DRAFT ENVIRONMENTAL IMPACT REPORT

Appendices

Tehachapi Walmart

Prepared for:
City of Tehachapi

Prepared By:
CHRISTOPHER A. JOSEPH & ASSOCIATES
Environmental Planning and Research

May 26, 2010

Appendices

Appendix A

Notice of Preparation (NOP) and Initial Study

NOTICE OF PREPARATION

OF AN

ENVIRONMENTAL IMPACT

REPORT

PREPARED BY
CITY OF TEHACHAPI
LEAD AGENCY

PREPARED FOR
ARCHITECTURAL DESIGN AND SITE PLAN REVIEW NO. 2007-11
WAL-MART SUPERCENTER

SEPTEMBER 6, 2007

City of Tehachapi

Respecting Our Past - Planning Our Future

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CEQA Appendix I:

Notice of Preparation

Notice of Preparation *Appendix j*

TO:

Subject: Notice of Preparation of a Draft Environmental Impact Report

Lead Agency:

Agency Name: City of Tehachapi

Street Address: 115 South Robinson Street

City/State/Zip: Tehachapi, CA 93561

Contact: Mr. David A. James

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

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

Due to the time limits mandated by State law, your response must be sent at the earliest possible date but no later than 30 days after receipt of this notice.

Please send your response to Mr. David A. James at the address shown above or email the response to rdavis@tehachapicityhall.com.

Tehachapi Kern

City (nearest) County

Date September 6, 2007

Signature

Title Community Development Director

Telephone (661) 822-2200 ext. 119

DISTRIBUTION LIST
AD&SPR 2007-11
WAL-MART

Local Agencies

1. X Tehachapi Unified School Dist.
2. ___ City of Tehachapi Fire Dept.
3. X Tehachapi Cummings County Water Dist.
4. X Tehachapi Recreation & Parks Dist.
5. X Tehachapi Hospital
6. X Benz Sanitation
7. X Kern County Library-Tehachapi Branch
8. ___ Brighthouse Cable
9. X Southern California Edison
10. X Southern California Gas Company
11. X SBC Telephone Planning Dept.
12. X Tehachapi Resource Conservation Dist.
13. ___ Local Agency Formation Commission
14. X City of Tehachapi Public Works Dept.
15. X City of Tehachapi Engineer
16. X City of Tehachapi Airport Dept.
17. X City of Tehachapi Police Chief
17. ___ Other

Kern County Agencies

1. ___ Kern County Water Agency
2. X Kern County Fire Dept. (Kevin Scott)
3. ___ Kern County Sheriff's Dept. (Kelly Allred-Tract Maps)
4. X Kern County Sheriff's Dept. (Sgt.Lopez)
5. ___ Kern County Agriculture Commissions Office
6. X Kern Council of Government
7. X Kern County Public Works & Roads Dept.
8. ___ Kern County Building Dept.
9. X Kern County Office of Planning
10. X Kern County Environmental Health Dept.
11. X Kern County Waste Management Dept.
12. X Air Pollution Control Dist.
13. ___ Other

State/Federal

1. X State Office of Planning & Research/State Clearing House
2. ___ Soil conservation Service, US Dept. of Agriculture
3. X Supervisor Don Maben
4. X CalTrans District 9 – Gayle Rosander
5. X Native American Heritage Council of Kern County
6. X California Regional Water Quality Control Board
7. ___ California Department of Fish and Game
8. ___ Southern San Joaquin Arch Information Center
9. ___ Fish and Wildlife
10. ___ Soil Conservation Service
11. ___ U.S. Army Corps of Engineers
12. ___ Other

Other

1. ___ Audobon Society-Sacramento
2. ___ Sierra Club
3. ___ CalTrans Aeronautical Division
4. ___ Federal Aviation Administration
5. X Other - Applicant

Date Mailed 9/6/07
By: Marcia Smith

Notice of Completion — Form A

Mail to: State Clearinghouse, 1400 Tenth Street, Sacramento, CA 95814 (916) 4445-0613

See NOTE below
SCH#_____

Project Title: AD & SPR No.2007-11 **Agency:** City of Tehachapi

Contact Person: David James

Street Address: 115 South Robinson Street Phone: (661) 822-2200 ext. 119

City: Tehachapi, CA Zip: 93561 County: Kern

Project Location

County: Kern City/Nearest Community: Tehachapi

Cross Streets: Tucker Road Zip Code: 93561 Total Acres: 23

Assessors Parcel No.: 415-130-28 & 69 Section: 20 Twp: 32S Range: 33E Base: Mt. Diablo

Within 2 miles: State Hwy #: 58 Waterways: _____

Airports: Tehachapi Muni Railways: Union Pacific Schools: Jacobsen Jr. High

Document Type:

CEQA: ■ NOP ☐ Supplement/Subsequent ☐ Early Cross ☐ EIR (Prior SCH No.)_____ ☐ Neg Dec ☐ Other:_____

NEPA: ☐ NOI ☐ EA ☐ Draft EIS ☐ FONSI

OTHER: ☐ Joint Document ☐ Final Document ☐ Draft EIR

Local Action Type:

☐ General Plan Update ☐ General Plan Amendment ☐ General Plan Element ☐ Community Plan

☐ Specific Plan ☐ Master Plan ☐ Planned Unit Development ■ Site Plan

☐ Rezone ☐ Prezone ☐ Use Permit ☐ Land Division (Subdivision Parcel Map, Tract Map, etc.)

☐ Annexation ☐ Redevelopment ☐ Coastal Permit ☐ Other_____

Development Type:

☐ Residential: Units_____ Acres_____
☐ Office: Sq.ft._____ Acres_____
■ Commercial: Units_____ Acres_____
☐ Industrial: Units_____ Acres_____
☐ Educational: _____
☐ Recreational: _____
☐ Other_____

☐ Water Facilities: Type_____ MGD_____
Employees_____
Employees_____
Employees_____
☐ Transportation: Type_____
☐ Mining: Mineral_____
☐ Power: Type_____ Watts_____
☐ Waste Treatment: Type_____
☐ Hazardous Waste: Type_____

Project Issues Discussed In Document:

☐ Aesthetic/Visual
☐ Agricultural Land
■ Air Quality
■ Archeological/Historical
☐ Coastal Zone
■ Drainage/Absorption
☐ Economic/Jobs
☐ Fiscal

☐ Flood Plain/Flooding
☐ Forest Land/Fire Hazard
■ Geologic/Seismic
☐ Minerals
☐ Noise
☐ Population/Housing Balance
■ Public Services/Facilities
☐ Recreation/Parks

☐ Schools/Universities
☐ Septic Systems
■ Sewer Capacity
☐ Soil Erosion/Compaction/Grading
☐ Solid Waste
☐ Toxic/Hazardous
■ Traffic/Circulation
☐ Vegetation

■ Water Quality
■ Water Supply/Groundwater
☐ Wetland/Riparian
☐ Wildlife
☐ Growth Inducing
■ Landuse
☐ Cumulative Effects
☐ Other_____

Present Land Use/Zoning/General Plan Designation – Vacant, Existing commercial site (C-3 Zoning)

Project Description – To consider construction of a 185,433 square foot Wal-Mart Supercenter .

NOTE: Clearinghouse will assign identification numbers for all new projects. If a SCH number already exists for a project (e.g. from a Notice of Preparation or previous draft document) please fill it in.
Revised October 1989

SECTION ONE
INTRODUCTION

SECTION ONE

INTRODUCTION

Purpose and Authority

In following the provisions of the California Environmental Quality Act (CEQA) Guidelines, the City of Tehachapi will prepare or cause to have prepared an Environmental Impact Report (EIR) for the Wal-Mart Supercenter located along Tucker Road/State Hwy 202 also known as Architectural Design and Site Plan Review No. 2007-11 ("Project"). As the lead agency the City of Tehachapi is transmitting copies of the Notice of Preparation (NOP) and Initial Study to responsible agencies and trustee agencies prior to completion of the Draft EIR.

Pursuant to *CEQA Guidelines* Section 15082, within 30 days of receiving the NOP each responsible agency shall provide the lead agency with specific details about the scope and content of the environmental information related to the responsible agency's area of statutory responsibility, which must be included in the Draft EIR.

Responses to the NOP should be mailed to the City of Tehachapi to the attention of David James, Community Development Director.

INITIAL STUDY

This initial study has been prepared in compliance with the California Environmental Quality Act (CEQA), Public Resources Code Section 21000 et seq., and the CEQA Guidelines, California Code of Regulations Section 15000 et seq., the latter referenced to hereafter as the CEQA Guidelines. An Initial Study is an informational document to provide the City with information to use as the basis to focus the environmental assessment and to provide documentation for subsequent findings.

Identification and Assessment of Environmental Effects

An Environmental Checklist Form has been completed which identifies and weighs the potential significance of environmental effects resulting from the proposed project. Included in the narrative occupying this checklist is a discussion of possible mitigation measures for environmental effects identification of potentially significance on the basis of the analysis undertaken in association with completing the environmental checklist, it has been determined that the project may result in significant adverse effects on the environment.

The aspects of the environmental upon which the Initial Study has focused are summarized as follows:

- Hydrology/drainage, specifically the relationship of the project and anticipated storm water runoff generated and the constraints of local stormwater disposal capabilities.

- Public facilities and services, in particular groundwater resources and the projects impact on law enforcement and fire protection resources.

- Transportation/circulation, addressing the prospective impacts of the project on local traffic and circulation network.

- Air quality, addressing the projects incremental short and long term impacts on air quality relative to the project development and ongoing project implementation related impacts associated with vehicular traffic.

- Aesthetics, addressing the projects visual impacts particularly as seen from Tucker Road/State Hwy 202 and Tehachapi Boulevard, in addition to lighting and glare.

The initial study also considers CEQA topics not specifically related to any single aspect of the environment. These topics will include:

- Alternatives to the proposed project.

- The relationship between local short-term uses to the environment and the maintenance and enhancement of long-term productivity.

- Any significant irreversible environmental changes which would be involved in the project should it be implemented; and

Possible environmental effects of the project will also be evaluated in the context of their potential significance when weighed cumulatively with other known related projects.

Preparer of the Initial Study

This initial study has been prepared and is being utilized by the Tehachapi Planning Commission and Tehachapi City Council. Preparation of the study has relied upon the context of other environmental documents description of the City and its setting in addition to the General Plan. David A. James, Community Development Director for the City of Tehachapi, is the principal preparer of the Initial Study.

SECTION TWO
PROJECT DESCRIPTION

SECTION TWO

PROJECT DESCRIPTION

Project Description

The "Project" being evaluated by this Initial Study is a Wal-Mart Supercenter consisting of a general merchandise, grocery, and garden center. The entire project consists of 185,433 square feet of building structure on a 24.96-acre site. A significant amount of the subject development site will be dedicated to parking. A recreational parking lot on the east side of the property will be utilized by the public for access to Antelope Run. The number of off-street parking totals 939 spaces.

General Plan

The subject site has a General Commercial General Plan designation. The General Commercial category is characterized by a wide range of retail commercial activities, including regional shopping centers and heavy commercial uses. Building intensities should be typical of development permitted under the general commercial zoning. Building heights shall be no taller than thirty-five feet or three stories. All areas proposing general commercial uses shall provide details regarding location, intensity, height and scale of the proposed development, landscaping, circulation, architecture and design and signage.

Zoning

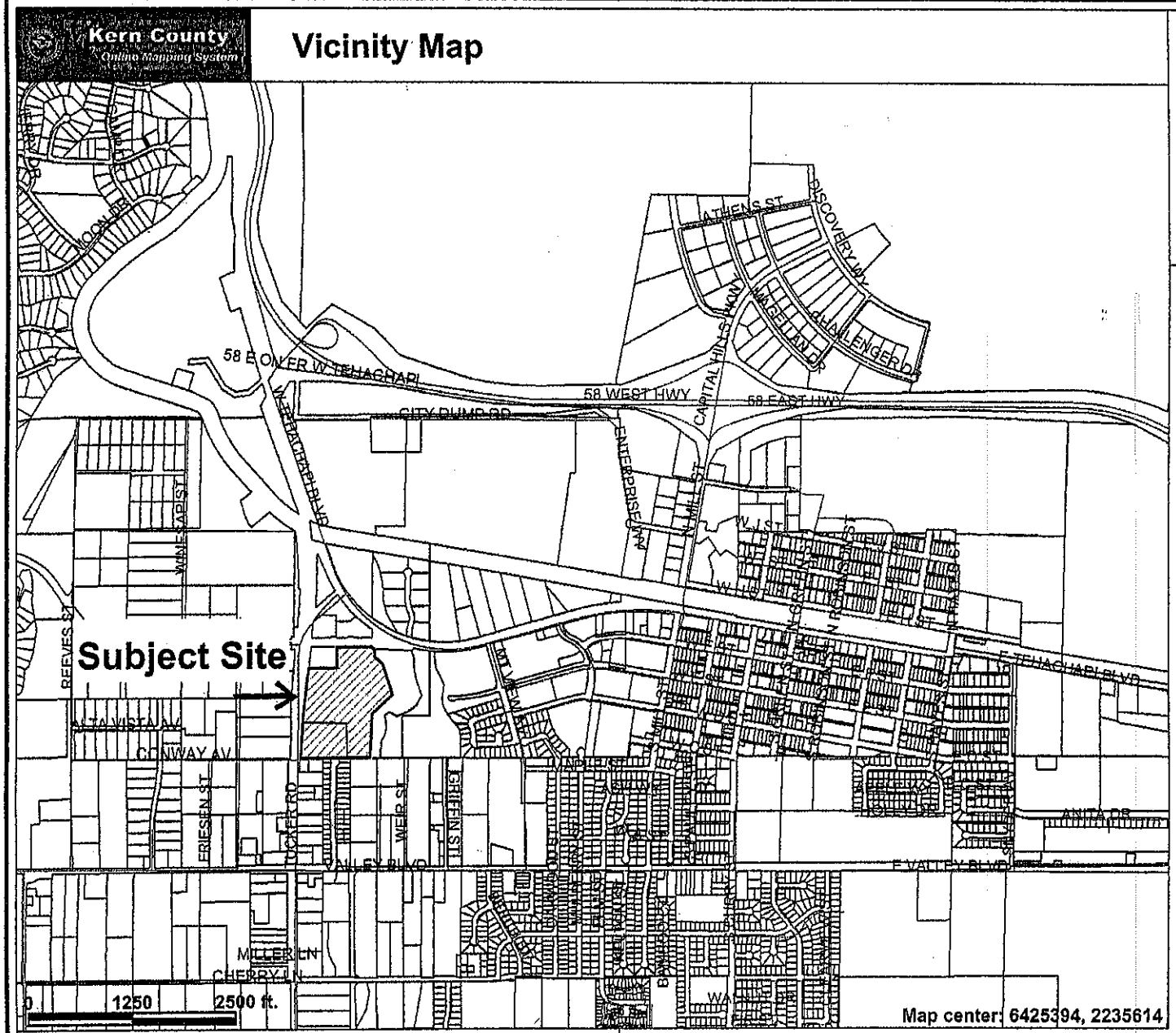
The subject site has a C-3 (General Commercial) zoning designation. The C-3 designation states:

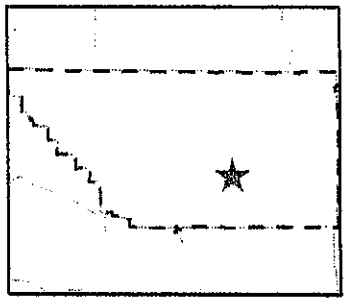
> The General Commercial (C-3) District establishes areas for the widest range of retail commercial activities, including regional shopping centers and heavy commercial uses. The C-3 District should be located on major traffic arteries.

Location and Site Characteristics

The subject site is located south of Tehachapi Boulevard, east and adjacent to Tucker Road/State Hwy 202. Topography of the subject site is gentle sloping and drains to the north with an average slope of approximately three percent from its highest elevation of approximately 3,972 to its lowest at 3,937 feet. Please refer to vicinity map and location map for details. (Figure 1 through Figure 3)

Vicinity Map





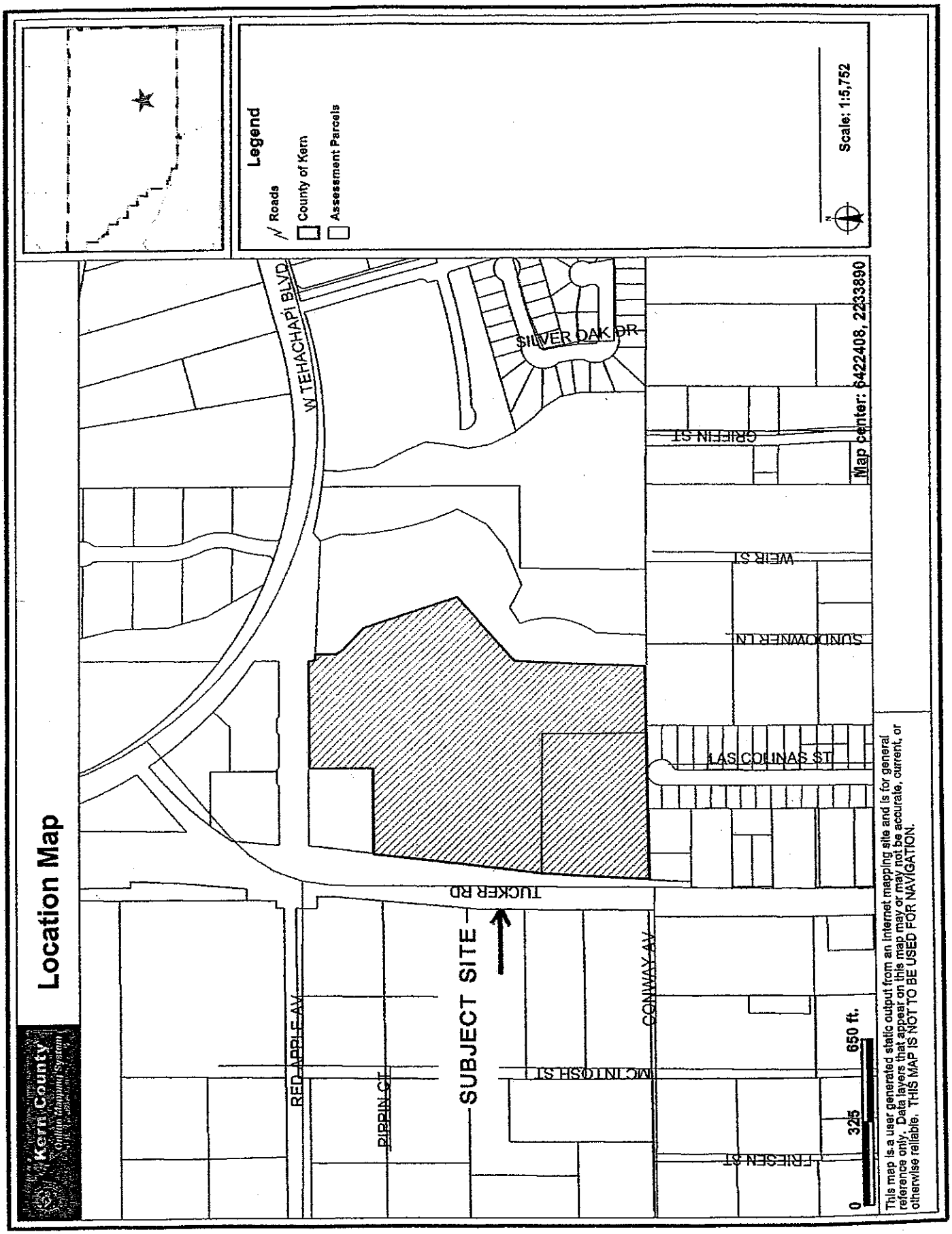
Legend

- Roads
- County of Kern
- Assessment Parcels

Scale: 1:21,307

This map is a user generated static output from an Internet mapping site and is for general reference only. Data layers that appear on this map may or may not be accurate, current, or otherwise reliable. THIS MAP IS NOT TO BE USED FOR NAVIGATION.

VICINITY MAP



LOCATION MAP

SECTION THREE
ENVIRONMENTAL SETTING

SECTION THREE

ENVIRONMENTAL SETTING

Environmental Setting

CEQA Guidelines Section 15063 states that an Initial Study shall contain an identification of the environmental setting of the project. The following section will provide the necessary illustration of the background upon which the project's environmental analysis has been based.

Incorporated in 1909, the City of Tehachapi lies in Kern County's Tehachapi Valley between the Sierra Nevada to the north and the Tehachapi Mountains to the south. The City of Bakersfield is approximately 35 miles to the northwest, in the southern end of the San Joaquin Valley. The unincorporated community of Mojave is 20 miles east, in the Mojave Desert region. Surrounding the City are recreational and low density residential communities many of which are second family homes for residents of the Los Angeles area and other Southern California cities.

The Tehachapi Valley is traversed by State Highway 58, which provides an east/west link between the San Joaquin Valley and eastern California, Nevada, and between interstate highways. The Union Pacific railroad provides rail service to the area; its "Tehachapi Loop" is an historic site.

The General Plan area covers the lands within the City's Sphere of Influence, a planning area of about 13,551 acres. The City contains about 4,260 acres.

US Highway 58 is the primary arterial within the City running northwest to southeast from Bakersfield to Mojave, and passes north of the City, bisecting the City's Sphere of Influence in a rough east-west fashion.

Topography

The City of Tehachapi is located in the Tehachapi Valley. The natural setting of Tehachapi is dominated by prominent hills and ridgelines to the north, west, and south, with level open land to the east. To the west, in addition to the topography the Golden Hills Community Service District (CSD) and Specific Plan area adjoined the Tehachapi Sphere of Influence boundary. To the south, the Mountain Meadows CSD adjoins the City of Tehachapi at Highline Road. This county specific plan area is a rural large lot area that is near the Fantasy Haven Private Airport and includes Antelope Dam and Black Burn Dams, all of which lies south of Highline Avenue.

The city lies at an average elevation of 4,000 feet above sea level. The elevation of Tehachapi's Sphere of Influence ranges from 3,540 feet at its northwest corner, to 7,600 feet at the southern boundaries of the planning area.

Geology/Seismicity

The Tehachapi area has a long and complex geologic history. Initially the region was an ancient sea floor characterized by thick deposits of fine sediments, which were significantly metamorphosed during the Nevadan orogeny. The Cascadian orogeny resulted in major regional uplift and faulting which largely resulted in the topography, as it exists today.

The Tehachapi Valley System represents a series of intermountain, intermediate elevation valleys, which lie at the intersection of two mountain block systems, the Sierra Nevada Mountains to the north and the Tehachapi Mountains to the south. These valleys are filled by alluvial deposits formed from these mountain ranges.

The Tehachapi vicinity is surrounded by several major faults: the Garlock fault, the Oil Canyon fault, the Phillips Ranch fault, the Warren fault to the east, the Breckenridge fault, Tehachapi Creek fault, and lesser faults to the north, and the White Wolf and San Andreas faults to the west and south respectively.

The Seismic Safety Element of the Tehachapi General Plan has compiled a comprehensive seismic hazards and seismic risk analyses. The document recognizes moderate to high hazards from seismic activity in terms of possible fault ruptures, ground shaking, landslides, flooding, and damage to buildings, roads, public facilities, and pipelines located in the Tehachapi environs.

Climate and Air Quality

Hot summers and pronounced winters give the Tehachapi Valley sharply defined seasons. Monthly temperatures range from a high of 88°F in July to an average of 40°F in January. Summer temperatures may exceed 100°F and winter nights often drop below freezing. In the Tehachapi region, the typical growing season between last frost in the spring and the first frost in the fall lasts about 100 days, although it may average as high as 180 days. Throughout most of the Tehachapi area, frosts can occur on any day of the year.

Annual precipitation averages 10.3 inches, occurring primarily between November and March. Snowfall occurs every winter. Winds occur with equal frequency from the west-northwest and from the east-southeast throughout the year at speeds commonly between 4 to 12 miles per hour.

The City of Tehachapi lies within the Kern County portion of the Southeast Desert Air Basin (SEDAB), which includes most of Imperial, Riverside, and San Bernardino Counties, as well as small portions of Los Angeles and Kern Counties. The California Air Resources Board establishes air quality standards and the South Coast Air Quality Management District provides some technical and monitoring support.

Approximately ten miles west of Tehachapi lies the San Joaquin Valley Unified Air Pollution Control District (SJVUAPCD), the desert portion of which has been designated as a non-adequate description of the existing air quality in Tehachapi, due to the elevation differentials and meteorological conditions affecting pollutant transport and dispersions. In addition, only limited monitoring is conducted in the region, primarily at stations located in Bakersfield and in Lancaster. However, an air quality monitoring station is planned for Tehachapi at the Southeast corner of Valley Boulevard. and Curry Street.

Air quality in the SEDAB is determined by local emissions of primary pollutants, regional ambient air quality, and topographical and meteorological factors which influence the transport of secondary air pollutants. The SEDAB has been designated by the EPA as "unclassified" or better than national standards for all pollutants. The distinctive climate of Tehachapi is mountainous region combine to make Tehachapi an area of low to moderate air pollution potential. The City of Tehachapi has significantly better air quality than Bakersfield, due to the lack of temperature inversion layers common to the valley floor, and to the stronger winds, which provide ventilation and adequate dilution of air pollutants.

Most emission in the Tehachapi area is estimated to be from man-made sources, such as automobiles or evaporation or organic liquids.

Surface Water Resources and Drainage

Tehachapi lies at the bottom of merging alluvial fans built by Antelope Creek, Blackburn Creek, Brite Creek, Water Canyon Creek, Chia Hill Creek, and the Cook and Wyman subwatersheds. In the past, much of the area has been inundated by water to depths of several feet causing severe damage. Urban developments have and will continue to intensify flood potential by decreasing the infiltration area through which storm waters may be absorbed.

Antelope and Blackburn Creeks are the principal drainages in the vicinity of the City. Historically, during periods of heavy precipitation, this drainage course produced large surface flows, which spread across the low sloping agricultural lands in the valley floor. The Federal Emergency Managements Agency's Flood Insurance Rate Map has designated the City as Zone B, indicating areas between the limits of the 100-year and 500-year floods.

The Tehachapi Watershed Project has alleviated a major portion of potential flooding problems. The project includes structural improvement to retard surface flows at the mouths of both Antelope and Blackburn canyons. These and other dams and diversion structures were constructed and are maintained by the Tehachapi-Cummings County Water District. Retention basins and various crossings and culverts provide additional floodwater impact reduction. Through the General Plan update process, the City intends to implement a comprehensive storm water runoff control program.

Groundwater

The Tehachapi Valley has a closed groundwater basin with limited recharge. Its groundwater basin is generally defined by the Tehachapi Valley floor, bounded on the south by the Tehachapi Mountains, on the north by the Sierra Nevada, on the west by a low-lying ridge connected these two ranges, and on the east by a similar ridge separated by Proctor Gap.

Groundwater flows generally to the north, following the surface topography. Inflow to the surface and subsurface water from the surrounding watershed replenishes the basin. Surface outflow from Tehachapi Valley occurs via Tehachapi Creek to the west and Cache Creek to the west. Subsurface outflow is restricted by the impervious rock outcroppings in the Tehachapi Creek and by the Proctor Gap substrata.

Groundwater quality in the area has been classified as excellent for domestic and agricultural uses. No treatment of groundwater is currently used prior to delivery to customers. Average depth to groundwater is 200 feet.

Plant and Animal Communities

Although the City of Tehachapi has lost most of its natural flora and fauna due to agricultural activities and urban expansion, much of the planning area is still covered by native vegetation. The Tehachapi environs are dominated by non-native grasses (Slender Wild Oat, Red Broom Grass, Western Ryegrass), and the native perennial Stipa grass with chaparral consisting of Rabbit Brush, Wild Lilac, and Manzanita, constituting the next most abundant vegetation class. Native trees include Valley Oak, California White Oak, Blue Oaks, Bull Pine and California Juniper. Red Willows and Freemont Cottonwood are found along drainage channels along with Goldenbush and Curly Dock.

Wildlife species in the environs are California Mule Deer, Mountain Lion and Black Bear. Upland game includes quail, rabbits, tree squirrels, band-tailed pigeons, dove, turkey and chukar.

The 1991 Endangered Species Element of the Kern County General Plan observed that there are 27 state and/or federal listed threatened or endangered wildlife species, ten state and federal threatened and endangered plant species, and a wide variety of non-listed sensitive species in Kern County.

The presence of fauna of concern in the project area should be examined in the context of the regions urbanization; that is, species that may have frequented the area may have been displaced from their habitat, not necessarily by direct urbanization this land, but by the overall activities of man in the region. The *1988 Final EIR for GPA Project Areas 1 & 2* noted,

> [t]he Federal Fish and Wildlife Service and the California Department of Fish and Game have cited three rare and endangered species whose habitats include the Tehachapi Mountain area. These species are the Cooper's Hawk, the Tehachapi Slender Salamander and the California Condor. While the past natural habitats and ranges of these fauna species are recognized to be in the vicinity of the [project area], it is doubtful that these particular species still frequent the terrain within the project site boundaries, especially as the site is adjacent to on-going and developing activity.

Efforts to reintroduce excluded native species Tule Elk and Pronghorn Antelope have taken place. Other species once abundant in the area, such as the Swainson's Hawk, Black Shouldered Kite, Ringtailed Cat, Golden Eagle, Southern Rubber Boa, Southern Spotted Owl have been listed as threatened and or protected by the California Department of Fish and Game.

Noise

Measures to evaluate permissible noise levels are established in the General Plans Noise Element which states that exterior noise levels at "sensitive land uses" should not exceed 55db Ldn. The Noise Element states that noncompatible land uses should be separated, land uses should be conducive to public enjoyment and the environment should not be degraded by excessive noise. The Noise Element of the General Plan identifies four land use categories, which are defined by their relative sensitivity to ambient noise levels. The categories and some examples of subordinate land uses are:

Highly Sensitive
- Rural Single Family Dwellings
- Hospitals

Sensitive
- Urban Single Family Dwellings
- Hotels

Moderately Sensitive
- Government Services
- Restaurants

Insensitive
- Agriculture
- Auto Parking

Noise sources in the City of Tehachapi include traffic on Highway 58 and City streets, in particular major and minor collector streets, the airports, the Union Pacific Railroad and local industries.

Population

Tehachapi's population is estimated at 13,063 people. This number includes the inmate population of the California Correctional Institution. Within the City limits, the population is 7,218. Census data indicated that the City grew at an annual rate of about 4.5% between 1990 and 2000.

The City's population increase has been attributed to proximity with employment centers in the San Joaquin and Antelope Valleys, Tehachapi's rural atmosphere, and the presence of the California Correctional Institution, which incarcerates over 5,000 inmates.

Land Use Controls

The City operates under a City Manager form of government with a City Council exercising legislative control of land use decisions and a Planning Commission providing analysis and recommendations of land use proposals to the Council. The General Plan designates urban land use patterns and the necessary public facilities. The General Plan supports relatively low density development in response to the residents' desire to maintain a rural mountain community.

The Tehachapi Zoning Ordinance, revised in 1990, establishes building setbacks, land use controls and specific land uses that are allowed by right or with a conditional use permit.

The City has established Specific Plan areas (SPA) to consider development proposals analyzing development standards and uses tailored to the need and unique characteristics of a particular area. Generally, under General Plan SPAs should only be applied to larger areas and where community benefit can be demonstrated. The existing specific plan areas are:

Town Site Specific Plan
East Tehachapi Specific Plan
South Tehachapi Specific Plan
Loop Ranch Specific Plan
Capital Hills Specific Plan

Land use in the unincorporated lands surrounding the City is regulated by the Kern County Land Use Ordinance.

Public Facilities

In 1993, the existing public facilities, including water and sanitary sewer were determined to have the capacity to accommodate a population of approximately 26,000. Improvements have since been made to the capacity of the wastewater treatment plant and the domestic water production system. Drainage facilities will be expanded as

development occurs. Where increases in residential densities threaten to impact circulation patterns, improvements and or traffic mitigation fees are required as part of the permit approval and CEQA process. It is the intent of the City to require future development to pay its fair share of needed improvements.

Circulation/Transportation Network

City streets are classified by the Circulation Element of the General Plan to provide mobility and access to and from the City, including a bikeway and pedestrian pathway system. Improvements to streets are funded through the Capital Improvement Program (CIP). The CIP is funded by sales tax, gas tax and revenues generated by the Traffic Impact Fee program.

Regional roads in the area are Highway 58, which extends for about 144 miles between the San Luis Obispo County line to the west to the eastern county line in the Mojave Desert. This highway provides a link for interregional and interstate traffic as well as connectivity between Interstate 5 and Highway 99 in the San Joaquin Valley.

Route 202 is a road of local significance, serving as the principal access between substantial residential population in Bear Valley Springs, Stallion Springs, Golden Hills and Tehachapi. Route 202 also links the California State Correctional Institution with Highway 58, which is the principal reason of Route 202 to exist. This route serves daily commuter traffic to Edwards Air Force Base, Lancaster/Palmdale and Bakersfield.

Since 1929, the City has been served by the Tehachapi Municipal Airport, a general aviation airport located at its northern edge. In 1938 Kern County acquired the airfield and contracted its operation until 1967. In 1980, the City of Tehachapi acquired the airport from the County.

Mountain Valley Airport also lies in Tehachapi's Sphere of Influence south of Highline Road between Dennison and Steuber Roads. This airport is privately owned public use airport. In 1992, it had 12,000 take offs and landings of tow planes and gliders and 3,500 transient arrivals.

Kern Regional Transit provides fixed-route and demand response service in Kern County up to six days per week. Fixed routes run on different schedules and frequencies from two days per week to several times over six days. Fixed route service between Tehachapi, Mojave, and Bakersfield was started in 1995. Currently, kern Regional Transit runs seven round trips a day, five days a week. Trips between Tehachapi and Mojave take approximately 35 minutes, and 65 minutes between Tehachapi and Bakersfield. Tehachapi Transit operates a dial-a-ride system in Tehachapi and the surrounding area. This service is contracted to Kern County and is available 0730-1630.

Sewer Collection and Treatment

The City operates a wastewater treatment plant. It was expanded in 1992 to a capacity of 1.25 million gallons per day (mgd). Current influent is about .87 mgd or roughly 70 percent of the plant design. The plant provides advanced secondary treatment and is currently in compliance with state and federal regulations. Plant expansion is being planned that will approximately double the current population or up to 2.5 mgd. This is the treatment level required for the buildout of the general plan area.

There are some sewer collection service areas that do not have adequate capacity exists areas for full buildout of the General Plan. Improvements to these areas are included in the Capital Improvement Program.

The City uses water reclaimed from its wastewater treatment plant for agricultural uses on City owned property only.

Solid Waste

The City of Tehachapi is served by the County operated Tehachapi Landfill that is located about five miles east of the City. According to the Kern County Waste Management Department, the Tehachapi Landfill is expected to remain open until 2013 when it will be replaced by a transfer station. About 38% of the waste stream is diverted from the landfill and recycled.

Fire Protection

The Kern County Fire Department is proud to provide a high level of emergency services to the residents and visitors of the greater Tehachapi area. The area it protects varies from rural to metropolitan, but also covers large portions of wild land and wild land/urban interface areas. The Kern County Fire Department is a full service all risk department with the ability to also provide hazardous material, technical rescue, a helicopter with helitack crew and bulldozer response, among other things, into this area.

Located at 800 South Curry Street, Tehachapi Station 12 consists of three full-time on duty personnel within the city limits. In addition there are three fire stations within a nine to twelve mile radius of the City of Tehachapi who will provide support to the Tehachapi Station: Keen Station 11 is composed of three full-time on duty personnel and is located at 30356 Woodford-Tehachapi Road, Bear Valley Station 16 consists of two full-time on duty personnel and is located at 28946 Bear Valley Road, and Stallion Springs Station 18 is composed of two full-time on duty personnel and is located at 28381 Braeburn Place #22. The equipment at these stations consists of an engine and a four-wheel drive patrol vehicle with full-time personnel trained in all facets of fire suppression, rescue, and basic life support.

Water

Tehachapi pumps its groundwater from an adjudicated groundwater basin. The "safe yield" of the basin has been estimated at 5,500 acre feet per year (AFY); last year the City pumped about 2,100 acre feet with rights to about 1,822 AFY. The Tehachapi-Cummings County Water District imports water from the State Water Project via the California Aqueduct and a pipeline/water system constructed in 1973. The District's annual entitlement administered through the Kern County Water Agency is 20,000 acre feet.

The City is actively pursuing water rights as well as purchasing water from Tehachapi Cummings County Water District (TCCWD) for recharge. This will allow the City to provide the water to existing customers. To serve its nearly 2,600 active connections, the City's municipal water supply system consists of three storage tanks with a total capacity of 3.5 million gallons, a 1.5 million gallon water tank above the Antelope Dam, seven water wells and a distribution system of 4 to 16 inch water lines. This system is currently adequate to serve existing customers and is in good repair. The City's seven water wells have been rehabilitated, allowing an additional million gallons of water per day to be pumped with no added energy cost. Currently the City is developing additional storage tanks and transmission lines in order to stay ahead of demand and in anticipation of continued growth.

The Public Facilities Element of the General Plan calls for future growth to be required to provide additional water rights to the City as a condition of its development and or contribute to the funding of the water treatment facility.

Law Enforcement

The Tehachapi Police Department is located at 129 E. "F" Street, which is at the corner of "F" Street and Robinson Street. The Tehachapi Police Department provides 24-hour police services within the Tehachapi city limits. The primary response area covers seven square miles with a population of approximately 6,000 residents.

The Tehachapi Police Department currently consists of 13 authorized full-time sworn peace officers and two full-time non-sworn employees. The authorized staff includes a Chief of Police, two Police Sergeants, two Senior Police Officers, eight Police Officers, one Administrative Assistant, and one Records Clerk. Shift operations are based upon a 12-hour work day, with one shift operating from 6:00 am to 6:00 pm and one shift operating from 6:00 pm to 6:00 am. Supervisory coverage is generally provided from 8:00 am to midnight. Additional law enforcement support is available through Mutual Aid agreements with the Bear Valley and Stallion Springs Police Departments, the Kern County Sheriff's Department, and the California Highway Patrol.

The Tehachapi Police Department currently operates a fleet of 11 authorized vehicles. The fleet includes five (5) marked police cars, three (3) marked 4WD patrol vehicles,

two (2) unmarked patrol vehicles, and one (1) marked volunteer support vehicle. In addition, there is one marked police motorcycle that is operated on a part-time basis.

Parks and Recreation

The Tehachapi Valley Recreation and Parks District operates on a community park (West Park), and two neighborhood parks (Central Park and Railroad Park). The District operates two additional community park facilities, a baseball park and an indoor swimming pool.

The City of Tehachapi maintains several parks within the community through the Landscape Maintenance District or City funded contract maintenance program. Warrior Park is a 5.5-acre park facility located west of South Curry Street within Tract 6216. Pioneer Park is a 0.70-acre park located on West "I" Street within an established residential neighborhood. Manzanita park is located at the Southeast corner of South Curry Street and Manzanita Drive. The park area measures approximately 0.5 acres in size and was built in conjunction with Tract 6215.

A number of park facilities have been planned but not constructed. These include the Chapi Peak Park and the Antelope Run Linear Park.

Regional facilities available in the Tehachapi environs include four golf courses, Tehachapi Mountain County Park, Indian Hill Ranch Campground, Brite Lake and Fantasy Haven Glider Port. The Tehachapi Unified School District and the Tehachapi Valley Recreation and Parks District have a joint agreement for use of existing playground and recreational facilities which increases the availability of open space and recreation facilities within the community.

Schools

The Tehachapi Unified School District operates five schools that serve the City. Tompkins elementary School (K-5), Golden Hills Elementary School (K-5), Cummings Valley Elementary School, Jacobsen Middle School (6-8) operating out of the former high school, Tehachapi High School (9-12) a new facility, Monroe Continuation High School and Summit High School for independent study. Growth of the outlying Tehachapi areas has resulted in the elementary schools operating about 25% over their intended capacity. In response, the District has added portable classrooms for its elementary schools.

Higher education facilities are located within a one hour drive from Tehachapi including California State University, Bakersfield, Bakersfield Community College, and Antelope Valley Community College near Lancaster.

Libraries

The Kern County Free Library operates a 25,000 volume branch within the City of Tehachapi. The Tehachapi branch has access to an inter-library loan system that connects with libraries across the county.

Medical Services

The Tehachapi Valley Hospital District operates a 28-bed acute care hospital and an emergency/trauma care center in the City. There are several private medical offices, dental centers and veterinary facilities in the greater Tehachapi area. In addition, a private ambulance service maintains a 24-hour emergency service in Tehachapi staffed by certified emergency service personnel. Private emergency air service is available to hospitals in Bakersfield, Lancaster and Edwards Airforce Base. The nearest medical facilities outside of the City are in Bakersfield 30 miles to the west and Lancaster 50 miles to the south.

Other Utilities

The Southern California Edison Company provides Tehachapi and its environs with electrical power. Natural gas is provided by the Southern California Gas Company, telephone service by Pacific Bell and cable television by Brighthouse Networks.

Cultural Resources

The Greater Tehachapi area is considered to be archaeologically sensitive. Indigenous clans to the Tehachapi area are the Kitanemuk and Kawaiisu. Both clans are of the Great Basin Paiute tribe of Shoshone origin. Little information is available about their lifestyle. There are 150 – 200 Kawaiisu descendents remaining in California, however they have no Federal Recognition. Staff from the California State University, Bakersfield, California Archaeological Inventory Southern San Joaquin Valley Center have stated that although no sites are known to exist on the valley floor, several large sites exist in the Tehachapi Creek area.

SECTION FOUR
ENVIRONMENTAL CHECKLIST

Environmental Checklist Form

1.	Project Title:	Architectural Design & Site Plan Review No. 2007-11
2.	Lead Agency Name and Address:	City of Tehachapi 115 South Robinson Street Tehachapi, CA 93561
3.	Contact Person and Phone Number:	David A. James (661) 822-2200 ext. 119
4.	Project Location:	East and adjacent to Tucker Road/State Hwy 202 and South of Tehachapi Blvd.
5.	Project Sponsor's Name and Address:	Thomas Graham Civil Design Group 1902 Wright Pl., Suite 200 Carlsbad, CA 92008
6.	General Plan Designation:	General Commercial
7.	Zoning:	C-3
8.	Description of Project:	To construct a 185,433 square foot Wal-Mart Supercenter consisting of general merchandise, grocery, and garden center shopping areas.
9.	Surrounding Land Uses and Setting:	North: Tehachapi Crossing Shopping Center South: Sail-Thru Carwash/ Single family residential East: Antelope Run West: Vacant C-3 and County property
10.	Other agencies whose approval is required:	Kern County Building and Safety, Kern County Fire Department

Environmental Factors Potentially Affected:

The environmental factors checked below would be potentially affected by this project, involving at least one impact that is a "Potentially Significant Impact" or as indicated by the checklist on the following pages.

☐ Land Use and Planning	■ Transportation/Circulation	■ Public Services
☐ Population and Housing	☐ Biological Resources	■ Utilities and Service Systems
■ Geophysical	☐ Energy and Mineral Resources	☐ Aesthetics
■ Water	☐ Hazards	☐ Cultural Resources
☐ Air Quality	☐ Noise	☐ Recreation
	☐ Mandatory Findings of Significance	

Determination:

On the basis of this initial evaluation:

I find that the proposed project COULD NOT have a significant effect on the environment, and a NEGATIVE DECLARATION will be prepared. ☐

I find that although the proposed project could have a significant effect on they environment, there will not be a significant effect in this case because the mitigation measures described on an attached sheet have been added to the project. A NEGATIVE DECLARATION will be prepared. ☐

I find that the proposed project MAY have a significant effect on the environment, and an ENVIRONMENTAL IMPACT REPORT is required. ■

I find that the proposed project MAY have a significant effect(s) on the environment, but at least one effect 1) has been adequately analyzed in an earlier document pursuant to applicable legal standards, and 2) has been addressed by mitigation measures based on the earlier analysis as described on attached sheets, if the effect is a "potentially significant impact" or "potentially significant unless mitigated." An ENVIRONMENTAL IMPACT REPORT is required, but it must analyze only the effects that remain to be addressed. ☐

Signature of Community Development Director

9/6/07
Date sent out for public review

Issues:	Potentially Significant Impact	Negative Declaration: Significant Unless Mitigation Incorporated	Less Than Significant Impact	No Impact
Would the proposal result in potential impacts involving:				
Landslides or mudslides?	☐	☐	☐	■
I. LAND USE AND PLANNING. Would the proposal:				
a) Conflict with general plan designation or zoning?	☐	☐	☐	■
b) Conflict with applicable environmental plans or policies adopted by agencies with jurisdiction over the project?	☐	☐	☐	■
c) Be incompatible with existing land use in the vicinity?	☐	☐	☐	■
d) Affect agricultural resources or operations (e.g. impacts to soils or farmlands, or impacts from incompatible land uses)?	☐	☐	☐	■
e) Disrupt or divide the physical arrangement of an established community (including a low-income or minority community?	☐	☐	☐	■
II. POPULATION AND HOUSING. Would the proposal:				
a) Cumulatively exceed official regional or local population projections?	☐	☐	☐	■
b) Induce substantial growth in an area either directly or indirectly (e.g. through projects in an undeveloped area or extension of major infrastructure?	☐	☐	■	☐
c) Displace existing housing, especially affordable housing?	☐	☐	☐	■

Issues:		Potentially Significant Impact	Negative Declaration: Potentially Significant Unless Mitigation Incorporated	Less Than Significant Impact	No Impact
III.	**GEOLOGICAL PROBLEMS.** Would the proposal result in or expose people to potential impacts involving:				
a)	Fault rupture?	☐	☐	☐	■
b)	Seismic ground shaking?	☐	■	☐	☐
c)	Seismic ground failure, including liquefaction?	☐	■	☐	☐
d)	Seich, Tsumani, or volcanic hazard?	☐	☐	☐	■
e)	Landslides or mudflows?	☐	☐	☐	■
f)	Erosion, changes in topography or unstable soil conditions from excavation, grading, or fill?	☐	☐	■	☐
g)	Subsidence of the land?	☐	☐	☐	■
h)	Expansive soils?	☐	☐	■	☐
i)	Unique geologic or physical features?	☐	☐	☐	■
IV.	**WATER.** Would the proposal result in:				
a)	Changes in absorption rates, drainage patterns, or the rate and amount of surface runoff?	☐	☐	■	☐
b)	Exposure of people or property to water related hazards such as flooding?	☐	☐	☐	■
c)	Discharge into surface water or other alteration of surface water quality (e.g. temperature, dissolved oxygen or turbidity)?	☐	☐	☐	■

Issues:	Potentially Significant Impact	Negative Declaration: Potentially Significant Unless Mitigation Incorporated	Less Than Significant Impact	No Impact
d) Changes in the amount of surface water in any water body?	☐	☐	☐	■
e) Changes in currents, or the course or direction of water movements?	☐	☐	■	☐
f) Change in the quantity of ground waters, either through direct additions or withdrawals, or through interception of an aquifer by cuts or excavations or through substantial loss of groundwater recharge capability?	☐	☐	■	☐
g) Altered direction or rate of flow of groundwater?	☐	☐	☐	■
h) Impacts to groundwater quality?	☐	☐	■	☐
i) Substantial reduction in the amount of groundwater otherwise available for public water supplies?	☐	☐	■	☐
V. AIR QUALITY. Would the proposal:				
a) Violate any air quality standard or contribute to an existing or projected air quality violation?	☐	☐	☐	■
b) Expose sensitive receptors to pollutants?	☐	☐	☐	■
c) Alter air movement, moisture, or temperature, or cause any change in climate?	☐	☐	☐	■
d) Create objectionable odors?	☐	☐	☐	■

Issues:	Potentially Significant Impact	Negative Declaration: Potentially Significant Unless Mitigation Incorporated	Less Than Significant Impact	No Impact
VI. TRANSPORTATION/CIRCULATION. Would the proposal result in:				
a) Increased vehicle trips or traffic congestion?	☐	☐	■	☐
b) Hazards to safety from design features (e.g. sharp curves or dangerous intersections) or incompatible uses (e.g. farm equipment)?	☐	☐	☐	■
c) Inadequate emergency access or access to nearby uses?	☐	☐	☐	■
d) Insufficient parking capacity on-site or off-site?	☐	☐	☐	■
e) Hazards or barriers for pedestrians or bicyclists?	☐	☐	☐	■
f) Conflicts with adopted policies supporting alternative transportation (e.g. bus turnouts, bicycle racks)?	☐	☐	☐	■
g) Rail, waterborne or air traffic impacts?	☐	☐	☐	■
VII. BIOLOGICAL RESOURCES. Would the proposal result in impacts to:				
a) Endangered, threatened or rare species or their habitats (including but not limited to plants, fish, insects, animals, and birds)?	☐	☐	☐	■
b) Locally designated species (e.g. heritage trees)?	☐	☐	☐	■
c) Locally designated natural communities (e.g. oak forest, coastal habitat, etc.)?	☐	☐	☐	■

Issues:	Potentially Significant Impact	Negative Declaration: Potentially Significant Unless Mitigation Incorporated	Less Than Significant Impact	No Impact
d) Wetland habitat (e.g. marsh, riparian and vernal pool)?	☐	☐	☐	■
e) Wildlife dispersal or migration corridors?	☐	☐	☐	■
VIII. ENERGY AND MINERAL RESOURCES. Would the proposal:				
a) Conflict with adopted energy conservation plans?	☐	☐	☐	■
b) Use non-renewable resources in a wasteful and inefficient manner?	☐	☐	☐	■
c) Result in the loss of availability of a known mineral resource that would be of future value to the region and the residents of the State?	☐	☐	☐	■
IX. HAZARDS. Would the proposal involve:				
a) A risk of accidental explosion or release of hazardous substances (including, but not limited to: oil, pesticides, chemicals or radiation)?	☐	☐	☐	■
b) Possible interference with an emergency response plan or emergency evacuation plan?	☐	☐	☐	■
c) The creation of any health hazard or potential health hazards?	☐	☐	☐	■
d) Exposure of people to existing sources of potential health hazards?	☐	☐	☐	■

Issues:	Potentially Significant Impact	Negative Declaration: Potentially Significant Unless Mitigation Incorporated	Less Than Significant Impact	No Impact
e) Increased fire hazard in areas with flammable brush, grass, or trees?	☐	☐	☐	■
X. NOISE. Would the proposal result in:				
a) Increases in existing noise levels?	☐	☐	☐	■
b) Exposure of people to severe noise levels?	☐	☐	■	☐
XI. PUBLIC SERVICES. Would the proposal have an effect upon, or result in a need for new or altered government services in any of the following areas:				
a) Fire protection?	☐	☐	■	☐
b) Police protection?	☐	☐	■	☐
c) Schools?	☐	☐	☐	■
d) Maintenance of public facilities, including roads?	☐	☐	■	☐
e) Other governmental services?	☐	☐	■	☐
XII. UTILITIES AND SERVICE SYSTEM. Would the proposal result in a need for new systems or supplies, or substantial alterations to the following utilities:				
a) Power or natural gas?	☐	☐	☐	■
b) Communications systems?	☐	☐	☐	■
c) Local or regional water treatment or distribution facilities?	☐	☐	☐	■

Issues:		Potentially Significant Impact	Negative Declaration: Potentially Significant Unless Mitigation Incorporated	Less Than Significant Impact	No Impact
d)	Sewer or septic tanks?	☐	☐	■	☐
e)	Storm water drainage?	☐	☐	■	☐
f)	Solid waste disposal?	☐	☐	■	☐
g)	Local or regional water supplies?	☐	☐	■	☐
XIII.	**AESTHETICS.** Would the proposal:				
a)	Affect a scenic vista or scenic highway?	☐	☐	☐	■
b)	Have a demonstrable negative aesthetic effect?	☐	☐	☐	■
c)	Create light or glare?	☐	☐	■	☐
XIV.	**CULTURAL RESOURCES.** Would the proposal:				
a)	Disturb paleontological resources?	☐	☐	☐	■
b)	Disturb archaeological resources?	☐	☐	☐	■
c)	Affect historical resources?	☐	☐	☐	■
d)	Have the potential to cause a physical change which would affect unique ethnic cultural values?	☐	☐	☐	■
e)	Restrict existing religious or sacred uses within the potential impact area?	☐	☐	☐	■
XV.	**RECREATION.** Would the proposal:				
a)	Increase the demand for neighborhood or regional parks or other recreational facilities?	☐	☐	☐	■

Issues:	Potentially Significant Impact	Negative Declaration: Potentially Significant Unless Mitigation Incorporated	Less Than Significant Impact	No Impact
b) Affect existing recreational opportunities?	☐	☐	☐	■
XVI. MANDATORY FINDINGS OF SIGNIFICANCE.				
a) Does the project have the potential to degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, reduce the number or restrict the range of a rare or endangered plant or animal or eliminate important examples of the major periods of California history or prehistory?	☐	☐	☐	■
b) Does the project have the potential to achieve short-term, to the disadvantage of long-term, environmental goals?	☐	☐	■	☐
c) Does the project have impacts that are individually limited, but cumulatively considerable? ("Cumulatively considerable" means that the incremental effects of a project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects)	☐	☐	■	☐
d) Does the project have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly?	☐	☐	☐	■

SECTION FIVE
NARRATIVE DISCUSSION OF ENVIRONMENTAL IMPACTS

SECTION 5

NARRATIVE DISCUSSION OF ENVIRONMENTAL IMPACTS REGARDING ARCHITECTURAL DESIGN & SITE PLAN REVIEW NO. 2007-11

A 185,433 SQUARE FOOT WAL-MART SUPERCENTER

A. EARTH

The soil underlying the project area is predominately Havala Sandy Loam. This soil type is commonly found in the Tehachapi region and can be characterized as a very deep well-drained alluvial soil. It is a brown and grayish brown, sandy loam underlain by dark brown and yellowish brown sandy clay loam subsoil. Permeability of the Havala Sandy Loam soil is moderately slow and erosion potential is characterized as slight. The Havala Sandy Loam soil has low to moderate shrink/swell properties and its erosion hazard is moderate. Sites possessing this soil characteristic may experience significant amount of shirk-swell which if not appropriately mitigated could have a significant impact on buildings constructed on this type of soil. Based on this preliminary finding, the site may require excavation, scarification, moisture conditioning and recompaction of the exposed soils. The Environmental impact Report will need to evaluate the subject site's underlying soil; characteristics and recommend a mitigation strategy based on a preliminary soils investigation.

B. TRAFFIC/CIRCULATION

The Wal-Mart Supercenter will include general merchandise, grocery, and garden centers all within the single structure. The Environmental Impact Report (EIR) will analyze the project to determine the vehicle trips projected to be generated by the proposed development in terms of on street traffic volumes. This impact will need to analyze traffic impacts in the context of existing and proposed street networks, segments and key intersections within the study area and general vicinity of the subject site. The project proponent will contribute the fare share in terms of mitigation based on the Regional Traffic Mitigation Fee schedule.

C. AIR

The development of the subject site as a Wal-Mart Supercenter will have both short term construction related impacts and long term operational related impacts. With respect to the short term impacts the project will temperately increase the level of "Fugitive Dust" (particulate matter) in the air primarily during the grading phase of the project. This impact associated with particulate matter is commonly referred to as P. M. 10 and P.M 2.5. The Environmental Impact Report (EIR) will need to address the short term air quality related impacts develop a mitigation strategy accordingly. With respect to the lon

operational impacts associated with the traveling public Level of Service (LOS) and traffic congestion is directly related to the issue of air quality. Therefore, the EIR will need to evaluate traffic related air quality impacts in terms of auto exhaust based on the build out of the Supercenter. In this regard it is anticipated that the EIR will include an air quality analysis relative to auto emission for SOX, NOX (precursor to ozone) and VOC'S.

D. WATER

The development of the Wal-Mart Supercenter will have an incremental impact on the City of Tehachapi's ability to deliver domestic water. The Environmental Impact Report (EIR) will need to evaluate the projects incremental impact on the City's municipal water system both in terms of the City's ability to deliver domestic water for human consumption, irrigation and fire flows to the subject development in addition to the project's anticipated consumption of this limited resource.

E. SEWER

The development of the Wal-Mart Supercenter will have an incremental impact on the City of Tehachapi's waste water treatment facility. The Environmental Impact Report (EIR) will need to evaluate the project's incremental Impact on the City of Tehachapi's waste water treatment facility and the City's ability to accommodate the additional waste water and develop a mitigation strategy accordingly. In addition, the EIR will need to evaluate the domestic sewer networks ability to deliver the waste water from the subject development to the sewer treatment facility to determine if there is adequate capacity in the sewer line(s) to accommodate the wastewater based on the build out of the proposed development.

F. GEOLOGY/SEISMICITY

The subject site is considered seismically active, as is most of Kern County. All proposed structures and utility installations anticipated to occur at the development stage must be designed to withstand anticipated ground acceleration within an acceptable level of risk. It is assumed that the Garlock Fault located approximately nine (9) miles southeast of the project area will be the design fault by which construction parameters will be established in conjunction with other Uniform Building Code (UBC) seismic standards applicable to the project site. The Garlock Fault shows the characteristic features of high-angle faults with major strike-slip component. The Garlock Fault has a Richter Magnitude potential of 8.0 and a Peak Execration range of .409(g) to .904(g). The Environmental Impact Report (EIR) will need to evaluate seismic issues relative to the specific design of the various uses within the development to insure that they can withstand the potential seismic event and develop mitigation by design strategy accordingly

G. CULTURAL RESOURCES

The subject site is located within the ancestral home of the Kawaiisu cultural group also known as Nuooah who are linguistically related to the Shoshonean language family. An archeological evaluation will be conducted over the entire site through the EIR process.

H. PLANT LIFE/WILDLIFE

The subject site is located within an area having an established pattern of urban development. There are several plant and animal species in the Tehachapi region that are of special concern, and with that, a Biological Survey will be conducted over the site through the EIR process.

I. PUBLIC SERVICES

The Wal-Mart Supercenter at build-out may result in the need for increased law enforcement and fire protection facilities. This incremental level of need for law enforcement and fire protection services will be partially offset by the increase in property tax and transient occupancy tax (TOT) revenue to the City and potential sales tax associated with an increase in visitors. The project will additionally place an incremental increased demand on water and sewer facilities. The development of the subject site as proposed will also have an indirect impact on the Tehachapi Unified School District. The Environmental Impact Report (EIR) will need to address impacts to public services and facilities.

J. DRAINAGE/HYDROLOGY AND WATER QUALITY

The development of the Wal-Mart Supercenter will increase the amount of impervious surface area and as such create a corresponding increase in storm water run-off. The applicant will be required to calculate, collect and divert the storm water run-off into drain inlets. Runoff will be conveyed to the regional retention system at the northeast corner of Tehachapi Blvd. and Tucker Rd. The Environmental Impact Report (EIR) will need to address the issue of drainage and water quality particularly as it relates to the existing system and capacity to accommodate the anticipated storm water runoff.

With respect to water quality related issues, impacts can be broken down into three (3) categories; grading, construction and project occupancy. At the development stage any non-point pollution and storm-water discharge associated with grading activity and/or construction activity will be regulated under the Federal Clean Water Act Section 402. Any grading disturbance of over one (1) acre will necessitate a National Pollution Discharge Elimination System (NPDES) permit relative to non-point pollution associated with construction activity, processed through the Regional Water Quality Control Board (Central Valley

Region). This permit process will require preparing a Storm Water Pollution Prevention Program (SWPPP) employing "best management practices" (BMPs) relative to the long and short-term control of erosion and sedimentation, and construction staging activity. In terms of the post construction impacts and pollution concentrations associated with the project occupancy phase will need to be evaluated. The highest concentration of urban related pollutants such as hydrocarbons occurs following the first major storm of the year. This event is commonly referred to as the first flush. The potential impacts to ground water resources associated with urban runoff emanating from the proposed development will need to be evaluated in the EIR and a mitigation strategy developed accordingly.

K. AESTHETICS

The subject site is located east and adjacent to Tucker Rd./State Hwy 202 and south of Tehachapi Blvd. The Environmental Impact Report (EIR) will need to address the aesthetic/visual impacts associated with the project and develop a mitigation by design strategy.

L. FISCAL AND BLIGHTING INFLUENCE IMPACTS

Through the EIR process, potential positive or negative fiscal impacts associated within the Tehachapi community will be analyzed in conjunction with the potential for blighting influences should the establishment of a Wal-Mart Supercenter precipitate the closure of a major anchor store such as Kmart, Albertsons, Save Mart, etc.

SECTION SIX
CORRESPONDENCE RECEIVED FROM EARLY PUBLIC CONSULTATION PER SECTION 15083 OF CEQA

(661) 822-2200
Fax: (661) 822-8559

City of Tehachapi

Respecting Our Past - Planning Our Future

115 South Robinson Street
Tehachapi, California 93561-1722
www.tehachapicityhall.com

RECEIVED
AUG 2 1 2007
City of Tehachapi

August 7, 2007

RECEIVED
AUG 0 9 2007
TEHACHAPI CUMMINGS
COUNTY WATER DISTRICT

Tehachapi-Cummings County Water District
P.O. Box 326
Tehachapi, CA 93581

Dear Sir or Madam:

Enclosed herein please find an application for Architectural Design and Site Plan Review No. 2007-11, to establish a 185,433 square foot Wal-Mart Supercenter located east and adjacent to Tucker Rd./State Hwy 202 and south of Tehachapi Blvd. Please see vicinity map and location map for details.

The subject site is currently zoned C-3, and its land use classification is general commercial. The proposed supercenter will consist of general merchandise, grocery, and garden center shopping areas, all within the 185,433 square foot structure. The City of Tehachapi is preparing the initial study to determine what issues to address in the CEQA document and the appropriate level of CEQA review that will be required to process the application i.e., Negative Declaration, Mitigated Negative Declaration or Environmental Impact Report. To that end the City is transmitting the site plan to various "Responsible Agencies" per Section 15083 (Early Public Consultation) of the CEQA guidelines to solicit feedback on what issues should be evaluated, and to assist the City in determining what level of CEQA review is appropriate to adequately process the application and meet the CEQA requirements. To expedite this process, I respectfully request that all comments regarding this matter be provided no later than **August 17, 2007.**

Thank you for your assistance and consideration in this matter. Should you have any questions and/or concerns please do not hesitate to contact me at (661) 822-2200 ext. 119.

Sincerely,

David A. James
Community Development Director

MITIGATED NEGATIVE DEC. IS OUR SUGGESTION,

Glenn H. Mueller

Enclosure

ED GRIMES
Mayor

DEBORAH C. HAND
Mayor Pro-Tempore

STAN BECKHAM
Council Member

PHILIP A. SMITH
Council Member

LINDA S. VERNON
Council Member

JASON D. CAUDLE
City Manager

GREG GARRETT
Assistant City Manager

HANNAH H. CHUNG
Finance Director

DAVID A. JAMES
Community Development Director

DENNIS WAHLSTROM
Public Works Director

TIMOTHY McLAUGHLIN
Fire Chief

JEFF KERMODE
Chief of Police

DAVID ZWEIGLE
Airport Manager

PAT GASSAWAY
City Treasurer

THOMAS F. SCHROETER
City Attorney

DEBBIE SPARKS
City Clerk

JAY SCHLOSSER, P.E.
City Engineer

cc: Jim Smith, Union Pacific Railroad

ROADS DEPARTMENT
CRAIG M. POPE, P.E., Director
2700 "M" STREET, SUITE 400
BAKERSFIELD, CA 93301-2370
Phone: (661) 862-8850
FAX: (661) 862-8851
Toll Free: (800) 552-5376 Option 5
TTY Relay: (800)735-2929
E-Mail: *roads@co.kern.ca.us*

RESOURCE MANAGEMENT AGENCY
DAVID PRICE III, RMA DIRECTOR
Community Development Program Department
Engineering & Surveying Services Department
Environmental Health Services Department
Planning Department
Roads Department

August 15, 2007

Mr. David James
Community Development Director
115 South Robinson Street
Tehachapi, CA 93561-1722

Subject: City of Tehachapi Site Plan Review No. 2007-11, Proposed WalMart Super Center

At the time of development of the Tehachapi Transportation Impact Fee (TTIF) the property upon which this project is proposed was considered lightly developed with its minor traffic generation included in volumes applied to Tehachapi Blvd. and Tucker Road.

Attached for your reference is the portion of the Tehachapi TIF study covering the area of this project. Please note the minimal traffic anticipated into the project area located to the east of Tucker Road (referenced as TAZ 530) upon which the WalMart Supercenter and Tehachapi Junction projects are proposed. Also note that no traffic was directly included for the Annexation No. 82 (pre-zone to C-3) proposed project at its ingress/egress location on the west side of Tucker Road.

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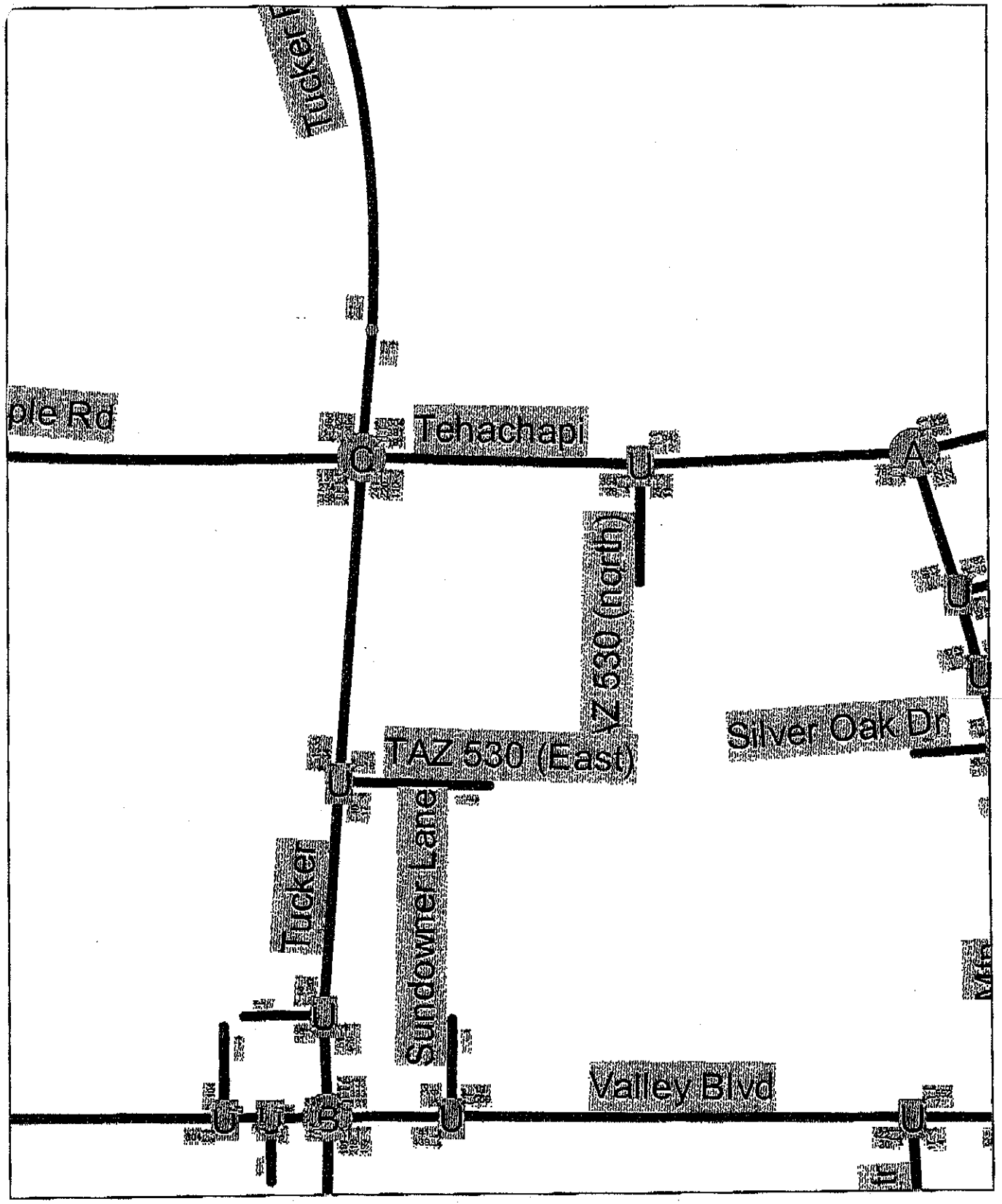
Therefore, it is recommended that a traffic analysis be prepared that quantifies the level of impact and proposes mitigation for those impacts noted in the analysis that are supplemental to the facilities proposed by the TTIF.

Thank you for the opportunity to comment, if you have any questions please contact Clark Farr (email: clarkf@co.kern.ca.us, or at 661-862-8857).

Barry Nienke, TE, Engineering Manager
Kern County Roads

Tehachapi Intersection Layout



DEPARTMENT OF TRANSPORTATION
District 9
500 South Main Street
Bishop, CA 93514
PHONE (760) 872-0785
FAX (760) 872-0754
TTY 711 (760) 872-0785

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AUG 20 2007
City of Tehachapi

Flex your power!
Be energy efficient!

August 16, 2007

David James, Director
Tehachapi Community Development Department
115 South Robinson Street
Tehachapi, California 93561-1722

File: 09-KER
EC
SCH # : TBD

Dear Mr. James:

Early Consultation – Tehachapi Wal-Mart Architectural Design & Site Plan Review No. 2007-011 (August 2007)

Thank you for consulting the California Department of Transportation (Caltrans) about the proposed Wal-Mart Super Center abutting Tucker Road (State Route 202) and south of Tehachapi Boulevard. We have the following comments for consideration as you prepare project environmental documentation:

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We look forward to reviewing future project documentation. We appreciate our good working relationship with the City of Tehachapi in transportation system matters. Please call me at (760) 872-0785 if you have questions.

Sincerely,

Gayle J. Rosander

GAYLE J. ROSANDER
IGR/CEQA Coordinator

c: Steve Wisniewski, Caltrans

PLANNING DEPARTMENT

TED JAMES, AICP, Director
2700 "M" STREET, SUITE 100
BAKERSFIELD, CA 93301-2323
Phone: (661) 862-8600
FAX: (661) 862-8601 TTY Relay 1-800-735-2929
E-Mail: planning@co.kern.ca.us
Web Address: www.co.kern.ca.us/planning

RESOURCE MANAGEMENT AGENCY

DAVID PRICE III, RMA DIRECTOR
Community & Economic Development Department
Engineering & Survey Services Department
Environmental Health Services Department
Planning Department
Roads Department

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City of Tehachapi

August 17, 2007

File: City of Tehachapi
Wal-Mart Supercenter

City of Tehachapi
Community Development
Attn: David James
115 South Robinson Street
Tehachapi, California 93561

RE: Early Consultation CEQA : Wal-Mart Supercenter Site Plan Review No. 2007-11

Dear Mr. James,

Kern County Planning appreciates the opportunity to provide comments at this early stage on the proposed Wal-Mart Supercenter located east and adjacent to Tucker Road /State Hwy 202 and south Tehachapi Blvd. This proposed 185,433 square foot retail project will have significant project and cumulative level impacts on air quality and related health effects, traffic, public services and the indirect impact of urban decay on existing businesses. These impacts are potentially significant and therefore an Environmental Impact Report needs to be prepared.

Please provide Kern County Planning with all notices regarding this project including, but not limited to: Notice of Preparation, Draft EIR, staff reports and the Notice of Determination.

If you have any questions regarding this matter, please contact me at (661) 862-8866 or Loreleio@co.kern.ca.us.

Sincerely,

Lorelei H. Oviatt A.I.C.P
Division Chief

WAL-MART
CEQA
DISTRIBUTION LIST

Leroy Barker
Tehachapi Unified School District
400 South Snyder
Tehachapi, CA 93561

Kern County Library-Tehachapi
1001 W. Tehachapi Blvd.
Suite A 400
Tehachapi, CA 93561

Kern County Fire Department
Attn: Kevin Scott
5642 Victor Street
Bakersfield, CA 93308

Native American Heritage Commission
915 Capitol Mall, Room 364
Sacramento, CA 95814

Tehachapi Valley Recreation & Parks District
P.O. Box 373
Tehachapi, CA 93581

Southern California Gas Company
Attn: Dwight Ensor
3701 Pegasus, Ste. 114
Bakersfield, CA 93308

Kern County Public Works & Roads
2700 "M" Street, Suite 400
Bakersfield, CA 93301

Native American Heritage Council of
Kern County Control Board/Lahontan Region
P.O. Box 1507
Bakersfield, CA 93302

Kern County Office of Planning
2700 "M" Street, Suite 100
Bakersfield, CA 93301

Kern County Environmental Health Department
2700 "M" Street, Suite 300
Bakersfield, CA 93301

Kern County Waste Management
ATTN: Daphne Washington
2700 "M" Street, Suite 500
Bakersfield, CA 93301-2370

Alis Clausen
Southern California Edison Company
42060 10th Street West
Lancaster, CA 93534

David L. Jones
Kern County Air Pollution Control District
2700 "M" Street, Suite 302
Bakersfield, CA 93301

Benz Sanitation
P.O. Box 1750
Tehachapi, CA 93581

SBC
Attn: Planning Department
1250 East Ashlan Avenue
Fresno, CA 93762

Kern Council of Governments
1401 19th Street, Suite 300
Bakersfield, CA 93301

State Department of Transportation
Attn: CEQA Coordinator
500 South Main Street
Bishop, CA 93514

California Regional Water Quality Control
Board
11020 Sun Center Dr. Ste. 200
Rancho Cordova, CA 95670

Supervisor Don Maben
1115 Truxtun Avenue, Suite 502
Bakersfield, CA 93301

Tehachapi Valley Healthcare District
115 West E Street
Tehachapi, CA 93561

WAL-MART
CEQA
DISTRIBUTION LIST

Tehachapi-Cummings County Water District
P.O. Box 326
Tehachapi, CA 93581

Tehachapi Resource Conservation District
202 S. Green
Tehachapi, CA 93561

Tehachapi Police Department
Chief Jeff Kermode
129 East F St.
Tehachapi, CA 93561

City of Tehachapi
Dennis Wahlstrom
115 S. Robinson St
Tehachapi, CA 93561

City of Tehachapi
Dave Zweigle
115 S. Robinson St.
Tehachapi, CA 93561

State Office of Planning and Research
1400 Tenth St. Room 121
Sacramento, CA 95814

STATE OF CALIFORNIA

Arnold Schwarzenegger, *Governor*

PUBLIC UTILITIES COMMISSION
505 VAN NESS AVENUE
SAN FRANCISCO, CA 94102-3298

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OCT 1 1 2007
City of Tehachapi

October 9, 2007

David James
City of Tehachapi
115 South Robinson Street
Tehachapi, CA 93561

RE: AD & SPR No. 2007-11 (WalMart), SCH# 2007081139

Dear Mr. James:

As the state agency responsible for rail safety within California, we recommend that any development projects planned adjacent to or near the rail corridor in the City be planned with the safety of the rail corridor in mind. New developments may increase traffic volumes not only on streets and at intersections, but also at at-grade highway-rail crossings. This includes considering pedestrian circulation patterns/destinations with respect to railroad right-of-way (ROW).

Safety factors to consider include, but not limited to, the planning for grade separations for major thoroughfares, improvements to existing at-grade highway-rail crossings due to the increase in traffic volumes and appropriate fencing to limit the access of trespassers onto the railroad right-of-way.

Of specific concern is the cumulative impact from increased traffic from the numerous projects occurring in the vicinity on the existing at-grade highway-rail crossings on Green and Hayes Streets.

The above-mentioned safety improvements should be considered when approval is sought for the new development. Working with Commission staff early in the conceptual design phase will help improve the safety to motorists and pedestrians in the City.

If you have any questions in this matter, please call me at (415) 703-2795.

Very truly yours,

Kevin Boles
Environmental Specialist
Rail Crossings Engineering Section
Consumer Protection and Safety Division

cc: Jim Smith, Union Pacific Railroad

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SEP 10 2007
City of Tehachapi

STATE OF CALIFORNIA Arnold Schwarzenegger, Governor

NATIVE AMERICAN HERITAGE COMMISSION
915 CAPITOL MALL, ROOM 364
SACRAMENTO, CA 95814
(916) 653-6251
Fax (916) 657-5390
Web Site www.nahc.ca.gov
e-mail: ds_nahc@pacbell.net

September 7, 2007

Mr. David A. James, Community Development Director
City of Tehachapi
115 South Robinson Street
Tehachapi, CA 93561-1722

Re: SCH#2007081139; CEQA Notice of Completion; Early Consultation Under §15083 of CEQA Guidelines for Site Plan Review No. 2007-11 to establish a 185,433 square feet Wal-Mart facility in the City of Tehachapi; Kern County, California

Dear Mr. James:

The Native American Heritage Commission is the state's Trustee Agency for Native American Cultural Resources. The California Environmental Quality Act (CEQA) requires that any project that causes a substantial adverse change in the significance of an historical resource, that includes archaeological resources, is a 'significant effect' requiring the preparation of an Environmental Impact Report (EIR) per CEQA guidelines § 15064.5(b)(c). In order to comply with this provision, the lead agency is required to assess whether the project will have an adverse impact on these resources within the 'area of potential effect (APE)', and if so, to mitigate that effect. To adequately assess the project-related impacts on historical resources, the Commission recommends the following action:

√ Contact the appropriate California Historic Resources Information Center (CHRIS). Contact information for the Information Center nearest you is available from the State Office of Historic Preservation (916/653-7278)/ http://www.ohp.parks.ca.gov/1068/files/IC%20Roster.pdf The record search will determine:

- If a part or the entire APE has been previously surveyed for cultural resources.
- If any known cultural resources have already been recorded in or adjacent to the APE.
- If the probability is low, moderate, or high that cultural resources are located in the APE.
- If a survey is required to determine whether previously unrecorded cultural resources are present.

√ If an archaeological inventory survey is required, the final stage is the preparation of a professional report detailing the findings and recommendations of the records search and field survey.

- The final report containing site forms, site significance, and mitigation measurers should be submitted immediately to the planning department. All information regarding site locations, Native American human remains, and associated funerary objects should be in a separate confidential addendum, and not be made available for pubic disclosure.
- The final written report should be submitted within 3 months after work has been completed to the appropriate regional archaeological Information Center.

√ Contact the Native American Heritage Commission (NAHC) for:

* A Sacred Lands File (SLF) search of the project area and information on tribal contacts in the project vicinity that may have additional cultural resource information. Please provide this office with the following citation format to assist with the Sacred Lands File search request: USGS 7.5-minute quadrangle citation with name, township, range and section; .

- The NAHC advises the use of Native American Monitors to ensure proper identification and care given cultural resources that may be discovered. The NAHC recommends that contact be made with Native American Contacts on the attached list to get their input on potential project impact (APE). In some cases, the existence of a Native American cultural resources may be known only to a local tribe(s).

√ Lack of surface evidence of archeological resources does not preclude their subsurface existence.

- Lead agencies should include in their mitigation plan provisions for the identification and evaluation of accidentally discovered archeological resources, per California Environmental Quality Act (CEQA) §15064.5 (f). In areas of identified archaeological sensitivity, a certified archaeologist and a culturally affiliated Native American, with knowledge in cultural resources, should monitor all ground-disturbing activities.
- Lead agencies should include in their mitigation plan provisions for the disposition of recovered artifacts, in consultation with culturally affiliated Native Americans.

√ Lead agencies should include provisions for discovery of Native American human remains or unmarked cemeteries in their mitigation plans.

* CEQA Guidelines, Section 15064.5(d) requires the lead agency to work with the Native Americans identified by this Commission if the initial Study identifies the presence or likely presence of Native American human remains within the APE. CEQA Guidelines provide for agreements with Native American, identified by the

STATE OF CALIFORNIA

GOVERNOR'S OFFICE *of* PLANNING AND RESEARCH

STATE CLEARINGHOUSE AND PLANNING UNIT

ARNOLD SCHWARZENEGGER
GOVERNOR

CYNTHIA BRYANT
DIRECTOR

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SEP 1 5 2007
City of Tehachapi

Notice of Preparation

September 12, 2007

To: Reviewing Agencies

Re: AD & SPR No. 2007-11 - Wal-Mart
SCH# 2007081139

Attached for your review and comment is the Notice of Preparation (NOP) for the AD & SPR No. 2007-11 draft Environmental Impact Report (EIR).

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

Please direct your comments to:

David James
City of Tehachapi
115 South Robinson Street
Tehachapi, CA 93561

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

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

Sincerely,

Scott Morgan
For: Project Analyst, State Clearinghouse

Attachments
cc: Lead Agency

1400 10th Street P.O. Box 3044 Sacramento, California 95812-3044
(916) 445-0613 FAX (916) 323-3018 www.opr.ca.gov

Appendix B

Comment Letters in Response to the NOP

SECTION SIX
CORRESPONDENCE RECEIVED FROM EARLY PUBLIC CONSULTATION PER SECTION 15083 OF CEQA

(661) 822-2200
Fax: (661) 822-8559

City of Tehachapi

Respecting Our Past - Planning Our Future

115 South Robinson Street
Tehachapi, California 93561-1722
www.tehachapicityhall.com

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City of Tehachapi

August 7, 2007

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AUG 0 9 2007
TEHACHAPI CUMMINGS
COUNTY WATER DISTRICT

Tehachapi-Cummings County Water District
P.O. Box 326
Tehachapi, CA 93581

Dear Sir or Madam:

Enclosed herein please find an application for Architectural Design and Site Plan Review No. 2007-11, to establish a 185,433 square foot Wal-Mart Supercenter located east and adjacent to Tucker Rd./State Hwy 202 and south of Tehachapi Blvd. Please see vicinity map and location map for details.

The subject site is currently zoned C-3, and its land use classification is general commercial. The proposed supercenter will consist of general merchandise, grocery, and garden center shopping areas, all within the 185,433 square foot structure. The City of Tehachapi is preparing the initial study to determine what issues to address in the CEQA document and the appropriate level of CEQA review that will be required to process the application i.e., Negative Declaration, Mitigated Negative Declaration or Environmental Impact Report. To that end the City is transmitting the site plan to various "Responsible Agencies" per Section 15083 (Early Public Consultation) of the CEQA guidelines to solicit feedback on what issues should be evaluated, and to assist the City in determining what level of CEQA review is appropriate to adequately process the application and meet the CEQA requirements. To expedite this process, I respectfully request that all comments regarding this matter be provided no later than **August 17, 2007.**

Thank you for your assistance and consideration in this matter. Should you have any questions and/or concerns please do not hesitate to contact me at (661) 822-2200 ext. 119.

Sincerely,

David A. James
Community Development Director

MITIGATED NEGATIVE DEC. IS OUR SUGGESTION,

Glenn H. Mueller

Enclosure

ED GRIMES
Mayor

DEBORAH C. HAND
Mayor Pro-Tempore

STAN BECKHAM
Council Member

PHILIP A. SMITH
Council Member

LINDA S. VERNON
Council Member

JASON D. CAUDLE
City Manager

GREG GARRETT
Assistant City Manager

HANNAH H. CHUNG
Finance Director

DAVID A. JAMES
Community Development Director

DENNIS WAHLSTROM
Public Works Director

TIMOTHY McLAUGHLIN
Fire Chief

JEFF KERMODE
Chief of Police

DAVID ZWEIGLE
Airport Manager

PAT GASSAWAY
City Treasurer

THOMAS F. SCHROETER
City Attorney

DEBBIE SPARKS
City Clerk

JAY SCHLOSSER, P.E.
City Engineer

cc: Jim Smith, Union Pacific Railroad

ROADS DEPARTMENT
CRAIG M. POPE, P.E., Director
2700 "M" STREET, SUITE 400
BAKERSFIELD, CA 93301-2370
Phone: (661) 862-8850
FAX: (661) 862-8851
Toll Free: (800) 552-5376 Option 5
TTY Relay: (800)735-2929
E-Mail: *roads@co.kern.ca.us*

RESOURCE MANAGEMENT AGENCY
DAVID PRICE III, RMA DIRECTOR
Community Development Program Department
Engineering & Surveying Services Department
Environmental Health Services Department
Planning Department
Roads Department

August 15, 2007

Mr. David James
Community Development Director
115 South Robinson Street
Tehachapi, CA 93561-1722

Subject: City of Tehachapi Site Plan Review No. 2007-11, Proposed WalMart Super Center

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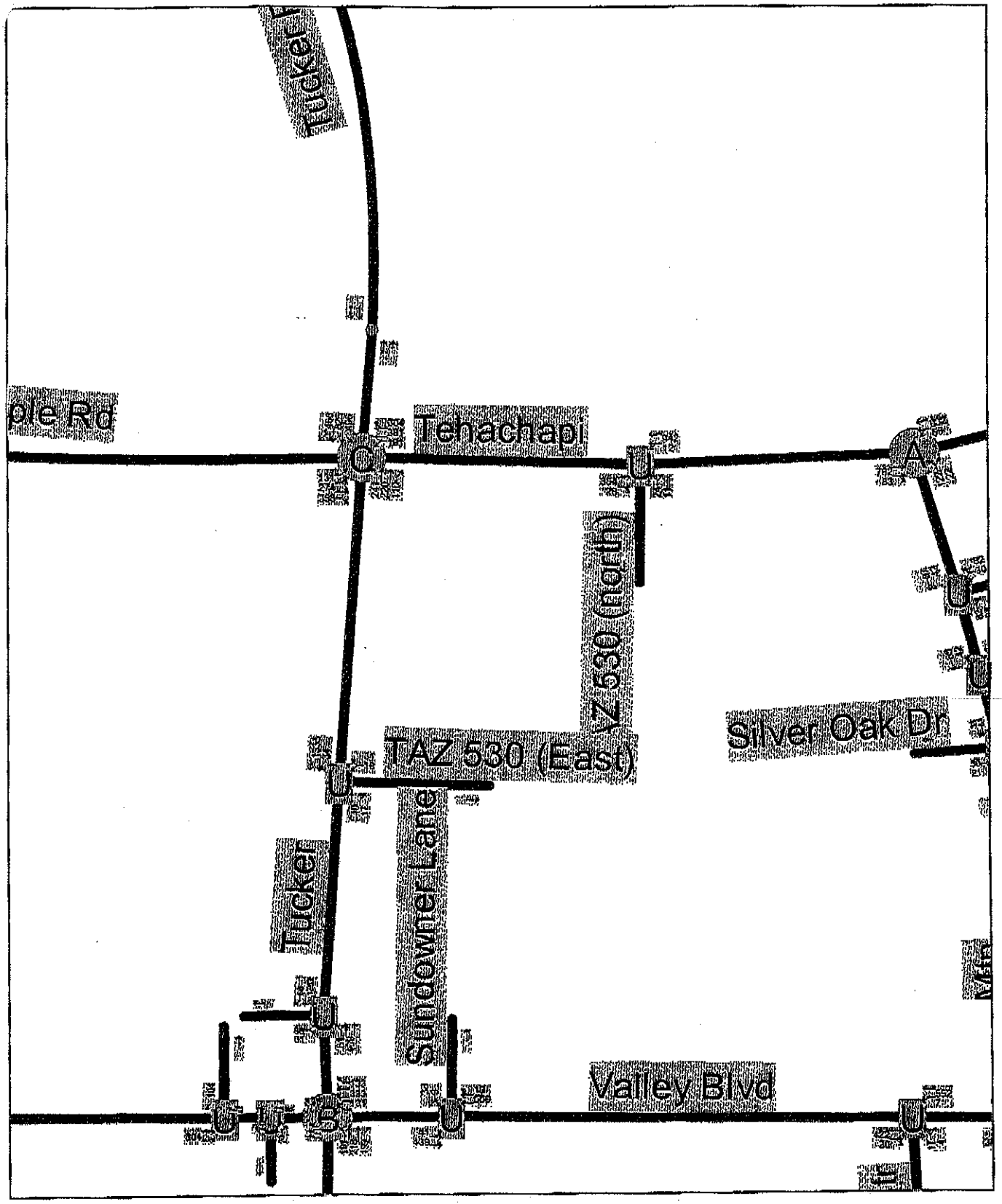

DEPARTMENT OF TRANSPORTATION
District 9
500 South Main Street
Bishop, CA 93514
PHONE (760) 872-0785
FAX (760) 872-0754
TTY 711 (760) 872-0785

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AUG 20 2007
City of Tehachapi

Flex your power!
Be energy efficient!

August 16, 2007

David James, Director
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115 South Robinson Street
Tehachapi, California 93561-1722

File: 09-KER
EC
SCH # : TBD

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Sincerely,

Gayle J. Rosander

GAYLE J. ROSANDER
IGR/CEQA Coordinator

c: Steve Wisniewski, Caltrans

PLANNING DEPARTMENT

TED JAMES, AICP, Director
2700 "M" STREET, SUITE 100
BAKERSFIELD, CA 93301-2323
Phone: (661) 862-8600
FAX: (661) 862-8601 TTY Relay 1-800-735-2929
E-Mail: planning@co.kern.ca.us
Web Address: www.co.kern.ca.us/planning

RESOURCE MANAGEMENT AGENCY

DAVID PRICE III, RMA DIRECTOR
Community & Economic Development Department
Engineering & Survey Services Department
Environmental Health Services Department
Planning Department
Roads Department

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City of Tehachapi

August 17, 2007

File: City of Tehachapi
Wal-Mart Supercenter

City of Tehachapi
Community Development
Attn: David James
115 South Robinson Street
Tehachapi, California 93561

RE: Early Consultation CEQA : Wal-Mart Supercenter Site Plan Review No. 2007-11

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Sincerely,

Lorelei H. Oviatt A.I.C.P
Division Chief

WAL-MART
CEQA
DISTRIBUTION LIST

Leroy Barker
Tehachapi Unified School District
400 South Snyder
Tehachapi, CA 93561

Kern County Library-Tehachapi
1001 W. Tehachapi Blvd.
Suite A 400
Tehachapi, CA 93561

Kern County Fire Department
Attn: Kevin Scott
5642 Victor Street
Bakersfield, CA 93308

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915 Capitol Mall, Room 364
Sacramento, CA 95814

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P.O. Box 373
Tehachapi, CA 93581

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Attn: Dwight Ensor
3701 Pegasus, Ste. 114
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Kern County Public Works & Roads
2700 "M" Street, Suite 400
Bakersfield, CA 93301

Native American Heritage Council of
Kern County Control Board/Lahontan Region
P.O. Box 1507
Bakersfield, CA 93302

Kern County Office of Planning
2700 "M" Street, Suite 100
Bakersfield, CA 93301

Kern County Environmental Health Department
2700 "M" Street, Suite 300
Bakersfield, CA 93301

Kern County Waste Management
ATTN: Daphne Washington
2700 "M" Street, Suite 500
Bakersfield, CA 93301-2370

Alis Clausen
Southern California Edison Company
42060 10th Street West
Lancaster, CA 93534

David L. Jones
Kern County Air Pollution Control District
2700 "M" Street, Suite 302
Bakersfield, CA 93301

Benz Sanitation
P.O. Box 1750
Tehachapi, CA 93581

SBC
Attn: Planning Department
1250 East Ashlan Avenue
Fresno, CA 93762

Kern Council of Governments
1401 19th Street, Suite 300
Bakersfield, CA 93301

State Department of Transportation
Attn: CEQA Coordinator
500 South Main Street
Bishop, CA 93514

California Regional Water Quality Control
Board
11020 Sun Center Dr. Ste. 200
Rancho Cordova, CA 95670

Supervisor Don Maben
1115 Truxtun Avenue, Suite 502
Bakersfield, CA 93301

Tehachapi Valley Healthcare District
115 West E Street
Tehachapi, CA 93561

WAL-MART
CEQA
DISTRIBUTION LIST

Tehachapi-Cummings County Water District
P.O. Box 326
Tehachapi, CA 93581

Tehachapi Resource Conservation District
202 S. Green
Tehachapi, CA 93561

Tehachapi Police Department
Chief Jeff Kermode
129 East F St.
Tehachapi, CA 93561

City of Tehachapi
Dennis Wahlstrom
115 S. Robinson St
Tehachapi, CA 93561

City of Tehachapi
Dave Zweigle
115 S. Robinson St.
Tehachapi, CA 93561

State Office of Planning and Research
1400 Tenth St. Room 121
Sacramento, CA 95814

STATE OF CALIFORNIA

Arnold Schwarzenegger, *Governor*

PUBLIC UTILITIES COMMISSION
505 VAN NESS AVENUE
SAN FRANCISCO, CA 94102-3298

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OCT 1 1 2007
City of Tehachapi

October 9, 2007

David James
City of Tehachapi
115 South Robinson Street
Tehachapi, CA 93561

RE: AD & SPR No. 2007-11 (WalMart), SCH# 2007081139

Dear Mr. James:

As the state agency responsible for rail safety within California, we recommend that any development projects planned adjacent to or near the rail corridor in the City be planned with the safety of the rail corridor in mind. New developments may increase traffic volumes not only on streets and at intersections, but also at at-grade highway-rail crossings. This includes considering pedestrian circulation patterns/destinations with respect to railroad right-of-way (ROW).

Safety factors to consider include, but not limited to, the planning for grade separations for major thoroughfares, improvements to existing at-grade highway-rail crossings due to the increase in traffic volumes and appropriate fencing to limit the access of trespassers onto the railroad right-of-way.

Of specific concern is the cumulative impact from increased traffic from the numerous projects occurring in the vicinity on the existing at-grade highway-rail crossings on Green and Hayes Streets.

The above-mentioned safety improvements should be considered when approval is sought for the new development. Working with Commission staff early in the conceptual design phase will help improve the safety to motorists and pedestrians in the City.

If you have any questions in this matter, please call me at (415) 703-2795.

Very truly yours,

Kevin Boles
Environmental Specialist
Rail Crossings Engineering Section
Consumer Protection and Safety Division

cc: Jim Smith, Union Pacific Railroad

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SEP 10 2007
City of Tehachapi

STATE OF CALIFORNIA Arnold Schwarzenegger, Governor

NATIVE AMERICAN HERITAGE COMMISSION
915 CAPITOL MALL, ROOM 364
SACRAMENTO, CA 95814
(916) 653-6251
Fax (916) 657-5390
Web Site www.nahc.ca.gov
e-mail: ds_nahc@pacbell.net

September 7, 2007

Mr. David A. James, Community Development Director
City of Tehachapi
115 South Robinson Street
Tehachapi, CA 93561-1722

Re: SCH#2007081139; CEQA Notice of Completion; Early Consultation Under §15083 of CEQA Guidelines for Site Plan Review No. 2007-11 to establish a 185,433 square feet Wal-Mart facility in the City of Tehachapi; Kern County, California

Dear Mr. James:

The Native American Heritage Commission is the state's Trustee Agency for Native American Cultural Resources. The California Environmental Quality Act (CEQA) requires that any project that causes a substantial adverse change in the significance of an historical resource, that includes archaeological resources, is a 'significant effect' requiring the preparation of an Environmental Impact Report (EIR) per CEQA guidelines § 15064.5(b)(c). In order to comply with this provision, the lead agency is required to assess whether the project will have an adverse impact on these resources within the 'area of potential effect (APE)', and if so, to mitigate that effect. To adequately assess the project-related impacts on historical resources, the Commission recommends the following action:

√ Contact the appropriate California Historic Resources Information Center (CHRIS). Contact information for the Information Center nearest you is available from the State Office of Historic Preservation (916/653-7278)/ http://www.ohp.parks.ca.gov/1068/files/IC%20Roster.pdf The record search will determine:

- If a part or the entire APE has been previously surveyed for cultural resources.
- If any known cultural resources have already been recorded in or adjacent to the APE.
- If the probability is low, moderate, or high that cultural resources are located in the APE.
- If a survey is required to determine whether previously unrecorded cultural resources are present.

√ If an archaeological inventory survey is required, the final stage is the preparation of a professional report detailing the findings and recommendations of the records search and field survey.

- The final report containing site forms, site significance, and mitigation measurers should be submitted immediately to the planning department. All information regarding site locations, Native American human remains, and associated funerary objects should be in a separate confidential addendum, and not be made available for pubic disclosure.
- The final written report should be submitted within 3 months after work has been completed to the appropriate regional archaeological Information Center.

√ Contact the Native American Heritage Commission (NAHC) for:

* A Sacred Lands File (SLF) search of the project area and information on tribal contacts in the project vicinity that may have additional cultural resource information. Please provide this office with the following citation format to assist with the Sacred Lands File search request: USGS 7.5-minute quadrangle citation with name, township, range and section; .

- The NAHC advises the use of Native American Monitors to ensure proper identification and care given cultural resources that may be discovered. The NAHC recommends that contact be made with Native American Contacts on the attached list to get their input on potential project impact (APE). In some cases, the existence of a Native American cultural resources may be known only to a local tribe(s).

√ Lack of surface evidence of archeological resources does not preclude their subsurface existence.

- Lead agencies should include in their mitigation plan provisions for the identification and evaluation of accidentally discovered archeological resources, per California Environmental Quality Act (CEQA) §15064.5 (f). In areas of identified archaeological sensitivity, a certified archaeologist and a culturally affiliated Native American, with knowledge in cultural resources, should monitor all ground-disturbing activities.
- Lead agencies should include in their mitigation plan provisions for the disposition of recovered artifacts, in consultation with culturally affiliated Native Americans.

√ Lead agencies should include provisions for discovery of Native American human remains or unmarked cemeteries in their mitigation plans.

* CEQA Guidelines, Section 15064.5(d) requires the lead agency to work with the Native Americans identified by this Commission if the initial Study identifies the presence or likely presence of Native American human remains within the APE. CEQA Guidelines provide for agreements with Native American, identified by the

STATE OF CALIFORNIA

GOVERNOR'S OFFICE *of* PLANNING AND RESEARCH

STATE CLEARINGHOUSE AND PLANNING UNIT

ARNOLD SCHWARZENEGGER
GOVERNOR

CYNTHIA BRYANT
DIRECTOR

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SEP 1 5 2007
City of Tehachapi

Notice of Preparation

September 12, 2007

To: Reviewing Agencies

Re: AD & SPR No. 2007-11 - Wal-Mart
SCH# 2007081139

Attached for your review and comment is the Notice of Preparation (NOP) for the AD & SPR No. 2007-11 draft Environmental Impact Report (EIR).

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

Please direct your comments to:

David James
City of Tehachapi
115 South Robinson Street
Tehachapi, CA 93561

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

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

Sincerely,

Scott Morgan
For: Project Analyst, State Clearinghouse

Attachments
cc: Lead Agency

1400 10th Street P.O. Box 3044 Sacramento, California 95812-3044
(916) 445-0613 FAX (916) 323-3018 www.opr.ca.gov

Appendix C

Economic Study

ADMINISTRATIVE DRAFT

ECONOMIC IMPACT/ URBAN DECAY STUDY

PROPOSED WALMART TEHACHAPI, CA

November 4, 2009

Prepared for:

City of Tehachapi

Prepared by:

THE NATELSON DALE GROUP, INC.
24835 E. La Palma Avenue, Suite I
Yorba Linda, California 92887
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www.natelsondale.com

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I. INTRODUCTION

This report evaluates the potential economic impacts of the proposed Walmart project in the City of Tehachapi. In particular, the study evaluates the extent to which the proposed project would have competitive impacts on existing retail facilities in the trade area and consequently have the potential to result in urban decay. In addition to addressing the potential impacts of the proposed project itself, the study also considers cumulative impacts, taking into account the impacts from other planned/proposed retail projects in the trade area.

The project site totals approximately 25 acres located at the southeast corner of Tehachapi Boulevard and Tucker Road (State Route 202). For purpose of this analysis, the project is assumed to include the following components:

- A 165,000 square foot Walmart store, including 34,293 square feet devoted to grocery sales/support space and 750 square feet (sales area) devoted to a drive-through pharmacy;
- "Out lot" development totaling 11,800 square feet.

The out lots do not currently have identified uses as part of the application and will be developed at a later time. In order to fully evaluate the project's potential economic impacts, this study assumes these parcels will be developed with the following probable uses:

- Out lot 1: 5,200 square feet of retail;
- Out lot 2: 3,100 square-foot fast food restaurant with drive through; and
- Out lot 3: 3,500 square-foot fast food restaurant with drive through.

The analysis assumes that the project would open in 2011. Given that the actual tenants for the out lots are currently undefined, it is likely that they would actually be developed later than 2011. Thus, the assumption of full build out by 2011 is analytically conservative in that it assumes the maximum possible impact to existing competitor businesses.

The economic impact analysis addresses five key issues:

1. The potential for the proposed grocery component of the Walmart Supercenter to negatively impact the existing supermarkets in the relevant trade area (as defined below);
2. The potential for the proposed Walmart pharmacy to negatively impact existing drugstores in the trade area;
3. The potential for the proposed Walmart general merchandise space to negatively impact existing retail stores in the trade area;
4. The potential for the planned 11,800 square feet of out lot development to negatively impact existing restaurants and retail stores in the trade area; and
5. The cumulative impacts associated with the project when its economic impacts are considered together with the economic impacts of all major retail projects currently planned for development in the trade area.

Overview of Methodology

The analysis projects total resident purchasing power within the relevant trade area, and uses this projection of total demand as the basis for determining the extent to which the proposed project could be supported in the market area without negatively impacting existing businesses.

The study methodology includes the following major steps:

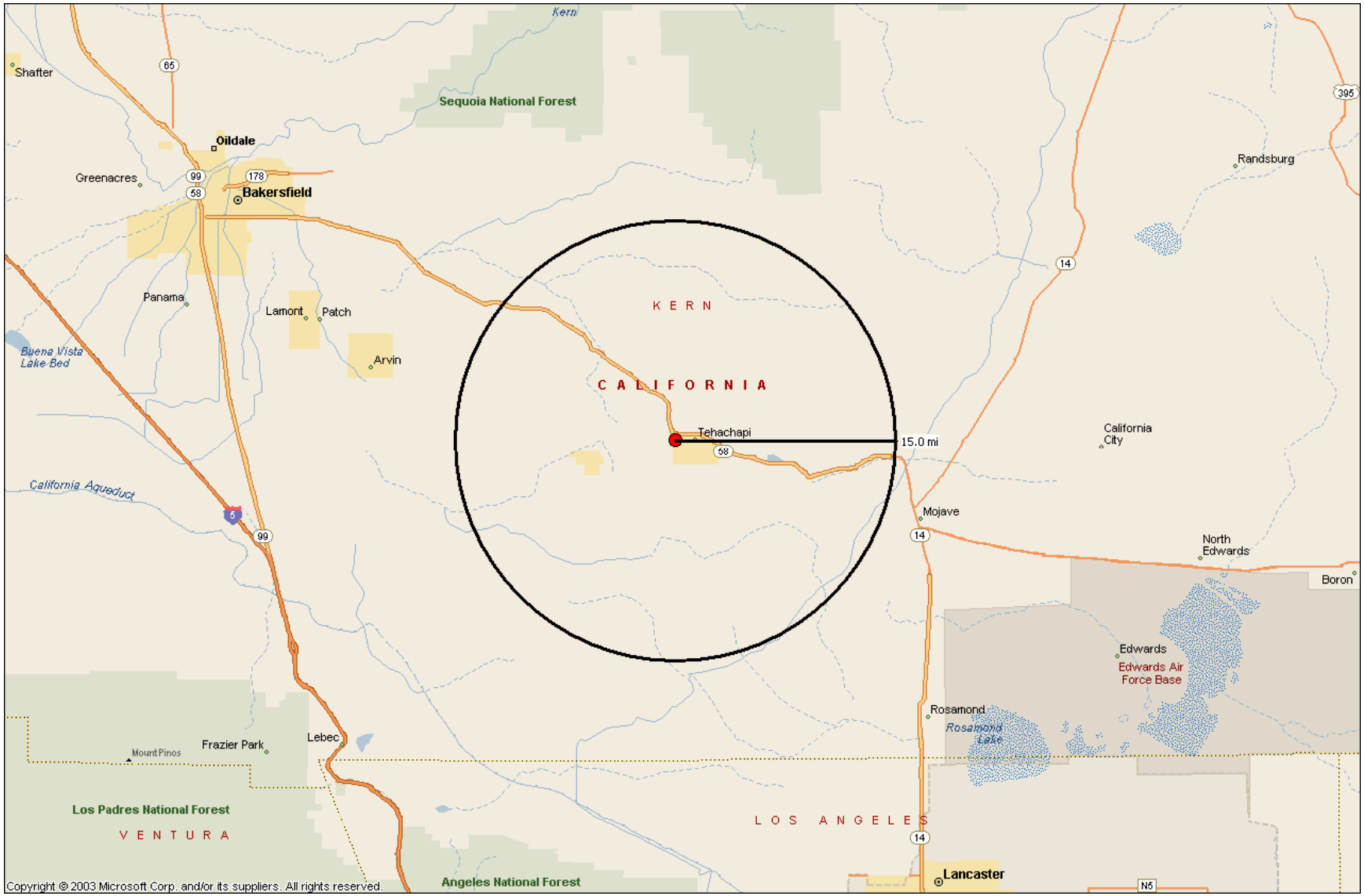
1. Estimate the current potential demand for general merchandise, apparel, furniture, specialty, grocery, drugstore and restaurant sales in the trade area, based on existing demographics;
2. Project the portion of trade area retail demand that can potentially be captured within the City of Tehachapi;
3. Compare this "potential" demand to the actual volume of retail sales in the City, based on taxable sales data from the California State Board of Equalization (SBOE);
4. Estimate the volumes of additional general merchandise, apparel, furniture, specialty, grocery, drugstore and restaurant sales that the City could support in future years (through 2019), based on the difference between potentially supportable sales and the existing sales volumes; and
5. Estimate the square footage of new retail space that could be supported in the City, by translating potential new retail sales (determined in step 4) into supportable square feet of retail space.

For the non-grocery retail categories, the potential impacts are expressed in terms of the square feet of existing businesses that could potentially be displaced by the proposed project. For the grocery category, in addition to evaluating the potential square footage displacement, the report evaluates direct potential sales impacts (in terms of dollars per square foot) to existing supermarkets in the City. This additional level of analysis for supermarkets is possible because the universe of supermarkets in the City is small (there are only two supermarkets in the City). Thus, it is possible to estimate the existing aggregate and average sales of these supermarkets, based on data from the SBOE.

Assumed Trade Area

For purposes of this study, the trade area has been defined by a 15-mile radius around the proposed project site. Additional information on the trade area design is provided in Section III of the report. The trade area boundaries are shown on Figure I-1 on the following page.

Figure I-1: Trade Area Boundaries



What this Study Provides

Since this study is being completed as part of the Environmental Impact Report (EIR) process for the proposed project, it focuses strictly on the types of economic impacts that are defined as significant by the California Environmental Quality Act (CEQA). Specifically, per Section 15131(b) of the CEQA Guidelines, a project's economic impacts on a community are considered significant only if they can be tied to direct physical changes in the market area (i.e., physical deterioration of existing retail centers/facilities). For purposes of this analysis, The Natelson Dale Group, Inc. (TNDG) has established the following criteria to determine if the project's market impacts would be significant enough to create a lasting physical change in a market area:

- Any diversion of sales from existing retail facilities would have to be severe enough to result in business closings; and

- The business closures would have to be significant enough in scale (i.e., in terms of the total square footage affected and/or the loss of key "anchor" tenants) and duration to affect the viability of existing shopping centers or districts.

Within the above context, the analysis includes a description of the "baseline" condition of existing retail facilities in the trade area. In particular, TNDG completed a detailed inventory of existing retail stores and vacancies.

II. EXECUTIVE SUMMARY

II-A. SUMMARY CONCLUSIONS REGARDING POTENTIAL FOR URBAN DECAY

It is TNDG's conclusion that the proposed project will potentially have substantial economic effects on existing retail businesses in the trade area. In this context, it is important to note that the terms "economic impact" and "economic effect" refer to loss of sales, or at most, closure of a business. Under CEQA, such purely economic impacts are not in themselves considered significant. In order to meet the definition of a "significant impact" under CEQA, there must be a substantial *physical* effect. For example, the competitive effects of a new project could result in a substantial economic impact to an existing business, leading to its closure and result in the vacancy of that space. If that space remained vacant for an extended period without regular maintenance such that it was subject to physical deterioration, then urban decay conditions could ultimately ensue. It is the ultimate physical effect of urban decay that would be considered a significant impact under CEQA, but not the substantial economic effect and ensuing chain of events that caused it.

Key conclusions regarding the proposed project's potential economic effects are summarized as follows:

- The Walmart grocery component will potentially cause one of the existing supermarkets in Tehachapi to close;

- Technically, there is sufficient "residual demand" (i.e., local purchasing power that currently "leaks" to retail facilities in larger cities) to support the general merchandise or "GAFO"[1] components of the proposed project without negatively impacting existing retailers. As a practical matter, though, the existing Tehachapi Kmart store is likely to be vulnerable to new competition. This vulnerability primarily stems from the well-known financial weaknesses of the Kmart chain and is not specifically an impact of the proposed project or an indication of insufficient market support for new GAFO stores in Tehachapi.[2]

- The proposed project would <u>not</u> have substantial economic impacts on existing restaurants in the trade area. There is sufficient demand to support to the two fast food restaurants (on the project's out lots) without negatively impacting existing restaurants.

Urban Decay Conclusions. Whereas the potential closure of one of Tehachapi's existing supermarkets is clearly a substantial economic impact, TNDG does not believe that it would ultimately result in urban decay. There is sufficient residual demand to support the reuse of any vacated space with other (non-grocery) retail tenants.

The same conclusion would apply to the potential closure of the existing Kmart store. There is sufficient demand to support the use of this space with other retail tenants.

---

[1] "GAFO" is a retail industry acronym for the <u>G</u>eneral Merchandise, <u>A</u>pparel, <u>F</u>urniture and <u>O</u>ther/Specialty retail categories. The GAFO categories generally correspond to the merchandise mix of a discount department store such as Walmart.

[2] It should be emphasized that TNDG does is not privy to store-level sales data for the Tehachapi Kmart location; the potential for store closure is being noted just on the basis of Kmart's chain wide financial weakness. See discussion on pages 10 to 12.

Thus, it is TNDG's conclusion that the proposed project is not likely to result in urban decay. This conclusion also applies to the cumulative projects analysis. The analysis supporting this conclusion is summarized below and detailed in Sections II-G, II-H and II-I.

II-B. OVERVIEW OF EXISTING COMMERCIAL RETAIL MARKET IN TRADE AREA

As part of the analysis, TNDG completed a comprehensive inventory of all existing retail tenants and vacancies in the trade area[3]. The detailed inventory is provided in Appendix B of the report.

Based on the inventory, there are no existing indications of urban decay in the trade area. The total inventory of retail space in the trade area is estimated at approximately 864,400 square feet. Of this total, approximately 754,700 square feet or 87% of the overall inventory is located in the City of Tehachapi. The remaining 109,700 square feet (13%) is located in unincorporated areas immediately adjacent to the City.

The trade area's retail space is currently 95% occupied, suggesting that the market is relatively strong (a vacancy rate in the range of 5% to 10% is generally considered to be reflective of a healthy retail market). Recent new development in the City includes a Home Depot store and the Orchard Shopping Center anchored by a Western Workwear store.

There is approximately 126,100 square feet of retail space (which is included in the citywide total listed above) in the downtown area of Tehachapi. The downtown has a strong representation of specialty retail, eating and drinking establishments, and service-based businesses. Vacant retail space in downtown totals approximately 5,700 square feet[4], translating to a vacancy rate of 4.5%, which indicates that the downtown retail market is relatively healthy. Indeed, it is recognized that the downtown has made significant progress toward revitalization in recent years as reflected in the 2007 Crystal Eagle Award (for physical improvement). The award was presented by the California Downtown Association to the City for its revitalization of historic downtown Tehachapi. Moreover, two former vacant spaces in the downtown area – 125 West Tehachapi Boulevard and 112 East Tehachapi Boulevard – were reoccupied by Hodad's Surf Shop and Debbie's Fabrics, respectively, during the period between January and September of 2009.

The breakdown of the existing retail inventory by category is summarized on Table II-1 on the following page.

[3] The inventory was first completed in September, 2008. It was updated in January, 2009 and September, 2009.
[4] This total does not include a vacant First Interstate bank on the corner of South Green Street and "F" street, given that this is a freestanding service-based (non-retail) vacancy.

Table II-1:
Summary of Existing Retail Inventory
Tehachapi Retail Trade Area

Tenant Category	Total Square Feet	Percent of Total
Apparel	19,669	2.3%
General Merchandise	147,411	17.1%
Food Stores (supermarkets, etc.)	141,870	16.4%
Restaurants	157,659	18.2%
Home Furnishings and Appliances	22,981	2.7%
Hardware & Building Materials	171,967	19.9%
Automobiles & Parts	12,738	1.5%
Service (Gasoline) Stations	20,145	2.3%
Specialty/Other	86,302	10.0%
Services in Retail Space	37,915	4.4%
Subtotal, Occupied Space	818,657	94.7%
Vacant Space	45,706	5.3%
Grand Total	864,362	100.0%

Source: TNDG, see Appendix B for detailed inventory.

II-C. IMPACT OF WALMART GROCERY COMPONENT

It is TNDG's conclusion that a supermarket component of the proposed Walmart could potentially cause one of the existing supermarkets in Tehachapi to close. The analysis supporting this conclusion is summarized below.

Project Description: For purposes of this analysis, it is assumed that grocery component of the proposed Walmart would total 34,293 square feet (24,995 square feet of grocery sales area plus 9,298 square feet of grocery support space). TNDG projects that the Walmart grocery space would generate sales levels equivalent to the national average for grocery sales in Walmart stores of approximately $621 per square foot (gross area)[5], or total grocery sales of approximately $21.3 million.

Evaluation of Existing Grocery Market: Tehachapi currently has two major supermarkets (Albertson's and Save-Mart) totaling an estimated 93,566 square feet. TNDG's demand analysis indicates that there is currently (year 2008) sufficient demand to support average supermarket sales volumes in the City of $586 per square foot[6]. This is approximately 23% above the industry median (for supermarkets in the U.S.) of approximately $475 per square foot, suggesting that that Tehachapi's existing supermarkets are performing relatively strongly. The

[5] Based on data from Progressive Grocer's Super 50 publication, May 2009.
[6] Since the State Board of Equalization reports only taxable sales (and a large portion of sales in supermarkets are nontaxable), it is necessary to estimate the total potential sales of the existing supermarkets. TNDG has utilized the following assumptions for this calculation: (1) taxable supermarket sales account for 78% of taxable sales in the overall Food category and (2) total sales are estimated by multiplying taxable sales by a factor of 3.2. These factors have been derived by TNDG based on numerous analyses of supermarket supply and demand in comparable communities throughout California, and based on data we have reviewed from the State Board of Equalization (SBOE), Claritas, and selected supermarket chains.

relatively strong performance would be expected given that population growth (and therefore growth in grocery demand) has greatly outpaced new supermarket development over the past 12 years. Whereas no new supermarket has been developed in Tehachapi since 1994, the number of households in the trade area has grown by 48% during that time.

Projected Growth in Grocery Demand: Total demand for supermarket sales in the City is projected to increase from approximately $54.8 million in 2008 to approximately to approximately $56.8 million in 2011 (the assumed opening date of the proposed project). By 2019, total demand for supermarket sales in the City is projected to reach $63.7 million (all projections are given in 2008 constant dollars[7]). Given the relatively modest growth in citywide grocery demand over the next several years, only a small portion of Walmart's grocery sales would be supported by incremental demand. The vast majority of Walmart Walmart's grocery sales would be diverted from existing supermarkets in the City. Table III-2 below evaluates this impact in terms of the potential reduction in the sales per square foot volume at the two existing supermarkets.

Table II-2:
Potential Sales Impacts to Existing Supermarkets
Grocery Component of Proposed Walmart
City of Tehachapi
In thousands of constant dollars

Description	2008	2009	2011	2013	2015	2017	2019
Total Food Sales Demand	$70,238	$71,103	$72,866	$74,673	$76,763	$79,192	$81,697
Supermarket Share @ 78%	$54,786	$55,460	$56,835	$58,245	$59,875	$61,770	$63,724
Less Demand Absorbed by Proposed Project (Walmart) 1/			$21,296	$21,296	$21,296	$21,296	$21,296
Net Demand Available to Support Existing Supermarkets	$54,786	$55,460	$35,540	$36,949	$38,579	$40,474	$42,428
Existing Supermarket Square Feet	93,566	93,566	93,566	93,566	93,566	93,566	93,566
Potential Sales per Square Foot Existing Supermarkets	***$586***	***$593***	***$380***	***$395***	***$412***	***$433***	***$453***

Source: TNDG; Progressive Grocer, The Super 50, May 2009.

1/ Sales per square foot (gross area) assumptions:
Walmart: $621

Conclusion: The above analysis suggest that the development of the proposed project could potentially cause one of the existing supermarkets in Tehachapi to close, given that the combined sales volumes of the two existing supermarkets would fall 35% from the existing level with the entry of the Walmart store in 2011. Based on this projected sales impact and an

[7] The analysis uses 2008 as the base year since the most recent four quarters for which taxable sales data are available from the State Board of Equalization (SBOE) is the 4th quarter of 2007 and the 1st, 2nd, and 3rd quarters of 2008.

assumed sales-per-square foot support requirement of $475, Tehachapi would be overbuilt by approximately 18,700 square feet of supermarket space in 2011. By 2019, sales volumes ($453 per square foot) at the existing stores would recover to 95% of the national benchmark.

It should be noted that the potential closure of a supermarket is considered a worst-case scenario, given that this analysis conservatively uses the national median sales figure of $475 per square foot as a benchmark sales-per-square foot requirement. It is recognized that the median U.S. sales figure of $475 per square foot does not necessarily reflect a break-even threshold for all supermarkets. Since the $475 per square foot figure reflects the median sales figure, by definition half of all supermarkets are operating below this level, and it is known that some supermarket chains, nationally, operate at substantially lower sales levels than the median.

To evaluate the "typical" sales volumes of California supermarkets, TNDG utilized a proprietary database of chain-specific supermarket sales estimates provided by Trade Dimensions International, Inc., a market research firm of The Nielsen Company. The database, based on data for more than 3,100 individual stores, includes sales estimates for 49 supermarket chains operating in California along with aggregate sales estimates for independent supermarkets. According to this database, average sales per square foot by chain ranges from $212 to $801 per square foot. For all chains combined, the median and average sales per square foot measures are $385 and $412, respectively, with a standard deviation of $133 per square foot. As indicated in the sales per square foot estimates above, there is significant variability in sales volumes at individual supermarkets, and evidence indicating that a number of stores (and entire chains) are operating at well below the $475 threshold evaluated in this analysis. In fact, of the 50 grocery chains represented in the database (including the aggregated independent category), 35, or 70% of the total, generate average sales volumes below $475 per square foot. Further, more than half (54%) of the chains operate at sales volumes below $400 per square foot, while 20% operate below $300 per square foot. These data further suggest that the median U.S. sales figure is a relatively aggressive benchmark for estimating potential store closures[8].

Recent sales and operating history of the Tehachapi supermarkets suggests that these stores may be able to operate at sales volumes below the $475 per square foot benchmark. Indeed, TNDG estimates that the two Tehachapi supermarkets have historically operated at sales volumes as low as $374 per square feet (as measured in 2008 dollars)[9].

In the event one of the supermarkets were to close, it is not possible to reliably predict which of the two supermarkets would be most likely to close, given that TNDG is not privy to the sales performance or overall financial strength of individual existing supermarkets. Thus, the discussion in Section II-G, below, which evaluates the potential for urban decay to result from the possible store closure, evaluates *each* existing supermarket site from the standpoint of reuse potentials.

---

[8] It should be noted that the data provided by Trade Dimensions are sales *estimates* and not the supermarkets' *actual* sales volumes. However, TNDG has also evaluated similar sales estimates from Trade Dimensions in the form of their Retail Performance Reports, which provide store-level sales estimates for individual trade areas. For trade areas which TNDG has evaluated, the sales estimates in these reports are generally consistent with actual sales data available from the California State Board of Equalization (SBOE), suggesting that the Trade Dimensions' sales estimates are reasonably accurate.

[9] See Appendix C for an analysis of historic food sales in the City.

II-D. IMPACT OF PROPOSED PROJECT'S "GAFO" SALES

Project Description: The proposed project would include 135,907 square feet of space devoted to tenants in the GAFO (General Merchandise, Apparel, Furniture/Appliances and Other/Specialty) retail categories. This includes the non-grocery portion (130,707 square feet) of the proposed Walmart and the non-restaurant portion (5,200 square feet) of the proposed "out lot" development.

Comparison of Existing Supply and Demand: TNDG's demand analysis indicates potential market support for $110.3 million in GAFO retail sales in the City of Tehachapi, in the 2008 base year used in this analysis (hereinafter referred to as "existing"). Existing (2008) sales in these retail categories in the City are estimated at $34.1 million, suggesting that approximately 69.0% of potential GAFO sales in Tehachapi are being lost to other jurisdictions (especially larger cities such as Bakersfield, Lancaster and Palmdale with more substantial retail development). In other words, there is currently an estimated $76.2 million ($110.3 million - $34.1 million) in unrealized GAFO demand in the City – demand "leakage" which could be recaptured with the development of additional retail facilities. The $76.2 million in unrealized demand or leakage translates into approximately 244,200 square feet of additional GAFO space that could be supported in the City.

Projected Growth in Demand: Within the City of Tehachapi, potential demand for new retail space in the GAFO retail categories is projected to grow to approximately 267,900 square feet by 2011 (the assumed opening date for the proposed project), 288,300 square feet by 2015 and 314,100 square feet by 2019. See Table II-3, below, for TNDG's projection of supportable square feet within the GAFO retail categories from 2009 to 2019.

Table II-3:
Potential Demand for NEW GAFO Retail Space
City of Tehachapi
In Square Feet (all numbers are cumulative)

Retail Category	2009	2011	2013	2015	2017	2019
Demand for New GAFO space	258,643	267,877	277,333	288,280	301,000	314,123

Source: TNDG.

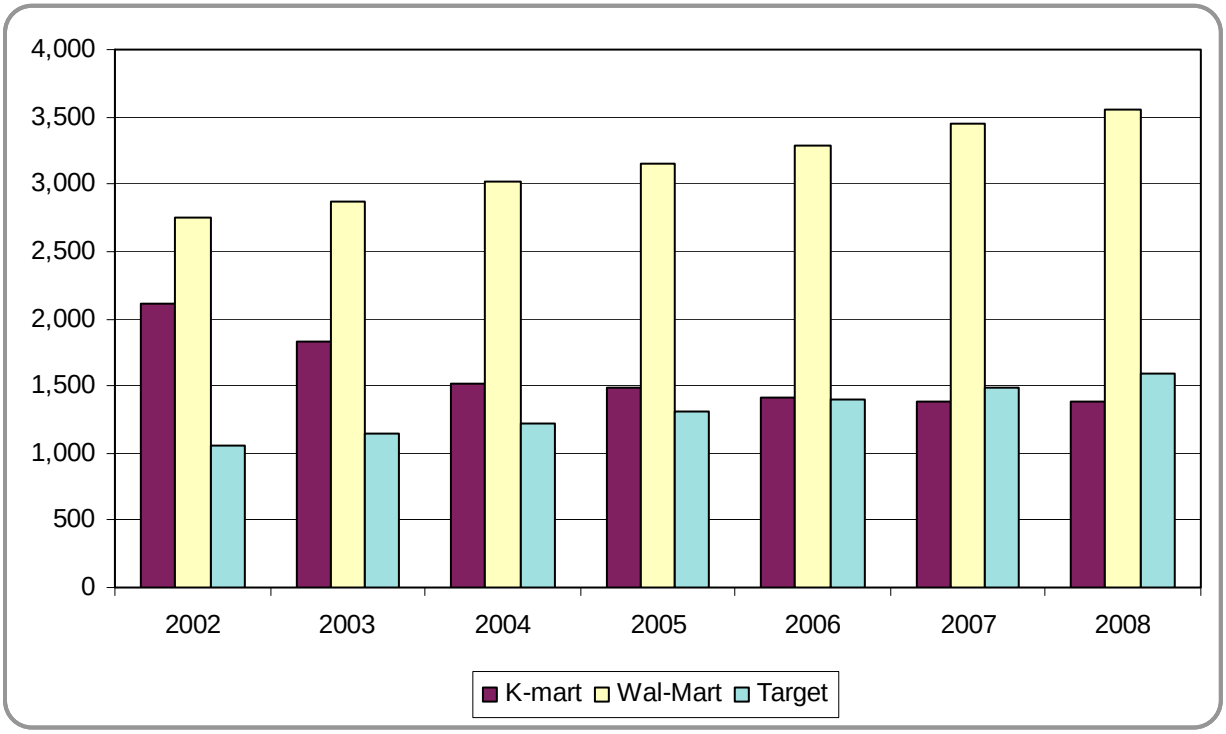
Conclusion: The proposed project's GAFO space, totaling 135,907 square feet, would be within the envelope of available demand for new space and thus is not – in and of itself – likely to result in the closure of existing businesses. However, for reasons described further below, TNDG believes that the Tehachapi Kmart store is vulnerable to closure, due to the chain's internal challenges combined with increased competition introduced by the proposed project.

Potential Vulnerability of Tehachapi Kmart Store

Although there is technically more than enough demand to support the proposed project without diverting sales from existing businesses, TNDG believes that the existing Tehachapi Kmart store is potentially vulnerable to competitive impacts. In large part, this is due to the chain's own internal challenges – not to an insufficiency of market demand for retail space. As shown on Figure II-1, below, the number of Kmart stores has declined by approximately 35% between 2002 (the year prior to filing bankruptcy) and 2008, from a total of 2,114 to 1,382 stores. On the

other hand, Walmart and Target have been adding stores at a significant rate during this time period, with the number of stores increasing by 29.1% and 51.1%, respectively. As the chart illustrates, the chain-wide trends are clear: the Walmart and Target chains are growing while Kmart is contracting.

Figure II-1:
Number of Kmart, Walmart, and Target Stores
2002 - 2008



Kmart was acquired by a hedge fund manager, Edward Lamper, during its bankruptcy proceedings in 2003. In 2005, Lamper acquired the Sears chain and combined it with Kmart to form the Sears Holding Corp. It has been widely acknowledged that Lamper and senior management have fundamentally mismanaged the chain over the past three years, with an overall focus on extreme cost-cutting to the detriment of the long-term viability of the company. During this period, there has been little or no investment in marketing, information technology, or the stores themselves, causing the chains to lose further ground against their primary competitors, such as Walmart, Target, Kohl's, JC Penney, among others.

Illustrating the poor performance of Kmart relative to Target and Walmart – its most direct competitors – are the same-store sales figures shown in Figure II-2 below. Same-store sales are sales for stores open for at least one year and are considered a key metric of a retail chain's overall performance. For Kmart, same-store sales have declined every year between 2002 and 2007 while they have increased at both Walmart and Target.

Figure II-2:
Same-store Sale Percentage Change: Kmart, Walmart, Target
2002 - 2007

Even without new competition, the existing Tehachapi Kmart would be vulnerable to closure, as many analysts are projecting Kmart will continue to close existing underperforming stores[10]. Although we have no way knowing the particular sales performance of the Tehachapi Kmart[11], it would appear to be at increased risk for closure given that it would become somewhat "redundant" if a Walmart store is added to its immediate trade area.

[10] For example, "Profit Down, Sears may hold yard sale, analysts see a failure in bid to revive sales, only an asset play", *Wall Street Journal*, February 29, 2008; "Retail Store Maturity: Moderating unit growth to limit EPS and stock multiples", Deutsche Bank research report, April 15, 2008.
[11] However, chain-wide, Kmart is severely underperforming relative to Walmart and Target. According to Retail Maxim's most recent sales performance report, Kmart's average sales per square foot is $141, compared to $304 and $422 for Target and Walmart, respectively.

II-E. IMPACT OF PROPOSED PROJECT'S RESTAURANT SPACE

It is TNDG's conclusion that the fast food restaurants assumed to occupy two of the proposed project's "out lots" would not have substantial economic effects on existing restaurant establishments. The analysis supporting this conclusion is summarized as follows:

Project Description: For purposes of this analysis, it is assumed that the project would include 6,600 square feet of fast food restaurant space, with out lots 2 and 3 developed as 3,100 and 3,500 square-foot fast food restaurants, respectively.

Evaluation of Existing Restaurant Market: TNDG's demand analysis indicates existing (year 2008) potential market support for $31.2 million in restaurant sales in the City of Tehachapi. Existing (2008) restaurant sales in the City are estimated at $20.7 million, suggesting that there is currently $10.5 million ($31.2 million – $20.7 million) in unrealized restaurant demand in the City. This translates into approximately 26,300 square feet of additional restaurant space that could currently be supported in the City.

Projected Growth in Demand: Potential demand for new restaurant space in the City of Tehachapi is projected to grow to 29,200 square feet by 2011 (the assumed opening date for the proposed project), 33,500 square feet by 2015 and 39,000 square feet by 2019. See Table II-4, below, for TNDG's projection of supportable square feet within the Eating and Drinking retail category from 2009 to 2019.

Table II-4:
Potential Demand for NEW RESTAURANT Retail Space
City of Tehachapi
In Square Feet (all numbers are cumulative)

Retail Category	2009	2011	2013	2015	2017	2019
Demand for New Restaurant space	27,233	29,193	31,200	33,523	36,223	39,008

Source: TNDG.

Conclusion: The proposed project's restaurant space would fall well within the envelope of available demand for new eating establishments in Tehachapi. Thus, TNDG does not believe any existing restaurants will close due to the development of the proposed project.

II-F. IMPACT OF PROPOSED DRIVE-THROUGH PHARMACY

It is TNDG's conclusion that the proposed project's drive-through pharmacy would not have substantial economic effects on existing restaurant establishments. The analysis supporting this conclusion is summarized as follows:

Project Description: For purposes of this analysis, it is assumed that the project would include a 1,000-square foot drive-through pharmacy[12].

[12] The project application indicates that the drive-through pharmacy's sales are will be 750 square feet. Based on an assumption that the sales area represents 75% of the total pharmacy space (sales and support/stocking area) – the typical ratio of sales to total floor area for the supermarket components of Walmart Supercenters – the total pharmacy floor area is estimated at 1,000 square feet.

Evaluation of Existing Drug Store Market: Given potential disclosure issues, the SBOE does not release sales data for drug stores at the city level of geography[13]. However, we estimate drug store sales by identifying existing drug stores in the trade area and multiplying their total square feet by the average sales per square foot for this category, as shown in Table II-5 below. Based on the national sales per square foot average for drug stores, TNDG estimates the two existing drug stores could potentially generate close to $21 million in annual sales.

Table II-5:
Potential Sales Impacts to Existing Drug Stores from
Drive-Through Pharmacy Component
Tehachapi Retail Trade Area

Store	Address	Square Feet
Walgreens	1101 W Tehachapi Blvd.	14,488
Rite Aid	811 Tucker Rd.	16,234
Total		30,722
Sales per Square Foot 1/		$683
Total Estimated Sales - Existing Drug Stores		$20,983,126
Walmart Pharmacy - Gross Area 2/		1,000
Estimated Walmart Pharmacy Sales		$683,000
Walmart Pharmacy Sales as % of Existing Drug Store Sales		3.3%

Source: TNDG; Retail Maxim.
1/ July, 2009 issue of Retail Maxim
2/ Assumes drive-through pharmacy *sales area* accounts for 75% of *gross area*.

Conclusion: The proposed project's drive-through pharmacy's projected sales would represent, at most, 3.3% of existing drug store sales in the trade area. This indicates the maximum sales impact to existing drug stores would be 3.3% of their existing sales. However, in all likelihood the percentage is much lower given that full-scale drug stores carry many more goods in addition to prescription and non-prescription medicines, which the Walmart drive-through pharmacy will strictly sell. Thus, TNDG does not believe any existing drug stores will close due to the development of the proposed project.

[13] The State Board of Equalization (SBOE) includes Drug stores within the General Merchandise category.

II-G. POTENTIAL FOR URBAN DECAY

Overall Potential for Urban Decay

This section evaluates the potential for urban decay to occur based on the two major retail vacancies – 1) one of the two existing supermarkets and 2) the existing Kmart store – that could potentially result from development of the proposed project. Although the above potential vacancies would clearly be undesirable from the standpoint of commercial property owners, TNDG does not believe they are likely to result in urban decay. Urban decay is a potential consequence of a downward spiral of store closures and long-term vacancies[14]. While the phenomenon of urban decay is not defined under CEQA, it is assumed to be indicated by significant deterioration of structures and/or their surroundings. Such deterioration occurs when property owners reduce property maintenance activities below that required to keep their properties in good condition. Property-owners are likely to make reductions in maintenance under conditions where they see little likelihood of future positive returns. Store closures and vacancies, in and of themselves, do not meet the above criteria.

While the closure of a business is clearly a severe impact to the owners and employees of the firm, within the context of CEQA it is only significant if it results in sustained vacancies which in turn results in deterioration of the physical condition of the vacant building(s). For the reasons discussed below, TNDG believes property owners would have sufficient economic incentives to maintain these properties based on the potential for some type of retail re-use.

Reuse Suitability of Specific Potential Vacancies

This section evaluates the potential for urban decay to occur based on the two major retail building vacancies that could result from development of the proposed project:

1. *Existing Supermarket Space:* As indicated in TNDG's demand analysis, the grocery component of the proposed Walmart Supercenter under worst-case conditions could potentially lead to the closing of one of the City's two existing supermarkets (shown, along with information on the two shopping centers, on Table II-6 below). Given that TNDG is not privy to the sales performance or overall financial strength of individual existing supermarkets, it is not possible to reliably predict which of the two supermarkets would be most likely to close. However, given that the two supermarkets serve as anchor tenants to similar type shopping centers across the street from one another, reuse potentials are expected to be similar for both properties.

2. *Existing Kmart Store:* Although TNDG's quantitative demand projections indicate that there would be sufficient demand to support the continued operation of the existing Kmart after the opening of the proposed project, there are compelling reasons – unrelated to the proposed project – to anticipate the eventual closure of that store as well. Thus, the discussion below considers the reuse potentials of the existing Kmart store.

[14] As cited in the Bakersfield Citizens for Local Control v. City of Bakersfield (2004) 124 Cal. App 4th 1184, p 2.

Table II-6:
Existing Supermarkets
City of Tehachapi

Supermarket	Square Feet (SF)	Total Shopping Center SF	Number of other Tenants	Co-Anchors	Distance from Project
Albertsons 775 Tucker Road	49,500	63,008	8 (plus 4 vacancies)	N/A	0.38 miles
Save Mart 835 Tucker Road	44,066	100,509	14 (plus 3 vacancies)	Rite Aid, Sears	0.46 miles

Source: TNDG

Under the worst-case scenario of one of the two existing supermarkets and the existing Kmart closing, Table II-7, on page 18, projects the demand for new retail space (i.e., over and above the existing amount of retail space) in the City from 2009 to 2019. As shown on the table, demand for new retail space is expected to reach approximately 303,900 square feet by 2011. This is well over the potential amount of vacant space that would result from the two potential store closings discussed above.[15] The existing Kmart store is approximately 91,500 square feet, and the larger of the two existing supermarkets (Albertsons) is approximately 49,500 square feet. Thus, in the worst-case scenario of these two stores closing, the existing amount of vacant square feet in the trade area would increase by approximately 141,000 square feet.

As discussed above, TNDG's demand analysis indicates there would be more than sufficient market support to re-occupy a potentially vacant supermarket and a vacant Kmart store in Tehachapi.[16] Just within the GAFO categories, there are a number of retailers in the in the Other/Specialty and Apparel categories that would be potential candidates to reoccupy one of the potential vacant supermarkets. In the Other/Specialty category, this could include an office supply store (e.g., Staples), a Pets specialty store (e.g., Petsmart), a sporting goods store (e.g. Big 5 Sporting Goods), or an arts/crafts supply store (e.g., Michaels), among others. Along with the Other/Specialty type tenants, in the Apparel category, an off-price apparel retailer – such as a Ross Dress for Less, T.J. Maxx, Marshalls, etc. – would be a candidate to reoccupy one of the potentially vacant supermarket sites.[17]

Although it would be difficult to reoccupy the Kmart site with a single tenant, given its relatively large size, it would be feasible to reconfigure and subdivide the building for multiple tenants. Many of the retailers discussed above would also be viable candidates to reoccupy the potentially vacant store. In addition, the existing Kmart store is in good physical condition and is

[15] For purposes of evaluating the potential for urban decay, we have assumed a worst-case scenario in that one of the two existing supermarkets and the existing Kmart store would close. With these stores closed, this would create additional demand (these stores' lost sales) in the City. This additional demand is shown on Table II-7 and explained in note 3.
[16] Given that there would only be market support for approximately 28,900 square feet (see Table II-7) of new supermarket space in 2015, it is unlikely that one of the existing supermarkets, if one were to close, would be reoccupied by another supermarket.
[17] It should be noted that these are just examples of national retail chains that potentially cold reoccupy the vacant space. TNDG does not have specific knowledge of any of these particular chains' interest in the Tehachapi market. It is also possible that the potential vacant space would be reoccupied by local independent retailers in the GAFO categories.

strategically located near the intersection of West Tehachapi Boulevard and Tucker Road along with easy access to State Route (SR)-58.

For the reasons discussed above, a closed supermarket and/or a closed Kmart store are unlikely to be subject to extended vacancy. Under these circumstances, the property owners would have a strong economic incentive to maintain the buildings in a condition suitable for re-tenanting. It is recognized that few national retailers are expanding in the current challenging economic climate, in response to a significant drop in private household consumption. However, most experts expect the economy to recover by 2011. As the economy recovers, and job growth becomes positive once again, consumer demand is expected to increase. In response, national retailers will likely begin to add new stores to match the increase in demand.

Table II-7:
Net Supportable Retail Space
After Opening of Proposed Project
City of Tehachapi

Retail Category	2009	2011	2013	2015	2017	2019
Demand 1/						
GAFO	258,643	267,877	277,333	288,280	301,000	314,123
Food (Supermarkets)	23,193	26,088	29,055	32,487	36,476	40,589
Eating and Drinking	27,233	29,193	31,200	33,523	36,223	39,008
Building Materials/Hardware	34,193	37,178	40,240	43,778	47,895	52,138
Automotive Parts	20,491	21,054	21,631	22,298	23,074	23,874
Services @ 10% of Total Space	40,417	42,377	44,384	46,707	49,407	52,192
TOTAL	404,169	423,765	443,843	467,073	494,074	521,925
Square Feet Absorbed by Project: 2/						
--GAFO		(135,907)	(135,907)	(135,907)	(135,907)	(135,907)
--Supermarket		(34,293)	(34,293)	(34,293)	(34,293)	(34,293)
--Eating and Drinking		(6,600)	(6,600)	(6,600)	(6,600)	(6,600)
Added Demand Resulting from Vacancy: 3/						
--GAFO (closed Kmart)		38,142	38,142	38,142	38,142	38,142
--Supermarket (closed store)		30,754	30,754	30,754	30,754	30,754
Net Demand						
GAFO	258,643	170,112	179,568	190,515	203,235	216,358
Food (Supermarkets)	23,193	22,549	25,516	28,948	32,937	37,050
Eating and Drinking	27,233	22,593	24,600	26,923	29,623	32,408
Building Materials/Hardware	34,193	37,178	40,240	43,778	47,895	52,138
Automotive Parts	20,491	21,054	21,631	22,298	23,074	23,874
Services @ 10% of Total Space	40,417	30,387	32,395	34,718	37,418	40,203
NET TOTAL	***404,169***	***303,872***	***323,950***	***347,180***	***374,181***	***402,032***

Source: TNDG; City of Tehachapi

Notes: 1/ See Table III-10 and Appendix A, Table A-10.

2/ See page 1 for project description.

3/ Added demand resulting from potential closure of stores. For Kmart, we have assumed that the existing Tehachapi store generates similar sales volumes to the chain-wide average of $125 per square foot. This would add approximately $11.44 million to demand in the GAFO category. Utilizing the benchmark sales per square foot factor or $300 for GAFO space (see Table III-9), this equates to additional demand of 38,142 square feet of GAFO space.

Assuming a benchmark sales per square foot factor of $475, there would be demand for approximately 74,820 square feet of supermarket space in the City after the opening of the proposed Walmart Supercenter. If we assume the larger (49,500 square feet) of the two existing supermarkets were to close and the other (44,066 square feet) remained opened, there would be demand for 30,754 square feet of new supermarket space (74,820 – 44,066 = 30,754) in Tehachapi in 2011.

II-H. POTENTIAL IMPACTS TO DOWNTOWN AREA

TNDG's experience in evaluating the impacts of big box retailers (such as the proposed Walmart) on small, independent merchants throughout southern and central California suggests that the impacts vary widely depending on the context. Clearly, there are examples of small businesses that have been unable to compete with big box stores. There are also prominent examples of traditional downtown areas that have been able to carve out specialized "niches" and continue to thrive despite the entry of big box competitors. Generally speaking, the difference in results can be explained by three factors:

1. The amount of resident demand for retail sales in the market area (i.e., whether the big box stores derive their sales from residual demand or "leakage" versus diverting sales from existing local merchants);

2. The degree to which trends in the traditional downtown areas were on a positive or negative path prior to the entry of the big box competitors (i.e., if an established trend of decline is already in evidence, disinvestment from an area is likely to occur with or without new competition);

3. The degree to which tenants in a downtown are selling goods directly comparable to those available at competitor big box stores.

Conclusion: Although TNDG's analysis concludes that the proposed project would potentially have substantial economic impacts on existing businesses, TNDG believes that these impacts would likely be concentrated in the two specific (non-downtown) locations evaluated above. As such, TNDG does not believe the downtown area would be vulnerable to urban decay conditions. TNDG bases this conclusion on the following:

- Based on TNDG's field inventory, there is no visible indication of economic distress (i.e., a large number of vacant stores or marginal uses) in the downtown area. The existing downtown retail vacancy rate of 4.5% indicates the market is relatively healthy (see Section II-B).

- The downtown area also includes a number of draws to the area, including a movie theater (the Hitching post) and the recently renovated Beekay Theater, which features various forms of live entertainment. In addition, the downtown is actively managed and promoted by the local non-profit, Main Street Tehachapi, with the aim of maintaining the area's historic preservation along with promoting its prosperity.

- The downtown has a strong representation of specialty retail, eating and drinking establishments, and service-based businesses, all of which offer a mix of merchandise and services that are not directly comparable to the type of goods that would be available at the proposed Walmart. In this regard, it is arguably the case that the downtown is actually less vulnerable to competitive impacts than the rest of the city. Since there are unlikely to be downtown vacancies resulting from the project, the conditions which would potentially result in urban decay would not occur.

- Further illustrating the relative strength of downtown, in 2007 the City of Tehachapi was awarded the Crystal Eagle Award for physical improvement by the California Downtown Association. The City received the award for recognition of the successful revitalization of historic Downtown Tehachapi.

II-I. CUMULATIVE IMPACTS OF PROJECTS PLANNED IN THE TEHACHAPI TRADE AREA

Whereas the above sections examine potential impacts strictly related to the proposed project, this section evaluates the cumulative impacts to the market based on all known pending retail development projects (including the proposed project evaluated in this analysis) in the retail trade area. In addition to the proposed Walmart project, there is one known planned retail development project in the trade area evaluated in this analysis. A 154,492 square foot shopping center on 13 acres is planned for development on the diagonal corner (Tehachapi Boulevard and Tucker Road) from the proposed project. According to City staff, there are no known tenants at this time, and the project is not expected to begin construction before 2010.

Table II-8, on the following page, provides a summary of the cumulative impacts to the trade area retail market, based on potential occupied square feet and supply of square feet of retail space. As shown on the table, the growth in demand would be sufficient to support both projects by 2011. In addition, theoretically the growth in demand would be sufficient to absorb all vacant space in the trade area. However, it is likely that the there will remain a “structural vacancy rate” (typically considered to be in the range of 5% to 10%) to accommodate normal turnover of retail tenants.

Table II-8:
Supply and Demand for Retail Building Space
Based on Development of Proposed Project
City of Tehachapi

Demand / Supply Variable	2009	2011	2013	2015	2017	2019
DEMAND						
Existing Occupied Square Feet (SF) 1/	818,657	818,657	818,657	818,657	818,657	818,657
Adjustments for Potential Future Vacancies						
-- Existing Supermarket		(49,500)	(49,500)	(49,500)	(49,500)	(49,500)
-- Existing Kmart		(91,540)	(91,540)	(91,540)	(91,540)	(91,540)
Net Occupancy, Existing Space		677,617	677,617	677,617	677,617	677,617
Potential Demand for New Occupancies 2/		423,765	443,843	467,073	494,074	521,925
Added Demand Resulting from Potential Vacancies						
--Supermarket @ $475/SF		30,754	30,754	30,754	30,754	30,754
--Kmart @ $125/SF		38,142	38,142	38,142	38,142	38,142
Net Demand for New Occupancies		492,661	512,739	535,969	562,970	590,821
Potential Occupied Square Feet	818,657	1,170,278	1,190,356	1,213,586	1,240,587	1,268,438
SUPPLY						
Total Existing Square Feet 3/	864,362	864,362	864,362	864,362	864,362	864,362
Potential Supply Increases						
-- Proposed Project		165,000	165,000	165,000	165,000	165,000
--Unnamed Center		152,492	152,492	152,492	152,492	152,492
Total Supply	864,362	1,181,854	1,181,854	1,181,854	1,181,854	1,181,854
Vacant Space	45,705	11,576	0	0	0	0
Vacancy Rate	5.3%	1.0%	0.0%	0.0%	0.0%	0.0%

Source: TNDG

1/ Includes existing occupied retail and services space in the trade area (see Appendix B).

2/ Net demand for new retail space. See Table III-10 for retail category detail.

3/ Includes existing occupied and vacant retail and services space in the trade area (See Appendix B).

III. RETAIL DEMAND ANALYSIS METHODOLOGY

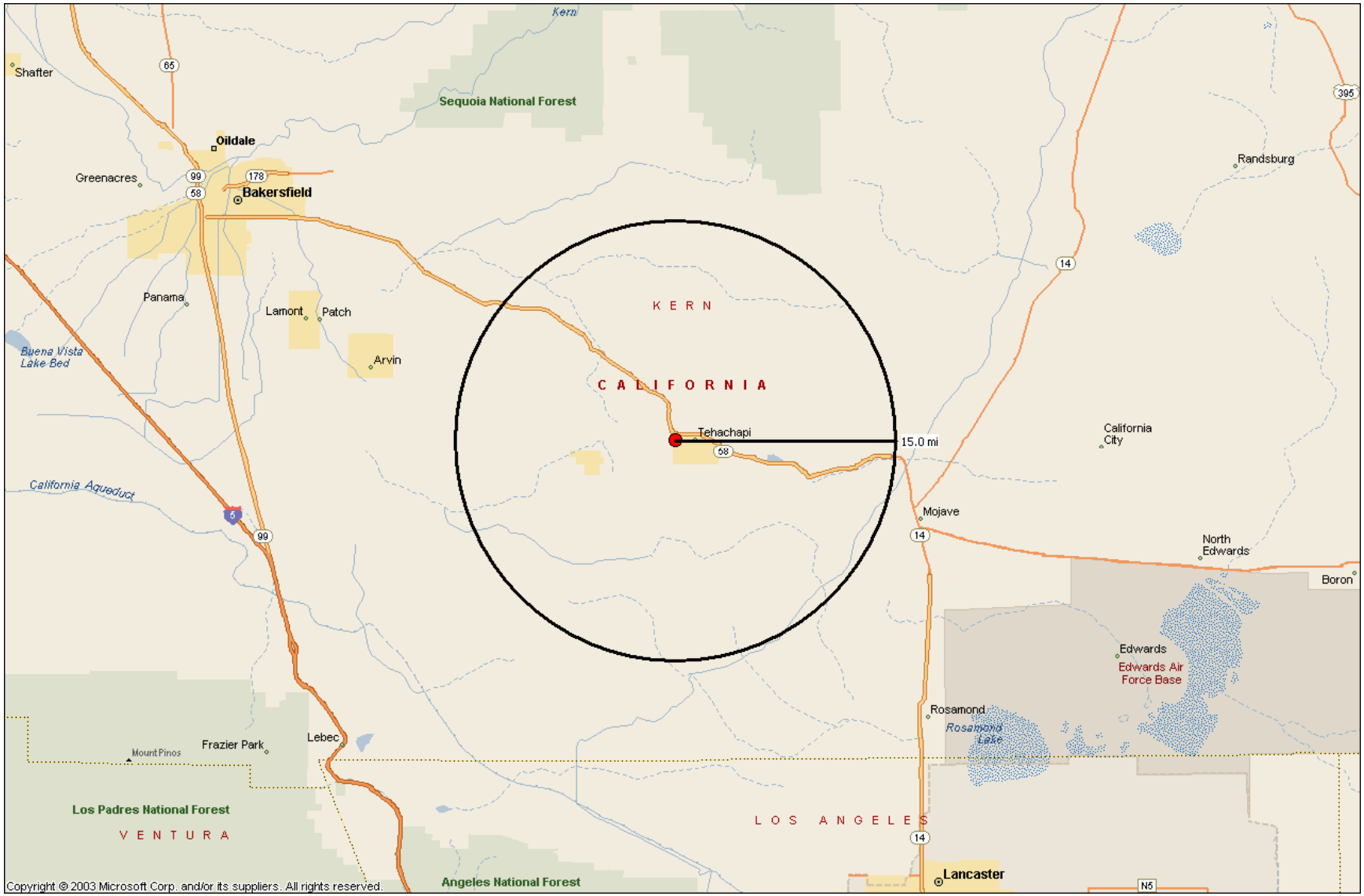
This section examines potential retail demand associated with the population residing in the market area that would be served by the proposed project. The analysis projects future retail demand of residents in Tehachapi as well as the resident demand of surrounding communities that would shop at the proposed facility.

III-A. MARKET AREA BOUNDARIES

The trade area evaluated in this analysis has been defined by a 15-mile radius around the proposed project site. Tehachapi represents the nearest shopping destination for residents living within a 15-mile radius of the City, and thus would be expected to capture a significant amount of market demand from residents in this trade area. The Bakersfield (to the northwest) and Lancaster/Palmdale (to the south) areas are the two closest shopping destinations, and both are approximately 35 “air-miles” away from Tehachapi. It should also be noted that close to two-thirds (65%) of the households in the trade area (see Table III-1 on page 24) reside within a 5-mile radius of the project site.

The trade area is referred to herein as the Tehachapi Retail Trade Area (TRTA). The trade area boundaries are shown on Figure III-1 on the following page.

Figure III-1: Tehachapi Retail Trade Area (TRTA)



III-B. HOUSEHOLD AND INCOME LEVELS

The number of households in the Trade Area is projected as follows:

Table III-1:
Household Projections by Year
Tehachapi Retail Trade Area

Market Area	Estimated 2008 Households	Projected 2009 Households	Projected 2011 Households	Projected 2013 Households	Projected 2015 Households	Projected 2017 Households	Projected 2019 Households
TRTA	11,382	11,522	11,807	12,100	12,439	12,832	13,239

Source: ESRI; Kern County Association of Governments (COG).

The above projections assume the following average annual growth rates:

2008 - 2013 - 1.3%

2013 - 2019 - 1.6%

The household projections are from the most recent forecasts developed by the Kern Council of Government's (Kern COG), and are consistent with the rate of growth suggested in the economic analysis recently completed for the City's General Plan Update. These household forecasts are for the entire region shown in Figure III-1 on page 23, which includes the City of Tehachapi and remaining unincorporated area within the 15-mile radius for the TRTA.

Average household income levels in the TRTA are estimated as follows:

Table III-2:
Average Household Income
Tehachapi Retail Trade Area

Market Area	2008 HH Income
TRTA	$85,627

Source: ESRI, TNDG

The indicated estimates of household income were obtained from ESRI, a national demographic research services firm, and increased 36% by TNDG. The reason for this increase factor is that these income estimates are based on "money income" definition of income utilized by the U.S. Census Bureau. This measure of income is narrower than the "personal income" definition used by the U.S. Department of Commerce, Bureau of Economic Analysis. The broader definition includes additional income sources such as fringe benefits (health insurance, retirement funding), imputed income (interest, rent), and direct payments to medical providers by governments. Personal income therefore represents a more complete gauge of a household's economic status. According to the Center for the Continuing Study of the California Economy (CCSCE), personal income is the preferred measure for purposes of projecting a household's

purchasing power (i.e., retail demand). Thus, this analysis increases the ESRI estimates of money income by 36% to estimate average household personal income[18].

III-C. RETAIL SALES DEMAND

Household and income characteristics are the primary determinants of the potential dollars available for purchases of goods and services in the market area. The analysis assumes that trade area residents will, on average, spend 34.9% of their income on retail purchases.[19] This factor is based on data from the National Consumer Expenditure Survey (CES) for households with comparable income levels to those in the TRTA.

Additionally, an 8.7% factor is included for the TRTA to account for "tourist" and business spending within the market area. This factor was derived from an analysis of Kern County taxable sales data and household income data in the County.

Table III-3:
Income and Retail Demand
Tehachapi Retail Trade Area
In thousands of constant dollars

Market Area	2008	2009	2011	2013	2015	2017	2019
TRTA	$974,572	$986,578	$1,011,037	$1,036,101	$1,065,100	$1,098,803	$1,133,573
Total Income	**$974,572**	**$986,578**	**$1,011,037**	**$1,036,101**	**$1,065,100**	**$1,098,803**	**$1,133,573**
TRTA	$424,913	$430,148	$440,812	$451,740	$464,383	$479,078	$494,237
Total Retail Demand	**$424,913**	**$430,148**	**$440,812**	**$451,740**	**$464,383**	**$479,078**	**$494,237**

III-D. DISTRIBUTION OF RESIDENT RETAIL EXPENDITURES

Projected retail demand from market area residents is disaggregated into various retail categories based upon retail expenditure patterns observed in California counties with similar income characteristics as the trade area. The basic distribution of retail sales by retail category is projected as follows in Table III-4.

[18] Per capita "personal income" is a full 36% higher than per capita "money income" in Kern County, based on the latest (2007) income data provided by the Bureau of Economic Analysis and the U.S. Census Bureau.
[19] This percentage factor is derived from data provided by the National Consumer Expenditure Survey (CES), Bureau of Labor Statistics (BLS), and reflects the fact that the portion of income spent on retail goods varies based on household income levels in a market area.

Table III-4:
Distribution of Retail Sales by Category
Tehachapi Retail Trade Area

Retail Category	Distribution
Shopper Goods:	
Apparel	4.8%
General Merchandise	13.7%
Furniture/Appliances	3.8%
Specialty	14.8%
Subtotal	*37.1%*
Convenience Goods:	
Food	17.4%
Eating and Drinking	10.5%
Subtotal	*27.9%*
Heavy Commercial Goods:	
Building Materials/Hardware	7.7%
Auto Dealers & Parts	16.5%
Service Stations	10.8%
Subtotal	*35.0%*
Total	**100.0%**

State Board of Equalization; TNDG

III-E. CAPTURE RATE ANALYSIS

Trade Area Capture Rates

Generally, it is reasonable to expect that residents will tend to make the vast majority of their retail purchases locally, provided that a competitive mix of retail stores reflective of consumer needs is available. Depending on the type and number of stores available, a trade area will normally capture 85% to 100% of its resident demand. For the Shopper Goods categories, however, TNDG has estimated that Tehachapi could realistically capture up to 70% of demand, for the following reasons:

- Approximately 13% of the total retail space in the trade area is outside of the City's boundaries. Thus, sales made at these retail establishments represent "potential lost sales" to the City.
- The City does not have a full-scale regional shopping center (and is not likely to attract one in the foreseeable future). Therefore, it is assumed that the area will always experience some level of retail "leakage" of shopper goods to communities with a larger array of retail facilities (e.g., in the Bakersfield and Lancaster/Palmdale metropolitan areas).

It is projected that the City of Tehachapi could potentially capture close to all (95%) of the

demand in the Food (grocery store) category[20], and all of the demand in the Building Materials/Hardware and the Service Station categories, because of the strong propensity of consumers to purchase goods in these categories as close as possible to their residences. In addition, Tehachapi is in a relatively isolated area, and its residents are not likely to travel to surrounding areas for purchasing goods in these categories.

Table III-5:
Capture Rates of Trade Area Demand
Within City of Tehachapi

Retail Category	Capture Rate
Shopper Goods:	
Apparel	70.0%
General Merchandise	70.0%
Furniture/Appliances	70.0%
Specialty	70.0%
Convenience Goods:	
Food	95.00%
Eating and Drinking	70.0%
Heavy Commercial Goods:	
Building Materials/Hardware	100.0%
Auto Dealers and Parts	70.00%
Service Stations	N/A

Source: TNDG

III-F. POTENTIAL RETAIL SALES VOLUMES

Based on the capture rates shown above, Table III-6, below, projects the potential market area demand in the City for each retail category. As shown on the table, incremental demand through 2019 for retail sales in the TRTA is projected to grow in proportion to increases in the number of households.

[20] It is acknowledged that some trade area residents make a portion of their food purchases at warehouse club stores (e.g., Costco) in Bakersfield and Lancaster. However, warehouse club stores are classified under the General Merchandise retail category by the California State Board of Equalization (SBOE). Thus, the portion of consumers' grocery purchases made in warehouse club stores is implicitly accounted for in the retail sales distribution percentages shown on Table III-4.

Table III-6:
Potential Capture of Sales
City of Tehachapi
in thousands of dollars

Retail Category	2008	2009	2011	2013	2015	2017	2019
Shopper Goods:							
Apparel	$14,277	$14,453	$14,811	$15,178	$15,603	$16,097	$16,606
General Merchandise	$40,749	$41,251	$42,274	$43,322	$44,534	$45,944	$47,397
Furniture/Appliances	$11,303	$11,442	$11,726	$12,016	$12,353	$12,743	$13,147
Specialty	$44,021	$44,563	$45,668	$46,800	$48,110	$49,632	$51,203
Subtotal	*$110,350*	*$111,709*	*$114,479*	*$117,316*	*$120,600*	*$124,416*	*$128,353*
Convenience Goods:							
Food	$70,238	$71,103	$72,866	$74,673	$76,763	$79,192	$81,697
Eating and Drinking	$31,231	$31,616	$32,400	$33,203	$34,132	$35,212	$36,326
Subtotal	*$101,469*	*$102,719*	*$105,266*	*$107,876*	*$110,895*	*$114,404*	*$118,023*
Heavy Commercial Goods:							
Building Materials	$32,718	$33,121	$33,942	$34,784	$35,757	$36,889	$38,056
Auto Dealers and Parts	$49,077	$49,682	$50,914	$52,176	$53,636	$55,333	$57,084
Service Stations	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Subtotal	*$81,795*	*$82,803*	*$84,856*	*$86,960*	*$89,393*	*$92,222*	*$95,140*
Total	**$293,614**	**$297,231**	**$304,601**	**$312,152**	**$320,888**	**$331,042**	**$341,516**

Source: TNDG.

Based on the demand estimates shown above, Table III-7 provides a comparison of total market area demand with actual sales in each retail category.

Table III-7:
Comparison of Potential Demand with Actual Sales
Non-Grocery Retail Categories
City of Tehachapi
In thousands of dollars

Retail Category	2008 Demand	2008* Sales	Expected Less Actual	Percent Actual/ Expected
Shopper Goods:				
GAFO Total	$110,350	$34,116	$76,234	30.92%
Convenience Goods:				
Food	$70,238	$67,341	$2,897	95.88%
Eating and Drinking	$31,231	$20,723	$10,508	66.35%
Heavy Commercial Goods:				
Building Materials/Hardware	$32,718	$23,718	$9,000	72.49%
Auto Dealers and Parts	$49,077	$4,859	$44,218	9.90%
Total	**$223,376**	**$83,416**	**$139,960**	**37.34%**

*Based on four most recent quarters available – first three quarters of 2008 and 4th quarter of 2007.

Source: TNDG; State Board of Equalization

In subsequent years, incremental demand in the TRTA is projected to grow in proportion to population increases. Table III-8, on the following page, shows the projected changes in incremental retail demand over the next few years.

Table III-8:
Total Potential Capture of Demand for New Retail Sales
Non-Grocery Retail Categories
City of Tehachapi
In thousands of constant dollars

Retail Category	2008	2009	2011	2013	2015	2017	2019
Shopper Goods:							
GAFO Total	$76,234	$77,593	$80,363	$83,200	$86,484	$90,300	$94,237
Convenience Goods:							
Eating and Drinking	$10,508	$10,893	$11,677	$12,480	$13,409	$14,489	$15,603
Heavy Commercial Goods:							
Building Materials	$9,000	$9,403	$10,224	$11,066	$12,039	$13,171	$14,338
Auto Dealers and Parts	$44,218	$44,823	$46,055	$47,317	$48,777	$50,474	$52,225
Total	**$139,960**	**$142,712**	**$148,319**	**$154,063**	**$160,709**	**$168,434**	**$176,403**

Source: TNDG

III-G. SUPPORTABLE RETAIL SPACE

Sales Per Square Foot Standards

Projected sales volume requirements per square foot of retail space by retail category are derived from typical sales standards from the Urban Land Institute's Dollars & Cents Publication and from typical sales per square foot data from representative stores in each retail category (as reported in the July 2009 issue of Retail MAXIM).

Table III-9:
Sales per Square Foot Standards for Retail Space
Tehachapi Retail Trade Area

Retail Category	Sales/ Square Foot
GAFO	$300
Food 1/	N/A
Eating / Drinking Establish.	$400
Building Materials	$275

Source: TNDG, based on data published by ULI and Retail Maxim.
1/ See calculations on Table III-11.

Demand for New Retail Space

The sales per square foot standards are applied to the net demand numbers for each relevant retail category, as shown in Table III-10, on the following page. This calculation essentially converts potential sales volumes to supportable square feet of new retail space. Supportable development levels will increase in the future by virtue of anticipated growth in the number of households in the trade area. Based on analysis of proprietary database of shopping centers in a major metropolitan area, TNDG has determined that services space (e.g., dry cleaners, hair salons, banks, etc.) accounts for 10% to 25% of total shopping center space, depending on type of retail development (i.e., regional, community, neighborhood, etc.). To be analytically

conservative, this analysis assumes that, on average, services space accounts for 10% of total space in typical shopping center settings.

Table III-10:
Demand for NEW Retail Space
Tehachapi Retail Trade Area

Retail Category	2009	2011	2013	2015	2017	2019
GAFO	258,643	267,877	277,333	288,280	301,000	314,123
Food (Supermarkets) 1/	23,193	26,088	29,055	32,487	36,476	40,589
Eating and Drinking	27,233	29,193	31,200	33,523	36,223	39,008
Building Materials	34,193	37,178	40,240	43,778	47,895	52,138
Automotive Parts 2/	20,491	21,054	21,631	22,298	23,074	23,874
Services Space @ 10% of Total Space	40,417	42,377	44,384	46,707	49,407	52,192
TOTAL	***404,169***	***423,765***	***443,843***	***467,073***	***494,074***	***521,925***

Source: TNDG

1/ See calculations on Table III-11.
2/ Assumes that automotive parts stores account for 8% of sales in overall Automotive group category (based on statewide average in 2008).

III-H. DEMAND FOR GROCERY SALES AND SUPPORTABLE GROCERY SPACE

Since the applicant has indicated that the proposed project would include a supermarket[21] component, this section evaluates the demand for grocery sales and supportable grocery space in the TRTA. Table III-11, below, shows the total food and supermarket category demand from 2008 to 2019 along with a projection of the net supportable square feet of supermarket space in the TRTA.

Based on analysis of available sales tax data, TNDG estimates that the two existing supermarkets in Tehachapi currently capture approximately 78% of the overall Food category sales (see Appendix C). The balance of sales in the overall Food category accrues to smaller convenience and specialty markets.

On the following page, Table III-12 provides an estimate of Tehachapi supermarkets' average sales volumes, in terms of sales per square foot, by dividing the estimate of supermarket demand (in dollars) by the square feet of existing supermarket space. Projections of future average sales volumes are net of the demand absorbed by the proposed grocery component of the Tehachapi Walmart Supercenter.

Table III-11:
Demand for Supermarket Sales and
Supportable Supermarket Space
Tehachapi Retail Trade Area
In thousands of 2008 constant dollars

Retail Category	2008	2009	2011	2013	2015	2017	2019
Total Food Sales Demand	$70,238	$71,103	$72,866	$74,673	$76,763	$79,192	$81,697
Supermarket Share @ 78%	$54,786	$55,460	$56,835	$58,245	$59,875	$61,770	$63,724
Supportable Space @ $475/SF	115,338	116,759	119,654	122,621	126,053	130,042	134,155
Existing Supermarket Square Feet (SF)	93,566	93,566	93,566	93,566	93,566	93,566	93,566
Net Supportable SF	***21,772***	***23,193***	***26,088***	***29,055***	***32,487***	***36,476***	***40,589***

Source: TNDG

[21] For purposes of this analysis, it is assumed that the supermarket component of the Walmart Supercenter would be 34,293 square feet.

Table III-12:
Demand for Grocery Sales and
Estimate of Sales per Square Foot
City of Tehachapi
In thousands of constant dollars

Description	2008	2009	2011	2013	2015	2017	2019
Total Food Sales Demand	$70,238	$71,103	$72,866	$74,673	$76,763	$79,192	$81,697
Supermarket Share @ 78%	$54,786	$55,460	$56,835	$58,245	$59,875	$61,770	$63,724
Less Demand Absorbed by New Facilities: 1/							
-- Walmart Supercenter			$21,296	$21,296	$21,296	$21,296	$21,296
Net Demand Available to Support Existing Supermarkets	$54,786	$55,460	$35,540	$36,949	$38,579	$40,474	$42,428
Existing Supermarket Square Feet	93,566	93,566	93,566	93,566	93,566	93,566	93,566
Sales per Square Foot Existing Supermarkets	***$586***	***$593***	***$380***	***$395***	***$412***	***$433***	***$453***

Source: TNDG; Progressive Grocer, The Super 50, May 2009.

1/ Sales per square foot (gross area) assumptions:
Walmart: $621

APPENDIX A:

RETAIL DEMAND MODEL – TEHACHAPI RETAIL TRADE AREA

Table A-1
Household Projections
Tehachapi Retail Trade Area

	2008	2009	2011	2013	2015	2017	2019
Households	11,382	11,522	11,807	12,100	12,439	12,832	13,239

Source: ESRI; Kern County Association of Governments; The Natelson Dale Group. (TNDG)

Table A-2
Average Household Income Projections
Tehachapi Retail Trade Area
In constant dollars

	2008
Base Year Income Estimate	$85,627
Annual Increase Factor	0.00%

	2008	2009	2011	2013	2015	2017	2019
Average Household Income	$85,627	$85,627	$85,627	$85,627	$85,627	$85,627	$85,627

Source: Claritas; TNDG

Table A-3
Total Income and Potential Retail Sales Projections
Tehachapi Retail Trade Area
In thousands of constant dollars

Percent of Income Spent for Retail Goods	34.9%
Visitor and Business Spending	8.7%
Total	43.6%

Area	**2008**	**2009**	**2011**	**2013**	**2015**	**2017**	**2019**
Total Income:	$974,572	$986,578	$1,011,037	$1,036,101	$1,065,100	$1,098,803	$1,133,573
Potential Retail Sales:							
Residents	$339,722	$343,908	$352,434	$361,171	$371,279	$383,028	$395,148
Business/Visitors	$85,190	$86,240	$88,378	$90,569	$93,104	$96,050	$99,089
Total Potential Retail Sales	$424,913	$430,148	$440,812	$451,740	$464,383	$479,078	$494,237

Source: TNDG

Table A-4
Distribution of Retail Sales by Retail Category
Tehachapi Retail Trade Area

Retail Category	%Distribution 2008	%Distribution 2009	%Distribution 2011	%Distribution 2013	%Distribution 2015	%Distribution 2017	%Distribution 2019
Shopper Goods:							
Apparel	4.8%	4.8%	4.8%	4.8%	4.8%	4.8%	4.8%
General Merchandise	13.7%	13.7%	13.7%	13.7%	13.7%	13.7%	13.7%
Home Furnishings	3.8%	3.8%	3.8%	3.8%	3.8%	3.8%	3.8%
Specialty/Other	14.8%	14.8%	14.8%	14.8%	14.8%	14.8%	14.8%
Subtotal	37.1%	37.1%	37.1%	37.1%	37.1%	37.1%	37.1%
Convenience Goods:							
Food	17.4%	17.4%	17.4%	17.4%	17.4%	17.4%	17.4%
Eating and Drinking	10.5%	10.5%	10.5%	10.5%	10.5%	10.5%	10.5%
Subtotal	27.9%	27.9%	27.9%	27.9%	27.9%	27.9%	27.9%
Heavy Commercial Goods:							
Building Materials/Hardware	7.7%	7.7%	7.7%	7.7%	7.7%	7.7%	7.7%
Auto Dealers and Parts	16.5%	16.5%	16.5%	16.5%	16.5%	16.5%	16.5%
Service Stations	10.8%	10.8%	10.8%	10.8%	10.8%	10.8%	10.8%
Subtotal	35.0%	35.0%	35.0%	35.0%	35.0%	35.0%	35.0%
Total	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%

Source: TNDG, based on historic trends reported by the State Board of Equalization.

Table A-5
Projected Demand for Retail Sales
Tehachapi Retail Trade Area
In thousands of constant dollars

Retail Category	2008	2009	2011	2013	2015	2017	2019
Shopper Goods:							
Apparel	$20,396	$20,647	$21,159	$21,684	$22,290	$22,996	$23,723
General Merchandise	$58,213	$58,930	$60,391	$61,888	$63,620	$65,634	$67,711
Furniture/Appliances	$16,147	$16,346	$16,751	$17,166	$17,647	$18,205	$18,781
Specialty/Other	$62,887	$63,662	$65,240	$66,857	$68,729	$70,904	$73,147
Subtotal	$157,643	$159,585	$163,541	$167,595	$172,286	$177,738	$183,362
Convenience Goods:							
Food	$73,935	$74,846	$76,701	$78,603	$80,803	$83,360	$85,997
Eating and Drinking	$44,616	$45,165	$46,285	$47,433	$48,760	$50,303	$51,895
Subtotal	$118,551	$120,011	$122,986	$126,035	$129,563	$133,663	$137,892
Heavy Commercial Goods:							
Building Materials/Hardware	$32,718	$33,121	$33,942	$34,784	$35,757	$36,889	$38,056
Auto Dealers and Parts	$70,111	$70,974	$72,734	$74,537	$76,623	$79,048	$81,549
Service Stations	$45,891	$46,456	$47,608	$48,788	$50,153	$51,740	$53,378
Subtotal	$148,719	$150,552	$154,284	$158,109	$162,534	$167,677	$172,983
Total	$424,913	$430,148	$440,812	$451,740	$464,383	$479,078	$494,237

Source: TNDG

Table A-6
Potential Capture Rates of Total Trade Area Demand within City of Tehachapi
Expressed in Percentages

Retail Category	2008	2009	2011	2013	2015	2017	2019
Shopper Goods:							
Apparel	70.00%	70.00%	70.00%	70.00%	70.00%	70.00%	70.00%
General Merchandise	70.00%	70.00%	70.00%	70.00%	70.00%	70.00%	70.00%
Furniture/Appliances	70.00%	70.00%	70.00%	70.00%	70.00%	70.00%	70.00%
Specialty/Other	70.00%	70.00%	70.00%	70.00%	70.00%	70.00%	70.00%
Convenience Goods:							
Food	95.00%	95.00%	95.00%	95.00%	95.00%	95.00%	95.00%
Eating and Drinking	70.00%	70.00%	70.00%	70.00%	70.00%	70.00%	70.00%
Heavy Commercial Goods:							
Building Materials/Hardware	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%
Auto Dealers and Parts	70.00%	70.00%	70.00%	70.00%	70.00%	70.00%	70.00%
Service Stations	N/A	N/A	N/A	N/A	N/A	N/A	N/A

Source: TNDG

Table A-7
Potential Retail Sales within City of Tehachapi
In thousands of constant dollars

Retail Category	2008	2009	2011	2013	2015	2017	2019
Shopper Goods:							
Apparel	$14,277	$14,453	$14,811	$15,178	$15,603	$16,097	$16,606
General Merchandise	$40,749	$41,251	$42,274	$43,322	$44,534	$45,944	$47,397
Furniture/Appliances	$11,303	$11,442	$11,726	$12,016	$12,353	$12,743	$13,147
Specialty/Other	$44,021	$44,563	$45,668	$46,800	$48,110	$49,632	$51,203
Subtotal	$110,350	$111,709	$114,479	$117,316	$120,600	$124,416	$128,353
Convenience Goods:							
Food	$70,238	$71,103	$72,866	$74,673	$76,763	$79,192	$81,697
Eating and Drinking	$31,231	$31,616	$32,400	$33,203	$34,132	$35,212	$36,326
Subtotal	$101,469	$102,719	$105,266	$107,876	$110,895	$114,404	$118,023
Heavy Commercial Goods:							
Building Materials/Hardware	$32,718	$33,121	$33,942	$34,784	$35,757	$36,889	$38,056
Auto Dealers and Parts	$49,077	$49,682	$50,914	$52,176	$53,636	$55,333	$57,084
Service Stations	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Subtotal	$81,795	$82,803	$84,856	$86,960	$89,393	$92,222	$95,140
Total	$293,614	$297,231	$304,601	$312,152	$320,888	$331,042	$341,516

Source: TNDG

Table A-8
Comparison of Potential Retail Demand with Actual Sales
City of Tehachapi
In thousands of constant dollars

Retail Category	2008 Demand	2008 Sales	Expected Less Actual	Percent Actual/Expected
Shopper Goods:				
GAFO Total	$110,350	$34,116	$76,234	30.92%
Convenience Goods:				
Food	$70,238	$67,341	$2,897	95.88%
Eating and Drinking	$31,231	$20,723	$10,508	66.35%
Subtotal	$31,231	$20,723	$10,508	66.35%
Heavy Commercial Goods:				
Building Materials/Hardware	$32,718	$23,718	$9,000	72.49%
Auto Dealers and Parts	$49,077	$4,859	$44,218	9.90%
Subtotal	$81,795	$28,577	$53,218	34.94%
Total	$223,376	$83,416	$139,960	37.34%

Source: TNDG, State Board of Equalization

Table A-9
Net Supportable Retail Sales (Non-Grocery Categories)
City of Tehachapi
In thousands of constant dollars

Retail Category	2008	2009	2011	2013	2015	2017	2019
Shopper Goods:							
GAFO Total	$76,234	$77,593	$80,363	$83,200	$86,484	$90,300	$94,237
Convenience Goods:							
Eating and Drinking	$10,508	$10,893	$11,677	$12,480	$13,409	$14,489	$15,603
Heavy Commercial Goods:							
Building Materials/Hardware	$9,000	$9,403	$10,224	$11,066	$12,039	$13,171	$14,338
Auto Dealers and Parts	$44,218	$44,823	$46,055	$47,317	$48,777	$50,474	$52,225
Subtotal	$53,218	$54,226	$56,279	$58,383	$60,816	$63,645	$66,563
Total	$139,960	$142,712	$148,319	$154,063	$160,709	$168,434	$176,403

Source: TNDG

Table A-10
Net Supportable Retail Space
City of Tehachapi
Expressed in Square Feet

Retail Category	Sales/Square Feet	2009	2011	2013	2015	2017	2019
GAFO	$300	258,643	267,877	277,333	288,280	301,000	314,123
Food (Supermarkets) 1/	N/A	23,193	26,088	29,055	32,487	36,476	40,589
Eating and Drinking	$400	27,233	29,193	31,200	33,523	36,223	39,008
Building Materials/Hardware	$275	34,193	37,178	40,240	43,778	47,895	52,138
Automotive Parts 2/	$175	20,491	21,054	21,631	22,298	23,074	23,874
Services @ 10% of Total Space	N/A	40,417	42,377	44,384	46,707	49,407	52,192
TOTAL		404,169	423,765	443,843	467,073	494,074	521,925

1/ Assumes that automotive parts stores account for 8% of sales in overall Automotive group category (based on statewide average in 2007).
2/ See calculations on Table A-11.

Source: TNDG

Table A-11
Supportable Supermarket Space
City of Tehachapi
Expressed in Square Feet

Description	2008	2009	2011	2013	2015	2017	2019
Total Food Sales Demand ($000s)	$70,238	$71,103	$72,866	$74,673	$76,763	$79,192	$81,697
Supermarket Share @ 78%	$54,786	$55,460	$56,835	$58,245	$59,875	$61,770	$63,724
Supportable Space @ $475/SF	115,338	116,759	119,654	122,621	126,053	130,042	134,155
Existing Supermarket Square Feet (SF)	93,566	93,566	93,566	93,566	93,566	93,566	93,566
Net Supportable Space (SF)	***21,772***	***23,193***	***26,088***	***29,055***	***32,487***	***36,476***	***40,589***

Source: TNDG

Table A-12
Potential Sales Impacts to Existing Supermarkets
City of Tehachapi

Demand Variable	2008	2009	2011	2013	2015	2017	2019
Total Food Sales Demand (000's)	$70,238	$71,103	$72,866	$74,673	$76,763	$79,192	$81,697
Supermarket Share @ 78%	$54,786	$55,460	$56,835	$58,245	$59,875	$61,770	$63,724
Less Demand Absorbed by New Facilities 1/:							
-- Wal-Mart			$21,296	$21,296	$21,296	$21,296	$21,296
Net Demand Available to Support Existing Supermarkets	$54,786	$55,460	$35,540	$36,949	$38,579	$40,474	$42,428
Existing Supermarket Square Feet (SF)	93,566	93,566	93,566	93,566	93,566	93,566	93,566
Sales Per Square Foot Existing Supermarkets	***$586***	***$593***	***$380***	***$395***	***$412***	***$433***	***$453***

1/ Wal-Mart food sales projected at $621 per gross square foot of grocery space.

Source: TNDG; Progressive Grocer.

APPENDIX B:

RETAIL INVENTORY – TEHACHAPI RETAIL TRADE AREA

Table B-1
INVENTORY OF RETAIL TENANTS AND SQUARE FEET OF BUILDING SPACE
TEHACHAPI RETAIL TRADE AREA

SHOPPING CENTER/BUSINESS NAME	ADDRESS	TYPE OF BUSINESS	RETAIL CATEGORY	SQUARE FEET
Tehachapi Blvd. (Dennison Rd. - east, Tucker Rd. - west)				
Pacino's Pizzeria/Spaghetti Factory	1100 W. Tehachapi Blvd. #A	Restaurant	ED	3,597
Vacant	1100 W. Tehachapi Blvd. #B	Vacant	VAC	1,058
Vacant	1100 W. Tehachapi Blvd. #C	Vacant	VAC	1,587
Vacant	1100 W. Tehachapi Blvd. #D	Vacant	VAC	4,190
Walgreens	1101 W. Tehachapi Blvd.	Drug Store	GM	14,488
Tehacahapi Crossing				
Tehachapi Medical Clinic	1001 W. Tehachapi Blvd. A-100	Medical Office	SVC	2,000
Peaceful Image Salon	1001 W. Tehachapi Blvd. B-100	Hair/Nail Salon	SVC	1,285
Bottoms Up Tanning Salon	1001 W. Tehachapi Blvd. A-300	Tanning Salon	SVC	1,428
Kern County Library	1001 W. Tehachapi Blvd. A-400	Public Library	SVC	7,194
Hodad's Surf Shack	1001 W. Tehachapi Blvd. B-300	Clothing	A	2,142
Quiznos Sub	1001 W. Tehachapi Blvd. B-400	Restaurant	ED	1,571
City Slickers	1001 W. Tehachapi Blvd. C-200	Restaurant/Saloon	ED	6,570
K-Mart	710 W. Tehachapi Blvd.	General Merchandise	GM	91,540
M&M Fish and Chips	640-A W. Tehachapi Blvd.	Restaurant	ED	1,571
Salon Noveau	640-B W. Tehachapi Blvd.	Hair Salon	SVC	1,714
Burger King	620 W. Tehachapi Blvd.	Restaurant	ED	3,301
Mountain Crossing Restaurant	416 W. Tehachapi Blvd.	Restaurant	ED	7,633
Shell - Food Store	107 S. Mill St.	Convenience Market	GAS	5,364
Tehachapi Lumber/Ace Hardware	228 W. Tehachapi Blvd.	Hardware	BM	9,760
B&B Country Store / Liquor Market	220 W. Tehachapi Blvd.	Convenience Market	F	4,147
The Burger Spot	208 W. Tehacahpi Blvd.	Restaurant	ED	2,068
Trains, etc.	114 W. Tehachapi Blvd.	Hobby Shop	S	2,544
Kelcy's Restaurant/Café	112 W. Tehachapi Blvd.	Restaurant	ED	6,655
Simple Elegance	106 W. Tehachapi Blvd.	Gifts, Antiques	S	2,349
5 Hearts	104 W. Tehachapi Blvd.	Quilts, Fabrics	S	2,544
Oak Tree Art and Antiques	102 W. Tehachapi Blvd.	Gift Shop	S	2,229
Tehachapi Valley Arts/Antiques	100 W. Tehachapi Blvd.	Gift Shop	S	2,638
Gas and Go Food Mart	106 E. Tehachapi Blvd.	Convenience Market	F	1,582
Vacant	108 E. Tehachapi Blvd.	Vacant	VAC	1,994
Debbie's Fabrics	112 E. Tehachapi Blvd.	Fabrics	S	3,835
Vacant (former Carquest Auto Parts)	116 E. Tehachapi Blvd.	Vacant	VAC	3,682
Four Seasons Mini-Mart	128 E. Tehachapi Blvd.	Convenience Market	F	1,799
Circle K	302 E. Tehachapi Blvd.	Convenience Market	F	3,259
Village Grille Family Restaurant	410 E. Tehachapi Blvd.	Restaurant	ED	6,771
Linda's Cakes and Things	402 E. Tehacahpi Blvd.	Bakery	ED	1,444
Mama Hillybeans - Coffee and Community	426 E. Tehachapi Blvd.	Coffee, Natural Foods	F	2,111
Canine Creek Pet Wash/Boutique	538 E. Tehachapi Blvd.	Pet Store	SVC	3,253
Stop and Save Food Mart	706 E. Tehachapi Blvd.	Convenience Market	F	1,825
Gracian's Grill	860 E. Tehachapi Blvd.	Restaurant	ED	3,724
Apple Shed	333 E. Tehachapi Blvd.	Restaurant, Bakery, Gifts	ED	5,227
Tacos Samich	211 E. Tehachapi Blvd.	Restaurant	ED	1,777

SHOPPING CENTER/BUSINESS NAME	ADDRESS	TYPE OF BUSINESS	RETAIL CATEGORY	SQUARE FEET
Picture Perfect	103 E. Tehachapi Blvd.	Scrapping/Stamping	S	1,111
Crossroads Gallery	101 E. Tehachapi Blvd.	Art Gallery, Gifts	S	1,984
Kohnen's Country Bakery	125 W. Tehachapi Blvd.	Bakery, Restaurant	ED	3,333
Hodad"s Surf Shop	125 W. Tehachapi Blvd.	Clothing	S	5,713
Gold Coast Station	125 W. Tehachapi Blvd.	Specialty	S	813
Mud Hut Pottery	225 W. Tehachapi Blvd.	Hobby Shop	S	2,518
Victorian Rose	120 S. Mill St.	Tea Garden/Gift Shop	S	1,587
Tehachapi Art Center	777-A W. Tehachapi Blvd.	Art Center, Gifts	S	4,015
Fitness Zone	777-C W. Tehachapi Blvd.	Gym	SVC	2,619
Mountain Express Deli	787 W. Tehachapi Blvd.	Coffee Shop	ED	518
Tehachapi Interior Improvements	787 W. Tehachapi Blvd.	Building Materials	BM	5,830
South Green Street				
The TEC Computers	113 S. Green St.	Computer Store	FA	1,428
Las Palmas Mexican Restaurant	108 S. Green St.	Restaurant	ED	2,222
La Bella Amore	209 S. Green St.	Restaurant	ED	2,476
St. Vincent De Paul Thrift Store	122 S. Green St.	Thrift Store	S	9,353
Petra Mediterranean Deli/Restaurant	200 S. Green St.	Restaurant	ED	809
F Street				
The Oaks/Alton's Furniture Gallery	450 W. F St.	Furniture/Home Furn.	FA	6,285
Tehachapi Flower	119 E. F St.	Florist	S	1,862
Barbie's Primo Burgers	118 E. F St.	Restaurant	ED	2,444
Southern Shooters Supply	120 E. F St.	Sporting Goods	S	1,513
Kasagiri Japanese Restauraunt	128 E. F St.	Restaurant	ED	2,074
Mountain Music (store portion)	206 E. F St.	Music Specialty	S	1,313
Counter Fit	112 E. F St. #C	Clothes/Accessories	A	800
E Street				
Tehachapi Hospital Guild Thrift Shop	115 W. E St.	Thrift Shop	S	2,433
Tehachapi Blvd/E. Steuber Rd.				
Vacant	480 Steuber Rd.	Vacant	VAC	7,618
Chevron Food Mart	400 Steuber Rd.	Convenience Market	GAS	2,381
Jake's Steakhouse - 213 S. Curry				
Jake's Steakhouse	213 S. Curry St.	Restaurant	ED	2,777
Mountain Gardens Nursery & Pet Feed	503 S. Curry St.	Nursery	BM	3,750
Valley Blvd. (SR 202) Jeffrey Road - Golden Hills Blvd.*				
Carlos Donut	20011-C Valley Blvd.	Donut Shop	ED	2,000
Century Glass	20011-A&B Valley Blvd.	Glass Shop	S	3,142
Tune Town Music	20418 Brian Way	Music Store	S	1,349
Computer Animals	20418 Brian Way	Computer Store	FA	1,111
McGuire's Pub	20424 Brian Way	Restaurant/Cocktail Lounge	ED	3,729
Kelley's Café	20424 Brian Way	Restaurant	ED	1,825
Old Towne Pizza	20430 Brian Way	Restaurant	ED	4,020
Wild Rose Mini-Mart (Texaco)	20436 Brian Way	Convenience Market	GAS	2,222
Tehachapi Help and Hope Thrift Store	20436 Brian Way	Thrift Store	S	2,116

SHOPPING CENTER/BUSINESS NAME	ADDRESS	TYPE OF BUSINESS	RETAIL CATEGORY	SQUARE FEET
Absolutely Rockin	20436 Brian Way	Clothing	A	1,709
Minute Serve Dairy (Shell)	Valley Blvd./Wdfd. Tehac. Rd.	Convenience Market	F	1,714
Frosty King	20651 Hwy. 202	Restaurant	ED	2,999
Treasures Unlimited	20424 Hwy. 202	Clothing, Gifts	A	4,909
Domingo's Restaurant	20416 Valley Blvd.	Restaurant	ED	5,290
Mobil Mini-Mart	_____ Valley Blvd.	Convenience Market	F	3,111
Vacant	20358 Valley Blvd.	Vacant	VAC	5,713
Vacant	20354 Valley Blvd.	Vacant	VAC	2,857
98 Cent Plus Stop	20350 Valley Blvd.	General Merchandise	GM	4,047
Tehachapi Furniture	20358 Valley Blvd.	Furniture	FA	4,285
Old Towne Food Market	20340 Valley Blvd.	Food Market	F	9,046
Edelweiss European Deli	20324 Valley Blvd.	Deli/Restaurant	ED	2,751
Vacant	20328 Valley Blvd.	Vacant	VAC	1,746
Vacant	20288 Valley Blvd.	Vacant	VAC	809
Farrel and Llyod Construction	20286 Valley Blvd.	Service/Office	SVC	809
Classic Cameras	20280 Valley Blvd.	Camera Store	S	809
Chevron Food Mart	21000 Valley Blvd.	Convenience Market	GAS	3,491
South Street - Valley Blvd. to Commercial Avenue*				
TBB Fashions for Less	20909 South St., Ste. 6,7	Clothing	A	1,164
Thai Palms Restaurant	20909 South St., Ste. 3,4,5	Restaurant	ED	3,015
Pioneer Home Center/Ace Hardware	20901 South St.	Hardware	BM	12,627
Babies and Things	20717 South St. #4	Clothing	A	989
South Fork Inn	20717 A South St.	Restaurant/Lounge	ED	2,613
NAPA Auto Parts	20633 South St.	Auto Parts	MVP	6,517
Ranch Service and Supply	20700 South St.	Pet Supplies, etc.	S	1,825
Don Juan's Grill	20700 South St.	Restaurant	ED	3,280
Denny's - Capital Hill Parkway and Magellan Dr.				
Denny's	9000 Magellan Drive	Restaurant	ED	5,639
Texaco Food Mart	1050 Capital Hills Pkwy.	Convenience Market	GAS	4,592
Home Depot - N. Mill St. and Industry Pkwy.				
Home Depot	507 N. Mill St.	Home Improvements	BM	140,000
Tucker Rd. - corner Tehachapi Blvd.				
Starbucks	300 Tucker Rd. #A	Coffee Shop	ED	1,508
Cold Stone Creamery	300 Tucker Rd. #B	Eating Place	ED	2,111
Valley Blvd. and Aspen Drive				
Aspen Wine and Beer Meat Market	805 Aspen Dr.	Food and Meat Market	F	11,850
98 Cents and Up	605 Linden Court	General Merchandise	GM	1,169
Tucker Rd.: Conway Blvd. to Valley Blvd.				
M and M Sports	760-A Tucker Rd.	Uniforms, Trophies	S	3,142
King of Siam Restaurant	760-B Tucker Rd.	Restaurant	ED	1,185
Henry's Café	550 Tucker Rd. #D	Restaurant	ED	3,777

SHOPPING CENTER/BUSINESS NAME	ADDRESS	TYPE OF BUSINESS	RETAIL CATEGORY	SQUARE FEET
Del Taco	645 Tucker Rd.	Restaurant	ED	3,015
The Orchard Shopping Center				
Western Workwear	655 Tucker Rd. -#H,G	Apparel	A	4,401
On Board Clothing Company	655 Tucker Rd. -#F	Apparel	A	2,031
Vacant	655 Tucker Rd. -#E	Vacant	VAC	2,031
Home Consignment	655 Tucker Rd. -#D&C	Home Furnishings	FA	3,048
Moses Master Carpet	655 Tucker Rd. -#B	Carpeting	S	1,524
Subway	655 Tucker Rd. -#A	Restaurant	ED	1,524
Hungry Howie's Pizza	675 Tucker Rd. -#F	Restaurant	ED	2,201
Little Bundles	675 Tucker Rd. -#E	Children's Clothing	A	1,524
Your Mattress Store	675 Tucker Rd. -#C,D	Furniture, etc.	FA	2,708
Sunshine Buffet	675 Tucker Rd. -#A,B	Restaurant	ED	4,063
The Wine and Cheese Cellar	695 Tucker Rd. -#C	Food, Wine	ED	2,074
Fire It Up	695 Tucker Rd. -#B	Fireplaces	S	1,777
Cellular World	695 Tucker Rd. -#A	General Merchandise	S	1,777
Union Bank	665 Tucker Rd.	Bank	SVC	4,313
Red Apple Plaza				
Albertsons	775 Tucker Rd.	Food Market	F	49,500
Verizon Wireless	785 Tucker Rd. -#A	General Merchandise	S	846
Natures Pantry	785 Tucker Rd. -#B	Health Food Store	F	846
Vacant	785 Tucker Rd. -#C	Vacant	VAC	677
Vacant	785 Tucker Rd. -#D	Vacant	VAC	894
Baskin Robbins	785 Tucker Rd. -#E	Eating Place	ED	1,270
Director's Realty	785 Tucker Rd. -#F	Real Estate	SVC	894
Postal +	785 Tucker Rd. -#G,H	Postal Services	SVC	1,544
Vacant	785 Tucker Rd. -#I	Vacant	VAC	1,481
Vacant	785 Tucker Rd. -#J	Vacant	VAC	1,481
Nails 2002	785 Tucker Rd. -#K	Nail Salon	SVC	1,481
Albertsons Gas/Food Express	785 Tucker Rd.	Convenience Market	GAS	2,095
NWC Tucker Rd and Valley Blvd.				
Radio Shack	1121 Valley Blvd. -#A	Electronics	FA	2,857
Books and Crannies	1121 Valley Blvd. -#B,C	Book Store	S	2,857
Blue Ginger PHO Restaurant	1121 Valley Blvd. -#D	Restaurant	ED	1,428
Domino's Pizza	1121 Valley Blvd. -#E	Restaurant	ED	1,571
Applegate Garden Florist	1121 Valley Blvd. -#H	Florist	S	1,285
Vacant	1121 Valley Blvd. -#I	Vacant	VAC	1,164
Delgado Jewelry	1121 Valley Blvd. -#J	Jewelry	S	1,005
McDonalds	795 Tucker Rd.	Restaurant	ED	4,170
NEC Tucker Rd and Valley Blvd.				
Tehachapi Loop Center				
Vacant	Tucker Rd., #5,6	Vacant	VAC	2,714
Tehachapi Christian Store	979 W. Valley Blvd. #6	Religious Articles and Books	S	1,481
Linen Chest	979 W. Valley Blvd. #4	Linens, Gifts	S	1,904

SHOPPING CENTER/BUSINESS NAME	ADDRESS	TYPE OF BUSINESS	RETAIL CATEGORY	SQUARE FEET
Howards Mini-Market/Liquor	798 Tucker Rd.	Convenience Market	F	4,264
SWC Tucker Rd. and Valley Blvd.				
Tehachapi Town Center				
Vacant	807-A Tucker Rd.	Vacant	VAC	952
Teas Donuts	807-B Tucker Rd.	Food	ED	952
Johnny's Take and Bake Pizza	807-C Tucker Rd.	Restaurant	ED	635
Quest Diagnostic (Patient Services)	807-D Tucker Rd.	Medical	SVC	635
Great Wall Chinese Restaurant	807-E,F Tucker Rd.	Restaurant	ED	4,592
Rite Aid	811 Tucker Rd.	Pharmacy/Drug Store	GM	16,234
Bargain Cigarettes	815-F Tucker Rd.	Gen. Merchandise	S	1,693
Aterio Therapy Fitness	815-C Tucker Rd.	Medical/Fitness	SVC	3,675
Little Caesars Pizza	815-A Tucker Rd.	Restaurant	ED	2,116
West Coast Cash	821-F Tucker Rd.	Check Cashing	SVC	1,259
Tehachapi Family Computers	821-E Tucker Rd.	Computers	FA	1,259
Vacant	821-D Tucker Rd.	Vacant	VAC	1,439
Vacant	821-C Tucker Rd.	Vacant	VAC	1,619
Kern County Schools Fed. Credit Union	821-A,B Tucker Rd.	Credit Union	SVC	2,438
Blockbuster Video	835-A Tucker Rd.	Video Store	S	5,830
Sears	835-B Tucker Rd.	General Merchandise	GM	7,406
Save Mart	835 Tucker Rd.	Food Market	F	44,066
Jack in the Box	801 Tucker Rd.	Restaurant	ED	3,333
Dollar Tree	844 Tucker Rd.	General Merchandise	GM	12,527
Auto Zone	842 Tucker Rd.	Auto Parts	MVP	6,221
SEC Tucker Rd. and Valley Blvd.				
Taco Bell	1098 Valley Blvd.	Restaurant	ED	2,608
Don Perico Mexican Restaurant	840 Tucker Rd., Suites A,B,C,D	Restaurant	ED	5,396
It Makes Scents	840 Tucker Rd., Suite E	Candle Store	S	1,587
Foot and Ankle Institute	840 Tucker Rd., Suite G	Medical	SVC	1,375
Tehachapi Liquor	840 Tucker Rd., Suite J,K	Liquor Store	F	2,750
Sonic Drive In	1040 W. Valley Blvd.	Restaurant	ED	2,407

* Outside of City of Tehachapi incorporated boundaries.

Source: TNDG

Table B-2
INVENTORY OF RETAIL TENANTS AND SQUARE FEET OF BUILDING SPACE
CITY OF TEHACHAPI - DOWNTOWN

BUSINESS NAME	ADDRESS	TYPE OF BUSINESS	RETAIL CATEGORY	SQUARE FEET
Tehachapi Valley Arts/Antiques	100 W. Tehachapi Blvd.	Gift Shop	S	2,638
Oak Tree Art and Antiques	102 W. Tehachapi Blvd.	Gift Shop	S	2,229
5 Hearts	104 W. Tehachapi Blvd.	Quilts, Fabrics	S	2,544
Simple Elegance	106 W. Tehachapi Blvd.	Gifts, Antiques	S	2,349
Kelcy's Restaurant/Café	112 W. Tehachapi Blvd.	Restaurant	ED	6,655
Trains, etc.	114 W. Tehachapi Blvd.	Hobby Shop	S	2,544
Kohnen's Country Bakery	125 W. Tehachapi Blvd.	Bakery, Restaurant	ED	3,333
Hodad"s Surf Shop	125 W. Tehachapi Blvd.	Clothing	S	5,713
Gold Coast Station	125 W. Tehachapi Blvd.	Specialty	S	813
The Burger Spot	208 W. Tehacahpi Blvd.	Restaurant	ED	2,068
B&B Country Store / Liquor Market	220 W. Tehachapi Blvd.	Convenience Market	F	4,147
Mud Hut Pottery	225 W. Tehachapi Blvd.	Hobby Shop	S	2,518
Tehachapi Lumber/Ace Hardware	228 W. Tehachapi Blvd.	Hardware	BM	9,760
Crossroads Gallery	101 E. Tehachapi Blvd.	Art Gallery, Gifts	S	1,984
Picture Perfect	103 E. Tehachapi Blvd.	Scrapping/Stamping	S	1,111
Gas and Go Food Mart	106 E. Tehachapi Blvd.	Convenience Market	F	1,582
Vacant	108 E. Tehachapi Blvd.	Vacant	VAC	1,994
Debbie's Fabrics	112 E. Tehachapi Blvd.	Fabrics	S	3,835
Vacant (former Carquest Auto Parts)	116 E. Tehachapi Blvd.	Vacant	VAC	3,682
Four Seasons Mini-Mart	128 E. Tehachapi Blvd.	Convenience Market	F	1,799
Tacos Samich	211 E. Tehachapi Blvd.	Restaurant	ED	1,777
Circle K	302 E. Tehachapi Blvd.	Convenience Market	F	3,259
Apple Shed	333 E. Tehachapi Blvd.	Restaurant, Bakery, Gifts	ED	5,227
Linda's Cakes and Things	402 E. Tehacahpi Blvd.	Bakery	ED	1,444
Village Grille Family Restaurant	410 E. Tehachapi Blvd.	Restaurant	ED	6,771
Mama Hillybeans - Coffee and Community	426 E. Tehachapi Blvd.	Coffee, Natural Foods	F	2,111
Shell - Food Store	107 S. Mill St.	Convenience Market	GAS	5,364
Victorian Rose	120 S. Mill St.	Tea Garden/Gift Shop	S	1,587
Las Palmas Mexican Restaurant	108 S. Green St.	Restaurant	ED	2,222
The TEC Computers	113 S. Green St.	Computer Store	FA	1,428
St. Vincent De Paul Thrift Store	122 S. Green St.	Thrift Store	S	9,353
Petra Mediterranean Deli/Restaurant	200 S. Green St.	Restaurant	ED	809
La Bella Amore	209 S. Green St.	Restaurant	ED	2,476
Barbie's Primo Burgers	118 E. F St.	Restaurant	ED	2,444
Tehachapi Flower	119 E. F St.	Florist	S	1,862
Southern Shooters Supply	120 E. F St.	Sporting Goods	S	1,513
Kasagiri Japanese Restauraunt	128 E. F St.	Restaurant	ED	2,074
Mountain Music (store portion)	206 E. F St.	Music Specialty	S	1,313
Tehachapi Hospital Guild Thrift Shop	115 W. E St.	Thrift Shop	S	2,433
Jake's Steakhouse	213 S. Curry St.	Restaurant	ED	2,777
Mountain Gardens Nursery & Pet Feed	503 S. Curry St.	Nursery	BM	3,750
Counter Fit	112 E. F St. #C	Clothes/Accessories	A	800

Source: TNDG

APPENDIX C:

HISTORIC GROCERY SALES – CITY OF TEHACHAPI

Table C-1
Estimate of Total Food and Supermarket Sales - City of Tehachapi
1993 - 2008 (in thousands of 2008 dollars)

		1993	1994	1995	1996	1997	1998	1999	2000
Taxable Food Sales (000s)		$7,178	$7,867	$10,543	$10,948	$11,467	$12,182	$13,780	$15,353
Food Store Permits (7/1)		7	5	8	10	10	9	8	10
Implicit Price Deflator		78.643	80.265	82.041	83.826	85.395	86.207	87.596	89.777
Taxable Food Sales (2008 $)		$9,952	$10,686	$14,011	$14,240	$14,641	$15,407	$17,152	$18,646
Estimated Total Food Sales, factor X	3.20	$31,845	$34,197	$44,837	$45,568	$46,851	$49,303	$54,886	$59,666
Estimated Supermarket Sales, factor X	78%	$24,839	$26,673	$34,973	$35,543	$36,544	$38,457	$42,811	$46,540
Supermarket Square Feet		44,066	44,066	93,566	93,566	93,566	93,566	93,566	93,566
Sales per SF		$564	$605	$374	$380	$391	$411	$458	$497

		2001	2002	2003	2004	2005	2006	2007	2008*
Taxable Food Sales (000s)		$17,751	$17,608	$20,604	$17,210	$21,508	$19,845	$21,688	$21,044
Food Store Permits (7/1)		10	10	9	10	8	9	9	N/A
Implicit Price Deflator		91.488	92.736	94.622	97.098	100	102.746	105.502	109.031
Taxable Food Sales (2008 $)		$21,155	$20,702	$23,742	$19,325	$23,450	$21,059	$22,413	$21,044
Estimated Total Food Sales, factor X	3.20	$67,695	$66,246	$75,973	$61,840	$75,041	$67,389	$71,723	$67,341
Estimated Supermarket Sales, factor X	78%	$52,802	$51,672	$59,259	$48,235	$58,532	$52,563	$55,944	$52,526
Supermarket Square Feet		93,566	93,566	93,566	93,566	93,566	93,566	93,566	93,566
Sales per SF		$564	$552	$633	$516	$626	$562	$598	$561

Note: *2008 sales are based on 1st 2nd and 2rd Quarters of 2008 and 4th quarter of 2007.
Source: State Board of Equalization (BOE); Bureau of Economic Analysis (BEA); TNDG.

Appendix D

Air Quality Data

9/15/2009 7:19:57 PM

Urbemis 2007 Version 9.2.4

Combined Summer Emissions Reports (Pounds/Day)

File Name: F:\MSWord 2008 Projects\Tehachapi Walmart\AQ Working File\modeling info\URBEMIS results\Proposed Project Construction and Operational Emissions.urb924

Project Name: Tehachapi Walmart Construction and Operations

Project Location: Kern County

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

	ROG	NOx	CO	SO2	PM10 Dust	PM10 Exhaust	PM10	PM2.5 Dust	PM2.5 Exhaust	PM2.5	CO2
2010 TOTALS (lbs/day unmitigated)	4.91	33.77	33.02	0.02	125.01	1.80	126.81	26.11	1.65	27.76	4,275.18
2010 TOTALS (lbs/day mitigated)	4.91	33.77	33.02	0.02	8.83	1.80	10.63	1.85	1.65	3.50	4,275.18
2011 TOTALS (lbs/day unmitigated)	180.43	22.54	30.98	0.02	0.10	1.40	1.50	0.03	1.29	1.32	4,276.45
2011 TOTALS (lbs/day mitigated)	180.43	22.54	30.98	0.02	0.10	1.40	1.50	0.03	1.29	1.32	4,276.45

AREA SOURCE EMISSION ESTIMATES

	ROG	NOx	CO	SO2	PM10	PM2.5	CO2
TOTALS (lbs/day, unmitigated)	1.52	1.77	6.08	0.00	0.02	0.02	2,059.31
TOTALS (lbs/day, mitigated)	1.51	1.60	5.93	0.00	0.02	0.02	1,854.22
Percent Reduction	0.66	9.60	2.47	NaN	0.00	0.00	9.96

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OPERATIONAL (VEHICLE) EMISSION ESTIMATES

	ROG	NOx	CO	SO2	PM10	PM2.5	CO2
TOTALS (lbs/day, unmitigated)	67.44	55.94	717.24	0.51	43.08	9.48	48,813.16
TOTALS (lbs/day, mitigated)	66.15	54.83	702.90	0.50	42.22	9.28	47,836.89
Percent Reduction	1.91	1.98	2.00	1.96	2.00	2.11	2.00

SUM OF AREA SOURCE AND OPERATIONAL EMISSION ESTIMATES

	ROG	NOx	CO	SO2	PM10	PM2.5	CO2
TOTALS (lbs/day, unmitigated)	68.96	57.71	723.32	0.51	43.10	9.50	50,872.47
TOTALS (lbs/day, mitigated)	67.66	56.43	708.83	0.50	42.24	9.30	49,691.11
Percent Reduction	1.89	2.22	2.00	1.96	2.00	2.11	2.32

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
Time Slice 6/1/2010-7/15/2010 Active Days: 33	4.22	**33.77**	19.60	0.00	**125.01**	**1.80**	**126.81**	**26.11**	**1.65**	**27.76**	3,212.28
Fine Grading 06/01/2010-07/15/2010	4.22	33.77	19.60	0.00	125.01	1.80	126.81	26.11	1.65	27.76	3,212.28
Fine Grading Dust	0.00	0.00	0.00	0.00	125.00	0.00	125.00	26.11	0.00	26.11	0.00
Fine Grading Off Road Diesel	4.16	33.67	17.48	0.00	0.00	1.79	1.79	0.00	1.65	1.65	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	0.06	0.10	2.11	0.00	0.01	0.01	0.02	0.00	0.00	0.01	204.80

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Time Slice 7/16/2010-7/30/2010 Active Days: 11	4.91	24.73	15.09	0.01	0.04	1.66	1.70	0.01	1.52	1.54	2,649.39
Asphalt 07/16/2010-07/31/2010	4.91	24.73	15.09	0.01	0.04	1.66	1.70	0.01	1.52	1.54	2,649.39
Paving Off-Gas	1.49	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Paving Off Road Diesel	3.01	20.10	9.67	0.00	0.00	1.46	1.46	0.00	1.35	1.35	1,671.81
Paving On Road Diesel	0.31	4.44	1.62	0.01	0.02	0.18	0.20	0.01	0.17	0.17	608.93
Paving Worker Trips	0.10	0.19	3.81	0.00	0.02	0.01	0.03	0.01	0.01	0.01	368.65
Time Slice 8/2/2010-12/31/2010 Active Days: 110	4.81	24.06	33.02	0.02	0.10	1.48	1.58	0.03	1.36	1.39	4,275.18
Building 08/01/2010-03/31/2011	4.81	24.06	33.02	0.02	0.10	1.48	1.58	0.03	1.36	1.39	4,275.18
Building Off Road Diesel	4.18	21.77	12.60	0.00	0.00	1.38	1.38	0.00	1.27	1.27	2,161.09
Building Vendor Trips	0.12	1.34	1.28	0.00	0.01	0.06	0.07	0.00	0.05	0.05	260.17
Building Worker Trips	0.51	0.94	19.14	0.02	0.09	0.05	0.14	0.03	0.04	0.07	1,853.92
Time Slice 1/3/2011-3/31/2011 Active Days: 64	4.45	22.54	30.98	0.02	0.10	1.40	1.50	0.03	1.29	1.32	4,276.45
Building 08/01/2010-03/31/2011	4.45	22.54	30.98	0.02	0.10	1.40	1.50	0.03	1.29	1.32	4,276.45
Building Off Road Diesel	3.89	20.47	12.18	0.00	0.00	1.30	1.30	0.00	1.20	1.20	2,161.09
Building Vendor Trips	0.11	1.23	1.19	0.00	0.01	0.05	0.06	0.00	0.05	0.05	260.23
Building Worker Trips	0.46	0.85	17.61	0.02	0.09	0.05	0.14	0.03	0.04	0.07	1,855.13
Time Slice 4/1/2011-4/29/2011 Active Days: 21	180.43	0.16	3.28	0.00	0.02	0.01	0.03	0.01	0.01	0.01	345.08
Coating 04/01/2011-04/30/2011	180.43	0.16	3.28	0.00	0.02	0.01	0.03	0.01	0.01	0.01	345.08
Architectural Coating	180.35	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Coating Worker Trips	0.09	0.16	3.28	0.00	0.02	0.01	0.03	0.01	0.01	0.01	345.08

Phase Assumptions

Phase: Fine Grading 6/1/2010 - 7/15/2010 - Default Fine Site Grading Description

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Total Acres Disturbed: 25

Maximum Daily Acreage Disturbed: 6.25

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

Phase: Paving 7/16/2010 - 7/31/2010 - Default Paving Description

Acres to be Paved: 6.25

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

1 Water Trucks (189 hp) operating at a 0.5 load factor for 8 hours per day

Phase: Building Construction 8/1/2010 - 3/31/2011 - 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

1 Water Trucks (189 hp) operating at a 0.5 load factor for 8 hours per day

Phase: Architectural Coating 4/1/2011 - 4/30/2011 - Default Architectural Coating Description

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Rule: Residential Interior Coatings begins 1/1/2005 ends 12/31/2040 specifies a VOC of 130

Rule: Residential Exterior Coatings begins 1/1/2005 ends 12/31/2040 specifies a VOC of 130

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

Construction Mitigated Detail Report:

CONSTRUCTION EMISSION ESTIMATES Summer Pounds Per Day, Mitigated

	ROG	NOx	CO	SO2	PM10 Dust	PM10 Exhaust	PM10	PM2.5 Dust	PM2.5 Exhaust	PM2.5	CO2
Time Slice 6/1/2010-7/15/2010 Active Days: 33	4.22	**33.77**	19.60	0.00	8.83	**1.80**	10.63	1.85	**1.65**	3.50	3,212.28
Fine Grading 06/01/2010-07/15/2010	4.22	33.77	19.60	0.00	8.83	1.80	10.63	1.85	1.65	3.50	3,212.28
Fine Grading Dust	0.00	0.00	0.00	0.00	8.82	0.00	8.82	1.84	0.00	1.84	0.00
Fine Grading Off Road Diesel	4.16	33.67	17.48	0.00	0.00	1.79	1.79	0.00	1.65	1.65	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	0.06	0.10	2.11	0.00	0.01	0.01	0.02	0.00	0.00	0.01	204.80
Time Slice 7/16/2010-7/30/2010 Active Days: 11	4.91	24.73	15.09	0.01	0.04	1.66	1.70	0.01	1.52	1.54	2,649.39
Asphalt 07/16/2010-07/31/2010	4.91	24.73	15.09	0.01	0.04	1.66	1.70	0.01	1.52	1.54	2,649.39
Paving Off-Gas	1.49	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Paving Off Road Diesel	3.01	20.10	9.67	0.00	0.00	1.46	1.46	0.00	1.35	1.35	1,671.81
Paving On Road Diesel	0.31	4.44	1.62	0.01	0.02	0.18	0.20	0.01	0.17	0.17	608.93
Paving Worker Trips	0.10	0.19	3.81	0.00	0.02	0.01	0.03	0.01	0.01	0.01	368.65

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Time Slice 8/2/2010-12/31/2010 Active Days: 110	4.81	24.06	33.02	0.02	0.10	1.48	1.58	0.03	1.36	1.39	4,275.18
Building 08/01/2010-03/31/2011	4.81	24.06	33.02	0.02	0.10	1.48	1.58	0.03	1.36	1.39	4,275.18
Building Off Road Diesel	4.18	21.77	12.60	0.00	0.00	1.38	1.38	0.00	1.27	1.27	2,161.09
Building Vendor Trips	0.12	1.34	1.28	0.00	0.01	0.06	0.07	0.00	0.05	0.05	260.17
Building Worker Trips	0.51	0.94	19.14	0.02	0.09	0.05	0.14	0.03	0.04	0.07	1,853.92
Time Slice 1/3/2011-3/31/2011 Active Days: 64	4.45	22.54	30.98	0.02	0.10	1.40	1.50	0.03	1.29	1.32	4,276.45
Building 08/01/2010-03/31/2011	4.45	22.54	30.98	0.02	0.10	1.40	1.50	0.03	1.29	1.32	4,276.45
Building Off Road Diesel	3.89	20.47	12.18	0.00	0.00	1.30	1.30	0.00	1.20	1.20	2,161.09
Building Vendor Trips	0.11	1.23	1.19	0.00	0.01	0.05	0.06	0.00	0.05	0.05	260.23
Building Worker Trips	0.46	0.85	17.61	0.02	0.09	0.05	0.14	0.03	0.04	0.07	1,855.13
Time Slice 4/1/2011-4/29/2011 Active Days: 21	180.43	0.16	3.28	0.00	0.02	0.01	0.03	0.01	0.01	0.01	345.08
Coating 04/01/2011-04/30/2011	180.43	0.16	3.28	0.00	0.02	0.01	0.03	0.01	0.01	0.01	345.08
Architectural Coating	180.35	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Coating Worker Trips	0.09	0.16	3.28	0.00	0.02	0.01	0.03	0.01	0.01	0.01	345.08

Construction Related Mitigation Measures

The following mitigation measures apply to Phase: Fine Grading 6/1/2010 - 7/15/2010 - Default Fine Site Grading Description

For Soil Stablizing Measures, the Apply soil stabilizers to inactive areas mitigation reduces emissions by:

PM10: 84% PM25: 84%

For Soil Stablizing Measures, the Water exposed surfaces 2x daily watering mitigation reduces emissions by:

PM10: 55% PM25: 55%

For Soil Stablizing Measures, the Equipment loading/unloading mitigation reduces emissions by:

PM10: 69% PM25: 69%

For Unpaved Roads Measures, the Reduce speed on unpaved roads to less than 15 mph mitigation reduces emissions by:

PM10: 44% PM25: 44%

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For Unpaved Roads Measures, the Manage haul road dust 2x daily watering mitigation reduces emissions by:

PM10: 55% PM25: 55%

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	0.12	1.71	1.44	0.00	0.00	0.00	2,050.88
Hearth							
Landscape	0.37	0.06	4.64	0.00	0.02	0.02	8.43
Consumer Products							
Architectural Coatings	1.03						
TOTALS (lbs/day, unmitigated)	1.52	1.77	6.08	0.00	0.02	0.02	2,059.31

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Area Source Mitigated Detail Report:

AREA SOURCE EMISSION ESTIMATES Summer Pounds Per Day, Mitigated

Source	ROG	NOx	CO	SO2	PM10	PM2.5	CO2
Natural Gas	0.11	1.54	1.29	0.00	0.00	0.00	1,845.79
Hearth							
Landscape	0.37	0.06	4.64	0.00	0.02	0.02	8.43
Consumer Products							
Architectural Coatings	1.03						
TOTALS (lbs/day, mitigated)	1.51	1.60	5.93	0.00	0.02	0.02	1,854.22

Area Source Mitigation Measures Selected

Mitigation Description	Percent Reduction
Commercial Increase Energy Efficiency Beyond Title 24	10.00

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
Fast food rest. w/ drive thru	17.80	15.24	196.27	0.14	11.79	2.59	13,365.47
Free-standing discount superstore	48.36	39.66	507.65	0.36	30.49	6.71	34,541.46
Strip mall	1.28	1.04	13.32	0.01	0.80	0.18	906.23
TOTALS (lbs/day, unmitigated)	67.44	55.94	717.24	0.51	43.08	9.48	48,813.16

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Operational Mitigated Detail Report:

OPERATIONAL EMISSION ESTIMATES Summer Pounds Per Day, Mitigated

Source	ROG	NOX	CO	SO2	PM10	PM25	CO2
Fast food rest. w/ drive thru	17.45	14.94	192.35	0.14	11.56	2.54	13,098.16
Free-standing discount superstore	47.44	38.87	497.50	0.35	29.88	6.57	33,850.63
Strip mall	1.26	1.02	13.05	0.01	0.78	0.17	888.10
TOTALS (lbs/day, mitigated)	66.15	54.83	702.90	0.50	42.22	9.28	47,836.89

Operational Mitigation Options Selected

Residential Mitigation Measures

Nonresidential Mitigation Measures

Non-Residential Local-Serving Retail Mitigation

Percent Reduction in Trips is 2%

Inputs Selected:

The Presence of Local-Serving Retail checkbox was selected.

Operational Settings:

Includes correction for passby trips

Does not include double counting adjustment for internal trips

Analysis Year: 2011 Temperature (F): 90 Season: Summer

Emfac: Version : Emfac2007 V2.3 Nov 1 2006

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Summary of Land Uses

Land Use Type	Acreage	Trip Rate	Unit Type	No. Units	Total Trips	Total VMT
Fast food rest. w/ drive thru		496.06	1000 sq ft	6.60	3,274.00	13,783.54
Free-standing discount superstore		53.13	1000 sq ft	165.00	8,766.45	35,626.52
Strip mall		44.23	1000 sq ft	5.20	230.00	934.69
					12,270.45	50,344.75

Vehicle Fleet Mix

Vehicle Type	Percent Type	Non-Catalyst	Catalyst	Diesel
Light Auto	49.9	1.0	98.7	0.3
Light Truck < 3750 lbs	15.0	2.5	90.8	6.7
Light Truck 3751-5750 lbs	25.7	1.0	98.5	0.5
Med Truck 5751-8500 lbs	1.1	0.8	99.2	0.0
Lite-Heavy Truck 8501-10,000 lbs	0.3	0.0	72.4	27.6
Lite-Heavy Truck 10,001-14,000 lbs	0.1	0.0	50.0	50.0
Med-Heavy Truck 14,001-33,000 lbs	0.1	0.0	15.4	84.6
Heavy-Heavy Truck 33,001-60,000 lbs	0.4	0.0	0.0	100.0
Other Bus	0.0	0.0	0.0	100.0
Urban Bus	0.0	0.0	0.0	0.0
Motorcycle	5.5	63.6	36.4	0.0
School Bus	0.3	0.0	0.0	100.0
Motor Home	1.6	0.0	84.6	15.4

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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)						
Fast food rest. w/ drive thru				5.0	2.5	92.5
Free-standing discount superstore				2.0	1.0	97.0
Strip mall				2.0	1.0	97.0

Operational Changes to Defaults

The urban/rural selection has been changed from Urban to Rural

Ambient summer temperature changed from 85 degrees F to 90 degrees F

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Urbemis 2007 Version 9.2.4

Combined Winter Emissions Reports (Pounds/Day)

File Name: F:\MSWord 2008 Projects\Tehachapi Walmart\AQ Working File\modeling info\URBEMIS results\Proposed Project Construction and Operational Emissions.urb924

Project Name: Tehachapi Walmart Construction and Operations

Project Location: Kern County

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

	ROG	NOx	CO	SO2	PM10 Dust	PM10 Exhaust	PM10	PM2.5 Dust	PM2.5 Exhaust	PM2.5	CO2
2010 TOTALS (lbs/day unmitigated)	4.91	33.77	33.02	0.02	125.01	1.80	126.81	26.11	1.65	27.76	4,275.18
2010 TOTALS (lbs/day mitigated)	4.91	33.77	33.02	0.02	8.83	1.80	10.63	1.85	1.65	3.50	4,275.18
2011 TOTALS (lbs/day unmitigated)	180.43	22.54	30.98	0.02	0.10	1.40	1.50	0.03	1.29	1.32	4,276.45
2011 TOTALS (lbs/day mitigated)	180.43	22.54	30.98	0.02	0.10	1.40	1.50	0.03	1.29	1.32	4,276.45

AREA SOURCE EMISSION ESTIMATES

	ROG	NOx	CO	SO2	PM10	PM2.5	CO2
TOTALS (lbs/day, unmitigated)	1.15	1.71	1.44	0.00	0.00	0.00	2,050.88
TOTALS (lbs/day, mitigated)	1.14	1.54	1.29	0.00	0.00	0.00	1,845.79
Percent Reduction	0.87	9.94	10.42	NaN	NaN	NaN	10.00

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OPERATIONAL (VEHICLE) EMISSION ESTIMATES

	ROG	NOx	CO	SO2	PM10	PM2.5	CO2
TOTALS (lbs/day, unmitigated)	81.97	87.43	806.32	0.41	43.08	9.48	40,558.12
TOTALS (lbs/day, mitigated)	80.32	85.68	790.20	0.40	42.22	9.28	39,746.95
Percent Reduction	2.01	2.00	2.00	2.44	2.00	2.11	2.00

SUM OF AREA SOURCE AND OPERATIONAL EMISSION ESTIMATES

	ROG	NOx	CO	SO2	PM10	PM2.5	CO2
TOTALS (lbs/day, unmitigated)	83.12	89.14	807.76	0.41	43.08	9.48	42,609.00
TOTALS (lbs/day, mitigated)	81.46	87.22	791.49	0.40	42.22	9.28	41,592.74
Percent Reduction	2.00	2.15	2.01	2.44	2.00	2.11	2.39

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
Time Slice 6/1/2010-7/15/2010 Active Days: 33	4.22	**33.77**	19.60	0.00	**125.01**	**1.80**	**126.81**	**26.11**	**1.65**	**27.76**	3,212.28
Fine Grading 06/01/2010-07/15/2010	4.22	33.77	19.60	0.00	125.01	1.80	126.81	26.11	1.65	27.76	3,212.28
Fine Grading Dust	0.00	0.00	0.00	0.00	125.00	0.00	125.00	26.11	0.00	26.11	0.00
Fine Grading Off Road Diesel	4.16	33.67	17.48	0.00	0.00	1.79	1.79	0.00	1.65	1.65	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	0.06	0.10	2.11	0.00	0.01	0.01	0.02	0.00	0.00	0.01	204.80

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Time Slice 7/16/2010-7/30/2010 Active Days: 11	4.91	24.73	15.09	0.01	0.04	1.66	1.70	0.01	1.52	1.54	2,649.39
Asphalt 07/16/2010-07/31/2010	4.91	24.73	15.09	0.01	0.04	1.66	1.70	0.01	1.52	1.54	2,649.39
Paving Off-Gas	1.49	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Paving Off Road Diesel	3.01	20.10	9.67	0.00	0.00	1.46	1.46	0.00	1.35	1.35	1,671.81
Paving On Road Diesel	0.31	4.44	1.62	0.01	0.02	0.18	0.20	0.01	0.17	0.17	608.93
Paving Worker Trips	0.10	0.19	3.81	0.00	0.02	0.01	0.03	0.01	0.01	0.01	368.65
Time Slice 8/2/2010-12/31/2010 Active Days: 110	4.81	24.06	33.02	0.02	0.10	1.48	1.58	0.03	1.36	1.39	4,275.18
Building 08/01/2010-03/31/2011	4.81	24.06	33.02	0.02	0.10	1.48	1.58	0.03	1.36	1.39	4,275.18
Building Off Road Diesel	4.18	21.77	12.60	0.00	0.00	1.38	1.38	0.00	1.27	1.27	2,161.09
Building Vendor Trips	0.12	1.34	1.28	0.00	0.01	0.06	0.07	0.00	0.05	0.05	260.17
Building Worker Trips	0.51	0.94	19.14	0.02	0.09	0.05	0.14	0.03	0.04	0.07	1,853.92
Time Slice 1/3/2011-3/31/2011 Active Days: 64	4.45	22.54	30.98	0.02	0.10	1.40	1.50	0.03	1.29	1.32	4,276.45
Building 08/01/2010-03/31/2011	4.45	22.54	30.98	0.02	0.10	1.40	1.50	0.03	1.29	1.32	4,276.45
Building Off Road Diesel	3.89	20.47	12.18	0.00	0.00	1.30	1.30	0.00	1.20	1.20	2,161.09
Building Vendor Trips	0.11	1.23	1.19	0.00	0.01	0.05	0.06	0.00	0.05	0.05	260.23
Building Worker Trips	0.46	0.85	17.61	0.02	0.09	0.05	0.14	0.03	0.04	0.07	1,855.13
Time Slice 4/1/2011-4/29/2011 Active Days: 21	180.43	0.16	3.28	0.00	0.02	0.01	0.03	0.01	0.01	0.01	345.08
Coating 04/01/2011-04/30/2011	180.43	0.16	3.28	0.00	0.02	0.01	0.03	0.01	0.01	0.01	345.08
Architectural Coating	180.35	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Coating Worker Trips	0.09	0.16	3.28	0.00	0.02	0.01	0.03	0.01	0.01	0.01	345.08

Phase Assumptions

Phase: Fine Grading 6/1/2010 - 7/15/2010 - Default Fine Site Grading Description

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Total Acres Disturbed: 25

Maximum Daily Acreage Disturbed: 6.25

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

Phase: Paving 7/16/2010 - 7/31/2010 - Default Paving Description

Acres to be Paved: 6.25

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

1 Water Trucks (189 hp) operating at a 0.5 load factor for 8 hours per day

Phase: Building Construction 8/1/2010 - 3/31/2011 - 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

1 Water Trucks (189 hp) operating at a 0.5 load factor for 8 hours per day

Phase: Architectural Coating 4/1/2011 - 4/30/2011 - Default Architectural Coating Description

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Rule: Residential Interior Coatings begins 1/1/2005 ends 12/31/2040 specifies a VOC of 130

Rule: Residential Exterior Coatings begins 1/1/2005 ends 12/31/2040 specifies a VOC of 130

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

Construction Mitigated Detail Report:

CONSTRUCTION EMISSION ESTIMATES Winter Pounds Per Day, Mitigated

	ROG	NOx	CO	SO2	PM10 Dust	PM10 Exhaust	PM10	PM2.5 Dust	PM2.5 Exhaust	PM2.5	CO2
Time Slice 6/1/2010-7/15/2010 Active Days: 33	4.22	**33.77**	19.60	0.00	8.83	**1.80**	10.63	1.85	**1.65**	3.50	3,212.28
Fine Grading 06/01/2010-07/15/2010	4.22	33.77	19.60	0.00	8.83	1.80	10.63	1.85	1.65	3.50	3,212.28
Fine Grading Dust	0.00	0.00	0.00	0.00	8.82	0.00	8.82	1.84	0.00	1.84	0.00
Fine Grading Off Road Diesel	4.16	33.67	17.48	0.00	0.00	1.79	1.79	0.00	1.65	1.65	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	0.06	0.10	2.11	0.00	0.01	0.01	0.02	0.00	0.00	0.01	204.80
Time Slice 7/16/2010-7/30/2010 Active Days: 11	4.91	24.73	15.09	0.01	0.04	1.66	1.70	0.01	1.52	1.54	2,649.39
Asphalt 07/16/2010-07/31/2010	4.91	24.73	15.09	0.01	0.04	1.66	1.70	0.01	1.52	1.54	2,649.39
Paving Off-Gas	1.49	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Paving Off Road Diesel	3.01	20.10	9.67	0.00	0.00	1.46	1.46	0.00	1.35	1.35	1,671.81
Paving On Road Diesel	0.31	4.44	1.62	0.01	0.02	0.18	0.20	0.01	0.17	0.17	608.93
Paving Worker Trips	0.10	0.19	3.81	0.00	0.02	0.01	0.03	0.01	0.01	0.01	368.65

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Time Slice 8/2/2010-12/31/2010 Active Days: 110	4.81	24.06	33.02	0.02	0.10	1.48	1.58	0.03	1.36	1.39	4,275.18
Building 08/01/2010-03/31/2011	4.81	24.06	33.02	0.02	0.10	1.48	1.58	0.03	1.36	1.39	4,275.18
Building Off Road Diesel	4.18	21.77	12.60	0.00	0.00	1.38	1.38	0.00	1.27	1.27	2,161.09
Building Vendor Trips	0.12	1.34	1.28	0.00	0.01	0.06	0.07	0.00	0.05	0.05	260.17
Building Worker Trips	0.51	0.94	19.14	0.02	0.09	0.05	0.14	0.03	0.04	0.07	1,853.92
Time Slice 1/3/2011-3/31/2011 Active Days: 64	4.45	22.54	30.98	0.02	0.10	1.40	1.50	0.03	1.29	1.32	4,276.45
Building 08/01/2010-03/31/2011	4.45	22.54	30.98	0.02	0.10	1.40	1.50	0.03	1.29	1.32	4,276.45
Building Off Road Diesel	3.89	20.47	12.18	0.00	0.00	1.30	1.30	0.00	1.20	1.20	2,161.09
Building Vendor Trips	0.11	1.23	1.19	0.00	0.01	0.05	0.06	0.00	0.05	0.05	260.23
Building Worker Trips	0.46	0.85	17.61	0.02	0.09	0.05	0.14	0.03	0.04	0.07	1,855.13
Time Slice 4/1/2011-4/29/2011 Active Days: 21	180.43	0.16	3.28	0.00	0.02	0.01	0.03	0.01	0.01	0.01	345.08
Coating 04/01/2011-04/30/2011	180.43	0.16	3.28	0.00	0.02	0.01	0.03	0.01	0.01	0.01	345.08
Architectural Coating	180.35	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Coating Worker Trips	0.09	0.16	3.28	0.00	0.02	0.01	0.03	0.01	0.01	0.01	345.08

Construction Related Mitigation Measures

The following mitigation measures apply to Phase: Fine Grading 6/1/2010 - 7/15/2010 - Default Fine Site Grading Description

For Soil Stablizing Measures, the Apply soil stabilizers to inactive areas mitigation reduces emissions by:

PM10: 84% PM25: 84%

For Soil Stablizing Measures, the Water exposed surfaces 2x daily watering mitigation reduces emissions by:

PM10: 55% PM25: 55%

For Soil Stablizing Measures, the Equipment loading/unloading mitigation reduces emissions by:

PM10: 69% PM25: 69%

For Unpaved Roads Measures, the Reduce speed on unpaved roads to less than 15 mph mitigation reduces emissions by:

PM10: 44% PM25: 44%

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For Unpaved Roads Measures, the Manage haul road dust 2x daily watering mitigation reduces emissions by:

PM10: 55% PM25: 55%

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	0.12	1.71	1.44	0.00	0.00	0.00	2,050.88
Hearth							
Landscaping - No Winter Emissions							
Consumer Products							
Architectural Coatings	1.03						
TOTALS (lbs/day, unmitigated)	1.15	1.71	1.44	0.00	0.00	0.00	2,050.88

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Area Source Mitigated Detail Report:

AREA SOURCE EMISSION ESTIMATES Winter Pounds Per Day, Mitigated

Source	ROG	NOx	CO	SO2	PM10	PM2.5	CO2
Natural Gas	0.11	1.54	1.29	0.00	0.00	0.00	1,845.79
Hearth							
Landscaping - No Winter Emissions							
Consumer Products							
Architectural Coatings	1.03						
TOTALS (lbs/day, mitigated)	1.14	1.54	1.29	0.00	0.00	0.00	1,845.79

Area Source Mitigation Measures Selected

Mitigation Description	Percent Reduction
Commercial Increase Energy Efficiency Beyond Title 24	10.00

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
Fast food rest. w/ drive thru	22.30	23.84	219.46	0.11	11.79	2.59	11,105.38
Free-standing discount superstore	58.14	61.96	571.86	0.29	30.49	6.71	28,699.77
Strip mall	1.53	1.63	15.00	0.01	0.80	0.18	752.97
TOTALS (lbs/day, unmitigated)	81.97	87.43	806.32	0.41	43.08	9.48	40,558.12

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Operational Mitigated Detail Report:

OPERATIONAL EMISSION ESTIMATES Winter Pounds Per Day, Mitigated

Source	ROG	NOX	CO	SO2	PM10	PM25	CO2
Fast food rest. w/ drive thru	21.85	23.37	215.07	0.11	11.56	2.54	10,883.27
Free-standing discount superstore	56.98	60.72	560.43	0.28	29.88	6.57	28,125.77
Strip mall	1.49	1.59	14.70	0.01	0.78	0.17	737.91
TOTALS (lbs/day, mitigated)	80.32	85.68	790.20	0.40	42.22	9.28	39,746.95

Operational Mitigation Options Selected

Residential Mitigation Measures

Nonresidential Mitigation Measures

Non-Residential Local-Serving Retail Mitigation

Percent Reduction in Trips is 2%

Inputs Selected:

The Presence of Local-Serving Retail checkbox was selected.

Operational Settings:

Includes correction for passby trips

Does not include double counting adjustment for internal trips

Analysis Year: 2011 Temperature (F): 40 Season: Winter

Emfac: Version : Emfac2007 V2.3 Nov 1 2006

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Summary of Land Uses

Land Use Type	Acreage	Trip Rate	Unit Type	No. Units	Total Trips	Total VMT
Fast food rest. w/ drive thru		496.06	1000 sq ft	6.60	3,274.00	13,783.54
Free-standing discount superstore		53.13	1000 sq ft	165.00	8,766.45	35,626.52
Strip mall		44.23	1000 sq ft	5.20	230.00	934.69
					12,270.45	50,344.75

Vehicle Fleet Mix

Vehicle Type	Percent Type	Non-Catalyst	Catalyst	Diesel
Light Auto	49.9	1.0	98.7	0.3
Light Truck < 3750 lbs	15.0	2.5	90.8	6.7
Light Truck 3751-5750 lbs	25.7	1.0	98.5	0.5
Med Truck 5751-8500 lbs	1.1	0.8	99.2	0.0
Lite-Heavy Truck 8501-10,000 lbs	0.3	0.0	72.4	27.6
Lite-Heavy Truck 10,001-14,000 lbs	0.1	0.0	50.0	50.0
Med-Heavy Truck 14,001-33,000 lbs	0.1	0.0	15.4	84.6
Heavy-Heavy Truck 33,001-60,000 lbs	0.4	0.0	0.0	100.0
Other Bus	0.0	0.0	0.0	100.0
Urban Bus	0.0	0.0	0.0	0.0
Motorcycle	5.5	63.6	36.4	0.0
School Bus	0.3	0.0	0.0	100.0
Motor Home	1.6	0.0	84.6	15.4

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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)						
Fast food rest. w/ drive thru				5.0	2.5	92.5
Free-standing discount superstore				2.0	1.0	97.0
Strip mall				2.0	1.0	97.0

Operational Changes to Defaults

The urban/rural selection has been changed from Urban to Rural

Ambient summer temperature changed from 85 degrees F to 90 degrees F

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Urbemis 2007 Version 9.2.4

Combined Annual Emissions Reports (Tons/Year)

File Name: F:\MSWord 2008 Projects\Tehachapi Walmart\AQ Working File\modeling info\URBEMIS results\Proposed Project Construction and Operational Emissions.urb924

Project Name: Tehachapi Walmart Construction and Operations

Project Location: Kern County

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

	ROG	NOx	CO	SO2	PM10 Dust	PM10 Exhaust	PM10	PM2.5 Dust	PM2.5 Exhaust	PM2.5	CO2
2010 TOTALS (tons/year unmitigated)	0.36	2.02	2.22	0.00	2.07	0.12	2.19	0.43	0.11	0.54	302.71
2010 TOTALS (tons/year mitigated)	0.36	2.02	2.22	0.00	0.15	0.12	0.27	0.03	0.11	0.14	302.71
Percent Reduction	0.00	0.00	0.00	0.00	92.69	0.00	87.59	92.50	0.00	73.70	0.00
2011 TOTALS (tons/year unmitigated)	2.04	0.72	1.03	0.00	0.00	0.05	0.05	0.00	0.04	0.04	140.47
2011 TOTALS (tons/year mitigated)	2.04	0.72	1.03	0.00	0.00	0.05	0.05	0.00	0.04	0.04	140.47
Percent Reduction	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

AREA SOURCE EMISSION ESTIMATES

	ROG	NOx	CO	SO2	PM10	PM2.5	CO2
TOTALS (tons/year, unmitigated)	0.24	0.32	0.68	0.00	0.00	0.00	375.05
TOTALS (tons/year, mitigated)	0.24	0.29	0.66	0.00	0.00	0.00	337.62
Percent Reduction	0.00	9.37	2.94	NaN	NaN	NaN	9.98

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OPERATIONAL (VEHICLE) EMISSION ESTIMATES

	ROG	NOx	CO	SO2	PM10	PM2.5	CO2
TOTALS (tons/year, unmitigated)	13.19	12.14	136.31	0.08	7.86	1.72	8,406.22
TOTALS (tons/year, mitigated)	12.93	11.88	133.59	0.08	7.70	1.69	8,238.09
Percent Reduction	1.97	2.14	2.00	0.00	2.04	1.74	2.00

SUM OF AREA SOURCE AND OPERATIONAL EMISSION ESTIMATES

	ROG	NOx	CO	SO2	PM10	PM2.5	CO2
TOTALS (tons/year, unmitigated)	13.43	12.46	136.99	0.08	7.86	1.72	8,781.27
TOTALS (tons/year, mitigated)	13.17	12.17	134.25	0.08	7.70	1.69	8,575.71
Percent Reduction	1.94	2.33	2.00	0.00	2.04	1.74	2.34

Construction Unmitigated Detail Report:

CONSTRUCTION EMISSION ESTIMATES Annual Tons Per Year, Unmitigated

	ROG	NOx	CO	SO2	PM10 Dust	PM10 Exhaust	PM10	PM2.5 Dust	PM2.5 Exhaust	PM2.5	CO2

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2010	0.36	2.02	2.22	0.00	2.07	0.12	2.19	0.43	0.11	0.54	302.71
Fine Grading 06/01/2010-07/15/2010	0.07	0.56	0.32	0.00	2.06	0.03	2.09	0.43	0.03	0.46	53.00
Fine Grading Dust	0.00	0.00	0.00	0.00	2.06	0.00	2.06	0.43	0.00	0.43	0.00
Fine Grading Off Road Diesel	0.07	0.56	0.29	0.00	0.00	0.03	0.03	0.00	0.03	0.03	49.62
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	0.00	0.00	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3.38
Asphalt 07/16/2010-07/31/2010	0.03	0.14	0.08	0.00	0.00	0.01	0.01	0.00	0.01	0.01	14.57
Paving Off-Gas	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Paving Off Road Diesel	0.02	0.11	0.05	0.00	0.00	0.01	0.01	0.00	0.01	0.01	9.19
Paving On Road Diesel	0.00	0.02	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3.35
Paving Worker Trips	0.00	0.00	0.02	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.03
Building 08/01/2010-03/31/2011	0.26	1.32	1.82	0.00	0.01	0.08	0.09	0.00	0.07	0.08	235.13
Building Off Road Diesel	0.23	1.20	0.69	0.00	0.00	0.08	0.08	0.00	0.07	0.07	118.86
Building Vendor Trips	0.01	0.07	0.07	0.00	0.00	0.00	0.00	0.00	0.00	0.00	14.31
Building Worker Trips	0.03	0.05	1.05	0.00	0.00	0.00	0.01	0.00	0.00	0.00	101.97
2011	2.04	0.72	1.03	0.00	0.00	0.05	0.05	0.00	0.04	0.04	140.47
Building 08/01/2010-03/31/2011	0.14	0.72	0.99	0.00	0.00	0.04	0.05	0.00	0.04	0.04	136.85
Building Off Road Diesel	0.12	0.65	0.39	0.00	0.00	0.04	0.04	0.00	0.04	0.04	69.15
Building Vendor Trips	0.00	0.04	0.04	0.00	0.00	0.00	0.00	0.00	0.00	0.00	8.33
Building Worker Trips	0.01	0.03	0.56	0.00	0.00	0.00	0.00	0.00	0.00	0.00	59.36
Coating 04/01/2011-04/30/2011	1.89	0.00	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3.62
Architectural Coating	1.89	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Coating Worker Trips	0.00	0.00	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3.62

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Phase Assumptions

Phase: Fine Grading 6/1/2010 - 7/15/2010 - Default Fine Site Grading Description

Total Acres Disturbed: 25

Maximum Daily Acreage Disturbed: 6.25

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

Phase: Paving 7/16/2010 - 7/31/2010 - Default Paving Description

Acres to be Paved: 6.25

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

1 Water Trucks (189 hp) operating at a 0.5 load factor for 8 hours per day

Phase: Building Construction 8/1/2010 - 3/31/2011 - 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

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1 Water Trucks (189 hp) operating at a 0.5 load factor for 8 hours per day

Phase: Architectural Coating 4/1/2011 - 4/30/2011 - Default Architectural Coating Description

Rule: Residential Interior Coatings begins 1/1/2005 ends 12/31/2040 specifies a VOC of 130

Rule: Residential Exterior Coatings begins 1/1/2005 ends 12/31/2040 specifies a VOC of 130

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

Construction Mitigated Detail Report:

CONSTRUCTION EMISSION ESTIMATES Annual Tons Per Year, Mitigated

	ROG	NOx	CO	SO2	PM10 Dust	PM10 Exhaust	PM10	PM2.5 Dust	PM2.5 Exhaust	PM2.5	CO2

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2010	0.36	2.02	2.22	0.00	0.15	0.12	0.27	0.03	0.11	0.14	302.71
Fine Grading 06/01/2010-07/15/2010	0.07	0.56	0.32	0.00	0.15	0.03	0.18	0.03	0.03	0.06	53.00
Fine Grading Dust	0.00	0.00	0.00	0.00	0.15	0.00	0.15	0.03	0.00	0.03	0.00
Fine Grading Off Road Diesel	0.07	0.56	0.29	0.00	0.00	0.03	0.03	0.00	0.03	0.03	49.62
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	0.00	0.00	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3.38
Asphalt 07/16/2010-07/31/2010	0.03	0.14	0.08	0.00	0.00	0.01	0.01	0.00	0.01	0.01	14.57
Paving Off-Gas	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Paving Off Road Diesel	0.02	0.11	0.05	0.00	0.00	0.01	0.01	0.00	0.01	0.01	9.19
Paving On Road Diesel	0.00	0.02	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3.35
Paving Worker Trips	0.00	0.00	0.02	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.03
Building 08/01/2010-03/31/2011	0.26	1.32	1.82	0.00	0.01	0.08	0.09	0.00	0.07	0.08	235.13
Building Off Road Diesel	0.23	1.20	0.69	0.00	0.00	0.08	0.08	0.00	0.07	0.07	118.86
Building Vendor Trips	0.01	0.07	0.07	0.00	0.00	0.00	0.00	0.00	0.00	0.00	14.31
Building Worker Trips	0.03	0.05	1.05	0.00	0.00	0.00	0.01	0.00	0.00	0.00	101.97
2011	2.04	0.72	1.03	0.00	0.00	0.05	0.05	0.00	0.04	0.04	140.47
Building 08/01/2010-03/31/2011	0.14	0.72	0.99	0.00	0.00	0.04	0.05	0.00	0.04	0.04	136.85
Building Off Road Diesel	0.12	0.65	0.39	0.00	0.00	0.04	0.04	0.00	0.04	0.04	69.15
Building Vendor Trips	0.00	0.04	0.04	0.00	0.00	0.00	0.00	0.00	0.00	0.00	8.33
Building Worker Trips	0.01	0.03	0.56	0.00	0.00	0.00	0.00	0.00	0.00	0.00	59.36
Coating 04/01/2011-04/30/2011	1.89	0.00	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3.62
Architectural Coating	1.89	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Coating Worker Trips	0.00	0.00	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3.62

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Construction Related Mitigation Measures

The following mitigation measures apply to Phase: Fine Grading 6/1/2010 - 7/15/2010 - Default Fine Site Grading Description

For Soil Stablizing Measures, the Apply soil stabilizers to inactive areas mitigation reduces emissions by:

PM10: 84% PM25: 84%

For Soil Stablizing Measures, the Water exposed surfaces 2x daily watering mitigation reduces emissions by:

PM10: 55% PM25: 55%

For Soil Stablizing Measures, the Equipment loading/unloading mitigation reduces emissions by:

PM10: 69% PM25: 69%

For Unpaved Roads Measures, the Reduce speed on unpaved roads to less than 15 mph mitigation reduces emissions by:

PM10: 44% PM25: 44%

For Unpaved Roads Measures, the Manage haul road dust 2x daily watering mitigation reduces emissions by:

PM10: 55% PM25: 55%

Area Source Unmitigated Detail Report:

AREA SOURCE EMISSION ESTIMATES Annual Tons Per Year, Unmitigated

Source	ROG	NOx	CO	SO2	PM10	PM2.5	CO2
Natural Gas	0.02	0.31	0.26	0.00	0.00	0.00	374.29
Hearth							
Landscape	0.03	0.01	0.42	0.00	0.00	0.00	0.76
Consumer Products							
Architectural Coatings	0.19						
TOTALS (tons/year, unmitigated)	0.24	0.32	0.68	0.00	0.00	0.00	375.05

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Area Source Mitigated Detail Report:

AREA SOURCE EMISSION ESTIMATES Annual Tons Per Year, Mitigated

Source	ROG	NOx	CO	SO2	PM10	PM2.5	CO2
Natural Gas	0.02	0.28	0.24	0.00	0.00	0.00	336.86
Hearth							
Landscape	0.03	0.01	0.42	0.00	0.00	0.00	0.76
Consumer Products							
Architectural Coatings	0.19						
TOTALS (tons/year, mitigated)	0.24	0.29	0.66	0.00	0.00	0.00	337.62

Area Source Mitigation Measures Selected

Mitigation Description	Percent Reduction
Commercial Increase Energy Efficiency Beyond Title 24	10.00

Area Source Changes to Defaults

Operational Unmitigated Detail Report:

OPERATIONAL EMISSION ESTIMATES Annual Tons Per Year, Unmitigated

Source	ROG	NOX	CO	SO2	PM10	PM25	CO2
Fast food rest. w/ drive thru	3.52	3.31	37.23	0.02	2.15	0.47	2,301.71
Free-standing discount superstore	9.42	8.60	96.55	0.06	5.56	1.22	5,948.45
Strip mall	0.25	0.23	2.53	0.00	0.15	0.03	156.06
TOTALS (tons/year, unmitigated)	13.19	12.14	136.31	0.08	7.86	1.72	8,406.22

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Operational Mitigated Detail Report:

OPERATIONAL EMISSION ESTIMATES Annual Tons Per Year, Mitigated

Source	ROG	NOX	CO	SO2	PM10	PM25	CO2
Fast food rest. w/ drive thru	3.45	3.24	36.49	0.02	2.11	0.46	2,255.67
Free-standing discount superstore	9.24	8.42	94.62	0.06	5.45	1.20	5,829.48
Strip mall	0.24	0.22	2.48	0.00	0.14	0.03	152.94
TOTALS (tons/year, mitigated)	12.93	11.88	133.59	0.08	7.70	1.69	8,238.09

Operational Mitigation Options Selected

Residential Mitigation Measures

Nonresidential Mitigation Measures

Non-Residential Local-Serving Retail Mitigation

Percent Reduction in Trips is 2%

Inputs Selected:

The Presence of Local-Serving Retail checkbox was selected.

Operational Settings:

Includes correction for passby trips

Does not include double counting adjustment for internal trips

Analysis Year: 2011 Season: Annual

Emfac: Version : Emfac2007 V2.3 Nov 1 2006

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Summary of Land Uses

Land Use Type	Acreage	Trip Rate	Unit Type	No. Units	Total Trips	Total VMT
Fast food rest. w/ drive thru		496.06	1000 sq ft	6.60	3,274.00	13,783.54
Free-standing discount superstore		53.13	1000 sq ft	165.00	8,766.45	35,626.52
Strip mall		44.23	1000 sq ft	5.20	230.00	934.69
					12,270.45	50,344.75

Vehicle Fleet Mix

Vehicle Type	Percent Type	Non-Catalyst	Catalyst	Diesel
Light Auto	49.9	1.0	98.7	0.3
Light Truck < 3750 lbs	15.0	2.5	90.8	6.7
Light Truck 3751-5750 lbs	25.7	1.0	98.5	0.5
Med Truck 5751-8500 lbs	1.1	0.8	99.2	0.0
Lite-Heavy Truck 8501-10,000 lbs	0.3	0.0	72.4	27.6
Lite-Heavy Truck 10,001-14,000 lbs	0.1	0.0	50.0	50.0
Med-Heavy Truck 14,001-33,000 lbs	0.1	0.0	15.4	84.6
Heavy-Heavy Truck 33,001-60,000 lbs	0.4	0.0	0.0	100.0
Other Bus	0.0	0.0	0.0	100.0
Urban Bus	0.0	0.0	0.0	0.0
Motorcycle	5.5	63.6	36.4	0.0
School Bus	0.3	0.0	0.0	100.0
Motor Home	1.6	0.0	84.6	15.4

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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)						
Fast food rest. w/ drive thru				5.0	2.5	92.5
Free-standing discount superstore				2.0	1.0	97.0
Strip mall				2.0	1.0	97.0

Operational Changes to Defaults

The urban/rural selection has been changed from Urban to Rural

Ambient summer temperature changed from 85 degrees F to 90 degrees F

SIMPLIFIED CALINE4 CARBON MONOXIDE ANALYSIS

Project Title: Tehachapi Wal-Mart

Background Information

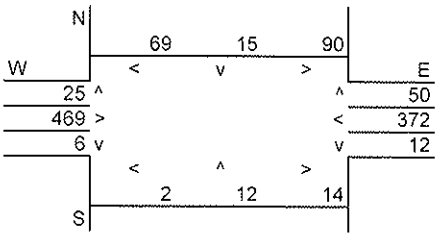
Nearest Air Monitoring Station measuring CO:	Bakersfield-Golden State Highway
Background 1-hour CO Concentration (ppm):	3.3
Background 8-hour CO Concentration (ppm):	2.2
Persistence Factor:	0.6
Analysis Year:	2011

Roadway Data

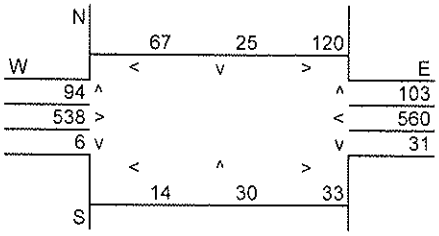
Intersection: Woodford Tehachapi Road/Valley Boulevard (SR-202)
Analysis Condition: Future (2011) WITH Project

		Roadway Type	No. of Lanes	Average Speed A.M.	Average Speed P.M.
North-South Roadway:	Woodford Tehachapi Road	At Grade	2	20	20
East-West Roadway:	Valley Boulevard (SR-202)	At Grade	2	20	20

A.M. Peak Hour Traffic Volumes



P.M. Peak Hour Traffic Volumes



Highest Traffic Volumes (Vehicles per Hour)

N-S Road:	261	N-S Road:	439
E-W Road:	1,007	E-W Road:	1,385

Roadway CO Contributions and Concentrations

Emissions = (A x B x C) / 100,000[1]

Roadway	A_1 E.O.R.	A_2 25 Feet	A_3 50 Feet	A_4 100 Feet	B Traffic Volume	C Emission Factors[2]	Estimated CO Concentrations E.O.R.	25 Feet	50 Feet	100 Feet
	Reference CO Concentrations									
A.M. Peak Traffic Hour										
North-South Road	3.7	2.7	2.2	1.7	261	4.08	0.04	0.03	0.02	0.02
East-West Road	14.0	7.6	5.7	4.0	1,007	4.08	0.58	0.31	0.23	0.16
P.M. Peak Traffic Hour										
North-South Road	3.7	2.7	2.2	1.7	439	4.08	0.07	0.05	0.04	0.03
East-West Road	14.0	7.6	5.7	4.0	1,385	4.08	0.79	0.43	0.32	0.23

[1] Methodology from Bay Area Air Quality Management District *BAAQMD CEQA Guidelines* (1996).
[2] Emission factors from EMFAC2002 (2003).

Total Roadway CO Concentrations

Peak Hour Emissions = North-South Concentration + East-West Concentration + Background 1-hour Concentration[2]
8-Hour Emissions = ((Highest Peak Hour Concentration - Background 1-hour Concentration) x Persistence Factor) + Background 8-hour Conc[2]

	A.M. Peak Hour	P.M. Peak Hour	8-Hour
Roadway Edge	3.9	4.2	2.7
25 Feet from Roadway Edge	3.6	3.8	2.5
50 Feet from Roadway Edge	3.6	3.7	2.4
100 Feet from Roadway Edge	3.5	3.6	2.3

[2] Methodology from Bay Area Air Quality Management District *BAAQMD CEQA Guidelines* (1996).

SIMPLIFIED CALINE4 CARBON MONOXIDE ANALYSIS

Project Title: Tehachapi Wal-Mart

Background Information

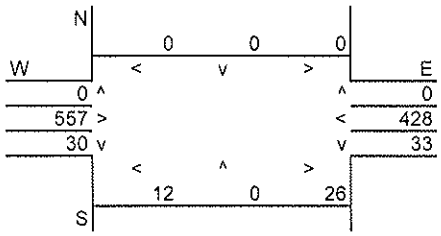
Nearest Air Monitoring Station measuring CO:	Bakersfield-Golden State Highway
Background 1-hour CO Concentration (ppm):	3.3
Background 8-hour CO Concentration (ppm):	2.2
Persistence Factor:	0.6
Analysis Year:	2011

Roadway Data

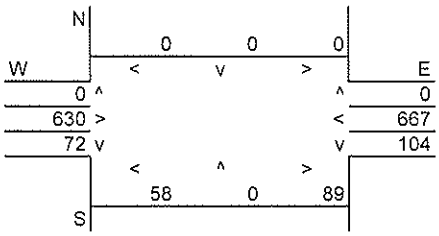
Intersection:	South Street/Valley Boulevard (SR-202)
Analysis Condition:	Future (2011) WITH Project

		Roadway Type	No. of Lanes	Average Speed A.M.	Average Speed P.M.
North-South Roadway:	South Street	At Grade	2	5	5
East-West Roadway:	Valley Boulevard (SR-202)	At Grade	2	20	20

A.M. Peak Hour Traffic Volumes



P.M. Peak Hour Traffic Volumes



Highest Traffic Volumes (Vehicles per Hour)

N-S Road:	101	N-S Road:	323
E-W Road:	1,044	E-W Road:	1,490

Roadway CO Contributions and Concentrations

Emissions = (A x B x C) / 100,000[1]

Roadway	A_1 E.O.R.	A_2 25 Feet	A_3 50 Feet	A_4 100 Feet	B Traffic Volume	C Emission Factors[2]	Estimated CO Concentrations E.O.R.	25 Feet	50 Feet	100 Feet
	Reference CO Concentrations									
A.M. Peak Traffic Hour										
North-South Road	3.7	2.7	2.2	1.7	101	7.00	0.03	0.02	0.02	0.01
East-West Road	14.0	7.6	5.7	4.0	1,044	4.08	0.60	0.32	0.24	0.17
P.M. Peak Traffic Hour										
North-South Road	3.7	2.7	2.2	1.7	323	7.00	0.08	0.06	0.05	0.04
East-West Road	14.0	7.6	5.7	4.0	1,490	4.08	0.85	0.46	0.35	0.24

[1] Methodology from Bay Area Air Quality Management District *BAAQMD CEQA Guidelines* (1996).
[2] Emission factors from EMFAC2002 (2003).

Total Roadway CO Concentrations

Peak Hour Emissions = North-South Concentration + East-West Concentration + Background 1-hour Concentration[2]
8-Hour Emissions = ((Highest Peak Hour Concentration - Background 1-hour Concentration) x Persistence Factor) + Background 8-hour Conc[2]

	A.M. Peak Hour	P.M. Peak Hour	8-Hour
Roadway Edge	3.9	4.2	2.7
25 Feet from Roadway Edge	3.6	3.8	2.5
50 Feet from Roadway Edge	3.6	3.7	2.4
100 Feet from Roadway Edge	3.5	3.6	2.3

[2] Methodology from Bay Area Air Quality Management District *BAAQMD CEQA Guidelines* (1996).

SIMPLIFIED CALINE4 CARBON MONOXIDE ANALYSIS

Project Title: Tehachapi Wal-Mart

Background Information

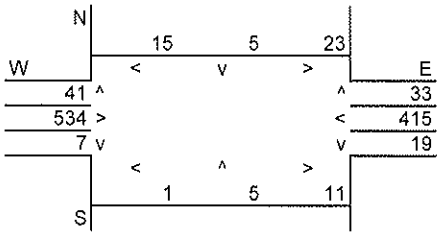
Nearest Air Monitoring Station measuring CO:	Bakersfield-Golden State Highway
Background 1-hour CO Concentration (ppm):	3.3
Background 8-hour CO Concentration (ppm):	2.2
Persistence Factor:	0.6
Analysis Year:	2011

Roadway Data

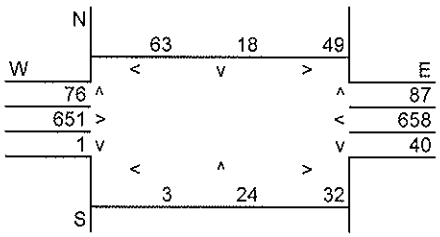
Intersection: Santa Lucia Street/Valley Boulevard (SR-202)
Analysis Condition: Future (2011) WITH Project

		Roadway Type	No. of Lanes	Average Speed A.M.	Average Speed P.M.
North-South Roadway:	Santa Lucia Street	At Grade	2	5	5
East-West Roadway:	Valley Boulevard (SR-202)	At Grade	2	20	10

A.M. Peak Hour Traffic Volumes



P.M. Peak Hour Traffic Volumes



Highest Traffic Volumes (Vehicles per Hour)

N-S Road:	122	N-S Road:	317
E-W Road:	1,035	E-W Road:	1,517

Roadway CO Contributions and Concentrations

Emissions = (A x B x C) / 100,000[1]

Roadway	A_1 Reference CO Concentrations E.O.R.	A_2 25 Feet	A_3 50 Feet	A_4 100 Feet	B Traffic Volume	C Emission Factors[2]	Estimated CO Concentrations E.O.R.	25 Feet	50 Feet	100 Feet
A.M. Peak Traffic Hour										
North-South Road	3.7	2.7	2.2	1.7	122	7.00	0.03	0.02	0.02	0.01
East-West Road	14.0	7.6	5.7	4.0	1,035	4.08	0.59	0.32	0.24	0.17
P.M. Peak Traffic Hour										
North-South Road	3.7	2.7	2.2	1.7	317	7.00	0.08	0.06	0.05	0.04
East-West Road	14.0	7.6	5.7	4.0	1,517	4.67	0.99	0.54	0.40	0.28

[1] Methodology from Bay Area Air Quality Management District *BAAQMD CEQA Guidelines* (1996).
[2] Emission factors from EMFAC2002 (2003).

Total Roadway CO Concentrations

Peak Hour Emissions = North-South Concentration + East-West Concentration + Background 1-hour Concentration[2]
8-Hour Emissions = ((Highest Peak Hour Concentration - Background 1-hour Concentration) x Persistence Factor) + Background 8-hour Conc[2]

	A.M. Peak Hour	P.M. Peak Hour	8-Hour
Roadway Edge	3.9	4.4	2.8
25 Feet from Roadway Edge	3.6	3.9	2.5
50 Feet from Roadway Edge	3.6	3.8	2.4
100 Feet from Roadway Edge	3.5	3.6	2.4

[2] Methodology from Bay Area Air Quality Management District *BAAQMD CEQA Guidelines* (1996).

SIMPLIFIED CALINE4 CARBON MONOXIDE ANALYSIS

Project Title: Tehachapi Wal-Mart

Background Information

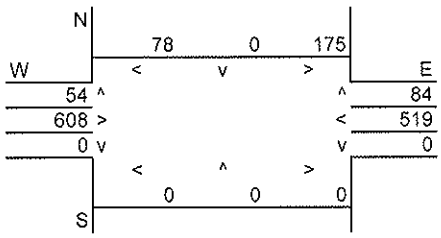
Nearest Air Monitoring Station measuring CO:	Bakersfield-Golden State Highway
Background 1-hour CO Concentration (ppm):	3.3
Background 8-hour CO Concentration (ppm):	2.2
Persistence Factor:	0.6
Analysis Year:	2011

Roadway Data

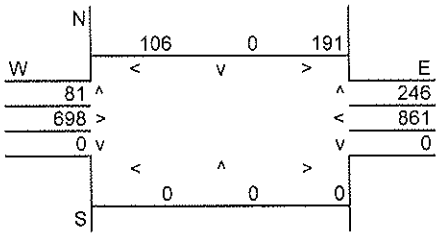
Intersection:	Golden Hills Boulevard/Valley Boulevard (SR-202)
Analysis Condition:	Future (2011) WITH Project

		Roadway Type	No. of Lanes	Average Speed A.M.	Average Speed P.M.
North-South Roadway:	Golden Hills Boulevard	At Grade	4	20	20
East-West Roadway:	Valley Boulevard (SR-202)	At Grade	2	20	20

A.M. Peak Hour Traffic Volumes



P.M. Peak Hour Traffic Volumes



Highest Traffic Volumes (Vehicles per Hour)

N-S Road:	391	N-S Road:	624
E-W Road:	1,386	E-W Road:	1,996

Roadway CO Contributions and Concentrations

Emissions = (A x B x C) / 100,000[1]

Roadway	A_1 E.O.R.	A_2 25 Feet	A_3 50 Feet	A_4 100 Feet	B Traffic Volume	C Emission Factors[2]	Estimated CO Concentrations E.O.R.	25 Feet	50 Feet	100 Feet
	Reference CO Concentrations									
A.M. Peak Traffic Hour										
North-South Road	3.3	2.6	2.2	1.7	391	4.08	0.05	0.04	0.04	0.03
East-West Road	14.0	7.6	5.7	4.0	1,386	4.08	0.79	0.43	0.32	0.23
P.M. Peak Traffic Hour										
North-South Road	3.3	2.6	2.2	1.7	624	4.08	0.08	0.07	0.06	0.04
East-West Road	14.0	7.6	5.7	4.0	1,996	4.08	1.14	0.62	0.46	0.33

[1] Methodology from Bay Area Air Quality Management District *BAAQMD CEQA Guidelines* (1996).
[2] Emission factors from EMFAC2002 (2003).

Total Roadway CO Concentrations

Peak Hour Emissions = North-South Concentration + East-West Concentration + Background 1-hour Concentration[2]
8-Hour Emissions = ((Highest Peak Hour Concentration - Background 1-hour Concentration) x Persistence Factor) + Background 8-hour Conc[2]

	A.M. Peak Hour	P.M. Peak Hour	8-Hour
Roadway Edge	4.1	4.5	2.9
25 Feet from Roadway Edge	3.8	4.0	2.6
50 Feet from Roadway Edge	3.7	3.8	2.5
100 Feet from Roadway Edge	3.6	3.7	2.4

[2] Methodology from Bay Area Air Quality Management District *BAAQMD CEQA Guidelines* (1996).

SIMPLIFIED CALINE4 CARBON MONOXIDE ANALYSIS

Project Title: Tehachapi Wal-Mart

Background Information

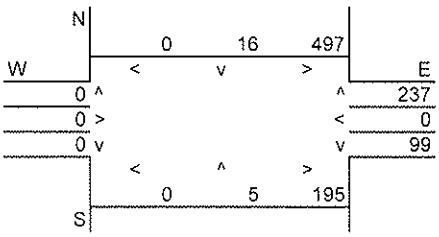
Nearest Air Monitoring Station measuring CO:	Bakersfield-Golden State Highway
Background 1-hour CO Concentration (ppm):	3.3
Background 8-hour CO Concentration (ppm):	2.2
Persistence Factor:	0.6
Analysis Year:	2011

Roadway Data

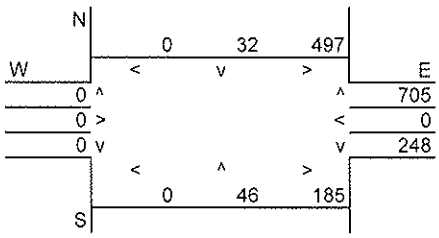
Intersection:	Westwood Boulevard/Red Apple Avenue
Analysis Condition:	Future (2011) WITHOUT Project

		Roadway Type	No. of Lanes	Average Speed A.M.	Average Speed P.M.
North-South Roadway:	Westwood Boulevard	At Grade	2	5	5
East-West Roadway:	Red Apple Avenue	At Grade	2	5	5

A.M. Peak Hour Traffic Volumes



P.M. Peak Hour Traffic Volumes



Highest Traffic Volumes (Vehicles per Hour)

N-S Road:	755	N-S Road:	1,280
E-W Road:	1,028	E-W Road:	1,635

Roadway CO Contributions and Concentrations

Emissions = (A x B x C) / 100,000[1]

Roadway	A_1 E.O.R.	A_2 25 Feet	A_3 50 Feet	A_4 100 Feet	B Traffic Volume	C Emission Factors[2]	Estimated CO Concentrations E.O.R.	25 Feet	50 Feet	100 Feet
	Reference CO Concentrations									
A.M. Peak Traffic Hour										
North-South Road	3.7	2.7	2.2	1.7	755	7.00	0.20	0.14	0.12	0.09
East-West Road	14.0	7.6	5.7	4.0	1,028	7.00	1.01	0.55	0.41	0.29
P.M. Peak Traffic Hour										
North-South Road	3.7	2.7	2.2	1.7	1,280	7.00	0.33	0.24	0.20	0.15
East-West Road	14.0	7.6	5.7	4.0	1,635	7.00	1.60	0.87	0.65	0.46

[1] Methodology from Bay Area Air Quality Management District *BAAQMD CEQA Guidelines* (1996).
[2] Emission factors from EMFAC2002 (2003).

Total Roadway CO Concentrations

Peak Hour Emissions = North-South Concentration + East-West Concentration + Background 1-hour Concentration[2]
8-Hour Emissions = ((Highest Peak Hour Concentration - Background 1-hour Concentration) x Persistence Factor) + Background 8-hour Conc[2]

	A.M. Peak Hour	P.M. Peak Hour	8-Hour
Roadway Edge	4.5	5.2	3.3
25 Feet from Roadway Edge	4.0	4.4	2.8
50 Feet from Roadway Edge	3.8	4.1	2.7
100 Feet from Roadway Edge	3.7	3.9	2.5

[2] Methodology from Bay Area Air Quality Management District *BAAQMD CEQA Guidelines* (1996).

SIMPLIFIED CALINE4 CARBON MONOXIDE ANALYSIS

Project Title: Tehachapi Wal-Mart

Background Information

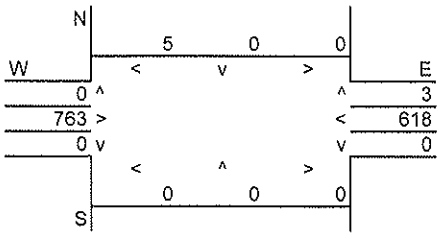
Nearest Air Monitoring Station measuring CO:	Bakersfield-Golden State Highway
Background 1-hour CO Concentration (ppm):	3.3
Background 8-hour CO Concentration (ppm):	2.2
Persistence Factor:	0.6
Analysis Year:	2011

Roadway Data

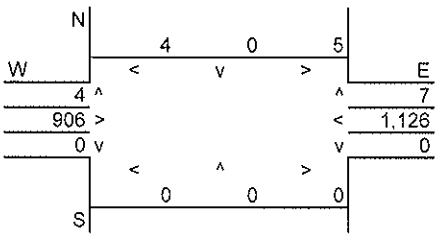
Intersection:	Sierra Vista Drive/Valley Boulevard (SR-202)
Analysis Condition:	Future (2011) WITH Project

		Roadway Type	No. of Lanes	Average Speed A.M.	Average Speed P.M.
North-South Roadway:	Sierra Vista Drive	At Grade	2	5	5
East-West Roadway:	Valley Boulevard (SR-202)	At Grade	2	20	5

A.M. Peak Hour Traffic Volumes



P.M. Peak Hour Traffic Volumes



Highest Traffic Volumes (Vehicles per Hour)

N-S Road:	8	N-S Road:	20
E-W Road:	1,386	E-W Road:	2,044

Roadway CO Contributions and Concentrations

Emissions = (A x B x C) / 100,000[1]

Roadway	A_1 Reference CO Concentrations E.O.R.	A_2 25 Feet	A_3 50 Feet	A_4 100 Feet	B Traffic Volume	C Emission Factors[2]	Estimated CO Concentrations E.O.R.	25 Feet	50 Feet	100 Feet
A.M. Peak Traffic Hour										
North-South Road	3.7	2.7	2.2	1.7	8	7.00	0.00	0.00	0.00	0.00
East-West Road	14.0	7.6	5.7	4.0	1,386	4.08	0.79	0.43	0.32	0.23
P.M. Peak Traffic Hour										
North-South Road	3.7	2.7	2.2	1.7	20	7.00	0.01	0.00	0.00	0.00
East-West Road	14.0	7.6	5.7	4.0	2,044	7.00	2.00	1.09	0.82	0.57

[1] Methodology from Bay Area Air Quality Management District *BAAQMD CEQA Guidelines* (1996).
[2] Emission factors from EMFAC2002 (2003).

Total Roadway CO Concentrations

Peak Hour Emissions = North-South Concentration + East-West Concentration + Background 1-hour Concentration[2]
8-Hour Emissions = ((Highest Peak Hour Concentration - Background 1-hour Concentration) x Persistence Factor) + Background 8-hour Conc[2]

	A.M. Peak Hour	P.M. Peak Hour	8-Hour
Roadway Edge	4.1	5.3	3.4
25 Feet from Roadway Edge	3.7	4.4	2.8
50 Feet from Roadway Edge	3.6	4.1	2.7
100 Feet from Roadway Edge	3.5	3.9	2.5

[2] Methodology from Bay Area Air Quality Management District *BAAQMD CEQA Guidelines* (1996).

SIMPLIFIED CALINE4 CARBON MONOXIDE ANALYSIS

Project Title: Tehachapi Wal-Mart

Background Information

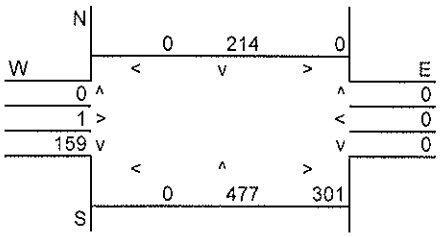
Nearest Air Monitoring Station measuring CO:	Bakersfield-Golden State Highway
Background 1-hour CO Concentration (ppm):	3.3
Background 8-hour CO Concentration (ppm):	2.2
Persistence Factor:	0.6
Analysis Year:	2011

Roadway Data

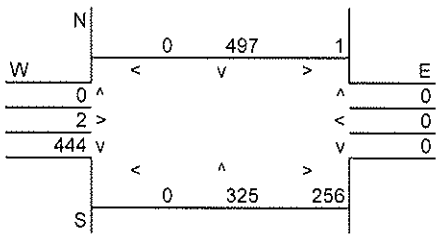
Intersection:	Tucker Road/SR-58 (Eastbound Ramps)
Analysis Condition:	Future (2011) WITH Project

		Roadway Type	No. of Lanes	Average Speed A.M.	Average Speed P.M.
North-South Roadway:	Tehachapi Boulevard	At Grade	2	20	10
East-West Roadway:	SR-58 (Eastbound Ramps)	At Grade	2	5	5

A.M. Peak Hour Traffic Volumes



P.M. Peak Hour Traffic Volumes



Highest Traffic Volumes (Vehicles per Hour)

N-S Road:	1,151	N-S Road:	1,522
E-W Road:	302	E-W Road:	446

Roadway CO Contributions and Concentrations

Emissions = (A x B x C) / 100,000[1]

Roadway	A_1 E.O.R.	A_2 25 Feet	A_3 50 Feet	A_4 100 Feet	B Traffic Volume	C Emission Factors[2]	Estimated CO Concentrations E.O.R.	25 Feet	50 Feet	100 Feet
	Reference CO Concentrations									
A.M. Peak Traffic Hour										
North-South Road	14.0	7.6	5.7	4.0	1,151	4.08	0.66	0.36	0.27	0.19
East-West Road	3.7	2.7	2.2	1.7	302	7.00	0.08	0.06	0.05	0.04
P.M. Peak Traffic Hour										
North-South Road	14.0	7.6	5.7	4.0	1,522	4.67	0.99	0.54	0.40	0.28
East-West Road	3.7	2.7	2.2	1.7	446	7.00	0.12	0.08	0.07	0.05

[1] Methodology from Bay Area Air Quality Management District *BAAQMD CEQA Guidelines* (1996).
[2] Emission factors from EMFAC2002 (2003).

Total Roadway CO Concentrations

Peak Hour Emissions = North-South Concentration + East-West Concentration + Background 1-hour Concentration[2]
8-Hour Emissions = ((Highest Peak Hour Concentration - Background 1-hour Concentration) x Persistence Factor) + Background 8-hour Conc[2]

	A.M. Peak Hour	P.M. Peak Hour	8-Hour
Roadway Edge	4.0	4.4	2.8
25 Feet from Roadway Edge	3.7	3.9	2.5
50 Feet from Roadway Edge	3.6	3.8	2.5
100 Feet from Roadway Edge	3.5	3.6	2.4

[2] Methodology from Bay Area Air Quality Management District *BAAQMD CEQA Guidelines* (1996).

SIMPLIFIED CALINE4 CARBON MONOXIDE ANALYSIS

Project Title: Tehachapi Wal-Mart

Background Information

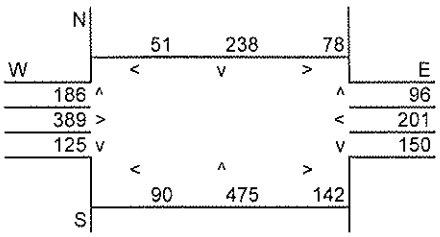
Nearest Air Monitoring Station measuring CO:	Bakersfield-Golden State Highway
Background 1-hour CO Concentration (ppm):	3.3
Background 8-hour CO Concentration (ppm):	2.2
Persistence Factor:	0.6
Analysis Year:	2011

Roadway Data

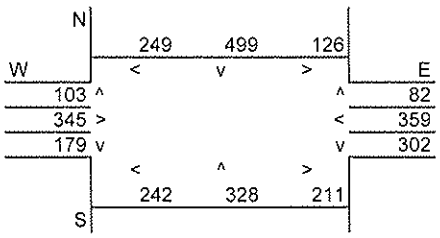
Intersection: Tehachapi Boulevard and Tucker Road/ Red Apple Avenue and Tehachapi Boulevard
Analysis Condition: Future (2011) WITH Project

		Roadway Type	No. of Lanes	Average Speed A.M.	Average Speed P.M.
North-South Roadway:	Tehachapi Boulevard and Tu	At Grade	4	20	15
East-West Roadway:	Red Apple Avenue and Teha	At Grade	2	20	15

A.M. Peak Hour Traffic Volumes



P.M. Peak Hour Traffic Volumes



Highest Traffic Volumes (Vehicles per Hour)

N-S Road:	1,220	N-S Road:	1,761
E-W Road:	1,056	E-W Road:	1,477

Roadway CO Contributions and Concentrations

Emissions = (A x B x C) / 100,000[1]

Roadway	A_1 Reference CO Concentrations E.O.R.	A_2 25 Feet	A_3 50 Feet	A_4 100 Feet	B Traffic Volume	C Emission Factors[2]	Estimated CO Concentrations E.O.R.	25 Feet	50 Feet	100 Feet
A.M. Peak Traffic Hour										
North-South Road	11.9	7.0	5.4	3.8	1,220	4.08	0.59	0.35	0.27	0.19
East-West Road	3.7	2.7	2.2	1.7	1,056	4.08	0.16	0.12	0.09	0.07
P.M. Peak Traffic Hour										
North-South Road	11.9	7.0	5.4	3.8	1,761	4.73	0.99	0.58	0.45	0.32
East-West Road	3.7	2.7	2.2	1.7	1,477	4.73	0.26	0.19	0.15	0.12

[1] Methodology from Bay Area Air Quality Management District *BAAQMD CEQA Guidelines* (1996).
[2] Emission factors from EMFAC2002 (2003).

Total Roadway CO Concentrations

Peak Hour Emissions = North-South Concentration + East-West Concentration + Background 1-hour Concentration[2]
8-Hour Emissions = ((Highest Peak Hour Concentration - Background 1-hour Concentration) x Persistence Factor) + Background 8-hour Conc[2]

	A.M. Peak Hour	P.M. Peak Hour	8-Hour
Roadway Edge	4.1	4.6	2.9
25 Feet from Roadway Edge	3.8	4.1	2.6
50 Feet from Roadway Edge	3.7	3.9	2.5
100 Feet from Roadway Edge	3.6	3.7	2.4

[2] Methodology from Bay Area Air Quality Management District *BAAQMD CEQA Guidelines* (1996).

SIMPLIFIED CALINE4 CARBON MONOXIDE ANALYSIS

Project Title: Tehachapi Wal-Mart

Background Information

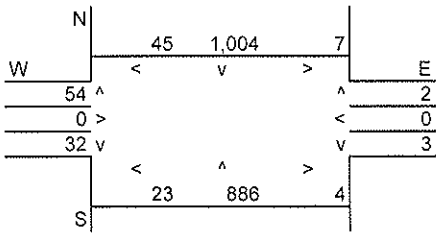
Nearest Air Monitoring Station measuring CO:	Bakersfield-Golden State Highway
Background 1-hour CO Concentration (ppm):	3.3
Background 8-hour CO Concentration (ppm):	2.2
Persistence Factor:	0.6
Analysis Year:	2011

Roadway Data

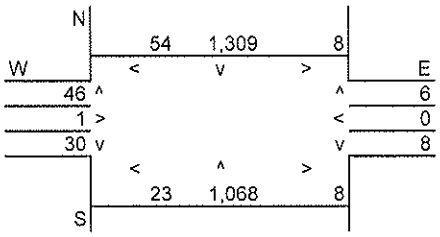
Intersection:	Tucker Road/Conway Avenue
Analysis Condition:	Future (2011) WITH Project

		Roadway Type	No. of Lanes	Average Speed A.M.	Average Speed P.M.
North-South Roadway:	Tucker Road	At Grade	4	5	5
East-West Roadway:	Conway Avenue	At Grade	2	5	5

A.M. Peak Hour Traffic Volumes



P.M. Peak Hour Traffic Volumes



Highest Traffic Volumes (Vehicles per Hour)

N-S Road:	1,998	N-S Road:	2,491
E-W Road:	154	E-W Road:	154

Roadway CO Contributions and Concentrations

Emissions = (A x B x C) / 100,000[1]

Roadway	A_1 E.O.R.	A_2 25 Feet	A_3 50 Feet	A_4 100 Feet	B Traffic Volume	C Emission Factors[2]	Estimated CO Concentrations E.O.R.	25 Feet	50 Feet	100 Feet
	Reference CO Concentrations									
A.M. Peak Traffic Hour										
North-South Road	11.9	7.0	5.4	3.8	1,998	7.00	1.67	0.98	0.76	0.53
East-West Road	3.7	2.7	2.2	1.7	154	7.00	0.04	0.03	0.02	0.02
P.M. Peak Traffic Hour										
North-South Road	11.9	7.0	5.4	3.8	2,491	7.00	2.08	1.22	0.94	0.66
East-West Road	3.7	2.7	2.2	1.7	154	7.00	0.04	0.03	0.02	0.02

[1] Methodology from Bay Area Air Quality Management District *BAAQMD CEQA Guidelines* (1996).
[2] Emission factors from EMFAC2002 (2003).

Total Roadway CO Concentrations

Peak Hour Emissions = North-South Concentration + East-West Concentration + Background 1-hour Concentration[2]
8-Hour Emissions = ((Highest Peak Hour Concentration - Background 1-hour Concentration) x Persistence Factor) + Background 8-hour Conc[2]

	A.M. Peak Hour	P.M. Peak Hour	8-Hour
Roadway Edge	5.0	5.4	3.4
25 Feet from Roadway Edge	4.3	4.6	2.9
50 Feet from Roadway Edge	4.1	4.3	2.7
100 Feet from Roadway Edge	3.9	4.0	2.6

[2] Methodology from Bay Area Air Quality Management District *BAAQMD CEQA Guidelines* (1996).

SIMPLIFIED CALINE4 CARBON MONOXIDE ANALYSIS

Project Title: Tehachapi Wal-Mart

Background Information

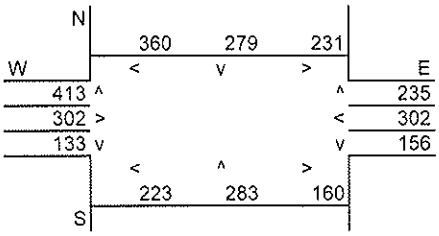
Nearest Air Monitoring Station measuring CO:	Bakersfield-Golden State Highway
Background 1-hour CO Concentration (ppm):	3.3
Background 8-hour CO Concentration (ppm):	2.2
Persistence Factor:	0.6
Analysis Year:	2011

Roadway Data

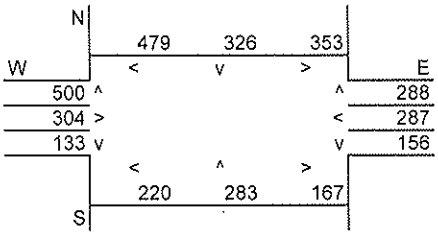
Intersection:	Tucker Road/Valley Boulevard (SR-202)
Analysis Condition:	Future (2011) WITH Project

		Roadway Type	No. of Lanes	Average Speed A.M.	Average Speed P.M.
North-South Roadway:	Tucker Road	At Grade	4	10	5
East-West Roadway:	Valley Boulevard (SR-202)	At Grade	2	10	5

A.M. Peak Hour Traffic Volumes



P.M. Peak Hour Traffic Volumes



Highest Traffic Volumes (Vehicles per Hour)

N-S Road:	1,801	N-S Road:	2,229
E-W Road:	1,733	E-W Road:	1,923

Roadway CO Contributions and Concentrations

Emissions = (A x B x C) / 100,000[1]

Roadway	A_1 E.O.R.	A_2 25 Feet	A_3 50 Feet	A_4 100 Feet	B Traffic Volume	C Emission Factors[2]	Estimated CO Concentrations E.O.R.	25 Feet	50 Feet	100 Feet
	Reference CO Concentrations									
A.M. Peak Traffic Hour										
North-South Road	11.9	7.0	5.4	3.8	1,801	4.67	1.00	0.59	0.45	0.32
East-West Road	3.7	2.7	2.2	1.7	1,733	4.67	0.30	0.22	0.18	0.14
P.M. Peak Traffic Hour										
North-South Road	11.9	7.0	5.4	3.8	2,229	7.00	1.86	1.09	0.84	0.59
East-West Road	3.7	2.7	2.2	1.7	1,923	7.00	0.50	0.36	0.30	0.23

[1] Methodology from Bay Area Air Quality Management District *BAAQMD CEQA Guidelines* (1996).
[2] Emission factors from EMFAC2002 (2003).

Total Roadway CO Concentrations

Peak Hour Emissions = North-South Concentration + East-West Concentration + Background 1-hour Concentration[2]
8-Hour Emissions = ((Highest Peak Hour Concentration - Background 1-hour Concentration) x Persistence Factor) + Background 8-hour Conc[2]

	A.M. Peak Hour	P.M. Peak Hour	8-Hour
Roadway Edge	4.6	5.7	3.6
25 Feet from Roadway Edge	4.1	4.8	3.0
50 Feet from Roadway Edge	3.9	4.4	2.9
100 Feet from Roadway Edge	3.8	4.1	2.7

[2] Methodology from Bay Area Air Quality Management District *BAAQMD CEQA Guidelines* (1996).

SIMPLIFIED CALINE4 CARBON MONOXIDE ANALYSIS

Project Title: Tehachapi Wal-Mart

Background Information

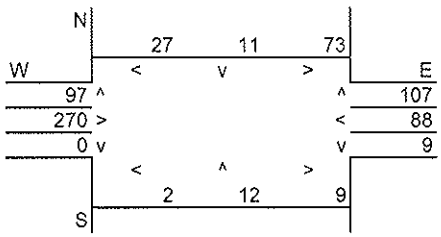
Nearest Air Monitoring Station measuring CO:	Bakersfield-Golden State Highway
Background 1-hour CO Concentration (ppm):	3.3
Background 8-hour CO Concentration (ppm):	2.2
Persistence Factor:	0.6
Analysis Year:	2011

Roadway Data

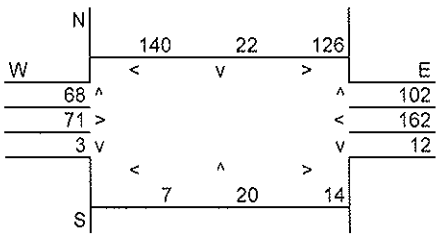
Intersection:	Tucker Road/Highland Road
Analysis Condition:	Future (2011) WITH Project

		Roadway Type	No. of Lanes	Average Speed A.M.	Average Speed P.M.
North-South Roadway:	Tucker Road	At Grade	2	5	5
East-West Roadway:	Highline Road	At Grade	2	5	5

A.M. Peak Hour Traffic Volumes



P.M. Peak Hour Traffic Volumes



Highest Traffic Volumes (Vehicles per Hour)

N-S Road:	327	N-S Road:	478
E-W Road:	556	E-W Road:	487

Roadway CO Contributions and Concentrations

Emissions = (A x B x C) / 100,000[1]

Roadway	A_1 Reference CO Concentrations E.O.R.	A_2 25 Feet	A_3 50 Feet	A_4 100 Feet	B Traffic Volume	C Emission Factors[2]	Estimated CO Concentrations E.O.R.	25 Feet	50 Feet	100 Feet
A.M. Peak Traffic Hour										
North-South Road	3.7	2.7	2.2	1.7	327	7.00	0.08	0.06	0.05	0.04
East-West Road	14.0	7.6	5.7	4.0	556	7.00	0.55	0.30	0.22	0.16
P.M. Peak Traffic Hour										
North-South Road	3.7	2.7	2.2	1.7	478	7.00	0.12	0.09	0.07	0.06
East-West Road	14.0	7.6	5.7	4.0	487	7.00	0.48	0.26	0.19	0.14

[1] Methodology from Bay Area Air Quality Management District *BAAQMD CEQA Guidelines* (1996).
[2] Emission factors from EMFAC2002 (2003).

Total Roadway CO Concentrations

Peak Hour Emissions = North-South Concentration + East-West Concentration + Background 1-hour Concentration[2]
8-Hour Emissions = ((Highest Peak Hour Concentration - Background 1-hour Concentration) x Persistence Factor) + Background 8-hour Conc[2]

	A.M. Peak Hour	P.M. Peak Hour	8-Hour
Roadway Edge	3.9	3.9	2.5
25 Feet from Roadway Edge	3.7	3.6	2.4
50 Feet from Roadway Edge	3.6	3.6	2.3
100 Feet from Roadway Edge	3.5	3.5	2.3

[2] Methodology from Bay Area Air Quality Management District *BAAQMD CEQA Guidelines* (1996).

SIMPLIFIED CALINE4 CARBON MONOXIDE ANALYSIS

Project Title: Tehachapi Wal-Mart

Background Information

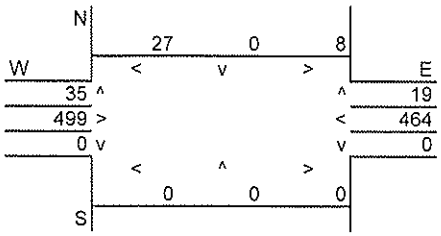
Nearest Air Monitoring Station measuring CO:	Bakersfield-Golden State Highway
Background 1-hour CO Concentration (ppm):	3.3
Background 8-hour CO Concentration (ppm):	2.2
Persistence Factor:	0.6
Analysis Year:	2011

Roadway Data

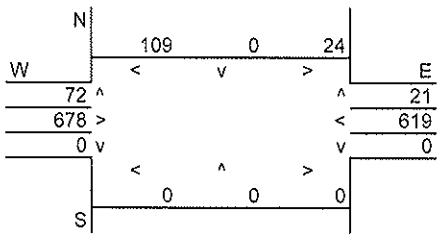
Intersection:	Mountain View Avenue/Valley Boulevard (SR-202)
Analysis Condition:	Future (2011) WITH Project

		Roadway Type	No. of Lanes	Average Speed A.M.	Average Speed P.M.
North-South Roadway:	Mountain View Avenue	At Grade	2	5	5
East-West Roadway:	Valley Boulevard (SR-202)	At Grade	2	20	15

A.M. Peak Hour Traffic Volumes



P.M. Peak Hour Traffic Volumes



Highest Traffic Volumes (Vehicles per Hour)

N-S Road:	89	N-S Road:	226
E-W Road:	1,025	E-W Road:	1,478

Roadway CO Contributions and Concentrations

Emissions = (A x B x C) / 100,000[1]

Roadway	A_1 E.O.R.	A_2 25 Feet	A_3 50 Feet	A_4 100 Feet	B Traffic Volume	C Emission Factors[2]	Estimated CO Concentrations E.O.R.	25 Feet	50 Feet	100 Feet
	Reference CO Concentrations									
A.M. Peak Traffic Hour										
North-South Road	3.7	2.7	2.2	1.7	89	7.00	0.02	0.02	0.01	0.01
East-West Road	14.0	7.6	5.7	4.0	1,025	4.08	0.59	0.32	0.24	0.17
P.M. Peak Traffic Hour										
North-South Road	3.7	2.7	2.2	1.7	226	7.00	0.06	0.04	0.03	0.03
East-West Road	14.0	7.6	5.7	4.0	1,478	4.73	0.98	0.53	0.40	0.28

[1] Methodology from Bay Area Air Quality Management District *BAAQMD CEQA Guidelines* (1996).
[2] Emission factors from EMFAC2002 (2003).

Total Roadway CO Concentrations

Peak Hour Emissions = North-South Concentration + East-West Concentration + Background 1-hour Concentration[2]
8-Hour Emissions = ((Highest Peak Hour Concentration - Background 1-hour Concentration) x Persistence Factor) + Background 8-hour Conc[2]

	A.M. Peak Hour	P.M. Peak Hour	8-Hour
Roadway Edge	3.9	4.3	2.8
25 Feet from Roadway Edge	3.6	3.9	2.5
50 Feet from Roadway Edge	3.6	3.7	2.4
100 Feet from Roadway Edge	3.5	3.6	2.4

[2] Methodology from Bay Area Air Quality Management District *BAAQMD CEQA Guidelines* (1996).

SIMPLIFIED CALINE4 CARBON MONOXIDE ANALYSIS

Project Title: Tehachapi Wal-Mart

Background Information

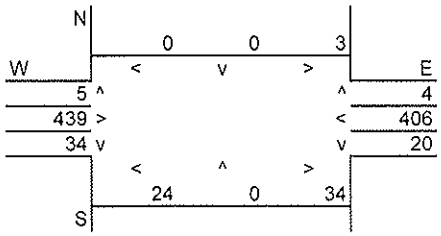
Nearest Air Monitoring Station measuring CO:	Bakersfield-Golden State Highway
Background 1-hour CO Concentration (ppm):	3.3
Background 8-hour CO Concentration (ppm):	2.2
Persistence Factor:	0.6
Analysis Year:	2011

Roadway Data

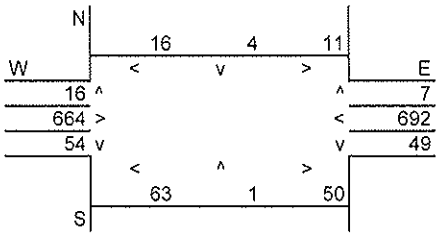
Intersection:	Mountain View Avenue/Tehachapi Boulevard
Analysis Condition:	Future (2011) WITH Project

		Roadway Type	No. of Lanes	Average Speed A.M.	Average Speed P.M.
North-South Roadway:	Mountain View Avenue	At Grade	2	5	5
East-West Roadway:	Tehachapi Boulevard	At Grade	2	20	20

A.M. Peak Hour Traffic Volumes



P.M. Peak Hour Traffic Volumes



Highest Traffic Volumes (Vehicles per Hour)

N-S Road:	112	N-S Road:	221
E-W Road:	908	E-W Road:	1,505

Roadway CO Contributions and Concentrations

Emissions = (A x B x C) / 100,000[1]

Roadway	A_1 E.O.R.	A_2 25 Feet	A_3 50 Feet	A_4 100 Feet	B Traffic Volume	C Emission Factors[2]	Estimated CO Concentrations E.O.R.	25 Feet	50 Feet	100 Feet
	Reference CO Concentrations									
A.M. Peak Traffic Hour										
North-South Road	3.7	2.7	2.2	1.7	112	7.00	0.03	0.02	0.02	0.01
East-West Road	14.0	7.6	5.7	4.0	908	4.08	0.52	0.28	0.21	0.15
P.M. Peak Traffic Hour										
North-South Road	3.7	2.7	2.2	1.7	221	7.00	0.06	0.04	0.03	0.03
East-West Road	14.0	7.6	5.7	4.0	1,505	4.08	0.86	0.47	0.35	0.25

[1] Methodology from Bay Area Air Quality Management District *BAAQMD CEQA Guidelines* (1996).
[2] Emission factors from EMFAC2002 (2003).

Total Roadway CO Concentrations

Peak Hour Emissions = North-South Concentration + East-West Concentration + Background 1-hour Concentration[2]
8-Hour Emissions = ((Highest Peak Hour Concentration - Background 1-hour Concentration) x Persistence Factor) + Background 8-hour Conc[2]

	A.M. Peak Hour	P.M. Peak Hour	8-Hour
Roadway Edge	3.8	4.2	2.7
25 Feet from Roadway Edge	3.6	3.8	2.5
50 Feet from Roadway Edge	3.5	3.7	2.4
100 Feet from Roadway Edge	3.5	3.6	2.3

[2] Methodology from Bay Area Air Quality Management District *BAAQMD CEQA Guidelines* (1996).

SIMPLIFIED CALINE4 CARBON MONOXIDE ANALYSIS

Project Title: Tehachapi Wal-Mart

Background Information

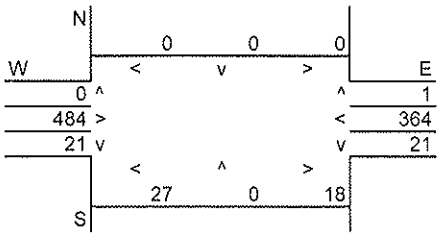
Nearest Air Monitoring Station measuring CO:	Bakersfield-Golden State Highway
Background 1-hour CO Concentration (ppm):	3.3
Background 8-hour CO Concentration (ppm):	2.2
Persistence Factor:	0.6
Analysis Year:	2011

Roadway Data

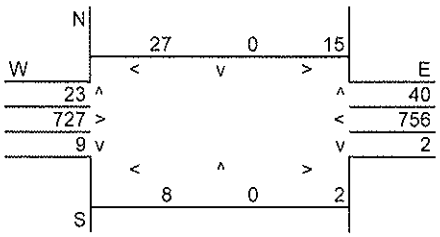
Intersection:	Tehachapi Boulevard/Mulberry Street
Analysis Condition:	Future (2011) WITH Project

		Roadway Type	No. of Lanes	Average Speed A.M.	Average Speed P.M.
North-South Roadway:	Mulberry Street	At Grade	2	5	5
East-West Roadway:	Tehachapi Boulevard	At Grade	2	20	20

A.M. Peak Hour Traffic Volumes



P.M. Peak Hour Traffic Volumes



Highest Traffic Volumes (Vehicles per Hour)

N-S Road:	87	N-S Road:	105
E-W Road:	896	E-W Road:	1,550

Roadway CO Contributions and Concentrations

Emissions = (A x B x C) / 100,000[1]

Roadway	A_1 Reference CO Concentrations E.O.R.	A_2 25 Feet	A_3 50 Feet	A_4 100 Feet	B Traffic Volume	C Emission Factors[2]	Estimated CO Concentrations E.O.R.	25 Feet	50 Feet	100 Feet
A.M. Peak Traffic Hour										
North-South Road	3.7	2.7	2.2	1.7	87	7.00	0.02	0.02	0.01	0.01
East-West Road	14.0	7.6	5.7	4.0	896	4.08	0.51	0.28	0.21	0.15
P.M. Peak Traffic Hour										
North-South Road	3.7	2.7	2.2	1.7	105	7.00	0.03	0.02	0.02	0.01
East-West Road	14.0	7.6	5.7	4.0	1,550	4.08	0.89	0.48	0.36	0.25

[1] Methodology from Bay Area Air Quality Management District *BAAQMD CEQA Guidelines* (1996).
[2] Emission factors from EMFAC2002 (2003).

Total Roadway CO Concentrations

Peak Hour Emissions = North-South Concentration + East-West Concentration + Background 1-hour Concentration[2]
8-Hour Emissions = ((Highest Peak Hour Concentration - Background 1-hour Concentration) x Persistence Factor) + Background 8-hour Conc[2]

	A.M. Peak Hour	P.M. Peak Hour	8-Hour
Roadway Edge	3.8	4.2	2.7
25 Feet from Roadway Edge	3.6	3.8	2.5
50 Feet from Roadway Edge	3.5	3.7	2.4
100 Feet from Roadway Edge	3.5	3.6	2.3

[2] Methodology from Bay Area Air Quality Management District *BAAQMD CEQA Guidelines* (1996).

SIMPLIFIED CALINE4 CARBON MONOXIDE ANALYSIS

Project Title: Tehachapi Wal-Mart

Background Information

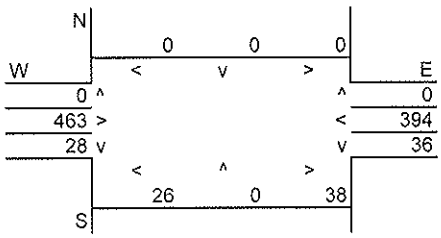
Nearest Air Monitoring Station measuring CO:	Bakersfield-Golden State Highway
Background 1-hour CO Concentration (ppm):	3.3
Background 8-hour CO Concentration (ppm):	2.2
Persistence Factor:	0.6
Analysis Year:	2011

Roadway Data

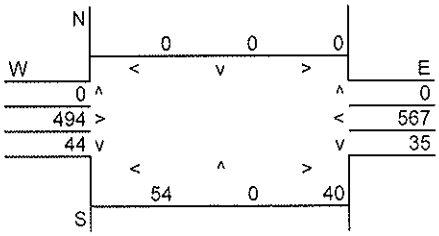
Intersection:	Mill Street/Tehachapi Boulevard
Analysis Condition:	Future (2011) WITH Project

		Roadway Type	No. of Lanes	Average Speed A.M.	Average Speed P.M.
North-South Roadway:	Mill Street	At Grade	2	5	5
East-West Roadway:	Tehachapi Boulevard	At Grade	4	20	20

A.M. Peak Hour Traffic Volumes



P.M. Peak Hour Traffic Volumes



Highest Traffic Volumes (Vehicles per Hour)

N-S Road:	128	N-S Road:	173
E-W Road:	931	E-W Road:	1,159

Roadway CO Contributions and Concentrations

Emissions = (A x B x C) / 100,000[1]

Roadway	A_1 E.O.R.	A_2 25 Feet	A_3 50 Feet	A_4 100 Feet	B Traffic Volume	C Emission Factors[2]	Estimated CO Concentrations E.O.R.	25 Feet	50 Feet	100 Feet
	Reference CO Concentrations									
A.M. Peak Traffic Hour										
North-South Road	3.7	2.7	2.2	1.7	128	7.00	0.03	0.02	0.02	0.02
East-West Road	11.9	7.0	5.4	3.8	931	4.08	0.45	0.27	0.21	0.14
P.M. Peak Traffic Hour										
North-South Road	3.7	2.7	2.2	1.7	173	7.00	0.04	0.03	0.03	0.02
East-West Road	11.9	7.0	5.4	3.8	1,159	4.08	0.56	0.33	0.26	0.18

[1] Methodology from Bay Area Air Quality Management District *BAAQMD CEQA Guidelines* (1996).
[2] Emission factors from EMFAC2002 (2003).

Total Roadway CO Concentrations

Peak Hour Emissions = North-South Concentration + East-West Concentration + Background 1-hour Concentration[2]
8-Hour Emissions = ((Highest Peak Hour Concentration - Background 1-hour Concentration) x Persistence Factor) + Background 8-hour Conc[2]

	A.M. Peak Hour	P.M. Peak Hour	8-Hour
Roadway Edge	3.8	3.9	2.5
25 Feet from Roadway Edge	3.6	3.7	2.4
50 Feet from Roadway Edge	3.5	3.6	2.3
100 Feet from Roadway Edge	3.5	3.5	2.3

[2] Methodology from Bay Area Air Quality Management District *BAAQMD CEQA Guidelines* (1996).

SIMPLIFIED CALINE4 CARBON MONOXIDE ANALYSIS

Project Title: Tehachapi Wal-Mart

Background Information

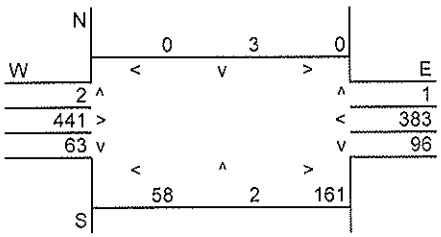
Nearest Air Monitoring Station measuring CO:	Bakersfield-Golden State Highway
Background 1-hour CO Concentration (ppm):	3.3
Background 8-hour CO Concentration (ppm):	2.2
Persistence Factor:	0.6
Analysis Year:	2011

Roadway Data

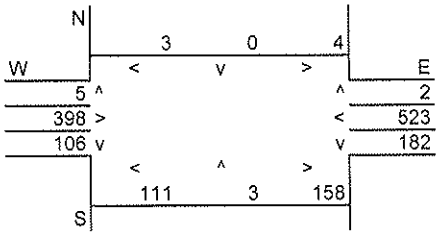
Intersection:	Curry Street/Tehachapi Boulevard
Analysis Condition:	Future (2011) WITH Project

		Roadway Type	No. of Lanes	Average Speed A.M.	Average Speed P.M.
North-South Roadway:	Curry Street	At Grade	2	5	5
East-West Roadway:	Tehachapi Boulevard	At Grade	4	5	5

A.M. Peak Hour Traffic Volumes



P.M. Peak Hour Traffic Volumes



Highest Traffic Volumes (Vehicles per Hour)

N-S Road:	383	N-S Road:	560
E-W Road:	1,082	E-W Road:	1,267

Roadway CO Contributions and Concentrations

Emissions = (A x B x C) / 100,000[1]

Roadway	A_1 E.O.R.	A_2 25 Feet	A_3 50 Feet	A_4 100 Feet	B Traffic Volume	C Emission Factors[2]	Estimated CO Concentrations E.O.R.	25 Feet	50 Feet	100 Feet
	Reference CO Concentrations									
A.M. Peak Traffic Hour										
North-South Road	3.7	2.7	2.2	1.7	383	7.00	0.10	0.07	0.06	0.05
East-West Road	11.9	7.0	5.4	3.8	1,082	7.00	0.90	0.53	0.41	0.29
P.M. Peak Traffic Hour										
North-South Road	3.7	2.7	2.2	1.7	560	7.00	0.15	0.11	0.09	0.07
East-West Road	11.9	7.0	5.4	3.8	1,267	7.00	1.06	0.62	0.48	0.34

[1] Methodology from Bay Area Air Quality Management District *BAAQMD CEQA Guidelines* (1996).
[2] Emission factors from EMFAC2002 (2003).

Total Roadway CO Concentrations

Peak Hour Emissions = North-South Concentration + East-West Concentration + Background 1-hour Concentration[2]
8-Hour Emissions = ((Highest Peak Hour Concentration - Background 1-hour Concentration) x Persistence Factor) + Background 8-hour Conc[2]

	A.M. Peak Hour	P.M. Peak Hour	8-Hour
Roadway Edge	4.3	4.5	2.9
25 Feet from Roadway Edge	3.9	4.0	2.6
50 Feet from Roadway Edge	3.8	3.9	2.5
100 Feet from Roadway Edge	3.6	3.7	2.4

[2] Methodology from Bay Area Air Quality Management District *BAAQMD CEQA Guidelines* (1996).

SIMPLIFIED CALINE4 CARBON MONOXIDE ANALYSIS

Project Title: Tehachapi Wal-Mart

Background Information

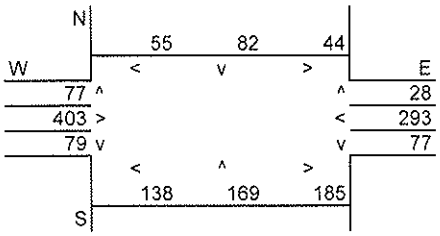
Nearest Air Monitoring Station measuring CO:	Bakersfield-Golden State Highway
Background 1-hour CO Concentration (ppm):	3.3
Background 8-hour CO Concentration (ppm):	2.2
Persistence Factor:	0.6
Analysis Year:	2011

Roadway Data

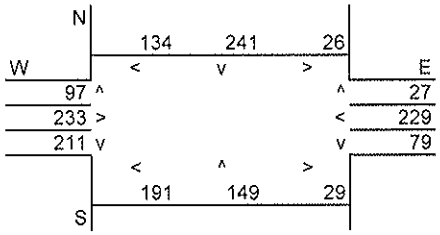
Intersection:	Curry Street/Valley Boulevard (SR-202)
Analysis Condition:	Future (2011) WITH Project

		Roadway Type	No. of Lanes	Average Speed A.M.	Average Speed P.M.
North-South Roadway:	Curry Street	At Grade	2	20	20
East-West Roadway:	Valley Boulevard (SR-202)	At Grade	2	20	20

A.M. Peak Hour Traffic Volumes



P.M. Peak Hour Traffic Volumes



Highest Traffic Volumes (Vehicles per Hour)

N-S Road:	730	N-S Road:	900
E-W Road:	1,045	E-W Road:	1,095

Roadway CO Contributions and Concentrations

Emissions = (A x B x C) / 100,000[1]

Roadway	A_1 Reference CO Concentrations E.O.R.	A_2 25 Feet	A_3 50 Feet	A_4 100 Feet	B Traffic Volume	C Emission Factors[2]	Estimated CO Concentrations E.O.R.	25 Feet	50 Feet	100 Feet
A.M. Peak Traffic Hour										
North-South Road	3.7	2.7	2.2	1.7	730	4.08	0.11	0.08	0.07	0.05
East-West Road	14.0	7.6	5.7	4.0	1,045	4.08	0.60	0.32	0.24	0.17
P.M. Peak Traffic Hour										
North-South Road	3.7	2.7	2.2	1.7	900	4.08	0.14	0.10	0.08	0.06
East-West Road	14.0	7.6	5.7	4.0	1,095	4.08	0.63	0.34	0.25	0.18

[1] Methodology from Bay Area Air Quality Management District *BAAQMD CEQA Guidelines* (1996).
[2] Emission factors from EMFAC2002 (2003).

Total Roadway CO Concentrations

Peak Hour Emissions = North-South Concentration + East-West Concentration + Background 1-hour Concentration[2]
8-Hour Emissions = ((Highest Peak Hour Concentration - Background 1-hour Concentration) x Persistence Factor) + Background 8-hour Conc[2]

	A.M. Peak Hour	P.M. Peak Hour	8-Hour
Roadway Edge	4.0	4.1	2.6
25 Feet from Roadway Edge	3.7	3.7	2.4
50 Feet from Roadway Edge	3.6	3.6	2.4
100 Feet from Roadway Edge	3.5	3.5	2.3

[2] Methodology from Bay Area Air Quality Management District *BAAQMD CEQA Guidelines* (1996).

SIMPLIFIED CALINE4 CARBON MONOXIDE ANALYSIS

Project Title: Tehachapi Wal-Mart

Background Information

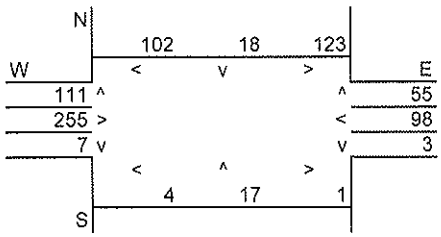
Nearest Air Monitoring Station measuring CO:	Bakersfield-Golden State Highway
Background 1-hour CO Concentration (ppm):	3.3
Background 8-hour CO Concentration (ppm):	2.2
Persistence Factor:	0.6
Analysis Year:	2011

Roadway Data

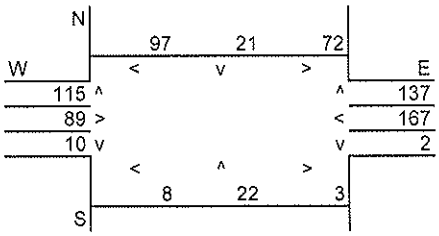
Intersection:	Curry Street and Summit Road/Highland Road
Analysis Condition:	Future (2011) WITH Project

		Roadway Type	No. of Lanes	Average Speed A.M.	Average Speed P.M.
North-South Roadway:	Curry Street and Summit Ro	At Grade	2	5	5
East-West Roadway:	Highline Road	At Grade	2	20	20

A.M. Peak Hour Traffic Volumes



P.M. Peak Hour Traffic Volumes



Highest Traffic Volumes (Vehicles per Hour)

N-S Road:	426	N-S Road:	464
E-W Road:	577	E-W Road:	486

Roadway CO Contributions and Concentrations

Emissions = (A x B x C) / 100,000[1]

Roadway	A_1 Reference CO Concentrations E.O.R.	A_2 25 Feet	A_3 50 Feet	A_4 100 Feet	B Traffic Volume	C Emission Factors[2]	Estimated CO Concentrations E.O.R.	25 Feet	50 Feet	100 Feet
A.M. Peak Traffic Hour										
North-South Road	3.7	2.7	2.2	1.7	426	7.00	0.11	0.08	0.07	0.05
East-West Road	14.0	7.6	5.7	4.0	577	4.08	0.33	0.18	0.13	0.09
P.M. Peak Traffic Hour										
North-South Road	3.7	2.7	2.2	1.7	464	7.00	0.12	0.09	0.07	0.06
East-West Road	14.0	7.6	5.7	4.0	486	4.08	0.28	0.15	0.11	0.08

[1] Methodology from Bay Area Air Quality Management District *BAAQMD CEQA Guidelines* (1996).
[2] Emission factors from EMFAC2002 (2003).

Total Roadway CO Concentrations

Peak Hour Emissions = North-South Concentration + East-West Concentration + Background 1-hour Concentration[2]
8-Hour Emissions = ((Highest Peak Hour Concentration - Background 1-hour Concentration) x Persistence Factor) + Background 8-hour Conc[2]

	A.M. Peak Hour	P.M. Peak Hour	8-Hour
Roadway Edge	3.7	3.7	2.4
25 Feet from Roadway Edge	3.6	3.5	2.3
50 Feet from Roadway Edge	3.5	3.5	2.3
100 Feet from Roadway Edge	3.4	3.4	2.3

[2] Methodology from Bay Area Air Quality Management District *BAAQMD CEQA Guidelines* (1996).

SIMPLIFIED CALINE4 CARBON MONOXIDE ANALYSIS

Project Title: Tehachapi Wal-Mart

Background Information

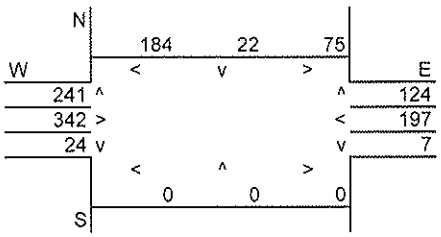
Nearest Air Monitoring Station measuring CO:	Bakersfield-Golden State Highway
Background 1-hour CO Concentration (ppm):	3.3
Background 8-hour CO Concentration (ppm):	2.2
Persistence Factor:	0.6
Analysis Year:	2011

Roadway Data

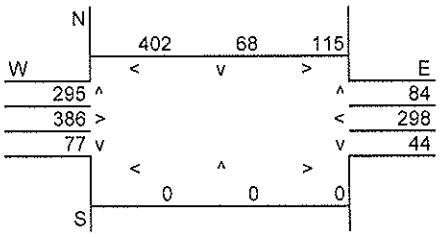
Intersection:	Green Street/Tehachapi Boulevard
Analysis Condition:	Future (2011) WITH Project

		Roadway Type	No. of Lanes	Average Speed A.M.	Average Speed P.M.
North-South Roadway:	Green Street	At Grade	2	5	5
East-West Roadway:	Tehachapi Boulevard	At Grade	4	5	5

A.M. Peak Hour Traffic Volumes



P.M. Peak Hour Traffic Volumes



Highest Traffic Volumes (Vehicles per Hour)

N-S Road:	646	N-S Road:	964
E-W Road:	988	E-W Road:	1,458

Roadway CO Contributions and Concentrations

Emissions = (A x B x C) / 100,000[1]

Roadway	A_1 E.O.R.	A_2 25 Feet	A_3 50 Feet	A_4 100 Feet	B Traffic Volume	C Emission Factors[2]	Estimated CO Concentrations E.O.R.	25 Feet	50 Feet	100 Feet
	Reference CO Concentrations									
A.M. Peak Traffic Hour										
North-South Road	3.7	2.7	2.2	1.7	646	7.00	0.17	0.12	0.10	0.08
East-West Road	11.9	7.0	5.4	3.8	988	7.00	0.82	0.48	0.37	0.26
P.M. Peak Traffic Hour										
North-South Road	3.7	2.7	2.2	1.7	964	7.00	0.25	0.18	0.15	0.11
East-West Road	11.9	7.0	5.4	3.8	1,458	7.00	1.22	0.71	0.55	0.39

[1] Methodology from Bay Area Air Quality Management District *BAAQMD CEQA Guidelines* (1996).
[2] Emission factors from EMFAC2002 (2003).

Total Roadway CO Concentrations

Peak Hour Emissions = North-South Concentration + East-West Concentration + Background 1-hour Concentration[2]
8-Hour Emissions = ((Highest Peak Hour Concentration - Background 1-hour Concentration) x Persistence Factor) + Background 8-hour Conc[2]

	A.M. Peak Hour	P.M. Peak Hour	8-Hour
Roadway Edge	4.3	4.8	3.0
25 Feet from Roadway Edge	3.9	4.2	2.7
50 Feet from Roadway Edge	3.8	4.0	2.6
100 Feet from Roadway Edge	3.6	3.8	2.5

[2] Methodology from Bay Area Air Quality Management District *BAAQMD CEQA Guidelines* (1996).

SIMPLIFIED CALINE4 CARBON MONOXIDE ANALYSIS

Project Title: Tehachapi Wal-Mart

Background Information

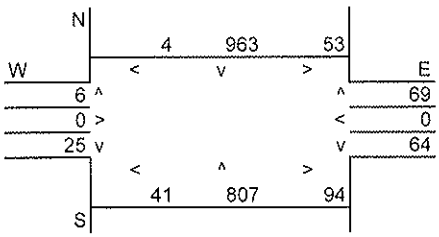
Nearest Air Monitoring Station measuring CO:	Bakersfield-Golden State Highway
Background 1-hour CO Concentration (ppm):	3.3
Background 8-hour CO Concentration (ppm):	2.2
Persistence Factor:	0.6
Analysis Year:	2011

Roadway Data

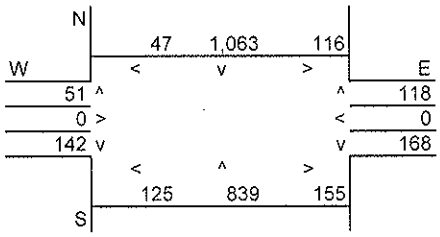
Intersection: Tucker Road/Driveway 1
Analysis Condition: Future (2011) WITH Project

		Roadway Type	No. of Lanes	Average Speed A.M.	Average Speed P.M.
North-South Roadway:	Tucker Road	At Grade	4	20	20
East-West Roadway:	Driveway 1	At Grade	2	5	5

A.M. Peak Hour Traffic Volumes



P.M. Peak Hour Traffic Volumes



Highest Traffic Volumes (Vehicles per Hour)

N-S Road:	1,994	N-S Road:	2,492
E-W Road:	280	E-W Road:	557

Roadway CO Contributions and Concentrations

Emissions = (A x B x C) / 100,000[1]

Roadway	A_1 Reference CO Concentrations E.O.R.	A_2 25 Feet	A_3 50 Feet	A_4 100 Feet	B Traffic Volume	C Emission Factors[2]	Estimated CO Concentrations E.O.R.	25 Feet	50 Feet	100 Feet
A.M. Peak Traffic Hour										
North-South Road	11.9	7.0	5.4	3.8	1,994	4.08	0.97	0.57	0.44	0.31
East-West Road	3.7	2.7	2.2	1.7	280	7.00	0.07	0.05	0.04	0.03
P.M. Peak Traffic Hour										
North-South Road	11.9	7.0	5.4	3.8	2,492	4.08	1.21	0.71	0.55	0.39
East-West Road	3.7	2.7	2.2	1.7	557	7.00	0.14	0.11	0.09	0.07

[1] Methodology from Bay Area Air Quality Management District *BAAQMD CEQA Guidelines* (1996).
[2] Emission factors from EMFAC2002 (2003).

Total Roadway CO Concentrations

Peak Hour Emissions = North-South Concentration + East-West Concentration + Background 1-hour Concentration[2]
8-Hour Emissions = ((Highest Peak Hour Concentration - Background 1-hour Concentration) x Persistence Factor) + Background 8-hour Conc[2]

	A.M. Peak Hour	P.M. Peak Hour	8-Hour
Roadway Edge	4.3	4.7	3.0
25 Feet from Roadway Edge	3.9	4.1	2.7
50 Feet from Roadway Edge	3.8	3.9	2.6
100 Feet from Roadway Edge	3.6	3.8	2.4

[2] Methodology from Bay Area Air Quality Management District *BAAQMD CEQA Guidelines* (1996).

SIMPLIFIED CALINE4 CARBON MONOXIDE ANALYSIS

Project Title: Tehachapi Wal-Mart

Background Information

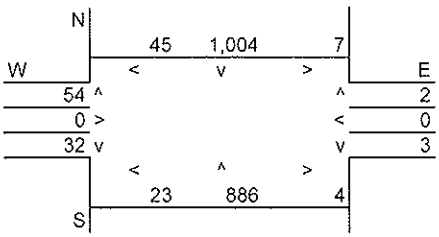
Nearest Air Monitoring Station measuring CO:	Bakersfield-Golden State Highway
Background 1-hour CO Concentration (ppm):	3.3
Background 8-hour CO Concentration (ppm):	2.2
Persistence Factor:	0.6
Analysis Year:	2011

Roadway Data

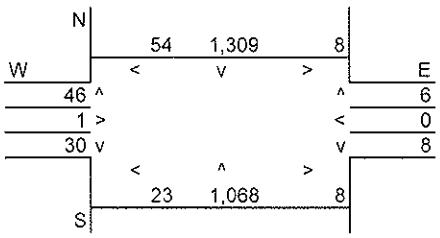
Intersection: Tucker Road/Driveway 2
Analysis Condition: Future (2011) WITH Project

		Roadway Type	No. of Lanes	Average Speed A.M.	Average Speed P.M.
North-South Roadway:	Tucker Road	At Grade	4	5	5
East-West Roadway:	Driveway 2	At Grade	2	5	5

A.M. Peak Hour Traffic Volumes



P.M. Peak Hour Traffic Volumes



Highest Traffic Volumes (Vehicles per Hour)

N-S Road:	1,998	N-S Road:	2,491
E-W Road:	154	E-W Road:	154

Roadway CO Contributions and Concentrations

Emissions = (A x B x C) / 100,000[1]

Roadway	A_1 Reference CO Concentrations E.O.R.	A_2 25 Feet	A_3 50 Feet	A_4 100 Feet	B Traffic Volume	C Emission Factors[2]	Estimated CO Concentrations E.O.R.	25 Feet	50 Feet	100 Feet
A.M. Peak Traffic Hour										
North-South Road	11.9	7.0	5.4	3.8	1,998	7.00	1.67	0.98	0.76	0.53
East-West Road	3.7	2.7	2.2	1.7	154	7.00	0.04	0.03	0.02	0.02
P.M. Peak Traffic Hour										
North-South Road	11.9	7.0	5.4	3.8	2,491	7.00	2.08	1.22	0.94	0.66
East-West Road	3.7	2.7	2.2	1.7	154	7.00	0.04	0.03	0.02	0.02

[1] Methodology from Bay Area Air Quality Management District *BAAQMD CEQA Guidelines* (1996).
[2] Emission factors from EMFAC2002 (2003).

Total Roadway CO Concentrations

Peak Hour Emissions = North-South Concentration + East-West Concentration + Background 1-hour Concentration[2]
8-Hour Emissions = ((Highest Peak Hour Concentration - Background 1-hour Concentration) x Persistence Factor) + Background 8-hour Conc[2]

	A.M. Peak Hour	P.M. Peak Hour	8-Hour
Roadway Edge	5.0	5.4	3.4
25 Feet from Roadway Edge	4.3	4.6	2.9
50 Feet from Roadway Edge	4.1	4.3	2.7
100 Feet from Roadway Edge	3.9	4.0	2.6

[2] Methodology from Bay Area Air Quality Management District *BAAQMD CEQA Guidelines* (1996).

SIMPLIFIED CALINE4 CARBON MONOXIDE ANALYSIS

Project Title: Tehachapi Wal-Mart

Background Information

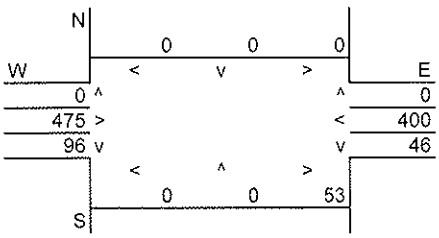
Nearest Air Monitoring Station measuring CO:	Bakersfield-Golden State Highway
Background 1-hour CO Concentration (ppm):	3.3
Background 8-hour CO Concentration (ppm):	2.2
Persistence Factor:	0.6
Analysis Year:	2011

Roadway Data

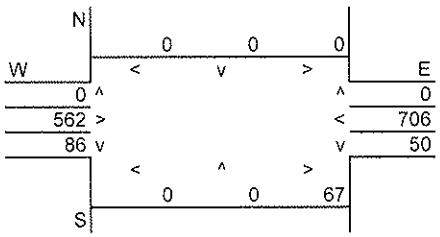
Intersection:	Driveway 4/Tehachapi Boulevard
Analysis Condition:	Future (2011) WITH Project

		Roadway Type	No. of Lanes	Average Speed A.M.	Average Speed P.M.
North-South Roadway:	Driveway 4	At Grade	2	5	5
East-West Roadway:	Tehachapi Boulevard	At Grade	4	20	20

A.M. Peak Hour Traffic Volumes



P.M. Peak Hour Traffic Volumes



Highest Traffic Volumes (Vehicles per Hour)

N-S Road:	195	N-S Road:	203
E-W Road:	974	E-W Road:	1,385

Roadway CO Contributions and Concentrations

Emissions = (A x B x C) / 100,000[1]

Roadway	A_1 Reference CO Concentrations E.O.R.	A_2 25 Feet	A_3 50 Feet	A_4 100 Feet	B Traffic Volume	C Emission Factors[2]	Estimated CO Concentrations E.O.R.	25 Feet	50 Feet	100 Feet
A.M. Peak Traffic Hour										
North-South Road	3.7	2.7	2.2	1.7	195	7.00	0.05	0.04	0.03	0.02
East-West Road	11.9	7.0	5.4	3.8	974	4.08	0.47	0.28	0.21	0.15
P.M. Peak Traffic Hour										
North-South Road	3.7	2.7	2.2	1.7	203	7.00	0.05	0.04	0.03	0.02
East-West Road	11.9	7.0	5.4	3.8	1,385	4.08	0.67	0.40	0.31	0.21

[1] Methodology from Bay Area Air Quality Management District *BAAQMD CEQA Guidelines* (1996).
[2] Emission factors from EMFAC2002 (2003).

Total Roadway CO Concentrations

Peak Hour Emissions = North-South Concentration + East-West Concentration + Background 1-hour Concentration[2]
8-Hour Emissions = ((Highest Peak Hour Concentration - Background 1-hour Concentration) x Persistence Factor) + Background 8-hour Conc[2]

	A.M. Peak Hour	P.M. Peak Hour	8-Hour
Roadway Edge	3.8	4.0	2.6
25 Feet from Roadway Edge	3.6	3.7	2.4
50 Feet from Roadway Edge	3.5	3.6	2.4
100 Feet from Roadway Edge	3.5	3.5	2.3

[2] Methodology from Bay Area Air Quality Management District *BAAQMD CEQA Guidelines* (1996).

SIMPLIFIED CALINE4 CARBON MONOXIDE ANALYSIS

Project Title: Tehachapi Wal-Mart

Background Information

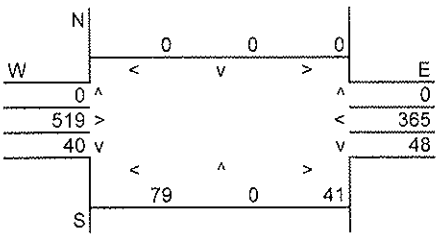
Nearest Air Monitoring Station measuring CO:	Bakersfield-Golden State Highway
Background 1-hour CO Concentration (ppm):	3.3
Background 8-hour CO Concentration (ppm):	2.2
Persistence Factor:	0.6
Analysis Year:	2011

Roadway Data

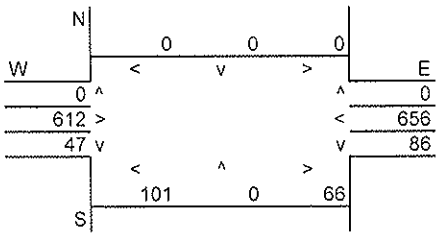
Intersection:	Driveay 5/Tehachapi Boulevard
Analysis Condition:	Future (2011) WITH Project

		Roadway Type	No. of Lanes	Average Speed A.M.	Average Speed P.M.
North-South Roadway:	Driveway 5	At Grade	2	5	5
East-West Roadway:	Tehachapi Boulevard	At Grade	4	20	20

A.M. Peak Hour Traffic Volumes



P.M. Peak Hour Traffic Volumes



Highest Traffic Volumes (Vehicles per Hour)

N-S Road:	208	N-S Road:	300
E-W Road:	1,003	E-W Road:	1,420

Roadway CO Contributions and Concentrations

Emissions = (A x B x C) / 100,000[1]

Roadway	A_1 E.O.R.	A_2 25 Feet	A_3 50 Feet	A_4 100 Feet	B Traffic Volume	C Emission Factors[2]	Estimated CO Concentrations E.O.R.	25 Feet	50 Feet	100 Feet
	Reference CO Concentrations									
A.M. Peak Traffic Hour										
North-South Road	3.7	2.7	2.2	1.7	208	7.00	0.05	0.04	0.03	0.02
East-West Road	11.9	7.0	5.4	3.8	1,003	4.08	0.49	0.29	0.22	0.16
P.M. Peak Traffic Hour										
North-South Road	3.7	2.7	2.2	1.7	300	7.00	0.08	0.06	0.05	0.04
East-West Road	11.9	7.0	5.4	3.8	1,420	4.08	0.69	0.41	0.31	0.22

[1] Methodology from Bay Area Air Quality Management District *BAAQMD CEQA Guidelines* (1996).
[2] Emission factors from EMFAC2002 (2003).

Total Roadway CO Concentrations

Peak Hour Emissions = North-South Concentration + East-West Concentration + Background 1-hour Concentration[2]
8-Hour Emissions = ((Highest Peak Hour Concentration - Background 1-hour Concentration) x Persistence Factor) + Background 8-hour Conc[2]

	A.M. Peak Hour	P.M. Peak Hour	8-Hour
Roadway Edge	3.8	4.1	2.6
25 Feet from Roadway Edge	3.6	3.8	2.4
50 Feet from Roadway Edge	3.6	3.7	2.4
100 Feet from Roadway Edge	3.5	3.6	2.3

[2] Methodology from Bay Area Air Quality Management District *BAAQMD CEQA Guidelines* (1996).

EMISSIONS OF GREENHOUSE GAS EMISSIONS FROM ELECTRICITY GENERATION

Project Name: Tehachapi Wal-Mart
Analysis Year: 2011
Analysis Scenario: Wal-Mart + 3 out lots

ELECTRICITY DEMAND

Land Use	Units	Useage Rate (KWh/ unit/year)	Electricity Demand (KWh/ year)
Residential Units		5626.5	-
Food Store (square feet):		53.3	-
Restaurant (square feet):	6600	47.45	313,170.0
Hospital (square feet):		21.7	-
Retail (square feet):	170200	13.55	2,306,210.0
College/University (square feet):		11.55	-
High School (square feet):		10.5	-
Elementary School (square feet):		5.9	-
Office (square feet):		12.95	-
Hotel/Motel (square feet):		9.95	-
Warehouse (square feet):		4.35	-
Miscellaneous (square feet):		10.5	-
		Total Electricity Demand:	2,619,380.0

Total Megawatt Hours (MWh) per Year: 2,619.4

GREENHOUSE GAS EMISSIONS

Emissions	Emission Factors (lbs/MWh)	Emissions (metric tons)	CO_2 Equivalency Factors	CO_2 Equivalent Emissions (tons per year)
Carbon Dioxide	724.12	860.35	1	860.35
Methane	0.030	0.036	23	0.83
Nitrous Oxide	0.008	0.010	296	2.85
	Total Emissions:	860.40		864.02

EMISSIONS OF GREENHOUSE GAS EMISSIONS FROM WATER USE

Project Name: Tehachapi Wal-Mart
Analysis Year: 2011
Analysis Scenario: Wal-Mart + 3 out lots

Gallons/month	759827
Water Use Intensities (kwh/MG)	12700
Total Megawatt Hours (MWh) per Y	115.797635

GREENHOUSE GAS EMISSIONS

Emissions	Emission Factors (lbs/MWh)	Emissions (metric tons)	CO_2 Equivalency Factors	CO_2 Equivalent Emissions tons per year)
Carbon Dioxide	724.12	38.03	1	38.03
Methane	0.030	0.00	23	0.04
Nitrous Oxide	0.008	0.00	296	0.13
	Total Emissions:	38.04		38.20

Source of Water Use Intensity: California Energy Commission. Water-Energy Relationship 2005.
Source of greenhouse gas emission factors: *California Climate Action Registry General Reporting Protocol, v.3.1* January 2009.

Diesel Particulate Matter (DPM) Health Risk Assessment (HRA) of Diesel Trucks at the Wal-Mart Project Tehachapi, California

Introduction

This health risk assessment (HRA) evaluates the chronic cancer risk and non-cancer health effects of diesel particulate matter (DPM) associated with trucks traveling within the proposed project.

Methodology

The methodologies and assumptions used in this HRA analysis are consistent with U.S. EPA, Cal/EPA, CARB, SCAQMD and the State's Office of Environmental Health Hazard Assessment (OEHHA) guidance. The primary guidance document used in this analysis is the OEHHA's "Air Toxics Hot Spots Program Risk Assessment Guidelines" (OEHHA 2003). The basic components of a risk assessment as identified in the guidance are as follows: (1) hazard identification; (2) exposure assessment; (3) dose response assessment; and (4) risk characterization.

Hazard Identification

The hazard identification portion of the project's DPM HRA involves identifying if a hazard exists, and if so, what are the pollutants of concern and their associated potential adverse health effects. In this HRA, the primary hazard is emissions from vehicular sources (specifically heavy-duty, diesel delivery trucks) associated with the proposed Project. The State of California has identified DPM as a toxic air contaminant with potential cancer and chronic non-cancer effects.

Exposure Assessment

The exposure assessment estimates the extent of exposure to diesel exhaust for which potential cancer and chronic non-cancer effects will be evaluated. This assessment starts with an emission quantification, followed by dispersion modeling and an estimation of long-term exposure levels.

The quantification of diesel exhaust emissions requires a diesel exhaust emission rate from trucks. The volume of truck traffic within the project was estimated to be approximately 65 heavy-duty trucks daily. An emission rate for the 65 diesel trucks was estimated based on emission factors for diesel-powered trucks obtained from the EMFAC2007 computer model. Table 1, Diesel Truck Exhaust Emissions, presents the diesel exhaust emissions used to evaluate the potential chronic (long-term) cancer and non-cancer health impacts at sensitive receptors identified in the project vicinity. As there is no acute toxicity factor for diesel exhaust, potential acute (short-term) non-cancer health impacts were not evaluated and maximum hourly diesel emissions were not forecasted.

Dispersion modeling was performed using US EPA's Industrial Source Complex—Short Term, Release 3 (ISCST3) model (Version 02035) to estimate the ground-level diesel concentrations.

Truck traffic was modeled as a series of volume sources along truck routes within the project site and individiual volume sources to represent truck idling locations.

The modeling utilized pre-processed meteorological data from the Mojave Desert Meteorlogical Station, which is the station nearest the site, obtained from Kern County Air Pollution Control District (KCAPCD).

Dose-Response

The dose-response assessment is the process of characterizing the relationship between exposure to diesel exhaust and the incidence of an adverse health effect in exposed populations.

The estimation of potential inhalation cancer risk posed by exposure to DPM requires a cancer potency factor. Cancer potency factors (CPFs) are expressed as the upper bound probability of developing cancer assuming continuous lifetime exposure to diesel exhaust at a dose of one milligram per kilogram of body weight, and are expressed in units of inverse dose as a potency slope (i.e., $[mg/kg/day]^{-1}$). A CPF when multiplied by the dose of a carcinogen gives the associated lifetime cancer risk. The CPF for DPM is 1.1×10^{0} $[mg/kg/day]^{-1}$ (OEHHA, 2003). The estimation of potential inhalation chronic non-cancer effects posed by exposure to DPM requires a chronic reference exposure level (REL). A chronic REL is a concentration level (that is expressed in units of micrograms per cubic meter ($\mu g/m^3$) for inhalation exposures), at or below which no adverse health effects are anticipated following long-term exposure. The chronic REL for DPM is 5 $\mu g/m^3$ (OEHHA, 2003). The chronic hazard index target organ for DPM is the respiratory system (OEHHA, 2003). Table 2, Toxicity Values for DPM presents the CPF and REL used in this HRA.

Risk Characterization

Risk characterization combines the maximum annual average ground-level DPM concentration from the exposure assessment and the cancer potency factor and chronic REL from the dose-response analysis to estimate the potential inhalation cancer risk and chronic hazard index (HI) from the exposure to DPM emissions.

The equation below was used to estimate exposure through inhalation as a function of respiration rate and the concentration of diesel exhaust in air (OEHHA, 2003, Equation 5.4.1 A) with the recommended default values.

$$Dose\text{-}inh = [Cair * \{DBR\} * A * EF * ED * 10^{-6}] / AT$$

where:

Dose-inh = Dose through inhalation (mg/kg/day)

Cair = Concentration of DPM in air ($\mu g/m^3$)

{DBR} = Daily breathing rate (L/kg body weight - day)

A = Inhalation absorption factor

EF = Exposure frequency (days/year)

ED = Exposure duration (years)

10^{-6} = Micrograms to milligrams conversion, Liters to cubic meters conversion.

AT = Averaging time period over which exposure is averaged, in days

The exposure factors used in this HRA are presented in Table 3. The daily breathing rates used in this HRA approximate the residential inhalation rate is consistent with the average residential inhalation rates provided in OEHHA (2003) guidance for 70-year duration point-estimate calculations.

The following equation was used to estimate the excess cancer risk based upon the calculated dosage.

Inhalation Cancer Risk = (Dose-inh, mg/kg/day) x (Cancer Potency Value, $[mg/kg/day]^{-1}$)

The chronic HI is a calculated ratio. Exposures above the REL are indicated by an HI greater than one (1) and may indicate that the source has a potential to cause adverse non-cancer health effects.

HI = *(Cair,* $\mu g/m^3$*) / REL*

Table 4 presents both cancer risks and chronic non-cancer Hazard Indices at sensitive receptors.

Conclusions

The maximum cancer risks at nearby sensitive receptors from DPM emissions generated by truck traffic at the project site are below the significance criteria of 10 per one million. Additionally, the maximum non-cancer hazard index is below 1. An HI of less than 1 is considered to be less than significant.

The estimated cancer risks and non-cancer hazard index presented in this HRA is based on a number of conservative assumptions. As a result of the effects of these conservative assumptions, the calculated risks are likely to overestimate actual risks. The following section summarizes some of these conservative estimates used in this HRA.

<u>Emission Rates</u>

The HRA assumes a constant emission rate from diesel-emitting vehicles. However, to decrease diesel particulate emissions, statewide programs and regulations are presently being developed

and implemented by CARB and U.S. EPA to reduce the risks of exposure to diesel exhaust. These programs include emission control requirements along with subsidies for upgrading older diesel engines to low-emission models.

Exposure Assumptions

Health risks were calculated with the assumption that residents spend every hour of every day of exposure at that location for 70 years. As these are retail locations, it is highly unlikely exposure would exceed ten hours per day for employees. Accordingly, the actual risks to employees and consumers are likely to be lower than those calculated in this assessment.

Chemical Toxicity

There are a number of uncertainties in conducting a toxicity assessment. The primary areas of uncertainty include the assumption that adverse effects observed in animal experiments would also be observed in humans (animal-to-human extrapolation), and that the toxic effects observed after exposure by one route would occur following exposure by a different route (route-to-route extrapolation).

Calculation of Risk

The USEPA (1989) notes that the conservative assumptions used in a risk assessment are intended to assure that the estimated risks do not underestimate the actual risks posed by a site and that the estimated risks do not necessarily represent actual risks experienced by populations at or near a site. By using standardized conservative assumptions in a risk assessment, USEPA further states that:

"These values [risk estimates] are upperbound estimates of excess cancer risk potentially arising from lifetime exposure to the chemical in question. A number of assumptions have been made in the derivation of these values, many of which are likely to overestimate exposure and toxicity. The actual incidence of cancer is likely to be lower than these estimates and may be zero."

The estimated risks in this risk assessment are based primarily on a series of conservative assumptions related to predicted emission rates, concentrations, exposure, and chemical toxicity. The use of conservative assumptions tends to produce upper-bound estimates of risk and is likely to result in substantial overestimates of exposure, and hence, risk.

I. REFERENCES

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Office of Environmental Health Hazard Assessment (OEHHA), 2003. The Air Toxics Hot spots Program Guidance for Preparation of Health Risk Assessments*. August 2003.*

United States Environmental Protection Agency (USEPA). 1997. *Exposure Factors Handbook. National Center for Environmental Assessment.* Office of *Research and Development.* Washington, D.C.

USEPA. 1989. *Risk Assessment Guidance for Superfund: Volume I - Human Health Evaluation Manual (Part A).* Office of Emergency and Remedial Response. Washington, D.C.

TABLE 1
Diesel Truck Exhaust Emissions
Wal-Mart Project, Tehachapi, California

Site Entrance	Background Data			Running Exhaust			Idle Exhaust				Total Exhaust PM10 (gm/day)
	Trips Per Day[1]	Hours Operation (hrs)	Distance On Site (mi/trip)[2]	PM10 gm/mi (on site)[3]	Running Exhaust PM10 (gm/day)[4]	Running Emission Rate (g/s)[5]	Idle Exhaust gm/min (on site)[6]	Idle Time (min/trip)[7]	Idle Exhaust PM10 (gm/day)[8]	Idle Emission Rate g/s	
Wal-Mart, South of Site, Tucker Road	13	24.0	0.32	1.278	5.4	**6.29E-05**	0.0036	5	0.2	**2.80E-06**	5.7
Outlot Parcels, north of site, Tehachapi Blvd	52	24.0	0.10	0.697	3.7	**4.28E-05**	0.0036	5	0.9	**1.10E-05**	4.6

Notes
1 Wal-Mart truck data provided by applicant, outlot truck data estimated using URBEMIS 2007 based on land use
2 Source:Based on site plan
3 Source: Weighted average of the EMFAC2007 emission factors for the four types of trucks: ∑ (#trucks) x (emission factor/∑ emission factors)
4 Information from Table 1A
5 (grams/day)/(hours of operation)/(60 min)/(60 sec)
6 Information from Table 1B (Total emissions, continuous running) / (24 hr) / (60 min)
7 Based on CARB's ATCM limit of 5 minutes idling
8 (trips/day)*(min/trip)*(gm/min)

TABLE 1A
Diesel Truck Running Exhaust Emissions (5 MPH, Calculation Table)
Wal-Mart Project, Tehachapi, California

Site Entrance	Light Heavy Duty Trucks (type 1)	Light Heavy Duty Trucks (type 1) Emission Factor	Light Heavy Duty Trucks (Type 2)	Light Heavy Duty Trucks (Type 2) Emission Factor	Medium Heavy Duty Trucks	Medium Heavy Duty Trucks Emission Factor	Heavy Heavy Duty Trucks	Heavy Heavy Duty Trucks Emission Factor	Total Emissions[1]
	(trips/day)	(gm/mile)	(trips/day)	(gm/mile)	(trips/day)	(gm/mile)	(trips/day)	(gm/mile)	(gm/day)
Wal-Mart, south of site, Tucker Road	3.15	0.113	3.15	0.139	0	1.09	7	2.314	5.44
Outlot Parcels, north of site, Tehachapi Blvd	23	0.113	7.5	0.139	14	1.09	7.5	2.314	3.70

1 ∑(trips/day)*(miles/trip)*(gm/mile)

TABLE 1B
Diesel Truck Idling Exhaust Emissions (0 MPH, Calculation Table)
Wal-Mart Project, Tehachapi, California

Site Entrance	Light Heavy Duty Trucks (type 1)	Light Heavy Duty Trucks (type 1) Emission Factor	Light Heavy Duty Trucks (Type 2)	Light Heavy Duty Trucks (Type 2) Emission Factor	Medium Heavy Duty Trucks	Medium Heavy Duty Trucks Emission Factor	Heavy Heavy Duty Trucks	Heavy Heavy Duty Trucks Emission Factor	Total Emissions (continuous running)[1]
	(trips/day)	(gm/mile)	(trips/day)	(gm/mile)	(trips/day)	(gm/mile)	(trips/day)	(gm/mile)	(gm/day)
Wal-Mart, south of site, Tucker Road	3.15	0.758	3.15	0.925	0	1.09	7	1.582	5.24
Outlot Parcels, north of site, Tehachapi Blvd	23	0.758	7.5	0.925	14	1.09	7.5	1.582	5.25

1 ∑(trips/day)*(miles/trip)*(gm/mile)

TABLE 2 Toxicity Values Wal-Mart Project, Ridgecrest, California			
Compound	**Cancer Potency Value $(mg/kg\text{-}d)^{-1}$**	**Chronic Reference Exposure Level ug/m^3**	**Acute Reference Exposure Level mg/m^3**
DPM	1.1	5	No value

Source:

OEHHA Toxicity Criteria Database. http://www.oehha.ca.gov/risk/chemicalDB/index.asp. Accessed January 21, 2009.

TABLE 3
Exposure Factors
Wal-Mart Project, Ridgecrest, California

Variable	Abbrev	Value	Unit
Daily breathing rate	DBR	301	L/kg-d
Inhalation absorption factor	A	1	unitless
Exposure frequency	EF	350	days/years
Exposure duration	ED	70	years
Averaging time period	AT	25,550	days

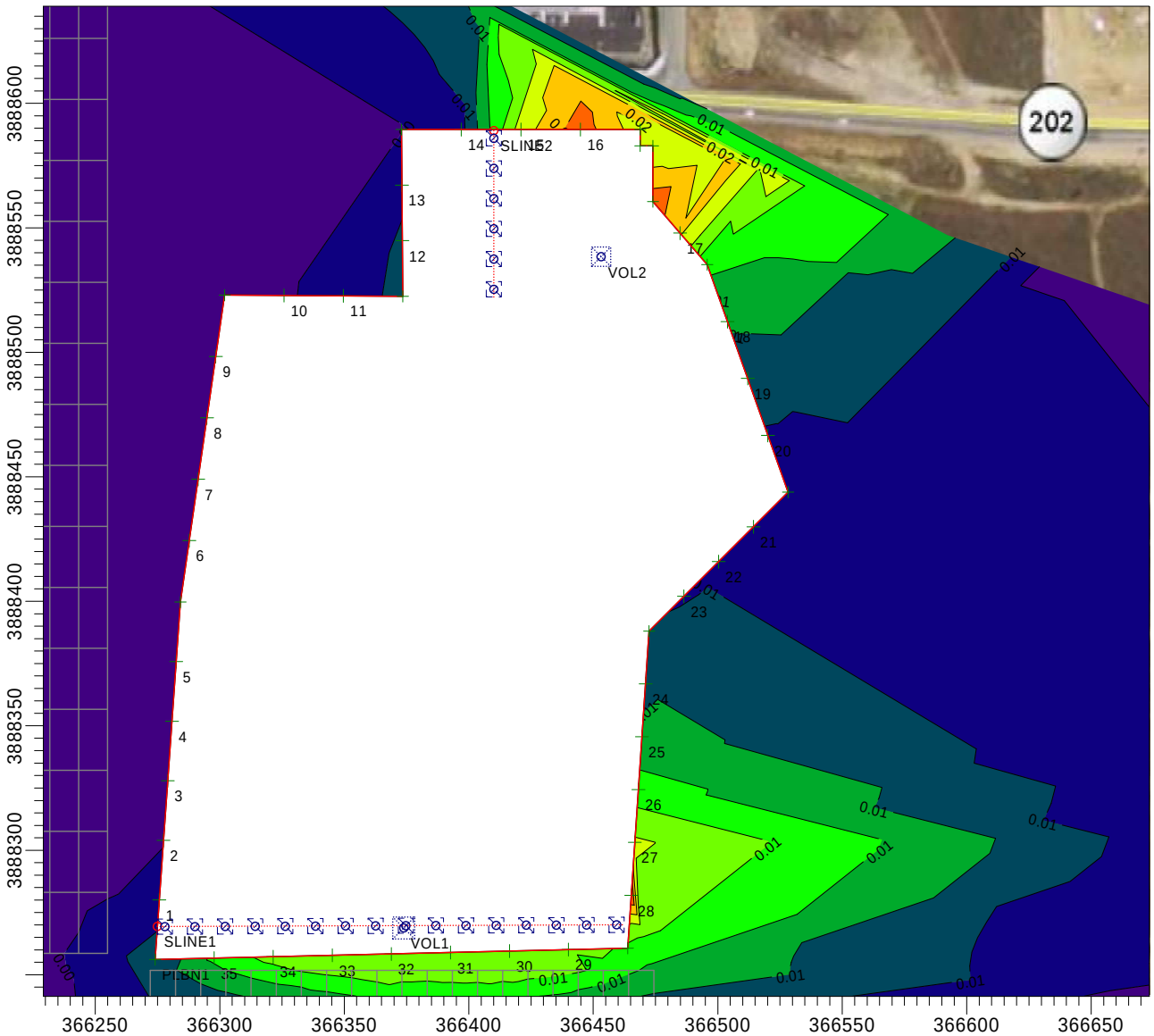
Notes:

Source of values: Office of Environmental Health Hazard Assessment (OEHHA), 2003. The Air Toxics Hot spots Program Guidance for Preparation of Health Risk Assessments. August 2003.

TABLE 4 Cancer Risk and Noncancer Hazard Index (HI) from DPM Wal-Mart Project, Tehachapi, California				
Location	**Air Concentration**	**Dose**	**Cancer Risk**	**Chronic HI**
Highest Max Conc.	2.36E-02	6.80E-06	7.48E-06	4.71E-03

PROJECT TITLE:

C:\Data\TehahWal\TehahWal.isc



PLOT FILE OF ANNUAL VALUES FOR SOURCE GROUP: ALL

ug/m^3

0.000 0.003 0.005 0.008 0.011 0.013 0.016 0.018 0.021 0.024

COMMENTS:	SOURCES: **4**		
	RECEPTORS: **1371**		
	OUTPUT TYPE: **Concentration**	SCALE: 1:2,711 0 0.1 km	
	MAX: **0.02356 ug/m^3**		PROJECT NO.:

AERMOD View - Lakes Environmental Software

```
**
****************************************
**
** ISCST3 Input Produced by:
** AERMOD View Ver. 6.2.0
** Lakes Environmental Software Inc.
** Date: 5/21/2009
** File: C:\Data\TehahWal\TehahWal.INP
**
****************************************
**
**
****************************************
** ISCST3 Control Pathway
****************************************
**
**
CO STARTING
   TITLEONE C:\Data\TehahWal\TehahWal.isc
   MODELOPT DFAULT CONC NOCMPL  RURAL
   AVERTIME ANNUAL
   POLLUTID OTHER
   TERRHGTS ELEV
   RUNORNOT RUN
CO FINISHED
**
****************************************
** ISCST3 Source Pathway
****************************************
**
**
```

```
SO STARTING
** Source Location **
** Source ID - Type - X Coord. - Y Coord. **
** Line Source represented by Separated Volume Sources
** ---------------------------------------------------------------------
** LINE Source ID = SLINE1
** DESCRSRC Walmart Entrance
** Length of Side = 6.10
** Emission Rate = 6.29E-5
** Vertical Dimension = 6.00
** SZINIT = 2.79
** Nodes = 2
** 366274.95, 3888269.33, 1207.00, 0.00, 0.0
** 366462.48, 3888270.04, 1207.00, 0.00, 5.63
** ---------------------------------------------------------------------
   LOCATION L0000083 VOLUME 366277.985 3888269.262 1207.00
   LOCATION L0000084 VOLUME 366290.081 3888269.311 1207.00
   LOCATION L0000085 VOLUME 366302.177 3888269.359 1207.00
   LOCATION L0000086 VOLUME 366314.273 3888269.407 1207.00
   LOCATION L0000087 VOLUME 366326.368 3888269.456 1207.00
   LOCATION L0000088 VOLUME 366338.464 3888269.504 1207.00
   LOCATION L0000089 VOLUME 366350.560 3888269.552 1207.00
   LOCATION L0000090 VOLUME 366362.655 3888269.601 1207.00
   LOCATION L0000091 VOLUME 366374.751 3888269.649 1207.00
   LOCATION L0000092 VOLUME 366386.847 3888269.698 1207.00
   LOCATION L0000093 VOLUME 366398.942 3888269.746 1207.00
   LOCATION L0000094 VOLUME 366411.038 3888269.794 1207.00
   LOCATION L0000095 VOLUME 366423.134 3888269.843 1207.00
   LOCATION L0000096 VOLUME 366435.229 3888269.891 1207.00
   LOCATION L0000097 VOLUME 366447.325 3888269.939 1207.00
   LOCATION L0000098 VOLUME 366459.421 3888269.988 1207.00
** End of Line Source
```

```
** Line Source represented by Separated Volume Sources
** ---------------------------------------------------------------------
** LINE Source ID = SLINE2
** DESCRSRC Outlot Truck Route
** Length of Side = 6.10
** Emission Rate = 4.28E-5
** Vertical Dimension = 6.00
** SZINIT = 2.79
** Nodes = 2
** 366410.08, 3888589.05, 1202.45, 0.00, 0.0
** 366410.08, 3888522.19, 1205.60, 0.00, 5.64
** ---------------------------------------------------------------------
   LOCATION L0000099 VOLUME 366410.094 3888585.952 1202.59
   LOCATION L0000100 VOLUME 366410.094 3888573.821 1203.17
   LOCATION L0000101 VOLUME 366410.094 3888561.690 1203.74
   LOCATION L0000102 VOLUME 366410.094 3888549.560 1204.31
   LOCATION L0000103 VOLUME 366410.094 3888537.429 1204.88
   LOCATION L0000104 VOLUME 366410.094 3888525.298 1205.46
** End of Line Source
   LOCATION VOL1 VOLUME 366373.950 3888268.730 0.000
** DESCRSRC Idling Trucks (Behind Walmart)
   LOCATION VOL2 VOLUME 366453.196 3888538.378 0.000
** DESCRSRC Idling Trucks (3 outlots)
** Source Parameters **
   SRCPARAM L0000083 3.9313E-06 0.00 5.63 2.79
   SRCPARAM L0000084 3.9313E-06 0.00 5.63 2.79
   SRCPARAM L0000085 3.9313E-06 0.00 5.63 2.79
   SRCPARAM L0000086 3.9313E-06 0.00 5.63 2.79
   SRCPARAM L0000087 3.9313E-06 0.00 5.63 2.79
   SRCPARAM L0000088 3.9313E-06 0.00 5.63 2.79
   SRCPARAM L0000089 3.9313E-06 0.00 5.63 2.79
```

```
   SRCPARAM L0000090 3.9313E-06 0.00 5.63 2.79
   SRCPARAM L0000091 3.9313E-06 0.00 5.63 2.79
   SRCPARAM L0000092 3.9313E-06 0.00 5.63 2.79
   SRCPARAM L0000093 3.9313E-06 0.00 5.63 2.79
   SRCPARAM L0000094 3.9313E-06 0.00 5.63 2.79
   SRCPARAM L0000095 3.9313E-06 0.00 5.63 2.79
   SRCPARAM L0000096 3.9313E-06 0.00 5.63 2.79
   SRCPARAM L0000097 3.9313E-06 0.00 5.63 2.79
   SRCPARAM L0000098 3.9313E-06 0.00 5.63 2.79
   SRCPARAM L0000099 7.1333E-06 0.00 5.64 2.79
   SRCPARAM L0000100 7.1333E-06 0.00 5.64 2.79
   SRCPARAM L0000101 7.1333E-06 0.00 5.64 2.79
   SRCPARAM L0000102 7.1333E-06 0.00 5.64 2.79
   SRCPARAM L0000103 7.1333E-06 0.00 5.64 2.79
   SRCPARAM L0000104 7.1333E-06 0.00 5.64 2.79
   SRCPARAM VOL1 2.8E-06 6.000 2.047 2.791
   SRCPARAM VOL2 1.1E-5 6.000 1.791 2.791
   SRCGROUP WALMART L0000083 L0000084 L0000085 L0000086 L0000087 L0000088
   SRCGROUP WALMART L0000089 L0000090 L0000091 L0000092 L0000093 L0000094
   SRCGROUP WALMART L0000095 L0000096 L0000097 L0000098
   SRCGROUP OUTLOT L0000099 L0000100 L0000101 L0000102 L0000103 L0000104
   SRCGROUP ALL
SO FINISHED
**
****************************************
** ISCST3 Receptor Pathway
****************************************
**
**
RE STARTING
   GRIDCART UCART1 STA
                    XYINC 366023.14 21 11.59 3888258.56 21 24.50
```

ELEV	1	1206.93	1207.00	1206.92	1206.97	1206.96	1207.00
ELEV	1	1207.00	1207.00	1207.00	1207.00	1207.00	1207.00
ELEV	1	1207.00	1207.00	1207.00	1207.00	1207.00	1207.00
ELEV	1	1207.00	1207.00	1207.00			
ELEV	2	1207.00	1207.00	1207.00	1207.00	1207.00	1207.00
ELEV	2	1207.00	1207.00	1207.00	1207.00	1207.00	1207.00
ELEV	2	1207.00	1207.00	1207.00	1207.00	1207.00	1207.00
ELEV	2	1207.00	1207.00	1207.00			
ELEV	3	1207.00	1207.00	1207.00	1207.00	1207.00	1207.00
ELEV	3	1207.00	1207.00	1207.00	1207.00	1207.00	1207.00
ELEV	3	1207.00	1207.00	1207.00	1207.00	1207.00	1207.00
ELEV	3	1207.00	1207.00	1207.00			
ELEV	4	1207.00	1207.00	1207.00	1207.00	1207.00	1207.00
ELEV	4	1207.00	1207.00	1207.00	1207.00	1207.00	1207.00
ELEV	4	1207.00	1207.00	1207.00	1207.00	1207.00	1207.00
ELEV	4	1207.00	1207.00	1207.00			
ELEV	5	1207.00	1207.00	1206.86	1206.86	1206.85	1206.87
ELEV	5	1207.00	1207.00	1207.00	1207.00	1207.00	1207.00
ELEV	5	1207.00	1207.00	1207.00	1207.00	1207.00	1207.00
ELEV	5	1207.00	1207.00	1207.00			
ELEV	6	1206.85	1206.97	1206.50	1206.08	1206.11	1206.66
ELEV	6	1206.99	1207.00	1207.00	1207.00	1207.00	1207.00
ELEV	6	1207.00	1207.00	1207.00	1207.00	1207.00	1207.00
ELEV	6	1206.90	1206.99	1206.90			
ELEV	7	1206.02	1206.01	1206.10	1206.00	1206.07	1206.66
ELEV	7	1206.99	1207.00	1207.00	1207.00	1207.00	1207.00
ELEV	7	1207.00	1207.00	1207.00	1207.00	1206.98	1206.87
ELEV	7	1206.40	1206.02	1206.42			
ELEV	8	1205.45	1205.22	1205.58	1205.90	1206.07	1206.16
ELEV	8	1206.16	1206.50	1206.87	1207.00	1207.00	1207.00
ELEV	8	1207.00	1207.00	1206.94	1206.68	1206.26	1206.14

ELEV	8	1206.11	1206.00	1206.12			
ELEV	9	1205.16	1205.08	1205.20	1205.32	1205.56	1205.78
ELEV	9	1205.91	1206.17	1206.31	1206.42	1206.45	1206.42
ELEV	9	1206.44	1206.44	1206.23	1205.99	1205.64	1205.43
ELEV	9	1205.45	1205.42	1205.66			
ELEV	10	1204.65	1204.79	1204.63	1204.69	1204.91	1205.24
ELEV	10	1205.71	1205.64	1205.67	1205.62	1205.44	1205.50
ELEV	10	1205.31	1205.31	1205.34	1204.97	1204.81	1204.68
ELEV	10	1204.64	1204.86	1204.87			
ELEV	11	1203.80	1203.95	1203.77	1203.89	1203.96	1204.30
ELEV	11	1204.88	1204.58	1204.70	1204.81	1204.11	1203.99
ELEV	11	1203.82	1203.82	1203.95	1203.77	1203.93	1203.85
ELEV	11	1203.79	1203.95	1203.78			
ELEV	12	1203.00	1203.00	1203.00	1203.00	1203.00	1203.08
ELEV	12	1203.00	1203.08	1203.05	1203.02	1203.00	1203.00
ELEV	12	1203.00	1202.94	1202.99	1202.92	1202.98	1202.96
ELEV	12	1202.92	1203.00	1202.92			
ELEV	13	1202.20	1202.05	1202.23	1202.11	1202.13	1202.22
ELEV	13	1202.05	1202.21	1202.15	1202.07	1202.23	1202.02
ELEV	13	1202.02	1201.53	1201.13	1201.47	1201.14	1201.29
ELEV	13	1201.43	1201.09	1201.44			
ELEV	14	1201.54	1201.28	1201.37	1201.31	1201.32	1201.36
ELEV	14	1201.14	1201.14	1200.80	1200.60	1200.74	1200.57
ELEV	14	1200.56	1200.47	1200.29	1200.37	1200.30	1200.33
ELEV	14	1200.36	1200.21	1200.36			
ELEV	15	1200.90	1200.58	1200.55	1200.57	1200.45	1200.29
ELEV	15	1200.25	1199.91	1199.71	1199.48	1199.31	1199.25
ELEV	15	1199.12	1199.12	1199.17	1199.10	1199.15	1199.14
ELEV	15	1199.11	1199.33	1199.11			
ELEV	16	1200.04	1199.94	1199.72	1199.81	1199.61	1199.10
ELEV	16	1198.95	1198.62	1198.64	1198.56	1198.03	1197.96
ELEV	16	1197.66	1197.60	1197.78	1197.56	1197.77	1197.79

```
                ELEV   16  1197.73  1197.90  1197.72
                ELEV   17  1199.16  1199.00  1198.82  1198.99  1198.92  1198.07
                ELEV   17  1197.98  1197.45  1197.12  1197.01  1196.81  1196.97
                ELEV   17  1196.83  1196.19  1196.01  1196.16  1196.92  1196.93
                ELEV   17  1196.76  1196.99  1196.75
                ELEV   18  1198.40  1198.03  1198.19  1198.01  1197.87  1196.96
                ELEV   18  1196.04  1196.27  1196.02  1196.01  1196.20  1196.01
                ELEV   18  1195.93  1195.35  1195.03  1195.29  1195.05  1195.17
                ELEV   18  1195.94  1195.99  1195.93
                ELEV   19  1198.11  1197.94  1197.71  1197.31  1196.96  1196.50
                ELEV   19  1196.00  1195.77  1195.37  1195.19  1195.30  1195.07
                ELEV   19  1194.99  1194.54  1194.18  1194.30  1194.20  1194.31
                ELEV   19  1194.45  1194.24  1194.45
                ELEV   20  1197.28  1197.36  1197.26  1197.11  1196.88  1196.72
                ELEV   20  1196.47  1195.96  1195.41  1194.89  1194.72  1194.54
                ELEV   20  1194.31  1194.15  1194.00  1194.00  1194.00  1194.00
                ELEV   20  1194.00  1194.00  1194.00
                ELEV   21  1196.47  1196.74  1196.65  1196.71  1196.70  1196.65
                ELEV   21  1196.67  1196.08  1195.38  1194.82  1194.46  1194.15
                ELEV   21  1193.88  1193.79  1193.74  1193.64  1193.72  1193.70
                ELEV   21  1193.66  1193.81  1193.65
GRIDCART UCART1 END
GRIDCART UCART2 STA
                XYINC 366272.14 21 10.11 3888009.55 21 12.11
                ELEV    1  1208.17  1208.53  1208.95  1209.06  1209.16  1209.11
                ELEV    1  1208.94  1208.81  1208.47  1208.18  1208.27  1208.27
                ELEV    1  1208.12  1208.28  1208.26  1208.06  1207.95  1207.53
                ELEV    1  1207.17  1207.28  1207.25
                ELEV    2  1207.99  1208.06  1208.54  1208.96  1208.84  1208.83
                ELEV    2  1208.97  1208.67  1208.18  1208.01  1207.93  1207.91
                ELEV    2  1207.98  1207.83  1207.85  1207.96  1207.61  1207.15
```

ELEV	2	1207.01	1207.00	1207.00			
ELEV	3	1207.46	1207.79	1208.11	1208.29	1208.47	1208.47
ELEV	3	1208.37	1208.31	1208.17	1207.92	1207.82	1207.64
ELEV	3	1207.46	1207.47	1207.47	1207.37	1207.30	1207.15
ELEV	3	1207.00	1207.00	1207.00			
ELEV	4	1207.01	1207.22	1207.81	1208.00	1208.02	1208.02
ELEV	4	1208.01	1208.02	1207.94	1208.00	1207.75	1207.24
ELEV	4	1207.01	1207.08	1207.08	1207.01	1207.09	1206.94
ELEV	4	1207.00	1207.00	1206.95			
ELEV	5	1207.07	1207.18	1207.46	1207.76	1207.69	1207.68
ELEV	5	1207.83	1207.68	1207.68	1207.76	1207.48	1207.19
ELEV	5	1207.07	1207.00	1207.00	1207.00	1206.87	1206.80
ELEV	5	1206.83	1206.67	1206.70			
ELEV	6	1206.94	1207.09	1207.16	1207.10	1207.25	1207.26
ELEV	6	1207.10	1207.25	1207.26	1207.10	1207.15	1207.10
ELEV	6	1207.00	1207.00	1207.00	1206.95	1206.78	1206.42
ELEV	6	1206.16	1206.27	1206.24			
ELEV	7	1206.95	1206.84	1206.82	1206.97	1206.84	1206.82
ELEV	7	1206.97	1206.83	1206.83	1206.97	1206.83	1206.83
ELEV	7	1206.97	1206.82	1206.84	1206.95	1206.60	1206.15
ELEV	7	1206.02	1206.00	1206.00			
ELEV	8	1206.35	1206.45	1206.45	1206.35	1206.45	1206.45
ELEV	8	1206.35	1206.45	1206.45	1206.35	1206.45	1206.45
ELEV	8	1206.35	1206.45	1206.45	1206.35	1206.28	1206.15
ELEV	8	1206.00	1206.00	1206.00			
ELEV	9	1206.00	1206.07	1206.08	1206.00	1206.07	1206.08
ELEV	9	1206.00	1206.08	1206.08	1206.00	1206.08	1206.07
ELEV	9	1206.00	1206.08	1206.07	1206.00	1206.08	1206.00
ELEV	9	1206.00	1206.00	1206.00			
ELEV	10	1206.00	1206.00	1206.00	1206.00	1206.00	1206.00
ELEV	10	1206.00	1206.00	1206.00	1206.00	1206.00	1206.00
ELEV	10	1206.00	1206.00	1206.00	1206.00	1206.00	1206.00

ELEV	10	1206.00	1206.00	1206.00			
ELEV	11	1206.00	1206.00	1206.00	1206.00	1206.00	1206.00
ELEV	11	1206.00	1206.00	1206.00	1206.00	1206.00	1206.00
ELEV	11	1206.00	1206.00	1206.00	1206.00	1206.00	1206.00
ELEV	11	1206.00	1206.00	1206.00			
ELEV	12	1206.00	1206.00	1206.00	1206.00	1206.00	1206.00
ELEV	12	1206.00	1206.00	1206.00	1206.00	1206.00	1206.00
ELEV	12	1206.00	1206.00	1206.00	1206.00	1206.00	1206.00
ELEV	12	1206.00	1206.00	1206.00			
ELEV	13	1206.00	1206.00	1206.00	1206.00	1206.00	1206.00
ELEV	13	1206.00	1206.00	1206.00	1206.00	1206.00	1206.00
ELEV	13	1206.00	1206.00	1206.00	1206.00	1206.00	1206.00
ELEV	13	1206.00	1206.00	1206.00			
ELEV	14	1206.00	1206.06	1206.07	1206.00	1206.06	1206.07
ELEV	14	1206.00	1206.06	1206.07	1206.00	1206.07	1206.06
ELEV	14	1206.00	1206.07	1206.06	1206.00	1206.07	1206.06
ELEV	14	1206.00	1206.07	1206.06			
ELEV	15	1206.21	1206.34	1206.36	1206.21	1206.35	1206.35
ELEV	15	1206.21	1206.35	1206.35	1206.21	1206.35	1206.35
ELEV	15	1206.21	1206.35	1206.35	1206.21	1206.36	1206.34
ELEV	15	1206.21	1206.36	1206.34			
ELEV	16	1206.88	1206.79	1206.77	1206.93	1206.78	1206.77
ELEV	16	1206.93	1206.78	1206.78	1206.93	1206.77	1206.78
ELEV	16	1206.93	1206.77	1206.79	1206.93	1206.77	1206.79
ELEV	16	1206.93	1206.76	1206.80			
ELEV	17	1206.97	1207.00	1207.00	1207.00	1207.00	1207.00
ELEV	17	1207.00	1207.00	1207.00	1207.00	1207.00	1207.00
ELEV	17	1207.00	1207.00	1207.00	1207.00	1207.00	1207.00
ELEV	17	1207.00	1207.00	1207.00			
ELEV	18	1207.00	1207.00	1207.00	1207.00	1207.00	1207.00
ELEV	18	1207.00	1207.00	1207.00	1207.00	1207.00	1207.00

```
                ELEV   18  1207.00  1207.00  1207.00  1207.00  1207.00  1207.00
                ELEV   18  1207.00  1207.00  1207.00
                ELEV   19  1207.00  1207.00  1207.00  1207.00  1207.00  1207.00
                ELEV   19  1207.00  1207.00  1207.00  1207.00  1207.00  1207.00
                ELEV   19  1207.00  1207.00  1207.00  1207.00  1207.00  1207.00
                ELEV   19  1207.00  1207.00  1207.00
                ELEV   20  1207.00  1207.00  1207.00  1207.00  1207.00  1207.00
                ELEV   20  1207.00  1207.00  1207.00  1207.00  1207.00  1207.00
                ELEV   20  1207.00  1207.00  1207.00  1207.00  1207.00  1207.00
                ELEV   20  1207.00  1207.00  1207.00
                ELEV   21  1207.00  1207.00  1207.00  1207.00  1207.00  1207.00
                ELEV   21  1207.00  1207.00  1207.00  1207.00  1207.00  1207.00
                ELEV   21  1207.00  1207.00  1207.00  1207.00  1207.00  1207.00
                ELEV   21  1207.00  1207.00  1207.00
GRIDCART UCART2 END
GRIDCART UCART3 STA
                XYINC 366710.75 21 8.28 3888244.85 21 10.22
                ELEV    1  1207.00  1207.00  1207.00  1207.00  1207.00  1207.00
                ELEV    1  1206.86  1206.71  1206.55  1206.22  1206.08  1205.81
                ELEV    1  1205.60  1205.53  1205.69  1205.84  1206.00  1206.30
                ELEV    1  1206.56  1206.78  1207.19
                ELEV    2  1207.00  1207.00  1207.00  1207.00  1207.00  1206.99
                ELEV    2  1206.90  1206.57  1206.15  1206.01  1205.90  1205.47
                ELEV    2  1205.06  1205.07  1205.52  1205.83  1206.00  1206.07
                ELEV    2  1206.59  1206.92  1207.01
                ELEV    3  1207.00  1207.00  1207.00  1207.00  1207.00  1206.96
                ELEV    3  1206.87  1206.61  1206.28  1206.08  1205.74  1205.30
                ELEV    3  1205.01  1204.98  1205.17  1205.57  1205.92  1206.02
                ELEV    3  1206.31  1206.70  1206.93
                ELEV    4  1207.00  1207.00  1207.00  1207.00  1207.00  1207.00
                ELEV    4  1206.88  1206.78  1206.73  1206.27  1205.85  1205.21
                ELEV    4  1204.75  1204.60  1204.87  1205.11  1205.28  1205.69
```

ELEV	4	1205.97	1206.16	1206.56			
ELEV	5	1207.00	1207.00	1207.00	1207.00	1207.00	1207.00
ELEV	5	1207.00	1206.90	1206.92	1206.95	1206.27	1204.91
ELEV	5	1204.05	1204.03	1204.60	1204.80	1205.01	1205.03
ELEV	5	1205.78	1205.97	1206.03			
ELEV	6	1206.88	1206.95	1207.00	1207.00	1207.00	1207.00
ELEV	6	1206.92	1206.85	1206.87	1206.70	1205.69	1204.60
ELEV	6	1204.03	1203.72	1203.73	1204.16	1204.69	1204.71
ELEV	6	1205.02	1205.55	1205.91			
ELEV	7	1206.76	1206.89	1207.00	1207.00	1207.00	1206.92
ELEV	7	1206.85	1206.68	1206.48	1205.73	1205.14	1204.10
ELEV	7	1203.28	1202.78	1202.97	1202.97	1202.98	1203.71
ELEV	7	1204.43	1204.90	1205.61			
ELEV	8	1206.72	1206.96	1206.98	1207.00	1206.88	1207.00
ELEV	8	1206.82	1206.56	1206.00	1205.95	1205.11	1203.00
ELEV	8	1202.07	1202.04	1202.44	1202.18	1202.02	1202.55
ELEV	8	1204.13	1204.91	1205.05			
ELEV	9	1206.32	1206.67	1206.75	1206.58	1206.58	1206.70
ELEV	9	1206.23	1205.72	1205.60	1205.40	1204.12	1202.87
ELEV	9	1202.17	1201.86	1201.84	1201.91	1202.17	1202.75
ELEV	9	1203.71	1204.52	1205.26			
ELEV	10	1205.97	1206.12	1206.20	1206.13	1205.89	1205.38
ELEV	10	1205.28	1204.91	1204.33	1203.43	1203.12	1202.40
ELEV	10	1201.79	1201.44	1201.65	1201.84	1202.16	1202.84
ELEV	10	1203.68	1204.39	1205.35			
ELEV	11	1205.66	1205.96	1205.96	1205.65	1205.16	1205.00
ELEV	11	1204.84	1204.37	1203.20	1203.00	1202.78	1201.46
ELEV	11	1201.03	1201.05	1201.51	1201.89	1202.00	1202.35
ELEV	11	1203.79	1204.89	1205.03			
ELEV	12	1205.12	1205.47	1205.40	1204.97	1204.71	1204.66
ELEV	12	1204.11	1203.47	1203.07	1202.82	1202.05	1201.40

ELEV	12	1201.07	1201.02	1201.27	1201.65	1202.13	1202.78
ELEV	12	1203.70	1204.48	1205.29			
ELEV	13	1204.55	1204.47	1204.37	1204.29	1203.95	1203.39
ELEV	13	1203.27	1203.01	1202.60	1202.09	1201.66	1201.07
ELEV	13	1200.59	1200.60	1201.08	1201.58	1202.08	1202.82
ELEV	13	1203.69	1204.42	1205.33			
ELEV	14	1204.08	1204.02	1203.99	1203.80	1203.21	1203.00
ELEV	14	1202.96	1202.38	1202.06	1201.99	1201.62	1200.60
ELEV	14	1200.04	1200.14	1200.84	1201.73	1202.00	1202.30
ELEV	14	1203.95	1204.86	1205.02			
ELEV	15	1203.81	1203.82	1203.58	1203.26	1202.98	1202.83
ELEV	15	1202.47	1202.13	1201.93	1201.72	1201.27	1200.78
ELEV	15	1200.42	1200.49	1200.91	1201.39	1201.90	1202.50
ELEV	15	1203.35	1204.18	1205.13			
ELEV	16	1203.58	1203.34	1203.08	1202.92	1202.59	1202.17
ELEV	16	1202.04	1201.81	1201.47	1201.23	1201.07	1200.94
ELEV	16	1200.89	1200.90	1200.98	1201.09	1201.37	1202.09
ELEV	16	1203.03	1203.71	1204.63			
ELEV	17	1203.27	1203.02	1202.97	1202.72	1202.14	1202.00
ELEV	17	1201.91	1201.38	1201.06	1201.00	1201.00	1200.85
ELEV	17	1200.98	1200.95	1200.83	1201.05	1201.00	1201.41
ELEV	17	1203.11	1203.91	1204.05			
ELEV	18	1203.05	1202.90	1202.55	1202.24	1201.97	1201.82
ELEV	18	1201.45	1201.12	1200.92	1200.87	1200.66	1200.66
ELEV	18	1200.73	1200.80	1200.81	1200.89	1201.22	1201.82
ELEV	18	1202.69	1203.42	1204.49			
ELEV	19	1202.71	1202.38	1202.06	1201.91	1201.57	1201.15
ELEV	19	1201.03	1200.80	1200.44	1200.21	1200.30	1200.31
ELEV	19	1200.21	1200.34	1200.61	1200.85	1201.13	1201.78
ELEV	19	1202.70	1203.48	1204.43			
ELEV	20	1202.27	1202.02	1201.97	1201.71	1201.14	1201.00
ELEV	20	1200.91	1200.29	1200.05	1200.00	1199.99	1200.07

```
                    ELEV   20  1200.01  1200.07  1200.42  1200.89  1201.00  1201.35
                    ELEV   20  1202.79  1203.89  1204.05
                    ELEV   21  1202.19  1201.96  1201.50  1201.22  1200.95  1200.78
                    ELEV   21  1200.41  1200.10  1199.90  1199.77  1199.78  1199.85
                    ELEV   21  1199.92  1200.21  1200.45  1200.73  1201.16  1201.84
                    ELEV   21  1202.68  1203.39  1204.52
   GRIDCART UCART3 END
** Discrete Cartesian Plant Boundary - Primary Receptors
** Plant Boundary Name PLBN1
** DESCRREC "FENCEPRI" "Cartesian plant boundary Primary Receptors"
   DISCCART    366274.04   3888256.06 1207.00
   DISCCART    366284.19   3888399.67 1207.00
   DISCCART    366301.95   3888522.99 1203.06
   DISCCART    366373.50   3888522.48 1204.40
   DISCCART    366373.00   3888589.46 1201.91
   DISCCART    366468.91   3888589.46 1204.73
   DISCCART    366468.91   3888582.87 1205.35
   DISCCART    366473.98   3888582.87 1205.28
   DISCCART    366473.98   3888560.54 1206.70
   DISCCART    366495.80   3888535.17 1207.00
   DISCCART    366528.28   3888443.82 1207.00
   DISCCART    366472.46   3888388.00 1207.00
   DISCCART    366463.83   3888260.63 1207.00
** Discrete Cartesian Plant Boundary - Intermediate Receptors
** Plant Boundary Name PLBN1
** DESCRREC "FENCEINT" "Cartesian plant boundary Intermediate Receptors"
   DISCCART    366275.73   3888280.00 1207.00
   DISCCART    366277.42   3888303.93 1207.00
   DISCCART    366279.12   3888327.87 1207.00
   DISCCART    366280.81   3888351.80 1207.00
   DISCCART    366282.50   3888375.74 1207.00
```

DISCCART	366287.74	3888424.33	1206.72
DISCCART	366291.29	3888449.00	1206.40
DISCCART	366294.85	3888473.66	1205.66
DISCCART	366298.40	3888498.33	1204.02
DISCCART	366325.80	3888522.82	1203.98
DISCCART	366349.65	3888522.65	1204.23
DISCCART	366373.33	3888544.81	1203.78
DISCCART	366373.17	3888567.13	1202.90
DISCCART	366396.98	3888589.46	1202.04
DISCCART	366420.95	3888589.46	1203.00
DISCCART	366444.93	3888589.46	1204.71
DISCCART	366484.89	3888547.86	1206.93
DISCCART	366503.92	3888512.33	1207.00
DISCCART	366512.04	3888489.50	1207.00
DISCCART	366520.16	3888466.66	1207.00
DISCCART	366514.33	3888429.87	1207.00
DISCCART	366500.37	3888415.91	1207.00
DISCCART	366486.42	3888401.96	1207.00
DISCCART	366471.02	3888366.77	1207.00
DISCCART	366469.58	3888345.54	1207.00
DISCCART	366468.15	3888324.32	1207.00
DISCCART	366466.71	3888303.09	1207.00
DISCCART	366465.27	3888281.86	1207.00
DISCCART	366440.11	3888260.06	1207.00
DISCCART	366416.38	3888259.49	1207.00
DISCCART	366392.66	3888258.92	1207.00
DISCCART	366368.94	3888258.35	1207.00
DISCCART	366345.21	3888257.77	1207.00
DISCCART	366321.49	3888257.20	1207.00
DISCCART	366297.76	3888256.63	1207.00

RE FINISHED

**

```
****************************************
** ISCST3 Meteorology Pathway
****************************************
**
**
ME STARTING
   INPUTFIL Y:\PRE73D~1\TEHACH~1\MOJ-ASC.MET
   ANEMHGHT 10 METERS
   SURFDATA 23114 1970 Mojave
   UAIRDATA 23114 1970 Mojave
ME FINISHED
**
****************************************
** ISCST3 Output Pathway
****************************************
**
**
OU STARTING
** Auto-Generated Plotfiles
   PLOTFILE ANNUAL ALL TehahWal.IS\AN00GALL.PLT
   PLOTFILE ANNUAL Walmart TehahWal.IS\AN00G001.PLT
   PLOTFILE ANNUAL Outlot TehahWal.IS\AN00G002.PLT
OU FINISHED

 *** Message Summary For ISC3 Model Setup ***
 --------- Summary of Total Messages --------
A Total of            0 Fatal Error Message(s)
A Total of            1 Warning Message(s)
A Total of            0 Informational Message(s)

   ******** FATAL ERROR MESSAGES ********
              ***  NONE  ***

   ********   WARNING MESSAGES   ********
RE W282   440 CHK_EL:RecElev < SrcBase; See non-DFAULT HE>ZI option in  MCB#9
```

```
***********************************
*** SETUP Finishes Successfully ***
***********************************

 *** ISCST3 - VERSION 02035 ***    *** C:\Data\TehahWal\TehahWal.isc
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                                   ***
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**MODELOPTs:
                                  PAGE   1
CONC                     RURAL ELEV         DFAULT
                      NOCMPL

                                             ***     MODEL SETUP OPTIONS SUMMARY
***
- - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
- - - - - - - - - - - - - - - - - - - - - -

**Simple Terrain Model is Selected

**Model Is Setup For Calculation of Average CONCentration Values.

  --  SCAVENGING/DEPOSITION LOGIC --
**Model Uses NO DRY DEPLETION.  DDPLETE =  F
**Model Uses NO WET DEPLETION.  WDPLETE =  F
**NO WET SCAVENGING Data Provided.
**NO GAS DRY DEPOSITION Data Provided.
**Model Does NOT Use GRIDDED TERRAIN Data for Depletion Calculations

**Model Uses RURAL Dispersion.

**Model Uses Regulatory DEFAULT Options:
           1. Final Plume Rise.
           2. Stack-tip Downwash.
           3. Buoyancy-induced Dispersion.
           4. Use Calms Processing Routine.
           5. Not Use Missing Data Processing Routine.
           6. Default Wind Profile Exponents.
           7. Default Vertical Potential Temperature Gradients.
           8. "Upper Bound" Values for Supersquat Buildings.
           9. No Exponential Decay for RURAL Mode

**Model Accepts Receptors on ELEV Terrain.

**Model Assumes No FLAGPOLE Receptor Heights.

**Model Calculates ANNUAL Averages Only

**This Run Includes:    24 Source(s);      3 Source Group(s); and    1371
Receptor(s)

**The Model Assumes A Pollutant Type of:  OTHER

**Model Set To Continue RUNning After the Setup Testing.

**Output Options Selected:
         Model Outputs Tables of ANNUAL Averages by Receptor
         Model Outputs External File(s) of High Values for Plotting (PLOTFILE
Keyword)

**NOTE:  The Following Flags May Appear Following CONC Values:  c for Calm Hours
                                                                m for Missing Hours
```

b for Both Calm and Missing Hours

**Misc. Inputs: Anem. Hgt. (m) = 10.00 ; Decay Coef. = 0.000 ; Rot. Angle = 0.0
Emission Units = GRAMS/SEC ; Emission Rate Unit Factor = 0.10000E+07
Output Units = MICROGRAMS/M**3

**Approximate Storage Requirements of Model = 1.3 MB of RAM.

**Input Runstream File: TehahWal.INP

**Output Print File: TehahWal.OUT

 *** ISCST3 - VERSION 02035 *** *** C:\Data\TehahWal\TehahWal.isc
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PAGE 2
CONC RURAL ELEV DFAULT
NOCMPL

*** VOLUME SOURCE DATA ***

SOURCE ID	NUMBER PART. CATS.	EMISSION RATE (GRAMS/SEC)	X (METERS)	Y (METERS)	BASE ELEV. (METERS)	RELEASE HEIGHT (METERS)	INIT. SY (METERS)	INIT. SZ (METERS)	EMISSION RATE SCALAR VARY BY
L0000083	0	0.39313E-05	366278.0	3888269.3	1207.0	0.00	5.63	2.79	
L0000084	0	0.39313E-05	366290.1	3888269.3	1207.0	0.00	5.63	2.79	
L0000085	0	0.39313E-05	366302.2	3888269.3	1207.0	0.00	5.63	2.79	
L0000086	0	0.39313E-05	366314.3	3888269.5	1207.0	0.00	5.63	2.79	
L0000087	0	0.39313E-05	366326.4	3888269.5	1207.0	0.00	5.63	2.79	
L0000088	0	0.39313E-05	366338.5	3888269.5	1207.0	0.00	5.63	2.79	
L0000089	0	0.39313E-05	366350.6	3888269.5	1207.0	0.00	5.63	2.79	
L0000090	0	0.39313E-05	366362.7	3888269.5	1207.0	0.00	5.63	2.79	
L0000091	0	0.39313E-05	366374.8	3888269.8	1207.0	0.00	5.63	2.79	
L0000092	0	0.39313E-05	366386.8	3888269.8	1207.0	0.00	5.63	2.79	
L0000093	0	0.39313E-05	366398.9	3888269.8	1207.0	0.00	5.63	2.79	
L0000094	0	0.39313E-05	366411.0	3888269.8	1207.0	0.00	5.63	2.79	
L0000095	0	0.39313E-05	366423.1	3888269.8	1207.0	0.00	5.63	2.79	

```
  L0000096      0   0.39313E-05  366435.2 3888270.0  1207.0     0.00     5.63
2.79
  L0000097      0   0.39313E-05  366447.3 3888270.0  1207.0     0.00     5.63
2.79
  L0000098      0   0.39313E-05  366459.4 3888270.0  1207.0     0.00     5.63
2.79
  L0000099      0   0.71333E-05  366410.1 3888586.0  1202.6     0.00     5.64
2.79
  L0000100      0   0.71333E-05  366410.1 3888573.8  1203.2     0.00     5.64
2.79
  L0000101      0   0.71333E-05  366410.1 3888561.8  1203.7     0.00     5.64
2.79
  L0000102      0   0.71333E-05  366410.1 3888549.5  1204.3     0.00     5.64
2.79
  L0000103      0   0.71333E-05  366410.1 3888537.5  1204.9     0.00     5.64
2.79
  L0000104      0   0.71333E-05  366410.1 3888525.3  1205.5     0.00     5.64
2.79
  VOL1          0   0.28000E-05  366373.9 3888268.8     0.0     6.00     2.05
2.79
  VOL2          0   0.11000E-04  366453.2 3888538.5     0.0     6.00     1.79
2.79
  *** ISCST3 - VERSION 02035 ***    *** C:\Data\TehahWal\TehahWal.isc
                         ***        05/21/09
                                    ***
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**MODELOPTs:
                                  PAGE   3
CONC                     RURAL ELEV         DFAULT
                      NOCMPL



                                              *** SOURCE IDs DEFINING SOURCE GROUPS ***

GROUP ID                                                        SOURCE IDs


 WALMART   L0000083, L0000084, L0000085, L0000086, L0000087, L0000088, L0000089,
L0000090, L0000091, L0000092, L0000093, L0000094,

           L0000095, L0000096, L0000097, L0000098,


 OUTLOT    L0000099, L0000100, L0000101, L0000102, L0000103, L0000104,


 ALL       L0000083, L0000084, L0000085, L0000086, L0000087, L0000088, L0000089,
L0000090, L0000091, L0000092, L0000093, L0000094,

           L0000095, L0000096, L0000097, L0000098, L0000099, L0000100, L0000101,
L0000102, L0000103, L0000104, VOL1    , VOL2    ,
  *** ISCST3 - VERSION 02035 ***    *** C:\Data\TehahWal\TehahWal.isc
                         ***        05/21/09
                                    ***
                       ***        11:19:36
**MODELOPTs:
                                  PAGE   4
CONC                     RURAL ELEV         DFAULT
                      NOCMPL
```

TEHAHWAL
*** GRIDDED RECEPTOR NETWORK SUMMARY ***

*** NETWORK ID: UCART1 ; NETWORK TYPE: GRIDCART ***

*** X-COORDINATES OF GRID ***
(METERS)

366023.1, 366034.7, 366046.3, 366057.9, 366069.5, 366081.1, 366092.7, 366104.3, 366115.8, 366127.4,
366139.0, 366150.6, 366162.2, 366173.8, 366185.4, 366197.0, 366208.6, 366220.2, 366231.8, 366243.3,
366254.9,

*** Y-COORDINATES OF GRID ***
(METERS)

3888258.5, 3888283.0, 3888307.5, 3888332.0, 3888356.5, 3888381.0, 3888405.5, 3888430.0, 3888454.5, 3888479.0,
3888503.5, 3888528.0, 3888552.5, 3888577.0, 3888601.5, 3888626.0, 3888650.5, 3888675.0, 3888699.5, 3888724.0,
3888748.5,

 *** ISCST3 - VERSION 02035 *** *** C:\Data\TehahWal\TehahWal.isc
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***
*** 11:19:36
**MODELOPTs:
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CONC RURAL ELEV DFAULT
NOCMPL

*** NETWORK ID: UCART1 ; NETWORK TYPE: GRIDCART ***

* ELEVATION HEIGHTS IN METERS *

Y-COORD (METERS)	X-COORD (METERS) 366023.13	366034.72	366046.31	366057.91	366069.50	366081.06	366092.66	366104.25	366115.84
3888748.50	1196.47	1196.74	1196.65	1196.71	1196.70	1196.65	1196.67	1196.08	1195.38
3888724.00	1197.28	1197.36	1197.26	1197.11	1196.88	1196.72	1196.47	1195.96	1195.41
3888699.50	1198.11	1197.94	1197.71	1197.31	1196.96	1196.50	1196.00	1195.77	1195.37
3888675.00	1198.40	1198.03	1198.19	1198.01	1197.87	1196.96	1196.04	1196.27	1196.02
3888650.50	1199.16	1199.00	1198.82	1198.99	1198.92	1198.07	1197.98	1197.45	1197.12
3888626.00	1200.04	1199.94	1199.72	1199.81	1199.61	1199.10	1198.95	1198.62	1198.64
3888601.50	1200.90	1200.58	1200.55	1200.57	1200.45	1200.29	1200.25	1199.91	1199.71
3888577.00	1201.54	1201.28	1201.37	1201.31	1201.32	1201.36	1201.14	1201.14	1200.80
3888552.50	1202.20	1202.05	1202.23	1202.11	1202.13	1202.22	1202.05	1202.21	1202.15
3888528.00	1203.00	1203.00	1203.00	1203.00	1203.00	1203.08	1203.00	1203.08	1203.05

```
 3888503.50 |       1203.80      1203.95      1203.77      1203.89      1203.96
1204.30      1204.88      1204.58      1204.70
 3888479.00 |       1204.65      1204.79      1204.63      1204.69      1204.91
1205.24      1205.71      1205.64      1205.67
 3888454.50 |       1205.16      1205.08      1205.20      1205.32      1205.56
1205.78      1205.91      1206.17      1206.31
 3888430.00 |       1205.45      1205.22      1205.58      1205.90      1206.07
1206.16      1206.16      1206.50      1206.87
 3888405.50 |       1206.02      1206.01      1206.10      1206.00      1206.07
1206.66      1206.99      1207.00      1207.00
 3888381.00 |       1206.85      1206.97      1206.50      1206.08      1206.11
1206.66      1206.99      1207.00      1207.00
 3888356.50 |       1207.00      1207.00      1206.86      1206.86      1206.85
1206.87      1207.00      1207.00      1207.00
 3888332.00 |       1207.00      1207.00      1207.00      1207.00      1207.00
1207.00      1207.00      1207.00      1207.00
 3888307.50 |       1207.00      1207.00      1207.00      1207.00      1207.00
1207.00      1207.00      1207.00      1207.00
 3888283.00 |       1207.00      1207.00      1207.00      1207.00      1207.00
1207.00      1207.00      1207.00      1207.00
 3888258.50 |       1206.93      1207.00      1206.92      1206.97      1206.96
1207.00      1207.00      1207.00      1207.00
  *** ISCST3 - VERSION 02035 ***    *** C:\Data\TehahWal\TehahWal.isc
                        ***        05/21/09
                                   ***
                      ***        11:19:36
**MODELOPTs:
                                   PAGE   6
CONC                    RURAL ELEV         DFAULT
                     NOCMPL


                                 *** NETWORK ID: UCART1   ;  NETWORK TYPE: GRIDCART
***

                                                 * ELEVATION HEIGHTS IN METERS *

   Y-COORD  |                                                  X-COORD (METERS)
   (METERS) |     366127.44    366139.03    366150.63    366162.22    366173.78
366185.38    366196.97    366208.56    366220.16
- - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
- - - - - - - - - - - - - - - - - - - - - - - - - -

 3888748.50 |       1194.82      1194.46      1194.15      1193.88      1193.79
1193.74      1193.64      1193.72      1193.70
 3888724.00 |       1194.89      1194.72      1194.54      1194.31      1194.15
1194.00      1194.00      1194.00      1194.00
 3888699.50 |       1195.19      1195.30      1195.07      1194.99      1194.54
1194.18      1194.30      1194.20      1194.31
 3888675.00 |       1196.01      1196.20      1196.01      1195.93      1195.35
1195.03      1195.29      1195.05      1195.17
 3888650.50 |       1197.01      1196.81      1196.97      1196.83      1196.19
1196.01      1196.16      1196.92      1196.93
 3888626.00 |       1198.56      1198.03      1197.96      1197.66      1197.60
1197.78      1197.56      1197.77      1197.79
 3888601.50 |       1199.48      1199.31      1199.25      1199.12      1199.12
1199.17      1199.10      1199.15      1199.14
 3888577.00 |       1200.60      1200.74      1200.57      1200.56      1200.47
1200.29      1200.37      1200.30      1200.33
 3888552.50 |       1202.07      1202.23      1202.02      1202.02      1201.53
1201.13      1201.47      1201.14      1201.29
 3888528.00 |       1203.02      1203.00      1203.00      1203.00      1202.94
1202.99      1202.92      1202.98      1202.96
```

3888503.50	1204.81	1204.11	1203.99	1203.82	1203.82	1203.95	1203.77	1203.93	1203.85
3888479.00	1205.62	1205.44	1205.50	1205.31	1205.31	1205.34	1204.97	1204.81	1204.68
3888454.50	1206.42	1206.45	1206.42	1206.44	1206.44	1206.23	1205.99	1205.64	1205.43
3888430.00	1207.00	1207.00	1207.00	1207.00	1207.00	1206.94	1206.68	1206.26	1206.14
3888405.50	1207.00	1207.00	1207.00	1207.00	1207.00	1207.00	1207.00	1206.98	1206.87
3888381.00	1207.00	1207.00	1207.00	1207.00	1207.00	1207.00	1207.00	1207.00	1207.00
3888356.50	1207.00	1207.00	1207.00	1207.00	1207.00	1207.00	1207.00	1207.00	1207.00
3888332.00	1207.00	1207.00	1207.00	1207.00	1207.00	1207.00	1207.00	1207.00	1207.00
3888307.50	1207.00	1207.00	1207.00	1207.00	1207.00	1207.00	1207.00	1207.00	1207.00
3888283.00	1207.00	1207.00	1207.00	1207.00	1207.00	1207.00	1207.00	1207.00	1207.00
3888258.50	1207.00	1207.00	1207.00	1207.00	1207.00	1207.00	1207.00	1207.00	1207.00

 *** ISCST3 - VERSION 02035 *** *** C:\Data\TehahWal\TehahWal.isc *** 05/21/09 ***
*** 11:19:36
**MODELOPTs:
PAGE 7
CONC RURAL ELEV DFAULT NOCMPL

*** NETWORK ID: UCART1 ; NETWORK TYPE: GRIDCART ***

* ELEVATION HEIGHTS IN METERS *

Y-COORD (METERS)	X-COORD (METERS) 366231.75	366243.34	366254.94
3888748.50	1193.66	1193.81	1193.65
3888724.00	1194.00	1194.00	1194.00
3888699.50	1194.45	1194.24	1194.45
3888675.00	1195.94	1195.99	1195.93
3888650.50	1196.76	1196.99	1196.75
3888626.00	1197.73	1197.90	1197.72
3888601.50	1199.11	1199.33	1199.11
3888577.00	1200.36	1200.21	1200.36
3888552.50	1201.43	1201.09	1201.44
3888528.00	1202.92	1203.00	1202.92
3888503.50	1203.79	1203.95	1203.78
3888479.00	1204.64	1204.86	1204.87
3888454.50	1205.45	1205.42	1205.66
3888430.00	1206.11	1206.00	1206.12
3888405.50	1206.40	1206.02	1206.42
3888381.00	1206.90	1206.99	1206.90
3888356.50	1207.00	1207.00	1207.00
3888332.00	1207.00	1207.00	1207.00
3888307.50	1207.00	1207.00	1207.00
3888283.00	1207.00	1207.00	1207.00
3888258.50	1207.00	1207.00	1207.00

*** GRIDDED RECEPTOR NETWORK SUMMARY ***

*** NETWORK ID: UCART2 ; NETWORK TYPE: GRIDCART ***

*** X-COORDINATES OF GRID ***
(METERS)

366272.1, 366282.3, 366292.3, 366302.5, 366312.6, 366322.7, 366332.8, 366342.9, 366353.0, 366363.1,
366373.2, 366383.3, 366393.4, 366403.6, 366413.7, 366423.8, 366433.9, 366444.0, 366454.1, 366464.2,
366474.3,

*** Y-COORDINATES OF GRID ***
(METERS)

3888009.5, 3888021.5, 3888033.8, 3888045.8, 3888058.0, 3888070.0, 3888082.3, 3888094.3, 3888106.5, 3888118.5,
3888130.5, 3888142.8, 3888154.8, 3888167.0, 3888179.0, 3888191.3, 3888203.3, 3888215.3, 3888227.5, 3888239.5,
3888251.8,

*** NETWORK ID: UCART2 ; NETWORK TYPE: GRIDCART ***

* ELEVATION HEIGHTS IN METERS *

Y-COORD (METERS)	X-COORD (METERS) 366272.13	366282.25	366292.34	366302.47	366312.56	366322.69	366332.78	366342.91	366353.00
3888251.75	1207.00	1207.00	1207.00	1207.00	1207.00	1207.00	1207.00	1207.00	1207.00
3888239.50	1207.00	1207.00	1207.00	1207.00	1207.00	1207.00	1207.00	1207.00	1207.00
3888227.50	1207.00	1207.00	1207.00	1207.00	1207.00	1207.00	1207.00	1207.00	1207.00
3888215.25	1207.00	1207.00	1207.00	1207.00	1207.00	1207.00	1207.00	1207.00	1207.00
3888203.25	1206.97	1207.00	1207.00	1207.00	1207.00	1207.00	1207.00	1207.00	1207.00

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 3888191.25 |       1206.88      1206.79      1206.77      1206.93      1206.78
1206.77      1206.93      1206.78      1206.78
 3888179.00 |       1206.21      1206.34      1206.36      1206.21      1206.35
1206.35      1206.21      1206.35      1206.35
 3888167.00 |       1206.00      1206.06      1206.07      1206.00      1206.06
1206.07      1206.00      1206.06      1206.07
 3888154.75 |       1206.00      1206.00      1206.00      1206.00      1206.00
1206.00      1206.00      1206.00      1206.00
 3888142.75 |       1206.00      1206.00      1206.00      1206.00      1206.00
1206.00      1206.00      1206.00      1206.00
 3888130.50 |       1206.00      1206.00      1206.00      1206.00      1206.00
1206.00      1206.00      1206.00      1206.00
 3888118.50 |       1206.00      1206.00      1206.00      1206.00      1206.00
1206.00      1206.00      1206.00      1206.00
 3888106.50 |       1206.00      1206.07      1206.08      1206.00      1206.07
1206.08      1206.00      1206.08      1206.08
 3888094.25 |       1206.35      1206.45      1206.45      1206.35      1206.45
1206.45      1206.35      1206.45      1206.45
 3888082.25 |       1206.95      1206.84      1206.82      1206.97      1206.84
1206.82      1206.97      1206.83      1206.83
 3888070.00 |       1206.94      1207.09      1207.16      1207.10      1207.25
1207.26      1207.10      1207.25      1207.26
 3888058.00 |       1207.07      1207.18      1207.46      1207.76      1207.69
1207.68      1207.83      1207.68      1207.68
 3888045.75 |       1207.01      1207.22      1207.81      1208.00      1208.02
1208.02      1208.01      1208.02      1207.94
 3888033.75 |       1207.46      1207.79      1208.11      1208.29      1208.47
1208.47      1208.37      1208.31      1208.17
 3888021.50 |       1207.99      1208.06      1208.54      1208.96      1208.84
1208.83      1208.97      1208.67      1208.18
 3888009.50 |       1208.17      1208.53      1208.95      1209.06      1209.16
1209.11      1208.94      1208.81      1208.47
  *** ISCST3 - VERSION 02035 ***    *** C:\Data\TehahWal\TehahWal.isc
                         ***        05/21/09
                                    ***
                       ***        11:19:36
**MODELOPTs:
                                   PAGE  10
CONC                     RURAL ELEV         DFAULT
                      NOCMPL


                                  *** NETWORK ID: UCART2   ;  NETWORK TYPE: GRIDCART
***

                                                 * ELEVATION HEIGHTS IN METERS *

   Y-COORD  |                                                 X-COORD (METERS)
   (METERS) |     366363.13    366373.22    366383.34    366393.44    366403.56
366413.66    366423.78    366433.88    366444.00
- - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
- - - - - - - - - - - - - - - - - - - - - - - - -

 3888251.75 |       1207.00      1207.00      1207.00      1207.00      1207.00
1207.00      1207.00      1207.00      1207.00
 3888239.50 |       1207.00      1207.00      1207.00      1207.00      1207.00
1207.00      1207.00      1207.00      1207.00
 3888227.50 |       1207.00      1207.00      1207.00      1207.00      1207.00
1207.00      1207.00      1207.00      1207.00
 3888215.25 |       1207.00      1207.00      1207.00      1207.00      1207.00
1207.00      1207.00      1207.00      1207.00
 3888203.25 |       1207.00      1207.00      1207.00      1207.00      1207.00
1207.00      1207.00      1207.00      1207.00
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 3888191.25 |       1206.93      1206.77      1206.78      1206.93      1206.77
1206.79      1206.93      1206.77      1206.79
 3888179.00 |       1206.21      1206.35      1206.35      1206.21      1206.35
1206.35      1206.21      1206.36      1206.34
 3888167.00 |       1206.00      1206.07      1206.06      1206.00      1206.07
1206.06      1206.00      1206.07      1206.06
 3888154.75 |       1206.00      1206.00      1206.00      1206.00      1206.00
1206.00      1206.00      1206.00      1206.00
 3888142.75 |       1206.00      1206.00      1206.00      1206.00      1206.00
1206.00      1206.00      1206.00      1206.00
 3888130.50 |       1206.00      1206.00      1206.00      1206.00      1206.00
1206.00      1206.00      1206.00      1206.00
 3888118.50 |       1206.00      1206.00      1206.00      1206.00      1206.00
1206.00      1206.00      1206.00      1206.00
 3888106.50 |       1206.00      1206.08      1206.07      1206.00      1206.08
1206.07      1206.00      1206.08      1206.00
 3888094.25 |       1206.35      1206.45      1206.45      1206.35      1206.45
1206.45      1206.35      1206.28      1206.15
 3888082.25 |       1206.97      1206.83      1206.83      1206.97      1206.82
1206.84      1206.95      1206.60      1206.15
 3888070.00 |       1207.10      1207.15      1207.10      1207.00      1207.00
1207.00      1206.95      1206.78      1206.42
 3888058.00 |       1207.76      1207.48      1207.19      1207.07      1207.00
1207.00      1207.00      1206.87      1206.80
 3888045.75 |       1208.00      1207.75      1207.24      1207.01      1207.08
1207.08      1207.01      1207.09      1206.94
 3888033.75 |       1207.92      1207.82      1207.64      1207.46      1207.47
1207.47      1207.37      1207.30      1207.15
 3888021.50 |       1208.01      1207.93      1207.91      1207.98      1207.83
1207.85      1207.96      1207.61      1207.15
 3888009.50 |       1208.18      1208.27      1208.27      1208.12      1208.28
1208.26      1208.06      1207.95      1207.53
 *** ISCST3 - VERSION 02035 ***    *** C:\Data\TehahWal\TehahWal.isc
                         ***        05/21/09
                                    ***
                       ***        11:19:36
**MODELOPTs:
                                   PAGE  11
CONC                    RURAL ELEV         DFAULT
                      NOCMPL


                                  *** NETWORK ID: UCART2   ;  NETWORK TYPE: GRIDCART
***

                                                 * ELEVATION HEIGHTS IN METERS *

   Y-COORD  |                                                  X-COORD (METERS)
   (METERS) |     366454.09    366464.22    366474.31
- - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
- - - - - - - - - - - - - - - - - - - - - - - - -

 3888251.75 |       1207.00      1207.00      1207.00
 3888239.50 |       1207.00      1207.00      1207.00
 3888227.50 |       1207.00      1207.00      1207.00
 3888215.25 |       1207.00      1207.00      1207.00
 3888203.25 |       1207.00      1207.00      1207.00
 3888191.25 |       1206.93      1206.76      1206.80
 3888179.00 |       1206.21      1206.36      1206.34
 3888167.00 |       1206.00      1207.07      1206.06
 3888154.75 |       1206.00      1206.00      1206.00
 3888142.75 |       1206.00      1206.00      1206.00
 3888130.50 |       1206.00      1206.00      1206.00
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3888118.50	1206.00	1206.00	1206.00
3888106.50	1206.00	1206.00	1206.00
3888094.25	1206.00	1206.00	1206.00
3888082.25	1206.02	1206.00	1206.00
3888070.00	1206.16	1206.27	1206.24
3888058.00	1206.83	1206.67	1206.70
3888045.75	1207.00	1207.00	1206.95
3888033.75	1207.00	1207.00	1207.00
3888021.50	1207.01	1207.00	1207.00
3888009.50	1207.17	1207.28	1207.25

*** GRIDDED RECEPTOR NETWORK SUMMARY ***

*** NETWORK ID: UCART3 ; NETWORK TYPE: GRIDCART ***

*** X-COORDINATES OF GRID ***
(METERS)

366710.8, 366719.0, 366727.3, 366735.6, 366743.9, 366752.2, 366760.4, 366768.7, 366777.0, 366785.3,
366793.6, 366801.8, 366810.1, 366818.4, 366826.7, 366834.9, 366843.2, 366851.5, 366859.8, 366868.1,
366876.3,

*** Y-COORDINATES OF GRID ***
(METERS)

3888244.8, 3888255.0, 3888265.3, 3888275.5, 3888285.8, 3888295.8, 3888306.0, 3888316.3, 3888326.5, 3888336.8,
3888347.0, 3888357.3, 3888367.5, 3888377.5, 3888387.8, 3888398.0, 3888408.3, 3888418.5, 3888428.8, 3888439.0,
3888449.3,

*** NETWORK ID: UCART3 ; NETWORK TYPE: GRIDCART ***

* ELEVATION HEIGHTS IN METERS *

Y-COORD (METERS)	X-COORD (METERS) 366710.75	366719.03	366727.31	366735.59	366743.88	366752.16	366760.44	366768.72	366777.00

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 3888449.25 |       1202.19      1201.96      1201.50      1201.22      1200.95
1200.78      1200.41      1200.10      1199.90
 3888439.00 |       1202.27      1202.02      1201.97      1201.71      1201.14
1201.00      1200.91      1200.29      1200.05
 3888428.75 |       1202.71      1202.38      1202.06      1201.91      1201.57
1201.15      1201.03      1200.80      1200.44
 3888418.50 |       1203.05      1202.90      1202.55      1202.24      1201.97
1201.82      1201.45      1201.12      1200.92
 3888408.25 |       1203.27      1203.02      1202.97      1202.72      1202.14
1202.00      1201.91      1201.38      1201.06
 3888398.00 |       1203.58      1203.34      1203.08      1202.92      1202.59
1202.17      1202.04      1201.81      1201.47
 3888387.75 |       1203.81      1203.82      1203.58      1203.26      1202.98
1202.83      1202.47      1202.13      1201.93
 3888377.50 |       1204.08      1204.02      1203.99      1203.80      1203.21
1203.00      1202.96      1202.38      1202.06
 3888367.50 |       1204.55      1204.47      1204.37      1204.29      1203.95
1203.39      1203.27      1203.01      1202.60
 3888357.25 |       1205.12      1205.47      1205.40      1204.97      1204.71
1204.66      1204.11      1203.47      1203.07
 3888347.00 |       1205.66      1205.96      1205.96      1205.65      1205.16
1205.00      1204.84      1204.37      1203.20
 3888336.75 |       1205.97      1206.12      1206.20      1206.13      1205.89
1205.38      1205.28      1204.91      1204.33
 3888326.50 |       1206.32      1206.67      1206.75      1206.58      1206.58
1206.70      1206.23      1205.72      1205.60
 3888316.25 |       1206.72      1206.96      1206.98      1207.00      1206.88
1207.00      1206.82      1206.56      1206.00
 3888306.00 |       1206.76      1206.89      1207.00      1207.00      1207.00
1206.92      1206.85      1206.68      1206.48
 3888295.75 |       1206.88      1206.95      1207.00      1207.00      1207.00
1207.00      1206.92      1206.85      1206.87
 3888285.75 |       1207.00      1207.00      1207.00      1207.00      1207.00
1207.00      1207.00      1206.90      1206.92
 3888275.50 |       1207.00      1207.00      1207.00      1207.00      1207.00
1207.00      1206.88      1206.78      1206.73
 3888265.25 |       1207.00      1207.00      1207.00      1207.00      1207.00
1206.96      1206.87      1206.61      1206.28
 3888255.00 |       1207.00      1207.00      1207.00      1207.00      1207.00
1206.99      1206.90      1206.57      1206.15
 3888244.75 |       1207.00      1207.00      1207.00      1207.00      1207.00
1207.00      1206.86      1206.71      1206.55
 *** ISCST3 - VERSION 02035 ***    *** C:\Data\TehahWal\TehahWal.isc
                         ***        05/21/09
                                    ***
                       ***        11:19:36
**MODELOPTs:
                                   PAGE  14
CONC                     RURAL ELEV         DFAULT
                      NOCMPL


                                  *** NETWORK ID: UCART3   ;  NETWORK TYPE: GRIDCART
***

                                                 * ELEVATION HEIGHTS IN METERS *

   Y-COORD  |                                                 X-COORD (METERS)
   (METERS) |     366785.28    366793.56    366801.84    366810.13    366818.38
366826.66    366834.94    366843.22    366851.50
- - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
- - - - - - - - - - - - - - - - - - - - - - - - - - -
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 3888449.25 |       1199.77      1199.78      1199.85      1199.92      1200.21
1200.45      1200.73      1201.16      1201.84
 3888439.00 |       1200.00      1199.99      1200.07      1200.01      1200.07
1200.42      1200.89      1201.00      1201.35
 3888428.75 |       1200.21      1200.30      1200.31      1200.21      1200.34
1200.61      1200.85      1201.13      1201.78
 3888418.50 |       1200.87      1200.66      1200.66      1200.73      1200.80
1200.81      1200.89      1201.22      1201.82
 3888408.25 |       1201.00      1201.00      1200.85      1200.98      1200.95
1200.83      1201.05      1201.00      1201.41
 3888398.00 |       1201.23      1201.07      1200.94      1200.89      1200.90
1200.98      1201.09      1201.37      1202.09
 3888387.75 |       1201.72      1201.27      1200.78      1200.42      1200.49
1200.91      1201.39      1201.90      1202.50
 3888377.50 |       1201.99      1201.62      1200.60      1200.04      1200.14
1200.84      1201.73      1202.00      1202.30
 3888367.50 |       1202.09      1201.66      1201.07      1200.59      1200.60
1201.08      1201.58      1202.08      1202.82
 3888357.25 |       1202.82      1202.05      1201.40      1201.07      1201.02
1201.27      1201.65      1202.13      1202.78
 3888347.00 |       1203.00      1202.78      1201.46      1201.03      1201.05
1201.51      1201.89      1202.00      1202.35
 3888336.75 |       1203.43      1203.12      1202.40      1201.79      1201.44
1201.65      1201.84      1202.16      1202.84
 3888326.50 |       1205.40      1204.12      1202.87      1202.17      1201.86
1201.84      1201.91      1202.17      1202.75
 3888316.25 |       1205.95      1205.11      1203.00      1202.07      1202.04
1202.44      1202.18      1202.02      1202.55
 3888306.00 |       1205.73      1205.14      1204.10      1203.28      1202.78
1202.97      1202.97      1202.98      1203.71
 3888295.75 |       1206.70      1205.69      1204.60      1204.03      1203.72
1203.73      1204.16      1204.69      1204.71
 3888285.75 |       1206.95      1206.27      1204.91      1204.05      1204.03
1204.60      1204.80      1205.01      1205.03
 3888275.50 |       1206.27      1205.85      1205.21      1204.75      1204.60
1204.87      1205.11      1205.28      1205.69
 3888265.25 |       1206.08      1205.74      1205.30      1205.01      1204.98
1205.17      1205.57      1205.92      1206.02
 3888255.00 |       1206.01      1205.90      1205.47      1205.06      1205.07
1205.52      1205.83      1206.00      1206.07
 3888244.75 |       1206.22      1206.08      1205.81      1205.60      1205.53
1205.69      1205.84      1206.00      1206.30
  *** ISCST3 - VERSION 02035 ***    *** C:\Data\TehahWal\TehahWal.isc
                         ***        05/21/09
                                    ***
                       ***        11:19:36
**MODELOPTs:
                                   PAGE  15
CONC                     RURAL ELEV         DFAULT
                      NOCMPL


                                  *** NETWORK ID: UCART3   ;  NETWORK TYPE: GRIDCART
***

                                                 * ELEVATION HEIGHTS IN METERS *

   Y-COORD  |                                                 X-COORD (METERS)
   (METERS) |     366859.78    366868.06    366876.34
- - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
- - - - - - - - - - - - - - - - - - - - - - - - - -

 3888449.25 |       1202.68      1203.39      1204.52
```

3888439.00	1202.79	1203.89	1204.05
3888428.75	1202.70	1203.48	1204.43
3888418.50	1202.69	1203.42	1204.49
3888408.25	1203.11	1203.91	1204.05
3888398.00	1203.03	1203.71	1204.63
3888387.75	1203.35	1204.18	1205.13
3888377.50	1203.95	1204.86	1205.02
3888367.50	1203.69	1204.42	1205.33
3888357.25	1203.70	1204.48	1205.29
3888347.00	1203.79	1204.89	1205.03
3888336.75	1203.68	1204.39	1205.35
3888326.50	1203.71	1204.52	1205.26
3888316.25	1204.13	1204.91	1205.05
3888306.00	1204.43	1204.90	1205.61
3888295.75	1205.02	1205.55	1205.91
3888285.75	1205.78	1205.97	1206.03
3888275.50	1205.97	1206.16	1206.56
3888265.25	1206.31	1206.70	1206.93
3888255.00	1206.59	1206.92	1207.01
3888244.75	1206.56	1206.78	1207.19

 *** ISCST3 - VERSION 02035 *** *** C:\Data\TehahWal\TehahWal.isc
*** 05/21/09
***
*** 11:19:36
**MODELOPTs:
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CONC RURAL ELEV DFAULT
NOCMPL

*** DISCRETE CARTESIAN RECEPTORS ***
(X-COORD, Y-COORD, ZELEV, ZFLAG)
(METERS)

(366274.0, 3888256.0, 1207.0, 0.0); (366284.2, 3888399.8, 1207.0, 0.0);
(366301.9, 3888523.0, 1203.1, 0.0); (366373.5, 3888522.5, 1204.4, 0.0);
(366373.0, 3888589.5, 1201.9, 0.0); (366468.9, 3888589.5, 1204.7, 0.0);
(366468.9, 3888582.8, 1205.3, 0.0); (366474.0, 3888582.8, 1205.3, 0.0);
(366474.0, 3888560.5, 1206.7, 0.0); (366495.8, 3888535.3, 1207.0, 0.0);
(366528.3, 3888443.8, 1207.0, 0.0); (366472.5, 3888388.0, 1207.0, 0.0);
(366463.8, 3888260.8, 1207.0, 0.0); (366275.7, 3888280.0, 1207.0, 0.0);
(366277.4, 3888304.0, 1207.0, 0.0); (366279.1, 3888327.8, 1207.0, 0.0);
(366280.8, 3888351.8, 1207.0, 0.0); (366282.5, 3888375.8, 1207.0, 0.0);
(366287.8, 3888424.3, 1206.7, 0.0); (366291.3, 3888449.0, 1206.4, 0.0);
(366294.8, 3888473.8, 1205.7, 0.0); (366298.4, 3888498.3, 1204.0, 0.0);
(366325.8, 3888522.8, 1204.0, 0.0); (366349.7, 3888522.8, 1204.2, 0.0);
(366373.3, 3888544.8, 1203.8, 0.0); (366373.2, 3888567.3, 1202.9, 0.0);
(366397.0, 3888589.5, 1202.0, 0.0); (366420.9, 3888589.5, 1203.0, 0.0);
(366444.9, 3888589.5, 1204.7, 0.0); (366484.9, 3888547.8,

```
1206.9,       0.0);
    ( 366503.9, 3888512.3,    1207.0,       0.0);          ( 366512.0, 3888489.5,
1207.0,       0.0);
    ( 366520.2, 3888466.8,    1207.0,       0.0);          ( 366514.3, 3888429.8,
1207.0,       0.0);
    ( 366500.4, 3888416.0,    1207.0,       0.0);          ( 366486.4, 3888402.0,
1207.0,       0.0);
    ( 366471.0, 3888366.8,    1207.0,       0.0);          ( 366469.6, 3888345.5,
1207.0,       0.0);
    ( 366468.2, 3888324.3,    1207.0,       0.0);          ( 366466.7, 3888303.0,
1207.0,       0.0);
    ( 366465.3, 3888281.8,    1207.0,       0.0);          ( 366440.1, 3888260.0,
1207.0,       0.0);
    ( 366416.4, 3888259.5,    1207.0,       0.0);          ( 366392.7, 3888259.0,
1207.0,       0.0);
    ( 366368.9, 3888258.3,    1207.0,       0.0);          ( 366345.2, 3888257.8,
1207.0,       0.0);
    ( 366321.5, 3888257.3,    1207.0,       0.0);          ( 366297.8, 3888256.8,
1207.0,       0.0);
 *** ISCST3 - VERSION 02035 ***    *** C:\Data\TehahWal\TehahWal.isc
                         ***        05/21/09
                                    ***
                       ***        11:19:36
**MODELOPTs:
                                   PAGE  17
CONC                    RURAL ELEV         DFAULT
                     NOCMPL

                     * SOURCE-RECEPTOR COMBINATIONS FOR WHICH CALCULATIONS MAY NOT
BE PERFORMED *
                          LESS THAN 1.0 METER OR 3*ZLB IN DISTANCE, OR WITHIN OPEN
PIT SOURCE


                              SOURCE         - - RECEPTOR LOCATION - -
DISTANCE
                                ID           XR (METERS)   YR (METERS)
(METERS)
                            - - - - - - - - - - - - - - - - - - - - - - - - - - - -
- -

                              L0000083          366275.7     3888280.0
-1.12
                              L0000089          366345.2     3888257.8
0.80
                              L0000090          366368.9     3888258.3
0.78
                              L0000091          366368.9     3888258.3
0.78
                              L0000092          366392.7     3888259.0
0.12
                              L0000093          366392.7     3888259.0
0.35
                              L0000094          366416.4     3888259.5
-0.55
                              L0000095          366416.4     3888259.5
0.17
                              L0000096          366440.1     3888260.0
-0.97
                              L0000097          366440.1     3888260.0
0.21
                              L0000098          366463.8     3888260.8
-1.85
```

*** METEOROLOGICAL DAYS SELECTED FOR PROCESSING ***

(1=YES; 0=NO)

```
          1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1   1 1 1 1
1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1
          1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1   1 1 1 1
1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1
          1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1   1 1 1 1
1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1
          1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1   1 1 1 1
1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1
          1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1   1 1 1 1
1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1
          1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1   1 1 1 1
1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1
          1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1   1 1 1 1
1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1
          1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1   1 1 1 1
1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1
          1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1
```

NOTE: METEOROLOGICAL DATA ACTUALLY PROCESSED WILL ALSO DEPEND ON WHAT IS INCLUDED IN THE DATA FILE.

*** UPPER BOUND OF FIRST THROUGH FIFTH WIND SPEED CATEGORIES ***

(METERS/SEC)

1.54, 3.09, 5.14, 8.23, 10.80,

*** WIND PROFILE EXPONENTS ***

STABILITY CATEGORY	WIND SPEED CATEGORY 1	2	3	4	5	6
A	.70000E-01	.70000E-01	.70000E-01	.70000E-01	.70000E-01	.70000E-01
B	.70000E-01	.70000E-01	.70000E-01	.70000E-01	.70000E-01	.70000E-01
C	.10000E+00	.10000E+00	.10000E+00	.10000E+00	.10000E+00	.10000E+00
D	.15000E+00	.15000E+00	.15000E+00	.15000E+00	.15000E+00	.15000E+00
E	.35000E+00	.35000E+00	.35000E+00	.35000E+00	.35000E+00	.35000E+00
F	.55000E+00	.55000E+00	.55000E+00	.55000E+00	.55000E+00	.55000E+00

*** VERTICAL POTENTIAL TEMPERATURE GRADIENTS ***
(DEGREES KELVIN PER METER)

STABILITY CATEGORY	WIND SPEED CATEGORY 1	2	3	4	5	6
A	.00000E+00	.00000E+00	.00000E+00	.00000E+00	.00000E+00	.00000E+00
B	.00000E+00	.00000E+00	.00000E+00	.00000E+00	.00000E+00	.00000E+00
C	.00000E+00	.00000E+00	.00000E+00	.00000E+00	.00000E+00	.00000E+00
D	.00000E+00	.00000E+00	.00000E+00	.00000E+00	.00000E+00	.00000E+00
E	.20000E-01	.20000E-01	.20000E-01	.20000E-01	.20000E-01	.20000E-01
F	.35000E-01	.35000E-01	.35000E-01	.35000E-01	.35000E-01	.35000E-01

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***
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**MODELOPTs:
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CONC RURAL ELEV DFAULT
NOCMPL

*** THE FIRST 24 HOURS OF METEOROLOGICAL DATA ***

FILE: Y:\PRE73D~1\TEHACH~1\MOJ-ASC.MET

FORMAT: (4I2,2F9.4,F6.1,I2,2F7.1,f9.4,f10.1,f8.4,i4,f7.2)

SURFACE STATION NO.: 23114 UPPER AIR STATION NO.: 23114
NAME: MOJAVE NAME: MOJAVE

YEAR: 1970 YEAR: 1970

YR	MN	DY	HR	FLOW VECTOR	SPEED (M/S)	TEMP (K)	STAB CLASS	MIXING HEIGHT (M) RURAL	URBAN	USTAR (M/S)	M-O LENGTH (M)	Z-0 (M)	IPCODE	PRATE (mm/HR)
70	01	01	01	181.0	1.00	269.8	7	1040.0	410.0	0.0000	0.0	0.0000	0	0.00
70	01	01	02	178.0	0.00	269.3	7	1040.0	410.0	0.0000	0.0	0.0000	0	0.00
70	01	01	03	124.0	2.06	268.1	6	1040.0	410.0	0.0000	0.0	0.0000	0	0.00
70	01	01	04	123.0	0.00	269.3	7	1040.0	410.0	0.0000	0.0	0.0000	0	0.00
70	01	01	05	123.0	0.00	267.6	7	1040.0	410.0	0.0000	0.0	0.0000	0	0.00
70	01	01	06	142.0	2.06	268.1	6	1040.0	410.0	0.0000	0.0	0.0000	0	0.00
70	01	01	07	145.0	0.00	267.6	5	23.0	424.0	0.0000	0.0	0.0000		

```
0   0.00
70 01 01 08   93.0   1.03  268.1   4     168.0   512.0    0.0000       0.0  0.0000
0   0.00
70 01 01 09   87.0   0.00  273.1   3     313.0   600.0    0.0000       0.0  0.0000
0   0.00
70 01 01 10  221.0   2.06  275.4   3     459.0   688.0    0.0000       0.0  0.0000
0   0.00
70 01 01 11  204.0   3.60  279.8   3     604.0   776.0    0.0000       0.0  0.0000
0   0.00
70 01 01 12  256.0   8.23  285.4   4     749.0   864.0    0.0000       0.0  0.0000
0   0.00
70 01 01 13  263.0   7.20  284.8   4     895.0   952.0    0.0000       0.0  0.0000
0   0.00
70 01 01 14  259.0   7.20  285.4   4    1040.0  1040.0    0.0000       0.0  0.0000
0   0.00
70 01 01 15  272.0   6.17  285.4   4    1040.0  1040.0    0.0000       0.0  0.0000
0   0.00
70 01 01 16  274.0   6.17  284.3   4    1040.0  1040.0    0.0000       0.0  0.0000
0   0.00
70 01 01 17  281.0   5.66  282.6   4    1040.0  1040.0    0.0000       0.0  0.0000
0   0.00
70 01 01 18  257.0   3.60  279.3   5    1040.0   917.0    0.0000       0.0  0.0000
0   0.00
70 01 01 19  264.0   0.00  277.6   6    1040.0   833.0    0.0000       0.0  0.0000
0   0.00
70 01 01 20  257.0   0.00  276.5   7    1040.0   748.0    0.0000       0.0  0.0000
0   0.00
70 01 01 21  260.0   0.00  272.6   7    1040.0   664.0    0.0000       0.0  0.0000
0   0.00
70 01 01 22  162.0   2.57  272.6   6    1040.0   579.0    0.0000       0.0  0.0000
0   0.00
70 01 01 23  190.0   4.12  275.4   5    1040.0   495.0    0.0000       0.0  0.0000
0   0.00
70 01 01 24  200.0   3.09  274.8   6    1040.0   410.0    0.0000       0.0  0.0000
0   0.00


*** NOTES:  STABILITY CLASS 1=A, 2=B, 3=C, 4=D, 5=E AND 6=F.
            FLOW VECTOR IS DIRECTION TOWARD WHICH WIND IS BLOWING.
 *** ISCST3 - VERSION 02035 ***    *** C:\Data\TehahWal\TehahWal.isc
                         ***        05/21/09
                                    ***
                        ***        11:19:36
**MODELOPTs:
                                   PAGE  20
CONC                    RURAL ELEV         DFAULT
                      NOCMPL

                              *** THE ANNUAL (   1 YRS) AVERAGE CONCENTRATION
VALUES FOR SOURCE GROUP: WALMART  ***
                                  INCLUDING SOURCE(S):      L0000083, L0000084,
L0000085, L0000086, L0000087, L0000088, L0000089,
         L0000090, L0000091, L0000092, L0000093, L0000094, L0000095, L0000096,
L0000097, L0000098,

                                  *** NETWORK ID: UCART1   ;  NETWORK TYPE: GRIDCART
***

                                       ** CONC OF OTHER    IN MICROGRAMS/M**3
                    **

   Y-COORD  |                                                  X-COORD (METERS)
```

```
   (METERS) |     366023.13    366034.72    366046.31    366057.91    366069.50
366081.06    366092.66    366104.25    366115.84
- - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
- - - - - - - - - - - - - - - - - - - - - - - - - -

 3888748.50 |       0.00004      0.00004      0.00004      0.00004      0.00004
0.00004      0.00004      0.00004      0.00004
 3888724.00 |       0.00004      0.00004      0.00004      0.00004      0.00004
0.00004      0.00004      0.00004      0.00004
 3888699.50 |       0.00004      0.00004      0.00004      0.00004      0.00004
0.00004      0.00004      0.00004      0.00004
 3888675.00 |       0.00004      0.00004      0.00004      0.00005      0.00005
0.00004      0.00004      0.00005      0.00005
 3888650.50 |       0.00004      0.00004      0.00005      0.00005      0.00005
0.00005      0.00005      0.00005      0.00005
 3888626.00 |       0.00005      0.00005      0.00005      0.00005      0.00005
0.00005      0.00006      0.00006      0.00006
 3888601.50 |       0.00005      0.00005      0.00005      0.00006      0.00006
0.00006      0.00006      0.00006      0.00006
 3888577.00 |       0.00005      0.00006      0.00006      0.00006      0.00006
0.00007      0.00007      0.00007      0.00007
 3888552.50 |       0.00006      0.00006      0.00006      0.00007      0.00007
0.00007      0.00008      0.00008      0.00008
 3888528.00 |       0.00007      0.00007      0.00007      0.00007      0.00008
0.00008      0.00008      0.00009      0.00009
 3888503.50 |       0.00007      0.00008      0.00008      0.00008      0.00008
0.00009      0.00009      0.00010      0.00010
 3888479.00 |       0.00009      0.00009      0.00009      0.00009      0.00009
0.00010      0.00010      0.00011      0.00011
 3888454.50 |       0.00010      0.00010      0.00010      0.00011      0.00011
0.00011      0.00012      0.00012      0.00012
 3888430.00 |       0.00011      0.00011      0.00012      0.00012      0.00013
0.00013      0.00014      0.00014      0.00014
 3888405.50 |       0.00014      0.00014      0.00014      0.00014      0.00015
0.00015      0.00016      0.00017      0.00017
 3888381.00 |       0.00017      0.00017      0.00018      0.00018      0.00019
0.00019      0.00020      0.00020      0.00021
 3888356.50 |       0.00020      0.00021      0.00021      0.00022      0.00023
0.00024      0.00025      0.00026      0.00027
 3888332.00 |       0.00022      0.00023      0.00025      0.00026      0.00028
0.00029      0.00031      0.00032      0.00034
 3888307.50 |       0.00021      0.00022      0.00024      0.00026      0.00028
0.00030      0.00033      0.00036      0.00039
 3888283.00 |       0.00023      0.00025      0.00026      0.00028      0.00030
0.00032      0.00035      0.00038      0.00041
 3888258.50 |       0.00028      0.00030      0.00032      0.00034      0.00037
0.00039      0.00043      0.00046      0.00050
  *** ISCST3 - VERSION 02035 ***    *** C:\Data\TehahWal\TehahWal.isc
                          ***        05/21/09
                                     ***
                        ***        11:19:36
**MODELOPTs:
                                   PAGE  21
CONC                     RURAL ELEV         DFAULT
                       NOCMPL

                                *** THE ANNUAL (   1 YRS) AVERAGE CONCENTRATION
VALUES FOR SOURCE GROUP: WALMART  ***
                                   INCLUDING SOURCE(S):      L0000083, L0000084,
L0000085, L0000086, L0000087, L0000088, L0000089,
          L0000090, L0000091, L0000092, L0000093, L0000094, L0000095, L0000096,
L0000097, L0000098,
```

** CONC OF OTHER IN MICROGRAMS/M**3 **

Y-COORD (METERS)	X-COORD (METERS) 366127.44	366139.03	366150.63	366162.22	366173.78	366185.38	366196.97	366208.56	366220.16
3888748.50	0.00004	0.00004	0.00004	0.00004	0.00004	0.00004	0.00004	0.00004	0.00004
3888724.00	0.00004	0.00004	0.00004	0.00004	0.00004	0.00004	0.00004	0.00004	0.00005
3888699.50	0.00004	0.00004	0.00004	0.00004	0.00004	0.00004	0.00004	0.00005	0.00005
3888675.00	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005
3888650.50	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005	0.00006	0.00006	0.00007
3888626.00	0.00006	0.00006	0.00006	0.00006	0.00006	0.00007	0.00007	0.00007	0.00007
3888601.50	0.00007	0.00007	0.00007	0.00007	0.00007	0.00008	0.00008	0.00008	0.00009
3888577.00	0.00007	0.00008	0.00008	0.00008	0.00008	0.00009	0.00009	0.00009	0.00010
3888552.50	0.00008	0.00009	0.00009	0.00009	0.00009	0.00010	0.00010	0.00011	0.00011
3888528.00	0.00010	0.00010	0.00010	0.00010	0.00011	0.00011	0.00012	0.00012	0.00013
3888503.50	0.00011	0.00011	0.00012	0.00012	0.00012	0.00013	0.00013	0.00014	0.00015
3888479.00	0.00012	0.00013	0.00014	0.00014	0.00015	0.00015	0.00015	0.00016	0.00017
3888454.50	0.00013	0.00014	0.00015	0.00016	0.00017	0.00017	0.00018	0.00019	0.00020
3888430.00	0.00015	0.00015	0.00016	0.00017	0.00019	0.00020	0.00021	0.00022	0.00023
3888405.50	0.00018	0.00018	0.00019	0.00020	0.00021	0.00023	0.00024	0.00026	0.00027
3888381.00	0.00022	0.00023	0.00024	0.00024	0.00025	0.00027	0.00029	0.00031	0.00033
3888356.50	0.00028	0.00029	0.00030	0.00031	0.00033	0.00034	0.00036	0.00039	0.00042
3888332.00	0.00036	0.00038	0.00040	0.00042	0.00044	0.00047	0.00050	0.00053	0.00056
3888307.50	0.00042	0.00046	0.00050	0.00054	0.00059	0.00064	0.00070	0.00076	0.00083
3888283.00	0.00045	0.00049	0.00054	0.00060	0.00068	0.00077	0.00088	0.00101	0.00119
3888258.50	0.00055	0.00060	0.00067	0.00075	0.00084	0.00096	0.00112	0.00133	0.00161

*** THE ANNUAL (1 YRS) AVERAGE CONCENTRATION VALUES FOR SOURCE GROUP: WALMART ***
INCLUDING SOURCE(S): L0000083, L0000084, L0000085, L0000086, L0000087, L0000088, L0000089, L0000090, L0000091, L0000092, L0000093, L0000094, L0000095, L0000096, L0000097, L0000098,

*** NETWORK ID: UCART1 ; NETWORK TYPE: GRIDCART ***

** CONC OF OTHER IN MICROGRAMS/M**3 **

Y-COORD (METERS)	X-COORD (METERS) 366231.75	366243.34	366254.94
3888748.50	0.00005	0.00005	0.00005
3888724.00	0.00005	0.00005	0.00006
3888699.50	0.00005	0.00005	0.00006
3888675.00	0.00006	0.00006	0.00007
3888650.50	0.00007	0.00007	0.00008
3888626.00	0.00008	0.00008	0.00009
3888601.50	0.00009	0.00010	0.00010
3888577.00	0.00011	0.00011	0.00012
3888552.50	0.00012	0.00013	0.00014
3888528.00	0.00014	0.00016	0.00017
3888503.50	0.00016	0.00018	0.00020
3888479.00	0.00018	0.00020	0.00023
3888454.50	0.00021	0.00023	0.00026
3888430.00	0.00025	0.00027	0.00030
3888405.50	0.00029	0.00032	0.00036
3888381.00	0.00035	0.00038	0.00043
3888356.50	0.00045	0.00049	0.00055
3888332.00	0.00062	0.00068	0.00075
3888307.50	0.00091	0.00101	0.00115
3888283.00	0.00141	0.00170	0.00209
3888258.50	0.00202	0.00264	0.00370

*** THE ANNUAL (1 YRS) AVERAGE CONCENTRATION VALUES FOR SOURCE GROUP: WALMART ***
INCLUDING SOURCE(S): L0000083, L0000084, L0000085, L0000086, L0000087, L0000088, L0000089, L0000090, L0000091, L0000092, L0000093, L0000094, L0000095, L0000096, L0000097, L0000098,

*** NETWORK ID: UCART2 ; NETWORK TYPE: GRIDCART ***

** CONC OF OTHER IN MICROGRAMS/M**3 **

Y-COORD (METERS)	X-COORD (METERS) 366272.13	366282.25	366292.34	366302.47	366312.56

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366322.69    366332.78    366342.91    366353.00
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TEHAHWAL
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** CONC OF OTHER IN MICROGRAMS/M**3
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Y-COORD (METERS)	X-COORD (METERS) 366363.13	366373.22	366383.34	366393.44	366403.56	366413.66	366423.78	366433.88	366444.00
3888251.75	0.01348	0.01372	0.01390	0.01397	0.01396	0.01386	0.01364	0.01332	0.01279
3888239.50	0.00908	0.00927	0.00941	0.00947	0.00947	0.00940	0.00925	0.00902	0.00863
3888227.50	0.00654	0.00674	0.00688	0.00696	0.00699	0.00696	0.00687	0.00670	0.00638
3888215.25	0.00486	0.00504	0.00518	0.00528	0.00533	0.00535	0.00529	0.00516	0.00490
3888203.25	0.00373	0.00388	0.00401	0.00412	0.00419	0.00421	0.00418	0.00407	0.00386
3888191.25	0.00296	0.00307	0.00318	0.00327	0.00333	0.00336	0.00334	0.00323	0.00308
3888179.00	0.00240	0.00248	0.00255	0.00260	0.00266	0.00268	0.00264	0.00255	0.00245
3888167.00	0.00204	0.00207	0.00210	0.00213	0.00216	0.00216	0.00211	0.00204	0.00198
3888154.75	0.00177	0.00177	0.00177	0.00178	0.00178	0.00176	0.00170	0.00164	0.00161
3888142.75	0.00156	0.00155	0.00154	0.00153	0.00151	0.00146	0.00139	0.00135	0.00134
3888130.50	0.00138	0.00137	0.00136	0.00133	0.00129	0.00122	0.00115	0.00112	0.00111
3888118.50	0.00124	0.00123	0.00121	0.00118	0.00112	0.00104	0.00098	0.00094	0.00094
3888106.50	0.00112	0.00110	0.00108	0.00104	0.00098	0.00090	0.00084	0.00082	0.00081
3888094.25	0.00102	0.00100	0.00097	0.00092	0.00086	0.00080	0.00075	0.00072	0.00071
3888082.25	0.00093	0.00091	0.00087	0.00082	0.00076	0.00071	0.00067	0.00065	0.00063
3888070.00	0.00085	0.00083	0.00078	0.00073	0.00067	0.00063	0.00060	0.00058	0.00057
3888058.00	0.00078	0.00075	0.00070	0.00065	0.00060	0.00056	0.00054	0.00053	0.00052
3888045.75	0.00072	0.00068	0.00063	0.00058	0.00054	0.00051	0.00049	0.00048	0.00047
3888033.75	0.00066	0.00062	0.00057	0.00052	0.00049	0.00046	0.00045	0.00044	0.00043
3888021.50	0.00060	0.00056	0.00051	0.00047	0.00044	0.00042	0.00041	0.00040	0.00039
3888009.50	0.00055	0.00051	0.00047	0.00043	0.00041	0.00039	0.00038	0.00037	0.00036

*** THE ANNUAL (1 YRS) AVERAGE CONCENTRATION

VALUES FOR SOURCE GROUP: WALMART *** INCLUDING SOURCE(S): L0000083, L0000084, L0000085, L0000086, L0000087, L0000088, L0000089, L0000090, L0000091, L0000092, L0000093, L0000094, L0000095, L0000096, L0000097, L0000098,

*** NETWORK ID: UCART2 ; NETWORK TYPE: GRIDCART ***

** CONC OF OTHER IN MICROGRAMS/M**3 **

Y-COORD (METERS)	X-COORD (METERS) 366454.09	366464.22	366474.31
3888251.75	0.01182	0.01041	0.00938
3888239.50	0.00796	0.00725	0.00683
3888227.50	0.00590	0.00551	0.00529
3888215.25	0.00457	0.00437	0.00425
3888203.25	0.00366	0.00355	0.00349
3888191.25	0.00297	0.00292	0.00290
3888179.00	0.00240	0.00239	0.00239
3888167.00	0.00196	0.00197	0.00199
3888154.75	0.00162	0.00163	0.00166
3888142.75	0.00134	0.00137	0.00140
3888130.50	0.00112	0.00114	0.00117
3888118.50	0.00095	0.00097	0.00100
3888106.50	0.00081	0.00083	0.00085
3888094.25	0.00070	0.00071	0.00073
3888082.25	0.00062	0.00062	0.00063
3888070.00	0.00056	0.00055	0.00056
3888058.00	0.00051	0.00050	0.00050
3888045.75	0.00046	0.00046	0.00046
3888033.75	0.00043	0.00042	0.00042
3888021.50	0.00039	0.00039	0.00039
3888009.50	0.00036	0.00036	0.00036

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*** THE ANNUAL (1 YRS) AVERAGE CONCENTRATION ***

VALUES FOR SOURCE GROUP: WALMART *** INCLUDING SOURCE(S): L0000083, L0000084, L0000085, L0000086, L0000087, L0000088, L0000089, L0000090, L0000091, L0000092, L0000093, L0000094, L0000095, L0000096, L0000097, L0000098,

*** NETWORK ID: UCART3 ; NETWORK TYPE: GRIDCART ***

** CONC OF OTHER IN MICROGRAMS/M**3 **

Y-COORD (METERS)	X-COORD (METERS) 366710.75	366719.03	366727.31	366735.59	366743.88	366752.16	366760.44	366768.72	366777.00

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** CONC OF OTHER IN MICROGRAMS/M**3 **

Y-COORD (METERS)	X-COORD (METERS) 366785.28	366793.56	366801.84	366810.13	366818.38	366826.66	366834.94	366843.22	366851.50
3888449.25	0.00099	0.00096	0.00093	0.00090	0.00088	0.00086	0.00084	0.00083	0.00083
3888439.00	0.00099	0.00095	0.00093	0.00089	0.00087	0.00086	0.00085	0.00083	0.00082
3888428.75	0.00099	0.00096	0.00093	0.00090	0.00088	0.00087	0.00085	0.00084	0.00084
3888418.50	0.00102	0.00098	0.00095	0.00093	0.00091	0.00088	0.00086	0.00085	0.00085
3888408.25	0.00103	0.00100	0.00097	0.00095	0.00092	0.00089	0.00088	0.00085	0.00085
3888398.00	0.00105	0.00101	0.00098	0.00095	0.00093	0.00091	0.00089	0.00088	0.00088
3888387.75	0.00109	0.00104	0.00099	0.00094	0.00092	0.00092	0.00091	0.00090	0.00090
3888377.50	0.00111	0.00106	0.00099	0.00094	0.00092	0.00092	0.00093	0.00092	0.00090
3888367.50	0.00113	0.00108	0.00102	0.00097	0.00094	0.00094	0.00093	0.00092	0.00092
3888357.25	0.00117	0.00110	0.00104	0.00100	0.00097	0.00095	0.00094	0.00093	0.00092
3888347.00	0.00118	0.00113	0.00104	0.00099	0.00096	0.00095	0.00094	0.00091	0.00090
3888336.75	0.00118	0.00113	0.00107	0.00101	0.00096	0.00094	0.00092	0.00090	0.00089
3888326.50	0.00121	0.00113	0.00105	0.00099	0.00094	0.00091	0.00089	0.00087	0.00085
3888316.25	0.00115	0.00110	0.00100	0.00093	0.00090	0.00088	0.00084	0.00081	0.00080
3888306.00	0.00106	0.00101	0.00095	0.00090	0.00085	0.00082	0.00080	0.00077	0.00076
3888295.75	0.00096	0.00092	0.00087	0.00082	0.00079	0.00076	0.00074	0.00072	0.00070
3888285.75	0.00085	0.00082	0.00078	0.00074	0.00071	0.00069	0.00067	0.00065	0.00063
3888275.50	0.00076	0.00073	0.00070	0.00067	0.00065	0.00063	0.00061	0.00059	0.00058
3888265.25	0.00070	0.00068	0.00065	0.00063	0.00060	0.00059	0.00057	0.00056	0.00054
3888255.00	0.00069	0.00067	0.00064	0.00061	0.00059	0.00058	0.00056	0.00054	0.00053
3888244.75	0.00072	0.00069	0.00066	0.00064	0.00062	0.00060	0.00058	0.00056	0.00054

*** THE ANNUAL (1 YRS) AVERAGE CONCENTRATION VALUES FOR SOURCE GROUP: WALMART ***

TEHAHWAL
INCLUDING SOURCE(S): L0000083, L0000084, L0000085, L0000086, L0000087, L0000088, L0000089, L0000090, L0000091, L0000092, L0000093, L0000094, L0000095, L0000096, L0000097, L0000098,

*** NETWORK ID: UCART3 ; NETWORK TYPE: GRIDCART ***

** CONC OF OTHER IN MICROGRAMS/M**3 **

Y-COORD (METERS)	X-COORD (METERS) 366859.78	366868.06	366876.34
3888449.25	0.00082	0.00081	0.00081
3888439.00	0.00083	0.00083	0.00081
3888428.75	0.00084	0.00083	0.00083
3888418.50	0.00085	0.00084	0.00084
3888408.25	0.00087	0.00086	0.00084
3888398.00	0.00088	0.00087	0.00086
3888387.75	0.00090	0.00089	0.00088
3888377.50	0.00092	0.00091	0.00089
3888367.50	0.00092	0.00091	0.00089
3888357.25	0.00092	0.00091	0.00089
3888347.00	0.00091	0.00090	0.00088
3888336.75	0.00088	0.00087	0.00086
3888326.50	0.00085	0.00084	0.00082
3888316.25	0.00080	0.00079	0.00076
3888306.00	0.00074	0.00072	0.00071
3888295.75	0.00068	0.00066	0.00064
3888285.75	0.00061	0.00060	0.00058
3888275.50	0.00056	0.00054	0.00053
3888265.25	0.00052	0.00051	0.00049
3888255.00	0.00051	0.00050	0.00048
3888244.75	0.00053	0.00051	0.00049

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PAGE 29
CONC RURAL ELEV DFAULT NOCMPL

*** THE ANNUAL (1 YRS) AVERAGE CONCENTRATION VALUES FOR SOURCE GROUP: WALMART ***
INCLUDING SOURCE(S): L0000083, L0000084, L0000085, L0000086, L0000087, L0000088, L0000089, L0000090, L0000091, L0000092, L0000093, L0000094, L0000095, L0000096, L0000097, L0000098,

*** DISCRETE CARTESIAN RECEPTOR POINTS ***

** CONC OF OTHER IN MICROGRAMS/M**3 **

X-COORD (M)	Y-COORD (M)	CONC	X-COORD (M)	Y-COORD (M)	CONC

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        366274.03    3888256.00        0.00649                        366284.19
3888399.75        0.00055
        366301.94    3888523.00        0.00026                        366373.50
3888522.50        0.00057
        366373.00    3888589.50        0.00033                        366468.91
3888589.50        0.00072
        366468.91    3888582.75        0.00077                        366473.97
3888582.75        0.00078
        366473.97    3888560.50        0.00093                        366495.81
3888535.25        0.00125
        366528.28    3888443.75        0.00286                        366472.47
3888388.00        0.00471
        366463.84    3888260.75        0.01185                        366275.72
3888280.00        0.00277
        366277.41    3888304.00        0.00206                        366279.13
3888327.75        0.00124
        366280.81    3888351.75        0.00087                        366282.50
3888375.75        0.00067
        366287.75    3888424.25        0.00046                        366291.28
3888449.00        0.00041
        366294.84    3888473.75        0.00036                        366298.41
3888498.25        0.00030
        366325.81    3888522.75        0.00034                        366349.66
3888522.75        0.00044
        366373.34    3888544.75        0.00048                        366373.16
3888567.25        0.00040
        366396.97    3888589.50        0.00041                        366420.94
3888589.50        0.00052
        366444.94    3888589.50        0.00064                        366484.88
3888547.75        0.00108
        366503.91    3888512.25        0.00154                        366512.03
3888489.50        0.00189
        366520.16    3888466.75        0.00232                        366514.34
3888429.75        0.00322
        366500.38    3888416.00        0.00363                        366486.41
3888402.00        0.00413
        366471.03    3888366.75        0.00607                        366469.59
3888345.50        0.00788
        366468.16    3888324.25        0.01059                        366466.72
3888303.00        0.01535
        366465.28    3888281.75        0.02274                        366440.13
3888260.00        0.01258
        366416.38    3888259.50        0.01317                        366392.66
3888259.00        0.01302
        366368.94    3888258.25        0.01239                        366345.22
3888257.75        0.01274
        366321.50    3888257.25        0.01323                        366297.75
3888256.75        0.01034
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                        ***        05/21/09
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CONC                    RURAL ELEV         DFAULT
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                              *** THE ANNUAL (   1 YRS) AVERAGE CONCENTRATION
VALUES FOR SOURCE GROUP: OUTLOT   ***
                                 INCLUDING SOURCE(S):      L0000099, L0000100,
L0000101, L0000102, L0000103, L0000104,

                                  *** NETWORK ID: UCART1   ;  NETWORK TYPE: GRIDCART
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TEHAHWAL
***

** CONC OF OTHER IN MICROGRAMS/M**3
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Y-COORD (METERS)	X-COORD (METERS) 366023.13	366034.72	366046.31	366057.91	366069.50	366081.06	366092.66	366104.25	366115.84
3888748.50	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005
3888724.00	0.00006	0.00006	0.00006	0.00006	0.00006	0.00006	0.00006	0.00006	0.00006
3888699.50	0.00007	0.00007	0.00007	0.00007	0.00007	0.00007	0.00007	0.00007	0.00007
3888675.00	0.00009	0.00009	0.00009	0.00009	0.00009	0.00009	0.00009	0.00009	0.00009
3888650.50	0.00010	0.00010	0.00011	0.00011	0.00011	0.00011	0.00012	0.00012	0.00012
3888626.00	0.00011	0.00011	0.00012	0.00012	0.00013	0.00013	0.00014	0.00014	0.00015
3888601.50	0.00011	0.00012	0.00012	0.00013	0.00014	0.00014	0.00015	0.00016	0.00017
3888577.00	0.00012	0.00013	0.00013	0.00014	0.00015	0.00016	0.00017	0.00018	0.00019
3888552.50	0.00013	0.00014	0.00015	0.00016	0.00017	0.00018	0.00019	0.00020	0.00021
3888528.00	0.00015	0.00015	0.00016	0.00017	0.00018	0.00019	0.00021	0.00022	0.00024
3888503.50	0.00015	0.00016	0.00017	0.00018	0.00019	0.00021	0.00022	0.00024	0.00026
3888479.00	0.00016	0.00017	0.00018	0.00020	0.00021	0.00023	0.00024	0.00026	0.00028
3888454.50	0.00018	0.00019	0.00020	0.00021	0.00023	0.00024	0.00025	0.00027	0.00028
3888430.00	0.00018	0.00019	0.00020	0.00021	0.00022	0.00023	0.00024	0.00025	0.00027
3888405.50	0.00017	0.00018	0.00019	0.00019	0.00020	0.00021	0.00022	0.00024	0.00025
3888381.00	0.00016	0.00016	0.00017	0.00018	0.00019	0.00020	0.00022	0.00023	0.00024
3888356.50	0.00015	0.00016	0.00017	0.00018	0.00019	0.00020	0.00021	0.00022	0.00023
3888332.00	0.00015	0.00016	0.00017	0.00018	0.00018	0.00019	0.00019	0.00019	0.00020
3888307.50	0.00015	0.00015	0.00016	0.00016	0.00016	0.00016	0.00017	0.00017	0.00017
3888283.00	0.00014	0.00014	0.00014	0.00014	0.00014	0.00014	0.00015	0.00015	0.00015
3888258.50	0.00012	0.00012	0.00012	0.00013	0.00013	0.00013	0.00013	0.00014	0.00014

*** THE ANNUAL (1 YRS) AVERAGE CONCENTRATION

TEHAHWAL
VALUES FOR SOURCE GROUP: OUTLOT *** INCLUDING SOURCE(S): L0000099, L0000100, L0000101, L0000102, L0000103, L0000104,

*** NETWORK ID: UCART1 ; NETWORK TYPE: GRIDCART ***

** CONC OF OTHER IN MICROGRAMS/M**3 **

Y-COORD (METERS)	X-COORD (METERS) 366127.44	366139.03	366150.63	366162.22	366173.78	366185.38	366196.97	366208.56	366220.16
3888748.50	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005	0.00006	0.00006
3888724.00	0.00006	0.00006	0.00006	0.00006	0.00006	0.00006	0.00006	0.00006	0.00007
3888699.50	0.00007	0.00007	0.00007	0.00007	0.00007	0.00007	0.00007	0.00008	0.00008
3888675.00	0.00009	0.00010	0.00010	0.00010	0.00009	0.00009	0.00010	0.00010	0.00010
3888650.50	0.00012	0.00012	0.00013	0.00013	0.00013	0.00013	0.00013	0.00015	0.00015
3888626.00	0.00015	0.00016	0.00016	0.00017	0.00018	0.00019	0.00019	0.00020	0.00021
3888601.50	0.00018	0.00018	0.00020	0.00021	0.00022	0.00024	0.00025	0.00027	0.00029
3888577.00	0.00020	0.00022	0.00023	0.00025	0.00027	0.00029	0.00031	0.00034	0.00037
3888552.50	0.00023	0.00024	0.00026	0.00028	0.00030	0.00032	0.00036	0.00039	0.00043
3888528.00	0.00025	0.00027	0.00029	0.00032	0.00035	0.00038	0.00042	0.00047	0.00052
3888503.50	0.00028	0.00030	0.00033	0.00035	0.00039	0.00042	0.00046	0.00051	0.00056
3888479.00	0.00030	0.00032	0.00035	0.00037	0.00040	0.00043	0.00047	0.00051	0.00056
3888454.50	0.00030	0.00032	0.00034	0.00036	0.00039	0.00042	0.00045	0.00049	0.00052
3888430.00	0.00028	0.00030	0.00032	0.00034	0.00036	0.00039	0.00041	0.00044	0.00046
3888405.50	0.00027	0.00028	0.00030	0.00032	0.00033	0.00035	0.00037	0.00039	0.00040
3888381.00	0.00025	0.00027	0.00028	0.00029	0.00030	0.00031	0.00031	0.00032	0.00034
3888356.50	0.00023	0.00024	0.00024	0.00025	0.00025	0.00026	0.00027	0.00028	0.00031
3888332.00	0.00020	0.00020	0.00021	0.00021	0.00022	0.00023	0.00025	0.00027	0.00030
3888307.50	0.00018	0.00018	0.00019	0.00019	0.00021	0.00022	0.00025	0.00027	0.00030
3888283.00	0.00016	0.00016	0.00017	0.00019	0.00021	0.00023	0.00025	0.00027	0.00028
3888258.50	0.00015	0.00016	0.00017	0.00019	0.00021	0.00023	0.00024	0.00024	0.00024

CONC RURAL ELEV DFAULT
NOCMPL

*** THE ANNUAL (1 YRS) AVERAGE CONCENTRATION
VALUES FOR SOURCE GROUP: OUTLOT ***
INCLUDING SOURCE(S): L0000099, L0000100,
L0000101, L0000102, L0000103, L0000104,

*** NETWORK ID: UCART1 ; NETWORK TYPE: GRIDCART
***

** CONC OF OTHER IN MICROGRAMS/M**3
**

Y-COORD (METERS)	X-COORD (METERS) 366231.75	366243.34	366254.94
3888748.50	0.00006	0.00007	0.00007
3888724.00	0.00007	0.00007	0.00007
3888699.50	0.00008	0.00008	0.00009
3888675.00	0.00011	0.00011	0.00012
3888650.50	0.00015	0.00016	0.00016
3888626.00	0.00022	0.00023	0.00024
3888601.50	0.00031	0.00034	0.00036
3888577.00	0.00040	0.00044	0.00049
3888552.50	0.00048	0.00053	0.00061
3888528.00	0.00058	0.00065	0.00073
3888503.50	0.00062	0.00068	0.00077
3888479.00	0.00062	0.00068	0.00075
3888454.50	0.00056	0.00060	0.00065
3888430.00	0.00049	0.00052	0.00055
3888405.50	0.00042	0.00043	0.00046
3888381.00	0.00036	0.00039	0.00043
3888356.50	0.00034	0.00038	0.00041
3888332.00	0.00033	0.00036	0.00038
3888307.50	0.00032	0.00032	0.00033
3888283.00	0.00028	0.00028	0.00030
3888258.50	0.00024	0.00026	0.00031

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*** 05/21/09
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*** 11:19:36
**MODELOPTs:

CONC RURAL ELEV DFAULT
NOCMPL

*** THE ANNUAL (1 YRS) AVERAGE CONCENTRATION
VALUES FOR SOURCE GROUP: OUTLOT ***
INCLUDING SOURCE(S): L0000099, L0000100,
L0000101, L0000102, L0000103, L0000104,

*** NETWORK ID: UCART2 ; NETWORK TYPE: GRIDCART
***

** CONC OF OTHER IN MICROGRAMS/M**3
**

Y-COORD (METERS)	X-COORD (METERS) 366272.13	366282.25	366292.34	366302.47	366312.56

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366322.69    366332.78    366342.91    366353.00
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TEHAHWAL
** CONC OF OTHER IN MICROGRAMS/M**3
**

Y-COORD (METERS)	X-COORD (METERS) 366363.13	366373.22	366383.34	366393.44	366403.56	366413.66	366423.78	366433.88	366444.00
3888251.75	0.00029	0.00028	0.00028	0.00026	0.00023	0.00020	0.00018	0.00017	0.00018
3888239.50	0.00027	0.00027	0.00026	0.00024	0.00022	0.00019	0.00017	0.00016	0.00016
3888227.50	0.00025	0.00025	0.00024	0.00023	0.00020	0.00018	0.00016	0.00015	0.00015
3888215.25	0.00024	0.00023	0.00023	0.00021	0.00019	0.00017	0.00015	0.00014	0.00014
3888203.25	0.00022	0.00022	0.00021	0.00020	0.00018	0.00016	0.00014	0.00013	0.00013
3888191.25	0.00021	0.00021	0.00020	0.00019	0.00017	0.00015	0.00013	0.00012	0.00013
3888179.00	0.00020	0.00020	0.00019	0.00018	0.00016	0.00014	0.00013	0.00012	0.00012
3888167.00	0.00019	0.00018	0.00018	0.00017	0.00015	0.00013	0.00012	0.00011	0.00011
3888154.75	0.00018	0.00017	0.00017	0.00016	0.00014	0.00013	0.00011	0.00011	0.00011
3888142.75	0.00017	0.00017	0.00016	0.00015	0.00014	0.00012	0.00011	0.00010	0.00010
3888130.50	0.00016	0.00016	0.00015	0.00014	0.00013	0.00011	0.00010	0.00010	0.00009
3888118.50	0.00015	0.00015	0.00014	0.00013	0.00012	0.00011	0.00010	0.00009	0.00009
3888106.50	0.00015	0.00014	0.00014	0.00013	0.00012	0.00010	0.00009	0.00009	0.00009
3888094.25	0.00014	0.00014	0.00013	0.00012	0.00011	0.00010	0.00009	0.00008	0.00008
3888082.25	0.00013	0.00013	0.00012	0.00012	0.00011	0.00010	0.00009	0.00008	0.00008
3888070.00	0.00013	0.00012	0.00012	0.00011	0.00010	0.00009	0.00008	0.00008	0.00007
3888058.00	0.00012	0.00012	0.00011	0.00011	0.00010	0.00009	0.00008	0.00007	0.00007
3888045.75	0.00012	0.00011	0.00011	0.00010	0.00009	0.00008	0.00008	0.00007	0.00007
3888033.75	0.00011	0.00011	0.00010	0.00010	0.00009	0.00008	0.00007	0.00007	0.00006
3888021.50	0.00011	0.00010	0.00010	0.00009	0.00009	0.00008	0.00007	0.00006	0.00006
3888009.50	0.00010	0.00010	0.00010	0.00009	0.00008	0.00008	0.00007	0.00006	0.00006

CONC RURAL ELEV DFAULT
NOCMPL

*** THE ANNUAL (1 YRS) AVERAGE CONCENTRATION
VALUES FOR SOURCE GROUP: OUTLOT ***
INCLUDING SOURCE(S): L0000099, L0000100,

TEHAHWAL
L0000101, L0000102, L0000103, L0000104,

*** NETWORK ID: UCART2 ; NETWORK TYPE: GRIDCART ***

** CONC OF OTHER IN MICROGRAMS/M**3 **

Y-COORD (METERS)	366454.09	366464.22	366474.31
3888251.75	0.00018	0.00018	0.00018
3888239.50	0.00017	0.00017	0.00017
3888227.50	0.00016	0.00016	0.00016
3888215.25	0.00015	0.00015	0.00015
3888203.25	0.00014	0.00014	0.00014
3888191.25	0.00013	0.00013	0.00013
3888179.00	0.00012	0.00013	0.00012
3888167.00	0.00012	0.00012	0.00012
3888154.75	0.00011	0.00011	0.00011
3888142.75	0.00010	0.00011	0.00011
3888130.50	0.00010	0.00010	0.00010
3888118.50	0.00009	0.00010	0.00010
3888106.50	0.00009	0.00009	0.00009
3888094.25	0.00008	0.00009	0.00009
3888082.25	0.00008	0.00008	0.00009
3888070.00	0.00008	0.00008	0.00008
3888058.00	0.00007	0.00008	0.00008
3888045.75	0.00007	0.00007	0.00008
3888033.75	0.00007	0.00007	0.00007
3888021.50	0.00006	0.00007	0.00007
3888009.50	0.00006	0.00006	0.00007

 *** ISCST3 - VERSION 02035 *** *** C:\Data\TehahWal\TehahWal.isc ***
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*** 11:19:36
**MODELOPTs:
PAGE 36
CONC RURAL ELEV DFAULT NOCMPL

*** THE ANNUAL (1 YRS) AVERAGE CONCENTRATION VALUES FOR SOURCE GROUP: OUTLOT ***
INCLUDING SOURCE(S): L0000099, L0000100, L0000101, L0000102, L0000103, L0000104,

*** NETWORK ID: UCART3 ; NETWORK TYPE: GRIDCART ***

** CONC OF OTHER IN MICROGRAMS/M**3 **

Y-COORD (METERS)	366710.75	366719.03	366727.31	366735.59	366743.88	366752.16	366760.44	366768.72	366777.00
3888449.25	0.00073	0.00070	0.00066	0.00063	0.00060	0.00057	0.00055	0.00052	0.00050
3888439.00	0.00073	0.00070	0.00067	0.00064	0.00061

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0.00058      0.00056      0.00052      0.00050
 3888428.75 |       0.00073      0.00070      0.00067      0.00064      0.00061
0.00058      0.00056      0.00054      0.00051
 3888418.50 |       0.00073      0.00070      0.00067      0.00064      0.00062
0.00059      0.00057      0.00054      0.00052
 3888408.25 |       0.00072      0.00069      0.00067      0.00064      0.00061
0.00059      0.00057      0.00054      0.00052
 3888398.00 |       0.00071      0.00068      0.00066      0.00063      0.00061
0.00059      0.00057      0.00054      0.00052
 3888387.75 |       0.00069      0.00067      0.00065      0.00063      0.00060
0.00058      0.00056      0.00054      0.00052
 3888377.50 |       0.00067      0.00065      0.00063      0.00062      0.00059
0.00058      0.00056      0.00054      0.00052
 3888367.50 |       0.00064      0.00063      0.00062      0.00060      0.00058
0.00057      0.00055      0.00053      0.00051
 3888357.25 |       0.00062      0.00060      0.00059      0.00058      0.00057
0.00055      0.00054      0.00052      0.00051
 3888347.00 |       0.00059      0.00058      0.00057      0.00056      0.00055
0.00054      0.00052      0.00051      0.00050
 3888336.75 |       0.00055      0.00055      0.00054      0.00053      0.00052
0.00052      0.00051      0.00050      0.00049
 3888326.50 |       0.00052      0.00052      0.00051      0.00051      0.00050
0.00049      0.00049      0.00048      0.00047
 3888316.25 |       0.00048      0.00048      0.00048      0.00048      0.00048
0.00047      0.00047      0.00046      0.00045
 3888306.00 |       0.00045      0.00045      0.00045      0.00045      0.00045
0.00045      0.00044      0.00044      0.00043
 3888295.75 |       0.00041      0.00042      0.00042      0.00042      0.00042
0.00042      0.00042      0.00042      0.00041
 3888285.75 |       0.00037      0.00038      0.00039      0.00039      0.00040
0.00040      0.00040      0.00040      0.00039
 3888275.50 |       0.00033      0.00035      0.00036      0.00036      0.00037
0.00037      0.00037      0.00037      0.00037
 3888265.25 |       0.00029      0.00031      0.00032      0.00033      0.00034
0.00035      0.00035      0.00035      0.00035
 3888255.00 |       0.00026      0.00027      0.00029      0.00030      0.00031
0.00032      0.00033      0.00033      0.00033
 3888244.75 |       0.00023      0.00024      0.00026      0.00027      0.00028
0.00029      0.00030      0.00031      0.00031
  *** ISCST3 - VERSION 02035 ***    *** C:\Data\TehahWal\TehahWal.isc
                         ***        05/21/09
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                       ***        11:19:36
**MODELOPTs:
                                   PAGE  37
CONC                     RURAL ELEV         DFAULT
                    NOCMPL

                              *** THE ANNUAL (   1 YRS) AVERAGE CONCENTRATION
VALUES FOR SOURCE GROUP: OUTLOT   ***
                                  INCLUDING SOURCE(S):      L0000099, L0000100,
L0000101, L0000102, L0000103, L0000104,

                                  *** NETWORK ID: UCART3   ;  NETWORK TYPE: GRIDCART
***

                                       ** CONC OF OTHER    IN MICROGRAMS/M**3
                  **

   Y-COORD  |                                                X-COORD (METERS)
   (METERS) |     366785.28    366793.56    366801.84    366810.13    366818.38
366826.66    366834.94    366843.22    366851.50
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 3888449.25 |       0.00048      0.00046      0.00045      0.00044      0.00043
0.00042      0.00041      0.00040      0.00040
 3888439.00 |       0.00048      0.00047      0.00045      0.00044      0.00042
0.00042      0.00041      0.00040      0.00039
 3888428.75 |       0.00049      0.00047      0.00046      0.00044      0.00043
0.00042      0.00041      0.00040      0.00039
 3888418.50 |       0.00050      0.00048      0.00046      0.00045      0.00044
0.00042      0.00041      0.00040      0.00039
 3888408.25 |       0.00050      0.00049      0.00047      0.00045      0.00044
0.00042      0.00041      0.00040      0.00039
 3888398.00 |       0.00050      0.00049      0.00047      0.00045      0.00044
0.00043      0.00041      0.00040      0.00040
 3888387.75 |       0.00050      0.00048      0.00046      0.00044      0.00043
0.00042      0.00042      0.00041      0.00040
 3888377.50 |       0.00050      0.00048      0.00046      0.00044      0.00042
0.00042      0.00042      0.00041      0.00040
 3888367.50 |       0.00049      0.00048      0.00046      0.00044      0.00043
0.00042      0.00041      0.00041      0.00040
 3888357.25 |       0.00049      0.00047      0.00045      0.00044      0.00043
0.00042      0.00041      0.00040      0.00039
 3888347.00 |       0.00048      0.00047      0.00045      0.00043      0.00042
0.00041      0.00041      0.00040      0.00039
 3888336.75 |       0.00047      0.00046      0.00045      0.00043      0.00042
0.00041      0.00040      0.00039      0.00039
 3888326.50 |       0.00046      0.00045      0.00044      0.00042      0.00041
0.00040      0.00039      0.00039      0.00038
 3888316.25 |       0.00045      0.00044      0.00043      0.00041      0.00040
0.00040      0.00039      0.00038      0.00037
 3888306.00 |       0.00043      0.00042      0.00042      0.00041      0.00040
0.00039      0.00038      0.00038      0.00037
 3888295.75 |       0.00041      0.00041      0.00040      0.00039      0.00039
0.00038      0.00038      0.00037      0.00036
 3888285.75 |       0.00039      0.00039      0.00038      0.00038      0.00038
0.00037      0.00037      0.00036      0.00035
 3888275.50 |       0.00037      0.00037      0.00037      0.00036      0.00036
0.00036      0.00035      0.00035      0.00034
 3888265.25 |       0.00035      0.00035      0.00035      0.00035      0.00035
0.00034      0.00034      0.00034      0.00033
 3888255.00 |       0.00033      0.00033      0.00033      0.00033      0.00033
0.00033      0.00033      0.00032      0.00032
 3888244.75 |       0.00031      0.00031      0.00032      0.00031      0.00031
0.00031      0.00031      0.00031      0.00031
  *** ISCST3 - VERSION 02035 ***    *** C:\Data\TehahWal\TehahWal.isc
                        ***        05/21/09
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                       ***        11:19:36
**MODELOPTs:
                                   PAGE  38
CONC                     RURAL ELEV         DFAULT
                     NOCMPL

                              *** THE ANNUAL (   1 YRS) AVERAGE CONCENTRATION
VALUES FOR SOURCE GROUP: OUTLOT   ***
                                  INCLUDING SOURCE(S):      L0000099, L0000100,
L0000101, L0000102, L0000103, L0000104,

                                  *** NETWORK ID: UCART3   ;  NETWORK TYPE: GRIDCART
***

                                       ** CONC OF OTHER    IN MICROGRAMS/M**3
                  **
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Y-COORD (METERS)	X-COORD (METERS) 366859.78	366868.06	366876.34
3888449.25	0.00039	0.00038	0.00037
3888439.00	0.00039	0.00038	0.00037
3888428.75	0.00038	0.00037	0.00036
3888418.50	0.00038	0.00037	0.00036
3888408.25	0.00039	0.00038	0.00037
3888398.00	0.00039	0.00038	0.00037
3888387.75	0.00039	0.00038	0.00037
3888377.50	0.00039	0.00038	0.00037
3888367.50	0.00039	0.00038	0.00037
3888357.25	0.00039	0.00038	0.00037
3888347.00	0.00038	0.00037	0.00037
3888336.75	0.00038	0.00037	0.00036
3888326.50	0.00037	0.00037	0.00036
3888316.25	0.00037	0.00036	0.00035
3888306.00	0.00036	0.00035	0.00035
3888295.75	0.00035	0.00035	0.00034
3888285.75	0.00035	0.00034	0.00033
3888275.50	0.00034	0.00033	0.00033
3888265.25	0.00033	0.00032	0.00032
3888255.00	0.00032	0.00031	0.00031
3888244.75	0.00031	0.00030	0.00030

 *** ISCST3 - VERSION 02035 *** *** C:\Data\TehahWal\TehahWal.isc *** 05/21/09 *** *** 11:19:36

**MODELOPTs: CONC RURAL ELEV DFAULT NOCMPL

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*** THE ANNUAL (1 YRS) AVERAGE CONCENTRATION VALUES FOR SOURCE GROUP: OUTLOT ***

INCLUDING SOURCE(S): L0000099, L0000100, L0000101, L0000102, L0000103, L0000104,

*** DISCRETE CARTESIAN RECEPTOR POINTS ***

** CONC OF OTHER IN MICROGRAMS/M**3 **

X-COORD (M)	Y-COORD (M)	CONC	X-COORD (M)	Y-COORD (M)	CONC
366274.03	3888256.00	0.00043	366284.19	3888399.75	0.00059
366301.94	3888523.00	0.00129	366373.50	3888522.50	0.00505
366373.00	3888589.50	0.00208	366468.91	3888589.50	0.01390
366468.91	3888582.75	0.01402	366473.97	3888582.75	0.01279
366473.97	3888560.50	0.01151	366495.81	3888535.25	0.00583
366528.28	3888443.75	0.00146	366472.47	3888388.00	0.00048

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        366463.84    3888260.75        0.00019                        366275.72
3888280.00        0.00042
        366277.41    3888304.00        0.00041                        366279.13
3888327.75        0.00042
        366280.81    3888351.75        0.00047                        366282.50
3888375.75        0.00053
        366287.75    3888424.25        0.00066                        366291.28
3888449.00        0.00080
        366294.84    3888473.75        0.00099                        366298.41
3888498.25        0.00121
        366325.81    3888522.75        0.00185                        366349.66
3888522.75        0.00280
        366373.34    3888544.75        0.00490                        366373.16
3888567.25        0.00383
        366396.97    3888589.50        0.00388                        366420.94
3888589.50        0.01614
        366444.94    3888589.50        0.02115                        366484.88
3888547.75        0.00812
        366503.91    3888512.25        0.00414                        366512.03
3888489.50        0.00307
        366520.16    3888466.75        0.00217                        366514.34
3888429.75        0.00100
        366500.38    3888416.00        0.00072                        366486.41
3888402.00        0.00057
        366471.03    3888366.75        0.00042                        366469.59
3888345.50        0.00037
        366468.16    3888324.25        0.00031                        366466.72
3888303.00        0.00026
        366465.28    3888281.75        0.00022                        366440.13
3888260.00        0.00018
        366416.38    3888259.50        0.00020                        366392.66
3888259.00        0.00027
        366368.94    3888258.25        0.00030                        366345.22
3888257.75        0.00036
        366321.50    3888257.25        0.00056                        366297.75
3888256.75        0.00060
 *** ISCST3 - VERSION 02035 ***    *** C:\Data\TehahWal\TehahWal.isc
                         ***        05/21/09
                                    ***
                       ***        11:19:36
**MODELOPTs:
                                   PAGE  40
CONC                     RURAL ELEV         DFAULT
                     NOCMPL

                             *** THE ANNUAL (   1 YRS) AVERAGE CONCENTRATION
VALUES FOR SOURCE GROUP: ALL      ***
                                  INCLUDING SOURCE(S):      L0000083, L0000084,
L0000085, L0000086, L0000087, L0000088, L0000089,
         L0000090, L0000091, L0000092, L0000093, L0000094, L0000095, L0000096,
L0000097, L0000098, L0000099, L0000100, L0000101,
         L0000102, L0000103, L0000104, VOL1    , VOL2    ,

                                  *** NETWORK ID: UCART1   ;  NETWORK TYPE: GRIDCART
***

                                       ** CONC OF OTHER    IN MICROGRAMS/M**3
                  **

   Y-COORD  |                                                X-COORD (METERS)
   (METERS) |     366023.13    366034.72    366046.31    366057.91    366069.50
366081.06    366092.66    366104.25    366115.84
- - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
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- - - - - - - - - - - - - - - - - - - - - - - - -

 3888748.50 |       0.00010      0.00010      0.00010      0.00010      0.00011
0.00011      0.00011      0.00011      0.00011
 3888724.00 |       0.00011      0.00012      0.00012      0.00012      0.00012
0.00012      0.00012      0.00012      0.00012
 3888699.50 |       0.00013      0.00013      0.00014      0.00014      0.00014
0.00014      0.00014      0.00014      0.00014
 3888675.00 |       0.00015      0.00015      0.00016      0.00016      0.00016
0.00016      0.00016      0.00016      0.00016
 3888650.50 |       0.00017      0.00017      0.00018      0.00019      0.00019
0.00019      0.00020      0.00020      0.00020
 3888626.00 |       0.00018      0.00019      0.00020      0.00021      0.00021
0.00022      0.00023      0.00024      0.00025
 3888601.50 |       0.00019      0.00020      0.00021      0.00022      0.00023
0.00024      0.00025      0.00026      0.00028
 3888577.00 |       0.00020      0.00021      0.00022      0.00023      0.00024
0.00026      0.00027      0.00029      0.00030
 3888552.50 |       0.00022      0.00023      0.00024      0.00026      0.00027
0.00029      0.00030      0.00032      0.00034
 3888528.00 |       0.00025      0.00026      0.00027      0.00029      0.00030
0.00032      0.00034      0.00036      0.00038
 3888503.50 |       0.00026      0.00027      0.00028      0.00030      0.00032
0.00034      0.00036      0.00038      0.00041
 3888479.00 |       0.00028      0.00030      0.00031      0.00033      0.00035
0.00037      0.00039      0.00042      0.00045
 3888454.50 |       0.00031      0.00033      0.00035      0.00036      0.00038
0.00040      0.00042      0.00044      0.00047
 3888430.00 |       0.00034      0.00035      0.00037      0.00039      0.00040
0.00042      0.00044      0.00046      0.00048
 3888405.50 |       0.00036      0.00037      0.00038      0.00040      0.00041
0.00043      0.00045      0.00047      0.00049
 3888381.00 |       0.00037      0.00038      0.00040      0.00041      0.00043
0.00045      0.00047      0.00049      0.00051
 3888356.50 |       0.00039      0.00041      0.00043      0.00045      0.00047
0.00049      0.00051      0.00053      0.00055
 3888332.00 |       0.00042      0.00044      0.00046      0.00048      0.00051
0.00053      0.00056      0.00058      0.00061
 3888307.50 |       0.00040      0.00042      0.00045      0.00047      0.00050
0.00052      0.00055      0.00059      0.00062
 3888283.00 |       0.00042      0.00043      0.00045      0.00047      0.00049
0.00052      0.00055      0.00058      0.00062
 3888258.50 |       0.00045      0.00047      0.00049      0.00051      0.00054
0.00057      0.00061      0.00065      0.00070
  *** ISCST3 - VERSION 02035 ***    *** C:\Data\TehahWal\TehahWal.isc
                         ***        05/21/09
                                    ***
                       ***        11:19:36
**MODELOPTs:
                                   PAGE  41
CONC                     RURAL ELEV         DFAULT
                      NOCMPL

                              *** THE ANNUAL (   1 YRS) AVERAGE CONCENTRATION
VALUES FOR SOURCE GROUP: ALL      ***
                                  INCLUDING SOURCE(S):      L0000083, L0000084,
L0000085, L0000086, L0000087, L0000088, L0000089,
         L0000090, L0000091, L0000092, L0000093, L0000094, L0000095, L0000096,
L0000097, L0000098, L0000099, L0000100, L0000101,
         L0000102, L0000103, L0000104, VOL1    , VOL2    ,

                                  *** NETWORK ID: UCART1   ;  NETWORK TYPE: GRIDCART
***
```

** CONC OF OTHER IN MICROGRAMS/M**3 **

Y-COORD (METERS)	X-COORD (METERS) 366127.44	366139.03	366150.63	366162.22	366173.78	366185.38	366196.97	366208.56	366220.16
3888748.50	0.00011	0.00011	0.00011	0.00011	0.00011	0.00012	0.00012	0.00012	0.00012
3888724.00	0.00012	0.00012	0.00012	0.00012	0.00012	0.00013	0.00013	0.00014	0.00014
3888699.50	0.00014	0.00014	0.00014	0.00014	0.00014	0.00014	0.00014	0.00015	0.00016
3888675.00	0.00017	0.00017	0.00017	0.00018	0.00017	0.00017	0.00018	0.00018	0.00019
3888650.50	0.00021	0.00021	0.00022	0.00022	0.00022	0.00022	0.00023	0.00025	0.00026
3888626.00	0.00026	0.00026	0.00027	0.00028	0.00028	0.00030	0.00031	0.00032	0.00034
3888601.50	0.00029	0.00030	0.00032	0.00033	0.00035	0.00037	0.00039	0.00041	0.00044
3888577.00	0.00032	0.00034	0.00036	0.00038	0.00041	0.00043	0.00046	0.00050	0.00054
3888552.50	0.00036	0.00038	0.00040	0.00043	0.00045	0.00048	0.00053	0.00056	0.00062
3888528.00	0.00041	0.00043	0.00046	0.00049	0.00053	0.00058	0.00063	0.00068	0.00075
3888503.50	0.00044	0.00047	0.00050	0.00054	0.00058	0.00063	0.00068	0.00074	0.00081
3888479.00	0.00048	0.00051	0.00055	0.00059	0.00062	0.00067	0.00072	0.00077	0.00085
3888454.50	0.00050	0.00053	0.00057	0.00061	0.00065	0.00069	0.00074	0.00079	0.00084
3888430.00	0.00050	0.00053	0.00056	0.00060	0.00064	0.00067	0.00071	0.00075	0.00079
3888405.50	0.00051	0.00053	0.00056	0.00059	0.00062	0.00066	0.00070	0.00074	0.00078
3888381.00	0.00053	0.00055	0.00058	0.00060	0.00063	0.00066	0.00070	0.00074	0.00077
3888356.50	0.00057	0.00060	0.00062	0.00064	0.00067	0.00069	0.00071	0.00075	0.00081
3888332.00	0.00063	0.00066	0.00068	0.00071	0.00074	0.00077	0.00082	0.00088	0.00095
3888307.50	0.00066	0.00070	0.00075	0.00080	0.00087	0.00094	0.00103	0.00112	0.00121
3888283.00	0.00066	0.00071	0.00078	0.00085	0.00095	0.00106	0.00120	0.00136	0.00155
3888258.50	0.00075	0.00082	0.00091	0.00101	0.00112	0.00126	0.00143	0.00165	0.00195

 *** ISCST3 - VERSION 02035 *** *** C:\Data\TehahWal\TehahWal.isc ***
05/21/09
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*** 11:19:36
**MODELOPTs:
PAGE 42
CONC RURAL ELEV DFAULT
NOCMPL

*** THE ANNUAL (1 YRS) AVERAGE CONCENTRATION
VALUES FOR SOURCE GROUP: ALL ***

TEHAHWAL
INCLUDING SOURCE(S): L0000083, L0000084, L0000085, L0000086, L0000087, L0000088, L0000089, L0000090, L0000091, L0000092, L0000093, L0000094, L0000095, L0000096, L0000097, L0000098, L0000099, L0000100, L0000101, L0000102, L0000103, L0000104, VOL1 , VOL2 ,

*** NETWORK ID: UCART1 ; NETWORK TYPE: GRIDCART ***

** CONC OF OTHER IN MICROGRAMS/M**3 **

Y-COORD (METERS)	X-COORD (METERS) 366231.75	366243.34	366254.94
3888748.50	0.00013	0.00014	0.00015
3888724.00	0.00014	0.00015	0.00015
3888699.50	0.00017	0.00017	0.00018
3888675.00	0.00020	0.00021	0.00023
3888650.50	0.00026	0.00028	0.00028
3888626.00	0.00035	0.00037	0.00039
3888601.50	0.00047	0.00051	0.00054
3888577.00	0.00059	0.00064	0.00071
3888552.50	0.00068	0.00075	0.00085
3888528.00	0.00083	0.00092	0.00103
3888503.50	0.00089	0.00098	0.00109
3888479.00	0.00093	0.00103	0.00114
3888454.50	0.00090	0.00097	0.00105
3888430.00	0.00084	0.00091	0.00099
3888405.50	0.00083	0.00088	0.00095
3888381.00	0.00081	0.00087	0.00097
3888356.50	0.00088	0.00096	0.00106
3888332.00	0.00104	0.00113	0.00122
3888307.50	0.00132	0.00144	0.00160
3888283.00	0.00178	0.00209	0.00253
3888258.50	0.00238	0.00303	0.00414

 *** ISCST3 - VERSION 02035 *** *** C:\Data\TehahWal\TehahWal.isc ***
05/21/09
***
11:19:36
**MODELOPTs:
PAGE 43
CONC RURAL ELEV DFAULT NOCMPL

*** THE ANNUAL (1 YRS) AVERAGE CONCENTRATION VALUES FOR SOURCE GROUP: ALL ***
INCLUDING SOURCE(S): L0000083, L0000084, L0000085, L0000086, L0000087, L0000088, L0000089, L0000090, L0000091, L0000092, L0000093, L0000094, L0000095, L0000096, L0000097, L0000098, L0000099, L0000100, L0000101, L0000102, L0000103, L0000104, VOL1 , VOL2 ,

*** NETWORK ID: UCART2 ; NETWORK TYPE: GRIDCART ***

** CONC OF OTHER IN MICROGRAMS/M**3 **

Y-COORD (METERS)	X-COORD (METERS) 366272.13	366282.25	366292.34	366302.47	366312.56

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366322.69    366332.78    366342.91    366353.00
- - - -
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** CONC OF OTHER IN MICROGRAMS/M**3 **

Y-COORD (METERS)	X-COORD (METERS) 366363.13	366373.22	366383.34	366393.44	366403.56	366413.66	366423.78	366433.88	366444.00
3888251.75	0.01524	0.01528	0.01505	0.01553	0.01549	0.01508	0.01461	0.01412	0.01348
3888239.50	0.01048	0.01016	0.01012	0.01019	0.01030	0.01034	0.01012	0.00978	0.00930
3888227.50	0.00751	0.00739	0.00744	0.00748	0.00752	0.00752	0.00751	0.00734	0.00699
3888215.25	0.00554	0.00557	0.00564	0.00572	0.00576	0.00576	0.00571	0.00564	0.00540
3888203.25	0.00427	0.00433	0.00441	0.00451	0.00455	0.00456	0.00452	0.00441	0.00424
3888191.25	0.00341	0.00346	0.00353	0.00362	0.00365	0.00366	0.00363	0.00352	0.00336
3888179.00	0.00280	0.00283	0.00287	0.00291	0.00295	0.00295	0.00290	0.00281	0.00270
3888167.00	0.00239	0.00239	0.00239	0.00241	0.00243	0.00241	0.00235	0.00226	0.00221
3888154.75	0.00209	0.00207	0.00205	0.00204	0.00204	0.00200	0.00192	0.00185	0.00182
3888142.75	0.00185	0.00182	0.00179	0.00177	0.00174	0.00168	0.00159	0.00154	0.00152
3888130.50	0.00165	0.00162	0.00159	0.00156	0.00150	0.00143	0.00134	0.00129	0.00129
3888118.50	0.00149	0.00146	0.00143	0.00139	0.00132	0.00123	0.00115	0.00111	0.00110
3888106.50	0.00135	0.00133	0.00129	0.00124	0.00117	0.00108	0.00101	0.00097	0.00095
3888094.25	0.00124	0.00121	0.00117	0.00111	0.00104	0.00096	0.00091	0.00087	0.00084
3888082.25	0.00114	0.00111	0.00106	0.00100	0.00093	0.00086	0.00082	0.00079	0.00076
3888070.00	0.00105	0.00101	0.00096	0.00090	0.00083	0.00078	0.00074	0.00072	0.00069
3888058.00	0.00097	0.00093	0.00087	0.00081	0.00075	0.00070	0.00068	0.00066	0.00064
3888045.75	0.00089	0.00085	0.00079	0.00073	0.00068	0.00064	0.00062	0.00060	0.00059
3888033.75	0.00082	0.00078	0.00072	0.00067	0.00062	0.00059	0.00057	0.00055	0.00054
3888021.50	0.00076	0.00071	0.00066	0.00061	0.00057	0.00055	0.00053	0.00051	0.00050
3888009.50	0.00070	0.00065	0.00060	0.00056	0.00053	0.00051	0.00049	0.00047	0.00046

TEHAHWAL
*** THE ANNUAL (1 YRS) AVERAGE CONCENTRATION
VALUES FOR SOURCE GROUP: ALL ***
INCLUDING SOURCE(S): L0000083, L0000084,
L0000085, L0000086, L0000087, L0000088, L0000089,
L0000090, L0000091, L0000092, L0000093, L0000094, L0000095, L0000096,
L0000097, L0000098, L0000099, L0000100, L0000101,
L0000102, L0000103, L0000104, VOL1 , VOL2 ,

*** NETWORK ID: UCART2 ; NETWORK TYPE: GRIDCART
***

** CONC OF OTHER IN MICROGRAMS/M**3
**

Y-COORD (METERS)	X-COORD (METERS) 366454.09	366464.22	366474.31
3888251.75	0.01243	0.01097	0.00990
3888239.50	0.00856	0.00777	0.00731
3888227.50	0.00646	0.00602	0.00576
3888215.25	0.00507	0.00483	0.00468
3888203.25	0.00407	0.00395	0.00389
3888191.25	0.00329	0.00326	0.00324
3888179.00	0.00265	0.00266	0.00268
3888167.00	0.00219	0.00219	0.00222
3888154.75	0.00183	0.00184	0.00186
3888142.75	0.00153	0.00156	0.00158
3888130.50	0.00130	0.00132	0.00135
3888118.50	0.00111	0.00113	0.00116
3888106.50	0.00096	0.00098	0.00100
3888094.25	0.00084	0.00085	0.00087
3888082.25	0.00075	0.00075	0.00077
3888070.00	0.00068	0.00068	0.00069
3888058.00	0.00062	0.00062	0.00062
3888045.75	0.00058	0.00057	0.00057
3888033.75	0.00053	0.00053	0.00053
3888021.50	0.00049	0.00049	0.00049
3888009.50	0.00046	0.00045	0.00045

 *** ISCST3 - VERSION 02035 *** *** C:\Data\TehahWal\TehahWal.isc
*** 05/21/09
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*** 11:19:36
**MODELOPTs:
PAGE 46
CONC RURAL ELEV DFAULT
NOCMPL

*** THE ANNUAL (1 YRS) AVERAGE CONCENTRATION
VALUES FOR SOURCE GROUP: ALL ***
INCLUDING SOURCE(S): L0000083, L0000084,
L0000085, L0000086, L0000087, L0000088, L0000089,
L0000090, L0000091, L0000092, L0000093, L0000094, L0000095, L0000096,
L0000097, L0000098, L0000099, L0000100, L0000101,
L0000102, L0000103, L0000104, VOL1 , VOL2 ,

*** NETWORK ID: UCART3 ; NETWORK TYPE: GRIDCART
***

** CONC OF OTHER IN MICROGRAMS/M**3
**

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   Y-COORD  |                                                X-COORD (METERS)
   (METERS) |     366710.75    366719.03    366727.31    366735.59    366743.88
366752.16    366760.44    366768.72    366777.00
- - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
- - - - - - - - - - - - - - - - - - - - - - - - -

 3888449.25 |       0.00264      0.00252      0.00238      0.00226      0.00215
0.00205      0.00194      0.00184      0.00176
 3888439.00 |       0.00263      0.00250      0.00240      0.00228      0.00214
0.00204      0.00196      0.00184      0.00175
 3888428.75 |       0.00265      0.00251      0.00238      0.00227      0.00215
0.00203      0.00195      0.00186      0.00177
 3888418.50 |       0.00264      0.00252      0.00239      0.00227      0.00216
0.00206      0.00196      0.00187      0.00180
 3888408.25 |       0.00261      0.00249      0.00239      0.00228      0.00216
0.00207      0.00199      0.00189      0.00181
 3888398.00 |       0.00259      0.00247      0.00236      0.00227      0.00217
0.00208      0.00200      0.00192      0.00184
 3888387.75 |       0.00257      0.00248      0.00237      0.00228      0.00219
0.00211      0.00203      0.00195      0.00188
 3888377.50 |       0.00257      0.00248      0.00239      0.00230      0.00220
0.00212      0.00205      0.00196      0.00189
 3888367.50 |       0.00258      0.00249      0.00241      0.00233      0.00224
0.00214      0.00207      0.00200      0.00192
 3888357.25 |       0.00258      0.00251      0.00244      0.00235      0.00227
0.00220      0.00211      0.00202      0.00194
 3888347.00 |       0.00257      0.00250      0.00243      0.00235      0.00227
0.00220      0.00213      0.00205      0.00194
 3888336.75 |       0.00255      0.00247      0.00240      0.00232      0.00225
0.00217      0.00211      0.00203      0.00195
 3888326.50 |       0.00251      0.00243      0.00235      0.00227      0.00220
0.00213      0.00206      0.00199      0.00193
 3888316.25 |       0.00241      0.00233      0.00225      0.00218      0.00210
0.00203      0.00197      0.00191      0.00184
 3888306.00 |       0.00224      0.00218      0.00211      0.00204      0.00197
0.00190      0.00184      0.00178      0.00172
 3888295.75 |       0.00202      0.00196      0.00191      0.00185      0.00179
0.00174      0.00168      0.00163      0.00158
 3888285.75 |       0.00178      0.00174      0.00169      0.00165      0.00161
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0.00141      0.00137      0.00134      0.00131
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0.00129      0.00127      0.00124      0.00122
 3888255.00 |       0.00135      0.00133      0.00130      0.00128      0.00126
0.00124      0.00122      0.00120      0.00117
 3888244.75 |       0.00137      0.00133      0.00131      0.00128      0.00126
0.00124      0.00122      0.00120      0.00117
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L0000085, L0000086, L0000087, L0000088, L0000089,
          L0000090, L0000091, L0000092, L0000093, L0000094, L0000095, L0000096,
L0000097, L0000098, L0000099, L0000100, L0000101,
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*** NETWORK ID: UCART3 ; NETWORK TYPE: GRIDCART ***

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3888285.75	0.00139	0.00135	0.00130	0.00126	0.00123	0.00121	0.00118	0.00115	0.00112
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3888244.75	0.00115	0.00113	0.00110	0.00107	0.00105	0.00102	0.00100	0.00098	0.00096

NOCMPL

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*** NETWORK ID: UCART3 ; NETWORK TYPE: GRIDCART ***

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*** DISCRETE CARTESIAN RECEPTOR POINTS ***

** CONC OF OTHER IN MICROGRAMS/M**3

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                    **

      X-COORD (M)   Y-COORD (M)        CONC                        X-COORD (M)
Y-COORD (M)         CONC
- - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
- - - - - - - - - - - - - - - - - - - - - - - - - - -
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        366325.81    3888522.75        0.00244                       366349.66
3888522.75        0.00361
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CONC                     RURAL ELEV         DFAULT
                      NOCMPL
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TEHAHWAL
*** THE SUMMARY OF MAXIMUM ANNUAL (1 YRS) RESULTS ***

** CONC OF OTHER IN MICROGRAMS/M**3 **

```
                  NETWORK
GROUP ID                      AVERAGE CONC                RECEPTOR  (XR, YR, ZELEV,
ZFLAG)   OF TYPE  GRID-ID
- - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
- - - - - - - - - - - - - - - - - -

WALMART  1ST HIGHEST VALUE IS       0.02274 AT (  366465.28,  3888281.75,   1207.00,
     0.00)  DC      NA
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     0.00)  DC      NA
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     0.00)  GC   UCART2
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     0.00)  GC   UCART2
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     0.00)  GC   UCART2
         9TH HIGHEST VALUE IS       0.01348 AT (  366363.13,  3888251.75,   1207.00,
     0.00)  GC   UCART2
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     0.00)  DC      NA
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     0.00)  DC      NA
        10TH HIGHEST VALUE IS       0.00490 AT (  366373.34,  3888544.75,   1203.78,
     0.00)  DC      NA

ALL      1ST HIGHEST VALUE IS       0.02356 AT (  366465.28,  3888281.75,   1207.00,
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     0.00)  DC      NA
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```

```
     0.00)  DC      NA
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     0.00)  DC      NA
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     0.00)  DC      NA
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     0.00)  DC      NA
        10TH HIGHEST VALUE IS       0.01556 AT (  366392.66,  3888259.00,   1207.00,
     0.00)  DC      NA


 *** RECEPTOR TYPES:  GC = GRIDCART
                      GP = GRIDPOLR
                      DC = DISCCART
                      DP = DISCPOLR
                      BD = BOUNDARY
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                       NOCMPL


*** Message Summary : ISCST3 Model Execution ***

 --------- Summary of Total Messages --------

A Total of            0 Fatal Error Message(s)
A Total of            1 Warning Message(s)
A Total of         2707 Informational Message(s)

A Total of         1894 Calm Hours Identified

A Total of          813 Cases Identified with HE > ZI


   ******** FATAL ERROR MESSAGES ********
              ***  NONE  ***


   ********   WARNING MESSAGES   ********
RE W282   440 CHK_EL:RecElev < SrcBase; See non-DFAULT HE>ZI option in  MCB#9

   ************************************
   *** ISCST3 Finishes Successfully ***
   ************************************
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Appendix E

Biology

Tehachapi Wal-Mart
Biological Resources Assessment

Prepared For:

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1920 Main Street
Suite 1150
Irvine, CA 92614
Contact: Farman Shir or Alicia Khine
(949) 296-0450

Prepared by:

Christopher A. Joseph & Associates
179 H Street
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April 13, 2009

CHRISTOPHER A. JOSEPH & ASSOCIATES
Environmental Planning and Research

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Appendix B: Trapping for the Tehachapi Pocket Mouse
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Appendix D: List of Animal Species Observed During Field Surveys
Appendix E: Representative Photographs of Property

LIST OF ABBREVIATED TERMS

APN	Assessor Parcel Number
BUOW	Burrowing owl
CAJA	Christopher A. Joseph & Associates
CDFG	California Department of Fish and Game
CESA	California Endangered Species Act
CEQA	California Environmental Quality Act
CFR	Code of Federal Regulations
City	City of Tehachapi
CNDDB	California Natural Diversity Database
CNPS	California Native Plant Society
Corps	U.S. Army Corps of Engineers
CWA	Clean Water Act
FAC	Facultative
FESA	Federal Endangered Species Act
MBTA	Migratory Bird Treaty Act
MSL	Mean Sea Level
MWA	Marcia Wolfe & Associates
NCCP	Natural Community Conservation Planning
NOAA Fisheries Service	National Oceanic and Atmospheric Administrations' National Marine Fisheries Service
NPPA	Native Plant Protection Act
NRCS	Natural Resource Conservation Service
SR	State Route
SWPPP	Storm Water Pollution Prevention Plan
State Water Board	State Water Resources Control Board
US	U.S. Route
USDA	U.S. Department of Agriculture
USEPA	U.S. Environmental Protection Agency
USFWS	U.S. Fish and Wildlife Service
Water Board	Regional Water Quality Control Board

1.0 INTRODUCTION

This report presents the results of Christopher A. Joseph & Associates' ("CAJA") biological resources assessment of the approximately 25-acre property proposed for development of Wal-Mart's Tehachapi Supercenter. The purpose of this assessment is to evaluate the potential impacts to biological resources resulting from the construction and operation of the Supercenter ("proposed project" or "project"). CAJA and its subcontractor (Marcia Wolfe & Associates ["MWA"]) conducted field surveys on the property in May, June, and July 2008. This report provides (1) a description of the physical characteristics of the property, (2) an account of vegetation communities and associated wildlife habitats present on the property, (3) a discussion of special-status plant and animal species and sensitive communities that are known to or that could potentially occur on the property, (4) an evaluation of the potential impacts to biological resources that may occur as a result of the project, and (5) recommendations to avoid or minimize the significance of those impacts. The evaluation of potential project impacts is consistent with the biological resources thresholds of significance in Appendix G of the California Environmental Quality Act ("CEQA") Guidelines.

1.1 Regional and Local Setting

The property proposed for development of the project is located in the City of Tehachapi ("City"), which lies within the inter-mountain area of Kern County between the San Joaquin Valley and the Mojave Desert (Figure 1). The City is approximately 45 miles southeast from Bakersfield and 50 miles northwest from Lancaster, and is generally bounded by the Sierra Nevada Mountains to the north and the Tehachapi Mountains to the south. As described in the City of Tehachapi General Plan (1999), this unique location along with the City's relatively high elevation (approximately 4,000 feet above mean sea level ["msl"]) has allowed Tehachapi to be known as the "Land of Four Seasons". Tehachapi can have all four seasons in the same day; it can be sunny and relatively warm in the morning, cloudy and windy by noon, and snowing by nightfall. The City is bisected by State Route ("SR") 58, which connects with major U.S. Routes ("US") 99 and 14. Neighboring communities of the City include Bear Valley Springs and Golden Hills to the northwest and Stallion Springs and Old Town to the southwest.

The property proposed for development of the project covers approximately 25 acres and is comprised of two parcels (Assessor Parcel Numbers ["APN"] 415-130-69 and 415-130-28) generally located south of Tehachapi Boulevard, north of Valley Boulevard, and east of Tucker Road (also referred to as SR 202) in west Tehachapi (Figure 2). Access to the property is provided by an unnamed dirt road off of Tucker Road. The parking lot of the Tehachapi Junction Shopping Center north of the property also provides access to the property. The property is generally bounded by commercial development to the north, residential development to the south and west, and undeveloped lands to the east.

Source: Kern County, ESRI Streetmap and Christopher A. Joseph & Associates; July 2008.

CHRISTOPHER A. JOSEPH & ASSOCIATES
Environmental Planning and Research

Figure 1 - Regional Vicinity Map
Tehachapi Wal-Mart
City of Tehachapi, California
July 2008

Source: Kern County, ESRI Imagery and Christopher A. Joseph & Associates; July 2008.

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Environmental Planning and Research

Figure 2 – Project Location Map
Tehachapi Wal-Mart
City of Tehachapi, California
July 2008

2.0 REGULATORY SETTING

The following discussion identifies federal, state, and local environmental regulations that serve to protect sensitive biological resources relevant to the proposed project and CEQA review process.

2.1 Federal

2.1.1 Federal Endangered Species Act

The Federal Endangered Species Act ("FESA") of 1973, as amended, provides the regulatory framework for the protection of plant and animal species (and their associated critical habitats), which are formally listed, proposed for listing, or candidates for listing as endangered or threatened under the FESA. The FESA has the following four major components: (1) provisions for listing species, (2) requirements for consultation with the U.S. Fish and Wildlife Service ("USFWS") and the National Oceanic and Atmospheric Administration's National Marine Fisheries Service ("NOAA Fisheries Service"), (3) prohibitions against "taking" (meaning harassing, harming, hunting, shooting, wounding, killing, trapping, capturing, or collecting, or attempting to engage in any such conduct) of listed species, and (4) provisions for permits that allow incidental "take". The FESA also discusses recovery plans and the designation of critical habitat for listed species. Both the USFWS and the NOAA Fisheries Service share the responsibility for administration of the FESA. During the CEQA review process, each agency is given the opportunity to comment on the potential of the proposed project to affect plants and animals listed, proposed for listing, or candidate for listing.

2.1.2 Clean Water Act Section 404 and 401

The U.S. Army Corps of Engineers ("Corps") and the U.S. Environmental Protection Agency ("USEPA") regulate the discharge of dredged or fill material into waters of the United States, including wetlands, under Section 404 of the Clean Water Act ("CWA") (33 U.S.C. 1344). Waters of the United States are defined in Title 33 CFR Part 328.3(a) and include a range of wet environments such as lakes, rivers, streams (including intermittent streams), mudflats, sandflats, wetlands, sloughs, prairie potholes, wet meadows, playa lakes, or natural ponds. The lateral limits of jurisdiction in those waters may be divided into three categories – territorial seas, tidal waters, and non-tidal waters – and is determined depending on which type of waters is present (Title 33 CFR Part 328.4(a), (b), (c)). Activities in waters of the United States regulated under Section 404 include fill for development, water resource projects (e.g., dams and levees), infrastructure developments (e.g., highways and airports) and mining projects. Section 404 of the CWA requires a federal license or permit before dredged or fill material may be discharged into waters of the United States, unless the activity is exempt from Section 404 regulation (e.g., certain farming and forestry activities).

Section 401 of the CWA (33 U.S.C. 1341) requires any applicant for a federal license or permit to conduct any activity that may result in a discharge of a pollutant into waters of the United States to obtain a certification from the state in which the discharge originates or would originate, or, if appropriate, from the interstate water pollution control agency having jurisdiction over the affected waters at the point where the discharge originates or would originate. The discharge is required to comply with the

applicable effluent limitations and water quality standards. A certification obtained for the construction of any facility must also pertain to the subsequent operation of the facility. The responsibility for the protection of water quality in California rests with the State Water Resources Control Board ("State Water Board") and its nine Regional Water Quality Control Boards ("Water Boards").

2.1.3 Fish and Wildlife Coordination Act

The Fish and Wildlife Coordination Act (16 U.S.C. Sections 661-667e, March 10, 1994, as amended 1946, 1958, 1978, and 1995) requires that whenever waters or channel of a stream or other body of water are proposed or authorized to be modified by a public or private agency under a federal license or permit, the federal agency must first consult with the USFWS and/or NOAA Fisheries Service and with the head of the agency exercising administration over the wildlife resources of the state where construction will occur (in this case the California Department of Fish and Game ["CDFG"]), with a view to conservation of birds, fish, mammals and all other classes of wild animals and all types of aquatic and land vegetation upon which wildlife is dependent.

2.1.4 The Migratory Bird Treaty Act

The Federal Migratory Bird Treaty Act ("MBTA") (16 U.S.C. 703 et seq.), Title 50 Code of Federal Regulations ("CFR") Part 10, prohibits taking, killing, possessing, transporting, and importing of migratory birds, parts of migratory birds, and their eggs and nests, except when specifically authorized by the Department of the Interior. As used in the act, the term "take" is defined as meaning, "to pursue, hunt, capture, collect, kill or attempt to pursue, hunt, shoot, capture, collect or kill, unless the context otherwise requires." With a few exceptions, most birds are considered migratory under the MBTA. Disturbances that causes nest abandonment and/or loss of reproductive effort or loss of habitat upon which these birds depend would be in violation of the MBTA.

2.2 State

2.2.1 California Endangered Species Act

The State of California enacted similar laws to the FESA, the California Native Plant Protection Act ("NPPA") in 1977 and the California Endangered Species Act ("CESA") in 1984. The CESA expanded upon the original NPPA and enhanced legal protection for plants, but the NPPA remains part of the California Fish and Game Code. To align with the FESA, CESA created the categories of "threatened" and "endangered" species. It converted all "rare" animals into the CESA as threatened species, but did not do so for rare plants. Thus, these laws provide the legal framework for protection of California-listed rare, threatened, and endangered plant and animal species. The CDFG implements NPPA and CESA, and its Wildlife and Habitat Data Analysis Branch maintains the California Natural Diversity Database ("CNDDB"), a computerized inventory of information on the general location and status of California's rarest plants, animals, and natural communities. During the CEQA review process, the CDFG is given the opportunity to comment on the potential of the proposed project to affect listed plants and animals.

2.2.2 Fully Protected Species and Species of Special Concern

The classification of "fully protected" was the CDFG's initial effort to identify and provide additional protection to those animals that were rare or faced possible extinction. Lists were created for fish, amphibian and reptiles, birds, and mammals. Most of the species on these lists have subsequently been listed under CESA and/or FESA. The Fish and Game Code sections (fish at §5515, amphibian and reptiles at §5050, birds at §3511, and mammals at §4700) dealing with "fully protected" species states that these species "…may not be taken or possessed at any time and no provision of this code or any other law shall be construed to authorize the issuance of permits or licenses to take any fully protected species," (CDFG Fish and Game Commission 1998) although take may be authorized for necessary scientific research. This language makes the "fully protected" designation the strongest and most restrictive regarding the "take" of these species. In 2003, the code sections dealing with fully protected species were amended to allow the CDFG to authorize take resulting from recovery activities for state-listed species.

Species of special concern are broadly defined as animals not listed under the FESA or CESA, but which are nonetheless of concern to the CDFG because are declining at a rate that could result in listing or historically occurred in low numbers and known threats to their persistence currently exist. This designation is intended to result in special consideration for these animals by the CDFG, land managers, consulting biologist, and others, and is intended to focus attention on the species to help avert the need for costly listing under FESA and CESA and cumbersome recovery efforts that might ultimately be required. This designation also is intended to stimulate collection of additional information on the biology, distribution, and status of poorly known at-risk species, and focus research and management attention on them. Although these species generally have no special legal status, they are given special consideration under the CEQA during project review.

2.2.3 California Fish and Game Code Sections 3503 and 3513

According to Section 3503 of the California Fish and Game Code it is unlawful to take, possess, or needlessly destroy the nest or eggs of any bird (except English Sparrow (*Passer domesticus*) and European Starling (*Sturnus vulgaris*)). Section 3503.5 specifically protects birds in the orders Falconiformes and Strigiformes (birds-of-prey). Section 3513 essentially overlaps with the MTBA, prohibiting the take or possession of any migratory non-game bird. Disturbance that causes nest abandonment and/or loss of reproductive effort is considered "take" by the CDFG.

2.2.4 Other Sensitive Plants – California Native Plant Society

The California Native Plant Society ("CNPS"), a non-profit plant conservation organization, publishes and maintains an Inventory of Rare and Endangered Vascular Plants of California in both hard copy and electronic version (www.cnps.org/rareplants/inventory/6thedition.htm). The Inventory assigns plants to the following categories:

- 1A – Presumed extinct in California;
- 1B – Rare, threatened, or endangered in California and elsewhere;

- 2 – Rare, threatened, or endangered in California, but more common elsewhere;
- 3 – Plants for which more information is needed – A review list; and
- 4 – Plants of limited distribution – A watch list.

Additional endangerment codes are assigned to each taxon as follows:

- .1 – Seriously endangered in California (over 80% of occurrences threatened/high degree of immediacy of threat).
- .2 – Fairly endangered in California (20-80% occurrences threatened).
- .3 – Not very endangered in California (<20% of occurrences threatened or no current threats known).

Plants on Lists 1A, 1B, and 2 of the CNPS Inventory consist of plants that may qualify for listing, and the CDFG, as well as other state agencies (e.g., California Department of Forestry and Fire Protection), and the CNPS recommends these plants be given special consideration under CEQA during project review. In addition, the CDFG and CNPS recommend, and local governments may require, consideration of plants on List 3 and 4 during project review.

2.2.5 Other Sensitive Species – NatureServe

NatureServe is a non-profit conservation organization whose mission is to provide a scientific basis for effective conservation action. NatureServe and its natural heritage member programs have developed a method for evaluating the relative imperilment of both species and ecological communities. These assessments lead to the designation of a conservation status rank, which are a valuable complement to legal status designations assigned by government agencies such as the USFWS and the NOAA Fisheries Service in administering the FESA. NatureServe conservation status ranks, and the documentation that support them, are often used by such agencies in making official determinations, particularly in the identification of candidates for future legal protection.

The conservation status of a species or community is designated by a number from 1 to 5, preceded by a letter reflecting the appropriate geographic scale of the assessment (G = Global, N = National, and S = Subnational). The numbers have the following meaning:

- 1 - Critically imperiled (at very high risk of extinction due to extreme rarity [often 5 or fewer populations], very steep declines, or other factors).
- 2 - Imperiled (at high risk of extinction due to very restricted range, very few populations [often 20 or fewer], steep declines, or other factors).
- 3 - Vulnerable to extirpation or extinction (at moderate risk of extinction due to a restricted range, relatively few populations [often 80 or fewer], recent and widespread declines, or other factors).

- 4 - Apparently secure (uncommon but not rare; some cause for long-term concern due to declines or other factors).
- 5 - Demonstrably widespread, abundant, and secure (common; widespread and abundant).

For example, G1 would indicate that a species is critically imperiled across its entire range (i.e., globally). In this sense the species as a whole is regarded as being at very high risk of extinction. A rank of S3 would indicate the species is vulnerable and at moderate risk within a particular state or province, even though it may be more secure elsewhere. The letters have the following significance:

- G - Global (global-wide assessment of condition).
- N - National (condition in a particular country).
- S - Subnational (status in a particular state or province).

Extinct or missing species and ecological communities are designed with the following letters:

- X - Presumed extinct/extirpated; or
- H - Possibly extinct or extirpated.

Other ranks include:

- ? - Represents rank uncertainty; and
- NR - Not ranked.

Infraspecific taxa refer to subspecies, varieties and other designations below the level of the species. T-ranks apply to plants and animal species only.

For plant and animal species the list of ranks provides an estimate of extinction risk, while for ecological communities they provide an estimate of the risk of elimination. There is currently no conservation status ranks determined for ecological systems. The NatureServe database is less detailed than that of the CNDDB where the emphasis is on rare and endangered species and communities, whereas the CNDDB concerns California's endangered, threatened, and rare plants, animals, and natural communities.

2.2.6 Porter-Cologne Water Quality Control Act

Waters of the State are defined by the Porter-Cologne Act as “any surface water or groundwater, including saline waters, within the boundaries of the state.” The State Water Board protects all waters in its regulatory scope, but has special responsibility for isolated wetlands and headwaters. These waterbodies have high resource value, are vulnerable to filling, and may not be regulated by other programs, such as Section 404 of the CWA. Waters of the State are regulated by the Water Boards under the State Water Quality Certification Program, which regulates discharges of dredged and fill material under Section 401 of the CWA and the Porter-Cologne Water Quality Control Act. Projects that require a Corps permit, or fall under other federal jurisdiction, and have the potential to impact Waters of the State

are required to comply with the terms of the Water Quality Certification Program. If a proposed project does not require a federal license or permit, but does involve activities that may result in a discharge of harmful substances to Waters of the State, the Water Boards have the option to regulate such activities under its state authority in the form of Waste Discharge Requirements or Certification of Waste Discharge Requirements.

2.2.7 California Fish and Game Code Section 1600

Streams, lakes, and riparian vegetation as habitat for fish and other wildlife species, are subject to jurisdiction by the CDFG under Sections 1600-1616 of the California Fish and Game Code. Any activity that will do one or more of the following: (1) substantially obstruct or divert the natural flow of a river, stream, or lake; (2) substantially change or use any material from the bed, channel, or bank of a river, stream, or lake; or (3) deposit or dispose of debris, waste, or other material containing crumbled, flaked, or ground pavement where it can pass into a river, stream, or lake generally require a 1602 Lake and Streambed Alteration Agreement. The term "stream", which includes creeks and rivers, is defined in the California Code of Regulations ("CCR") as follows: "a body of water that flows at least periodically or intermittently through a bed or channel having banks and supports fish or other aquatic life". This includes watercourses having a surface or subsurface flow that supports or has supported riparian vegetation" (14 CCR 1.72). In addition, the term stream can include ephemeral streams, dry washes, watercourses with subsurface flows, canals, aqueducts, irrigation ditches, and other means of water conveyance if they support aquatic life, riparian vegetation, or stream-dependent terrestrial wildlife (CDFG ESD 1994). Riparian is defined as "on, or pertaining to, the banks of a stream;" therefore, riparian vegetation is defined as, "vegetation which occurs in and/or adjacent to a stream and is dependent on, and occurs because of, the stream itself" (CDFG ESD 1994). Removal of riparian vegetation also requires a Section 1602 Lake and Streambed Alteration Agreement from the CDFG.

2.2.8 Sensitive Vegetation Communities

Sensitive vegetation communities are natural communities and habitats that are either unique, of relatively limited distribution in the region, or of particularly high wildlife value. However, these communities may or may not necessarily contain special-status species. Sensitive natural communities are usually identified in local or regional plans, policies or regulations, or by the CDFG (i.e., CNDDB) or the USFWS. Impacts to sensitive natural communities and habitats must be considered and evaluated under the CEQA (CCR: Title 14, Div. 6, Chap. 3, Appendix G).

2.3 Local

Local agencies, such as the City of Tehachapi Planning Department and the Department of Public Works, aid in the protection and preservation of sensitive natural resources in exercising land use controls. The Conservation Element of the City of Tehachapi General Plan (1999), combined with other General Plan Update Elements, strives to achieve this control in defining certain goals, objectives, and polices for the conservation of sensitive natural resources. Relevant goals, objectives, and polices are presented below, and the identification of such goals, objectives, and policies are consistent with that outlined in the Conservation Element of the City's General Plan.

Goals

2. Fulfill the responsibilities of each generation as trustee of natural resources for succeeding generation.

4. Attain the widest range of beneficial uses of the natural resources without degradation, risk to health or safety, or other undesirable and unintended consequences.

6. Achieve a balance between population and natural resource use, which will permit high standards of living and a wide sharing of life's amenities.

11. Express interest in the forestland and work with various agencies for the conservation and development of this resource, and support the replanting of forests for their future multiple use benefits.

14. Encourage state researchers to find new ways to provide and manage fisheries and to develop new techniques for establishing recreational fishing areas.

16. Promote the survival of indigenous wildlife species, and reduce the loss of key wildlife habitat to uses that are detrimental to wildlife types.

17. Properly utilizes wildlife resources for recreational benefits.

20. Preserve natural areas having unique and/or endangered plant types or plant communities.

21. Promote conservation, development and utilization of natural resources, which includes flora, fauna, wildlife and other natural resources in the City of Tehachapi.

Objective 1: Maintain existing significant vegetation on present and future public and private properties throughout the City.

Policies

b. Encourage property owners to maintain existing vegetation on developed sites and replace unhealthy or dead landscape.

c. Encourage developers to incorporate mature and specimen trees and other significant vegetation, which may exist on a site into the design of a development project for that site.

d. Require that new development incorporate adequate landscape in accordance with land use amenity policies.

e. Encourage the use of fruit bearing trees and vegetable gardens in private development projects.

Objective 6: Encourage the conservation and protection of natural resources within the City of Tehachapi.

Policies

a. Cooperate with federal, state, and county governments and local agencies concerning the maintenance and improvement of the quality and quantity of local and regional groundwater resources.

b. Reduce per capita water consumption by requiring the use of drought tolerant landscapes in new developments and encourage the replacement of existing non-native and water consumptive landscapes.

n. Projects which meet the City of Tehachapi's Thresholds of Significance for biological resources or are known to possess listed plant and animal species will be required to have a biological investigation if such species may be present. Federal and state protocols and requirements shall be used for such surveys and needed mitigation.

o. Regulate the type and design of new projects that may eliminate natural (permeable) surface and interfere with ground water recharge, open areas or landscaping coverage as prescribed.

Biological:

1. Propagate and protect fish and game by maintaining and improving wildlife habitats.

2. Acquire and improve land and water areas for conservation purposes.

3. Watershed management of which the forests are an integral part indirectly affects the water supply of the City. The City will also support and assist the various agencies which have jurisdiction over the forestland to conserve and develop the forestlands for the benefit and enjoyment of the citizens.

4. Encourage the state to take all possible measures to protect and improve the management of fisheries.

5. Expand pollution control efforts to improve water quality for fish.

6. The preservation of all species of animals is deemed essential to the citizens of the City. Public and private owners of wildlife habitat are encouraged to operate these areas in a manner that reflects good management principles and conserves the wildlife habitat.

7. Within the sphere of interest of the City, the Planning Commission in the decision-making process will review the effect of land use projects on wildlife habitat. Land uses known to be detrimental to wildlife habitats will be guided, if feasible, to other areas where such use would not be detrimental to wildlife.

8. Land use activities in important wildlife habitat areas should be restricted to that which is tolerable by the wildlife inhabitants.

10. Areas containing unique plant life should be restricted or human use activities minimized so uses will not be detrimental to plant types.

3.0 METHODS

The analysis of potential biological resources impacts associated with the development and operation of the proposed project involved a review of available background information pertaining to biological resources on and in the vicinity of the property and completion of field surveys by CAJA and MWA. The methods of the background review and field surveys are summarized below. The specific methods associated with MWA's studies conducted on the property and referenced in this report are given in the *Reconnaissance Survey for the Tehachapi Pocket Mouse for the Wal-Mart Project* and *Trapping for the Tehachapi Pocket Mouse for the Wal-Mart Project*, which are included as Appendix A and Appendix B, respectively, of this report. Also, the specific methods used to assess the existing conditions of the property (i.e., assessment of the plant communities and wildlife habitats and their potential to support special-status species and sensitive natural communities) are described in more detail at the beginning of each appropriate subsection in Section 4.0 (Existing Conditions) below.

3.1 Background Review

Prior to conducting field surveys, CAJA reviewed available background information pertaining to the biological resources on and in the vicinity of the property proposed for development of the project. The following information was reviewed:

- California Department of Fish and Game's ("CDFG") California Natural Diversity Database ("CNDDB") record search of the Tehachapi North (212B), Tehachapi South (212C), Monolith (212D), Cummings Mountain (213D), Keene (213A), and Tehachapi NE (212A) USGS 7 ½ Minute Quadrangles;
- California Native Plant Society' ("CNPS") Electronic Inventory search of the Tehachapi North (212B), Tehachapi South (212C), Monolith (212D), Cummings Mountain (213D), Keene (213A), and Tehachapi NE (212A) USGS 7 ½ Minute Quadrangles;
- U.S. Fish and Wildlife Service ("USFWS") list of Federal Endangered and Threatened Species that Occur in or May be Affected by Projects in the Tehachapi North (212B) USGS 7 ½ Minute Quad;
- U.S. Department of Agricultural ("USDA") Natural Resource Conservation Service ("NRCS") web soil survey;
- U.S. Fish and Wildlife Service ("USFWS") National Wetlands Inventory ("NWI") for the Tehachapi North Quadrangle; and
- The City of Tehachapi General Plan.

3.2 Field Surveys

Reconnaissance-level and focused field surveys were conducted on the property, including a general biological resources survey, a focused special-status plant survey, and reconnaissance-level and focused Tehachapi pocket mouse (*Perognathus alticolus inexpectatus*) surveys. CAJA conducted the general biological resources survey on May 15, 2008. Because the timing of this survey coincided with the spring blooming season for flowering plants, the first of two focused special-status plant surveys was conducted simultaneously. The purpose of the general biological resources survey was to assess the existing conditions of the property, including characterizing and delineating the vegetation communities and associated wildlife habitats and evaluating the potential for these habitats to support special-status species and sensitive communities. The purpose of the focused special-status plant survey was to confirm the presence or absence of special-status plant species on the property. An additional field survey was conducted by CAJA on June 12, 2008 for special-status plants. MWA conducted a reconnaissance-level survey for the Tehachapi pocket mouse on June 27, 2008. Focused surveys (i.e., trapping surveys) for the Tehachapi pocket mouse were conducted on July 7, 2008, July 8, 2008, July 9, 2008, and July 10, 2008. The purposes of these surveys were to evaluate the potential of the habitats on the property to support the Tehachapi pocket mouse and to determine the presence or absence of the Tehachapi pocket mouse. As previously discussed, the Tehachapi pocket mouse reconnaissance-level and focused surveys are presented in individual reports included in Appendix A and Appendix B of this report; however, this report includes the findings associated with these surveys.

During the general biological resources and focused special-status plant surveys, Shannon Lucas (CAJA, Principal Biologist), assisted by Aindrea Jensen (CAJA, Senior Biologist), traversed the entire property on foot, through all vegetation communities present on the property, listing all plants and animals (or their sign [e.g., tracks, burrows, scat, and other distinctive evidence]) encountered and delineating the vegetation communities and associated wildlife habitats present. Any plant species that was not identifiable in the field was collected and keyed in the laboratory. A list of all of the plant and animal species identified on the property during these surveys is included in Appendix C and Appendix D, respectively, of this report.

4.0 EXISTING CONDITIONS

The following provides a description of the physical characteristics, vegetation communities and associated wildlife habitats, wildlife movement corridors, sensitive natural communities, special-status species, and jurisdictional wetlands and other waters present or potentially present on the property. Representative photographs of the property are included in Appendix E of this report.

4.1 Physical Characteristics

The property proposed for development of the project is currently undeveloped and is characterized by its relatively flat terrain with undulating topography along the eastern property boundary. Past grading or other ground disturbing activities appear to have significantly influenced the existing terrain (as well as the existing vegetation) as there is an engineered slope along the northern property boundary fronting the Tehachapi Junction Shopping Center, two retention basins in the south-central portion of the property,

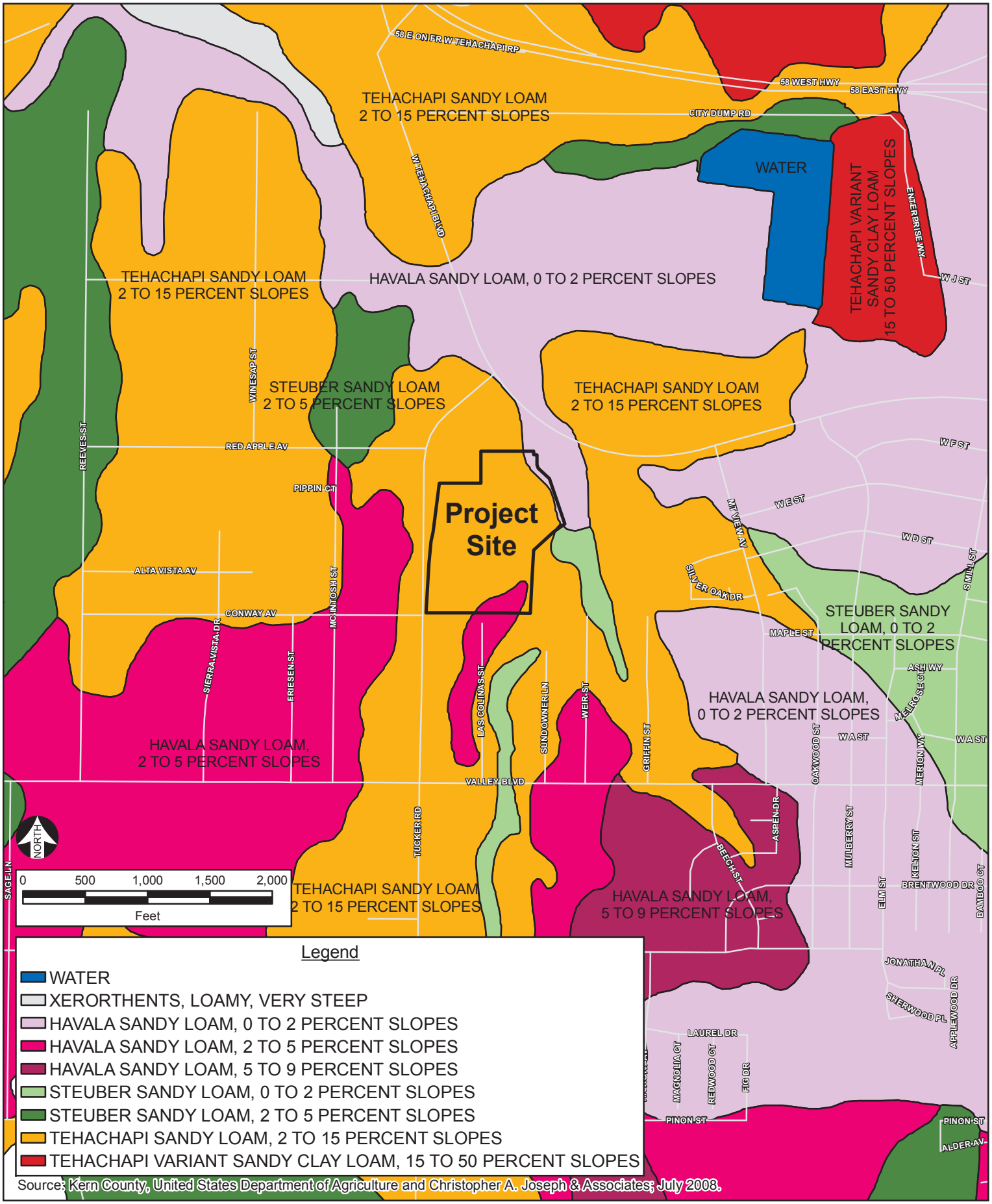
and several dirt roads throughout the property. The undulating topography along the eastern property boundary descends to an unnamed tributary to Tehachapi Creek, which is located east of the property boundary. Elevations on the property range from a low of about 3,930 feet msl to a high about 3,960 feet msl.

The U.S. Department of Agriculture ("USDA") Natural Resource Conservation Service ("NRCS") has mapped the following four soil units on the property: Havala Sandy Loam, 0 to 2 Percent Slopes; Havala sandy loam, 2 to 5 percent slopes; Steuber sandy loam, 0 to 2 percent slopes; and Tehachapi sandy loam, 2 to 15 percent slopes (Figure 3). Soil units belonging to the Havala series, Steuber series, and Tehachapi series consist of deep, well-drained soils that formed from mixed alluvium. The Havala soils are on alluvial fans and terraces in mountain valleys and canyons while the Steuber soils are on alluvial fans and stream flood plains and Tehachapi soils are on alluvial fans and stream terraces. Runoff on the Havala and Tehachapi soils is slow to moderate and on the Steuber soils is medium, and permeability is moderately slow on the Havala soils, moderately rapid on the Steuber soils, and slow on the Tehachapi soils,. The natural vegetation typically supported by the Havala, Steuber, and Tehachapi soils are annual grasses and forbs with scattered oaks (e.g., live oak [*Quercus lobata*], blue oak [*Quercus douglasii*], white oak [*Quercus alba*]). The specific vegetation supported by these soils on the property is described in the following section.

4.2 Vegetation Communities & Associated Wildlife Habitats

The vegetation communities identified on the property are broadly classified as general units (e.g., grassland, scrubland, etc.). However, where applicable, a natural community described in the *Preliminary Descriptions of the Terrestrial Natural Communities of California* (Holland 1986) and a compatible community or "series" described in *A Manual of California Vegetation* (Sawyer and Keeler-Wolf 1995) are identified which most closely match the general units, as both these classification systems are currently being used by the CNDDB (recognized below by the CNDDB vegetation code). Also, some of the vegetation communities are classified as a habitat because they are defined as much by their physical conditions as by their plant species composition or lack of plants (e.g., disturbed upland).

In general, the vegetation communities on the property appear to have been significantly influenced by past disturbance activities (e.g., grading, recreational uses, etc.). The dominant vegetation communities and associated wildlife habitats identified on the property include grassland and scrubland. Additionally, areas of disturbed uplands (or barren areas) are present. The vegetation communities and associated wildlife habitats on the property are described below and illustrated in Figure 4.



Source: Kern County, United States Department of Agriculture and Christopher A. Joseph & Associates; July 2008.

CHRISTOPHER A. JOSEPH & ASSOCIATES
Environmental Planning and Research

Figure 3 – Mapped Soil Units
Tehachapi Wal-Mart
City of Tehachapi, California
July 2008

4.2.1 Grassland

Grassland occupies a total of approximately 10 acres of the property, most of which is found in the northern portion of the property where the majority of past grading or other ground disturbing activities appear to have occurred (refer to Figure 4). The grassland cover varies from sparsely to densely vegetated, and extends into the understory of the adjacent scrubland. This community most closely matches the California Annual Grassland (CNDDB vegetation code 42.040.00) natural community listed by the CNDDB, and is dominated by non-native grasses and forbs, such as barley (*Hordeum murinum*), black mustard (*Brassica nigra*), cheat grass (*Bromus tectorum*), horehound (*Marrubium vulgare*), ripgut grass (*Bromus diandrus*), and yellow star thistle (*Centaurea solstitialis*). Several native grasses and forbs also occur in this community, such as squirrel tail (*Elymus elymoides*), blow wives (*Achyrachaena mollis*), California poppy (*Eschscholzia californica*), Jacumba milkvetch (*Astragalus douglasii* var. *douglasii*) and needlegrass (*Nassella sp.*).

Grasslands provide habitat for a number of wildlife species, from insects and spiders to large mammals. Wildlife species typically found in grasslands are those that have adapted to dry, windy conditions. These are grazing species, burrowing species, and their predators; insects and spiders are abundant. Some of these species forage in grasslands and retreat to the protective cover of the surrounding habitats (e.g., woodland, chaparral, scrub) for shelter and nesting, while other disperse through this habitat. Wildlife species or their sign observed on the property during field surveys include mammals, such as black-tailed jackrabbit (*Lepus californicus*), California ground squirrel (*Spermophilus beecheyi*), and desert cottontail (*Sylvilagus audubonii*); birds, such as American Crow (*Corvus brachyrhynchos*) and Common Raven (*Corvus conrax*); lizards, such as common side-blotched lizard (*Uta stansburiana*); and butterflies, such as painted ladies (*Vanessa cardui*).

4.2.2 Scrubland

Scrubland forms the dominant vegetation community over most of the property. The scrubland community covers approximately 13 acres of the property, most of which is found in the southern portion of the property (refer to Figure 4). This community most closely matches the rabbitbrush scrub (CNDDB vegetation code 35.300.00) natural community listed by the CNDDB, and more specifically the rubber rabbitbrush series (CNDDB vegetation code 35.310.00). White-stemmed rabbitbrush (*Chysothamnus nauseosus* ssp. *albicaulis*) is the dominant shrub in this community, and where there is considerable space between the shrubs, grasses and forbs found in the annual grassland occupy the understory.

Although the forage value of rubber rabbitbrush varies among subspecies and ecotypes, the forage value of this habitat is generally considered poor to wildlife species. It has low palatability and is commonly avoided by wildlife species if more palatable plants are available. The cover value of rubber rabbitbrush is also considered poor for larger mammal species, as the hiding/escape cover, thermal cover, and fawning cover is of little importance. However, rubber rabbitbrush does provide good cover for several species of nesting birds and small mammals and insects and spiders. Wildlife species or their sign observed on the property during field surveys include mammals, such as black-tailed jackrabbit; birds such as American Crow and House Sparrow (*Passer domesticus*), and butterflies, such as painted ladies.

Source: Kern County, Google Earth and Christopher A. Joseph & Associates; July 2008.

CHRISTOPHER A. JOSEPH & ASSOCIATES
Environmental Planning and Research

Figure 4 - Vegetation Communities & Associated Wildlife Habitats
Tehachapi Wal-Mart
City of Tehachapi, California
July 2008

4.2.3 Disturbed Upland

Approximately two acres of the property are disturbed uplands. This habitat occurs where vegetation was previously removed by grading or other ground disturbing activities and has not yet been re-colonized by annual grassland and/or rubber rabbitbrush scrub species. The majority of this habitat is currently barren and the soils are fairly compacted. The disturbed upland is located in the northern of the property along Tehachapi Boulevard (refer to Figure 4). Given the connectivity with the other communities on the property, many of the wildlife species using these habitats may occasionally disperse through the disturbed upland.

4.3 Wildlife Movement Corridors

The movement and migration of wildlife species has been substantially altered due to habitat fragmentation over the past century. This fragmentation has most commonly been caused by development, which can result in large patches of land becoming inaccessible and forming a virtual barrier between undeveloped areas, or resulting in additional roads which, although narrow, may result in barriers to smaller or less mobile wildlife species. Habitat fragmentation results in isolated islands of habitat, which affects wildlife behavior, foraging activity, reproductive patterns, immigration and emigration or dispersal capabilities, and survivability.

Wildlife corridors play an important role in countering habitat fragmentation. A wildlife corridor is a linear landscape element which serves as a linkage between historically connected habitats or landscapes that are otherwise separated (McEuen 1993) and is meant to provide avenues along which wildlife can travel, migrate, and meet mates; plants can propagate; genetic interchange can occur; populations can move in response to environmental changes and natural disasters; and individuals can re-colonize habitats from which populations have been locally extirpated (Beir and Loe 1992). Corridors can consist of a sequence of stepping-stones across the landscape (i.e., discontinuous areas of habitat such as isolated wetlands and roadside vegetation), continuous lineal strips of vegetation and habitat (e.g., riparian strips and ridge lines), or they may be parts of larger habitat areas selected for its known or likely importance to local wildlife.

Although limited wildlife movement may occur between the habitats on the property and those to the east, such movement is unlikely to the north, south, and west of the property due to the surrounding land uses. Additionally, SR 58 (located approximately a half mile north of the property) is identified as a major barrier to wildlife movement (California Wilderness Coalition 2001). For these reasons, the property does not serve as a continuous regional connection for wildlife species. However, the habitats on the property may provide stepping stone linkages for birds and insects during migration, although the property is not unique in this respect, as there are other properties in the general vicinity that may serve the same purpose.

4.4 Sensitive Communities

Based on a search of the CNDDB occurrences, there are no sensitive natural communities recorded in the vicinity of the property (CDFG 2008). Additionally, the property does not support oak woodlands,

riparian, or wetlands or other waters, which are considered sensitive by the regulatory and resource agencies. The two retention basins previously discussed in the south-central portion of the property do not appear to be inundated or saturated by surface or groundwater at a frequency or duration sufficient to support a prevalence of vegetation typically adapted to life in saturated soil conditions. Although rush (*Juncus sp.*) and wooly marbles (*Psilocarphus tenellus* var. *tenellus*), species which typically have an equal likelihood of occurring in both wetlands and non-wetlands (Plant Indicator Status of Facultative ["FAC"]), were observed during field surveys within the basins, the plant species composition did not differ substantially from the surrounding vegetation. Other species observed in the basin included species such as those grasses and forbs found in the annual grassland, as well as shrubs found in the scrubland.

4.5 Special-Status Plant & Animal Species

For the purposes of this assessment, special-status species include: those plant and animals listed, proposed for listing, or candidates for listing as threatened or endangered by the USFWS or NOAAA Fisheries Service under the FESA; those listed or proposed for listing as rare, threatened or endangered by the CDFG under CESA; animals designated as "Fully Protected" or "Species of Special Concern" by the CDFG; birds protected by the USFWS under the MTBA and/or by the CDFG under Fish and Game Code Sections 3503 and 3513; and plants occurring on List 1A, List 1B, List 2, List 3, and List 4 of the CNPS Inventory.

The potential occurrence of special-status plant and animal species on the property was initially evaluated by developing a list of special-status species that are known to or have the potential to occur in the vicinity of the property based on a search of current database records (e.g., CNDDB and CNPS Electronic Inventory records) and review of the USFWS list of federal endangered and threatened species. The potential for occurrence of those species included on the list were then evaluated based on the habitat requirements of each species relative to the conditions observed during the field surveys conducted by CAJA and MWA, as well as informal consultation with governmental and non-governmental agencies, and other consulting biologists. Each species was evaluated for its potential to occur on the property according to the following criteria:

> *Not Expected:* There is no suitable habitat present on the property (i.e., habitats on the property are clearly unsuitable for the species requirements [e.g., foraging, breeding, cover, substrate, elevation hydrology, plant community, disturbance regime, etc.]). The species has an extremely low probability of being found on the property.
>
> *Low Potential:* Limited suitable habitat is present on the property (i.e., few of the habitat components meeting the species requirements are present and/or the majority of habitat on the property is unsuitable or of very low quality). Additionally, there are no or few recent known records of occurrence in the vicinity of the property. The species has a low probability of being found on the property.
>
> *Moderate Potential*. Suitable habitat is present on the property (i.e., some of the habitat components meeting the species requirements are present and/or the majority of the habitat on the property is suitable or of marginal quality). Additionally, there are few or many recent known

records of occurrences in the vicinity of the property. The species has a moderate probability of being found on the property.

High Potential: Highly suitable habitat is present on the property (i.e., all habitat components meeting the species requirements are present and/or all of the habitat on the property is highly suitable or of high quality). Additionally, there are few or many recent known records of occurrences in the vicinity of the property. This species has a high probability of being found on the property.

Present. Species was observed on the property (i.e., species was either observed during recent surveys or has a recorded observation in the CNDDB on the property).

Table 1, beginning on page 21, and Table 2, beginning on page 24, presents the list of special-status plants and animals, respectively, that are known to or have the potential to occur in the vicinity of the property, their habitat requirements, and a ranking of potential for occurrence on the property.

4.5.1 Special-Status Plants

Sixteen special-status plant species are known to or have the potential to occur in the vicinity of the property, and have varying potential for occurrence in the vegetation communities present on the property (refer to Table 1). However, a focused special-status plant survey was conducted on the property in May and June 2008 to determine whether these species are present or absent. Based on the results of the focused survey, no special-status plants are present on the property.

4.5.2 Special-Status Animals

Twenty-one special-status animal species are known to or have the potential to occur in the vicinity of the property, and have varying potential for occurrence in the vegetation communities present on the property (refer to Table 2). Of these animal species, 20 species are not expected to occur on the property (species ranked as "Not Expected" or having "Low Potential") for varying reasons, including the absence of essential habitat requirements for the species, the distance to known occurrences and/or the species distributional range, the limited availability of foraging habitat, and/or the proximity of human-related disturbances. This includes vernal pool fairy shrimp (*Branchinecta lynchi*), Comstock's blue butterfly (*Euphilotes battoides comstocki*), delta smelt (*Hypomesus transpacificus*), Tehachapi slender salamander (*Batrachoseps stebbinsi*), yellow-blotched salamander (*Ensatina eschscholtzii croceator*), California red-legged frog (*Rana aurora draytonii*), blunt-nosed leopard lizard (*Gambelia sila*), San Diego horned lizard (*Phrynosoma coronatum*), Tricolored Blackbird (*Agelaius tricolor*), Burrowing Owl (*Athene cunicularia*), Golden Eagle (*Aquila chrysaetos*), Prairie Falcon (*Falco mexicanus*), California Condor (*Gymnogyps californianus*), Le Conte's Thrasher (*Toxostoma lecontei*), Tipton kangaroo rat (*Dipodomys nitratoides nitratoides*), Tulare grasshopper mouse (*Onychomys torridus tularensis*), San Joaquin pocket mouse (*Perognathus inornatus inornatus*), Mohave ground squirrel (*Spermophilus mohavensis*), American badger (*Taxidea taxus*), and San Joaquin kit fox (*Vulpes macrotis mutica*).

Table 1
Special-Status Plants Evaluated for Potential to Occur on the Property Proposed for Development of the Supercenter

Plants												
Scientific Name	**Common Name**	**Sensitivity/Regulatory Status[1]**					**General Habitat**	**Blooming Period**	**Elevation (meters)**	**Potential for Occurrence[2]**	**Discussion of Potential**	**Source[3]**
		Regulatory Status			**CNDDB Rarity Rank**							
		CNPS	**FESA**	**CESA**	**Global**	**State**						
Allium shevockii	Spanish Needle onion	List 1B.3	-	-	G1	S1.3	Pinyon and juniper woodland, upper montane coniferous forest/rocky	May-Jun	850-2500	**Not Expected (not observed)**	The property does not support habitats this species typically inhabits. Additionally, this species was not observed during focused special-status plant surveys conducted on the property in May and June 2008.	1, 2
Astragalus leucolobus	Big Bear Valley woollypod	List 1B.2	-	-	G3	S3.2	Lower montane coniferous forest, pebble plain, pinyon and juniper woodland, upper montane coniferous forest/rocky	May-Jul	1750-2665	**Not Expected (not observed)**	The property does not support habitats this species typically inhabits. Additionally, the property is slightly below the elevational range this species typically occupies. This species was not observed during focused special-status plant surveys conducted on the property in May and June 2008.	1, 2
California macrophylla	round-leaved filaree	List 1B.1	-	-	G3	S3.1	Cismontane woodland, valley and foothill grassland/clay	Mar-May	15-1200	**Moderate Potential (not observed)**	Although there is an occurrence of this species recorded in the CNDDB within the vicinity of Tehachapi, this species was not observed during focused special-status plant surveys conducted on the property in May and June 2008.	1, 2
Calochortus palmeri var. palmeri	Palmer's mariposa lily	List 1B.2	-	-	G2T2	S2.1	Chaparral, lower montane coniferous forest, meadows and seeps/mesic	May-Jul	1000-2390	**Low Potential (not observed)**	Although there is an occurrence of this species recorded in the CNDDB in the vicinity of Tehachapi, this species was not observed during focused special-status plant surveys conducted on the property in May and June 2008.	1, 2
Eriogonum kennedyi var. pinicola	Kern buckwheat	List 1B.1	-	-	G4T1	S1.1	Chaparral, pinyon and juniper woodland/clay	May-Jun	1340-1950	**Not Expected (not observed)**	The property does not support habitats this species typically inhabits. Additionally, the property is slightly below the elevational range this species typically occupies. This species was not observed during focused special-status plant surveys conducted on the property in May and June 2008.	2
Eschscholzia procera	Kernville poppy	List 3	-	-	G1G2Q	S1S2	Cismontane woodland (sandy floodplain)	Jun-Jul (Aug)	810-1025	**Not Expected (not observed)**	The property does not support habitats this species typically inhabits. Additionally, the property is slightly above the elevational range this species typically occupies. This species was not observed during focused special-status plant surveys conducted on the property in May and June 2008.	2
Fritillaria brandegeei	Greenhorn fritillary	List 1B.3	-	-	G2	S2.3	Lower montane coniferous forest (granitic)	Apr-Jun	1415-2100	**Not Expected (not observed)**	The property does not support habitats this species typically inhabits. Additionally, the property is slightly below the elevational range this species typically occupies. This species was not observed during focused special-status plant surveys conducted on the property in May and June 2008.	2
Lasthenia glabrata ssp. coulteri	Coulter's goldfields	List 1B.1	-	-	G4T3	S2.1	Marshes and swamps (coastal salt), playas, vernal pools	Feb-Jun	1-1220	**Not Expected (not observed)**	Although there is an occurrence of this species recorded in the CNDDB within the vicinity of Tehachapi, the property does not support habitats this species typically inhabits. Additionally, this species was not observed during focused special-	1

Table 1 (Continued)
Special-Status Plants Evaluated for Potential to Occur on the Property Proposed for Development of the Supercenter

Plants												
Scientific Name	**Common Name**	**Sensitivity/Regulatory Status[1]**					**General Habitat**	**Blooming Period**	**Elevation (meters)**	**Potential for Occurrence[2]**	**Discussion of Potential**	**Source[3]**
		Regulatory Status			**CNDDB Rarity Rank**							
		CNPS	**FESA**	**CESA**	**Global**	**State**						
											status plant surveys conducted on the property in May and June 2008.	
Layia heterotricha	pale-yellow layia	List 1B.1	-	-	G1	S1.1	Cismontane woodland, coastal scrub, pinyon and juniper woodland, valley and foothill grassland/alkaline or clay	Mar-Jun	300-1705	**Moderate Potential (not observed)**	Although there is an occurrence of this species recorded in the CNDDB within the vicinity of Tehachapi, this species was not observed during focused special-status plant surveys conducted on the property in May and June 2008.	1
Loeflingia squarrosa var. artemisiarum	sagebrush loeflingia	List 2.2	-	-	G5T2T3	S2.2	Desert dunes, Great Basin scrub, Sonoran desert scrub/sandy	Apr-May	700-1615	**Not Expected (not observed)**	The property does not support habitats this species typically inhabits. Additionally, this species was not observed during focused special-status plant surveys conducted on the property in May and June 2008.	1
Mimulus pictus	calico monkeyflower	List 1B.2	-	-	G2	S2.2	Broadleafed upland forest, cismontane woodland/granitic, disturbed areas	Mar-May	100-1300	**Not Expected (not observed)**	Although there is an occurrence of this species recorded in the CNDDB within the vicinity of Tehachapi, the property does not support habitats this species typically inhabits. Additionally, this species was not observed during focused special-status plant surveys conducted on the property in May and June 2008.	1, 2
Monardella linoides ssp. oblonga	flax-like monardella	List 1B.3	-	-	G5T2	S2.2	Lower montane coniferous forest, pinyon and juniper woodland, upper montane coniferous forest	Jun-Aug	900-2470	**Not Expected (not observed)**	Although there is an occurrence of this species recorded in the CNDDB within the vicinity of Tehachapi, the property does not support habitats this species typically inhabits. Additionally, this species was not observed during focused special-status plant surveys conducted on the property in May and June 2008.	1, 2
Navarretia peninsularis	Baja navarretia	List 1B.2	-	-	G3?	S2.2	Chaparral (openings), lower montane coniferous forest, meadows and seeps, pinyon and juniper woodland/mesic	Jun-Aug	1500-2300	**Not Expected (not observed)**	The property does not support habitats this species typically inhabits. Additionally, the property is slightly below the elevational range this species typically occupies. This species was not observed during focused special-status plant surveys conducted on the property in May and June 2008.	1
Navarretia setiloba	Piute Mountains navarretia	List 1B.1	-	-	G1	S1.1	Cismontane woodland, pinyon and juniper woodland, valley and foothill grassland/clay or gravelly loam	Apr-Jul	305-2100	**Moderate Potential (not observed)**	This species was not observed during focused special-status plant surveys conducted on the property in May and June 2008.	2
Orthotrichum spjutii	Spjut's bristle moss	List 1B.3	-	-	G1	S1.3	Lower montane coniferous forest, pinyon and juniper woodland, subalpine coniferous forest, upper montane coniferous forest/granitic, rock		2100-2400	**Not Expected**	The property does not support habitats this species typically inhabits. Additionally, the property is below the elevational range this species typically occupies.	1, 2

Table 1 (Continued)
Special-Status Plants Evaluated for Potential to Occur on the Property Proposed for Development of the Supercenter

Plants												
Scientific Name	**Common Name**	**Sensitivity/Regulatory Status[1]**					**General Habitat**	**Blooming Period**	**Elevation (meters)**	**Potential for Occurrence[2]**	**Discussion of Potential**	**Source[3]**
		Regulatory Status			**CNDDB Rarity Rank**							
		CNPS	**FESA**	**CESA**	**Global**	**State**						
Streptanthus cordatus var. piutensis	Piute Mountains jewel-flower	List 1B.2	-	-	G5T1	S1.2	Broadleafed upland forest, closed-cone coniferous forest, pinyon and juniper woodland/clay or metamorphic	May-Jul	1095-1735	**Note Expected (not observed)**	The property does not support habitats this species typically inhabits. Additionally, this species was not observed during focused special-status plant surveys conducted on the property in May and June 2008.	2

[1] Sensitivity/Regulatory Status Codes:

FESA: Federal Endangered Species Act of 1972, as amended

FE = Federally listed as Endangered; FT = Federally listed as Threatened; FD = Federally delisted (monitored for 5 years)

CESA: California Endangered Species Act

CE = State listed as Endangered; CT = State listed as Threatened; CR = State listed as Rare

CNDDB: California Natural Diversity Database

G1/S1 = Extremely endangered: less than 6 viable element occurrences (EOs) OR less than 1,000 individuals OR less than 2,000 acres; G2/S2 = Endangered: 6-20 EOs OR 1,000-3,000 individuals OR 2,000-10,000 acres; G3/S3 = Restricted range, rare: 21-80 EOs OR 3,000-10,000 individuals OR 10,000-50,000 acres; G4/S4 = Apparently secure; some factors exist to cause some concern such as narrow habitat or continued threats; G5/S5 = Demonstrably secure; commonly found throughout its historic range; GnTn = Subspecies receive a T-rank attached to the G-rank, Grank reflects the condition of the entire species and T-rank reflects the global situation of just the subspecies; GH/SH = All sites historical, the element has not been seen for at least 20 year, but suitable habitat exists; GX/SX = All site extirpated, this element is extinct in the wild (0.1 = very threatened, 0.2 = threatened, 0.3 = no current threats known)

CNPS: California Native Plant Society

List 1B = Plants listed as rare, threatened, or endangered in California and elsewhere; List 2 = Plants rare, threatened, or endangered in California, but more common elsewhere; List 3 = Plants about which more information is needed; List 4 = Limited distribution (.1 = Seriously endangered in California [>80% of occurrences threatened/high degree of immediacy of threat]; .2 = Fairly endangered in California [20-80% occurrences threatened]; .3 Not very endangered in California [<20% of occurrences threatened or no current threats known])

[2] Potential for Occurrence: Based on species requirements, occurrences recorded in the CNDDB, and focused special-status plant surveys conducted in May and June 2008.

[3] Source: 1 = Search of the California Natural Diversity Database (Biogeographic Data Branch, California Department of Fish and Game 2007) occurrences recorded on the Tehachapi North (212B), Tehachapi South (212C), Monlith (212D), Cummings Mountain (213D), Keene (213A), and Tehachapi NE (212A) Quadrangles; 2 = Search of the California Native Plant Society's On-line Inventory (CNPS 2008) of the Tehachapi North (212B), Tehachapi South (212C), Monolith (212D), Cummings Mountain (213D), Keene (213A), and Tehachapi NE (212A) Quadrangles.

Table 2
Special-Status Animals Evaluated for Potential to Occur on the Property Proposed for Development of the Supercenter.

Animals										
Scientific Name	**Common Name**	**Sensitivity/Regulatory Status**[1]					**General Habitat**	**Potential for Occurrence**[2]	**Discussion of Potential**	**Source**[3]
		Regulatory Status			**CNDDB Rarity Rank**					
		CDFG	**FESA**	**CESA**	**Global**	**State**				
Invertebrates										
Branchinecta lynchi	vernal pool fairy shrimp	-	-	CT	G3	S2S3	Endemic to the grasslands of the Central Valley, Central Coast Mountains, and south Coast Mountains, in rain-filled pools. Inhabit small, clear-water sandstone-depression pools and grassed swale, earth slump, or baslat-flow depression pools.	**Not Expected**	The property does not support habitats this species typically inhabits.	2
Euphilotes battoides comstocki	Comstock's blue butterfly	-	-	-	G5T1T3	S1S3	Host plant is *Eriogonum*sp.	**Not Expected**	Although there is an occurrence of this species recorded in the CNDDB within the vicinity of Tehachapi, the property does not support this species' host plant.	1
Fishes										
Hypomesus transpacificus	delta smelt	-	FT	CT	G1	S1	Suisun Bay upstream through the Delta in Contra Costa, Sacramento, San Joaquin, Solano, and Yolo counties. Seldom found at salinities $\geq$ 10 ppt. Most often at salinities $\leq$ 2 ppt.	**Not Expected**	The property does not support habitats this species typically inhabits.	2
Amphibians										
Batrachoseps stebbinsi	Tehachapi slender salamander	-	-	CT	G2	S2	Valley-foothill hardwood-conifer and valley-foothill riparian in the Piute and Tehachapi Mountains of Kern County. Prefers wet talus slopes or log-strewn hillsides with a steep, north-facing exposure.	**Not Expected**	The property does not support habitats this species typically inhabits.	1
Ensatina eschscholtzii croceator	yellow-blotched salamander	CSC	-	-	G5T2T3	S2S3	Forest and well-shaded canyons, as well as oak woodlands and old chaparral. Needs surface objects, such as logs, boards, and rocks. Also, needs old rodent burrows or other underground retreats.	**Not Expected**	The property does not support habitats this species typically inhabits.	1
Rana aurora draytonii	California red-legged frog	SCS	FT	-	G4T2T3	S2S3	Lowlands and foothills in or near permanent sources of deep water with dense, shrubby or emergent riparian vegetation. Requires 11-20 weeks of permanent water for larval development. Must have access to estivation habitat.	**Not Expected**	There are no occurrences of this species recorded in the CNDDB in the vicinity of the property. Additionally, the property does not support habitats this species typically inhabits.	2
Reptiles										
Gambelia sila	blunt-nosed leopard lizard	FP	FE	CE	G1	S1	Resident of sparsely vegetated alkali and desert scrub habitats, in areas of low topographic relief. Seeks cover in mammal burrows, under shrubs or structures such as fence posts; they do not excavate their own burrows.	**Not Expected**	The property does not support habitats this species typically inhabits. Additionally, the property is not within the current distribution of this species.	2

Table 2 (Continued)
Special-Status Animals Evaluated for Potential to Occur on the Property Proposed for Development of the Supercenter.

Animals										
Scientific Name	**Common Name**	**Sensitivity/Regulatory Status[1]**					**General Habitat**	**Potential for Occurrence[2]**	**Discussion of Potential**	**Source[3]**
		Regulatory Status			**CNDDB Rarity Rank**					
		CDFG	**FESA**	**CESA**	**Global**	**State**				
Phrynosoma coronatum (blainvillii population)	coast (San Diego) horned lizard	CSC	-	-	G4G5	S3S4	Inhabits coastal sage scrub and chaparral in arid and semi-arid climates. Prefers friable, rocky, or shallow sandy soils.	**Low Potential**	Although there is an occurrence of this species recorded in the CNDDB approximately seven miles northeast of the property, loose textured soil is not present on the property (i.e., soils on the property are fairly compacted due to previous disturbance activities). Additionally, this species primary prey (native ants) was not observed on the property.	1
Birds										
Agelaius tricolor	Tricolored Blackbird	CSC (nesting colony)	-	-	G2G3	S2	Freshwater marshes of cattails, tule, bulrushes, and sedges. Nests in vegetation of mashes or thickets, sometimes nests on the ground. In migration and winter also in open cultivated lands and pastures.	**Not Expected**	Although there is an occurrence of this species recorded in the CNDDB within the vicinity of Tehachapi, the property does not support habitats this species typically inhabits.	1
Athene cunicularia	Burrowing Owl	CSC (burrowing sites)	-	-	G4	S2	Open grasslands, especially prairie, plains, and savanna, sometimes in open areas such as vacant lots near human habitation or airports, nesting and roosting in burrow dug by mammal, or by owl (rarely).	**Low Potential**	Although there is an occurrence of this species recorded in the CNDBB approximately 12 miles southeast of the property and potentially suitable habitat is present on the property, this species was not observed during field surveys conducted on the property in May and June 2008, which is within the peak of the breeding season for this species. Additionally, no evidence (e.g., egg shells, white wash, feathers, prey remains, etc.) of past owl use of the burrows present on the property was observed during field surveys.	1
Aquila chrysaetos	Golden Eagle	CSC/FP (nesting and wintering)	-	-	G5	S3	Generally open country, in prairies, arctic and alpine tundra, open wooded country, and barren areas, especially in hilly or mountainous regions. Nests on rock ledge of cliff or in large tree (e.g., oak or eucalyptus in California). Pair may have several alternate nests; may use same nest in consecutive years or shift to alternate nest used in different years. Typically forages in open habitats (e.g., grasslands or steppe-like).	**Low Potential**	Although the property does not support potential nesting habitat for this species, limited foraging habitat is present.	1
Falco mexicanus	Prairie Falcon	CSC (nesting)	-	-	G5	S3	Distributed from annual grasslands to alpine meadows, but associated primarily with perennial grasslands, savannahs, rangeland, some agricultural fields, and desert scrub areas. Usually nests in a scrape on a sheltered ledge of a cliff overlooking a large open area.	**Low Potential**	Although the property does not support potential nesting habitat for this species, limited foraging habitat is present.	1

Table 2 (Continued)
Special-Status Animals Evaluated for Potential to Occur on the Property Proposed for Development of the Supercenter.

Animals										
Scientific Name	**Common Name**	**Sensitivity/Regulatory Status[1]**					**General Habitat**	**Potential for Occurrence[2]**	**Discussion of Potential**	**Source[3]**
		Regulatory Status			**CNDDB Rarity Rank**					
		CDFG	**FESA**	**CESA**	**Global**	**State**				
Gymnogyps californianus	California Condor	-	FE	CE	G1	S1	Require vast expanses of open savannah, grassland, and foothill chaparral in mountain ranges of moderate altitude. Deep Canyons containing clefts in the rocky walls provide nesting sites. Forages up to 100 miles from roosts/nests.	**Low Potential**	Although the property does not support potential nesting habitat for this species, limited foraging habitat is present.	2
Toxostoma lecontei	Le Conte's Thrasher	CSC	-	-	G3	S3	Desert resident, primarily of open desert wash, desert scrub, alkali desert scrub, and desert succulent scrub habitats. Commonly nests in a dense, spiny shrub or densely branched cactus in desert wash habitat, usually 2-8 feet above ground.	**Not Expected**	The property does not support habitats this species typically inhabits.	1
Mammals										
Dipodomys nitratoides nitratoides	Tipton kangaroo rat	-	FE	CE	G3T1	S1	Saltbrush scrub and sink scrub communities in the Tulare Lake Basin of the Southern San Joaquin Valley. Needs soft friable soils which escape seasonal flooding. Digs burrows in elevated soil mounds at bases of shrubs.	**Not Expected**	The property does not support habitats this species typically inhabits. Additionally, the property is not within the current distribution of this species. This species was not observed during focused surveys conducted on the property for Tehachapi pocket mouse in July 2008.	2
Onychomys torridus tularensis	Tulare grasshopper mouse	CSC	-	-	G5T1T2	S1S2	Hot, arid valleys and scrub deserts in the southern San Joaquin Valley. Diet almost exclusively composed of arthropods and, therefore, needs abundant supply of insects.	**Not Expected**	The property does not support habitats this species typically inhabits. Additionally, the property is not within the current distribution of this species. This species was not observed during focused surveys conducted on the property for Tehachapi pocket mouse in July 2008.	1
Perognathus alticolus inexpectatus	Tehachapi pocket mouse	CSC	-	-	G1G2T1T2	S1S2	Arid annual grasslands and desert shrub communities, but also taken in fallow grain field and russian thistle. Burrows for cover and nesting. Aestivates and hibernates during extreme weather. Forages on open ground and under shrubs.	**Moderate Potential (not observed)**	Although the property supports potentially suitable habitat for this species and there are several occurrences of this species recorded in the CNDDB in the vicinity of the property, this species was not observed during focused surveys conducted on the property in July 2008.	1
Perognathus inornatus inornatus	San Joaquin pocket mouse	-	-	-	G4T2T3	S2S3	Typically found in grasslands and blue oak savannas. Needs friable soils.	**Low Potential**	Although there is an occurrence of this species recorded in the CNDDB approximately eight miles southeast of the property, loose textured soil is not present on the property (i.e., soils on the property are fairly compacted due to previous disturbance activities). This species was not observed	1

Table 2 (Continued)
Special-Status Animals Evaluated for Potential to Occur on the Property Proposed for Development of the Supercenter.

Animals										
Scientific Name	**Common Name**	**Sensitivity/Regulatory Status[1]**					**General Habitat**	**Potential for Occurrence[2]**	**Discussion of Potential**	**Source[3]**
		Regulatory Status			**CNDDB Rarity Rank**					
		CDFG	**FESA**	**CESA**	**Global**	**State**				
									during focused surveys conducted on the property for Tehachapi pocket mouse in July 2008.	
Spermophilus mohavensis	Mohave ground squirrel	-	-	CT	G2G3	S2S3	Open desert scrub, alkali scrub and Joshua tree woodland. Also, feeds in annual grasslands. Restricted to Mojave Desert. Prefers sandy to gravelly soils, avoids rocky areas. Uses burrows at base of shrub for cover. Nest are in burrows.	**Not Expected**	The property does not support habitats this species typically inhabits. Additionally, the property is not within the distribution of this species.	1
Taxidea taxus	American badger	CSC	-	-	G5	S4	Prefers open areas and may also frequent brushlands with little groundcover. Although badger may prefer habitats with more friable soils for digging burrows, which are used for dens, escape, and predation, the hard-baked earth in the middle of an unpaved road is no obstacle. When inactive, occupies underground burrows that are elliptical shaped and eight or more inches in diameter.	**Low Potential**	Although the property supports potential habitat for this species, evidence of this species was not observed during field surveys. Additionally, the proximity to human-related disturbances would likely restrict this species use of the property. The nearest occurrence of this species recorded in the CNDDB in the vicinity of the property is approximately 12 miles southeast of the property.	1
Vulpes macrotis mutica	San Joaquin kit fox	-	FE	CT	G4T2T3	S2S3	Found in grasslands and scrubland communities on the San Joaquin Valley floor and in the surrounding foothills of the coastal ranges, Sierra Nevada, and Tehachapi Mountains, from southern Kern County north to Contra Costa, Alameda, and San Joaquin counties on the west, and near La Grange, Stanislaus County on the east side of the Valley, and on the Valley floor in Kern, Tulare, Kings, Fresno, Madera, and Merced counties.	**Low Potential**	There are no occurrences of this species recorded in the CNDDB in the vicinity of the property; the closest recorded occurrence is over 16 miles southwest of the property. Additionally, burrows on the property do not support typical characteristics of this species' dens.	2

[1] Sensitivity/Regulatory Status Codes:
FESA: Federal Endangered Species Act of 1972, as amended
FE = Federally listed as Endangered; FT = Federally listed as Threatened; FD = Federally delisted (monitored for 5 years); C = Candidate to become a proposed species.
CESA: California Endangered Species Act
CE = State listed as Endangered; CT = State listed as Threatened; CR = State listed as Rare
CNDDB: California Natural Diversity Database
G1/S1 = Extremely endangered: less than 6 viable element occurrences (EOs) OR less than 1,000 individuals OR less than 2,000 acres; G2/S2 = Endangered: 6-20 EOs OR 1,000-3,000 individuals OR 2,000-10,000 acres; G3/S3 = Restricted range, rare: 21-80 EOs OR 3,000-10,000 individuals OR 10,000-50,000 acres; G4/S4 = Apparently secure; some factors exist to cause some concern such as narrow habitat or continued threats; G5/S5 = Demonstrably secure; commonly found throughout its historic range; GnTn = Subspecies receive a T-rank attached to the G-rank, Grank reflects the condition of the entire species and T-rank reflects the global situation of just the subspecies; GH/SH = All sites historical, the element has not been seen for at least 20 year, but suitable habitat exists; GX/SX = All site extirpated, this element is extinct in the wild (0.1 = very threatened, 0.2 = threatened, 0.3 = no current threats known)
CDFG: California Department of Fish and Game

Table 2 (Continued)
Special-Status Animals Evaluated for Potential to Occur on the Property Proposed for Development of the Supercenter.

Animals										
Scientific Name	**Common Name**	**Sensitivity/Regulatory Status**[1]					**General Habitat**	**Potential for Occurrence**[2]	**Discussion of Potential**	**Source**[3]
		Regulatory Status			**CNDDB Rarity Rank**					
		CDFG	**FESA**	**CESA**	**Global**	**State**				

CSC = Species of Special Concern; FP = Fully Protected

The words "nesting", "nesting colony" or "wintering" following the sensitivity/regulatory status of the bird species indicates the regulatory status only while the species is nesting or wintering.

[2] *Potential for Occurrence: Based on species requirements, occurrences recorded in the CNDDB, and general biological resources surveys conducted in May and June 2008, and reconnaissance-level and focused Tehachapi pocket mouse surveys conducted in June and July 2008.*

[3] *Source: 1 = Search of the California Natural Diversity Database (Biogeographic Data Branch, California Department of Fish and Game 2007) occurrences recorded on the Tehachapi North (212B), Tehachapi South (212C), Monolith (212D), Cummings Mountain (213D), Keene (213A), and Tehachapi NE (212A) Quadrangles; 2 = Review of the U.S. Fish and Wildlife Service Sacramento Office's list of Federal Endangered and Threatened Species that Occur in or may be Affected by Projects in the Tehachapi North (212B), Tehachapi South (212C), Monolith (212D), Cummings Mountain (213D), Keene (213A), and Tehachapi NE (212A) USGS 7.5-Minute Quads.*

The aquatic habitats necessary to support vernal pool fairy shrimp, delta smelt, and California red-legged frog are absent from the property. Additionally, California red-legged frog is not expected to use the upland habitats present on the property due to the distance to known occurrences of this species (greater than 10 miles from the property boundaries). The larval host plant of Comstock's blue butterfly is not present on the property and, therefore, this species is also not expected on the property. The habitats necessary to support Tehachapi slender salamander, yellow-blotched salamander, Tri-colored Blackbird, and Le Conte's Thrasher are absent from the property, and while the habitats necessary to support the San Diego horned lizard and San Joaquin pocket mouse are present, past grading or other ground disturbance activities have limited the potential for occurrence of these species on the property by altering the soil conditions (i.e., compacting the soils). Although the habitat necessary to support American badger, Burrowing Owl, and San Joaquin kit fox is also present, the proximity to human-related disturbances and the distance to known occurrences (nearest occurrence approximately 12 miles from the property boundaries) limits the potential for occurrence of badger, and the presence of only a few of the habitat components (especially with regards to den and burrow characteristics) and the distance of known occurrences (nearest occurrence for Burrowing Owl approximately 12 miles and for San Joaquin kit fox greater than 16 miles from the property boundaries) limits the potential for occurrence of owl and kit fox. Additionally, no evidence of badger or owl use (i.e., burrows of sufficient size for badger or white-wash, pellets, feathers, prey remains of owls) was detected during field surveys. The relatively high elevation of the property also likely limits the potential use by kit fox. The property is not within the known distributional range of the blunt-nosed leopard lizard, Tipton kangaroo rat, Tulare grasshopper mouse, or Mohave ground squirrel and, therefore, these species are not expected on the property. Although habitats necessary to support nesting Golden Eagle, Prairie Falcon, and California Condor are absent from the property, limited foraging habitat is present; however, due to the proximity of the property to human-related disturbances and other properties in the general vicinity that may serve as the same purpose, these species are not expected to use the property on a regular basis.

A brief discussion of the legal status, distribution, habitat associations, and biology of the one remaining species, Tehachapi pocket mouse (*Perognathus alticolus inexpectatus*), as well as other bird species that may be present on the property that are protected by the MBTA and/or Fish and Game Code Sections 3503 and 3513, is presented below. These species were considered to have greatest potential for occurrence on the property (species ranked as having "Moderate Potential").

Tehachapi Pocket Mouse

The Tehachapi pocket mouse (also called the Tehachapi white-eared pocket mouse) is one of the two recognized subspecies of the white-eared pocket mouse (*Perognathus alticolus*). The white-eared pocket mouse is known only from small areas in southern California, and this subspecies is known to be extant at only a few localities in the Tehachapi Mountains, from the vicinity of Tehachapi Pass, Kern County, on the northeast, to the vicinity of Mt. Pinos, Ventura County, on the northwest, to the vicinity of Elizabeth and Quail Lakes, Los Angeles County, on the south, in elevations of about 3,500 to 6,000 feet (NatureServe 2008). This subspecies is designated a species of special concern by the CDFG, and is assigned a conservation status or rarity ranking of G1G2T1T2S1S2 by NatureServe and the CDFG.

The Tehachapi pocket mouse occupies native and non-native grasslands, Joshua tree woodlands, pinyon-juniper woodlands, yellow pine woodlands, and oak savannahs. Little information is available concerning the biology of the Tehachapi pocket mouse; however, other members of the species group are nocturnal granivores, foraging primarily on seeds of grasses, forbs, and annuals. Most other members of the genus exhibit seasonal hibernation, and it expected that the Tehachapi pocket mouse does as well.

Although the property supports suitable habitat for the Tehachapi pocket mouse and there are known occurrences recorded in the CNDDB within the vicinity of the property, this subspecies was not captured during focused surveys conducted in July 2008 (MWA 2008). For this reason, the Tehachapi pocket mouse is not expected to inhabit the habitats on the property.

Other Protected Bird Species

Besides the bird species discussed above, the vegetation communities on the property support suitable nesting habitat for other birds. Although no active nests were observed during the field surveys, there is potential for ground- and scrub-nesting birds to establish nests on the property in the future, such as Brewer's Blackbird (*Euphagus cyanocephalus*), Sage Sparrow (*Amphispiza belli*), and Western Meadow Lark (*Sturnella neglecta*). These species are protected under the MBTA and would be protected under the California Fish and Game Code when actively nesting.

4.0 ENVIRONMENTAL IMPACTS

4.1 Thresholds of Significance

In accordance with Appendix G of the CEQA Guidelines, a project could have a significant environmental impact on biological resources if it would:

(a) 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;

(b) Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, or regulations or by the California Department of Fish and Game or U.S. Fish and Wildlife Service;

(c) Have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means;

(d) Interfere substantially with the movement of any native resident or migratory fish and wildlife species or with established native resident or migratory wildlife corridors, or impede the use of a native wildlife nursery site;

(e) Conflict with an local polices or ordinances protecting biological resources, such as a tree preservation policy or ordinance; or

(f) Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan.

4.2 Project Description

The proposed project consists of the construction of a Wal-Mart, along with the conceptual development of three outlots, on a total of approximately 25 acres. The proposed Wal-Mart would be approximately 205,000 square feet in size, with all appurtenant structures and facilities, and would offer groceries and general retail merchandise. The proposed Wal-Mart would include a garden center with an exterior customer pick-up facility with two pick-up lanes. The proposed Wal-Mart would also have a pharmacy, and may include a vision and hearing care center, medical clinic, food service, a photo studio and photo finishing center, a banking center, and other related accessory uses. The Wal-Mart would have outdoor seasonal sales and storage. The proposed Wal-Mart would include, without limitation, truck doors, and loading facilities. The Wal-Mart would operate 24 hours per day. Customer access to the proposed project would be via two driveways off of Tehachapi Boulevard and three driveways off of Tucker Road. Truck access would be off of Tucker Road at the southernmost driveway.

The three outlots do not currently have identified uses as part of the project application, and would developed at a later time. Although there are currently no identified uses for the outlots, the following probable uses of these parcels are evaluated to fully analyze the proposed project:

- Outlot 1: 5,200 square feet of retail
- Outlot 2: 3,100 square-foot fast food restaurant with drive through
- Outlot 3: 3,500 square-foot fast food restaurant with drive through

The final element of the proposed project includes a land exchange between the project applicant and the City of Tehachapi, where the applicant would provide 0.96 acres to the City for trail access and parking, and the City would provide 0.19 acres to the project applicant to allow for access to Tehachapi Boulevard at the northeastern corner of the project.

4.3 Project Impacts & Mitigation Measures

The impacts of the project on biological resources are grouped below into major categories of impacts. The actual impact and its anticipated location in the project area (if applicable) are described in detail within each category. Appropriate mitigation measures to avoid, minimize, or otherwise offset each impact are also provided below.

Impact 1: Biological Resources Threshold (a)

<u>Special-Status Plants</u>

A number of special-status plant species were evaluated for their potential for occurrence on the property (refer to Table 1). Based on the results of a focused plant survey conducted in May and June 2008, none of these species are present on the property. For this reason, the proposed project would have no impact on special-status plants and, therefore, no further analysis of this issue is necessary.

Special-Status Animals

Of the special-status animal species evaluated for their potential for occurrence on the property, Tehachapi pocket mouse and bird species protected under the MTBA and the California Fish and Game Code were considered to have the greatest potential for occurrence on the property. With the exception of the Tehachapi pocket mouse, potential impacts to these special-status animals are discussed further below. Based on the results of focused surveys for the Tehachapi pocket mouse conducted in July 2008, this subspecies of the white-eared pocket mouse is not present on the property. For this reason, the proposed project would have no impact on the Tehachapi pocket mouse and, therefore, no further analysis of this issue is necessary.

Protected Bird Species

As previously discussed, the vegetation communities on the project site project support suitable nesting habitat for several protected bird species. Construction activities, such as clearing and grubbing and grading, could result in mortality, injury, or disturbance of nesting birds, if present. The nesting season is a critical period for the maintenance of bird populations and the physical removal or harm to nests, or disturbance activities that cause birds to abandon an active nest, are considered a *potentially significant* impact.

In addition to potential nesting impacts, the conversion of previously undeveloped lands on the property would result in the loss of potential foraging habitat for a number of bird species, such as American Kestrel (*Falco sparverius*), Golden Eagle, Prairie Falcon, and Red-tailed Hawk (*Buteo jamaicensis*). Construction and operation of the project would convert a total of approximately 23 acres of grassland and scrubland habitat. Although this loss would contribute to the local reduction of available foraging areas, potentially affecting individual birds using the property, the loss of foraging habitat would not substantially reduce the number or restrict the range of protected bird species in the vicinity of the property. For this reason, the loss of foraging habitat is considered *less than significant*.

The following mitigation measure would reduce *potentially significant* impacts described above to a *less-than-significant* level.

Mitigation Measure 1: Biological Resources Threshold (a)

To avoid impacts to nesting birds during project construction, one of the following measures should be implemented:

- Conduct vegetation clearing and grubbing, grading, and other construction activities associated with the project during the non-breeding season (in general, September 1st through January 31st); or

- Conduct pre-construction surveys for nesting birds if construction activities are to take place during the nesting season (in general, February 1st through August 31st). Within 30 days of ground disturbance activities associated with vegetation clearing and grubbing and grading, a qualified biologist should conduct weekly surveys with the last survey being conducted no more

than three days prior to the initiation of construction activities to confirm presence or absence of active nests in the project vicinity. If ground disturbance activities are delayed, then additional pre-construction surveys shall be conducted such that no more than three days will have lapsed between the survey and ground disturbance activities. The extent of the area survey shall be determined by the biologist considering (1) the nature of the construction activities; (2) the existing level of human-related disturbances in the vicinity of the construction activities; and (3) the availability of suitable nesting habitat in the project vicinity.

If no active nests are encountered, no further mitigation would be required following submittal of a survey reports letter to the City. However, if active nests are encountered, species-specific measures shall be prepared by a qualified biologist in coordination with the CDFG and other appropriate agencies, and implemented to prevent the direct loss or abandonment of the active nest. At a minimum, construction activities in the vicinity of nest shall be deferred until the young have fledged and an exclusion buffer zone should be established. A minimum exclusion buffer zone of 25 feet is typically recommended by CDFG for songbird nests, and 200 to 500 feet for raptor nests, depending on the species and location. The perimeter of the exclusion buffer zone shall be fenced or adequately demarcated with staked flagging at 20-foot intervals, and construction personnel shall be restricted from the area. A survey report by the qualified biologist verifying that the young have fledged shall be submitted to the City for review and concurrence prior to initiation of construction activities within the exclusion buffer zone.

Impact 2: Biological Resources Threshold (b)

Construction and operation of the proposed project would have no direct impact (e.g., removal) on riparian habitat or any other sensitive natural community, as the property does not support habitats considered sensitive by the regulatory and resource agencies. However, construction and operation of the proposed project could have indirect impacts (e.g., inadvertent damage by construction equipment or human encroachment, decreased water and habitat quality due to site runoff) on the unnamed tributary drainage to Tehachapi Creek located along beyond the eastern property boundary. Such impacts are considered *potentially significant.*

Implementation of the following mitigation measure would reduce the impacts described above to a *less-than-significant* level.

Mitigation Measure 2a: Biological Resources Threshold (b)

The following mitigation measures shall be implemented to avoid potential indirect impacts to adjacent sensitive habitats:

- A Storm Water Pollution Prevention Plan ("SWPPP") that complies with the statewide General Permit administered by the State Water Board for the National Pollutant Discharge Elimination System should be developed and implemented to protect the water quality of the adjacent tributary drainage to Tehachapi Creek. Appropriate erosion and sediment control and non-sediment pollution controls (i.e., sources of pollution generated by construction equipment and

material) best management practices should be prescribed in the SWPPP, and erosion and sediment control material included in the SWPPP should be certified as "weed free".

- The construction area shall be clearly delineated on all project plans and silt fencing and/or construction fencing shall be installed around the construction area, particularly along the eastern property boundary. A qualified biologist shall monitor the fence installation and the fencing, at a minimum of once per week, to ensure that the fence remains intact and functional, and that no encroachment has occurred into adjacent sensitive habitat. The biologist shall provide the City with his/her weekly monitoring reports, documenting the conditions of the fencing and recommendations to repair the fencing, if necessary.

- A qualified biologist shall brief construction workers on the location of sensitive habitat beyond the construction area that should be preserved and the importance of avoidance. All construction workers shall sign an attendee sign-in sheet to acknowledge their understanding of the importance of avoidance and to indicate proof of attendance. The sign-sheet shall be provided to the City to document completion of the briefing.

Impact 3: Biological Resources Threshold (c)

Construction and operation of the proposed project would have no direct impacts on federally-protected wetlands as defined by Section 404 of the CWA, as the property does not any areas that would qualify as jurisdictional wetlands. Implementation of Mitigation Measure 2a described above would reduce potential impacts to offsite potentially jurisdictional wetlands to a *less-than-significant* level.

Impact 4: Biological Resources Threshold (d)

Although wildlife may the property as a travel route as they move between the habitats on the property and those to the east or as a stepping stone during larger scale movements, the property is not located within an established movement corridor. Additionally, the property is not a known wildlife nursery site. For these reasons, construction and operation of the proposed project would have no impact on wildlife corridors or nursery sites, and no further analysis of this issue is necessary.

Impact 5: Biological Resources Threshold (e)

The City's General Plan provides protection and conservation of sensitive natural resources within the City's jurisdiction. As discussed above in the Regulatory Setting section, this plan defines goals, objectives, and policies for protecting and conserving vegetation communities and wildlife habitats and special-status plant and animal species. Construction and operation of the proposed project could conflict with the intent of some of the goals, objectives, and policies regarding the protection of special-status animal species (e.g., Goal 16 and Biological 6). However, implementation of the mitigation measures recommended for potentially significant impacts to such special-status animal species in this biological assessment would reduce adverse affects of the proposed project to sensitive natural resources protected by local goals, objectives, and policies to a *less-than-significant* level and ensure compliance with the City's General Plan. For this reason, no further analysis of this issue is necessary.

Impact 6: Biological Resources Threshold (f)

The property and the surrounding vicinity are not part of any adopted habitat conservation plan, natural community conservation plan, or other approved local, regional, or state habitat conservation plan. For this reason, construction and operation of the proposed project would have no impact on any adopted habitat conservation plan and, therefore, no further analysis of this issue is necessary.

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Appendix A
Reconnaissance Survey for Tehachapi Pocket Mouse

M.H. WOLFE and Associates
ENVIRONMENTAL CONSULTING INC.

June 27, 2008

Christopher A. Joseph & Assoc.
30851 Agoura Road, Suite 210
Agoura Hills, CA 91301
Attn: Ms. Shannon Lucas

RE: Reconnaissance survey for the Tehachapi pocket mouse for the Wal-Mart Project, Tehachapi, Kern County, California

Dear Ms. Lucas:

INTRODUCTION and BACKGROUND

At the request of Christopher Joseph and Associates, MH Wolfe and Associates Environmental Consulting, Inc, has conducted a reconnaissance survey for the Tehachapi pocket mouse. The survey was requested for a proposed Wal-Mart project that is located on approximately 30 acres south of Tehachapi Boulevard, north of Valley Boulevard and east and adjacent to Tucker Road within the Tucker Road commercial corridor. Specifically, the site is in Section 19, Township 32 south, Range 33 East in the Tehachapi North U.S. Geological Survey (USGS) topographical quadrangle map.

METHODS

A qualified biologist conducted a reconnaissance survey, driving the property boundaries and doing meandering pedestrian transects in areas of habitat on the project site. Field notes were recorded and photographs were taken to document the general site conditions and findings of species of concern.

FINDINGS

Parts of the project site appear to have been previously graded (Figures 1 and 2). Rubber rabbitbrush (*Chrysothamnus nauseosus)*, indicative of disturbance, ruderal vegetation and piles of soil are present. Some small mammal burrows are present in the areas where some of the brushy vegetation remains and a berm. Decomposed granitic soils exist on site. However, no large trees are present on site. Areas of the site have been excavated. A list of plant species observed onsite is presented in Table 1.

Very few small mammal burrows were observed (Figure 3). This is not uncommon on highly disturbed sites. Pocket gopher burrows and side-blotched lizards were observed. Wildlife observed is listed in Table 2.

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DISCUSSION

The project site is located on the north facing alluvial slopes, which developed from the north side of the Tehachapi Mountains. The original habitat type was likely upper Sonoran grassland comprised of native perennial bunch grasses. At this time, those areas not barren or supporting ruderal vegetation are dominated by rubber rabbitbrush (Figure 4).

The Tehachapi pocket mouse was trapped on the eastern slope of the Tehachapi Mountains, south of Oak Creek Road (Vanherweg and Wolfe, in progress). It occurs in rocky juniper woodland habitat that transitioned to upper Sonoran grasslands (perennial needle grass habitat). Other habitat types it has been found in include grassland, desert shrub and yellow pine forest. It also has been found in fallow wheat fields (Williams 1986). Very little is understood of the habitat requirements of the Tehachapi pocket mouse, and that is one reason for the undertaking of the habitat evaluation by Vanherweg and Wolfe. Further, the taxonomy of the Tehachapi pocket mouse is under question (Laabs 1994).

If it is a valid taxonomic entity, the Tehachapi pocket mouse is an uncommon species. It is considered by the California Department of Fish and Game to be a Species of Special Concern. With the disturbance of the site over time and the adjacent urban development, it can be anticipated that the few small mammal burrows on the site that are not pocket gopher holes, belong to the common house mouse (*Mus musculus*), and/or the white footed deer mouse (*Peromyscus maniculatus)*. However, without trapping, that cannot be determined.

CONCLUSIONS AND RECOMMENDATION

The project site supports very little undisturbed wildlife habitat. To help determine the potential impacts of this project, our recommendation is to trap four nights to determine the species of small mammal(s) present. This determination cannot be made from the burrows alone. As avoidance of habitat is not an option for this development, trapping will help ensure determination of California Environmental Quality Act significance relative to potential impacts to the Tehachapi pocket mouse.

Sincerely,

Marcia H. Wolfe
President

Enclosures

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Table 1. Plant Species List

SCIENTIFIC NAME	COMMON NAME
SHRUBS/TREES	
Chrysothamnus nauseosus ssp. *albicaulis*	white stemmed rabbitbrush
Ulmus parvifolia	Chinese elm
FORBS	
Agoseris grandi flora	mountain dandelion
Amsinckia menziesii var. *intermedia*	common fiddleneck
Argemone munita	prickly poppy
Asclepias fascicularis	Mexican milkweed
Brassica nigra	black mustard
Chamaesyce albomarginata	rattlesnake weed
Chenopodium album	lamb's quarters
Eschscholzia californica	California poppy
Filago californica	California cotton rose
Filago depressa	dwarf cotton rose
Gnaphalium californicum	California everlasting
Lomatium californicum	California lomatium
Lotus grandiflorus var. *grandiflorus*	large-flower birdsfoot trefoil
Lupinus microcarpus var. *microcarpus*	chick lupine
Marrubium vulgare	horehound
Nama californicum	California fiddleleaf
Polygonum arenastrum	common knotweed
Salsola tragus	Russian thistle
Senecio vulgaris	common groundsel
Siymbrium altissimum	tumble mustard
Sisymbrium irio	London rocket
Sisymbrium orientale	Indian hedge mustard
Stephanomeria pauciflora	wirelettuce
MONOCOTS	
Avena fatua	wild oat
Bromus hordeceus	soft chess
Bromus tectorum	cheat grass
Elymus elymoides	squirrel tail
Elymus glaucus	blue wild rye
Heterostipa comata	needle-and-thread grass
Hordeum jubatum	foxtail barley
Hordeum murinum	foxtail barley
Poa bulbosa	bulbous bluegrass
Schismus arabicus	sheep grass
Vulpia myuros var. *hirsuta*	foxtail fescue

TABLE 2. Wildlife Species List

COMMON NAME	SCIENTIFIC NAME
Brewer's blackbird	*Euphagus cyanocephalus*
ground squirrel	*Spermophilus beecheyi*
pocket gopher	*Thomomys bottae*
side-blotched lizard	*Uta stansburiana*

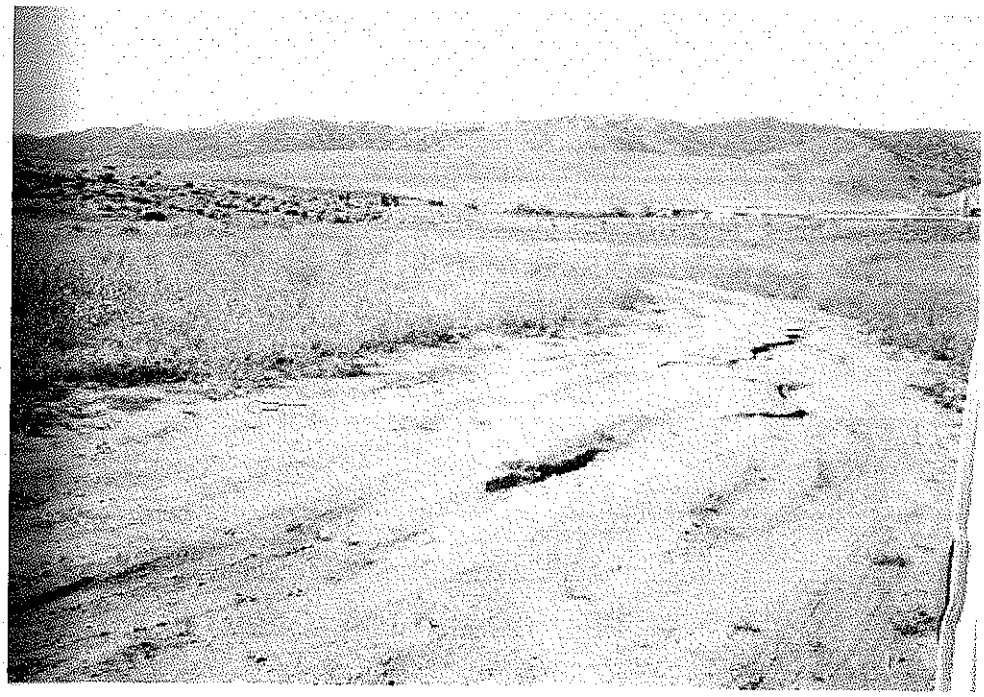

Figure 1. Some of the previous site grading.

Figure 2. More evidence of site disturbance.

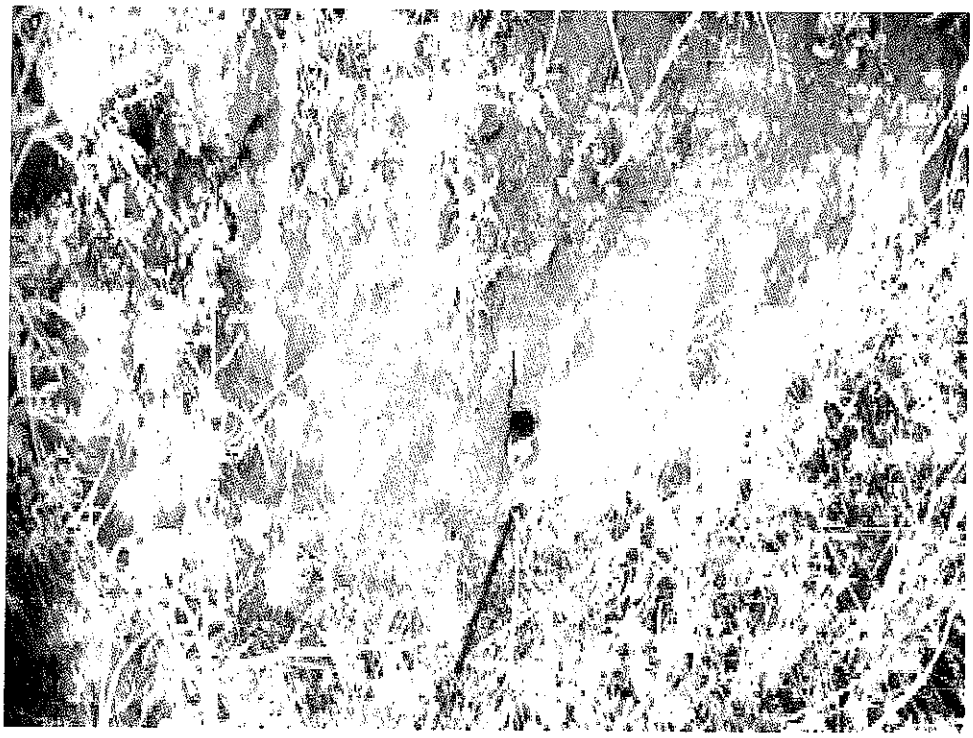

Figure 3. Small mammal burrow on site.

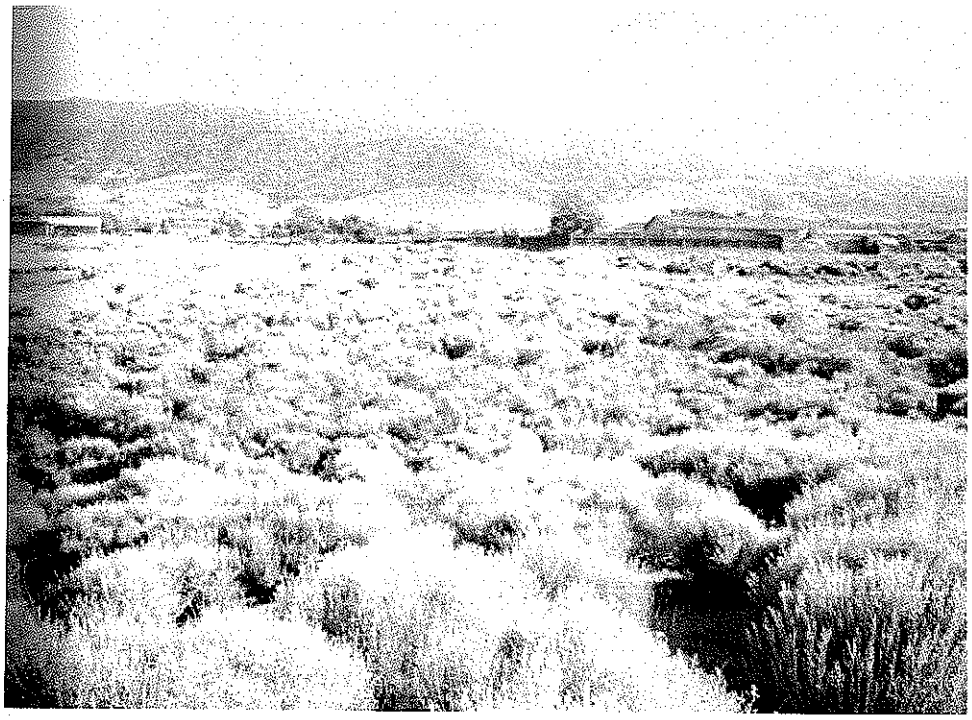

Figure 4. The site is dominated by rubber rabbitbrush.

Appendix B
Trapping Surveys for the Tehachapi Pocket Mouse

M.H. WOLFE and Associates
ENVIRONMENTAL CONSULTING INC.

July 28, 2008

Christopher A. Joseph & Associates
11849 W. Olympic Blvd
Los Angeles, CA 90064
Attn: Ms. Shannon Lucas

RE: Trapping for the Tehachapi pocket mouse for the Wal-Mart Project, Tehachapi, Kern County, California

Dear Ms. Lucas:

INTRODUCTION and BACKGROUND

At the request of Christopher Joseph and Associates, MH Wolfe and Associates Environmental Consulting, Inc, has conducted a four day trapping regime for the Tehachapi pocket mouse during July 7th-11th, 2008. The trapping was conducted for a proposed Wal-Mart project that is located on approximately 30 acres south of Tehachapi Boulevard, north of Valley Boulevard and east and adjacent to Tucker Road within the Tucker Road commercial corridor. Specifically, the site is in Section 19, Township 32 south, Range 33 East in the Tehachapi North U.S. Geological Survey (USGS) topographical quadrangle map.

METHODS

A qualified and permitted biologist, Bill Vanherweg, conducted the four nights of trapping. With the assistance of MH Wolfe who originally conducted a reconnaissance survey on the project site, traps were set near most of the potential mouse burrows located on the project site. The site supported a very low density of small mammal burrows of any kind.

A total of 16 traps were baited with bird seed mixed with sunflower seed. The traps were run for four days for a total of 64 trap nights. The captured small mammals were not handled because of the high percentage of Hanta virus in these types of small mammals.

FINDINGS

As relayed in our report of June 27, 2008, we anticipated the species present would be *Peromyscus maniculatus*, otherwise known as the white-footed deer mouse. A total of four white-footed deer mice were captured, one each night. No other species were captured in the 64 night trapping effort.

P. O. Box 10254 • Bakersfield, California 93389 • (661) 837-1169 • Fax (661) 837-8467

DISCUSSION

Although the Tehachapi pocket mouse may aestivate during periods of high temperatures, the evening temperatures during the time of trapping were in the low- to mid 60's Fahrenheit at night and the low 80's during the day. It is anticipated under these conditions, the Tehachapi pocket mouse would still be active. Based on the trapping results and the current, past and ongoing site conditions, the presence of the Tehachapi pocked mouse on the proposed project site is highly unlikely.

CONCLUSIONS AND RECOMMENDATION

The project site supports very little undisturbed wildlife habitat. In fact, extensive additional site disturbance had occurred since the reconnaissance survey, which eliminated a number of burrows and a large area of vegetation. As originally reported, the site conditions reflects periodic long-term disturbances. At the time of the trapping, clearing work had occurred over the underground sewer pipeline along the southern property boundary and other new dumping of soil and debris, perhaps unauthorized, had occurred.

Relative to the California Environmental Quality Act, the impacts of the development of this property to the Tehachapi pocket mouse are anticipated to be none.

Sincerely,

Marcia H. Wolfe
President

Appendix C
List of Plant Species Observed During Field Surveys

List of Plant Species Observed During Field Surveys

(May 15, 2008 & June 11, 2008)

Scientific Name	Common Name	Weedy Exotic	Native
Achillea millefolium	yarrow		X
Achyrachaena mollis	blow wives		X
Ambrosia psilostachya	western ragweed		X
Amsinckia menziesii var. intermedia	fiddleneck		X
Argemone munita	prickly poppy		X
Asclepias fascicularis	Mexican milkweed		X
Astragalus douglasii var. douglasii	Jacumba milkvetch		X
Avena fatua	wild oat	X	
Baccharis salicifolia	mule fat		X
Beta sp.	beet	X	
Bloomeria crocea	golden stars		X
Brassica nigra	black mustard	X	
Bromus diandrus	ripgut brome	X	
Bromus hordeaceus	soft chess brome	X	
Bromus tectorum	cheat grass	X	
Centaurea solstitialis	yellow star thistle	X	
Chamaesyce albomarginata	rattlesnake weed		X
Chamomila suaveolens	pineapple weed	X	
Chenopodium album	lambs quarters	X	
Chrysothamnus nauseosus ssp. albicaulis	white-stemmed rabbitbrush		X
Cirsium occidentale	cobwebby thistle		X
Conyza sp.			
Croton setigerus	dove weed		X
Elymus elymoides	squirrel tail		X
Epilobium sp.	fireweed		X
Erodium cicutarium	redstem fillaree	X	
Eschscholzia californica	California poppy		X
Grindelia sp.	gum plant		X
Heterostipa comata	needle-and-thread grass	X	
Hirschfeldia incana	perennial mustard	X	
Hordeum jubatum	foxtail barley		X
Hordeum vulgare	common barley	X	
Juncus sp.	rush		X
Lagophylla ramosissima	common hareleaf		X
Lessingia filaginiifolia	California aster		X
Lotus purshianus	Spanish clover		X
Lupinus sp.	lupine		X
Lupinus bicolor	miniature lupine		X
Lupinus microcarpus var. microcarpus	chick lupine		X

Marrubium vulgare	horehound	X	
Microseris sp.			X
Muilla maritima	common muilla		X
Poa bulbosa	bulbous bluegrass	X	
Polygonum arenastrum	knotweed	X	
Psilocarphus tenellus var. tenellus	wooly marbles		X
Salsola tragus	Russian thistle	X	
Sisymbrium irio	London rocket	X	
Sonchus sp.	sowthistle	X	
Stephanomeria virgata	twiggy wreath plant		X
Tragopogon sp.		X	
Ulmus parvifolia	Chinese elm	X	

Appendix D
List of Animal Species Observed During Field Surveys

List of Animal Species Observed During Field Surveys

(May 15, 2008 & June 11, 2008)

Scientific Name	Common Name
Corvus brachyrhynchos	American Crow
Corvus conrax	Common Raven
Lepus californicus	black-tailed jackrabbit
Passer domesticus	House Sparrow
Spermophilus beecheyi	California ground squirrel
Sylvilagus audubonii	desert cottontail
Uta stansburiana	common side-blotched lizard
Vanessa cardui	painted ladies

Appendix E
Representative Photographs of Property

Photo 1: View of engineered slope along the northern property boundary fronting the Tehachapi Junction Shopping Center. Photo taken looking south on June 11, 2006.

Photo 2: View of retention basin in the south-central portion of the property. Photo taken looking west on May 15, 2008.

Photo 3: View of road cuts throughout property. Photo taken May 15, 2008.

Photo 4: View of unnamed tributary to Tehachapi Creek located offsite along the eastern property boundary. Photo taken looking north on May 15, 2008.

Photo 5: View of unnamed tributary to Tehachapi Creek located offsite along the eastern property boundary at the Tehachapi Boulevard crossing. Photo taken looking north on June 11, 2008.

Photo 6: View of grassland in northern portion of the property. Photo taken looking southwest on May 15, 2008.

Photo 7: View of grassland in eastern portion of the property. Photo taken looking southwest on May 15, 2008.

Photo 8: View of scrubland in central portion of the property. Photo taken looking northwest on June 11, 2008.

Photo 9: View of scrubland in southeastern portion of the property. Photo taken looking south on May 15, 2008.

Photo 10: View disturbed upland area in north portion of the property. Photo taken looking northeast on May 15, 2008.

LIVE OAK ASSOCIATES, INC.

an Ecological Consulting Firm

AN INVESTIGATION OF WATERS OF THE UNITED STATES 25-ACRE COMMERCIAL SITE, TEHACHAPI KERN COUNTY, CALIFORNIA

Live Oak Associates, Inc.

David Hartesveldt, Senior Biologist, Principal
Jeff Gurule, Wildlife Biologist
Wendy Fisher, Botanist, Wetlands Biologist

Prepared for:

Frank Sen
CEI Engineering Assoc. Inc.
1044 E. Herndon Ave., Suite 108
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February 24, 2006 File No. 852-02

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EXECUTIVE SUMMARY

Live Oak Associates, Inc. completed a study of a 25-acre commercial parcel in Tehachapi, California for possible Waters of the United States during the winter of 2005. The parcel is located southeast of the intersection of Tucker Road and Tehachapi Boulevard in Tehachapi, Kern County, California.

During the fall of 2005, the only area meeting the technical criteria of jurisdictional wetlands was an approximately 0.25-acre seasonal pond located on the northern boundary of the parcel. Grading that had occurred somewhat prior to the site visit had left the pond sparsely vegetated with willows, cottonwoods, and mulefat. When full, the pond spills into a standpipe that connects to a culvert under Tehachapi Boulevard. The culvert discharges into a stormwater basin that in turn discharges into Tehachapi Creek. Tehachapi Creek eventually connects to the Kern River via Caliente Creek. The jurisdictional status of rivers and creeks entering the southern Central Valley is presently under review by the U.S. Army Corps of Engineers and the U.S. Environmental Protection Agency. Pending the outcome of that review, all waters entering the southern Central Valley are presumed to be Waters of the United States subject to the jurisdiction of the Corps.

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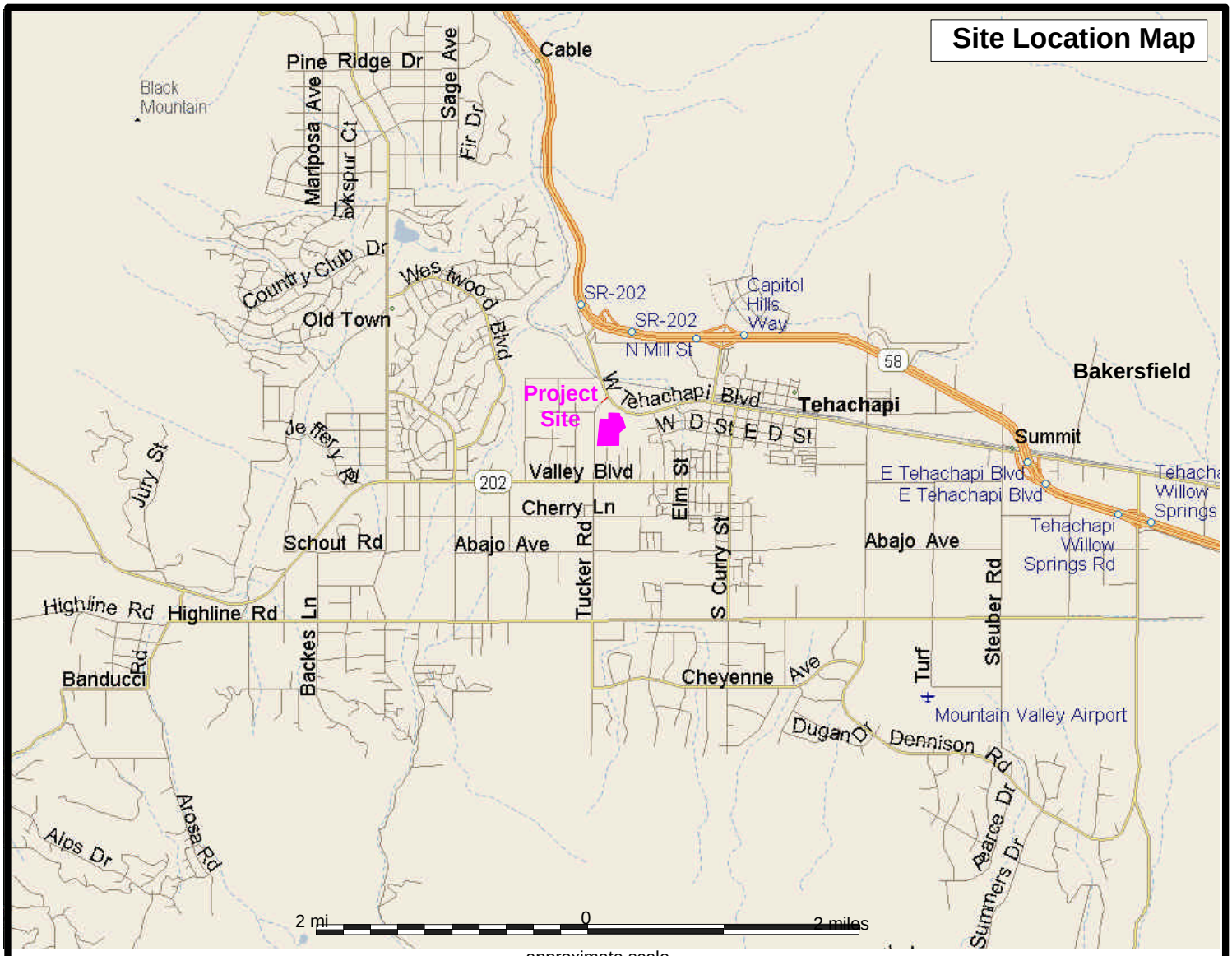
1.0 INTRODUCTION

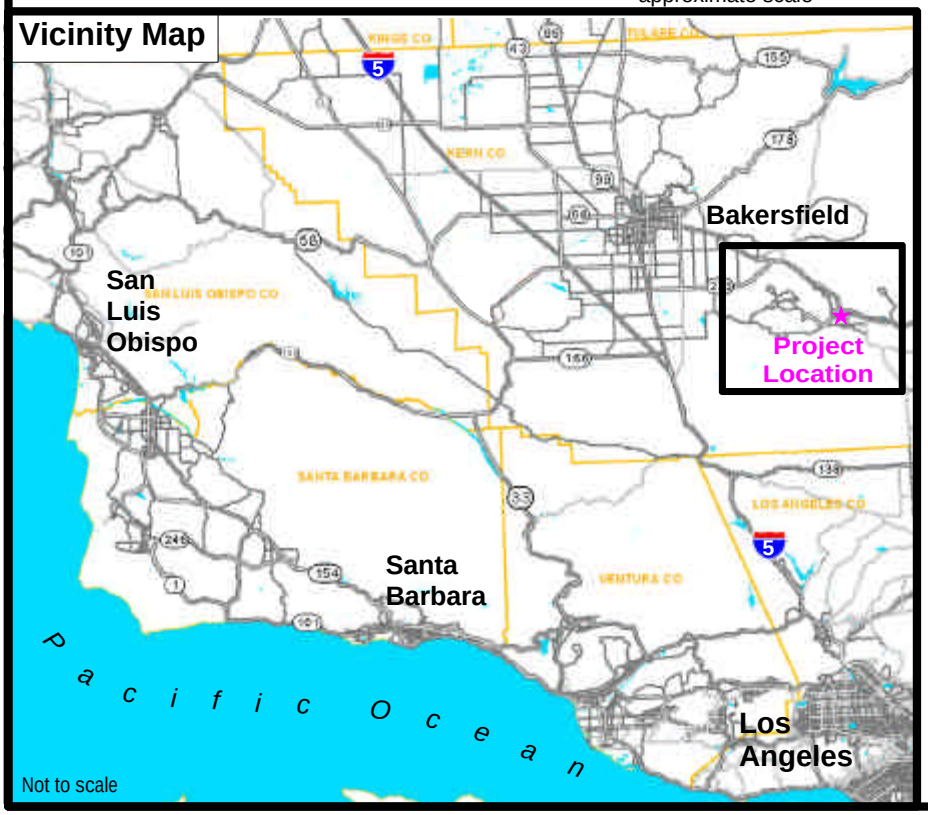
Live Oak Associates, Inc. conducted an investigation into the possible occurrence of Waters of the United States on a 25-acre commercial parcel in Tehachapi, California. The study area is located within the city of Tehachapi southeast of the intersection of Tehachapi Boulevard and Tucker Road (State Highway 202)(Figure 1). It can be found on the Tehachapi North, California, U.S.G.S 7.5 minute quadrangle, at Section 20, Township 32 South, Range 33 East, Mount Diablo Base Meridian (Figure 2).

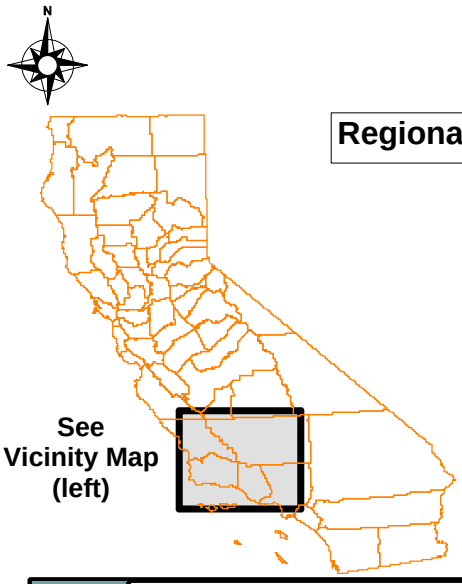
A field survey was conducted on the site on November 30, 2005 for the purpose of observing the site after the first winter rains, and conducting a field inspection for possible "Waters of the United States" (also referred to as "jurisdictional waters"). Such waters include natural drainage channels (tributary waters), their impoundments (other waters), and wetlands (Wetland Training Institute, Inc. 1990). Tributary waters include incised channels that connect to other jurisdictional waters. Such channels may carry a permanent, intermittent, or ephemeral flow of water. Jurisdictional wetlands are those wetlands adjacent to other jurisdictional waters. Wetlands are characterized by the presence of wetland hydrology (i.e. surface inundation or saturated soils), hydric soils (soils which have developed under the anaerobic conditions imposed by soil saturation), and hydrophytic vegetation (an association of plants adapted to saturated soils).

In many cases drainage channels and adjacent wetlands are considered to be within the jurisdiction of the U.S. Army Corps of Engineers (USACE) according to provisions of Section 404 of the Clean Water Act, but as recently interpreted in *Solid Waste Agency of Northern Cook County v. Corps of Engineers* (SWANCC), the U.S. Supreme Court held that isolated waters could not be regulated on the basis of their use by migratory birds. The SWANCC decision may be of particular relevance to the commercial site in Tehachapi, because any hydrologic features found on this site would at most be tributary to creeks that drain into the southern Central Valley, a closed basin with no connectivity to other Waters of the U.S.

Should the Corps consider any drainage features, pools, or wetlands that may be present on the site Waters of the United States, then the filling of or any grading within such waters for





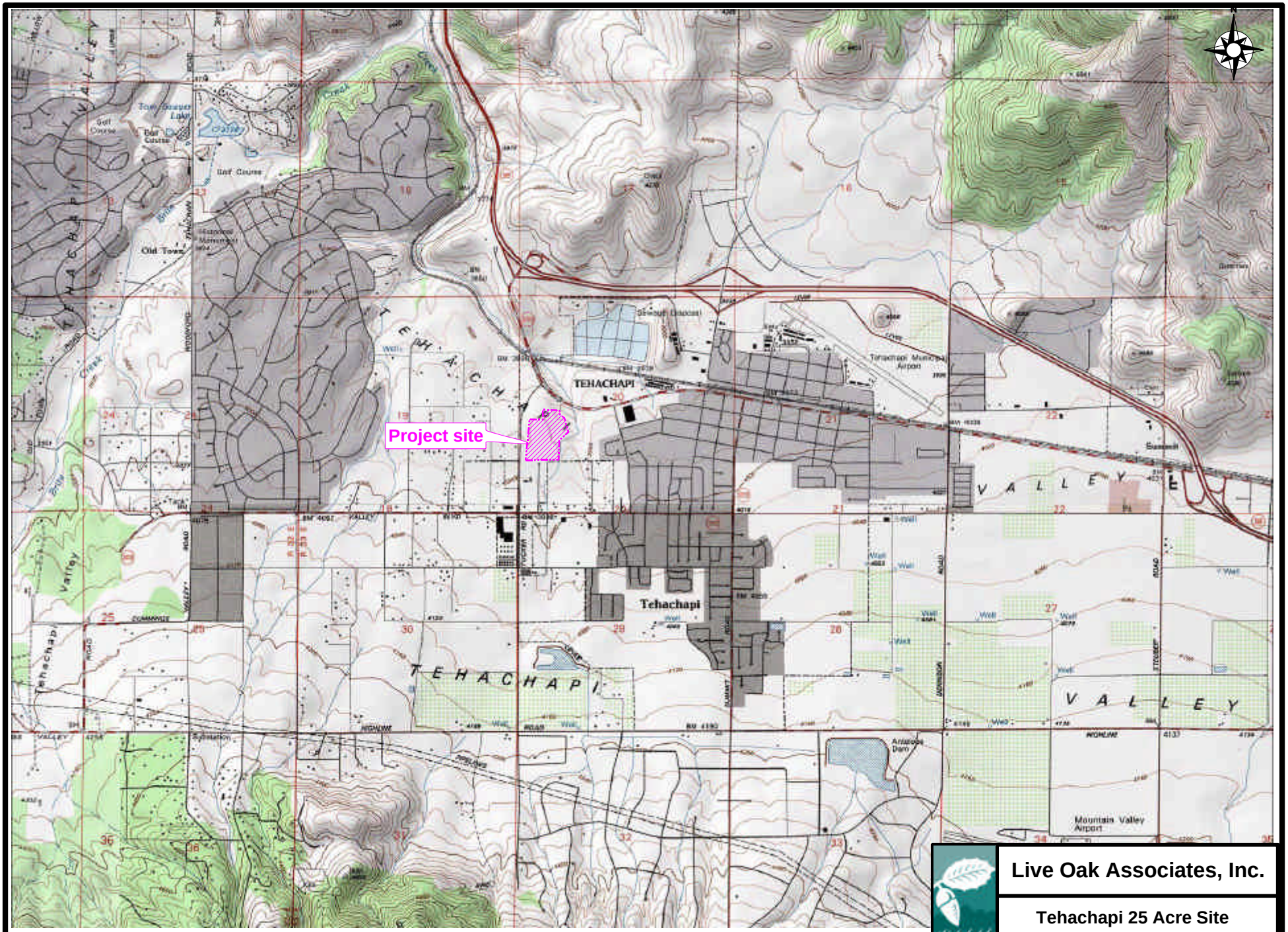


Live Oak Associates, Inc.

Tehachapi 25 Acre Site

Site / Vicinity Map

Date	Project #	Figure #
1/17/06	852-02	1



From USGS
Tehachapi North 7.5' Quadrangle 1973
Tehachapi South 7.5' Quadrangle 1973

1 mile 0 1 mile
approximate scale

Live Oak Associates, Inc.

Tehachapi 25 Acre Site
U.S.G.S. Quadrangle

Date	Project #	Figure #
1/17/06	852-02	2

building pads, parking lots, or infrastructure would likely require a Department of the Army permit per Section 404 of the Clean Water Act. This permit would be issued on the condition that the applicant provide some type of compensatory mitigation such that once the site has been developed fully, a net loss of jurisdictional waters will not have occurred.

Even in those cases where the Corps has disclaimed jurisdiction over isolated drainage features on the basis of the SWANCC ruling, two state agencies, the California Department of Fish and Game (CDFG) and the California Regional Water Quality Control Board (RWQCB) may also regulate the placement of fill in such waters.

This report addresses those factors that establish which state and federal agencies would have jurisdiction over any hydrologic features that may be present on the site. The analysis in Section 4.0 of this report draws conclusions about the likely jurisdictional status of on-site hydrologic features, recognizing that ultimately only the federal and state resource agencies charged with administration of the Clean Water Act, Fish and Game Code, and California State Water Code can make jurisdictional determinations.

2.0 METHODS

Wendy Fisher and Jeff Gurule of Live Oak Associates, Inc. surveyed the study area for jurisdictional waters on November 30, 2005. This survey was conducted on foot in order to maximize visual coverage of the entire project area. The field investigators used an aerial photograph and a topographic map at a scale of 1” = 200’ to guide the survey efforts. The boundaries of all jurisdictional waters were determined using a global positioning satellite unit (a Trimble Geo XT unit) with sub-meter accuracy. The GPS data were used to prepare a map depicting hydrologic features with the potential to be considered jurisdictional waters.

The surveys were consistent with guidelines found in the *Corps of Engineers Wetland Delineation Manual* (Environmental Laboratory 1987) and *Minimum Standards for Acceptance of Preliminary Wetland Delineations* (USACE 2001). The survey methodology used to identify and delineate likely jurisdictional waters has been described in more detail below.

2.1 AREAS MEETING THE TECHNICAL CRITERIA OF JURISDICTIONAL WETLANDS

Wetlands are defined as “those areas that are inundated or saturated by surface or ground water at a frequency and duration to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions. Wetlands generally include swamps, marshes, bogs and similar areas” (Environmental Laboratory 1987). The diagnostic environmental characteristics of wetlands include hydrophytic vegetation, hydric soils and a hydrology characterized by an aquic or peraquic moisture regime. Accordingly, Live Oak Associates, Inc. surveyed the site for wetland indicator plants, positive indicators of hydric soils and wetland hydrology.

Three representative sampling locations were selected within the study area where vegetation, hydrology, and soils information was collected for the purpose of documenting site conditions. All data were entered onto standard data sheets patterned after those used by U.S. Army Corps of Engineers (USACE). The data sheet for each numbered sampling location can be found in Appendix B of this report. All numbered sampling locations have been identified on the map depicting the areas meeting the technical criteria of jurisdictional wetlands (Figures 3). Color photographs were taken at selected sampling locations of the study area (Appendix C).

Plants observed at each sampling location were identified to species using *The Jepson Manual of Higher Plants of California* (Hickman 1994). The wetland indicator status of each species was obtained from the *1987 Wetland Plant List, California* (Reed 1988). A complete list of plants identified on the study area during 2005 surveys can be found in Appendix D.

Wetland indicator species are so designated according to their frequency of occurrence in wetlands.

OBLIGATE (OBL)	Probability to occur in wetland is >99%
FACULTATIVE WETLAND (FACW)	Probability to occur in wetland is between 67-99%
FACULTATIVE (FAC)	Probability to occur in wetland is between 33 to 67%
FACULTATIVE UPLAND (FACU)	Probability to occur in wetland is between 1 to <33%.
UPLAND (UPL)	Probability to occur in wetland is <1%

Hydrophytic vegetation is considered present when more than 50% of the dominant species at a given location are composed of obligate, facultative wetland and facultative plant species.

Each sampling location was also examined for positive indicators of wetland hydrology and hydric soils. Evidence of wetland hydrology consisted of primary indicators such as watermarks, drift lines, sediment deposits and drainage patterns in wetlands. Secondary indicators of wetland hydrology include oxidized root channels, water stained leaves, local soil survey data (where available), etc. A soil pit 10”- 12” in depth was dug at all sampling locations that were not inundated at the time of the site survey. The soils excavated from each pit were also examined for low chromas, gleying, mottling, concretions, sulfidic odors, etc.

2.2 TRIBUTARY WATERS

According to the Federal Register, 33 CFR Part 328 (Wetland Training Institute, Inc. 1990) tributary waters include the following:

- All waters which are currently used, or were used in the past, or may be susceptible to use in interstate of foreign commerce, including all waters which are subject to the ebb and flow of the tide;
- All interstate waters including interstate wetlands;
- All other waters such as intrastate lakes, rivers, streams (including intermittent streams), mudflats, sandflats, wetlands, sloughs, prairie potholes, wet meadows, playa lakes, or

natural ponds, the use, degradation or destruction of which could affect interstate or foreign commerce;

- All impoundments of waters otherwise defined as “Water of the United States” under the definition;
- Tributaries of waters; identified in paragraphs of the bulleted items above.

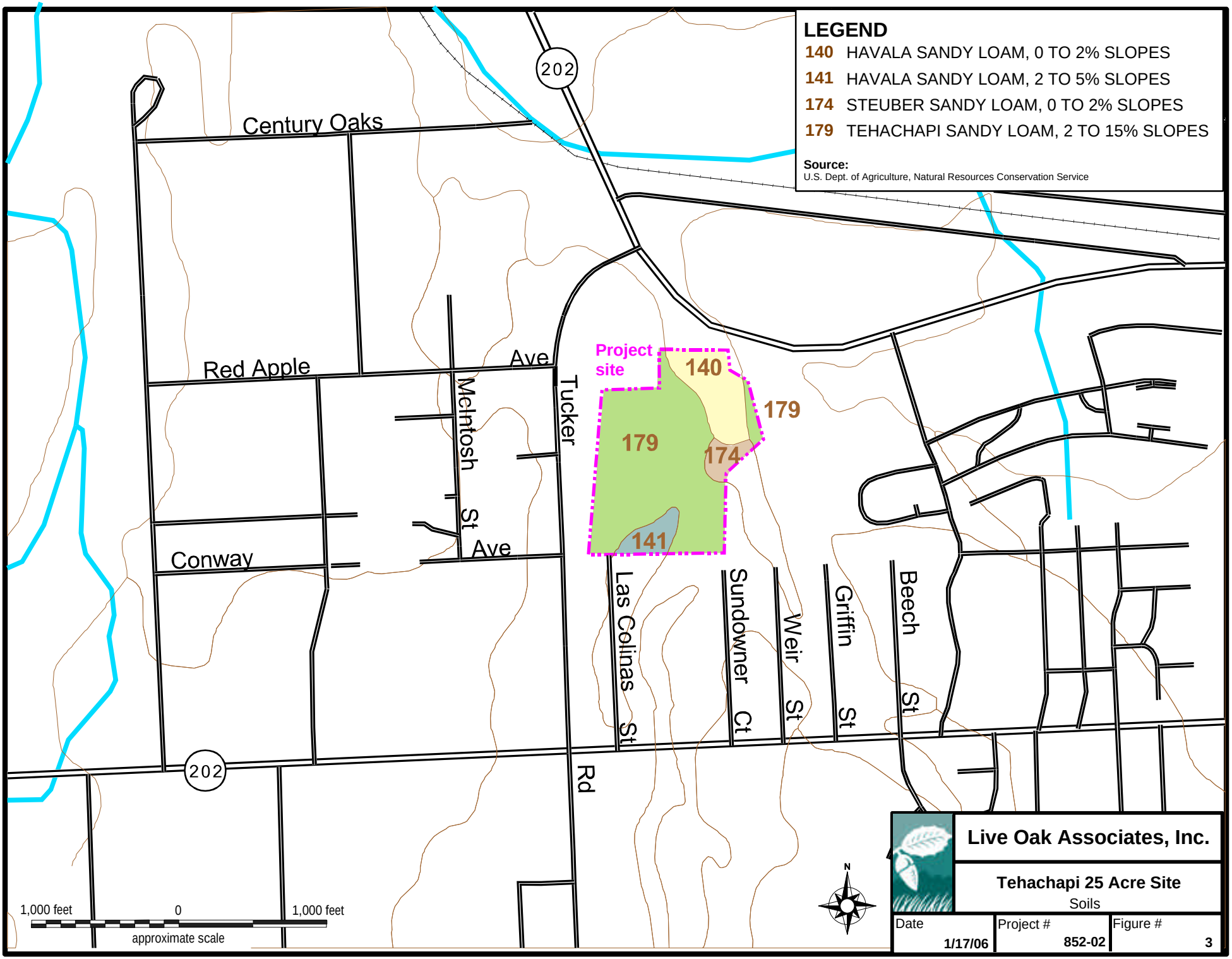
In the absence of adjacent wetlands, the limit of jurisdiction in rivers, streams, and their tributaries extends to “ordinary high water” (OHW). OHW refers to “that line on the shore established by the fluctuations of water and indicated by physical characteristics such as clear, natural line impressed on the bank, shelving, changes in the character of soil, destruction of terrestrial vegetation, the presence of litter and debris, or other appropriate means that consider the characteristics of the surrounding areas.”

3.0 RESULTS

The study area is located in the Tehachapi Valley of the southern Sierra. Elevations of the study area vary from a low of approximately 3,930 feet National Geodetic Vertical Datum (NGVD) near its northeast corner to a high of approximately 3,990 feet NGVD near the eastern border. At the time of the survey, the study area consisted primarily of relatively flat to hilly shrubland. Some areas of the study area were highly disturbed by grading, scraping, or digging. Motorcycle/bicycle trails, berms, and jumps were scattered throughout the site. Large portions of the site were, however, relatively undisturbed. The predominant natural environment in the valley consists of non-native grassland and rubber rabbitbrush scrub.

The study area is located in a region of California having a Mediterranean climate. Summers are dry and typically quite warm with daytime temperatures commonly exceeding 100° Fahrenheit. Winters are rainy and cool with daytime temperatures rarely exceeding 65° Fahrenheit. Annual precipitation in the general vicinity of the study area is highly variable from year to year with a mean annual rainfall of approximately 11 inches, most of which falls between the months of October through March. Most precipitation falls in the form of rain; however, snow is not uncommon during colder storms, but quickly melts. In flat areas of the site stormwater infiltrates the site's soils and exits the site as sheet flow. In hilly areas stormwater exits the site as runoff either into Tehachapi creek directly, or into the small onsite pond located near the northern boundary of the site.

Four native soil-mapping units were identified on the study area (Figure 3): Havala sandy loam, 0 to 2% slopes; Havala sandy loam, 2 to 5% slopes; Steuber sandy loam, 0 to 2% slopes; and Tehachapi sandy loam, 2 to 15% slopes (NRCS 1980). Soils of these series' are very deep, well drained, and composed of old alluvial fans and terraces. Erosion hazard is slight (NRCS 1980). None of these soils are listed as hydric by the NRCS.


LEGEND
140 HAVALA SANDY LOAM, 0 TO 2% SLOPES
141 HAVALA SANDY LOAM, 2 TO 5% SLOPES
174 STEUBER SANDY LOAM, 0 TO 2% SLOPES
179 TEHACHAPI SANDY LOAM, 2 TO 15% SLOPES
Source:
U.S. Dept. of Agriculture, Natural Resources Conservation Service
Century Oaks
Red Apple
Ave
Conway
Ave
McIntosh St
Tucker Rd
Las Colinas St
Sundowner Ct
Weir St
Griffin St
Beech St
202
202
Project site
140
179
179
174
141
1,000 feet
0
1,000 feet
approximate scale
N
Live Oak Associates, Inc.
Tehachapi 25 Acre Site
Soils
Date
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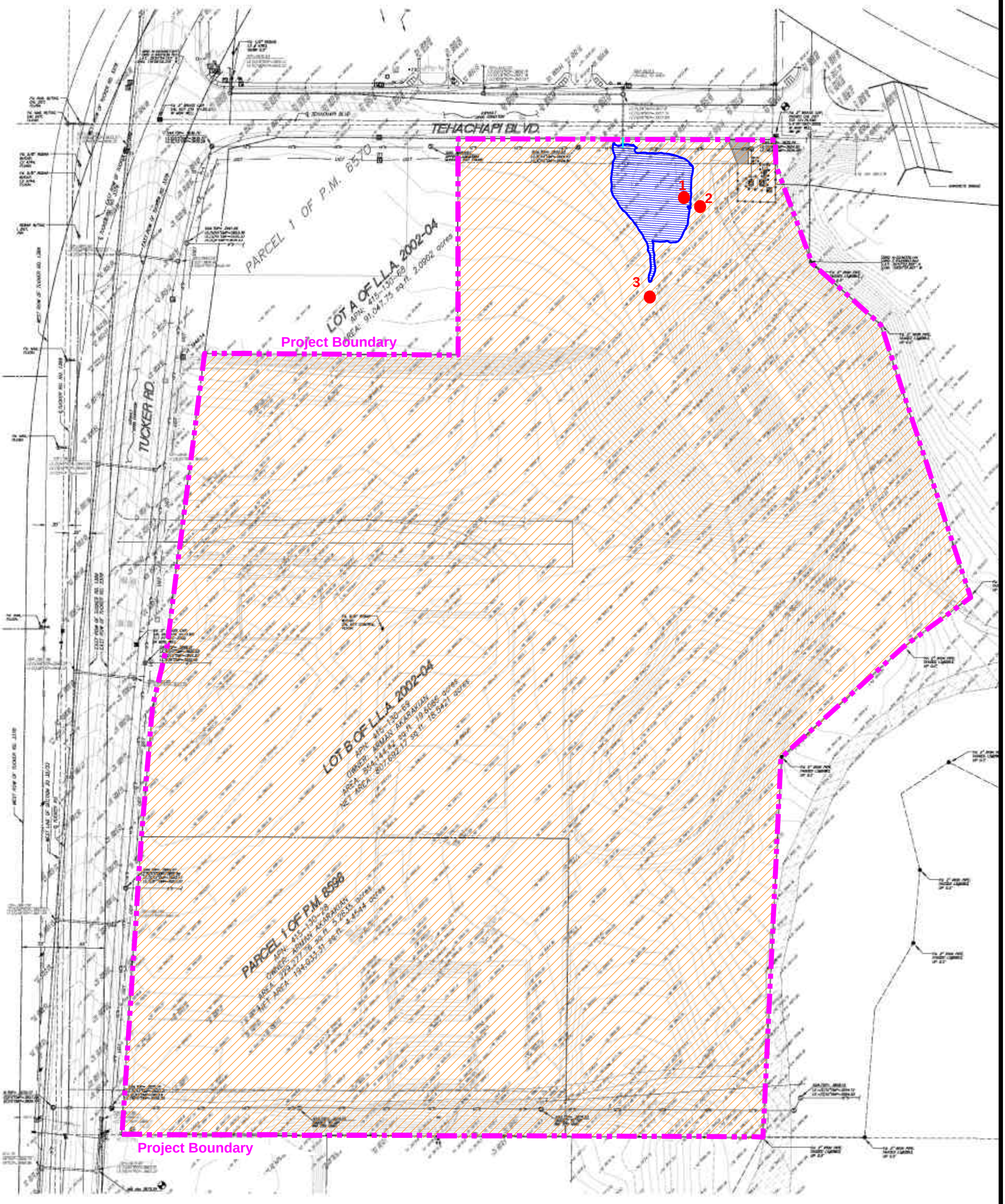
3

3.1 AREAS MEETING THE TECHNICAL CRITERIA OF JURISDICTIONAL WETLANDS

One seasonal pond approximately 0.25 acres in size met all the technical criteria of jurisdictional wetlands (Figure 4). This pond forms when winter rains generate stormwater runoff that collects in a topographic depression just south of Tehachapi Boulevard. The raised road shoulder of Tehachapi Boulevard acts as a dam that prevents ponded water in the depression from spilling directly into any natural drainage feature. Instead, the pond spills into a standpipe that is connected to a culvert passing under Tehachapi Boulevard. The spill elevation of the standpipe is three to four feet higher than the lowest point of the depression. Thus, the pond fills to a maximum depth of three to four feet.

The pond was sparsely vegetated at the time of the site visit, apparently the result of recent grading. Woody riparian plants observed just above the pond's high water mark included sprigs of an unidentified willow (*Salix sp*.) (FACW), Fremont's cottonwood (*Populus fremontii*) (FACW), and mule fat (*Baccharis salicifolia*) (FACW). These species provided at best a sparse vegetated cover. None of the plants observed were more than one foot in height. Given their relatively large leaf size and vigor, some or all of these wetland plants were likely sprouting from the root crowns of what were once more substantial riparian trees and shrubs. Common weedy vegetation found just above the pond's high water mark included Russian thistle (*Salsola tragus*) (FACU+), trefoil (*Lotus humistratus*) (UPL), and bracted saltbrush (*Atriplex serenana* ssp. *serenana*) (FAC).

The topographic depression in which the pond had formed appears to hold water for a significant portion of the winter and spring. Evidence of this included the presence of algal mats, sparse vegetation, and the level of inundation at the time of the site visit (approximately one foot in depth). Oxidized root channels observed in the soil profile around the margins of the pond were further evidence of seasonal ponding. A Munsell soil notation of 10YR 2/1 was also noted in the "B" horizon.



LEGEND

Areas not meeting the three technical criteria of jurisdictional wetlands

Ruderal Rubber Rabbitbrush Scrub (24.75 acres)

Sampling location

Areas meeting all three technical criteria of jurisdictional wetlands

Seasonal Pond (0.25 acres)

Areas meeting one of the three technical criteria of jurisdictional wetlands

Culvert (approx. 100 square feet)

Live Oak Associates, Inc.

Tehachapi 25 Acre Site
Waters of the U.S.

Date	Project #	Figure #
1/17/06	852-02	4

3.1.2 Channels and Culverts

The previously mentioned standpipe connects to culvert that carries overflow water from the seasonal pond under Tehachapi Boulevard (see Figure 4). The road passes east to west along the northern boundary of the study area. The culvert consisted of an underground pipe. This culvert constitutes a conduit for site runoff discharging from the pond, but clearly met none of the technical criteria of jurisdictional wetlands.

3.2 OTHER AREAS

The remainder of the study area was comprised of upland ruderal rabbitbrush scrub that did not meet any of the technical criteria of jurisdictional wetlands. At the time of the site survey, much of this habitat had been greatly disturbed by off highway vehicle use. The dominant shrub species vegetated upland areas was rubber rabbitbrush (*Chrysothamnus nauseosus ssp. hololeucus*) (UPL). Common weedy non-native species included yellow star thistle (*Centauria solstitialis*) (UPL), Russian thistle (*Salsola tragus*) (FACU+), soft chess brome (*Bromus hordeaceus*) (FACU-), prickly lettuce (*Lactuca serriola*) (FAC), and black mustard (*Brassica nigra*) (UPL). Native plant species observed on the site included Great Valley gumweed (*Grindelia camporum* ssp. *camporum*) (FACU), aster (*Aster ascendens*) (UPL), trefoil (*Lotus humistratus*) (UPL), California poppy (*Escholschzia californica*) (UPL), and wild onion (*Allium* sp.) (UPL). One tree, a non-native species of elm (*Ulmus sp.*) (UPL), was observed in the southwestern corner of the study area. Included within this habitat was an upland swale that emptied into the seasonal pond. Russian thistle and bracted saltbrush dominated the upland swale. The area of ruderal rabbitbrush scrub lacked indicators of hydric soils, hydrophytic vegetation, and wetland hydrology.

4.0 DISCUSSION

This discussion focuses on the possible jurisdictional status of the seasonal pond located along the northern boundary of the commercial parcel and whether it meets the technical and legal criteria to be considered a Water of the U.S. subject to the regulatory jurisdiction of the USACE.

As noted in Section 3.0 of this report the pond met the technical criteria of jurisdictional wetlands. Other factors, however, determine if areas meeting the technical criteria of jurisdictional wetlands are in fact Waters of the United States.

In January of 2001 the U.S. Supreme Court ruled in *Solid Waste Agency of Northern Cook County v. U.S. Army Corps of Engineers* (the SWANCC decision) that "non-navigable, isolated, intrastate" waters could not be claimed as jurisdictional by the USACE on the basis of their use by migratory birds (Guzy 2001). Although the Court did not specifically address the meaning of the word "isolated", it upheld the jurisdictional status of "adjacent" wetlands (and other waters), which are by definition wetlands that are "bordering, contiguous, or neighboring" other jurisdictional waters. Therefore, the term "isolated wetland" has implicitly been defined as 'wetlands that are not bordering, contiguous, or neighboring' other jurisdictional waters.

This definition does not, however, address the degree of proximity necessary to establish that a given wetland (or other water) is "adjacent" to a known jurisdictional water. As established by the Supreme Court in the *United States v. Riverside Bayview Homes, Inc.* in 1985 "wetlands separated from other waters by man-made dikes or barriers, natural river berms, beach dunes, and the like are 'adjacent wetlands'" (Guzy 2001). Other situations are not so clear.

The seasonal pond found on the study area forms in a depression along the northern boundary of the site (see Figure 4). The pond appears to be fed solely by sheet flow from adjacent lands, as well as roadside ditches along Tehachapi Boulevard. When full, the pond spills into a standpipe connected to a culvert that conveys stormwater under Tehachapi Boulevard to a stormwater ponding basin to the north. The ponding basin is connected to Tehachapi Creek via a culvert.

A review of aerial photographs and topographic maps (Microsoft TerraServer imagery) indicates that Tehachapi Creek joins Caliente Creek approximately 15 miles northwest of the study area. Caliente Creek consists of an engineered channel 6 miles downstream of its

confluence with Tehachapi Creek. Eventually, Caliente Creek enters the Arvin Edison canal west of Comanche Drive between Mountain View Road on the north, and Panama Drive on the south. The Arvin Edison canal travels west for several miles south of the City of Bakersfield. It then travels north and finally joins the Kern River opposite the Friant/Kern canal.

The jurisdictional status of rivers, creeks, distributary channels, and canals discharging into the closed basins of the Tulare and Buena Vista Lakes is presently under review of the USACE and U.S. Environmental Protection Agency (EPA). The staff at the Sacramento District of the USACE has recommended that all private and public entities contemplating projects affecting rivers, creeks, and wetlands of the southern Central Valley presume that these hydrologic features are Waters of the United States until the USACE and EPA have completed the aforementioned review and issued a formal report. Therefore, the 0.25-acre seasonal pond is presumed to be a Water of the U.S.

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APPENDIX A: SOILS OF THE STUDY AREA

from 35 to 50 percent. Gravel content ranges from 5 to 20 percent. A few pedons have no transitional B1t or B3t horizon. The C horizon has hue of 10YR or 7.5YR, value of 5 to 7, and chroma of 3, 4, 6, or 8. It is loamy sand or coarse sand with gravelly or very gravelly equivalents. Gravel content ranges from 10 to 55 percent. Some pedons have a silty substratum below a depth of 40 inches.

Godde series

The Godde series consists of shallow, somewhat excessively drained soils on mountainous uplands. These soils formed in residual material weathered from granitic rock. Slope ranges from 30 to 75 percent. The mean annual precipitation ranges from 12 to 21 inches, and the mean annual air temperature is about 54 degrees F.

Godde soils are similar to Friant, Tollhouse, and Tunis soils. They are near Edmundston and Tollhouse soils. Friant soils are well drained and are warmer. Tollhouse and Tunis soils have paralithic contacts with the granitic rock. Edmundston soils are deep and well drained.

Typical pedon of Godde gravelly sandy loam in an area of Edmundston-Godde-Tollhouse complex, 50 to 75 percent slopes, 50 feet north of SW corner of NW1/4NE1/4SW1/4 sec. 29, T. 11 N., R. 15 W. SBB&M.

01—2 inches to 0; oak leaves, oak leaf mold, pine needles; abrupt wavy boundary.

A1—0 to 10 inches; grayish brown (10YR 5/2) gravelly sandy loam, very dark brown (10YR 3/2) moist; weak fine granular structure; slightly hard, friable, nonsticky and nonplastic; common very fine and fine roots; common very fine tubular and interstitial pores; approximately 15 percent fine gravel with 5 percent of the top surface covered with fine and coarse gravel; neutral (pH 6.7); clear wavy boundary.

C—10 to 12 inches; brown (10YR 5/3) gravelly sandy loam, brown (10YR 4/3) moist; massive; slightly hard, friable, nonsticky and nonplastic; common fine and medium roots; friable; approximately 25 percent fine gravel; neutral (pH 6.7); abrupt wavy boundary.

R—12 inches; fractured granitic rock.

Depth to the fractured granitic rock ranges from 10 to 20 inches. The A horizon ranges from 10 to 20 inches in thickness. It has value of 3 to 5 and chroma of 2 or 3. Reaction is slightly acid or neutral. The C horizon has value of 5 or 6 and chroma of 2 to 4. It is sandy loam or gravelly sandy loam. Reaction ranges from medium acid to neutral.

Havala series

The Havala series consists of very deep, well drained soils on alluvial fans and old stream terraces. These soils formed in alluvial material derived mainly from granitic rocks. Slope ranges from 0 to 15 percent. The mean annual precipitation ranges from 9 to 12 inches, and the mean annual air temperature is about 59 degrees F.

Havala soils are similar to Tehachapi soils. They are near Steuber and Tehachapi soils. Tehachapi soils have a thinner A horizon. Steuber soils are stratified and have a coarse-loamy control section.

Typical pedon of Havala sandy loam, 9 to 15 percent slopes, about 2,400 feet west and 500 feet north of southwest corner sec. 12, T. 11 N., R. 17 W. SBB&M (nonsectionalized).

A1—0 to 10 inches; brown (10YR 5/3) sandy loam, dark brown (10YR 3/3) moist; weak fine subangular blocky structure; slightly hard, friable, nonsticky and nonplastic; common very fine roots; few very fine tubular and fine interstitial pores; 12 percent fine and medium gravel; neutral (pH 7.0); clear wavy boundary.

A3—10 to 24 inches; grayish brown (10YR 5/2) sandy loam, very dark grayish brown (10YR 3/2) moist; weak medium subangular blocky structure; slightly hard, friable, slightly sticky and nonplastic; few very fine roots; few fine and medium tubular and interstitial pores; neutral (pH 7.0); clear wavy boundary.

B1t—24 to 31 inches; dark brown (10YR 4/3) sandy clay loam, dark brown (10YR 3/3) moist; weak medium subangular blocky structure; hard, firm, slightly sticky and slightly plastic; few fine interstitial and tubular pores; mildly alkaline (pH 7.5); clear wavy boundary.

B2t—31 to 48 inches; yellowish brown (10YR 5/4) sandy clay loam, dark yellowish brown (10YR 3/4) moist; weak medium subangular blocky structure; hard, firm, slightly sticky and slightly plastic; few fine interstitial pores; few thin clay films on faces of peds and bridging mineral grains; moderately alkaline (pH 8.0); clear wavy boundary.

C—48 to 65 inches; grayish brown (10YR 5/2) sandy loam, dark grayish brown (10YR 4/2) moist; massive; slightly hard, friable, nonsticky and nonplastic; moderately alkaline (pH 8.0).

Solum thickness ranges from 30 to 60 inches. Organic matter content is more than 1.2 percent to a depth of 10 inches but decreases regularly to less than 1 percent at a depth of about 12 to 18 inches. Coarse fragment content ranges from 0 to 15 percent; occasional stones and boulders are on the surface. Reaction is neutral to moderately alkaline. The A horizon ranges from 20 to 30 inches in thickness. It has value of 4 or 5 and chroma of 1 to 3. A few pedons have no A3 horizon. Some pedons have no B1t horizon. The B2t horizon has hue of 10YR or 7.5YR, value of 3 or 4, and chroma of 2 to 4. It is loam, sandy clay loam, or clay loam. In some pedons, a B3 horizon is present. The C horizon has value of 4 or 5

and chroma of 2 to 4. It is sandy loam or fine sandy loam.

Hesperia series

The Hesperia series consists of very deep, well drained soils on alluvial fans. These soils formed in alluvial material derived from granitic rock. Slope ranges from 0 to 9 percent. The mean annual precipitation ranges from 6 to 9 inches, and the mean annual air temperature is about 64 degrees F.

Hesperia soils are similar to Arvin, DiGiorgio, Rosamond Variant, and Whitewolf soils. They are near Arvin, DiGiorgio, Wasioja, and Whitewolf soils. Arvin soils are stratified. DiGiorgio and Rosamond Variant soils have fine-loamy control sections. Wasioja soils have a fine-loamy control section and an argillic horizon. Whitewolf soils have a profile of loamy sand or coarser material throughout.

Typical pedon of Hesperia sandy loam in an area of Hesperia sandy loam, 0 to 2 percent slopes, NW corner of sec. 19 T. 11 N., R. 18 W. SBB&M.

Ap—0 to 4 inches; brown (10YR 5/3) sandy loam, dark brown (10YR 3/3) moist; moderate medium subangular blocky structure; hard, friable, slightly sticky and nonplastic; common fine interstitial pores; mildly alkaline (pH 7.8); clear smooth boundary.

C1—4 to 18 inches; brown (10YR 5/3) sandy loam, dark brown (10YR 3/3) moist; weak coarse subangular blocky structure; hard, friable, slightly sticky and nonplastic; common fine interstitial pores; mildly alkaline (pH 7.8); clear smooth boundary.

C2—18 to 34 inches; brown (10YR 5/3) fine sandy loam, dark brown (10YR 3/3) moist; massive; hard, friable, slightly sticky and nonplastic; common fine interstitial pores; slightly effervescent with disseminated lime; moderately alkaline (pH 8.0); clear smooth boundary.

C3—34 to 57 inches; light yellowish brown (10YR 6/4) sandy loam mixed with lenses of pale brown (10YR 6/3) fine sandy loam and silt loam, dark yellowish brown (10YR 4/4) moist; massive; hard, friable, slightly sticky and nonplastic; common fine interstitial pores; slightly effervescent with disseminated lime; moderately alkaline (pH 8.0); gradual smooth boundary.

C4—57 to 70 inches; light yellowish brown (10YR 6/4) sandy loam, dark yellowish brown (10YR 4/4) moist; massive; hard, friable, nonsticky and nonplastic; common fine interstitial pores; 5 to 10 percent fine gravel; slightly effervescent with disseminated lime; moderately alkaline (pH 8.0).

Reaction is mildly or moderately alkaline. Organic matter content is less than 1.0 percent. The A horizon ranges from 30 to 47 inches in thickness. It has hue of 10YR or 7.5YR and chroma of 2 or 3. Clay content ranges from 12 to 18 percent. Gravel content ranges from 0 to 5 percent. The C horizon has value of 5 or 6 chroma of 3 or 4. It is fine sandy loam, sandy loam, or coarse sandy loam. In some pedons, there is weak stratification of similar textures in the C horizon. Gravel content ranges from 5 to 10 percent.

Hi Vista series

The Hi Vista series consists of moderately deep, well drained soils on low pediments. These soils formed in residual material weathered from granitic rock. Slope ranges from 2 to 9 percent. The mean annual precipitation ranges from 4 to 6 inches, and the mean annual air temperature is about 63 degrees F.

Hi Vista soils are similar to Garlock and Neuralia soils. They are near Alko and Cajon soils. Garlock soils are very deep and Neuralia soils are deep over bedrock. Alko soils are shallow over a silica-lime cemented duripan. Cajon soils are very deep and have no argillic horizon.

Typical pedon of Hi Vista sandy loam in an area of Hi Vista sandy loam, 2 to 9 percent slopes, in NE1/4 SE1/4 NE1/4 sec. 8, T. 9 N., R. 12 W. SBB&M.

A1—0 to 4 inches; yellowish brown (10YR 5/4) sandy loam, dark yellowish brown (10YR 4/4) moist; weak coarse granular structure; slightly hard, friable, slightly sticky and slightly plastic; common very fine roots; few very fine interstitial pores; approximately 10 percent fine gravel fragments; moderately alkaline (pH 8.0); abrupt wavy boundary.

B1t—4 to 12 inches; brown (7.5YR 5/4) gravelly sandy clay loam, dark brown (7.5YR 4/4) moist; moderate, coarse subangular blocky structure; hard, firm, slightly sticky and plastic; common very fine roots; few fine tubular and interstitial pores; few thin clay films bridging mineral grains; approximately 25 percent fine gravel fragments; moderately alkaline (pH 8.0); clear wavy boundary.

B2t—12 to 18 inches; dark yellowish brown (10YR 4/4) gravelly sandy clay loam, dark brown (7.5YR 4/4) moist; moderate, coarse angular blocky structure; very hard, very firm, slightly sticky and plastic; few very fine roots; few very fine tubular and interstitial pores; common moderately thick clay films on faces of peds and lining pores; 25 percent fine gravel fragments; moderately alkaline (pH 8.0); clear wavy boundary.

B3t—18 to 30 inches; light yellowish brown (10YR 6/4) gravelly sandy clay loam, dark yellowish brown (10YR 4/4) moist; weak, medium angular blocky structure; very hard, firm, slightly sticky and plastic; few moderately thick clay films on faces of peds; approximately 30 percent fine gravel; moderately alkaline (pH 8.0); abrupt wavy boundary.

R—30 inches; hard, slightly fractured granite. Has cracks .1- to 1-inch wide, spaced 12 to 24 inches apart

Rosamond Variant

The Rosamond Variant consists of very deep, well drained soils on alluvial fans. These soils formed in alluvial material derived mainly from granitic rock. Slope ranges from 5 to 15 percent. The mean annual precipitation is about 12 inches, and the mean annual air temperature is about 59 degrees F.

Rosamond Variant soils are similar to Arvin and DiGiorgio soils. They are near Arvin, Chanac, and Pleito soils. Arvin soils have coarse loamy control sections. DiGiorgio soils have aridic moisture regimes bordering on xeric. Chanac soils are on terraces and have a B2ca horizon. Pleito soils have a thick mollic epipedon.

Typical pedon of Rosamond Variant in an area of Rosamond Variant sandy loam, 5 to 15 percent slopes, in SE1/4 NE1/4 NW1/4 sec. 14, T. 11 N., R. 18 W. SBB&M.

A11—0 to 1 inch; mixed grayish brown and brown (10YR 5/2, 5/3) sandy loam, mixed very dark grayish brown and dark brown (10YR 3/2, 3/3) moist; weak very fine granular structure; hard, friable, slightly sticky and slightly plastic; many very fine roots; common very fine and fine tubular and interstitial pores; 2 to 5 percent fine gravel, scattered on surface; slightly acid (pH 6.5); abrupt smooth boundary.

A12—1 to 4 inches; light yellowish brown (10YR 6/4) coarse sandy loam, yellowish brown (10YR 5/4) moist; massive; slightly hard, very friable, nonsticky and nonplastic; common very fine and fine roots; few very fine tubular and interstitial pores; neutral (pH 7.0); abrupt smooth boundary.

A13—4 to 7 inches; grayish brown (10YR 5/2) sandy loam, very dark grayish brown (10YR 3/2) moist; moderate medium and fine subangular blocky structure; hard, friable, slightly sticky and slightly plastic; few fine roots; few very fine and fine tubular and interstitial pores; slightly effervescent, moderately alkaline (pH 8.2); clear smooth boundary.

C1—7 to 30 inches; light brownish gray (10YR 6/2) sandy clay loam, dark grayish brown (10YR 4/2) moist; weak fine and medium subangular blocky structure; hard, friable, slightly sticky and slightly plastic; few very interstitial and coarse tubular pores; slightly effervescent, moderately alkaline (pH 8.2); clear wavy boundary.

C2ca—30 to 60 inches; yellowish brown (10YR 6/4) sandy clay loam, brown (10YR 5/3) moist; massive; hard, friable, sticky and slightly plastic; few very fine interstitial pores; strongly effervescent with segregated lime in filaments; moderately alkaline (pH 8.2).

Organic carbon decreases irregularly with depth, or it remains greater than 0.2 percent at a depth of 49 inches. The A horizon ranges from 5 to 18 inches in thickness. It has color stratification with value of 5 or 6 and chroma of 2 to 4. Clay content ranges from 10 to 18 percent. It ranges from slightly acid to moderately alkaline. Gravel content ranges from 0 to 10 percent. The C horizon has hue of 10YR and 2.5Y, value of 6, and chroma of 2 or 3. Clay content ranges from 20 to 27 percent. Reaction is mildly or moderately alkaline; segregated lime occurs as filaments or seams. Gravel content ranges from 0 to 10 percent.

Steuber series

The Steuber series consists of very deep, well drained soils on alluvial fans and stream flood plains. These soils formed in alluvial material derived mainly from granitic rock. Slope ranges from 0 to 9 percent. The mean annual precipitation ranges from 10 to 18 inches, and the mean annual air temperature is about 61 degrees F.

Steuber soils are similar to Arvin, Edmundston, Rosamond Variant, and Walong soils. They are near Havala, Tehachapi, Tujunga, and Walong soils. Arvin soils are in the San Joaquin Valley and have a higher mean annual soil temperature. Edmundston and Walong soils are on mountainous uplands. Rosamond Variant has a stratified fine-loamy control section. Havala and Tehachapi soils have a B horizon of clay loam and sandy clay loam, Tujunga soils have a sandy profile.

Typical pedon of Steuber sandy loam in an area of Steuber sandy loam, 0 to 2 percent slopes, center of the NW1/4NE1/4 of sec. 36, T. 32 S., R. 31 E. MDB&M.

Ap—0 to 6 inches; dark grayish brown (10YR 4/2) sandy loam, very dark grayish brown (10YR 3/2) moist; weak fine granular structure; slightly hard, friable, nonsticky and nonplastic; common very fine and fine roots; few very fine and fine tubular pores; neutral (pH 7.0); abrupt smooth boundary.

A12—6 to 12 inches; dark grayish brown (10YR 4/2) sandy loam, very dark grayish brown (10YR 3/2) moist; massive; slightly hard, friable, nonsticky and nonplastic; few very fine and fine roots; few very fine and fine tubular pores; neutral (pH 7.0); abrupt smooth boundary.

C1—12 to 42 inches; brown (10YR 5/3) sandy loam, very dark grayish brown (10YR 3/2) moist; massive; slightly hard, friable, slightly sticky and slightly plastic; few very fine roots; common very fine tubular pores; neutral (pH 7.0); clear smooth boundary.

C2—42 to 60 inches; brown (10YR 5/3) sandy loam, dark brown (10YR 3/3) moist; massive; slightly hard, friable, slightly sticky and slightly plastic; few very fine and fine tubular pores; moderately alkaline (pH 8.0).

Organic carbon content is less than 1 percent throughout and decreases irregularly with depth. Base

saturation is 75 percent or more. Gravel content ranges from 0 to 25 percent. Some pedons may be as much as 20 percent cobbles or stones on the surface or throughout the profile. Reaction is neutral to moderately alkaline. The A horizon ranges from 4 to 15 inches in thickness. It has hue of 10YR, value of 4 or 5, and chroma of 2 or 3. The C horizon has hue of 10YR, value of 4 or 5, and chroma of 2 or 3. It is sandy loam or gravelly sandy loam.

Sween Variant

The Sween Variant consists of moderately deep, well drained soils on mountainous uplands. These soils formed from residual material weathered from basalt of andesitic rocks. Slope ranges from 5 to 30 percent. The mean annual precipitation ranges from 13 to 15 inches, and the mean annual air temperature is about 55 degrees F.

Sween Variant soils are similar to Arujo, Tweedy, and Tehachapi soils. They are near Anaverde, Tweedy, and Walong soils. Arujo soils have a fine-loamy control section and a mollic epipedon more than 20 inches thick. Tweedy and Tehachapi soils have a fine-loamy control section. Anaverde soils are very deep and have a fine-loamy control section. Walong soils have a coarse-loamy control section.

Typical pedon of Sween Variant in an area of Sween Variant-Rock outcrop complex, 5 to 30 percent slopes, in SW1/4SE1/4NE1/4 sec. 29, T. 31 S., R. 35 E. MDB&M.

A11—0 to 6 inches; brown (7.5YR 4/2) stony sandy clay loam, dark brown (7.5YR 3/2) when moist; moderate fine granular structure; slightly hard, friable, slightly sticky and slightly plastic; few very fine and fine roots; few fine and medium tubular pores; approximately 15 percent stones; neutral (pH 7.0); clear wavy boundary.

A12—6 to 12 inches; brown (7.5YR 5/2) stony sandy clay loam, dark brown (7.5YR 3/2) when moist; week medium subangular blocky structure; slightly hard, friable, slightly sticky and slightly plastic; few very fine roots; few medium tubular pores; aproximately 15 percent stones and cobbles; neutral (pH 7.0); clear wavy boundary.

B2t—12 to 38 inches; light reddish brown (5YR 6/3) stony clay, dark reddish brown (5YR 3/3) when moist; strong coarse angular blocky structure; hard, firm, sticky and very plastic; few fine roots; approximately 20 percent stones; slightly acid (pH 6.5).

R—38 inches; hard basalt.

Depth to the lithic contact and solum thickness ranges from 24 to 40 inches. Content of stones in the profile ranges from 15 to 35 percent, and the gravel content ranges from 0 to 10 percent. The A horizon ranges 10 to 24 inches in thickness. It has hue of 7.5YR and 5YR, value of 4 or 5, and chroma of 2. Clay content ranges from 25 to 35 percent. The B horizon has hue of 5YR, value of 5 or 6, and chroma of 3. The clay content ranges from 40 to 45 percent.

Tehachapi series

The Tehachapi series consists of very deep, well drained soils on old alluvial fans and terraces. These soils formed in alluvial material derived mainly from granitic rock. Slope ranges from 2 to 30 percent. The mean annual precipitation ranges from 9 to 15 inches, and the mean annual air temperature is about 61 degrees F.

Tehachapi soils are similar to Arujo, Garlock, Havala, Neuralia, and Tweedy soils. They are near Arvin, Chanac, Havala, Pleito, and Walong soils. Arujo and Tweedy soils are on mountainous uplands. Garlock and Neuralia soils are in the Mojave Desert with aridic moisture regimes. Havala soils have a thicker A horizon. Arvin and Walong soils have coarse-loamy control sections. Chanac and Pleito soils have secondary lime in the profile, and they are on terraces near the San Joaquin Valley.

Typical pedon of Tehachapi sandy loam in an area of Tehachapi sandy loam, 2 to 15 percent slopes, in NW1/4NE1/4SW1/4 sec. 24, T. 32 S., R. 32 E. MDB&M.

A11—0 to 2 inches; dark grayish brown (10YR 4/2) sandy loam, very dark grayish brown (10YR 3/2) moist; strong medium granular structure; slightly hard, friable, slightly sticky and slightly plastic; many very fine roots; common fine tubular pores; neutral (pH 7.0); clear smooth boundary.

A12—2 to 11 inches; dark grayish brown (10YR 4/2) sandy loam, very dark grayish brown (10YR 3/2) moist; moderate medium subangular blocky structure; slightly hard, friable, slightly sticky and slightly plastic; common very fine roots; common fine tubular pores; neutral (pH 7.0); clear smooth boundary.

B1t—11 to 19 inches; dark grayish brown (10YR 4/2), with equal amounts of dark reddish gray (5YR 4/2) sandy clay loam, dark grayish brown (10YR 3/2) and dark reddish brown (5YR 3/2) moist; moderate medium subangular blocky structure; slightly hard, firm, slightly sticky and plastic; few medium roots; few fine and medium tubular pores; many moderate thick clay films on faces of peds and as bridges between mineral grains; neutral (pH 7.0); gradual smooth boundary.

B2t—19 to 32 inches; yellowish red (5YR 4/6) clay loam, reddish brown (5YR 4/3) moist; strong coarse angular blocky structure; very hard, firm, slightly sticky and plastic; few medium and coarse roots; few fine and medium tubular pores; common thick clay films on faces of peds and as bridges between

mineral grains; slightly acid (pH 6.5); abrupt wavy boundary.

B31t—32 to 38 inches; yellowish red (5YR 5/6) sandy clay loam, reddish brown (5YR 4/4) moist; massive; very hard, friable, slightly sticky and slightly plastic; some pieces exhibit thick clay films when broken; approximately 15 percent by volume mixed gravel, .1 to 1 inch; neutral (pH 7.0); clear wavy boundary.

B32t—38 to 44 inches; brown (7.5YR 4/4) sandy clay loam, reddish brown (5YR 4/4) moist; massive; very hard, very firm, sticky and plastic; few very fine roots; many moderately thick clay films coating mineral grains and as colloidal stains; approximately 10 percent by volume mixed gravel, .1 to 1.0 inch; moderately alkaline (pH 7.8); clear smooth boundary.

Cca—44 to 60 inches; reddish yellow (5YR 6/6) sandy loam, reddish brown (5YR 4/4) moist; massive; very hard, few thin lime silica cemented lamellae; some lamellae have thin clay films bridging mineral grains; moderately alkaline (pH 8.0).

Solum thickness ranges from 38 to 89 inches. Content of rock fragments ranges from 0 to 35 percent. In some places, 20 to 50 percent of the fragments below 40 inches are cobbles and stones. Clay content ranges from 18 to 35 percent. Reaction ranges from slightly acid to moderately alkaline. The A horizon ranges from 11 to 20 inches in thickness. It has hue of 10YR, 7.5YR, or 5YR; value of 3 to 5; and chroma of 1 to 4. The B horizon has hue of 7.5YR or 5YR; value of 4 to 6; and chroma or 2, 4, or 6. It is sandy clay loam, clay loam, gravelly sandy clay loam, or cobbly sandy clay loam. The C horizon has hue of 10YR, 7.5YR, or 5YR; value of 4 to 7; and chroma of 2, 4, or 6. It is stratified with texture ranging from loamy sand to sandy clay loam and their gravelly or cobbly equivalents. In some pedons, weakly cemented thin lamellae of lime-silica material occurs below 40 inches.

Tehachapi Variant

The Tehachapi Variant consists of very deep, well drained soils on alluvial fans and old stream terraces. These soils formed in alluvial material derived mainly from granitic rock. Slope ranges from 15 to 50 percent. The mean annual precipitation ranges from 10 to 15 inches, and the mean annual air temperature is about 59 degrees F.

Tehachapi Variant soils are similar to Arujo, Havala, Tweedy, and Wasioja soils. They are near Arujo, Steuber, Tehachapi, and Walong soils. Arujo and Tweedy soils are on mountainous uplands. Havala soils have a clay loam B horizon. Wasioja soils have a calcareous B horizon. Steuber soils are stratified and have a coarse-loamy control section. Tehachapi soils have a thinner mollic epipedon.

Typical pedon of Tehachapi Variant in an area of Tehachapi Variant sandy clay loam, 15 to 50 percent slopes, in NW1/4SE1/4NW1/4 sec. 17, T. 32 S., R. 33 E. MDB&M.

A1—0 to 17 inches; dark grayish brown (10YR 4/2) sandy clay loam, very dark grayish brown (10YR 3/2) moist; moderate medium granular structure; slightly hard, friable, slightly sticky and slightly plastic; many very fine and fine roots; common very fine and fine tubular pores and few medium tubular pores; moderately alkaline (pH 8.0); clear smooth boundary.

B1t—17 to 31 inches; dark grayish brown (10YR 4/2) sandy clay loam, very dark grayish brown (10YR 3/2) moist; moderate medium and coarse subangular blocky structure; hard, firm, sticky and plastic; few very fine and fine roots; common fine and few medium tubular pores; common thin clay films bridging mineral grains and on faces of peds; mildly alkaline (pH 7.5); clear smooth boundary.

B21t—31 to 42 inches; brown (10YR 4/3) sandy clay loam, dark brown (10YR 3/3) moist; moderate medium and coarse subangular blocky structure; very hard, firm, sticky and very plastic; few fine roots; few fine tubular pores; many moderately thick clay films bridging mineral grains and on faces of peds; neutral (pH 7.0); clear smooth boundary.

B22t—42 to 60 inches; brown (10YR 4/3) sandy clay loam, dark yellowish brown (10YR 3/4) moist; moderate medium and coarse subangular blocky structure; few very fine tubular pores; common thick clay films bridging mineral grains and on faces of peds; mildly alkaline (pH 7.5); clear smooth boundary.

Solum thickness ranges from 23 to 67 inches. The mollic epipedon is more than 20 inches thick. Depth to carbonates ranges from 23 to 60 inches. Reaction is neutral to moderately alkaline. Content of coarse fragments ranges from 0 to 15 percent. The A horizon ranges from 10 to 20 inches in thickness. It has hue of 10YR, value of 4 or 5, and chroma of 2 or 3. The clay content ranges from 20 to 25 percent. The B horizon has colors similar to the A horizon, but the clay content of the B horizon ranges from 25 to 35 percent.

Tollhouse series

The Tollhouse series consists of shallow, somewhat excessively drained soils on mountains. These soils formed in residual material weathered mainly from granitic rock. Slope ranges from 30 to 75 percent. The mean annual precipitation ranges from 10 to 18 inches, and the mean annual air temperature is about 55 degrees F.

Tollhouse soils are similar to Friant, Godde, Tunis, and Walong soils. They are near Edmundston, Friant, Godde, Tweedy, and Walong soils. Friant and Godde soils have lithic contacts. Tunis and Walong soils are warmer.

APPENDIX B: WETLAND DATA SHEETS

DATA FORM
ROUTINE WETLAND DETERMINATION
(1987 COE Wetlands Delineation Manual)

Project/Site: Tehachapi 25-acre Site Applicant/Owner: CEI Engineering Assoc. Inc. Investigator: Wendy Fisher	Date: November 30, 2005 County: Kern State: California

Do Normal Circumstances exist on the site? Yes **No**

Is the site significantly disturbed (Atypical Situation)? **Yes** No

Is the area a potential Problem Area? **Yes** No
(If needed, explain on reverse.)

Community ID	
Transect ID:	
Plot ID	1

VEGETATION

Dominant Plant Species	Stratum	Indicator	% Relative Cover	Other Plant Species	Stratum	Indicator	% Relative Cover
1. *Salix* sp.	Tree	FACW	40%	8.			
2. *Populus fremontii*	Tree	FACW	40%	9.			
3. *Baccharis salicifolia*	Herb	FACW	20%	10.			
4.				11.			
5.				12.			
6.				13.			
7.				14.			

Percent of Dominant Species that are OBL, FACW or FAC (Excluding FAC-). 100%

Remarks: Criterion met.

HYDROLOGY

___ Recorded Data (Describe in Remarks):
___ Stream, Lake, or Tide Gauge
___ Aerial Photographs
___ Other
___ No Recorded Data Available

Field Observations:

Depth of Surface Water: 12 (in.)

Depth to Free Water in Pit: 0 (in.)

Depth to Saturated Soil: on surface (in.)

Wetland Hydrology Indicators:
Primary Indicators:
x Inundated
x Saturated in Upper 12 Inches
x Water Marks
___ Drift Lines
___ Sediment Deposits
___ Drainage Patterns in Wetlands
Secondary Indicators (2 or more required):
___ Oxidized Root Channels in Upper 12 Inches
___ Water-Stained Leaves
___ Local Soil Survey Data
x FAC-Neutral Test
x Other (Explain in Remarks)

Remarks: Criterion met. Inundation, soil saturation, water marks, all suggestive of extended periods of inundation during winter and spring.

SOILS

Map Unit Name (Series and Phase):
Havala sandy loam (0-2 % slopes)

Drainage Class: Well-Drained
Field Observations: Poorly Drained
Confirm Mapped Type? Yes **No**

Taxonomy (Subgroup):
Profile Description:

Depth (inches)	Horizon	Matrix Color (Munsell Moist)	Mottle Colors (Munsell Moist)	Mottle Abundance /Size/Contrast	Texture, Concretions, Structure, etc.
10	A	10YR 2/1	-	-	Clay Loam

Hydric Soil Indicators:

___ Histosol
___ Histic Epipedon
___ Sulfidic Odor
_x_ Aquic Moisture Regime
___ Reducing Conditions
_x_ Gleyed or Low-Chroma Colors
___ Concretions
___ High Organic Content in Surface Layer in Sandy Soils
___ Organic Streaking in Sandy Soils
___ Listed on Local Hydric Soils List
___ Listed on National Hydric Soils List
___ Other (Explain in Remarks)

Remarks: Criteria me as indicated by low chroma and aquic moisture regime.

WETLAND DETERMINATION

Hydrophytic Vegetation Present?	**Yes**	No	
Wetland Hydrology Present?	**Yes**	No	
Hydric Soils Present?	**Yes**	No	Is this Sampling Point Within a Wetland? **Yes** No

Remarks:

Point taken within the margins of the pond meeting the technical criteria of jurisdictional wetlands. This pond is connected to other potential Waters of the US via a standpipe and culvert.

DATA FORM
ROUTINE WETLAND DETERMINATION
(1987 COE Wetlands Delineation Manual)

Project/Site: Tehachapi 25-acre Site Applicant/Owner: CEI Engineering Assoc. Inc. Investigator: Wendy Fisher	Date: November 30, 2005 County: Kern State: California

Do Normal Circumstances exist on the site? Yes **No**

Is the site significantly disturbed (Atypical Situation)? **Yes** No

Is the area a potential Problem Area? **Yes** No
(If needed, explain on reverse.)

Community ID	
Transect ID:	
Plot ID	2

VEGETATION

Dominant Plant Species	Stratum	Indicator	% Relative Cover	Other Plant Species	Stratum	Indicator	% Relative Cover
1. *Lotus humistratus*	Herb	UPL	50%	8.			
2. *Bromus hordeaceus*	Herb	UPL	30%	9.			
3. *Salsola tragus*	Herb	FACU+	20%	10.			
4.				11.			
5.				12.			
6.				13.			
7.				14.			

Percent of Dominant Species that are OBL, FACW or FAC (excluding FAC-). 0%

Remarks: Criterion not met.

HYDROLOGY

___ Recorded Data (Describe in Remarks):
___ Stream, Lake, or Tide Gauge
___ Aerial Photographs
___ Other
___ No Recorded Data Available

Field Observations:

Depth of Surface Water: 0 (in.)

Depth to Free Water in Pit: +8 (in.)

Depth to Saturated Soil: +8 (in.)

Wetland Hydrology Indicators:
Primary Indicators:
___ Inundated
___ Saturated in Upper 12 Inches
___ Water Marks
___ Drift Lines
___ Sediment Deposits
___ Drainage Patterns in Wetlands
Secondary Indicators (2 or more required):
___ Oxidized Root Channels in Upper 12 Inches
___ Water-Stained Leaves
___ Local Soil Survey Data
___ FAC-Neutral Test
___ Other (Explain in Remarks)

Remarks:
Criterion not met.

SOILS

Map Unit Name (Series and Phase):
Havala sandy loam (0-2 % slopes)

Drainage Class: Well-Drained
Field Observations
Confirm Mapped Type? **Yes** No

Taxonomy (Subgroup):
Profile Description:

Depth (inches)	Horizon	Matrix Color (Munsell Moist)	Mottle Colors (Munsell Moist)	Mottle Abundance /Size/Contrast	Texture, Concretions, Structure, etc.
8	B	10YR 4/6	-	-	Sandy loam

Hydric Soil Indicators:

___ Histosol
___ Histic Epipedon
___ Sulfidic Odor
___ Aquic Moisture Regime
___ Reducing Conditions
___ Gleyed or Low-Chroma Colors
___ Concretions
___ High Organic Content in Surface Layer in Sandy Soils
___ Organic Streaking in Sandy Soils
___ Listed on Local Hydric Soils List
___ Listed on National Hydric Soils List
___ Other (Explain in Remarks)

Remarks:
Criterion not met.

WETLAND DETERMINATION

Hydrophytic Vegetation Present?	Yes	**No**			
Wetland Hydrology Present?	Yes	**No**			
Hydric Soils Present?	Yes	**No**	Is this Sampling Point Within a Wetland?	Yes	**No**

Remarks:

Point taken within upland habitat adjacent to the seasonal pond (sample point 1).

DATA FORM
ROUTINE WETLAND DETERMINATION
(1987 COE Wetlands Delineation Manual)

Project/Site: Tehachapi 25-acre Site Applicant/Owner: CEI Engineering Assoc. Inc. Investigator: Wendy Fisher	Date: November 30, 2005 County: Kern State: California
Do Normal Circumstances exist on the site? Yes **No** Is the site significantly disturbed (Atypical Situation)? **Yes** No Is the area a potential Problem Area? **Yes** No (If needed, explain on reverse.)	Community ID Transect ID: Plot ID 3

VEGETATION

Dominant Plant Species	Stratum	Indicator	% Relative Cover	Other Plant Species	Stratum	Indicator	% Relative Cover
1. *Salsola tragus*	Herb	FACU+	70%	8.			
2. *Brassica nigra*	Herb	UPL	20%	9.			
3. *Atriplex serenana* ssp. *serenana*	Herb	FAC	10%	10.			
4.				11.			
5.				12.			
6.				13.			
7.				14.			

Percent of Dominant Species that are OBL, FACW or FAC (excluding FAC-). 0%

Remarks: Criterion not met.

HYDROLOGY

___ Recorded Data (Describe in Remarks):
___ Stream, Lake, or Tide Gauge
___ Aerial Photographs
___ Other
___ No Recorded Data Available

Field Observations:

Depth of Surface Water: _____(in.)

Depth to Free Water in Pit: _____(in.)

Depth to Saturated Soil: _____(in.)

Wetland Hydrology Indicators:
Primary Indicators:
___ Inundated
___ Saturated in Upper 12 Inches
___ Water Marks
___ Drift Lines
___ Sediment Deposits
___ Drainage Patterns in Wetlands
Secondary Indicators (2 or more required):
__ Oxidized Root Channels in Upper 12 Inches
__ Water-Stained Leaves
__ Local Soil Survey Data
__ FAC-Neutral Test
__ Other (Explain in Remarks)
Damp

Remarks:
Criterion not met.

SOILS

Map Unit Name (Series and Phase):
Havala sandy loam, 0-2% slopes

Drainage Class: Well-Drained
Field Observations
Confirm Mapped Type? **Yes** No

Taxonomy (Subgroup):
Profile Description:

Depth (inches)	Horizon	Matrix Color (Munsell Moist)	Mottle Colors (Munsell Moist)	Mottle Abundance /Size/Contrast	Texture, Concretions, Structure, etc.
10	A	10YR 4/4	-	-	Sandy loam

Hydric Soil Indicators:

___ Histosol
___ Histic Epipedon
___ Sulfidic Odor
___ Aquic Moisture Regime
___ Reducing Conditions
_ _ Gleyed or Low-Chroma Colors
___ Concretions
___ High Organic Content in Surface Layer in Sandy Soils
___ Organic Streaking in Sandy Soils
___ Listed on Local Hydric Soils List
___ Listed on National Hydric Soils List
___ Other (Explain in Remarks)

Remarks:
Criterion not met.

WETLAND DETERMINATION

Hydrophytic Vegetation Present?	Yes	**No**	
Wetland Hydrology Present?	Yes	**No**	
Hydric Soils Present?	Yes	**No**	Is this Sampling Point Within a Wetland? Yes **No**

Remarks:

Point taken within the upland swale above the pond. This swale did not meet the technical criteria of jurisdictional wetlands.

DATA FORM
ROUTINE WETLAND DETERMINATION
(1987 COE Wetlands Delineation Manual)

Project/Site: Tehachapi 25-acre Site Applicant/Owner: CEI Engineering Assoc. Inc. Investigator: Wendy Fisher	Date: November 30, 2005 County: Kern State: California

Do Normal Circumstances exist on the site? Yes **No**

Is the site significantly disturbed (Atypical Situation)? **Yes** No

Is the area a potential Problem Area? **Yes** No
(If needed, explain on reverse.)

Community ID	
Transect ID:	
Plot ID	1

VEGETATION

Dominant Plant Species	Stratum	Indicator	% Relative Cover	Other Plant Species	Stratum	Indicator	% Relative Cover
1. *Salix* sp.	Tree	FACW	40%	8.			
2. *Populus fremontii*	Tree	FACW	40%	9.			
3. *Baccharis salicifolia*	Herb	FACW	20%	10.			
4.				11.			
5.				12.			
6.				13.			
7.				14.			

Percent of Dominant Species that are OBL, FACW or FAC (Excluding FAC-). 100%

Remarks: Criterion met.

HYDROLOGY

___ Recorded Data (Describe in Remarks):
___ Stream, Lake, or Tide Gauge
___ Aerial Photographs
___ Other
___ No Recorded Data Available

Field Observations:

Depth of Surface Water: 12 (in.)

Depth to Free Water in Pit: 0 (in.)

Depth to Saturated Soil: on surface (in.)

Wetland Hydrology Indicators:
Primary Indicators:
x Inundated
x Saturated in Upper 12 Inches
x Water Marks
___ Drift Lines
___ Sediment Deposits
___ Drainage Patterns in Wetlands
Secondary Indicators (2 or more required):
___ Oxidized Root Channels in Upper 12 Inches
___ Water-Stained Leaves
___ Local Soil Survey Data
x FAC-Neutral Test
x Other (Explain in Remarks)

Remarks: Criterion met. Inundation, soil saturation, water marks, all suggestive of extended periods of inundation during winter and spring.

APPENDIX C: SELECTED PHOTOGRAPHS OF THE STUDY AREA

Photograph #1 (above). Sampling point #1 was taken on the far side of the pond just above the water line. Sampling point #2 was taken on the far side of the pond where upland vegetation was first encountered.
Photograph #2 (below). Sampling point #3 was taken in the lower portion of the upland swale.

APPENDIX D: VASCULAR PLANTS OF THE STUDY AREA

APPENDIX D
VASCULAR PLANTS OF THE STUDY AREA

The plants species listed below were observed during the site visit on November 30, 2005. The U.S. Fish and Wildlife Service wetland indicator status of each plant has been shown following each species common name.

OBL - Obligate
FACW - Facultative Wetland
FAC - Facultative
FACU - Facultative Upland
UPL - Upland
+/- - Higher/lower end of category
NR - No review
NA - No agreement
NI - No investigation

ASCLEPIADACEAE – Milkweed Family		
Asclepias vestita	Woolly Milkweed	UPL
ASTERACEAE – Sunflower Family		
Ambrosia acanthicarpa	Annual Bur-Sage	UPL
Aster ascendens	Aster	UPL
Baccharis salicifolia	Mule Fat	FACW
Centaurea solstitialis	Yellow Star Thistle	UPL
Chrysothamnus nauseosus ssp. *hololeucus*	Rubber Rabbitbrush	UPL
Conyza canadensis	Canada Horseweed	FAC
Conyza coulteri	Coulters Horseweed	FAC+
Grindelia camporum ssp. *camporum*	Great Valley Gumweed	FACU
Holocarpha heermannii ssp. *heermanii*	Heerman's Tarweed	UPL
Lactuca serriola	Prickly Lettuce	UPL
Tragopogon porrifolius	Salsify	UPL
BORAGINACEAE - Borage Family		
Amsinckia sp.	Fiddleneck	UPL
BRASSICACEAE – Mustard Family		
Brassica nigra	Black Mustard	UPL
Sisymbrium irio	London Rocket	UPL
CHENOPODIACEAE – Goosefoot Family		
Atriplex serenana ssp. *serenana*	Bracted Saltbrush	FAC
Salsola tragus	Russian Thistle	FACU+
EUPHORBIACEAE – Spurge Family		
Eremocarpus setigerus	Turkey Mullein	UPL
FABACEAE – Bean Family		
Lotus humistratus	Trefoil	UPL
Lotus sp.	Trefoil	-
Lupinus sp.	Lupine	UPL
GERANIACEAE - Geranium Family		

Erodium botrys	Broadleaf Filaree	UPL
Erodium cicutarium	Red Stem Filaree	UPL
LAMIACEAE - Mint Family		
Marrubium vulgare	Common Horehound	UPL
LILIACEAE – Lily Family		
Allium sp.	Wild Onion	UPL
ONAGRACEAE – Fuschia Family		
Epilobium brachycarpum	Willow-Herb	UPL
PAPAVERACEAE – Poppy Family		
Escholschzia californica	California Poppy	UPL
POACEAE – Grass Family		
Bromus hordeaceus	Soft Chess	FACU-
Bromus madritensis ssp. *rubens*	Red Brome	UPL
Cynodon dactylon	Bermuda Grass	FAC
Hordeum murinum ssp. *leporinum*	Barnyard Barley	NI
Teinatherum caput-medusae	Medusa Head	UPL
Vulpia myuros	Rat-tail Fescue	FACU*
POLYGONACEAE – Buckwheat Family		
Polygonum arenastrum	Common Knotweed	UPL
Rumex crispus	Curly Dock	FACW-
SALICACEAE - Willow Family		
Populus fremontii	Fremont's Cottonwood	FACW
Salix sp.	Willow	FACW
ULMACEAE – Elm Family		
Ulmus sp.	Elm	UPL

LIVE OAK ASSOCIATES, INC.

an Ecological Consulting Firm

BIOTIC EVALUATION
TEHACHAPI, 25-ACRE SITE
KERN COUNTY, CALIFORNIA

Prepared By:

LIVE OAK ASSOCIATES, INC.

David Hartesveldt (Principal and Senior Biologist)
Jeff Gurule (Wildlife Biologist)
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December 7, 2005 Project No. 852-01

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EXECUTIVE SUMMARY

Live Oak Associates, Inc. conducted a field survey of a 25-acre parcel located southeast of the intersection of Tucker Road and Tehachapi Boulevard in Tehachapi, Kern County. The applicant proposes to construct a large retail outlet center on the site. The results of the field survey and a review of background information relevant to biological resources of the area were used to complete an evaluation of the likely impact to biological resources from proposed site development.

Biotic habitats present on the site were limited to ruderal rabbitbrush scrub and seasonal pond. The site provides no habitat for 19 of the 20 special status plant species occurring regionally. The site provides suitable habitat for the dwarf calycadenia, a small annual that could not be observed at the time of the site survey. This species is listed as threatened in the state of California by the California Native Plant Society (CNPS). The site could be used as seasonal foraging habitat for twelve special status animal species, and provides potential breeding habitat for three special status animal species, including the Tehachapi pocket mouse, a California species of special concern. Possible Waters of the United States, including jurisdictional wetlands, were present in the form of the small seasonal pond located at the northeastern corner of the site.

The project could result in significant adverse environmental impact to biotic resources of the site. Site development would result in the loss of any population of dwarf calycadenia that may occur on the site. The project could also result in the extirpation of a third of the known populations of the Tehachapi pocket mouse, should it occur on the site. The site also provides limited nesting habitat for the loggerhead shrike. Project construction during the nesting season could result in nest failure should the loggerhead shrike be nesting on the site at the time of project construction.

The proposed project would also result in the loss of the ruderal rubberrabbit bush scrub and the seasonal pond. Both habitats have been significantly degraded by nearby construction activities and use of the site by recreational motorcyclists. Construction of the proposed project will not result in a significant adverse environmental effect on botanical and wildlife resources with the possible exception of the dwarf calycadenia and Tehachapi pocket mouse.

Mitigation measures have been proposed that would mitigate all project impacts to a less than significant level. Surveys for dwarf calycadenia and the Tehachapi pocket mouse are warranted, because the site provides suitable habitat for this species. These surveys must be completed according to generally accepted survey protocols of the CNPS and California Department of Fish and Game. Should either species be found during appropriately timed surveys, mitigation measures would include the protection of occupied habitat under conservation easement, the relocation of the on-site population to suitable habitat off-site, and monitoring of protected habitat supporting the relocated populations. Should future development of the site occur during the breeding season, a qualified biologist will conduct pre-construction surveys for nesting loggerhead shrikes. Should nesting activity be observed, a construction-free buffer will be established around the nest site sufficient to protect the nestlings from harm.

Implementation of all mitigation measures is expected to reduce project impacts to biotic resources of the site to a less than significant level.

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1.0 INTRODUCTION

The technical report that follows describes the biotic resources of a 25-acre parcel (hereafter referred to as the study area) located in Kern County, California, and evaluates possible impact to those resources resulting from the proposed development of a large retail outlet center. The study area is located within the city of Tehachapi southeast of the intersection of Tehachapi Boulevard and Tucker Road (State Highway 202)(Figure 1). It can be found on the Tehachapi North, California, U.S.G.S 7.5 minute quadrangle, at Section 20, Township 32 South, Range 33 East, Mount Diablo Base Meridian (Figure 2).

Two separate parcels make up the study area. Parcel 1 (APN 415-130-69) is approximately 19.41 acres and Parcel 2 (APN 415-130-28) is approximately 5.25 acres. The proposed project is the development of a large retail outlet center. The facility will include the retail center, an attached garden center, delivery docks, a parking lot, a gas station, a stormwater retention basin, and associated infrastructure. The retail center will encompass 21.94 acres, the Lease lot will encompass 1.49 acres, and Outlot 1 will encompass 1.44 acres of the site.

Projects constructed in previously undeveloped open space such as the proposed retail center can damage or modify biotic habitats used by sensitive plant and wildlife species. Impacts from site development may be regulated by state or federal agencies, subject to provisions of the California Environmental Quality Act (CEQA) and/or the National Environmental Policy Act, covered by policies of the County General Plan, or some combination of the four.

The objectives of this report are as follows:

- To summarize all site-specific information related to existing biological resources;
- To make reasonable inferences about the biological resources that could occur on site based on habitat suitability and the proximity of the site to a species' known range;

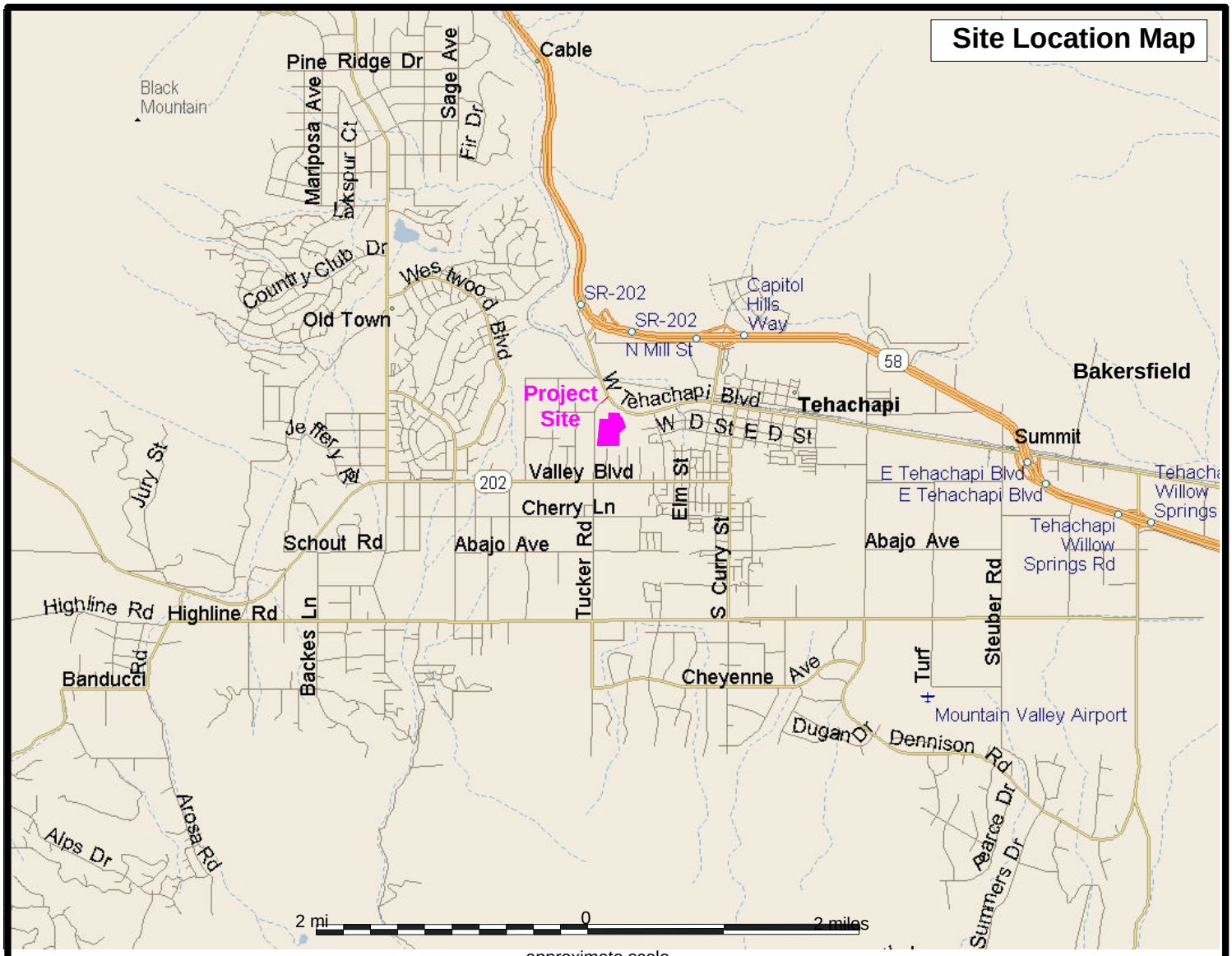
- Summarize all state and federal natural resource protection laws that may be relevant to possible future site development;

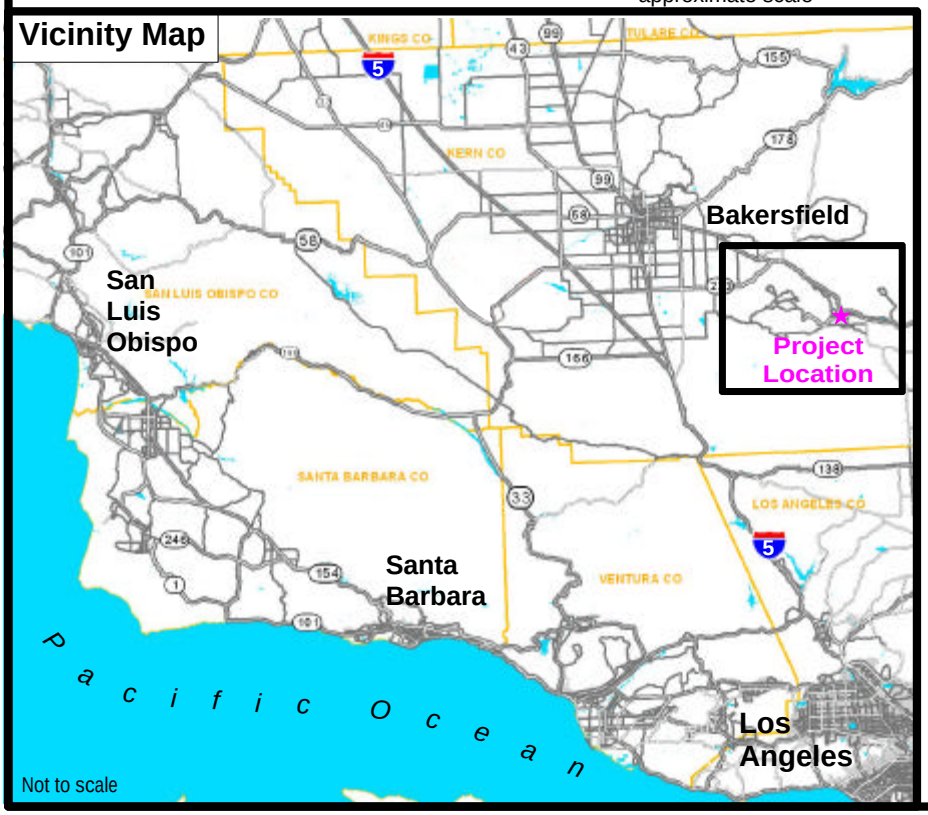
- Identify and discuss project impacts to biological resources likely to occur on the site;

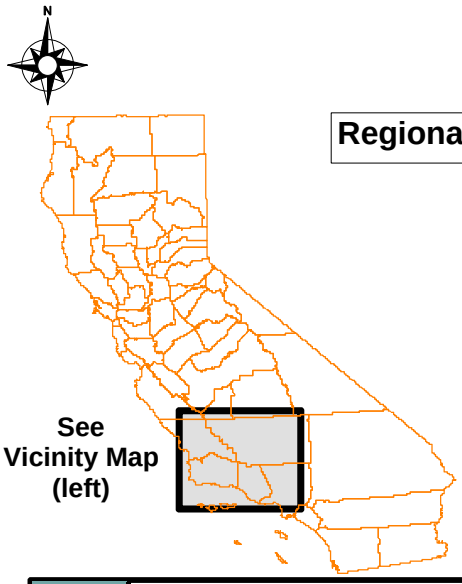
- Identify avoidance and mitigation measures typically required by resource agencies for projects in the region that would reduce the impacts to biological resources identified on the study area.

As a result, this report will identify possible project impact to sensitive biotic resources, significant biotic habitats, regional fish and wildlife movement corridors, and existing local, state and federal natural resource protection policies, ordinances, and laws regulating land use. Provisions of the California Environmental Quality Act (CEQA), the federal Clean Water Act (CWA), the state and federal endangered species acts (FESA and CESA respectively), California Fish and Game Code, California Water Code, and the Kern County General Plan could require permits and the implementation of measures that would mitigate project impacts, depending on the natural resources present on the parcel.

The impact analysis and mitigation proposals found in Section 3.0 of this report have been based on the known and potential biotic resources of the study area (discussed in Section 2.0). Sources of information used in the preparation of this analysis included: (1) the *California Natural Diversity Data Base* (CDFG 2005); (2) the *Inventory of Rare and Endangered Vascular Plants of California* (CNPS 2001); (3) miscellaneous other planning documents and biological studies from the general project vicinity. Additional information was gathered in the field by Wildlife Biologist, Jeff Gurule and Botanist /Wetlands Ecologist, Wendy Fisher, during a field survey conducted on November 30, 2005.





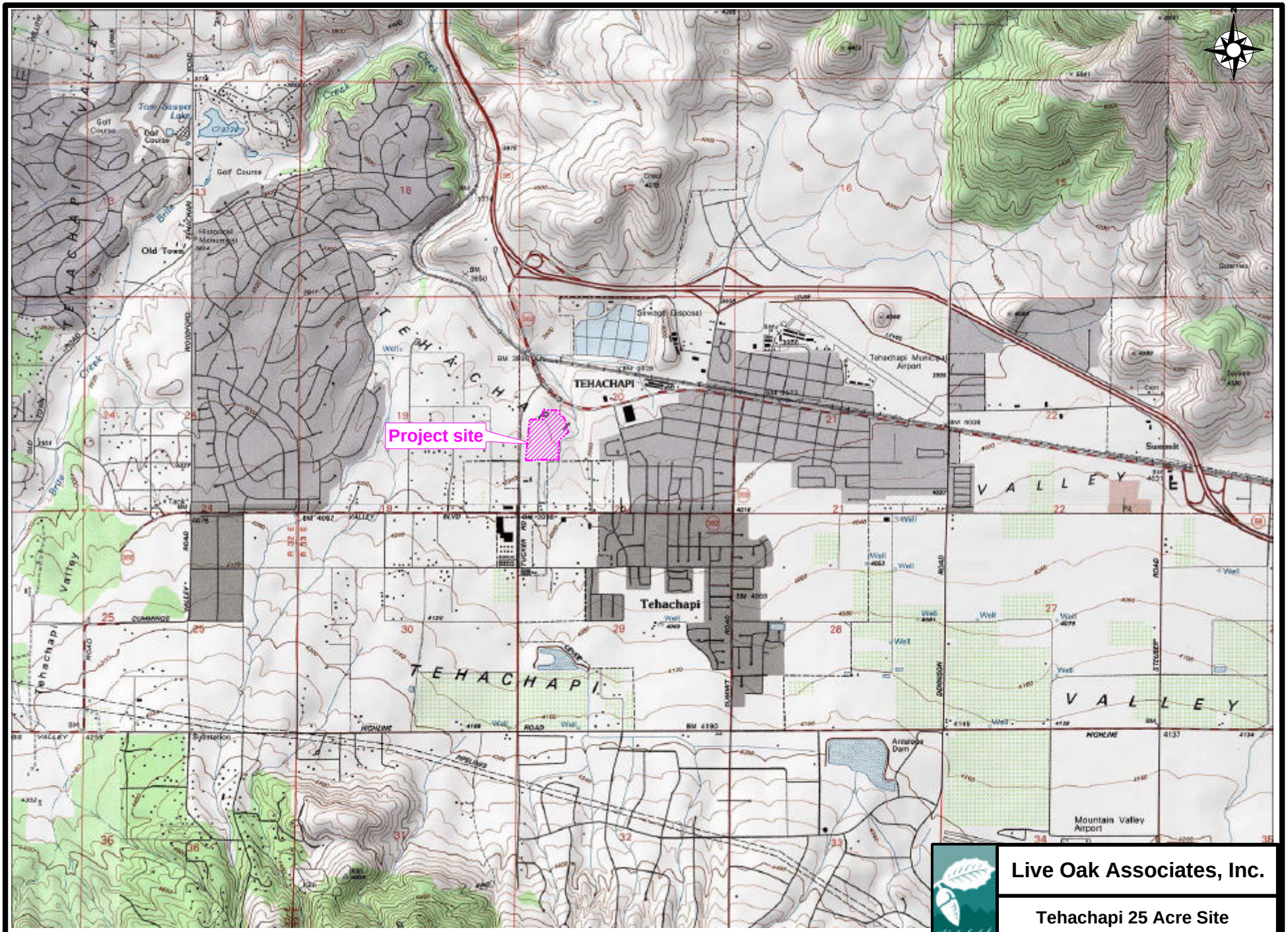


Live Oak Associates, Inc.

Tehachapi 25 Acre Site

Site / Vicinity Map

Date	Project #	Figure #
11/28/05	852-01	1



From USGS
Tehachapi North 7.5' Quadrangle 1973
Tehachapi South 7.5' Quadrangle 1973

1 mile 0 1 mile
approximate scale

Live Oak Associates, Inc.

Tehachapi 25 Acre Site
U.S.G.S. Quadrangle

Date	Project #	Figure #
11/28/05	852-01	2

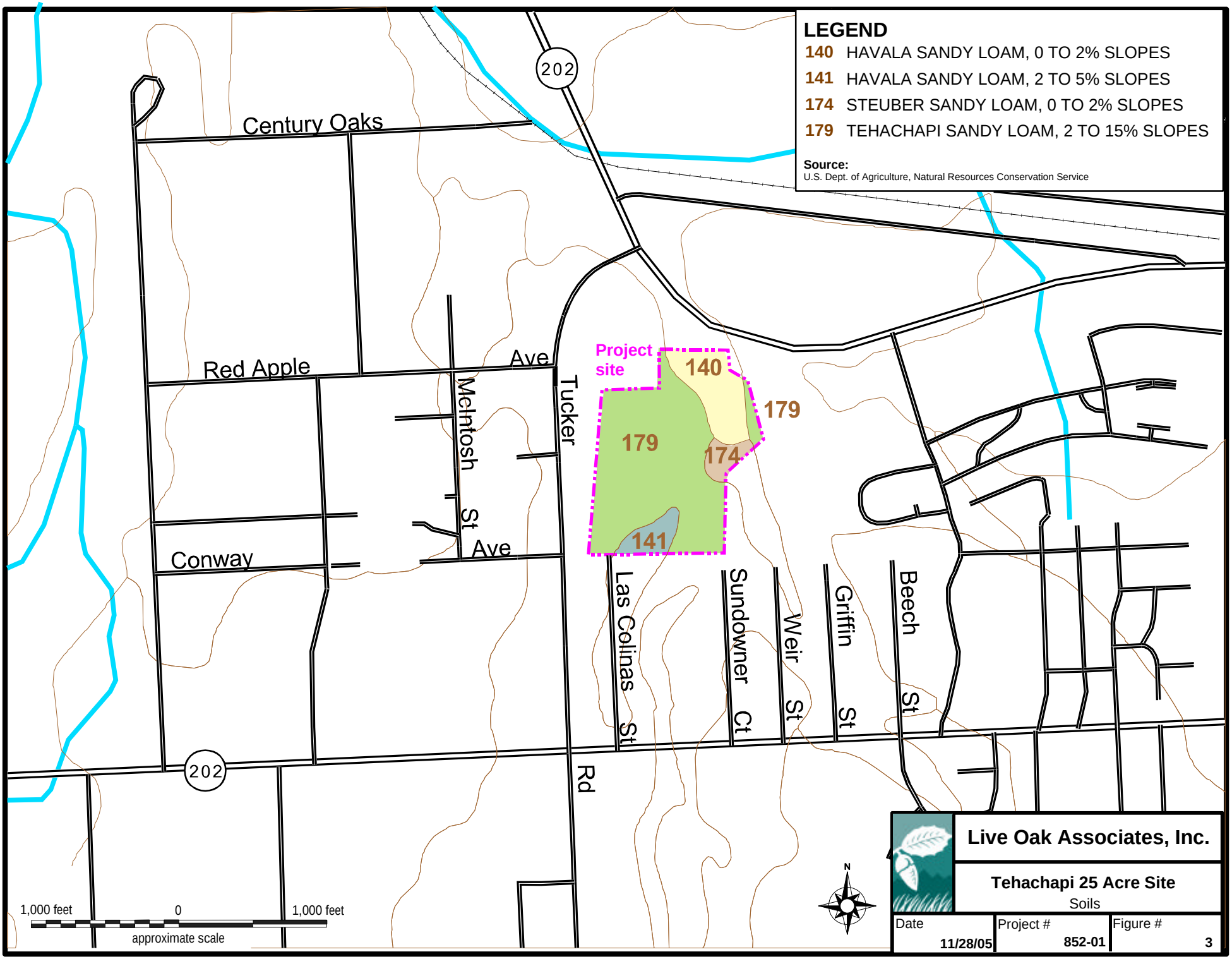
2.0 EXISTING CONDITIONS

The study area is located in the Tehachapi Valley of California within the City of Tehachapi, south of State Hwy 59. Elevations of the study area vary from a low of approximately 3,930 feet National Geodetic Vertical Datum (NGVD) near its northeast corner to a high of approximately 3,990 feet NGVD near the eastern border. The predominant natural environment in the valley consists of non-native grassland and shrubland. At the time of the survey, the study area consisted primarily of relatively flat to hilly shrubland. Some areas of the study area were highly disturbed by grading, scraping, or digging with motorcycle/bicycle trails, berms, and jumps scattered throughout. Other areas were relatively undisturbed.

Adjacent habitats of the study area consisted of Tehachapi Boulevard and a strip mall to the north, Tucker Road and residential development to the west, residential development and a vacant lot to the south, and Tehachapi Creek to the east. Graded vacant land was present east of Tehachapi Creek.

Four native soil-mapping units were identified on the study area (Figure 3): Havala sandy loam, 0 to 2% slopes; Havala sandy loam, 2 to 5% slopes; Steuber sandy loam, 0 to 2% slopes; and Tehachapi sandy loam, 2 to 15% slopes (NRCS 1980). Soils of these series' are very deep, well drained, and composed of old alluvial fans and terraces. Erosion hazard is slight (NRCS 1980). None of these soils are listed as hydric by the NRCS.

The study area is located in a region of California having a Mediterranean climate. Summers are dry and typically quite warm with daytime temperatures commonly exceeding 100° Fahrenheit. Winters are rainy and cool with daytime temperatures rarely exceeding 65° Fahrenheit. Annual precipitation in the general vicinity of the study area is highly variable from year to year with a mean annual rainfall of approximately 11 inches, most of which falls between the months of October through March. Most precipitation falls in the form of rain; however, snow is not uncommon during colder storms, but quickly melts. In flat areas of the site stormwater infiltrates the site's soils


LEGEND
140 HAVALA SANDY LOAM, 0 TO 2% SLOPES
141 HAVALA SANDY LOAM, 2 TO 5% SLOPES
174 STEUBER SANDY LOAM, 0 TO 2% SLOPES
179 TEHACHAPI SANDY LOAM, 2 TO 15% SLOPES
Source:
U.S. Dept. of Agriculture, Natural Resources Conservation Service
Century Oaks
Red Apple
Ave
Conway
Ave
McIntosh St
Tucker Rd
Las Colinas St
Sundowner Ct
Weir St
Griffin St
Beech St
202
202
Project site
140
179
179
174
141
1,000 feet
0
1,000 feet
approximate scale
N
Live Oak Associates, Inc.
Tehachapi 25 Acre Site
Soils
Date
11/28/05
Project #
852-01
Figure #
3

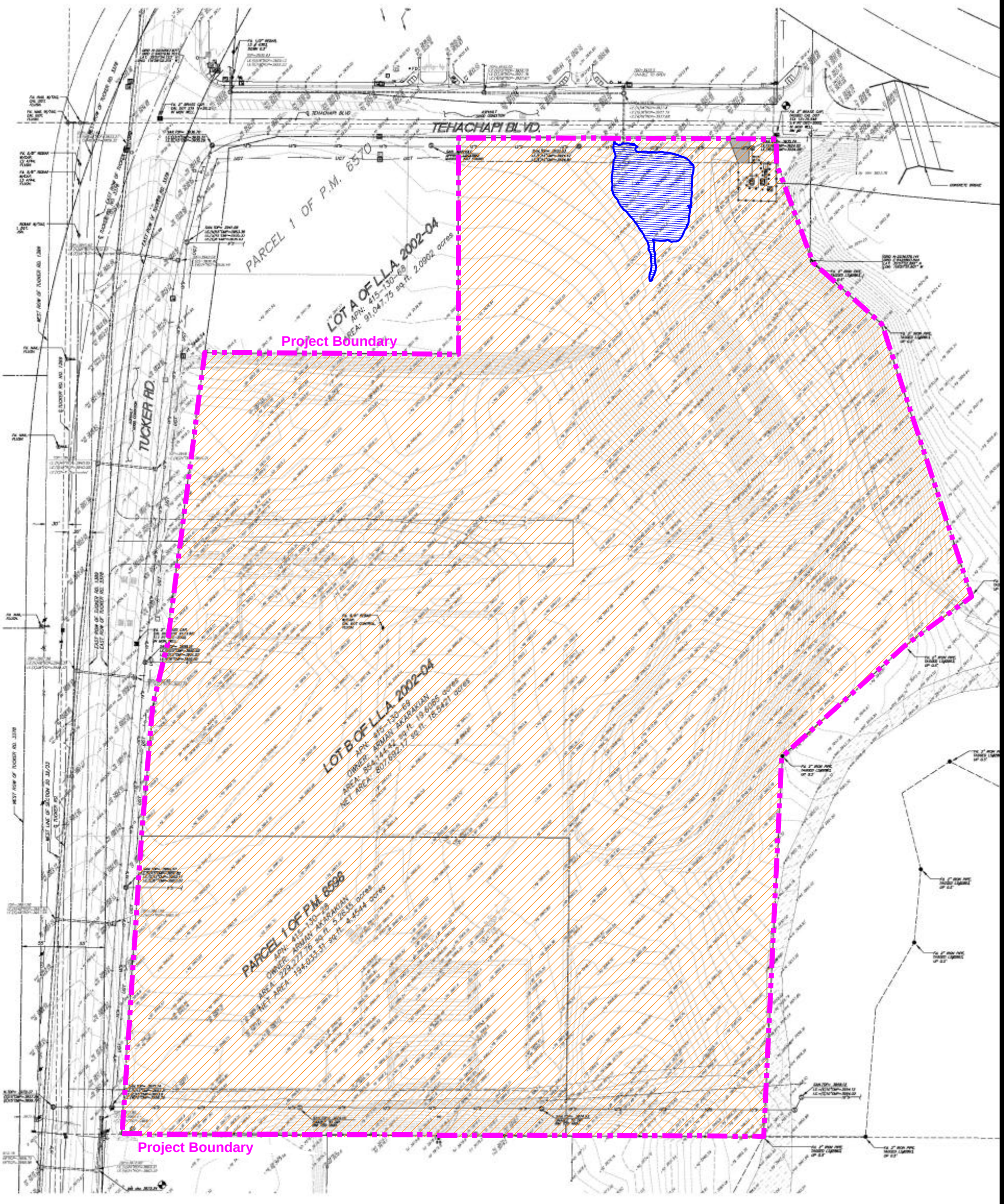
and exits the site as sheet flow. In hilly areas stormwater exits the site as runoff either into Tehachapi creek directly, or into a small onsite pond located in the northeastern corner of the site. When the pond is at maximum capacity, water exists the site through a vertical overflow culvert which either drains directly to Tehachapi Creek or into a ponding basin north of the site, which may at times flow into Tehachapi Creek. The exact destination of the onsite pond water is unclear at this time and requires further investigation.

2.1 BIOTIC HABITATS

Two biotic habitats were identified on the study area. These include ruderal rubber rabbitbrush scrub as defined by Sawyer and Keeler-Wolf and a seasonal degraded pond (Figure 4). Approximate acreages of the biotic habitats can be found in Table 1 below. A list of the vascular plants observed on the site during the site visit has been provided in Appendix A. A list of terrestrial vertebrates using, or potentially using, the study area has been provided in Appendix B. Selected photographs of the study area can be found in Appendix C.

Table 1. Acreages of Biotic Habitats of the Study Area.

Biotic Habitat	Acreage	Square Footage	Percent of the Study Area
Ruderal Rubber Rabbitbrush Scrub	24.41	1,063,300	99.0
Seasonal Pond	0.25	10,716	1.0
Total	24.66	1,074,716	100.0



LEGEND

Seasonal Pond

Ruderal Rubber Rabbitbrush Scrub

N

250 feet 0 250 feet

approximate scale

Live Oak Associates, Inc.

Tehachapi 25 Acre Site

Biotic Habitats

Date	Project #	Figure #
11/28/05	852-01	4

2.1.1 Ruderal Rubber Rabbitbrush Scrub

At the time of the field survey, 99% of the study area consisted of rubber rabbitbrush (*Chrysothamnus nauseosus ssp. hololeucus*) scrub habitat. At the time of the site survey, much of this habitat had been greatly disturbed by off highway vehicle use. Common weedy non-native species included yellow star thistle (*Centauria solstitialis*), Russian thistle (*Salsola tragus*), soft chess brome (*Bromus hordeaceus*), prickly lettuce (*Lactuca serriola*), and black mustard (*Brassica nigra*). Native vegetative species occasionally observed on the site included Great Valley gumweed (*Grindelia camporum* ssp. *camporum*), aster (*Aster ascendens*), trefoil (*Lotus humistratus*), California poppy (*Escholschzia californica*), and wild onion (*Allium* sp.). One tree, a non-native elm (*Ulmus sp.*) was observed in the southwestern corner of the study area. Included within this habitat was an upland swale that feeds the pond on the site. The upland swale was dominated by Russian thistle and bracted saltbrush (*Atriplex serenana* ssp. *serenana*).

The rubber rabbitbrush scrub habitat provides habitat for a number of animal species. This habitat is of little use to amphibians due to the lack of moisture accumulation and woody cover. The rubber rabbitbrush scrub could, however, be used by some reptile species. Common species likely to use the site include common side-blotched lizards (*Uta stansburiana*), western whiptails (*Aspidoscelis tigris*), gopher snakes (*Pituophis melanoleucus*), common kingsnakes (*Lampropeltis getulus*), and western rattlesnakes (*Crotalus viridis*).

Avian species can forage on seeds and/or nest in cover provided by shrubs, annual grasses and seasonal weeds found on site. Passerine species observed on site include scrub jays (*Aphelocoma californica*), European starlings (*Sturnus vulgaris*), song sparrows (*Melospiza melodia*), horned larks (*Eremophilie alpestris*), white-crowned sparrows (*Zonotrichia leucophrys*), western meadowlarks (*Sturnella neglecta*), and common ravens (*Corvus corax*).

A number of raptor species may utilize the ruderal rubber rabbitbrush scrub. Raptor species observed foraging over the rabbitbrush scrub included the red-tailed hawk (*Buteo*

jamaicensis), and northern harrier (*Circus cyaneus*). Other species such as the white-tailed kite (*Elanus leucurus*), and American kestrel (*Falco sparverius*) may forage over the area as well.

Some small mammals may occur in the rabbitbrush scrub on site. Evidence of Botta's pocket gophers (*Thomomys bottae*) and California ground squirrels (*Spermophilus beecheyi*) in the form of burrows were observed throughout the rabbitbrush scrub. Evidence of desert cottontails in the form of droppings was also observed. Other small mammals using pasturelands of the site could include California voles (*Microtus californicus*), deer mice (*Peromyscus maniculatus*), and western harvest mice (*Reithrodontomys megalotis*). Various species of bats may periodically forage over the pasture for flying insects, but would roost elsewhere. Rabbitbrush scrub on site provides some habitat value to larger mammals known to occur regionally. Coyotes (*Canis latrans*) grey foxes (*Urocyon cinereoargenteus*), bobcats (*Felis rufus*), and striped skunks (*Mephitis mephitis*) may move through the pasturelands from time to time. A list of terrestrial vertebrate animal species potentially occurring within the project site can be found in Appendix B.

2.1.2 Seasonal Pond

The seasonal pond found on the study area consisted of a 0.25-acre depression along the northern boundary of the site (see Figure 4). The pond received water from an onsite upland swale and sheet flow from adjacent graded land, as well as roadside ditches associated with Tehachapi Blvd. At the time of the field survey the pond was approximately one foot deep and highly disturbed (see Photograph #3 and #4 in Appendix C). Drainage from the pond is achieved via an overflow standpipe located along the northwestern boundary of the pond. This pipe allows for water to accumulate to a depth of three to four feet.

Evidence of grading and scraping has left the pond area sparsely populated by emergent vegetation. Emergent wetland vegetation was observed in various locations just above the existing water line. Sprigs of willow (*Salix sp*.), Fremont's cottonwood (*Populus fremontii*), and mules fat (*Baccharis salicifolia*) were sparse and, with the exception of

the mule's fat, were less than one foot in height. Given the relatively large leaf size and vigor, some or all of this wetland vegetation is likely sprouting from the roots of remnant vegetation that was scraped from the surface during previous grading operations. Common weedy vegetation found near the upper boundary of the pond included Russian thistle, trefoil, and bracted saltbrush.

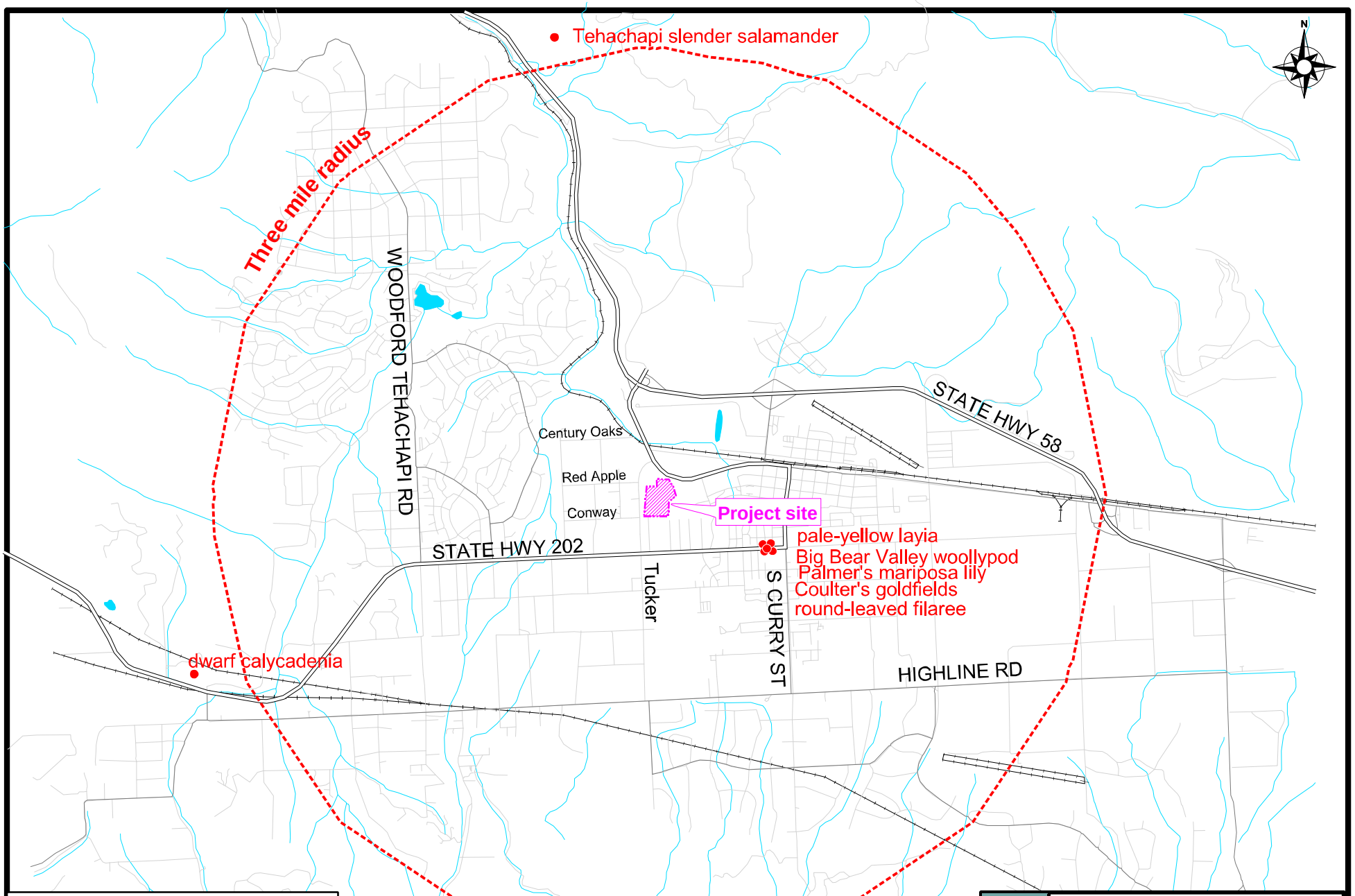
The seasonal pond as it appeared during the time of the field visit provides only low to moderate value to wildlife due to human disturbance, the lack of vegetation that may provide cover and foraging opportunities for animals, and the proximity of the pond to Tehachapi Blvd. Nonetheless, evidence of animal activity in and around the pond was observed. The aquatic insect, water boatman (*Corixidae* Family), was found in the pond. While no evidence of amphibian activity was found, the pond could be expected to provide habitat for the Pacific chorus frog (*Pseudacris regilla*), and the western toad (*Bufos boreas*). Avian use of the pond would likely be limited to drinking and bathing, and perhaps a small amount of foraging, by birds commonly found in surrounding habitats. No avian use of the pond was observed during the site visit. Evidence of several small mammals was found in the form of footprints in the mud around the pond. Prints of either a striped skunk (*Mephitis mephitis*) or a spotted skunk (*Spilogale gracilis*), and a California ground squirrel were left by drinking or foraging individuals. Likewise, larger mammals such as coyote, grey fox, and bobcat could be expected to visit the pond to drink or forage.

2.2 SPECIAL STATUS PLANTS AND ANIMALS

Several species of plants and animals within the state of California have low populations, limited distributions, or the combination of the two. Such species may be considered "rare" and are vulnerable to extirpation as the state's human population grows and the habitats these species occupy are converted to agricultural and urban uses. As described more fully in Section 3.2 state and federal laws have provided the California Department of Fish and Game (CDFG) and the U.S. Fish and Wildlife Service (USFWS) with a mechanism for conserving and protecting the diversity of plant and animal species native to the state. A sizable number of native plants and animals have been formally

designated as threatened or endangered under state and federal endangered species legislation. Others have been designated as "candidates" for such listing. Still others have been designated as "species of special concern" by the CDFG. The California Native Plant Society (CNPS) has developed its own set of lists of native plants considered rare, threatened or endangered (CNPS 2001). Collectively, these plants and animals are referred to as "special status species".

A number of special status plants and animals occur in the vicinity of the study area. These species, and their potential to occur in the study area, are listed in Table 1 on the following pages. Sources of information for this table include *California's Wildlife, Volumes I, II, and III* (Zeiner et. al 1988), *California Natural Diversity Data Base* (CDFG 2005), *Endangered and Threatened Wildlife and Plants* (USFWS 2002), *Annual Report on the Status of California State Listed Threatened and Endangered Animals and Plants* (CDFG 2005), and *The California Native Plant Society's Inventory of Rare and Endangered Vascular Plants of California* (CNPS 2001). Nine USGS quadrangles were searched in the California Natural Diversity Data Base (CNDDB), consisting of Tehachapi North, Loraine, Emerald Mountain, Keene, Cummings Mountain, Oiler Peak, Tehachapi North East, Tehachapi South, and Monolith. Special status species occurring within a 3-mile radius of the study area are shown in Figure 5.



LEGEND

- Special status species observation

Sources:
California Dep. of Fish & Game Natural Diversity Database

2 miles 0 2 miles
approximate scale

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Tehachapi 25 Acre Site
Special-status Species

Date	Project #	Figure #
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TABLE 2. LIST OF SPECIAL STATUS SPECIES THAT OCCUR OR MAY OCCUR IN THE VICINITY OF THE PROPOSED TEHACHAPI RETAIL SITE.

PLANTS (adapted from CNDDB 2005, CNPS 2001, Twisselman 1967))

Species Listed as Threatened or Endangered

Species	Status	Habitat	Occurrence in the Study Area
Bakersfield Cactus (*Opuntia basilaris var.* trelease)i	FE	Occurs in sandy or gravelly areas of chenopod scrub, cismontane woodland, or valley and foothill grassland from 120-550 meters. Blooms April-May.	**Absent.** This perennial species was not observed on the study area or adjacent lands. The nearest known location of this species is approx. 15 miles to the northwest of the study area (CDFG 2005).

CNPS LISTED PLANTS

Aromatic Canyon Gooseberry (*Ribes menziesii var. ixoderme*)	CNPS 1B	Occurs in chaparral and cismontane woodland at 610-1160 meters. Blooms in April.	**Absent**. The species was not present within the study area. Habitat for this species was absent. The nearest known location of this species is approx. 12 miles north of the study area (CDFG 2005).
Baja Navarretia (*Navarretia peninsularis*)	CNPS 1B	Occurs in chaparral openings and mesic lower montane coniferous forest at 1500-2300 meters. Blooms June-Aug.	**Unlikely**. No species of *Navarretia* were observed within the study area. Habitat for this species is marginal on site. The nearest known location of this species is approx. 7 miles southeast of the study area (CDFG 2005).
Big Bear Valley Woollypod (*Astragalus leuciobus*)	CNPS 1B	Occurs in dry pine woods and gravelly knolls among sagebrush or stony lake shores in the pine belt.	**Unlikely**. No species of *Astragalus* were observed during the site survey. Suitable onsite habitat is at best marginal for this species. Exact location of nearest documented occurrence is unknown (CDFG 2005).
Calico Monkeyflower (*Mimulus pictus*)	CNPS 1B	Occurs in broadleafed upland forest and granitic cismontane woodland at 100-1300 meters. Blooms March-May	**Absent**. Habitat necessary for this species was not present on the study area. Exact location of nearest documented occurrence is unknown (CDFG 2005).
Coulter's Goldfields (*Lasthenia glabrata ssp. coulteri*)	CNPS 1B	Occurs in coastal Marshes as well as swamps, playas, and vernal pools at 1-1120 meters. Blooms Feb.-June	**Unlikely**. The species was not observed within the study area. Habitat for this species is marginal on site. Exact location of nearest documented occurrence is unknown (CDFG 2005).
Drawf Calycadenia (*Calycadenia villosa*)	CNPS 1B	Occurs in chaparral, cismontane woodland, meadows and seeps, and rocky valley and foothill grassland at 240-1350 meters. Blooms May-Oct.	**Possible.** Although this species was not observed in the study area, suitable habitat for this species exists on site. Nearest known occurrence is 3.5 air miles to the southeast of the study area (CDFG 2005).
Grey-leaved Violet (*Viola pinetorum ssp. grisea*)	CNPS 1B	Occurs in subalpine coniferous forest and upper montane coniferous forest.	**Absent.** The study area is below the elevational range of this species. Suitable habitat is not present on the study area. Nearest known occurrence is 11 air miles to the northwest of the study area (CDFG 2005).

TABLE 2. LIST OF SPECIAL STATUS SPECIES THAT OCCUR OR MAY OCCUR IN THE VICINITY OF THE PROPOSED TEHACHAPI RETAIL SITE.

CNPS LISTED PLANTS (cont.)

Species	Status	Habitat	Occurrence in the Study Area
Greenhorn Fritillary (*Fritillaria brandegeei*)	CNPS 1B	Occurs in granitic soils of lower montane coniferous forest 1415-2100 meters. Blooms April-June	**Absent.** The study area is below the elevational range of this species. Suitable habitat is not present on the study area.
Kern Buckwheat (*Eriogonum kennedyi* var. *pinicola)*	CNPS 1B	Occurs in clay soils of chaparral, and pinyon and juniper woodland at 1340-1950 meters. Blooms May-June	**Absent**. The study area is below the elevational range of this species. Suitable habitat is not present on the study area.
Kernville Poppy (*Eschscholzia procera*)	CNPS 3	Occurs in sandy flood plains of cismontane woodlands at 810-1025 meters. Blooms June-Aug.	**Absent**. The study area is above the elevational range of this species. Suitable habitat is not present on the study area.
Pale-yellow Layia (*Layia heterotricha*)	CNPS 1B	Occurs in cismontane woodland, pinyon and juniper woodland, and alkaline or clay soils in valley and foothill grassland at 300-1705 meters. Blooms March-June	**Unlikely.** Suitable habitat for this species is absent due to the absence of woodland and clay soils on site. Exact location of nearest documented occurrence is unknown (CDFG 2005).
Piute Cypress (*Cupressus arizonica* ssp. *nevadensis*)	CNPS 1B	Occurs on dry slopes in closed cone coniferous forest, chaparral, and pinyon-juniper woodland. Known to occur on granodiorite, gabbro, and limestone.	**Absent.** This species was not observed during the site survey. Habitat for this species was absent on site. Nearest known occurrence is 19.5 air miles to the northwest of the study area (CDFG 2005).
Piute Mountains Jewel-flower (*Streptanthus cordatus var. piutensis*)	CNPS 1B	Occurs in broadleafed upland forest, closed-cone coniferous forest, and clay or metamorphic soils of pinyon and juniper woodland at 1095-1735 meters. Blooms May-July	**Absent.** Forest or woodland habitat necessary for this species was not present on the study area.
Piute Mountains Navarretia (*Navarretia setiloba*)	CNPS 1B	Occurs in Cismontane woodland, pinyon and juniper woodland, and clay or gravelly loams of valley and foothill grassland at 305-2100 meters. Blooms April-July	**Absent.** Habitat necessary for this species was not present on the study area. Nearest known occurrence is 20 air miles to the northwest of the study area (CDFG 2005).
Palmer's Mariposa Lily (*Calochortus palmeri* ssp. *palmeri*)	CNPS 1B	Occurs in meadows and seeps in chaparral and lower montane coniferous forests at 1000-2390 meters. Blooms May-July	**Absent.** Meadows and seeps in which this species occurs were absent from the study area. Exact location of nearest documented occurrence is unknown (CDFG 2005).
Round-leaved Filaree (*Erodium macrophyllum*)	CNPS 2	Occurs in clay soils of cismontane woodlands and chaparral at 15-1200 meters. Blooms March-May	**Absent.** Clay soils necessary for this species were not present on the study area. Exact location of nearest documented occurrence is unknown (CDFG 2005).
Sagebrush Loeflingia (*Loeflingia squarrosa var. artemisiarum*)	CNPS 2	Occurs in sandy areas around clay slicks in Great Basin scrub, Sonoran Desert scrub, and desert dunes.	**Absent.** Clay soils necessary for this species were not present on the study area.

TABLE 2. LIST OF SPECIAL STATUS SPECIES THAT OCCUR OR MAY OCCUR IN THE VICINITY OF THE PROPOSED TEHACHAPI RETAIL SITE.

CNPS LISTED PLANTS (cont.)

Species	Status	Habitat	Occurrence in the Study Area
Spanish Needle Onion (*Allium shevockii*)	CNPS 1B	Occurs in rocky areas of pinyon and juniper woodland, and upper montane coniferous forest at 850-2500 meters. Blooms May-June.	**Absent.** Forest or woodland habitat necessary for this species was not present on the study area. Nearest known occurrence is 10 air miles to the northeast of the study area in Horse Canyon (CDFG 2005).
Spjut's Bristle-moss (*Orthotrichum spjutii*)	CNPS 1B	Occurs in lower montane coniferous forest, pinyon and juniper woodland, subalpine coniferous forest, and granitic upper montane coniferous forest at 2100-2400 meters.	**Absent.** The study area is below the elevational range of this species. Nearest known occurrence is 12 air miles to the northeast of the study area in Horse Canyon (CDFG 2005).

ANIMALS (adapted from CNDDB 2005)

Species Listed as Threatened or Endangered

Valley Elderberry Longhorn Beetle (*Desmocerus californicus dimorphus*)	FT	Lives in mature elderberry shrubs of California's Central Valley and Sierra Foothills.	**Absent.** Elderberry plants were not observed within or adjacent to the study area.
Tehachapi Slender Salamander (*Batrachoseps stebbinsi*)	CT	Inhabits wet talus slopes or log-strewn hillsides with a steep north-facing exposure in hardwood-conifer and riparian areas of the Piute and Tehachapi Mountains (CDFG 2005).	**Absent** Steep woodland required by this species is absent from the study area.
Southern Rubber Boa (*Charina umbratica*)	CT	Found near streams or wet meadows. Requires loose moist soil for burrowing and rotten logs for cover.	**Absent** Moist habitat and woodland required by this species is absent form the study area.
Swainson's Hawk (*Buteo swainsoni*)	CT	Uncommon migrant in Southern Kern County. Forages in grasslands and fields Only sparse woodland required for nesting.	**Unlikely.** The study area provides marginal foraging habitat and this species is rarely seen in this part of Kern County.
Peregrine Falcon (*Falco peregrinus*)	CE	Individuals breed on cliffs in the Sierra Nevada or in coastal habitats; occurs in many habitats of the state during migration and winter.	**Unlikely.** The study area provides marginal foraging habitat for transients and migrants. Suitable breeding habitat is absent.

TABLE 2. LIST OF SPECIAL STATUS SPECIES THAT OCCUR OR MAY OCCUR IN THE VICINITY OF THE PROPOSED TEHACHAPI RETAIL SITE.

ANIMALS (adapted from CNDDB 2005)

Species of Special Concern

Species	Status	Habitat	*Occurrence in the Study Area
Yellow-blotched Salamander (*Ensatina eschscholtzii croceator*)	CSC	Inhabits forests and well-shaded canyons, as well as oak woodlands and old chaparral.	**Absent.** Canopy cover or topography that creates shade and surface debris that is required by this species is absent from the study area.
Coast (San Diego) Horned Lizard (*Phrynosoma coronatumblainvillei*)	CSC	Frequents sandy washes with scattered shrubs, grasslands, scrublands, or woodlands.	**Unlikely.** The study area provides unsuitable to marginal habitat for this species due to present and historical human disturbance of the study area.
White-tailed Kite (*Elanus caeruleus*)	CFP	Open grassland and shrubland areas throughout central and southern California.	**Possible.** The study area provides foraging habitat. Nesting habitat is absent on the study area. This species has occasionally been reported during the annual Tehachapi Christmas bird count conducted by the Tehachapi Mountains Birding Club.
Golden Eagle (*Aquila chrysaetos*)	CSC	Frequents rolling foothills, mountain areas, sage-juniper flats and desert habitats; requires cliffs or large trees for nesting.	**Possible.** The study area provides marginal foraging habitat for this species, but no nesting habitat. This species has been regularly reported during the annual Tehachapi Christmas bird count conducted by the Tehachapi Mountains Birding Club.
Northern Harrier (*Circus cyaneus*)	CSC	Frequents, grasslands, open rangelands, freshwater and emergent wetlands.	**Present.** The study area provides suitable foraging habitat, but provides no habitat for nesting.
Sharp-shinned Hawk (*Accipiter striatus*)	CSC	Breeds in mixed conifer forests of the northern Sierra Nevada, but winters in a variety of Calif. habitats.	**Unlikely.** The study area provides marginal to unsuitable foraging habitat and no breeding habitat for this species.
Cooper's Hawk (*Accipiter cooperii*)	CSC	Breeds in oak woodlands, riparian forests and mixed conifer forests of the Sierra Nevada, but winters in a variety of California lowland woodland habitats.	**Unlikely.** The study area provides marginal to unsuitable foraging habitat and no breeding habitat for this species.
Ferruginous Hawk (*Buteo regalis*)	CSC	Breeds in the Pacific Northwest and Canada, but winters in a variety of Calif. habitats, including grass-lands, savannahs, wetlands, etc.	**Possible.** The study area provides seasonal (winter) foraging habitat for this species. The study area is outside the species breeding range. This species has been regularly reported during the annual Tehachapi Christmas bird count conducted by the Tehachapi Mountains Birding Club.
Merlin (*Falco columbarius*)	CSC	Breeds in Canada, but winters in a variety of Calif. habitats, including grasslands, savannahs and wetlands.	**Possible.** The study area provides suitable foraging habitat for winter transients. This species breeds further north. This species has only occasionally been reported during the annual Tehachapi Christmas bird count conducted by the Tehachapi Mountains Birding Club.

TABLE 2. LIST OF SPECIAL STATUS SPECIES THAT OCCUR OR MAY OCCUR IN THE VICINITY OF THE PROPOSED TEHACHAPI RETAIL SITE.

ANIMALS (adapted from CNDDB 2005)

Species of Special Concern

Species	Status	Habitat	*Occurrence in the Study Area
Prairie Falcon (*Falco mexicanus*)	CSC	Frequents annual grasslands to alpine meadows; requires cliffs or rock outcroppings for nesting.	**Possible.** The study area provides suitable foraging habitat, but no nesting habitat for this species. This species has been regularly reported during the annual Tehachapi Christmas bird count conducted by the Tehachapi Mountains Birding Club.
Burrowing Owl (*Athene cunicularia*)	CSC	Frequents open, dry grasslands, deserts and ruderal areas; requires rodent burrows for nesting and roosting cover.	**Absent.** Although the habitat appears to be suitable for this species, no records of existing or historical populations of burrowing owls in the Tehachapi Valley have been found.
Long-eared Owl (*Asio otus*)	CSC	Frequents riparian woodlands and forests of California.	**Unlikely.** The study area provides unsuitable breeding and marginal foraging habitat for this species.
Short-eared Owl (*Asio flammeus*)	CSC	Frequents marshes, grasslands, irrigated lands, dunes and other treeless habitats of the Central Valley and western Sierra Nevada foothills.	**Possible.** The study area provides foraging habitat for this species but is outside the owls known breeding range.
Loggerhead Shrike (*Lanius iudovicianus*)	CSC	Frequents open habitats with sparse shrubs and trees, other suitable perches, bare ground, and low herbaceous cover. Can often be found in cropland.	**Possible.** The study area provides suitable foraging habitat, but only marginal nesting habitat. This species has been regularly reported during the annual Tehachapi Christmas bird count conducted by the Tehachapi Mountains Birding Club.
Tri-colored Blackbird (*Agelaius tricolor*)	CSC	Frequents grassland and cropland habitats; requires proximity to fresh water and emergent wetland vegetation with dense cattails and thickets of willow for nesting.	**Possible.** The study area provides suitable foraging habitat for this species. Nesting habitat was absent. A nesting colony exists in the vicinity of the study site; exact location is not disclosed (CDFG 2005).
Tehachapi Pocket Mouse (*Perognathus alticolus inexectatus)*	CSC	Inhabits arid grassland and desert scrub as well as fallow grain fields and Russian thistle.	**Possible**. Highly localized in the region. Only two extant populations of this species are known. These populations occur approximately 7 miles east of the study area near the town of Monolith (CDFG 2005).
Tulare Grasshopper Mouse (*Onychomys torridus tularensis*)	CSC	Hot, arid valleys and desert scrub. Requires abundant supply of insects.	**Unlikely.** Human disturbance of the study area has degraded any potential habitat for this species to a marginal level. Only two specimens of this species were documented in 1973 10 miles east of the study area (CDFG).
Townsend's Western Big-eared Bat (*Corynorhinus townsendii townsendii*)	CSC	Frequents all but subalpine and alpine habitats; requires buildings, mines, caves or tunnels for roosting and nesting.	**Possible.** The study area provides suitable foraging habitat for this species. Suitable roosting habitat is absent.

TABLE 2. LIST OF SPECIAL STATUS SPECIES THAT OCCUR OR MAY OCCUR IN THE VICINITY OF THE PROPOSED TEHACHAPI RETAIL SITE.

ANIMALS (adapted from CNDDB 2005)

Species of Special Concern

Species	Status	Habitat	Occurrence in the Study Area
Pallid Bat (*Antrozous pallidus*)	CSC	Grasslands, chaparral, wood-lands, and forests of California; most common in dry rocky open areas providing roosting opportunities.	**Possible.** The study area provides suitable foraging habitat for this species. Suitable roosting habitat is absent.
Spotted Bat (*Euderma maculatum*)	CSC	Found in a variety of habitats from arid desert and grassland to mixed conifer forest.	**Possible.** The site could be used for foraging, suitable roosting habitat is absent
Western Mastiff Bat (*Eumops perotis*)	CSC	Occurs in a variety of habitats from woodlands to grasslands along central and southern coast and the Central Valley.	**Possible.** This species may forage on the site, but roosting habitat is absent.
American Badger (*Taxidea taxus*)	CSC	This species inhabits open and dry sections of grasslands, shrub, and forest habitats with friable soil.	**Possible.** Human disturbance on the study area has resulted in compromised foraging and breeding habitat.

OCCURRENCE EXPLANATIONS

*Present: Species observed on the site at time of field surveys or during recent past.
Likely: Species not observed on the site, but it may reasonably be expected to occur there on a regular basis.
Possible: Species not observed on the site, but it could occur there from time to time.
Unlikely: Species not observed on the site, and would not be expected to occur there except, perhaps, as a transient.
Absent: Species not observed on the site, and precluded from occurring there because habitat requirements not met.

STATUS CODES

FE	Federally Endangered	CE	California Endangered
FT	Federally Threatened	CT	California Threatened
FPE	Federally Endangered (Proposed)	CR	California Rare
FC	Federal Candidate	CSC	California Species of Special Concern

CNPS California Native Plant Society Listing
CNPS List 1A Plants Presumed Extinct in California
CNPS List 1B Plant is threatened, endangered in California and elsewhere
CNPS List 2 Plants Rare, Threatened, or Endangered in California, But More Common Elsewhere
CNPS List 3 Plants About Which We Need More Information - A Review List
CNPS List 4 Plants of Limited Distribution - A Watch List

An expanded discussion of some special status species listed in Table 2 is in order due to the ultimate influence their possible presence could have on future site plans. Omitted from this expanded discussion are all the special status species that may be present on the site from time to time (or even regularly), but represent no appreciable constraint to site development, their presence notwithstanding.

2.2.1 Dwarf Calycadenia

The dwarf calycadenia is an annual member of the sunflower family (Asteraceae) that occurs in open, dry meadows, hillsides, and gravelly outwashes. It has no state or federal listing status, having been placed by the California Native Plant Society on its List 1B (Plants Rare, Threatened, or Endangered in California and Elsewhere). It has a RED Code of 2:3:3: RARITY 2: A limited number of occurrences in California, occasionally more if each occurrence is small. ENDANGERMENT 3: Seriously endangered in California. DISTRIBUTION 3: Endemic to California.

This species includes 51 total observations and is more abundant in the inland coastal range within Fresno, Madera, Kern, Santa Clara, Monterey, San Luis Obispo, and Santa Barbara Counties. There are only two historical occurrences of this species in Kern County. Little is known about these occurrences (date, exact location, etc) except that the nearest occurrence is extant from an elevation of 4,200 feet between Brite Valley and Tehachapi Valley approximately three miles from the study area (CDFG 2005) (see Figure 5).

Dwarf calycadenia was not observed on the study area during LOA's general site survey in December of 2005. However, this species would be extremely difficult if not impossible to identify during that time of year due to desiccation and deterioration of the dead plant parts. Based on available data the occurrence of this species on the study area cannot be ruled out. Therefore, eventual site development could have a significant effect on regional populations of the dwarf calycadenia should it be found growing on the study area. Until the rubber rabbitbrush scrub habitat is surveyed according to protocols acceptable to the California Department of Fish and Game and the U.S. Fish and Wildlife

Service, this special status plant species must be considered potentially present on the site.

2.2.2 Tehachapi Pocket Mouse

The Tehachapi pocket mouse (*Perognathus alticolus inexpectatus*) is one of two subspecies of the species *alticolus*. Both subspecies have a very limited known distribution. *Perognathus alticolus alticolus* is only known from a small area of the western San Bernardino Mountains. *Perognathus alticolus inexpectatus* had a historic distribution of a few scattered populations in both Los Angeles County and Kern County. Recent trapping efforts have found no Tehachapi pocket mice in all but two locations. One population occurs on private land just north of Hwy 58 in Sand Canyon approximately seven air miles east of the study area. The other population occurs on private land in Oak Creek Canyon located south of the Tehachapi Willow Springs Road approximately eight air miles east of the study area. Consequently, the Tehachapi pocket mouse has been listed by CDFG as a California Species of Concern. The Tehachapi pocket mouse inhabits arid annual grassland and desert shrub communities and has even been found in disturbed areas (i.e. a fallow grain field and Russian thistle). Due to the few observations of this species their habitat requirements are not clearly understood.

The Tehachapi pocket mouse is active only at night when it feeds on plant seeds and possibly some insects on open ground and beneath shrubs. During the day it retreats to underground burrows it constructs in loose soil. The pocket mouse builds a nest of dried grass in these burrows to rear its young. It will aestivate in very hot weather and hibernate in very cold weather (CDFG 2005).

Much more research could be done to understand more fully the distribution and habitat requirements of the Tehachapi pocket mouse. However, after researching available data gathered from CDFG, mammal experts, and other consultants, the possibility of this species inhabiting the study area cannot be ruled out. The similarity of habitats between its known habitat in the Tehachapi area and the habitat found on the study area, as well as the close proximity of the two known extant populations of the Tehachapi pocket mouse

to the study area further warrant the possibility that this species may occur on the study area.

2.3 JURISDICTIONAL WATERS

Jurisdictional waters include rivers, creeks, drainages with a defined bed and bank that may carry at most ephemeral flows, lakes, ponds, reservoirs, and wetlands. Such waters may be subject to the regulatory authority of the U.S. Army Corps of Engineers (USACE), the California Department of Fish and Game (CDFG) and the California Regional Water Quality Control Board (RWQCB) (see Section 3.2.4 of this report for additional information). Waters of the United States have been defined in the Code of Federal Regulations (33 CFR, Section 128), but these definitions have been modified by the U.S Supreme Court decision *Solid Waste Agency of Northern Cook County v. U.S. Army Corps of Engineers* (SWANCC Decision) of January of 2001. Prior to this decision, the USACE claimed as jurisdictional isolated wetlands and other waters on the basis that such wetlands provided habitat for migratory birds. The Supreme Court ruled in the SWANNC Decision that migratory bird use of isolated drainages and wetlands could no longer be used to establish federal jurisdiction over such areas.

Waters of the United States would at most be limited to the seasonal pond described in Section 2.1.2. This pond, however, appeared to be isolated from other Waters of the United States. It was connected to the storm drain system along Tehachapi Blvd. via an overflow standpipe. The storm water system either emptied directly into Tehachapi Creek or via a retention basin just north of the site that may at times empty into the creek. Tehachapi Creek is part of an isolated drainage system. From its headwaters, adjacent to the site, it flows northwest and empties into Caliente Creek. Caliente Creek continues northwest and then bends southwest after joining Walker Basin Creek. This waterway then enters the southern San Joaquin Valley where it is channelized and eventually peters out before connecting to any known Waters of the U.S.

Many drainages in this part of California are isolated drainages that fan out into the southern San Joaquin Valley, or are diverted into irrigation channels, or flow into the

Buena Vista Lake Basin. USACE is studying the factors that will determine which of these isolated drainages will be considered federal waters and which will be disclaimed. Until this study has been completed, the Corps has indicated that all such isolated drainages could be considered waters of the U.S.

The seasonal pond observed on the site meets all three technical criteria of a jurisdictional wetland. It was fed by an upland swale and surface runoff from Tehachapi Blvd. Sparse remnants of hydrophytic vegetation included willow, cottonwood and mule's fat. Soils of the onsite upland swale, the seasonal pond, and the upland adjacent to the pond were sampled using the Munsell Soil Color Book. The upland swale soils were found to match the 10YR 4/3 category in the color book. This classification does not meet the criteria of a hydric soil. Soils around the pond had a Munsell color notation of 10YR 2/2 or 2/1. This classification of 2/2 meets the criteria of a wetlands soil if oxidized root channels are found. No oxidized root channels were found; however, the pond area was fairly devoid of vegetation. The classification of 2/1 in itself meets the criteria of a wetlands soil. The upland soils adjacent to the pond had a Munsell color notation of 10YR 4/6. The pond was inundated during the site survey.

The seasonal pond is also likely to be subject to the jurisdiction of the California Department of Fish and Game per Section 1602 of the California Fish and Game Code and the Regional Water Quality Control Board per Section 401 of the Clean Water Act.

3.0 IMPACTS AND MITIGATION

As noted in Section 1.0 of this report, sensitive habitats such as wetlands, special status plants and animals, and animal movement corridors are all biotic resource issues that may be regulated according to provisions of federal and state laws and/or county general plans. These issues can affect how a property is used or developed. The discussion below addresses likely impact to sensitive biological resources from the development of a large retail outlet center on the 25-acre study area in Tehachapi. This discussion recognizes that not all impacts are significant and, therefore, establishes the criteria by which significance is determined. The discussion also examines state and federal laws that determine how sensitive habitats are developed.

3.1 SIGNIFICANCE CRITERIA

General plans, area plans, and specific projects are subject to the provisions of the California Environmental Quality Act (CEQA). The purpose of CEQA is to assess the impacts of proposed projects on the environment before they are constructed. For example, site development may require the removal of some or all of its existing vegetation. Animals associated with this vegetation could be destroyed or displaced. Animals adapted to humans, roads, buildings, pets, etc. may replace those species formerly occurring on a site. Plants and animals that are state and/or federally listed as threatened or endangered may be destroyed or displaced. Sensitive habitats such as wetlands and riparian woodlands may be altered or destroyed. These impacts may be considered significant or not. According to *Guide to the California Environmental Quality Act* (Remy et al. 1999), "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 interest. Specific project impacts to biological resources may be considered "significant" if they will:

- have a substantial adverse effect, the 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 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 (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means;
- interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery site; Reduce substantially the habitat of a fish or wildlife species, including causing a fish or wildlife population to drop below self-sustaining levels or threaten to eliminate an animal community;
- conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance;
- conflict with the provisions of an adopted Habitat Conservation Plan, or other approved local, regional, or state habitat conservation plan (Remy et al. 1999).

Furthermore, CEQA Guidelines Section 15065 states that a project may trigger the requirement to make a "mandatory findings of significance" if "the project has the potential to subsequently degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, reduce the number or restrict the range on an endangered, rare or threatened species, or eliminate important examples of the major periods of California history or prehistory."

3.2 RELEVANT GOALS, POLICIES, AND LAWS

3.2.1 Threatened and Endangered Species

State and federal "endangered species" legislation has provided the California Department of Fish and Game (CDFG) and the U.S. Fish and Wildlife Service (USFWS) with a mechanism for conserving and protecting plant and animal species of limited distribution and/or low or declining populations. Species listed as threatened or endangered under provisions of the state and federal endangered species acts, candidate species for such listing, state species of special concern, and some plants listed as endangered by the California Native Plant Society are collectively referred to as "species of special status". Permits may be required from the CDFG and USFWS if activities associated with a proposed project will result in the "take" of a listed species. "Take" is defined by the state of California as "to hunt, pursue, catch, capture, or kill, or attempt to hunt, pursue, catch, capture or kill" (California Fish and Game Code, Section 86). "Take" is more broadly defined by the federal Endangered Species Act to include "harm" (16 USC, Section 1532(19), 50 CFR, Section 17.3). Furthermore, the CDFG and the USFWS are responding agencies under the California Environmental Quality Act (CEQA). The agencies review CEQA documents in order to determine the adequacy of their treatment of endangered species issues and to make project-specific recommendations for their conservation.

3.2.2 Migratory Birds

State and federal law also protect most birds. The Federal Migratory Bird Treaty Act (FMBTA: 16 U.S.C., scc. 703, Supp. I, 1989) prohibits killing, possessing, or trading in migratory birds, except in accordance with regulations prescribed by the Secretary of the Interior. This act encompasses whole birds, parts of birds, and bird nests and eggs.

3.2.3 Birds of Prey

Birds of prey are also protected in California under provisions of the State Fish and Game Code, Section 3503.5, (1992), which states that it is "unlawful to take, possess, or destroy

any birds in the order Falconiformes or Strigiformes (birds of prey) or to take, possess, or destroy the nest or eggs of any such bird except as otherwise provided by this code or any regulation adopted pursuant thereto". Construction disturbance during the breeding season could result in the incidental loss of fertile eggs or nestlings, or otherwise lead to nest abandonment. Disturbance that causes nest abandonment and/or loss of reproductive effort is considered "taking" by the CDFG.

3.2.4 Wetlands and Other "Jurisdictional Waters"

Natural drainage channels and wetlands are considered "Waters of the United States" (hereafter referred to as "jurisdictional waters"). The U.S. Army Corps of Engineers (USACE) regulates the filling or grading of such waters under the authority of Section 404 of the Clean Water Act (Wetland Training Institute, Inc. 1991). The extent of jurisdiction within drainage channels is defined by "ordinary high water marks" on opposing channel banks. Wetlands are habitats with soils that are intermittently or permanently saturated, or inundated. The resulting anaerobic conditions select for plant species known as hydrophytes that show a high degree of fidelity to such soils. Wetlands are identified by the presence of hydrophytic vegetation, hydric soils (soils saturated intermittently or permanently saturated by water), and wetland hydrology according to methodologies outlined in the 1987 Corps of Engineers Wetlands Delineation Manual (USACE 1987).

All activities that involve the discharge of fill into jurisdictional waters are subject to the permit requirements of the USACE (Wetland Training Institute, Inc. 1991). Such permits are typically issued on the condition that the applicant agrees to provide mitigation that results in no net loss of wetland functions or values. No permit can be issued until the Regional Water Quality Control Board (RWQCB) issues a certification (or waiver of such certification) that the proposed activity will meet state water quality standards. The RWCQB is also responsible for enforcing National Pollution Discharge Elimination System (NPDES) permits, including the General Construction Activity Storm Water

Permit. All projects requiring federal money must also comply with Executive Order 11990 (Protection of Wetlands).

The California Department of Fish and Game has jurisdiction over the bed and bank of natural drainages according to provisions of Section 1601 and 1603 of the California Fish and Game Code (California Department of Fish and Game 1995). Activities that would disturb these drainages are regulated by the CDFG via a Streambed Alteration Agreement. Such an agreement typically stipulates that certain measures will be implemented which protects the habitat values of the drainage in question.

3.3 ENVIRONMENTAL IMPACT/MITIGATION

As described in Section 1.0 the proposed action is a retail center to be constructed on a 25-acre parcel in the city of Tehachapi, Kern County, California. Based on conversations with the client and site plans outlining the project, it has been assumed that existing habitats observed on the site will be entirely replaced with the proposed development of the property.

3.3.1 Potential Project Impacts to Special Status Plant Species

Impact. Twenty special status vascular plant species are known to occur in the general project vicinity in Kern County (Table 2). Although many special status plant species exist in the Tehachapi area, the study area provides suitable habitat for only one, the dwarf calycadenia (*Calycadenia villosa*), as discussed above under Section 2.2.1.

Mitigation. Impacts to the dwarf calycadenia resulting from proposed site development would be potentially significant. Measures that could be implemented to mitigate impacts to special status plant species include the following:

- Surveys. Surveys for the dwarf calycadenia would be warranted. These surveys should be conducted at a time of year when this species is blooming and can, therefore, be identified. Surveys should be conducted according to the CNPS Botanical Survey Guidelines. Any populations found should be mapped.

Measures to mitigate project impacts to these species would not be warranted, if they were determined to be absent from the project site.

- Avoidance. Resource agencies such as the USFWS and the CDFG prefer that habitat for listed species is avoided. This is typically the preferred mitigation identified in the CEQA Guidelines. Avoidance would require that those areas of the site supporting populations of special status plant species not be developed.

- Compensation. If avoidance of populations of special status plant species is not feasible, then habitat off-site could possibly be acquired and protected from future disturbance. Compensation ratios typically are 2:1 to 3:1, meaning that two to three acres of compensatory endangered species habitat must be created (or in some cases, existing habitat preserved) and protected under conservation easement. Alternatively, the applicant could purchase credits in a local conservation bank, if a local bank exists with the required credits for sale.

- Permit Compliance. The applicant could lawfully eliminate and/or relocate populations of state and federally listed plant species only after complying with provisions of the state endangered species acts.

Full implementation of the above measures would reduce impacts to special status plant species to a less than significant level.

3.3.2 Potential Project Impacts to Special Status Animal Species From Habitat Modification

Impact. Twenty-seven special status animal species occur or have occurred regionally (see Table 2). Possible impact to regional populations of these species from eventual site development is discussed below:

Special Status Species Absent From the Site, or Unlikely to Occur There. Twelve special status animals would not occur or would be unlikely to occur in the study area due to the absence of suitable habitat. For example, the Tehachapi slender salamander, yellow-blotched salamander, southern rubber boa, valley elderberry longhorn beetles, etc. would not occur on the site due to an absence of suitable habitat. Eventual site development would have no effect on these 13 species, because there is little or no likelihood that they are present on the study area.

Special Status Species That May Forage on the Site. Twelve special status species may forage in the study area from time to time but breed or roost in offsite habitats. Breeding habitat for these species is either not present on the site, or is of marginal suitability. For example, there is no breeding habitat onsite for prairie falcons, northern harriers, ferruginous hawks, tri-colored blackbirds, etc., but all these species may occasionally forage on the site. Additionally, four special status bat species could occasionally forage on the site and retreat to roosts located off site. The site does not provide regionally important foraging habitat for any of these species. Site development will result in at most the loss of a minor amount of foraging habitat. This impact is considered to be less than significant.

Special Status Species that May Breed. Nest, or Den on the Site. The site provides possible breeding habitat for three special status species. The loggerhead shrike may nest in an elm tree located in the southwest corner of the property and forage in rabbitbrush scrub on the study area. The American badger may reside in onsite rabbitbrush scrub where it would breed and forage. The study area appears to meet the habitat requirements of the Tehachapi pocket mouse, which may both breed and forage on the study area.

Impacts Considered Less Than Significant

Site development will result in at most the loss of a minor amount of regionally available breeding habitat for the loggerhead shrike and the American badger with little effect on regional populations. This impact is considered to be less than significant.

Mitigation. Habitat modification resulting from site development will result in no impact or less than significant impact on loggerhead shrikes or American badgers. Therefore, mitigation measures are not warranted.

Impacts Considered to be Potentially Significant

If the Tehachapi pocket mouse were to occur on the study area, site development will result in the loss of approximately a third of the habitat used by all known populations of this species. This loss of habitat would likely extirpate what would be a third of the known populations of the Tehachapi pocket mouse. This would be considered a significant impact as defined by CEQA.

Mitigation. Habitat modification resulting from site development will result in a potentially significant impact on the Tehachapi pocket mouse. Mitigation measures for possible project impact to the Tehachapi pocket mouse include the following:

- Pre-construction Trapping Surveys. A qualified biologist will conduct a pre-construction trapping survey for the Tehachapi pocket mouse during the spring and again during the fall prior to the onset of site construction. The trapping survey will be conducted according to specific protocol approved by CDFG.

- Establish Conservation Easement. Should Tehachapi pocket mice be found on the study area, the applicant will acquire property with suitable habitat, adjacent or in very close proximity to property known to support the Tehachapi pocket mouse. This property will be maintained as a conservation easement to ensure the protection of this species. The amount of property acquired will be a three to one exchange for the amount of habitat destroyed from site development.

- Relocation of Individuals. Should the Tehachapi pocket mouse be found on the study area, a sufficient number of individuals will be relocated to the established conservation easement to insure the continuation of a viable population on the new location. The relocation protocol will be conducted by qualified biologists and will be monitored by qualified biologists for five years to insure the population becomes established.

Full implementation of the above measures would reduce the project impacts to the Tehachapi pocket mouse from habitat modification to a less than significant impact.

3.3.3 Potential Project Impacts to Special Status Animal Species from Construction Mortality

Project construction may result in direct mortality of special status animal species. Mortality could occur from grading that eliminates habitat in which these species currently reside, from construction activities that crush or bury individuals, or by nest

abandonment caused by construction activity adjacent to active nests. Possible direct mortality is discussed below:

Impacts Considered to be Potentially Significant

1. Tehachapi Pocket Mouse. As noted in Section 3.2.2 of this report the Tehachapi pocket mouse may possibly occur on the study area. If present on site the pocket mouse could be buried or killed by construction related activities such that an entire population of Tehachapi pocket mice may be extirpated. If this were the case, one third of the known populations of this species would be eliminated. Consequently, mortality of the Tehachapi pocket mouse as a result of project construction would be a potentially significant impact as defined by CEQA.

2. Loggerhead Shrike. As noted in Section 3.2.2 of this report, loggerhead shrikes could nest in an elm located in the southeastern corner of the study area along the eastern fence line. Project construction during the nesting season could result in nest destruction or nest abandonment, leading to the possible mortality of nestlings. Mortality of nestlings as a result of project construction would be a violation of the federal Migratory Bird Treaty Act and California Fish and Game Code.

Mitigation Measures

1. Tehachapi Pocket Mouse. Mitigation measures for possible project impact to the Tehachapi pocket mouse due to construction related mortality include the following:

- Pre-construction Trapping Surveys. A qualified biologist will conduct a pre-construction trapping survey for the Tehachapi pocket mouse during the spring and again during the fall prior to the onset of site construction. The trapping survey will be conducted according to specific protocol approved by CDFG.

- Establish Conservation Easement. Should Tehachapi pocket mice be found on the study area, the applicant will acquire property with suitable habitat, adjacent or in very close proximity to property known to support the Tehachapi pocket mouse. This property will be maintained as a conservation easement to ensure the protection of this species. The amount of property acquired will be a three to one exchange for the amount of habitat destroyed from site development.

- Relocation of Individuals. Should the Tehachapi pocket mouse be found on the study area, a sufficient number of individuals will be relocated to the established conservation easement to insure the continuation of a viable population on the new location. The relocation protocol will be conducted by qualified biologists and will be monitored by qualified biologists for five years to insure the population becomes established.

Full implementation of the above measures would reduce the project impacts to the Tehachapi pocket mouse from construction related mortality to a less than significant impact

2. Loggerhead Shrike. Mitigation measures for possible project impact to nesting loggerhead shrikes include the following:

- Avoidance. All construction activity should occur outside of the nesting season (February through August) in order to avoid possible impact to nesting raptors.

- Pre-construction Surveys. A pre-construction survey will be conducted by a qualified biologist for nesting raptors within 30 days prior to the on-set of construction, if construction is to occur during the nesting season (February through August) and would occur within 250 feet of the aforementioned Elm tree.

- Establish Buffers. If pre-construction surveys undertaken during the breeding season (February through August) locate active nests within or near construction zones, these nests, and an appropriate buffer around them (as determined by a qualified biologist) would remain off-limits to construction until the breeding season is over. Construction setbacks of 250 feet (or more) from occupied nests could be required.

Full implementation of the above measures would ensure that the project is in compliance with California Fish and Game Code and the federal Migratory Bird Treaty Act. .

3.3.4 Potential Project Impacts to Riparian Habitat or Other Sensitive Natural Communities

Impact. Riparian habitat or other sensitive natural communities identified in local and regional plans, policies, regulations, or by state and federal agencies are not present on the proposed project site. Therefore, the project would have no effect on such communities.

Mitigation. The project will have no effect on riparian or sensitive natural communities. Mitigation measures are not warranted.

3.3.5 Potential Project Impacts on federally protected wetlands as defined by Section 404 of the Clean Water Act through direct removal, filling, hydrological interruption, or other means

Impact. The proposed project will result in the filling and grading of this pond (Frank Sen, CEI Engineering, pers. comm.) The pond is quite small (0.25 acres) and has been disturbed significantly in recent years by construction work on nearby Tehachapi Boulevard and a pumping station east of the pond. The biological resource values associated with the pond are minimal. Elimination of the pond will not result in a substantial loss of wetland resources occurring in the project vicinity. Therefore, loss of the pond is considered a less than significant adverse environmental impact.

The seasonal pond located on the site would be subject to the regulatory jurisdiction of the USACE, the CDFG, and the RWQCB as described in Section 2.3 of this document. The filling of the pond would be subject to the permit requirements of these agencies.

Mitigation. The loss of the pond from project construction is considered to be a less than significant environmental impact. No mitigation would be required per the requirements of CEQA. The USACE, the CDFG, and the RWQCB may require one or more mitigation measures as conditions of any permits that would be required prior to the filling and grading of the pond area.

3.3.6 Potential Project Impacts on The Movement of Any Native Resident or Migratory Fish or Wildlife Species

Impact. Although many species potentially move within and through the study area, the site does not appear to constitute a "movement corridor" for native wildlife or fish species. Some migratory species that now pass through the study area are birds that are likely to pass through or over the site even when it is eventually developed. However, site development will have an adverse effect on home range and dispersal movements of

native wildlife currently using habitats on site. In fact, as undeveloped open space in the Tehachapi Valley gradually succumbs to residential and commercial development, wildlife movements become increasingly restricted. The adjacent Tehachapi Creek should be considered a movement corridor for wildlife but not fish (the stream bed is dry most of the year). However, site development will not encroach on the creek, thus having a minimal impact on this habitat. The study area cannot be considered a significant wildlife movement corridor, as the site itself does not directly connect high quality habitat with other high quality habitat. Therefore, this project will result in a less than significant effect on regional fish and wildlife movements.

Mitigation. Because this project will result in a less than significant effect on regional wildlife movements, mitigation measures are not considered warranted.

3.3.7 Potential Project Impacts on Habitat for Fish Species

Impact. Site development will eliminate no habitat utilized by any fish species but will eliminate habitat used by a number of wildlife species including certain special status species. The loss of wildlife habitat associated with site development will not threaten the survival of any fish population. Project impact is considered less than significant.

Mitigation. Because this project will by itself have a less than significant effect on habitat for native fish occurring in this portion of Kern County, mitigation measures are not considered warranted.

3.3.7 Conflicts with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance

Impact. The project appears to be consistent with the General Plan Policies of Kern County that are relevant to natural resource protection.

Mitigation. Because this project appears to be consistent with the General Plan Policies of Kern County relevant to natural resource protection, mitigation measures further protecting biological resources are not considered warranted.

3.3.8 Degradation of Water Quality in Seasonal Creeks, Reservoirs, or Downstream Waters

Impact. Extensive grading often leaves the soils of construction zones barren of vegetation and, therefore, vulnerable to erosion. Eroded soil can be carried as sediment in seasonal creeks to be deposited in creek beds and adjacent wetlands. Much of the study area is, however, nearly level and the soils are not considered erodable. Furthermore, a channelization project in the Tehachapi Creek bed adjacent to the site has obliterated the natural creek bed. This project has left the creek bed devoid of vegetation and completely covered the sandy creek bottom with topsoil scraped from the banks. Therefore, the potential for erosion and the degradation of water quality in local creeks is negligible.

Mitigation. Measures to mitigate impacts to water quality in local creeks from erosion would not be necessary, especially if most construction work occurs during the summer and fall. The applicant should be aware, however, that projects involving the grading of large tracts of land must be in compliance with provisions of a General Construction permit (a type of NPDES permit) that is available from the California Regional Water Quality Control Board, which require an erosion control plan and the use of Best Management Practices. This permit would also cover the construction of the stormwater retention basin planned for the site (Lisa Gymer, CRWQCB, Central Valley Region, pers. comm.).

3.4 CUMULATIVE IMPACT

Numerous commercial development projects have been built in the Tehachapi Valley grasslands of Kern County over the past 30-40 years. While individually each project may have resulted in a less than significant adverse environmental impact on biological

resources, collectively they have eliminated large areas of native habitat and/or fragmented undeveloped patches of native habitat. In short, the effects of 40 years of development on biological resources have been substantial.

The contribution of this project to cumulative impacts in the region has not been analyzed. Although the ruderal rubber rabbitbrush scrub habitat of the site is of relatively moderate value for native wildlife, it does provide habitat for various species including special status species. Development of the 25-acre study area will make some type of contribution to regionally significant cumulative losses of habitat used by various wildlife species.

Kern County has not identified mitigation measures suitable for mitigating a given project's contribution to cumulative impact. The California Department of Fish and Game has negotiated mitigation measures with project proponents of some projects in Kern County in recent years. As of the time this biological evaluation was prepared, no consistently applied policy, based on published criteria has been prepared by either the County or CDFG that addresses a project's contribution to cumulative impact in Kern County. Until such a policy has been prepared and formally adopted, it is difficult if not impossible to address this issue in a manner that does not appear arbitrary.

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APPENDIX A

VASCULAR PLANTS OF THE STUDY AREA

APPENDIX A
VASCULAR PLANTS OF THE STUDY AREA

The plants species listed below were observed during the site visit on November 30, 2005. The U.S. Fish and Wildlife Service wetland indicator status of each plant has been shown following each species common name.

OBL - Obligate
FACW - Facultative Wetland
FAC - Facultative
FACU - Facultative Upland
UPL - Upland
+/- - Higher/lower end of category
NR - No review
NA - No agreement
NI - No investigation

ASCLEPIADACEAE – Milkweed Family		
Asclepias vestita	Woolly Milkweed	UPL
ASTERACEAE – Sunflower Family		
Ambrosia acanthicarpa	Annual Bur-Sage	UPL
Aster ascendens	Aster	UPL
Baccharis salicifolia	Mule Fat	FACW
Centaurea solstitialis	Yellow Star Thistle	UPL
Chrysothamnus nauseosus ssp. *hololeucus*	Rubber Rabbitbrush	UPL
Conyza canadensis	Canada Horseweed	FAC
Conyza coulteri	Coulters Horseweed	FAC+
Grindelia camporum ssp. *camporum*	Great Valley Gumweed	FACU
Holocarpha heermannii ssp. *heermanii*	Heerman's Tarweed	UPL
Lactuca serriola	Prickly Lettuce	UPL
Tragopogon porrifolius	Salsify	UPL
BORAGINACEAE - Borage Family		
Amsinckia sp.	Fiddleneck	UPL
BRASSICACEAE – Mustard Family		
Brassica nigra	Black Mustard	UPL
Sisymbrium irio	London Rocket	UPL
CHENOPODIACEAE – Goosefoot Family		
Atriplex serenana ssp. *serenana*	Bracted Saltbrush	FAC
Salsola tragus	Russian Thistle	FACU+
EUPHORBIACEAE – Spurge Family		
Eremocarpus setigerus	Turkey Mullein	UPL
FABACEAE – Bean Family		
Lotus humistratus	Trefoil	UPL
Lotus sp.	Trefoil	-
Lupinus sp.	Lupine	UPL
GERANIACEAE - Geranium Family		
Erodium botrys	Broadleaf Filaree	UPL
Erodium cicutarium	Red Stem Filaree	UPL

LAMIACEAE - Mint Family		
Marrubium vulgare	Common Horehound	UPL
LILIACEAE – Lily Family		
Allium sp.	Wild Onion	UPL
ONAGRACEAE – Fuschia Family		
Epilobium brachycarpum	Willow-Herb	UPL
PAPAVERACEAE – Poppy Family		
Escholschzia californica	California Poppy	UPL
POACEAE – Grass Family		
Bromus hordeaceus	Soft Chess	FACU-
Bromus madritensis ssp. *rubens*	Red Brome	UPL
Cynodon dactylon	Bermuda Grass	FAC
Hordeum murinum ssp. *leporinum*	Barnyard Barley	NI
Teinatherum caput-medusae	Medusa Head	UPL
Vulpia myuros	Rat-tail Fescue	FACU*
POLYGONACEAE – Buckwheat Family		
Polygonum arenastrum	Common Knotweed	UPL
Rumex crispus	Curly Dock	FACW-
SALICACEAE - Willow Family		
Populus fremontii	Fremont's Cottonwood	FACW
Salix sp.	Willow	FACW
ULMACEAE – Elm Family		
Ulmus sp.	Elm	UPL

APPENDIX B

TERRESTRIAL VERTEBRATE SPECIES THAT MAY POTENTIALLY OCCUR ON THE STUDY AREA

APPENDIX B: TERRESTRIAL VERTEBRATE SPECIES THAT POTENTIALLY OCCUR ON THE STUDY AREA

The species listed below are those that may reasonably be expected to use the habitats of the study area routinely from time to time. The list was not intended to include birds that are vagrants or occasional transients. Terrestrial vertebrate species observed on or above the study area on November 30, 2005 have been noted with an asterisk.

CLASS: AMPHIBIA
ORDER: SALIENTIA (Frogs and Toads)
FAMILY: BUFONIDAE (True Toads)
Western Toad (*Bufo boreas*)
FAMILY: HYLIDAE (Treefrogs and Relatives)
Pacific Chorus Frog (*Pseudacris regilla*)

CLASS: REPTILIA
ORDER: SQUAMATA (Lizards and Snakes)
SUBORDER: SAURIA (Lizards)
FAMILY: IGUANIDAE (Iguanids)
Western Fence Lizard (*Sceloporus occidentalis*)
*Sagebrush Lizard (*Sceloporus graciosus*)
Common Side-Blotched Lizard (*Uta stansburiana*)
FAMILY: TEIIDAE (Whiptails and Relatives)
Western Whiptail (*Aspidoscelis tigris*)
SUBORDER: SERPENTES (Snakes)
FAMILY: COLUBRIDAE (Colubrids)
Ring-Necked Snake (*Diadophis punctatus*)
Racer (*Coluber constrictor*)
Coachwhip (*Masticophis flagellum*)
California Whipsnake (Striped Racer) (*Masticophis lateralis*)
Western Patch-Nosed Snake (*Salvadora hexalepis*)
Gopher Snake (*Pituophis melanoleucus*)
Glossy Snake (*Arizona elegans*)
Common Kingsnake (*Lampropeltis getulus*)
Long-Nosed Snake (*Rhinocheilus lecontei*)
Night Snake (*Hypsiglena torquata*)
FAMILY: VIPERIDAE (Vipers)
Western Rattlesnake (*Crotalus viridis*)

CLASS: AVES
ORDER: FALCONIFORMES (Vultures, Hawks, and Falcons)
FAMILY: CATHARTIDAE (American Vultures)
Turkey Vulture (*Cathartes aura*)
FAMILY: ACCIPITRIDAE (Hawks, Old World Vultures, and Harriers)
White-tailed Kite (*Elanus caeruleus*)
*Northern Harrier (*Circus cyaneus*)

Swainson's Hawk (*Buteo swainsoni*)
*Red-tailed Hawk (*Buteo jamaicensis*)
Ferruginous Hawk (*Buteo regalis*)
Golden Eagle (*Aquila chrysaetos*)

FAMILY: FALCONIDAE (Caracaras and Falcons)

American Kestrel (*Falco sparverius*)
Merlin (*Falco columbarius*)
Prairie Falcon (*Falco mexicanus*)

ORDER: GALLIFORMES (Megapodes, Currassows, Pheasants, and Relatives)

FAMILY: PHASIANIDAE (Quails, Pheasants, and Relatives)

California Quail (*Callipepla californica*)

ORDER: CHARADRIIFORMES (Shorebirds, Gulls, and relatives)

FAMILY: CHARADRIIDAE (Plovers and relatives)

Killdeer (*Charadrius vociferus*)

ORDER: COLUMBIFORMES (Pigeons and Doves)

FAMILY: COLUMBIDAE (Pigeons and Doves)

Rock Dove (*Columba livia*)
Mourning Dove (*Zenaida macroura*)

ORDER: CUCULIFORMES (Cuckoos and Relatives)

FAMILY: CUCULIDAE (Typical Cuckoos)

Greater Roadrunner (*Geococcyx californianus*)

ORDER: STRIGIFORMES (Owls)

FAMILY: STRIGIDAE (Typical Owls)

Western Screech Owl (*Otus kennicottii*)
Great Horned Owl (*Bubo virginianus*)
Short-eared Owl (*Asio flammeus*)

ORDER: CAPRIMULGIFORMES (Goatsuckers and Relatives)

FAMILY: CAPRIMULGIDAE (Goatsuckers)

Common Poorwill (*Phalaenoptilus nuttalli*)

ORDER: APODIFORMES (Swifts and Hummingbirds)

FAMILY: APODIDAE (Swifts)

White-Throated Swift (*Aeronautes saxatalis*)

FAMILY: TROCHILIDAE (Hummingbirds)

Black-chinned Hummingbird (*Archilochus alexandri*)
Anna's Hummingbird (*Calypte anna*)

ORDER: PICIFORMES (Woodpeckers and Relatives)

FAMILY: PICIDAE (Woodpeckers and Wrynecks)

Red-Breasted Sapsucker (*Sphyrapicus ruber*)
Downy Woodpecker (*Picoides pubescens*)
Northern Flicker (*Colaptes auratus*)

ORDER: PASSERIFORMES (Perching Birds)

FAMILY: TYRANNIDAE (Tyrant Flycatchers)

Black Phoebe (*Sayornis nigricans*)
Say's Phoebe (*Sayornis saya*)
Western Kingbird (*Tyrannus verticalis*)

FAMILY: LANIIDAE (Shrikes)

Loggerhead Shrike (*Lanius ludovicianus*)

FAMILY: CORVIDAE (Jays, Magpies and Crows)

*Western Scrub-Jay (*Aphelocoma californica*)

American Crow (*Corvus brachyrhynchos*)

*Common Raven (*Corvus corax*)

FAMILY: ALAUDIDAE (Larks)

*Horned Lark (*Eremophila alpestris ammophila*)

FAMILY: HIRUNDINIDAE (Swallows)

Violet-green Swallow (*Tachycineta thalassina*)

Northern Rough-winged Swallow (*Stelgidopteryx serripennis*)

Cliff Swallow (*Petrochelidon pyrrhonota*)

FAMILY: AEGITHALIDAE (Bushtit)

Bushtit (*Psaltriparus minimus*)

FAMILY: TROGLODYTIDAE (Wrens)

House Wren (*Troglodytes aedon*)

FAMILY: MUSCICAPIDAE (Old World Warblers, Gnatcatchers, Kinglets, Thrushes, Bluebirds, and Wrentit)

Ruby-crowned Kinglet (*Regulus calendula*)

Western Bluebird (*Sialia mexicana*)

Mountain Bluebird (*Sialia currucoides*)

American Robin (*Turdus migratorius*)

FAMILY: MIMIDAE (Mockingbirds and Thrashers)

Northern Mockingbird (*Mimus polyglottos*)

FAMILY: STURNIDAE (Starlings)

*European Starling (*Sturnus vulgaris*)

FAMILY: MOTACILLIDAE (Wagtails and Pipits)

American Pipit (*Anthus rubescens*)

FAMILY: EMBERIZIDAE (Wood Warblers, Sparrows, Blackbirds, and Relatives)

Yellow-rumped Warbler (*Dendroica coronata*)

Lazuli Bunting (*Passerina amoena*)

California Towhee (*Pipilo crissalis*)

Chipping Sparrow (*Spizella passerina*)

Vesper Sparrow (*Pooecetes gramineus*)

Lark Sparrow (*Chondestes grammacus*)

Savannah Sparrow (*Passerculus sandwichensis*)

Fox Sparrow (*Passerella illiaca*)

*Song Sparrow (*Melospiza melodia*)

Golden-crowned Sparrow (*Zonotrichia atricapilla*)

*White-crowned Sparrow (*Zonotrichia leucophrys*)

Dark-eyed Junco (*Junco hyemalis*)

Red-winged Blackbird (*Agelaius phoeniceus*)

Tricolored Blackbird (*Agelaius tricolor*)

*Western Meadowlark (*Sturnella neglecta*)

Brewer's Blackbird (*Euphagus cyanocephalus*)

Brown-headed Cowbird (*Molothrus ater*)

FAMILY: FRINGILLIDAE (Finches)
House Finch (*Carpodacus mexicanus*)
Lesser Goldfinch (*Carduelis psaltria*)
American Goldfinch (*Carduelis tristis*)
FAMILY: PASSERIDAE (Old World Sparrows)
House Sparrow (*Passer domesticus*)

CLASS: MAMMALIA
ORDER: MARSUPIALIA (Opossums, Kangaroos, and Relatives)
FAMILY: DIDELPHIDAE (Opossums)
Virginia Opossum (*Didelphis virginiana*)
ORDER: INSECTIVORA (Shrews and Moles)
FAMILY: SORICIDAE (Shrews)
Ornate Shrew (*Sorex ornatus*)
FAMILY: TALPIDAE (Moles)
Broad-footed Mole (*Scapanus latimanus*)
ORDER: CHIROPTERA (Bats)
FAMILY: VESPERTILIONIDAE (Vespertilionid Bats)
Yuma Myotis (*Myotis yumanensis*)
Long-eared Myotis, (*Myotis evotis*)
Fringed Myotis (*Myotis thysanodes*)
Long-legged Myotis (*Myotis volans*)
California Myotis (*Myotis californicus*)
Small-footed Myotis (*Myotis leibii*)
Western Pipistrelle (*Pipistrellus hesperus*)
Big Brown Bat (*Eptesicus fuscus*)
Red Bat (*Lasiurus borealis*)
Hoary Bat (*Lasiurus cinereus*)
Spotted Bat (*Euderma maculatum*)
Townsend's Big-eared Bat (*Plecotus townsendii*)
Pallid Bat (*Antrozous pallidus*)
FAMILY: MOLOSSIDAE (Free-tailed Bat)
Brazilian Free-tailed Bat (*Tadarida brasiliensis*)
Western Mastiff Bat (*Eumops perotis*)
ORDER: LAGOMORPHA (Rabbits, Hares, and Pikas)
FAMILY: LEPORIDAE (Rabbits and Hares)
Desert Cottontail (*Sylvilagus audubonii*)
Black-tailed Hare (*Lepus californicus*)
ORDER: RODENTIA (Squirrels, Rats, Mice, and Relatives)
FAMILY: SCIURIDAE (Squirrels, Chipmunks and Marmots)
*California Ground Squirrel (*Spermophilus beecheyi*)
FAMILY: GEOMYIDAE (Pocket Gophers)
*Botta's Pocket Gopher (*Thomomys bottae*)
FAMILY: HETEROMYIDAE (Pocket Mice and Kangaroo Rats)
Tehachapi Pocket Mouse (*Perognathus alticola inexpectatus*)
California Pocket Mouse (*Chaetodipus californicus*)

Pacific Kangaroo Rat (*Dipodomys agilis*)

FAMILY: CRICETIDAE (Deer Mice, Voles, and Relatives)

Western Harvest Mouse (*Reithrodontomys megalotis*)

California Mouse (*Peromyscus californicus*)

Deer Mouse (*Peromyscus maniculatus*)

Southern Grasshopper Mouse (*Onychomys torridus*)

California Vole (*Microtus californicus*)

FAMILY: MURIDAE (Old World Rats and Mice)

House Mouse (*Mus musculus*)

ORDER: CARNIVORA (Carnivores)

FAMILY: CANIDAE (Foxes, Wolves, and Relatives)

Coyote (*Canis latrans*)

Gray Fox (*Urocyon cinereoargenteus*)

FAMILY: MUSTELIDAE (Weasels and Relatives)

American Badger (*Taxidea taxus*)

FAMILY: MEPHITIDAE (Skunks)

Western Spotted Skunk (*Spilogale gracilis*)

Striped Skunk (*Mephitis mephitis*)

FAMILY: FELIDAE (Cats)

Feral Cat (*Felis catus*)

APPENDIX C

SELECTED PHOTOGRAPHS OF THE STUDY AREA

Photograph #1 (above). The dominant native habitat on the site was rubber rabbitbrush scrub. OHV paths commonly disturbed this habitat. Photograph #2 (below). Small mammal burrows were observed sporadically throughout the site.

Photograph #3 (above). A seasonal pond (0.25 acre) was identified near the northeastern corner of the site. Remnants of native hydrophytic (water-loving) vegetative species consisting of willow, cottonwood, and mule's fat were present.
Photograph #4 (below). An upland swale lies south of the pond.

Appendix F

Cultural Resources Survey

Cultural Resources Survey for a Proposed Wal-Mart Supercenter in Tehachapi, Kern County, California

Andrew P. Monastero

Prepared By

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Submitted To
Christopher A. Joseph and Associates
30851 Agoura Road, Suite 210
Agoura Hills, California 91301

August 2008
draft

Tehachapi North 7.5-min. quad
30 acres
Results: No resources found

MANAGEMENT SUMMARY

At the request of Christopher A. Joseph and Associates and in accordance with the California Environmental Quality Act, Applied EarthWorks, Inc. (Æ) performed a cultural resources study of a 30-acre property in the City of Tehachapi in southeastern Kern County. The investigation included a records search, Native American consultation, and an intensive pedestrian survey of the study area. The records search indicated that one previous archaeological investigation had occurred within the project area. No archaeological sites have been previously identified within the project area.

Æ Staff Archaeologist Andrew Monastero completed an intensive pedestrian survey of the project area on 2 June 2008. No archaeological sites or isolated artifacts were identified during the survey.

Field notes, maps, and a complete set of photographs from the current investigation are on file at Æ's office in Fresno, California. A copy of the final version of this report will be submitted to the Southern San Joaquin Valley Information Center at California State University, Bakersfield for inclusion in the California Historical Resources Information System.

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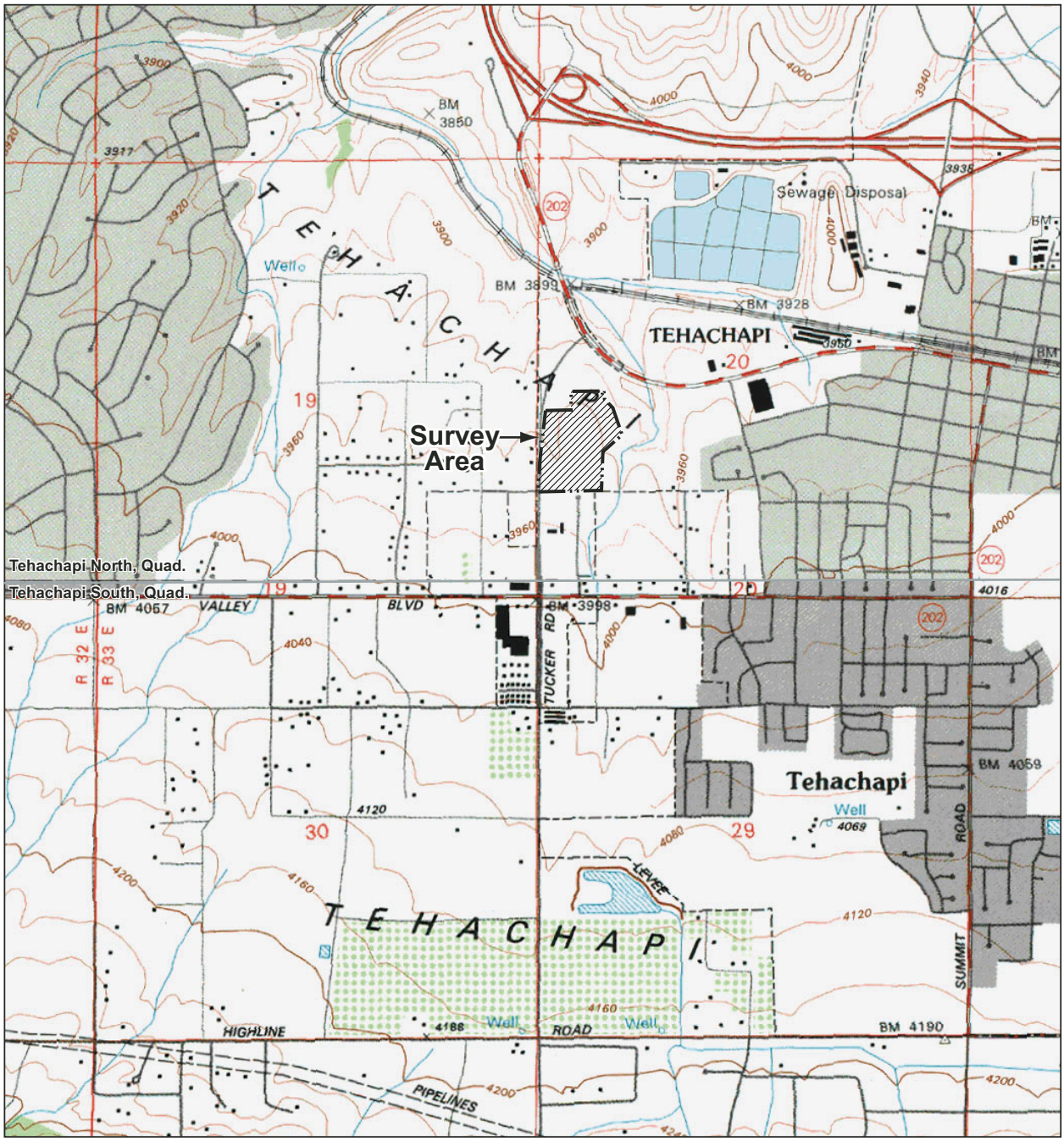
1
INTRODUCTION AND PROJECT DESCRIPTION

An Environmental Impact Report (EIR) is being prepared for a commercial development in the City of Tehachapi. The development includes a single Wal-Mart supercenter. The preparation and approval of the EIR is subject to the California Environmental Quality Act (CEQA), which mandates that state, county, and municipal agencies consider the impacts of their projects on the biological and cultural environment (California Public Resources Code 21100 et seq.).

At the request of Christopher A. Joseph and Associates, and in accordance with CEQA, Applied EarthWorks, Inc. (Æ) performed a cultural resources study of an undeveloped parcel for the proposed development of a Wal-Mart supercenter. The project area is within the boundaries of the city of Tehachapi in Kern County (Figures 1-1 and 1-2). The approximately 30-acre project area lies in Township 32 South, Range 33 East, Section 20 as shown on the Tehachapi North, California, 7.5-minute U.S. Geological Survey (USGS) topographic quadrangle (Figure 1-3). The project area, specifically, is located south of Tehachapi Boulevard, north of Valley Boulevard, and east of and adjacent to Tucker Road within the Tucker Road commercial corridor.

Figure 1-1 Wal-Mart supercenter project area, view to the northwest.

Figure 1-2 Project area in Kern County, California.



Confidential: Not for Public Distribution

Prepared by Applied EarthWorks, Inc.

U.S.G.S. 7.5 Minute
Topographic Quadrangles
Tehachapi North, and Tehachapi South, CA
T 32 S - R 33 E
1992

N

0 ½ 1
Miles

Contour Interval: 40 Feet

Figure 1-3 Survey location in the city of Tehachapi.

The archaeological work documented in the report was carried out in accordance with state regulations and the report has been prepared in accordance with California Office of Historic Preservation standards outlined in *Archaeological Resource Management Reports (ARMR): Recommended Contents and Format* (1990).

Jay Lloyd served as the project manager for this cultural resources investigation. Andrew Monastero served as Æ's field supervisor, a position that entailed performing the records search, Native American consultation, intensive pedestrian survey, and preparing the technical report. Résumés for key personnel are provided in Appendix A.

2
SETTING

This chapter describes the prehistoric and ethnographic cultural setting of the project area. The nature and distribution of human activities in the region have been affected, both prehistorically and ethnographically, by such factors as topography and the availability of water and biological resources. Therefore, prior to a discussion of the cultural setting, the environmental setting of the project area is summarized.

2.1 REGIONAL ENVIRONMENT

The project area lies along the northern edge of the Tehachapi Mountains, a mountain range that extends for 40 miles from the southern Central Valley to the southwestern Sierra Nevada. The Tehachapi Mountains are themselves a subset of the Transverse Ranges, a series of east-west trending mountains that separate central and southern California. The Tehachapi Mountains are bordered on the south by Antelope Valley, on the west by the Central Valley, on the east by the Mojave Desert, and on the north by the Sierra Nevada. Elevations in the region range from approximately 3,000 to 8,000 feet above mean sea level (amsl). The project area, specifically, lies at 3,965 feet amsl.

Major streams in the Transverse Ranges include the Santa Ynez, San Gabriel, and Los Angeles rivers. In the Tehachapi Mountains, natural waterways consist of ephemeral streams that are often of little hydrologic significance except during heavy rainstorms. As such, most ephemeral streams are dry during the summer with no natural lakes except for those along the San Andreas fault (U.S. Forest Service 2008).

The annual climatic cycle of the project area is a combination of the humid mesothermal climate of the Pacific Coast and the dry climate of the Mojave Desert. The cycle is further typified by mild, wet winters and warm, dry summers (Schoenherr 1992). Mean annual precipitation is 20–30 inches. Mean annual temperature is 30–90°F.

Vegetation in the Transverse Ranges consists of chaparral, southern oak woodland, and montane coniferous forest plant communities (Munz 1974:4). The chaparral community occurs at lower elevations and is characterized by dense brush on steep, rocky slopes. Chaparral species include big cone Douglas-fir (*Pseudotsuga* sp.), California lilac (*Ceanothus* sp.), chamise (*Adenostoma fasciculatum*), Coulter pine (*Pinus coulteri*), scrub oak (*Quercus dumosa*), holly-leaved cherry (*Prunus ilicifolia*), holly-leaved redberry (*Rhamnus ilicifolia*), honeysuckles (*Lonicera* sp.), manzanitas (*Arctostaphylos* sp.), silk-tassel bush (*Garrya elliptica*), western mountain mahogany (*Cercocarpus* sp.), wild cucumber (*Echinocystis lobata*), and wild pea (*Lathyrus vestitus*) (Schoenherr 1992:329). At higher elevations are the southern oak woodland and montane coniferous forest communities dominated by oaks (*Quercus* sp.), particularly California black oak (*Q. kelloggii*), elderberries (*Sambucus* sp.), walnut (*Juglans californica*), sugar bush (*Protea mellifera*), gray pine (*Pinus sabiniana*), sugar pine (*P. lambertiana*), ponderosa pine (*P. ponderosa*), and Coulter pine.

Mammals that currently inhabit the Transverse Ranges include small rodents (e.g., Pacific kangaroo rats [*Dipodomys californicus*], wood rats [*Neotoma* sp.], chipmunks [*Tamias* sp.], mice [*Peromyscus* sp.], and ground squirrels [*Spermophilus* sp.]), rabbits (*Sylvilagus* sp.), coyotes (*Canis latrans*), spotted skunk (*Spilogale putorius*), bobcats (*Lynx rufus*), mountain lions (*Felis concolor*), and mule deer (*Odocoileus hemionus*) (Jameson and Peeters 1988; McIntyre 1990:12). The California grizzly bear (*Ursus arctos horribilis*), while now extinct, was found in abundance in the Central Valley and Transverse Ranges until the late 1800s (Jameson and Peeters 1988). The black bear (*Ursus americanus*) was introduced into the Transverse Ranges in 1933 (Schoenherr 1992:386).

2.2 PREHISTORY AND ARCHAEOLOGY

2.2.1 Paleoindian Period (prior to 10,000 B.P.)

The proposed project area is located within the Tehachapi Mountains, an area that contains a substantial and varied record of human occupation. The earliest archaeological evidence of cultural activity dates to the terminal Pleistocene, a period marked by rising temperature and precipitation and unstable climate. This evidence is sparse, however, and is marked by a single Clovis point recovered from the foothills of the Tehachapi Mountains (Glennan 1971).

Archaeologists hypothesize that the earliest occupants of the region led a foraging lifestyle focused around lakeshore or wetland environments (Davis 1978; Moratto 1984). Population density was presumably quite low. The toolkit included large lanceolate and fluted points (e.g., Clovis or Folsom) for hunting game, as well as crescents, gravers, scrapers, choppers, perforators, and numerous small formalized and informal flake tools (Davis 1978). Ground stone implements were rare, indicating that processed seeds or nuts did not play a significant dietary role. As the Holocene era progressed and the climate moderated, humans occupied increasingly higher elevation zones in the Coast Ranges, Tehachapis, and Sierra Nevada. Archaeological research over the last century has established a cultural history for the prehistoric peoples of the region.

2.2.2 Lake Mojave Period (10,000–7000 B.P.)

The Lake Mojave Period is marked by a drier climate than the preceding period, with intermittent moist episodes. Several sites dating to this period have been found within the southwestern Great Basin and the northern Mojave Desert, suggesting a considerable population increase during this time. Lake Mojave artifacts include large percussion-flaked foliate and stemmed points and knives (typically Lake Mojave and Silver Lake types), stone crescents, and a wide variety of scrapers, gravers, and perforating tools. Ground stone implements continue to be rare. Sutton (1988:30) noted that much of Antelope and Fremont valleys to the southeast may have been covered by Pleistocene Lake Thompson. Because the relief in the valley is slight, extensive marshlands may have ringed the lake. Such marshes are among the most productive of habitats, and Davis (1978) argued that these wetlands would have attracted early occupants. A similar phenomenon occurred in the San Joaquin Valley. Archaeological evidence indicates humans were present on the shores of ancient Buena Vista Lake by approximately 8,000 years ago. A deeply buried cultural stratum at site CA-KER-116, on the western edge of Buena Vista Lake, revealed hunting and butchering artifacts suitable for large game. Another notable site is

the Witt site, near Tulare Lake. Thus, it is presumed that the adaptive strategy was one of generalized hunting and gathering focused on the exploitation of wetland resources.

2.2.3 Pinto Period (7000–4000 B.P.)

A generalized hunting and gathering strategy continued into the Pinto Period; however, it underwent marked changes with the onset of greater aridity. The Pinto Period is characterized by a decrease in population in response to variable and unstable climatic conditions and a decrease in permanent wetland habitats beginning in the mid-Holocene. This period corresponds to Antevs (1953) Altithermal (i.e., hot and dry), although recent research suggests that in the Antelope Valley this aridity was punctuated by wet episodes (Grayson 1993; Mehringer 1986). Sites dating to this period tend to be small temporary seasonal camps located near streams and seasonal water sources. They lack developed middens but contain a diverse toolkit consisting of Pinto projectile points, other flaked stone tools, and ground stone milling slabs and handstones. The appearance of milling tools indicates an increased reliance on seeds and nuts from the scrub and chaparral plant communities as wetland resources diminished. Rhyolite, fine-grained basalts, and poorer quality chert and quartz materials tend to dominate the lithic assemblages.

2.2.4 Gypsum Period (4000–1500 B.P.)

The Little Pluvial episode occurs between 5000 and 2000 B.P., marking a period of increased precipitation that intensified every thousand years until circa 1900 B.P. Modern vegetation and climate was well established by 4300 B.P., and mesquite trees, oaks on the valley margins, and piñon were readily available. The mortar and pestle were introduced to process mesquite pods, acorns, pine nuts, yuccas, and agaves. The archaeological record is marked by the appearance of large village sites reflecting a transition from seasonal migration to year-round or semisedentary settlements (Sutton 1988). The presence of coastal marine shell artifacts (e.g., *Olivella* beads) and Coso obsidian indicate that long-distance exchange systems were in place. Milling tools of various types dominate the artifact assemblages; diagnostic flaked stone artifacts include Humboldt, Elko, Gypsum, and Rose Spring projectile points.

2.2.5 Rose Spring Period (1500–800 B.P.)

This period is marked by moderate climatic conditions interrupted by severe drought at 1000–900 B.P. and again at 500 B.P. Adaptive strategies remain similar to the Gypsum Period, evinced by large village sites with deep middens reflecting a subsistence strategy focused on hunting and gathering and a continuation of trade networks with coastal and other outside groups (Moratto 1984:423; Sutton 1981:217). The biggest difference from the preceding period is the replacement of the atlatl, or spear thrower, by the bow and arrow. Projectile points diagnostic of this period include Rose Spring and Cottonwood points. Also prevalent are stone beads and schist and steatite ground stone artifacts reflecting the development of a regional stone trade. Schist and steatite stone workshops have been identified at habitation sites along Amargosa Creek west of Palmdale (Earle 2004). The end of the period is marked by a shift away from obsidian importation and an increased use of local cryptocrystallines.

2.2.6 Late Prehistoric Period (800–300 B.P.)

Adaptive strategies of the Rose Spring Period continued during the Late Prehistoric Period. With the amelioration of climatic conditions and an increase in precipitation circa 600 B.P., population increased and subsistence practices featured more intensive exploitation of a variety of both large and small mammals and some fish. The number of special-purpose sites appears to increase, use of Coso obsidian declines, and coastal trade items, particularly shell, increase. Use of Rose Spring and Cottonwood points continues during this period, while Desert Side-notched types are also introduced.

2.2.7 Ethnographic Period (300 B.P to present)

Ethnographic evidence suggests that the project area was occupied by at least two groups of Shoshonean speakers at the time of first contact with Europeans. These include the Kawaiisu, Numic speakers who lived in Tehachapi Valley and throughout the southern Sierra Nevada in the vicinity of Lake Isabella and Walker Pass, and the Kitanemuk (Takic), who resided south of the Kawaiisu and north of the Tataviam on the northwestern edge of the west end of Antelope Valley.

The limited ethnographic information provides few specifics about the daily life of each group (Blackburn and Bean 1978). In general, the native occupants lived in large permanent winter villages and dispersed into smaller mobile gathering groups during the late spring, summer, and fall months to harvest piñon nuts, mesquite, yucca, buckwheat, chia, berries, and other seasonally available foods. The villages were exogamous and marriage was patrilocal. Each village was ruled by a headman whose position was ascribed from his father. The villages appeared to remain politically independent, despite marital ties with other villages. The Kawaiisu lived amicably with their southern neighbors, the Kitanemuk, and are known to have participated in cooperative antelope drives with the Yokuts of the San Joaquin Valley (Antelope Valley Indian Museum n.d.).

After A.D. 1770, the native populations of the project area (as in many parts of California) were severely impacted by disease and disrupted settlement patterns as a result of Spanish colonial expeditions and mission recruitment. The destruction of the area's native cultures and societies was completed soon after 1848 as statehood and the gold rush brought an influx of settlers and miners.

2.3 HISTORY

The Spaniards were the first non-Indians to enter the project vicinity. Pedro Fagés led a group of soldiers through Tejon Pass into the San Joaquin Valley in 1772 (Wallace 1978:459). In 1776, Spanish missionary Father Francisco Garcés traveled north to south through the Antelope Valley along the Mohave Indian trail and documented his visit with the Kitanemuk in the southern portion of the project area (Beck and Haase 1974:15). California Historic Monument No. 130 in Rosamond marks the location where he stopped at Willow Springs (Tipton 1988). Trappers such as Jedediah Smith and Kit Carson journeyed through Antelope Valley in the 1820s and were followed by John Fremont, who explored the region in 1844, signaling the earliest American presence in the area (Palmdale City Library 2004).

During the Spanish period, land concessions given to settlers were referred to as ranchos. These land grants were turned into large settlements and ranches used to graze cattle and other stock.

The Tejon Ranch in Kern County is one of the oldest working ranches in California as well as the United States. The original 1843 Rancho el Tejón land grant was 97,616 acres situated in the southernmost section of Kern County and encompassed several Indian villages that were occupied until the end of the nineteenth century (Hoover et al. 1990:120). Established in 1854 on a section of Rancho el Tejón, Fort Tejon protected an important point along the north-south wagon route and warded off Indian attacks in the area (Hoover et al. 1990:121). By the mid-century, Native American populations felt the impact of the Hispanic and American graziers, miners, and explorers on their territories and were forced to relocate onto reservations or move deeper in the Sierra Nevadas. In 1850, General Edward Beale established a government reservation for the Indians at Rancho el Tejón. The reservation failed and General Beale bought the rancho and an adjacent land grant in 1865, employing many of the Indians as vaqueros and laborers (Hoover et al. 1990).

California's accession to the Union in 1850 led to several infrastructural developments in the region. From 1853 to 1863, the San Joaquin Valley, Tehachapi Mountains, and western Antelope Valley became centers of gold and silver mining. Small mining towns such as Randsburg and Calico were established during this period and Mojave, Barstow, and Rosamond became major suppliers for the mining operations. Willow Springs became a stage stop in 1860 (Tipton 1988), and a telegraph line connecting San Francisco and Los Angeles was strung through the Mojave Desert that same year (County of Los Angeles Public Library 2000). Nevertheless, the Tehachapis and Antelope Valley remained largely undeveloped. It was not until 1876, when the Southern Pacific Railroad completed its line through the valley and stations were established at Lancaster, Alpine (Palmdale), and Acton, that more permanent settlements took hold (Palmdale City Library 2004). An influx of people moved to the area when government-owned land was offered for homesteading.

In 1928, the military arrived in the western Mojave Desert when the dry lakebed near Muroc became and area for general aviation practices. In 1942, the facility was named Army Air Base Muroc Lake, which became Muroc Air Force Base in 1948. In 1949 the base was renamed Edwards Air Force Base.

3
METHODS

3.1 RECORDS SEARCH

On 23 May 2008, Æ completed a records search at the California Historical Resources Information System Southern San Joaquin Valley Information Center at California State University, Bakersfield. This records search included the study area, as well as a 0.5 mile radius around the property. Site record files, maps, and other materials were examined to identify previously recorded resources and prior surveys within or near the study area. Additional sources included the Historic Property Data File, the National Register of Historic Places (NRHP), the California Register of Historical Resources, the California Historical Landmarks, and the California Points of Historical Interest.

3.2 NATIVE AMERICAN CONSULTATION

On 27 May 2008, Æ faxed the Native American Heritage Commission (NAHC) in Sacramento to inform them about the current project. Æ provided a brief description of the project and a map showing its location and requested that the NAHC perform a search of the sacred lands file to determine if any Native American cultural resources have been recorded in the immediate study area. Æ also requested a current list of Native American contacts for the project area.

On 30 May 2008, Æ mailed letters to the contacts identified by the NAHC. The correspondence provided a brief description and the location of the proposed development and requested any information regarding sacred or other sites of cultural importance in the study area. As requested by the NAHC, follow-up telephone calls were placed to each representative approximately two weeks later.

3.3 FIELD SURVEY

Æ completed an intensive pedestrian survey of the 30-acre project area on 2 June 2008. The survey was accomplished by walking parallel and meandering transects spaced 10–15 meters apart. Survey of the project area was guided by a copy of the USGS Tehachapi North 7.5-minute topographic quadrangle and project maps depicting the study area.

The parcel was photographed using a Canon Powershot A720/S digital camera. Photo records and digital photos are on file at Æ's office in Fresno, California.

4
FINDINGS

4.1 RECORDS SEARCH

The records search revealed that one previous archaeological investigation has been documented within the study area (Laylander 1997). The Information Center records further indicated that 15 additional archaeological investigations within 0.5 mile of the study area (Table 4-1) have resulted in the documentation of five archaeological sites (Table 4-2). These resources include three prehistoric sites (CA-KER-6233, -12456, and -12457), one historic site (CA-KER-12643H), and one multicomponent site (CA-KER-2553/H) containing bedrock mortars, human burials, lithic scatters, flaked and ground stone tools, historic debris (e.g., glass, metal, ceramics, nails, cans, and bone), and/or historic structures. None of these sites has been evaluated for eligibility to the National Register or California Register.

Table 4-1
Prior Investigations Within 0.5 Mile of the Project Area

Information Center Reference No.	Type of Investigation	Report Citation
KER-107	Archaeological Survey for Road Realignment	Laylander 1996
KER-275	Archaeological Survey of Golden Hills Sewer Plant	Robinson 1981
KER-404	Archaeological Survey for Bridge and Highway Overhead	Fung 1994
KER-420	Archaeological Survey for Underground Telephone Cable	Garfinkel and Schiffman 1979
KER-887	Archaeological Survey for Roadway Widening	Proctor 1987
KER-1073	Archaeological Survey of Keene and Broome Ranches	Schiffman 1979
KER-1369	Archaeological Survey of Loop Ranch	Schiffman 1990
KER-2194	Archaeological Survey of Tehachapi Tract No. 10566	Schiffman 1998
KER-2326	Archaeological Survey for Annexation 99-1	Schiffman 1999
KER-2486	Archaeological Survey for Tehachapi Town Center Phase II	Pruett 2000
KER-2679	Archaeological Survey for Loop Ranch Grading Project	Schiffman 2002
KER-2753	Kawaiisu Tribe Overview	Robinson 2003
KER-2933	Archaeological Survey for Tehachapi Bridge Replacement	Hacking 2004
KER-3145	Archaeological Survey for Tehachapi Road Improvements	Romani 2005
KER-3511	Archaeological Survey for Red Apple Lane Project	Hudlow 2004a

Table 4-2
Previously Identified Cultural Resources Within 0.5 Mile of the Project Area

Trinomial	Site Types	USGS Quadrangle	Township, Range, Section	Report Citation
CA-KER-2553/H[a]	Bedrock mortars, burials, lithic scatter, ground stone tools, historic debris	Tehachapi North	T 32S, R 33E, Sec. 18	Walker 2004
CA-KER-6233[a]	Lithic scatter	Tehachapi North	T 32S, R 33E, Sec. 20	Wesson et al. 2001
CA-KER-12456[a]	Lithic scatter	Tehachapi North	T 32S, R 33E, Sec. 19	Schmidt and Schmidt 2006a
CA-KER-12457[a]	Flake, end scraper	Tehachapi North	T 32S, R 33E, Sec. 19	Schmidt and Schmidt 2006b
CA-KER-12643H[a]	Structure	Tehachapi North	T 32S, R 33E, Sec. 19	Hudlow 2004b

4.2 NATIVE AMERICAN CONSULTATION

In its 29 May 2008 response to Æ's request for information, the NAHC stated that the search of the sacred lands file did not indicate the presence of resources in the immediate project area (see Appendix B). The NAHC also supplied a list of parties to be contacted for information regarding locations of sacred or special sites of cultural and spiritual significance in the study locale—Chairperson Clarence Atwell of the Santa Rosa Rancheria, Chairperson Harold Williams of the Kern Valley Indian Council, Chairperson Neil Peyron of the Tule River Indian Tribe, Robert L. Gomez Jr., Ron Wermuth, Robert Robinson (Historic Preservation Officer) of the Kern Valley Indian Council, Chairperson Kathy Morgan of the Tejon Indian Tribe, and Tribal Chairwoman Donna Begay of Tubatulabals of Kern Valley.

On 30 May, Æ sent a letter to each of the contacts summarizing the investigation. On 5 June 2008, Harold Williams left a voice message for Æ Staff Archaeologist Andrew Monastero. In this message, Williams expressed his concern for the project area as his tribe had occupied the area for 2,000 years. He also noted the proximity of a trail and significant archaeological sites to the project area.

Monastero placed follow-up telephone calls on 18 June 2008. He left messages for Lalo Franco, Neil Peyron, Robert Robinson, and Donna Begay. Robert L. Gomez Jr. and Kathy Morgan were not contacted because phone numbers were not provided by the NAHC. Ron Wermuth indicated his unfamiliarity with the project area and suggested that Æ speak with Harold Williams. When reached, Williams reiterated his concerns from the 5 June 2008 telephone call.

On 19 June 2008, Donna Begay left a voice message for Monastero. In this message, Begay indicated that the project area occurs outside of the Tubatulabals tribal boundary; the boundary extends from Bakersfield in the west to Ridgecrest in the east, and from Kelso in the south to Mount Whitney in the north. As such, Begay had no concerns regarding the project.

On 2 July 2008, Æ received a letter from Ken Morgan, Assistant Project Manager of the Tejon Indian Tribe. In this letter, Mr. Morgan indicated the tribe's lack of knowledge and recorded information regarding the project area. He did request, however, that the Tejon Indian Tribe be

kept informed about the project's progress as the project area occurs within their historical territory (see Appendix B).

Æ has not received responses from the other individuals and/or organizations, but will forward any additional information received to Christopher A. Joseph and Associates.

4.1 FIELD SURVEY

The project area lies along the northern edge of the Tehachapi Mountains within the city of Tehachapi. The project area is bounded by recent commercial developments to the north, south, and west. The surveyed area is in a field with no standing structures (Figure 4-1). Identified material consists of modern debris, the majority of which appears to be fast food and beverage containers from nearby businesses (e.g., Starbucks, McDonalds). As the debris was obviously less than 50 years old, it were not recorded.

Figure 4-1 Project area, view to the southwest.

Surface visibility ranged from 0 to 75 percent, yet averaged about 50 percent due to some patches of dense vegetation. Survey coverage was 100 percent and no evidence of prehistoric or historical archaeological sites, historical buildings or structures, or other cultural resources were encountered within the project boundaries.

5
RESULTS AND RECOMMENDATIONS

5.1 SUMMARY OF FINDINGS

At the request of Christopher A. Joseph and Associates, Applied EarthWorks, Inc. performed a cultural resources study for the proposed construction of a Wal-Mart supercenter in the city of Tehachapi in southeastern Kern County.

The results of the records search showed that one previous cultural resource investigation has been conducted within the project parcel. An additional 15 investigations conducted within 0.5 mile of the project area have identified five cultural resources. No cultural resources have been recorded within the current study area.

A search of the NAHC sacred lands file failed to indicate the presence of Native American cultural resources within the immediate project area. To date, two Native American representatives have responded to the request for additional information. Harold Williams of the Kern Valley Indian Council expressed concern about the project and noted that a trail and other cultural resources exist in the vicinity. Donna Begay stated that the project area occurs outside Tubatulabals tribal area, and therefore she had no concerns. No additional responses have been received and no concerns have been expressed by the other Native American representatives contacted.

No prehistoric or historical archaeological sites were identified during the field survey.

5.2 DEFINITION OF IMPACTS

The CEQA requires consideration of project impacts on archaeological or historical sites deemed to be historical resources. If the project will cause a substantial adverse change in the characteristics of a resource that convey its significance or justify its eligibility for inclusion in the California Register, or a local register, either through demolition, destruction, relocation, alteration, or other means, then the project is judged to have a significant effect on the environment according to the CEQA Guidelines (Title 14, California Code of Regulations [CCR], Chapter 3).

Historical resources are places or objects that are important for scientific, historical, and religious reasons to cultures, communities, groups, or individuals. Historical resources may include archaeological sites, architectural remains, and other artifacts that provide evidence of past human activity. Historical resources can also include places of importance in the traditions of a society. To determine impacts to historical resources, it is necessary to assess the significance of resources and the effects of the project on their significance. The significance of resources in the project area is based on their importance to scientific-historic research, their importance to Native Americans, and their educational and community value for the general public.

Section 15064.5 of the CEQA Guidelines pertains to the determination of the significance of impacts to archaeological and historic resources. Direct impacts can be assessed by identifying the types and locations of proposed development, determining the exact locations of cultural resources within the project area, assessing the significance of the resources that may be affected, and determining the appropriate mitigation.

Direct impacts may occur by:

- Physically damaging, destroying, or altering all or part of the resource;
- Altering characteristics of the surrounding environment that contribute to the resource's significance;
- Neglecting the resource to the extent that it deteriorates or is destroyed; or
- The incidental discovery of cultural resources without proper notification.

Indirect impacts primarily result from the effects of project-induced population growth. Such growth can result in increased construction as well as increased recreational activities that can disturb or destroy cultural resources. Due to their nature, indirect impacts are much harder to assess and quantify.

5.3 PROJECT IMPACTS AND MITIGATION MEASURES

The CEQA guidelines for mitigating impacts to archaeological resources are provided in 14 CCR 15126.4. Achieving CEQA compliance with regard to treatment of impacts to significant cultural resources requires that a mitigation plan be developed for the resource. Preservation in place is the preferred manner of mitigating impacts to significant archaeological resources. Considering that no surface-visible cultural resources were identified during the survey, the following impact was determined to be salient to this project.

5.3.1 Impact CR-1: Exposure of Previously Unidentified Cultural Resources

It is possible that buried or concealed archaeological sites, features, or other cultural properties eligible for listing in the California Register could be present within the area designated for development and could become exposed during the course of construction or other project-related activities. Such sites or features might include aboriginal middens or artifact scatters, fire hearths, human burials and cemeteries, and historical dumps and trash deposits. Disturbance of such features is considered a *significant but mitigable* impact.

5.3.2 Mitigation Measure CR-1

All contractors and subcontractors shall be informed about the potential for archaeological discoveries during construction, and all construction personnel should be informed about the appropriate responses to such discoveries. The information will include a description of the kinds of cultural resources that might be encountered during construction and the steps to be taken if such a find is unearthed.

If buried or concealed cultural resources are discovered during excavation, construction, or related development work, all such work is to cease in the vicinity of the find and a qualified archaeologist shall be notified. The find shall be properly investigated and appropriate mitigative and/or protective measures (if necessary) shall be taken. If human remains are found, procedures for their treatment shall follow CEQA guidelines in 14 CCR 15064.5(e).

5.3.3 Significance after Mitigation

Impacts would be reduced to less than significant with implementation of these mitigation measures.

6
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APPENDIX A

Personnel Qualifications

JAY B. LLOYD, RPA

Expertise

California archaeology, inventory and excavation strategies for historic and prehistoric sites, laboratory processing and cataloging, theoretical phonology, language variation, and diachronic sound shift.

Education

M.A. Linguistics, University of California, Santa Cruz, 2000.
B.A. Anthropology, California State University, Fresno, 1998.
B.A. Linguistics, California State University, Fresno, 1998.

Professional Experience

2000– Senior Archaeologist (2007–), Staff Archaeologist (2001–2007), Archaeological Technician (2000–2001), Applied EarthWorks, Inc., Fresno, California.

2000 Adjunct Faculty Member, Reedley College, Reedley, California.

1998–2000 Teaching Assistant, University of California, Santa Cruz, Departments of Anthropology and Linguistics, Santa Cruz, California.

1998 Field School Teaching Assistant, California State University, Fresno, Department of Anthropology.

1997–1998 Archaeological Technician, Sierra Valley Cultural Planning, Fresno, California.

Technical Qualifications

Mr. Lloyd has served as a field and laboratory supervisor, crew chief, and technician for various archaeological projects throughout California, including the Sierra Nevada and Cascade ranges, Central Valley, and Central Coast regions. In this capacity he has participated in survey, extended survey, testing and evaluation, and data recovery projects at both prehistoric and historical sites. Additionally, Mr. Lloyd has authored and contributed to numerous National Historic Preservation Act Section 106 and California Environmental Quality Act compliance documents. He is proficient in laboratory sorting, cataloging, and artifact classification and has particular experience with the typologies of *Olivella* and *Haliotis* beads and ornaments. Since joining Applied EarthWorks, Mr. Lloyd has served as a monitor and Native American coordinator during supplemental survey and tree clearing operations, participated in testing and data recovery excavation, and served as a supervisor during laboratory processing and cataloging for the PGT-PG&E Line 401 Pipeline Expansion Capacity Loops Project in Modoc and Shasta counties. Mr. Lloyd also participated in data recovery and served as lead laboratory technician for the excavation of McNamee Cave, a mortuary cave in Columbia, California, as well as testing and evaluation excavations at the historic Wawona Hotel in Yosemite National Park where he was responsible for the field laboratory and collections management of recovered artifacts. Mr. Lloyd has also participated in various excavation and survey projects on Vandenberg Air Force Base in Santa Barbara County, California.

ANDREW PHILLIP MONASTERO, RPA

Expertise

California/Nevada, Great Basin, and Mojave Desert prehistory; hunter-gatherer cultural adaptations, including settlement and subsistence patterns, and the role of the environment in social complexity.

Education

M.A. Anthropology, California State University, Bakersfield, 2007.
B.A. Anthropology, University of Nevada, Reno, 2002.
A.A. Social Science, Cerro Coso Community College, 1999.

Professional Experience

2007– Staff Archaeologist, Applied EarthWorks, Inc., Fresno, California.

2006–2007 Field Technician, Statistical Research, Inc., Redlands, California; Pacific Legacy, Inc., Santa Cruz, California; and Jones & Stokes Environmental Consultants, Los Angeles, California.

2003–2007 Staff Archaeologist II, Center for Archaeological Research, Bakersfield, California.

2004–2005 Staff Archaeologist, USDA Forest Service, Bishop, California.

2003–2003 Archaeologist, USDA Forest Service, Overgaard, Arizona.

Technical Qualifications

Mr. Monastero has been involved in archaeology in California and the western United States since 2000. His areas of expertise include the prehistory of southern and central California, the Mojave Desert, Great Basin, and east-central Arizona. Mr. Monastero has performed background research, field surveys, archaeological excavations, tree removal monitoring, and laboratory studies for projects in Fresno, Imperial, Inyo, Kern, Madera, San Bernardino, Ventura, and Tulare counties. His experience in cultural resources management includes research design, data acquisition, laboratory analysis, and the preparation of technical reports. As a Staff Archaeologist II for the Center for Archaeological Research, Mr. Monastero conducted various archaeological survey projects, served as an archaeological monitor for the removal of infected trees along SCE transmission lines, and conducted record searches at the Southern San Joaquin Valley and San Bernardino Archaeological Information Centers. Prior to joining Applied EarthWorks, he served as a Field Technician for Statistical Research, Inc. and Pacific Legacy, Inc. where he conducted archaeological surveys, test excavations, and data recovery investigations in east-central and southern California. He is a member of both the Register of Professional Archaeologists and Society for California Archaeology.

APPENDIX B

Native American Consultation

Applied EarthWorks Inc.

1391 West Shaw Avenue
Suite C
Fresno, CA 93711-3600
(559) 229-1856
FAX (559) 229-2019

EXAMPLE

May 30, 2008

Santa Rosa Rancheria
Attn: Clarence Atwell, Chairperson
P.O. Box 8
Lemoore, CA 93245

RE: Cultural Resource Study for Christopher A. Joseph & Associates

Dear Mr. Atwell:

Your name and contact information was provided by the Native American Heritage Commission, which lists you as a person with knowledge about cultural resources in Kern County.

Applied EarthWorks, Inc. (Æ) is currently conducting a cultural resources inventory of a 30 acre tract in Kern County. Wal-Mart is proposing to construct a new supercenter in Tehachapi, CA. The study area, specifically, is located in the Tehachapi North, CA USGS 7.5 minute quadrangle at Township 32S, Range 33E, Section 22 (see enclosed map). As stipulated by our client, Native American consultation is an essential part of our investigation.

If you have information regarding the study area, please phone me or send a letter to my attention. Your comments will be included in the report. You can contact me during normal business hours (559-229-1856, ext. 17) if you have any questions or need additional information. Thank you.

Sincerely,

Andrew Monastero, MA, RPA
Staff Archaeologist

STATE OF CALIFORNIA Arnold Schwarzenegger, Governor

NATIVE AMERICAN HERITAGE COMMISSION
915 CAPITOL MALL, ROOM 364
SACRAMENTO, CA 95814
(916) 653-6251
Fax (916) 657-5390
Web Site www.nahc.ca.gov
e-mail: ds_nahc@pacbell.net

May 29, 2008

Andrew Monastero
APPLIED EARTH WORKS

Sent by Fax #: 559-229-2019
Number of Pages: 2

Re: Proposed 30-acre Development Project located in the Tehachapi area of Kern County.

Dear Mr. Monastero:

The Native American Heritage Commission was able to perform a record search of its Sacred Lands File (SLF) for the affected project area. The SLF failed to indicate the presence of Native American cultural resources in the immediate project area. The absence of specific site information in the Sacred Lands File does not guarantee the absence of cultural resources in any 'area of potential effect (APE).'

Early consultation with Native American tribes in your area is the best way to avoid unanticipated discoveries once a project is underway. Enclosed are the nearest tribes that may have knowledge of cultural resources in the project area. A List of Native American contacts are attached to assist you. The Commission makes no recommendation of a single individual or group over another. It is advisable to contact the person listed; if they cannot supply you with specific information about the impact on cultural resources, they may be able to refer you to another tribe or person knowledgeable of the cultural resources in or near the affected project area (APE).

Lack of surface evidence of archeological resources does not preclude the existence of archeological resources. Lead agencies should consider avoidance, as defined in Section 15370 of the California Environmental Quality Act (CEQA) when significant cultural resources could be affected by a project. Also, Public Resources Code Section 5097.98 and Health & Safety Code Section 7050.5 provide for provisions for accidentally discovered archeological resources during construction and mandate the processes to be followed in the event of an accidental discovery of any human remains in a project location other than a 'dedicated cemetery. Discussion of these should be included in your environmental documents, as appropriate.

If you have any questions about this response to your request, please do not hesitate to contact me at (916) 653-6251.

Sincerely,

Dave Singleton
Program Analyst

Attachment: Native American Contact List

Native American Contacts
Kern County
May 28, 2008

Santa Rosa Rancheria
Clarence Atwell, Chairperson
P.O. Box 8
Lemoore , CA 93245
(559) 924-1278
(559) 924-3583 Fax

Tache
Tachi
Yokut

Kern Valley Indian Council
Harold Williams, Chairperson
15775 Setimo Creek Road
Caliente , CA 93518
(661) 333-5032

Southern Paiute
Kawaiisu
Tubatulabal
Koso
Yokuts

Tule River Indian Tribe
Neil Peyron, Chairperson
P.O. Box 589
Porterville , CA 93258
chairman@tulerivertribe.nsn.
(559) 781-4271
(559) 781-4610 FAX

Yokuts

Robert L. Gomez, Jr.
2619 Driller Ave.
Bakersfield , CA 93306

Paiute
Yokuts
Tubatulabal

Ron Wermuth
P.O. Box 168
Kernville , CA 93238
warmoose@earthlink.net
(760) 376-4240 - Home
(916) 717-1176 - Cell

Tubatulabal
Kawaiisu
Koso
Yokuts

Kern Valley Indian Council
Robert Robinson, Historic Preservtion Officer
P.O. Box 401
Weldon , CA 93283
brobinson@mchsi.com
(760) 378-4575 (Home)
(760) 549-2131 (Work)

Tubatulabal
Kawaiisu
Koso
Yokuts

Tejon Indian Tribe
Kathy Morgan, Chairperson
2234 4th Street
Wasco , CA 93280

Yowlumne
Kitanemuk

Tubatulabals of Kern Valley
Donna Begay, Tribal Chairwoman
P.O. Box 226
Lake Isabella , CA 93240
(760) 379-4590
(760) 379-4592 FAX

Tubatulabal

This list is current only as of the date of this document.

Distribution of this list does not relieve any person of statutory responsibility as defined in Section 7050.5 of the Health and Safety Code, Section 5097.94 of the Public Resources Code and Section 5097.98 of the Public Resources Code.

This list is only applicable for contacting local Native Americans with regard to cultural resources for the propose 30-acre Development Project located in the Tehachapi area of Kern County, California for which a Sacred Lands File search and Native American Contacts list were requested.

Tejon Indian Tribe

Cultural Resource Management Team

June 29, 2008

Andrew Monastero, MA, RPA
Applied Earthworks, Inc.
1391 West Shaw Avenue
Fresno, CA. 93711-3600

Re: Cultural Resource Study for Christopher A. Joseph & Associates

Dear Mr. Monsdtero:

Thank you for your recent letter, dated May 30, 2008. This letter is to inform you the Tejon Indian Tribe is very much interested in the information you have sent us.

At this time, we do not have any knowledge nor do we have any recorded information pertaining to this site. However, due to the fact that we do claim this area as part of our historical territory, I am hereby requesting that we be kept informed on your progress, as we are very interested in how your progress proceeds. Please keep us in mind if you develop anything that relates to Native Americans in this area or if we can be of assistance to you in any other way.

Sincerely,

Ken Morgan
Assistant Project Manager
Tejon Indian Tribe CRMT

cc: Tribal Council Officers
Tribal Committee for CRMT

2234 4th Street Wasco, California 93280 (661) 758-2303 Fax: (661) 758-9385
e-mail: kmorgan@bak.rr.com

Appendix G

Geotechnical Engineering Investigation

PRELIMINARY GEOTECHNICAL EVALUATION
PROPOSED WAL-MART SUPERCENTER
SOUTHEAST OF THE CORNER OF WEST
TEHACHAPI BOULEVARD AND TUCKER ROAD
TEHACHAPI, CALIFORNIA

PREPARED FOR:
Christopher A. Joseph & Associates, Inc.
30851 Agoura Road, Suite 210
Agoura Hills, California 91301

PREPARED BY:
Ninyo & Moore
Geotechnical and Environmental Sciences Consultants
475 Goddard, Suite 200
Irvine, California 92618

January 13, 2009
Project No. 207437001

January 13, 2009
Project No. 207437001

Mr. Curtis Zacuto
Christopher A. Joseph & Associates, Inc.
30851 Agoura Road, Suite 210
Agoura Hills, California 91301

Subject: Preliminary Geotechnical Evaluation
Proposed Wal-Mart Supercenter
Southeast of the Corner of West Tehachapi Boulevard and Tucker Road
Tehachapi, California

Dear Mr. Curtis:

In accordance with your request and authorization, Ninyo & Moore has performed a preliminary geotechnical evaluation for the proposed Wal-Mart Supercenter located southeast of the corner of West Tehachapi Boulevard and Tucker Road in Tehachapi, California. Our study was conducted in general accordance with the scope of services presented in our proposal dated February 12, 2008. We understand that the results of this study will be utilized in the preparation of an Environmental Impact Report (EIR) for the proposed project.

We appreciate the opportunity to provide geotechnical consulting services on this project.

Sincerely,
NINYO & MOORE

PROFESSIONAL GEOLOGIST
MICHAEL E. ROGERS
No. 2364
CERTIFIED
ENGINEERING
GEOLOGIST
Exp. 6/30/09
STATE OF CALIFORNIA

Michael E. Rogers, C.E.G.
Senior Project Geologist

Carol A. Price, C.E.G.
Principal Geologist

Jalal Vakili, Ph.D., P.E.
Principal Engineer

REGISTERED PROFESSIONAL ENGINEER
JALAL VAKILI
No. C43850
Exp. 6/30/10
CIVIL
STATE OF CALIFORNIA

EBP/MER/CAP/JV/jad/mlc

Distribution: (3) Addressee

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1. INTRODUCTION

In accordance with your request and authorization, Ninyo & Moore has performed a preliminary geotechnical evaluation for the proposed Wal-Mart Supercenter located southeast of the corner of West Tehachapi Boulevard and Tucker Road in Tehachapi, California (Figure 1). The proposed project consists of an approximately 30-acre site that will include the construction of an approximately 185,000-square-foot commercial building. In accordance with the California Environmental Quality Act (CEQA), this report includes geotechnical evaluation of the impacts associated with potential geologic and seismic hazards at the proposed project site.

The purpose of our study was to evaluate the geologic and geotechnical conditions of the proposed Wal-Mart Supercenter site in order to make a preliminary assessment of potential geologic and seismic hazards relative to development of future improvements. Our geotechnical evaluation was based on review of readily available published geotechnical literature pertinent to the project site and site reconnaissance to develop preliminary conclusions regarding the proposed project's impact on the geologic environment and the potential geologic hazards that may affect the project. Where appropriate, measures to mitigate potential geologic hazards, as noted in this report, have been provided.

2. SCOPE OF SERVICES

Ninyo & Moore's scope of services has included review of geotechnical background materials and geologic reconnaissance of the project site. Specifically, we have performed the following tasks:

- Review of readily available geologic maps, seismic data, published geotechnical literature, aerial photographs, and in-house information.
- Geotechnical site reconnaissance to observe and document the existing surface conditions at the project site.
- Assessment of the general geologic conditions and seismic hazards affecting the area and evaluation of their potential impacts on the project.
- Compilation and analysis of existing geotechnical data pertaining to the site.

- Preparation of this report presenting the results of our study.

3. PROJECT DESCRIPTION

The proposed Wal-Mart Supercenter Project involves construction of a retail shopping facility on an undeveloped parcel at the southeast corner of West Tehachapi Boulevard and Tucker Road in Tehachapi, California. The project site comprises approximately 30 acres of land and the proposed Wal-Mart will be approximately 185,000 square feet. We understand that project plans have not yet been developed, but it is anticipated that development of the proposed improvements at the site will generally involve earthwork and foundations for new structures, pavements, utilities, hardscape, and landscape.

4. SITE DESCRIPTION

The project site is located on an alluvial flood plain in the Tehachapi Valley approximately ½ mile south of Highway 58. The Tehachapi Valley is rimmed by the surrounding Tehachapi Mountains to the south and Southern Sierra Nevada to the north. The site is comprised of vacant property bounded by Tucker Road to the west, West Tehachapi Boulevard to the north, residential properties to the south and vacant land to the east. Overall topography of the site descends gently to the northeast varying from an approximate elevation of 3973 relative to mean sea level (MSL) near the southwest side of the site to approximate elevation 3925 feet MSL near the northeast side of the site.

Geologic reconnaissance of the subject site was conducted on December 26, 2008. The vacant site is not improved with structures, but has been partially developed with dirt roads and other graded areas (Figure 2). Areas of previous grading activities at the site have resulted in gulleys, mounds and some oversteepened slope areas. These slopes are up to approximately 15 feet high and are inclined at gradients up to approximately 2:1 (horizontal to vertical ratio). A utility line indicated by manhole covers was observed along the south side of the site. No flowing surface water was observed during our site reconnaissance. Vegetation on the site consists of grasses and shrubs. Scattered debris and trash were observed on the site.

5. GEOLOGY

5.1. Regional Geology

The proposed project site is located along the northwest edge of the Mojave Desert Geomorphic Province. The Mojave Desert Geomorphic Province is characterized by mountain ranges and hills of moderate relief that are partially buried and separated by broad alluviated basins. The western part of the province in the project vicinity forms a wedge-shaped block bounded by the San Andreas fault zone on the southwest and Garlock fault zone and uplifted Tehachapi Mountain range on the northwest (Norris and Webb, 1990).

The geology of the region consists of older, pre-Tertiary age crystalline basement rocks comprising granite, quartz monzonite, gabbro, schist, gneiss, and other igneous and metamorphic rocks. Younger Tertiary age volcanic and sedimentary formations of marine and non-marine origin overlie the basement rocks. These formations contain units of sandstone, siltstone, shale, conglomerate, and undifferentiated pyroclastic and intrusive volcanic rocks. Younger Quaternary age alluvial sediments overlie the bedrock in valleys and other low-lying areas, deposited as a result of uplift and erosion of the surrounding mountains.

5.2. Site Geology

Regional geologic mapping indicates that the near-surface earth materials underlying the project site consist of Quaternary-age alluvium (Smith, A.R., 1964). The alluvium in the Tehachapi Valley is underlain at depth by older Mesozoic era granitic rocks and Paleozoic era metamorphic rocks. The valley alluvium mapped at the site is typically comprised of unconsolidated silt, sand and gravel which is poorly consolidated. Surface soils observed at the site during our reconnaissance generally consist of reddish-brown gravelly clayey sand. A regional geologic map including the site is shown on Figure 3.

Fill soils may be present on the project site, related to previous site grading activities. No landslides are mapped at the site, and no landslides were observed during our site reconnaissance. Our surface reconnaissance did not indicate the presence of faulting or surface rupture at the site.

5.3. Groundwater

Based on review of surrounding well data from the California Department of Water Resources (CDWR), the groundwater level in the vicinity of the site is reported to range from depths of approximately 179 feet below the ground surface to approximately 231 feet. The historic high groundwater level based on the well data reviewed was recorded in 1950 at a depth of approximately 123 feet (CDWR, 2008). It should be noted that fluctuations in the level of groundwater at the subject site may occur due to variations in ground surface topography, groundwater pumping, subsurface stratification, rainfall, irrigation practices, and other factors which may not have been evident at the time of our evaluation. Shallow perched conditions may be present.

6. FAULTING AND SEISMICITY

6.1. Regional Seismicity

The proposed Wal-Mart Supercenter site is located in a seismically active area, as is the majority of southern California. The numerous faults in southern California include active, potentially active, and inactive faults. As defined by the California Geological Survey (CGS), active faults are faults that have ruptured within Holocene time, or within approximately the last 11,000 years. Potentially active faults are those that show evidence of movement during Quaternary time (approximately the last 1.6 million years), but for which evidence of Holocene movement has not been established. Inactive faults have not moved in the last approximately 1.6 million years.

Based on our background review and site reconnaissance, the ground surface in the vicinity of the proposed Wal-Mart Supercenter site is not transected by known active or potentially active faults. The site is not located within a State of California Seismic Hazards Zone considered susceptible to liquefaction. The site is not located within an Earthquake Fault Zone (formerly Alquist-Priolo Special Studies Zone, Hart and Bryant, 1997). However, the site is located in a seismically active area, and the potential for strong ground motion at the site is

considered significant. Figure 4 shows the approximate site location relative to the principal faults in the region.

Based on our background review, the active Garlock (West) fault is located approximately 6.9 miles southeast of the site. The active White Wolf fault is located approximately 7.6 miles northwest of the project site (Table 1). These and other principal nearby active faults are discussed in further detail in the following sections. Based on the proximity and number of known active and potentially active faults within the general region, it is reasonable to expect a strong ground motion seismic event during the lifetime of structures for the proposed project. In general, potential hazards associated with seismic activity include strong ground motion, ground surface rupture, seismically induced liquefaction, and landsliding. These hazards are discussed in further detail below.

Table 1 lists selected principal known active faults that may affect the subject site, the maximum moment magnitude (M_{max}) as published by the CGS (Cao, 2003), and the type of fault as defined in Table 16A-U of the California Building Code (CBC, 2007). The approximate fault to site distance was calculated by the computer program FRISKSP (Blake, 2001).

Table 1 – Principal Active Faults

Fault	Approximate Fault-to-Site Distance [1] miles (kilometers)	Maximum Moment Magnitude [2] (M_{max})
Garlock (West)	6.9 (11.1)	7.3
White Wolf	7.6 (12.2)	7.3
Garlock (East)	26.1 (42.0)	7.5
Pleito Thrust	27.9 (44.9)	7.0
San Andreas – 1857 Rupture	29.3 (47.1)	7.4
San Gabriel	37.7 (60.6)	7.2
Big Pine	38.2 (61.4)	6.9
Sierra Nevada (South)	38.5 (61.9)	7.3
Lenwood-Lockhart-Old Woman Springs	39.2 (63.1)	7.3
Santa Ynez (East)	45.6 (73.4)	7.1
San Cayetano	48.2 (77.6)	7.0
Northridge (E. Oak Ridge)	52.1 (83.8)	7.0

Notes:
[1] Blake, 2001a
[2] Cao, et al., 2003

6.2. Principal Regional Faults

Principal active faults in the region that may affect the site are described in the following sections.

6.2.1. Garlock (West) Fault Zone

The Garlock (West) fault zone is a prominent fault feature in southern California and strikes northeast across the northern part of the Mojave Desert province. Although this fault has not produced large earthquakes historically, geomorphic and stratigraphic evidence indicates that it has done so in the past. The Garlock (West) fault is considered capable of generating about a M_{max} 7.3 earthquake. A portion of the Garlock fault zone ruptured due to the 1952 Kern County Earthquake that occurred on the White Wolf Fault (Southern California Earthquake Center [SCEC], 2004). A total of about 30 to 40 miles of left-lateral, strike slip has been documented across the Garlock (West) fault, and the slip rate is estimated to be 6 millimeters (mm) per year. The Garlock (West) fault is located approximately 7 miles southeast of the project site.

6.2.2. White Wolf Fault

The White Wolf fault is a left-lateral reverse fault located northwest of the project site near the community of Tehachapi. The White Wolf fault was the source of one of the largest earthquakes in Southern California history, the 1952 M 7.5 Kern County earthquake (SCEC, 2004). The Tehachapi area reportedly experienced extensive property damage due to the 1952 Kern County earthquake (Kern County, 2005). The White Wolf fault is considered capable of generating about a M_{max} 7.3 earthquake. The fault is approximately 37 miles in length and has an estimated slip rate of 2 mm per year. The White Wolf fault is located approximately 8 miles northwest of the project site.

6.2.3. Pleito Thrust Fault Zone

The Pleito Thrust fault zone is a south-dipping thrust fault that is part of a complex zone of thrust faults and folds which mark part of the southern end of the Central Valley of California. The Pleito thrust may be connected at depth with the nearby, and similar,

Wheeler Ridge fault. At the eastern end of the fault, it may dive below the surface as a blind thrust, forming the northern scarp of the Tehachapi Mountains (SCEC, 2004). The Pleito thrust is considered capable of generating about a M_{max} 7.0 earthquake. The fault is approximately 28 miles in length and has an estimated slip rate of 1.4 mm per year. The Pleito thrust fault zone is located approximately 28 miles southwest of the project site.

6.2.4. San Andreas Fault Zone

The San Andreas fault zone has long been recognized as the dominant seismotectonic feature in California. This right-lateral, strike-slip fault is over 700 miles long and strikes northwest through the state from the Gulf of California to north of San Francisco. Two of California's three largest historic earthquakes, the 1906 San Francisco earthquake and the 1857 Forth Tejon earthquake, occurred along the San Andreas fault. The segment of the San Andreas fault that ruptured during the 1857 earthquake is located approximately 29 miles southwest of the project site. Ground surface offset as much as 30 feet was recorded across the fault due to the 1857 earthquake. The slip rate of the fault is estimated to be 30 mm per year. The fault is considered capable of producing earthquakes in excess of M_{max} 7.4, and the average frequency of earthquakes along this segment of the San Andreas fault is approximately 140 years (SCEC, 2004).

6.2.5. San Gabriel Fault Zone

Segments of the San Gabriel fault zone are described as potentially active, and a portion of the fault between Castaic and Saugus is described as active (Jennings, 1994). This right-lateral, strike-slip fault is considered capable of producing a M_{max} 7.2 earthquake. The San Gabriel fault has a total length of approximately 87 miles, and the slip rate of the fault is estimated to be 1 mm per year. The San Gabriel fault zone is located approximately 38 miles southwest of the project site.

6.2.6. Big Pine Fault Zone

The Big Pine fault zone is a left-lateral, strike-slip fault approximately 27 miles long located near the community of Frazier Park. The Big Pine fault zone is considered capable of generating about a M_{max} 6.9 earthquake. The slip rate of the fault is estimated to be 0.8 to 4 mm per year. The Big Pine fault zone is located approximately 38 miles southwest of the project site.

6.2.7. Sierra Nevada Fault Zone

The Sierra Nevada fault zone is a normal fault approximately 149 miles long located near the communities of Big Pine and Bishop. The Sierra Nevada fault zone is considered capable of generating about a M_{max} 7.3 earthquake. The slip rate of the fault is estimated to be 0.1 mm per year. The South Sierra Nevada fault zone is located approximately 39 miles northeast of the project site.

6.2.8. Lenwood – Lockhart – Old Woman Springs Faults

The Lenwood, Lockhart, and Old Woman Spring faults are right-lateral, strike slip faults that form a connected, fairly complex, fault system approximately 99 miles long (SCEC, 2004). The Lenwood-Lockhart-Old Woman Spring fault system is considered capable of generating about a M_{max} 7.3 earthquake. The slip rate of the fault is estimated to be 0.8 mm per year. The Lenwood-Lockhart-Old Woman Spring fault system is located approximately 39 miles southeast of the project site

6.2.9. Santa Ynez Fault

The Santa Ynez fault is a left-reverse fault approximately 81 miles long located near the communities of Wheeler Springs, Santa Ynez, and Santa Barbara. The Santa Ynez fault is considered capable of generating about a M_{max} 7.1 earthquake. The slip rate of the fault is estimated to be 0.1 to 0.7 mm per year. The Santa Ynez fault is located approximately 46 miles southwest of the project site.

6.2.10. San Cayetano Fault

The San Cayetano fault is a thrust fault approximately 28 miles long located near the communities of Piru, Fillmore, and Ojai. The San Cayetano fault is considered capable of generating about a M_{max} 7.0 earthquake. The slip rate of the fault is estimated to be 6 mm per year. The San Cayetano fault is located approximately 48 miles southwest of the project site.

6.2.11. Northridge (East Oak Ridge) Fault

The Northridge (East Oak Ridge) fault is an active reverse thrust fault located on Oak Ridge near the communities of Santa Paula and Fillmore, northwest of the community of Northridge. This fault was associated with the 1994 M 6.7 Northridge earthquake. The Northridge (East Oak Ridge) fault is considered capable of generating about a M_{max} 7.0 earthquake. The fault is approximately 56 miles long, and the slip rate of the fault is estimated to be 1.5 mm per year. The Northridge (East Oak Ridge) fault is located approximately 52 miles southwest of the project site.

7. METHODOLOGY FOR GEOLOGIC IMPACT AND HAZARD ANALYSES

The proposed project has been evaluated with respect to its potential impacts on the geologic environment, as outlined by the CEQA. Additionally, the impacts of potential geologic hazards on the proposed project have been evaluated. Potential project impacts and geologic hazards are based on our geologic and seismic review of readily available published geotechnical literature pertinent to the proposed project. These include, but are not limited to, the Kern County Multi-Hazard Mitigation Plan, State of California Earthquake Fault Zone Maps (formerly Alquist-Priolo Special Studies Zone Maps), State of California Seismic Hazards Zones Maps, the California Surface Mining and Reclamation Act, published geologic and topographic maps, aerial photographs, published groundwater data by the California Department of Water Resources, and other publications by the California Geological Survey (CGS) and United States Geological Survey (USGS).

8. THRESHOLDS OF SIGNIFICANCE

According to Appendix G of the CEQA guidelines (CERES, 2005b), a project is considered to have a geologic impact if its implementation would result in or expose people/structures to potential substantial adverse effects, including the risk of loss, injury, or death involving hazards involving one or more of the geologic conditions presented in Table 2. Table 2 also presents the impact potential as defined by CEQA associated with each of the geologic conditions discussed in the following sections.

Table 2 – Summary of Potential Geologic Impacts/Hazards

Geologic Condition	Impact Potential[1]			
	Potentially Significant Impact	Less than Significant with Mitigation Incorporation	Less than Significant Impact	No Impact
Surface Fault Rupture			x	
Seismic Ground Shaking		x		
Liquefaction				x
Landslides				x
Soil Erosion		x		
Subsidence			x	
Soil Settlement		x		
Expansive Soil		x		
Corrosive Soil		x		
Shallow Groundwater			x	
Distinctive Geologic or Physical Feature				x
Excavations		x		
Dam Inundation				x
Seiches and Tsunamis				x
Loss of Mineral Resources				x

Note:
[1]Reference: CERES, 2005b, Appendix G – Environmental Checklist Form, Final Text, dated October 26. Website: http://ceres.ca.gov/topic/envlaw/ceqa/guidelines/appendices.html

9. POTENTIAL GEOLOGIC AND SEISMIC IMPACTS/HAZARDS

Based on our review of geologic and seismic background information and geotechnical site reconnaissance, the proposed project at the site is not anticipated to have a significant impact on the geologic environment. However, the proposed project may be subjected to potential impacts

from geologic and seismic hazards. Potential impacts on the proposed project based on our geologic and seismic review are provided in the following sections.

9.1. Surface Fault Rupture

Surface fault rupture is the offset or rupturing of the ground surface by relative displacement across a fault during an earthquake. The project site is not located within a State of California Earthquake Fault Zone (formerly known as Alquist-Priolo Special Studies Zones). Based on current published fault studies and geologic maps, the proposed project site is not mapped as transected by a known active fault.

The Garlock (West) fault zone is an active earthquake fault located approximately 6.9 miles southeast of the site. Based on available geologic information, the potential for impacts related to surface fault rupture at the project site is considered to be low and less than significant. However, cracking of the ground surface as a result of nearby seismic events is possible.

9.2. Seismic Ground Shaking

The seismic hazard likely to impact the project site is ground shaking during an earthquake on one of the nearby or distant active faults. The Tehachapi area reportedly experienced extensive property damage due to the 1952 Kern County earthquake (Kern County, 2005). The level of ground shaking at a given location depends on many factors, including the size and type of earthquake, distance from the earthquake, and subsurface geologic conditions. The size and type of construction also affects how a particular structure performs during ground shaking.

The 2007 California Building Code (CBC) recommends that the design of structures be based on the horizontal peak ground acceleration (PGA) having a 2 percent probability of exceedance in 50 years which is defined as the Maximum Considered Earthquake (MCE). The statistical return period for PGA_{MCE} is approximately 2,475 years. The probabilistic PGA_{MCE} for the site was calculated as 0.58g using the USGS (USGS, 2008) ground motion

calculator (web-based). The design PGA was estimated to be 0.39g using the USGS ground motion calculator. These estimates of ground motion do not include near-source factors that may be applicable to the design of structures on site. The requirements of the governing jurisdictions and the 2007 CBC should be considered in project design.

The potential impacts due to anticipated ground shaking at the estimated levels are significant, and the anticipated ground acceleration should be considered during the design and construction of the proposed project. Assessment of the ground shaking potential at the site should be evaluated prior to design and construction of project improvements, and design considerations should be implemented. Therefore, the potential impacts due to ground shaking are considered to have a less than significant impact with mitigation incorporation.

9.3. Liquefaction

Liquefaction is a phenomenon in which soil loses its shear strength for short periods of time during an earthquake. Ground shaking of sufficient duration results in the loss of grain-to-grain contact, due to a rapid increase in pore water pressure, causing the soil to behave as a fluid for short periods of time. The potential effects of liquefaction may include loss of ground support, ground cracking, and/or excessive total and/or differential settlement of structures founded on the liquefying soils. To be susceptible to liquefaction, a soil is typically cohesionless, with a grain-size distribution of a specified range (generally sand and silt), loose to medium dense, below the groundwater table, and subjected to a sufficient magnitude and duration of ground shaking.

The State of California Seismic Hazards Mapping Program produces maps indicating areas of the state susceptible to liquefaction but has not yet produced a map of the quadrangle where the subject site is located. A map provided in the Kern County Multi-Hazard Mitigation Plan indicates that the site is not located in an area of shallow groundwater which would be considered susceptible to liquefaction (Kern County, 2005). Additionally, groundwater, which is a component of liquefaction susceptibility at shallow depths, is reported to have a historic high depth of approximately 123 feet. Therefore, the proposed project would not re-

sult in, or expose people to, significant impacts related to potential earthquake induced liquefaction.

9.4. Landslides

Landslides, slope failures, and mudflows of earth materials predominately occur where slopes are too steep and/or the earth materials too weak to support themselves. Landslides may also occur by seismic ground shaking, particularly where high groundwater is present.

Based on the relatively gentle site topography, it is not anticipated that significant slopes will be created for project implementation. Landslides were not observed at the site during our reconnaissance. Therefore, the proposed project would not result in, or expose people to, impacts related to on- or off-site landslides or mudflows.

9.5. Soil Erosion

Soil erosion refers to the process by which soil or earth material is loosened or dissolved and removed from its original location. Erosion can occur by many different processes and may occur at the project site where bare soil is exposed to moving water or wind. Future construction activities at the project site may result in ground surface disruption during excavation, grading, and trenching that would create the potential for erosion to occur. However, the erosion potential during construction can be mitigated with prudent site management practices during construction. Following development of site improvements, erosion will be relatively minor due to the anticipated covering of areas with structures, pavements, and associated hardscape and landscaped features. Surface drainage provisions would also reduce the potential for soil erosion at the site. Potential soil erosion related to the project development is considered to have a less than significant impact with mitigation incorporation.

9.6. Subsidence

Subsidence is typically associated with areas of groundwater withdrawal or other fluid withdrawal from the ground such as oil and natural gas. Subsidence could cause damage to project improvements, including foundations, structures, pavements, and other hardscape features. Our background review did not indicate that subsidence has been recently reported in the project area. Therefore, potential subsidence is considered to have a less than significant impact.

9.7. Soil Settlement

Loose natural soils or undocumented/poorly compacted fill may be present in some areas at the site. Compressible natural soils and poorly compacted fills pose the risk of adverse settlement under static loads imposed by new fill or structures. Differential settlement of soils can cause damage to project improvements, including foundations, structures, pavements, and other hardscape features. Assessment of the potential for soils prone to settlement should be evaluated prior to design and construction of project improvements and mitigation measures would be developed, as appropriate. Therefore, the potential for soil settlement is considered to have a less than significant impact with mitigation incorporation.

9.8. Expansive Soils

Expansive soils generally result from specific clay minerals that have the capacity to shrink or swell in response to changes in moisture content. The ability of clayey soil to change volume can result in uplift or cracking to foundation elements or other rigid structures, such as sidewalks or slabs, founded on these soils. Expansive soils may be present in geologic units that underlie the project site. Assessment of the potential for expansive soils should be evaluated during the design phase of the project and mitigation measures would be developed, as appropriate. Therefore, the potential for expansive soils is considered to have a less than significant impact with mitigation incorporation.

9.9. Corrosive Soils

The project site is located in a geologic environment that could potentially contain soil conditions that are corrosive to concrete and metals. Corrosive soil conditions may exacerbate the corrosion hazard to pipelines, foundations, and other buried improvements. Assessment of the potential for corrosive soils should be evaluated during the design phase of the project and mitigation measures would be developed, as appropriate. Therefore, potential soil corrosivity is considered to have a less than significant impact during construction with mitigation incorporation.

9.10. Groundwater

Based on our review of data from nearby wells, shallow groundwater is not reported at the site. Groundwater depths in the site vicinity are reported to be more than 123 feet (CDWR, 2008). Subsurface construction activities for future development at the site are anticipated to consist of relatively shallow excavations for building pads, foundations, utilities, and other improvements. Based on the reported depths to groundwater and anticipated depth of construction activities, shallow groundwater is considered to have less than significant impact on the proposed project.

Groundwater levels may be influenced by seasonal variations, precipitation, irrigation, soil/rock types, groundwater pumping, and other factors and are subject to fluctuations. Shallow perched conditions or seepage may be present. Further study, including subsurface exploration, should be performed during the design phase to evaluate the presence of groundwater, seepage, and/or perched groundwater at the site and the potential impacts on design and construction of project improvements.

9.11. Distinctive Geologic or Topographic Features

This potential geologic impact refers to the proposed project's potential to cover or modify one or more distinct prominent geologic or topographic features. Rock exposures or other prominent geologic features were not observed on the surface at the site and are not anticipated at shallow depth. The existing topography of the project site is comprised of relatively

flat to gentle gradients, and prominent topographic features were not observed at the site. The proposed construction will result in grading and trenching activities but will be matched with surrounding gradients and is not anticipated to significantly alter the existing topography. Therefore, the proposed project would not result in impacts related to the alteration or modification of prominent geologic or topographic features.

9.12. Excavations

Earthwork associated with construction of the proposed project is anticipated to include excavations for the creation of building pads, parking areas, and trench excavations for utility lines. Potential deeper excavations may be anticipated for deeper foundation work for structures, if needed. Based on our background review and site reconnaissance, we anticipate that the materials encountered in excavations will be comprised predominantly of loose to medium dense sands with varying amounts of clay and gravel. We anticipate that excavations within these alluvial materials at the project site will be feasible with conventional grading equipment. However, areas of cemented soils could present excavation difficulty if encountered at the project site. The excavatibility of materials at the site would result in a less than significant impact to the proposed project.

Excavations for proposed project improvements adjacent to existing streets, sidewalks, or structures will need to be performed with care to reduce the potential for differential movement of existing improvements located near the excavations. With appropriate mitigation incorporation during construction, excavations at the project site would result in a less than significant impact to surrounding improvements.

We anticipate that the project site will be fenced during construction operations, such that the public will not be exposed to the impacts of excavations. Construction personnel may be exposed to the impacts of excavations, and appropriate mitigative safety measures would result in a less than significant impact to site personnel. Since excavations will be filled following construction, the proposed project would not result or expose people to impacts related to excavations after construction of the project.

9.13. Dam Inundation

According to the Kern County Multi-Hazard Mitigation Plan (2005), the Tehachapi area could be affected by a potential dam failure which could inundate the western part of the City/Cummings Valley area. Dams in California are monitored by various governmental agencies (such as the State of California Division of Safety of Dams and the U.S. Army Corps of Engineers) to guard against the threat of dam failure. Current design and construction practices, and ongoing programs of review, modification, seismic retrofitting or total reconstruction of existing dams are intended to see that dams are capable of withstanding the maximum credible earthquake for the site. Due to the regulatory monitoring of dams, the impact of inundation due to dam failure is not considered a significant constraint to the project. Therefore, the proposed project would not likely result or expose people to impacts related to dam failure inundation.

9.14. Seiches and Tsunamis

A seiche is the seismically induced sloshing of water in a large enclosed basin, such as a lake, reservoir, or bay. There are no known reservoirs or lakes in the site vicinity, thus, the potential for damage from seiches to the proposed project is considered low. Therefore, the proposed project would not result in, or expose people to, impacts related to seiches.

Tsunamis are open-sea tidal waves generated by earthquakes. Tsunami damage is typically confined to low-lying coastal areas. Water surge caused by tsunamis is measured by distance of run-up on the shore. The project site is not within an area considered to be susceptible to tsunami inundation. Therefore, the proposed project would not result in, or expose people to, impacts related to tsunamis.

9.15. Mineral Resources

The CGS and the State Mining and Geology Board (SMGB) classify the regional significance of mineral resources in accordance with the California Surface Mining and Reclamation Act of 1975 (SMARA). According to the State of California Mines and Mineral Resources of Kern County (CDMG, 1962), the project site is located in an area that has min-

ing resources related to limestone for cement production. Limestone is a commonly-occurring rock unit that is present in the metamorphic rock units in the Tehachapi region. Due to the common nature of limestone and abundance of similar mineralogical materials in the City of Tehachapi and surrounding region around the project site, the potential of the project to result in the loss of availability of a known mineral resource is not considered a significant impact

10. MITIGATION OF POTENTIAL GEOLOGIC IMPACTS/HAZARDS

The potential geologic and seismic hazards described above may be mitigated by employing sound engineering practice in the design and construction of the new facilities. This practice includes the performance of site-specific geotechnical and seismic hazards analyses prior to the construction of the structures at the site. Typical measures to mitigate potential hazards that may be encountered during the construction of the improvements are described in the following sections.

10.1. Seismic Ground Shaking

Mitigation measures to reduce the potential impacts of seismic ground shaking would be achieved through project design and construction. During the design phase, site-specific geotechnical evaluations will be performed to obtain detailed subsurface soil and geologic data, including evaluation of the site-specific ground motion anticipated for the site. Structural elements will then be designed to resist or accommodate appropriate site-specific ground motions and conform to the current California Building Code (CBC) seismic design standards.

10.2. Soil Erosion

Future construction at the project site is anticipated to create the potential for soil erosion during excavation, grading, and trenching activities. However, with the implementation of prudent site practices during construction, soil erosion can be limited to within the site boundaries. Examples of these procedures would include surface drainage measures for ero-

sion due to water, such as the use of sandbags and plastic sheeting, and wetting of soil surfaces to mitigate wind-related erosion.

10.3. Soil Settlement

During the design phase of the project, a site-specific geotechnical evaluation will be performed to evaluate the presence of settlement-prone soils at the site. The settlement potential of the materials will be evaluated in areas of proposed structures. If the potential exceeds acceptable tolerances for the structure, then remedial measures could be incorporated into the design and construction. Possible mitigation measures include overexcavation and recompaction, compaction grouting, deep foundations, and specialized foundation design.

10.4. Expansive Soils

Site-specific evaluations will be conducted during the design phase of the project to evaluate the extent to which expansive soils are present at the site. Where expansive soil conditions are found to occur and are considered detrimental to proposed improvements, mitigation measures such as overexcavation and replacement with non-expansive soil, chemical treatment (e.g., lime or cement), moisture adjustments, and/or specific structural design for expansive soil conditions will be developed during the design phase.

10.5. Corrosive Soils

The project site is located in a geologic environment that could potentially contain soil conditions that are corrosive to concrete and metals. The degree of potential corrosivity of soils will be evaluated by site-specific analysis during design of the project. Typical mitigation measures for corrosive soil include epoxy and metallic protective coatings, the use of alternative (corrosion resistant) materials, and selection of the type of cement and water/cement ratio. Concrete resistant to sulfate exposure and corrosion protection for metals will be used where appropriate for underground structures in areas where corrosive groundwater or soil could potentially cause deterioration. Specific measures to mitigate the potential effects of corrosive soils will be developed in the design phase of project improvements.

10.6. Excavations

The potential for damage to surrounding improvements and structures resulting from future excavation operations could be monitored for movement with a variety of instrumentation. If, during the course of construction, the instrumentation detects ground movement that exceeds a predetermined value, the work would stop and the contractor's methods would be reviewed and changes would be made, as appropriate. Typical monitoring methods include installation of ground survey points around the outside of the excavation to monitor settlement and/or placing monitoring points on nearby structures to monitor performance of the structures.

Difficult construction excavation is not anticipated but may be encountered due to the presence of cemented soils at the site. To further evaluate the potential for difficult excavation during future construction, subsurface evaluation should be performed during the design phase. This may include drilling of exploratory borings and/or test pits to evaluate ground conditions for excavation capability.

11. LIMITATIONS

The geotechnical analyses presented in this report have been conducted in accordance with current engineering practice and the standard of care exercised by reputable geotechnical consultants performing similar tasks in this area. No other warranty, implied or expressed, is made regarding the conclusions, recommendations, and professional opinions expressed in this report. Our preliminary conclusions and recommendations are based on a review of aerial photographs and readily available geotechnical literature, and an analysis of the observed conditions. Variations may exist and conditions not observed or described in this report may be encountered.

The purpose of this study was to evaluate geologic and geotechnical conditions at the site using readily available data and to provide a preliminary geotechnical report which can be utilized in the preparation of planning and environmental impact documents for the project. A more detailed geologic evaluation, including subsurface exploration and laboratory testing, should be performed prior to design and construction of the proposed improvements.

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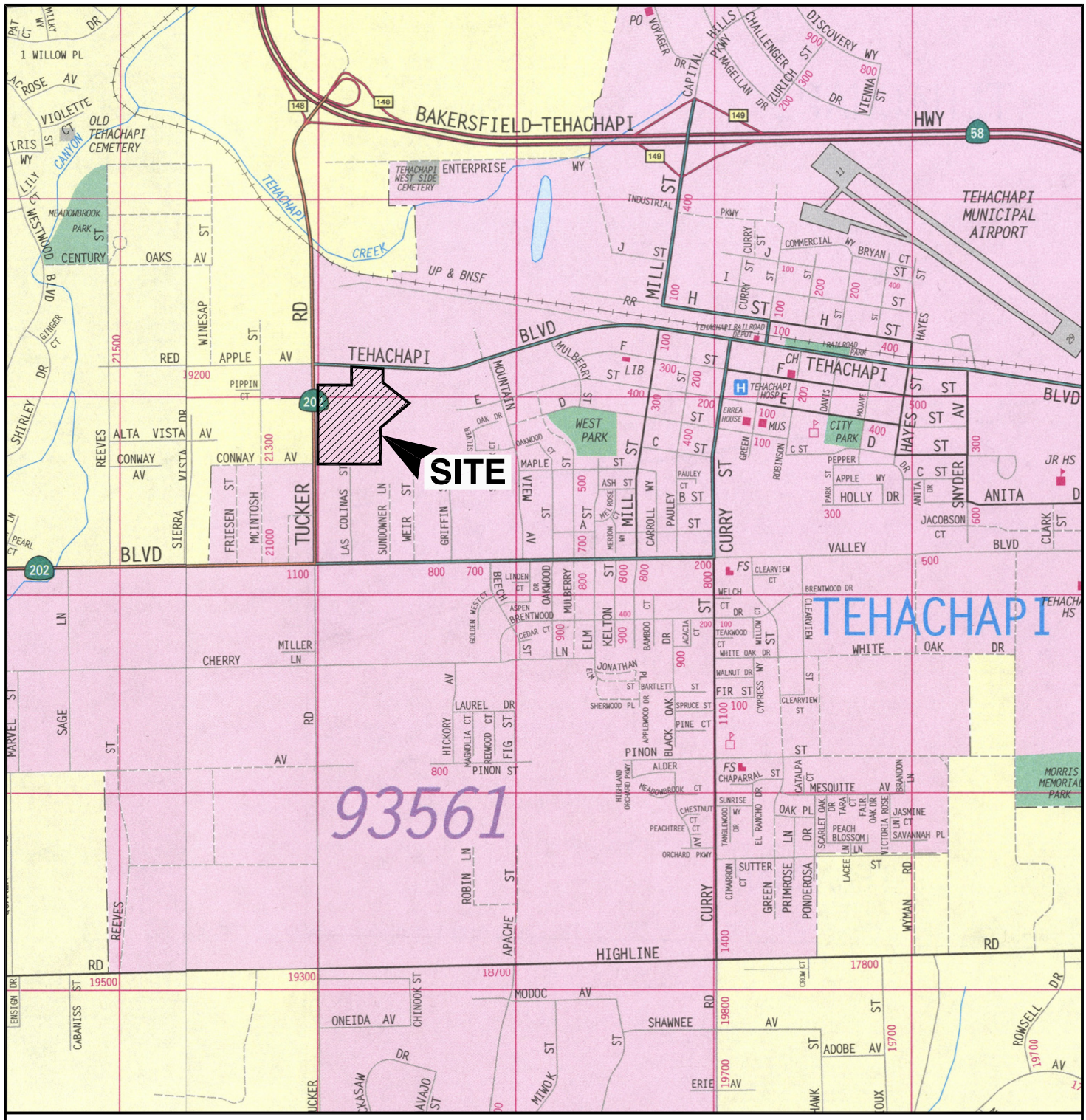
SITE
TEHACHAPI
BAKERSFIELD–TEHACHAPI
HWY
58
202
TEHACHAPI MUNICIPAL AIRPORT
OLD TEHACHAPI CEMETERY
TEHACHAPI WEST SIDE CEMETERY
ENTERPRISE
TEHACHAPI CREEK
UP & BNSF RR
WEST PARK
CITY PARK
TEHACHAPI HOSP
JR HS
TEHACHAPI HS
MORRIS MEMORIAL PARK
93561
TUCKER RD
MILL ST
CURRY ST
HAYES ST
SNYDER
ANITA
VALLEY BLVD
HIGHLINE RD
WYMAN RD
REEVES RD
MILLER LN
CHERRY
MODOC AV
SHAWNEE
ADOBE AV
ERIE AV
ROWSELL DR
CABANISS ST
ENSIGN DR
ONEIDA AV
CHINOOK ST
MINOK ST
APACHE
ROBIN LN
MARVEL ST
SAGE
LAUREL DR
HICKORY
PINON ST
ALDER
CHAPARRAL ST
MESQUITE AV
OAK PL
WHITE OAK DR
FIR ST
WALNUT DR
BRENTWOOD DR
CLEARVIEW
WELCH
MULBERRY
KELTON
ELM
BAMBOO
JONATHAN
BARTLETT
SPRUCE ST
PINE CT
BLACK OAK
APPLEWOOD DR
SHERWOOD PL
HIGHLAND ORCHARD PKWY
MEADOWBROOK CT
CHESTNUT CT
PEACHTREE
ORCHARD PKWY
SUNRISE WY
TANGLEWOOD DR
EL RANCHO DR
SCARLET OAK DR
TARA CT
FAIR OAK DR
VICTORIA ROSE
JASMINE CT
SAVANNAH PL
PEACH BLOSSOM LN
LACEE ST
CIMARRON CT
SUTTER
GREEN
PRIMROSE
PONDEROSA
CATALPA CT
BRANDON LN
CROW CT
MAPLE
ASH ST
MERION WY
CARROLL WY
PAULEY
LAS COLINAS
SUNDOWNER LN
WEIR ST
GRIFFIN
MOUNTAIN
VIEW ST
FRIESEN ST
MCINTOSH
SIERRA
CONWAY AV
ALTA VISTA AV
RED APPLE AV
PIPPIN CT
WINESAP ST
OAKS AV
CENTURY
MEADOWBROOK PARK
WESTWOOD BLVD
SHIRLEY DR
GINGER CT
PEARL CT
VIOLETTE CT
IRIS WY
LILY CT
ACROSE AV
1 WILLOW PL
PAT CT
MILKY WY
DR
CAPITAL HILLS PKWY
VOYAGER DR
CHALLENGER ST
MAGELLAN DR
ZURICH DR
DISCOVERY WY
VIENNA ST
INDUSTRIAL PKWY
COMMERCIAL WY
BRYAN CT
CURRY ST
HOLLY DR
PEPPER DR
APPLE WY
JACOBSON CT
CLARK ST
ERREA HOUSE
MUS
DAVITS
MOJAVE
GREEN
ROBINSON
C ST
TEHACHAPI RAILROAD DEPOT
RAILROAD PARK
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OAK DR
SILVER CT
OAKWOOD CT
MULBERRY ST
BEECH
LINDEN CT
ASPEN
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CEDAR CT
GOLDEN WEST CT
ACACIA CT
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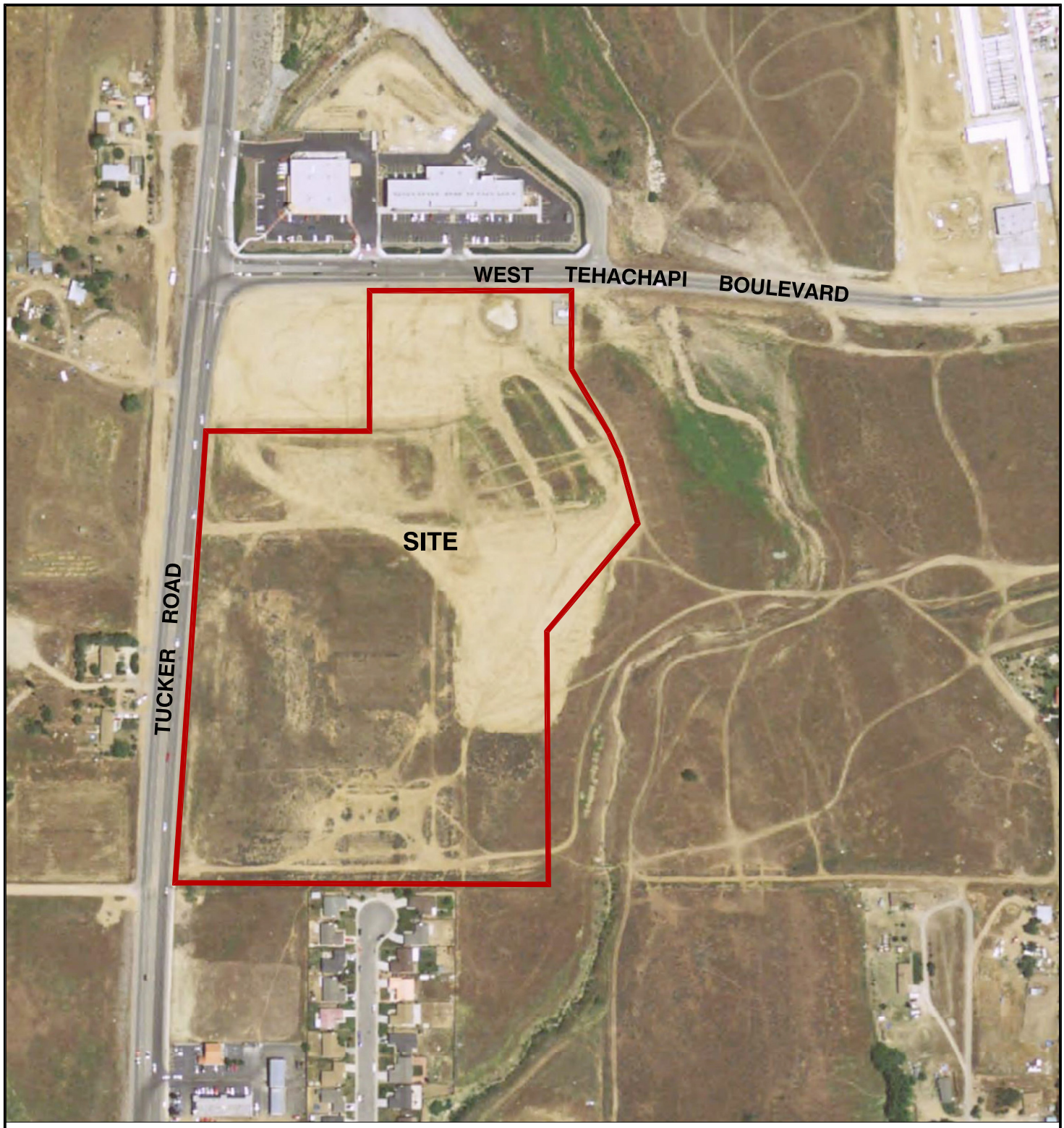
BRANDON LN



REFERENCE: GOOGLE MAP 2008.

APPROXIMATE SCALE IN FEET

0 300 600

NOTE: ALL DIMENSIONS, DIRECTIONS AND LOCATIONS ARE APPROXIMATE.

N

LEGEND	
	APPROXIMATE SITE BOUNDARY

2074370_A2.DWG

Ninyo & Moore

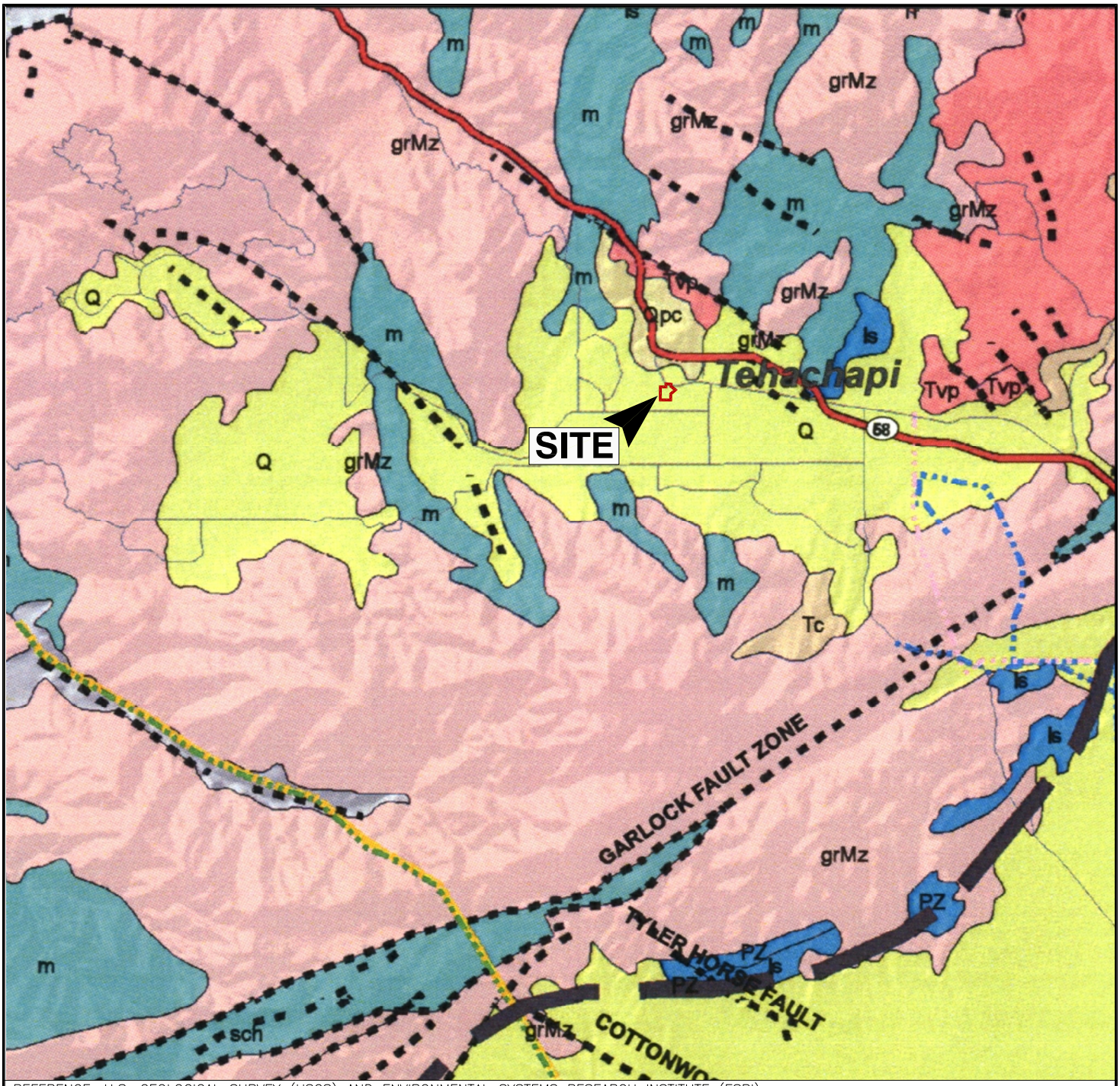
PROJECT NO.	DATE
207437001	1/09

SITE PLAN

PROPOSED WAL-MART SUPERCENTER
SOUTHEAST OF THE CORNER OF
WEST TEHACHAPI BOULEVARD AND TUCKER ROAD
TEHACHAPI, CALIFORNIA

FIGURE

2



REFERENCE: U.S. GEOLOGICAL SURVEY (USGS) AND ENVIRONMENTAL SYSTEMS RESEARCH INSTITUTE (ESRI).

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APPROXIMATE SCALE IN FEET

0 15,000 30,000

NOTE: ALL DIMENSIONS, DIRECTIONS AND LOCATIONS ARE APPROXIMATE.

LEGEND

Geologic Fault

Geologic Units

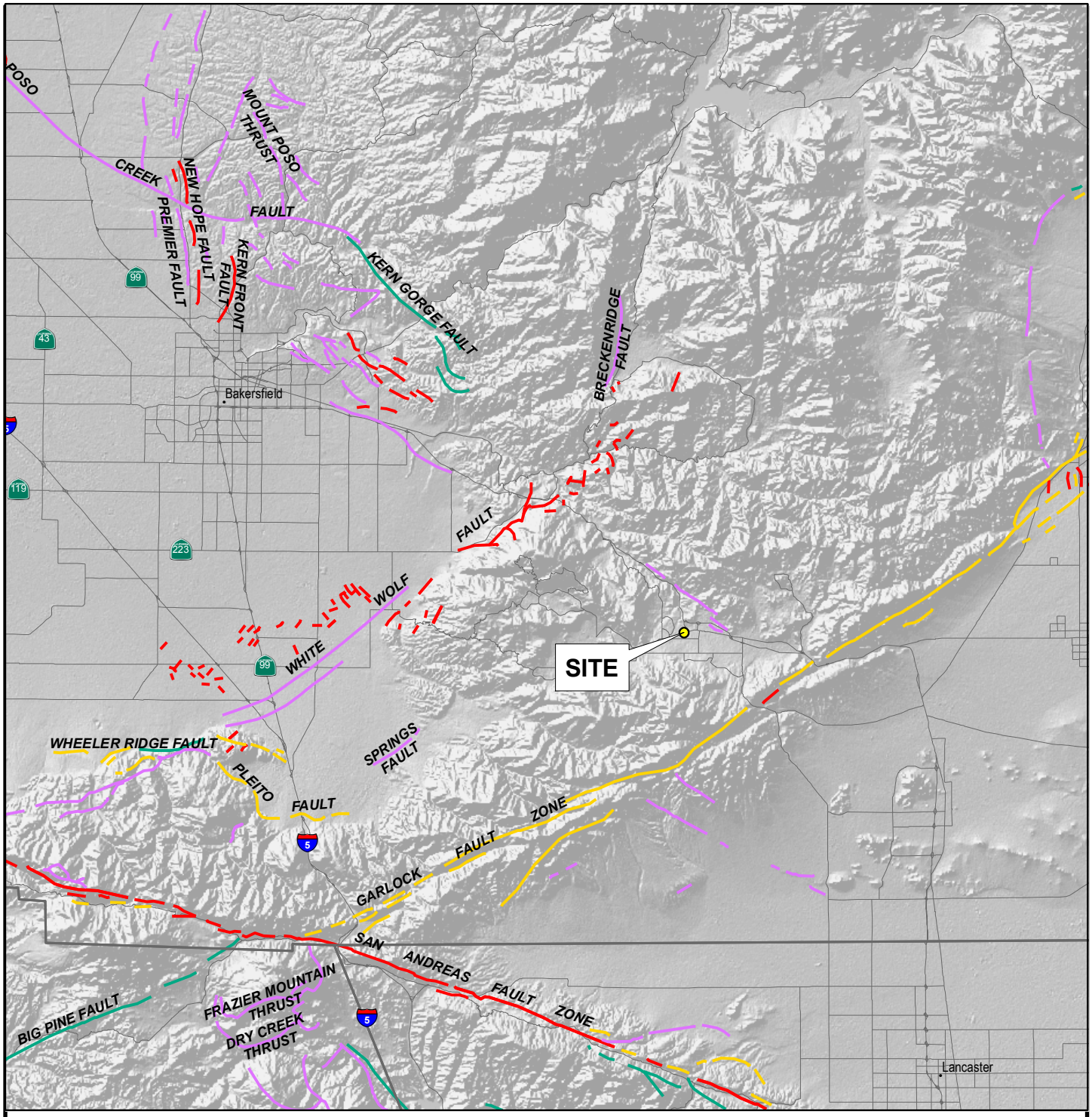
- Q — Alluvium
- Qpc — Plio-Pleistocene non-Marine
- Tc/Mc Oc — Tertiary non-Marine

Geologic Units

- Tl/Tv Tvp — Volcanic Rocks
- ls/PZ — Limestone
- sch — Schist
- m — Metasedimentary Rocks

2074370_A3.DWG

Ninyo & Moore	GEOLOGIC MAP	FIGURE
PROJECT NO. 207437001 / DATE 1/09	PROPOSED WAL-MART SUPERCENTER SOUTHEAST OF THE CORNER OF WEST TEHACHAPI BOULEVARD AND TUCKER ROAD TEHACHAPI, CALIFORNIA	3



GIS DATA SOURCE: CALIFORNIA GEOLOGICAL SURVEY (CGS); ENVIRONMENTAL SYSTEMS RESEARCH INSTITUTE (ESRI)
REFERENCE: JENNINGS, 1994, FAULT ACTIVITY MAP OF CALIFORNIA AND ADJACENT AREAS

LEGEND

FAULT ACTIVITY:

- HISTORICALLY ACTIVE
- HOLOCENE ACTIVE
- COUNTY BOUNDARIES
- LATE QUATERNARY
- QUATERNARY

N

9 0 9

Miles

NOTE: ALL DIMENSIONS, DIRECTIONS, AND LOCATIONS ARE APPROXIMATE

207437_a4.gis

Ninyo & Moore	FAULT LOCATION MAP	FIGURE
PROJECT NO. 207437001 / DATE 1/09	PROPOSED WAL-MART SUPERCENTER SOUTHEAST OF THE CORNER OF WEST TEHACHAPI BOULEVARD AND TUCKER ROAD TEHACHAPI, CALIFORNIA	4

Appendix H

Phase I ESA

HAZARDOUS MATERIALS ASSESSMENT REPORT
PROPOSED WAL MART SUPERCENTER
SOUTHEAST OF THE CORNER OF
WEST TEHACHAPI BOULEVARD
AND TUCKER ROAD
TEHACHAPI, CALIFORNIA

PREPARED FOR:
Christopher A. Joseph & Associates, Inc.
30851 Agoura Road, Suite 210
Agoura Hills, California 91301

PREPARED BY:
Ninyo & Moore
Geotechnical and Environmental Sciences Consultants
475 Goddard, Suite 200
Irvine, California 92618

January 13, 2009
Project No. 207437002

January 13, 2009
Project No. 207437002

Mr. Curtis Zacuto
Christopher A. Joseph & Associates
30851 Agoura Road, Suite 210
Agoura Hills, California 91301

Subject: Hazardous Materials Assessment Report
Proposed Wal Mart Supercenter
Southeast of the Corner of Tehachapi Boulevard and Tucker Road
Tehachapi, California

Dear Mr. Zacuto:

In accordance with our proposal dated February 12, 2008, Ninyo & Moore has performed a Hazardous Materials Assessment (HMA) of the above-referenced property (site). The attached report presents our methodology, findings, opinions, and conclusions regarding the environmental conditions at the site.

We appreciate the opportunity to be of service to you on this project.

Sincerely,
NINYO & MOORE

Javier Perez
Senior Staff Environmental Scientist

Krista A. Brodersen, R.E.A.
Project Scientist

Gene Berkland, P.E.
Senior Engineer

JP/KAB/GOB/jad

Distribution: (3) Addressee

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EXECUTIVE SUMMARY

Ninyo & Moore was authorized by Christopher A. Joseph & Associates to perform a Hazardous Materials Assessment (HMA) for the approximately 25-acre property located southeast of the corner of West Tehachapi Boulevard and Tucker Road in the city of Tehachapi, California (site). Historical research, document review, and site assessment activities were conducted between November 10, 2008, and January 12, 2009. In summary, the following items were noted:

- From at least the 1950s to the present, the site has been undeveloped, vacant land.
- A sewer lift station was observed on the northeast portion of the site. The lift station consisted of a compound approximately 50-feet by 50-feet enclosed by chain linked fence. Within the compound, two concrete vaults were observed. One was 10-foot by 10-foot with a breather vent and the other was 5-foot by 5-foot. Additionally a power generator, electrical and communication box, transfer switch, storage container, and a 15-gallon plastic drum were observed within the compound. The contents of the drum and storage container could not be confirmed due to lack of access. Evidence of leaks or stains were not observed.
- Records indicating the site used or stored hazardous materials or underground storage tanks (USTs) were not found.
- Other potential on-or off-site sources of environmental concern were not identified.

Based on the results of this HMA, Ninyo & Moore has no recommendations for further evaluation.

As with all proposed construction projects, we recommend that the following be implemented during construction:

- The contractor should prepare a hazardous materials contingency plan addressing the potential for discovery of unidentified USTs, septic systems, hazardous materials, petroleum hydrocarbons, or hazardous or solid wastes encountered during construction. This contingency plan should address UST decommissioning, field screening and materials testing methods, mitigation and contaminant management requirements, and health and safety requirements.
- The contractor should prepare a soil monitoring plan prior to construction and should implement it during all phases of construction. Disturbed soils should be monitored for visual evidence of contamination (e.g., staining or discoloration). If visual evidence of contamination is observed, the soil should be monitored for the presence of Volatile Organic Compounds (VOCs) using appropriate field instruments such as organic vapor measurement with photoionization detectors (PIDs) or flame ionization detectors (FIDs). If the monitor-

ing procedures indicate the possible presence of contaminated soil, a contaminated soil contingency plan should be implemented and should include procedures for segregation, sampling, and chemical analysis of soil. Contaminated soil will be profiled for disposal and will be transported with appropriate hazardous or non-hazardous waste manifests by a state-certified hazardous material hauler to a state-certified disposal or recycling facility licensed to accept and treat the type of waste indicated by the profiling process. The contaminated soil contingency plan should be developed and in place during all construction activities. In the event that these processes generate any contaminated groundwater that must be disposed of outside of the dewatering/ National Pollutant Discharge Elimination System (NPDES) process, the groundwater should be profiled, manifested, hauled, and disposed of in the same manner.

1. INTRODUCTION

Christopher A. Joseph & Associates (client) authorized Ninyo & Moore to perform a Hazardous Materials Assessment (HMA) of the approximately 25-acre property located southeast of the corner of West Tehachapi Boulevard and Tucker Road in the city of Tehachapi, California (site; Figure 1). The work was conducted in general accordance with Ninyo & Moore's Proposal No. S-6542 dated February 12, 2008. The following sections identify the purpose, the involved parties, the scope of work, and the limitations and exceptions associated with the HMA.

1.1. Purpose

In accordance with the American Society for Testing and Materials (ASTM) Standards on Environmental Site Assessments (ESAs) for Commercial Real Estate E 1527-00, the objective of the HMA was to identify recognized environmental conditions (RECs), which are defined by ASTM as "the presence or likely presence of any hazardous substance or petroleum products on a property under conditions that indicate an existing release, a past release, or a material threat of a release of any hazardous substances or petroleum products into structures on the property or into the ground, groundwater, or surface water of the property."

1.2. Involved Parties

Mr. Javier Perez of Ninyo & Moore conducted the site reconnaissance and performed interviews and regulatory inquiries. Ms. Krista Brodersen and Mr. Gene Berkland of Ninyo & Moore performed project oversight and quality review.

1.3. Scope of Work

Ninyo & Moore's scope of work included the following:

- Review of readily available maps and reports pertaining to the site, as provided by the client.
- Performance of a site reconnaissance to visually identify areas of possibly contaminated surficial soil or surface water, improperly stored hazardous materials, possible sources of polychlorinated biphenyls (PCBs), and possible risks of contamination from activities at the site and adjacent properties.

- Review of readily available local regulatory agency files for the site.
- Review of available regulatory agency databases for the site and for properties located within a specified radius of the site. The purpose of this review was to evaluate the possible environmental impact to the site. These databases list locations of known hazardous waste sites, landfills, leaking underground storage tanks (LUSTs), permitted facilities that utilize underground storage tanks (USTs), and facilities that use, store, or dispose of hazardous materials.
- Review of readily available historical documents, including aerial photographs (site and vicinity), historical fire insurance rate maps (site and available adjacent properties), building department records (site only), and city directories (site and available adjacent properties), as available and necessary.
- Preparation of this HMA report documenting findings and providing opinions and conclusions regarding possible environmental impacts at the site.

1.4. Limitations and Exceptions

The environmental services described in this report have been conducted in general accordance with current regulatory guidelines and the standard of care exercised by environmental consultants performing similar work in the project area. No warranty, expressed or implied, is made regarding the professional opinions presented in this report. Please note that this study did not include an evaluation of geotechnical conditions or potential geologic hazards. In addition, it should be noted that this HMA does not include analysis of the following: asbestos-containing materials, methane gas, radon, lead-based paint, lead in drinking water, wetlands, regulatory compliance, cultural and historic resources, industrial hygiene, health and safety, ecological resources, endangered species, indoor air quality, and high voltage power lines.

This document is intended to be used only in its entirety. No portion of the document, by itself, is designed to completely represent any aspect of the project described herein. Ninyo & Moore should be contacted if the reader requires any additional information or has questions regarding the content, interpretations presented, or completeness of this document.

Our findings, opinions, and conclusions are based on an analysis of the observed site conditions and the referenced literature. It should be understood that the conditions of a site can

change with time as a result of natural processes or the activities of man at the subject site or nearby sites. In addition, changes to the applicable laws, regulations, codes, and standards of practice may occur due to government action or the broadening of knowledge. The findings of this report may, therefore, be invalidated over time, in part or in whole, by changes over which Ninyo & Moore has no control. Ninyo & Moore cannot warrant or guarantee that not finding indicators of any particular hazardous material means that this particular hazardous material or any other hazardous materials do not exist on the site. Additional research, including invasive testing, can reduce the uncertainty, but no techniques now commonly employed can eliminate the uncertainty altogether.

1.5. User Reliance

This report may be relied upon and is intended exclusively for use by the client. Any use or reuse of the findings, opinions, and/or conclusions of this report by parties other than the client is undertaken at said parties' sole risk.

2. GENERAL SITE CHARACTERISTICS

The following sections describe the location and the current uses of the site. The uses of adjacent properties are also described.

2.1. Location and Description

The site consists of approximately 25-acres of land located southeast of the intersection of West Tehachapi Boulevard and Tucker Road in the city of Tehachapi, California (Figure 1). The site is owned by the Wal Mart Corporation and is currently vacant land with a city owned sewer lift station in the northeast corner of the site. Color photographs of the site and surrounding properties are provided in Appendix A.

The site has been assigned Assessor's Parcel Numbers (APN) 415-130-68, 415-130-69 and 415-130-28 by Kern County. An assessor's map is provided in Appendix B.

2.2. Current Title Information

A current title report was not provided for review.

2.3. Adjacent Properties

Adjacent properties are described in Table 1.

Table 1 – Adjacent Properties

Direction from Site	Description
North	West Tehachapi Boulevard is north of the site. A commercial development identified as Tehachapi Crossing is north of West Tehachapi Boulevard and includes the following: Walgreens, Tehachapi Medical Clinic, Peaceful Image Salon, Tanning salon, County library, Hodad's Surf Shack, Quizno's Sub, and City Slickers restaurant. A commercial development is northwest of the site and includes the following: Starbucks coffee, Coldstone Creamery, and Que Pasa Mexican Café. The development is identified as the Tehachapi Junction.
East	Vacant land followed by residential and commercial development (K-mart).
South	Commercial development (car wash) and residential.
West	Tucker road, followed by vacant land and residential development.

Visual evidence of hazardous materials or releases was not observed on adjacent properties. The site and surrounding properties are shown in Figure 2.

2.4. Site Description and Current Site Uses/Operations

The following paragraphs present a description of the structures present at the site, the tenants currently occupying the site, if any, the activities being conducted on-site, the heating and cooling systems utilized in the site building, the sewage disposal system, and the potable water provider for the site.

2.4.1. Site Description

The site is approximately rectangular-shaped and consists of 2 parcels totaling approximately 25 acres of vacant land. On the northeast corner of the property exists an approximately 50-foot by 50-foot sewer lift station compound installed, owned and maintained by the city of Tehachapi. The lift system lifts gravity flow sewage liquid from a deeper pipeline to a pipeline that is located near the surface, which in turn flows to the next lift station.

The Tehachapi creek runs along the eastern boundary of the property from north to south based on elevation.

Municipal sewer lines run along the southern and western boundaries of the site. Southern California Edison (SCE) power junction boxes are located along the western boundary of the site. Color photographs of the site are provided in Appendix A.

2.4.2. Occupants

The site is currently undeveloped and unoccupied.

2.4.3. Heating and Cooling Systems

Heating and cooling systems are not present at the site. Southern California Edison provides electricity service in the site vicinity.

2.4.4. Sewage Disposal/Septic Systems

Currently, the site is not connected to a sewer disposal system. Sewage disposal services are provided by the city of Tehachapi in the site vicinity.

2.4.5. Potable Water

Currently, the site is not connected to potable water. Potable water is provided by the city of Tehachapi in the site vicinity.

2.5. Previous Reports and Documentation

No previous reports or documents were provided by Christopher A. Joseph & Associates regarding the site.

A Master Environmental Assessment (MEA) was prepared by the City of Tehachapi Community Development Department in June 2002 for 36-acres of land at the intersection of West Tehachapi Boulevard and Tucker Road which includes the 25-acres of the subject site. The purpose of the MEA was to evaluate potential environmental impacts based on a "worse-case" conceptual model of prototypical retail configurations and establish mitigation strategies over the entire areas encompassed by the conceptual site plan.

The findings of the MEA suggest that at the time of the study, future development based on the conceptual model could not have a significant effect on the environment. Additionally no existing REC's were noted in the MEA. Based on the MEA, the city of Tehachapi prepared a negative declaration exempting the 36 acre property from a full Environmental Impact Report (EIR) pursuant to the California Environmental Quality Act of 1970 (CEQA).

3. SITE RECONNAISSANCE

On December 2, 2008, Mr. Javier Perez of Ninyo & Moore conducted a site reconnaissance. The reconnaissance involved a tour of the site and visual observations of adjoining properties. Conditions were sunny and clear at the time of the site reconnaissance. Selected photographs taken during the site reconnaissance are included in Appendix A.

3.1. Physical Limitations

Access was not available at the time of the reconnaissance of a sewer lift station compound located in the northeast corner of the site. Other physical limitations were not encountered during the site reconnaissance.

3.2. Use and Storage of Hazardous Substances and Petroleum Products

Evidence of on-site hazardous substance or petroleum product storage was not observed during the site reconnaissance.

3.3. Storage and Disposal of Hazardous Wastes

Evidence of on-site hazardous waste generation, storage, or disposal was not observed during the site reconnaissance.

3.4. Unidentified Substance Containers

Unidentified substance containers were not observed during the site reconnaissance.

3.5. Aboveground and Underground Storage Tanks

Evidence of on-site aboveground storage tanks (ASTs) or USTs was not observed during the site reconnaissance.

3.6. Evidence of Releases

Areas of stressed vegetation or soil staining were not observed during the site reconnaissance. Other evidence of chemical releases on site (i.e., odors, stains, leaks, pools of liquids, and spills) were not observed during the site reconnaissance.

3.7. Polychlorinated Biphenyls

One pad-mounted transformer was observed on the site within the sewer lift station compound. Leaks or stains were not observed during the site reconnaissance.

3.8. Suspect Asbestos-Containing Materials (ACMs)

Suspect ACMs were not observed during the site reconnaissance.

3.9. Lead-Based Paint (LBP)

No evidence of LBP was observed during the site reconnaissance.

3.10. Wastewater Systems

Wastewater systems, such as clarifiers, sumps, pits, grease traps, and floor drains, were not observed on the site at the time of the reconnaissance.

3.11. Storm Water Systems

Storm water systems, such as catch basins and drains, were not observed at the time of the reconnaissance.

3.12. Wells

Evidence of wells was not observed during the site reconnaissance.

3.13. Other On-Site and Off-Site Potential Environmental Concerns

A sewer lift station was observed on the northeast portion of the site (Figure 2). The lift station consisted of a compound approximately 50-feet by 50-feet enclosed by chain linked fence. Within the compound, two concrete vaults were observed. One was 10-foot by 10-foot with a breather vent and the other was 5-foot by 5-foot. Additionally a power generator, electrical and communication box, transfer switch, storage container, and a 15-gallon plastic drum were observed within the compound. The contents of the drum and storage container could not be confirmed due to lack of access. Evidence of leaks or stains were not observed. Photographs of the sewer lift station compound are provided in Appendix A.

Other on or off-site potential environmental concerns were not noted.

4. PHYSICAL SETTING

The following sections include discussions of topographic, geologic, and hydrogeologic conditions in the vicinity of the site based upon our document review and our visual reconnaissance of the site and adjacent areas.

4.1. Site Topography

Based on our review of the United States Geological Survey (USGS) 7.5 Minute Series, Tehachapi North, Topographic Quadrangle Map, dated 1992, the site elevation is approximately 3,950 feet above mean sea level (msl). The general topography in the site vicinity is mountainous and regional drainage generally follows topography and flows generally to the southeast.

4.2. Geology

The proposed project site is located along the northwest edge of the Mojave Desert Geomorphic Province. The Mojave Desert Geomorphic Province is characterized by mountain ranges and hills of moderate relief that are partially buried and separated by broad alluviated basins like the Antelope Valley. The western part of the province in the project vicinity forms a wedge-shaped block bounded by the San Andreas fault zone on the southwest and Garlock fault zone on the northwest (Norris and Webb, 1990). The uplifted Tehachapi Mountain range borders the northwest edge of the province.

The geology of the region consists of older, pre-Tertiary age crystalline basement rocks comprising granite, quartz monzonite, gabbro, schist, gneiss, and other igneous and metamorphic rocks. Younger Tertiary age volcanic and sedimentary formations of marine and non-marine origin overlie the basement rocks. These formations contain units of sandstone, siltstone, shale, conglomerate, and undifferentiated pyroclastic and intrusive volcanic rocks. Younger Quaternary age alluvial sediments overlie the bedrock in valleys and other low-lying areas, deposited as a result of uplift and erosion of the surrounding mountains.

4.3. Site Hydrology

The following sections discuss the site hydrology in terms of both surface waters and groundwater.

4.3.1. Surface Waters

The Tehachapi creek runs along the eastern boundary of the site and flows southeast following topography.

4.3.2. Groundwater

Based on review of surrounding well data from the California Department of Water Resources (CDWR), the groundwater level in the vicinity of the site is reported to range from depths of approximately 179 feet below the ground surface (bgs) to approximately 231 feet bgs. The historic high groundwater level based on the well data reviewed was recorded in 1950 at a depth of approximately 123 feet bgs (CDWR, 2008). Groundwater flow direction in the site vicinity is estimated to be toward the south-southeast. It should be noted that fluctuations in the level of groundwater at the subject site may occur due to variations in ground surface topography, groundwater pumping, subsurface stratification, rainfall, irrigation practices, and other factors which may not have been evident at the time of our evaluation. Shallow perched conditions may be present.

5. HISTORICAL LAND USE

Ninyo & Moore conducted a review of historical records regarding the site and neighboring properties. This included a review of available historical topographic maps, aerial photographs, historical building permits on file at the city of Tehachapi City Hall, and city (reverse) telephone directories. Pertinent site documents related to this review are included in Appendix B.

From at least the 1950s to the present, the site has been undeveloped. This land was annexed by the City of Tehachapi in 1977. No records were available from Kern County.

5.1. Historical Aerial Photographs

Historical aerial photographs were provided by Environmental Data Resources, Inc. (EDR), of Milford, Connecticut. Aerial photographs were available for the site for the years 1952, 1961, 1983, 1994, 2002, and 2005. Notable observations from each photograph are presented below. Copies of aerial photographs are included in Appendix B.

- **1952, 1961, and 1983** – The site appears to be undeveloped with a creek running north/south along the eastern boundary. The surrounding vicinity appears to be developed for agricultural use. Tehachapi Boulevard is seen north of the site, but not adjacent. Tucker Road is west and adjacent to the site.

- **1994** – The site appeared generally as it did in the 1983 aerial photograph. Residential development was observed south and west of the site.

- **2002** – The site appeared as undeveloped land with several dirt roads. West Tehachapi Boulevard was rerouted and was observed adjacent and north of the site. Additional residential development was observed south and southwest of the site.

- **2005** – The site and vicinity appeared generally as it did in the 2002 aerial photograph. Commercial/industrial development was observed north of Tehachapi Boulevard, immediately north of the site. The sewer lift station appears on the northeast corner of the site. The soil on the northern portion of the site and adjacent property to the northwest, appeared to be graded.

5.2. Fire Insurance Rate Maps

Sanborn Fire Insurance Rate Map coverage was not available for the subject area.

5.3. Building Permits

Building permits were not available from the city of Tehachapi for the site. According to a representative of the City of Tehachapi, the land surrounding the site was annexed by the City of Tehachapi in 1977. The site is owned by the Wal Mart Corporation. A Master Environmental Assessment for the site and adjacent property to the northwest (Tehachapi Junction retail center) was reviewed and discussed in section 2.5. No other building permits records were available for review.

5.4. City Directories

A city directory search completed by Ninyo & Moore noted residential addresses along Tucker Road in the site vicinity from 1976 to approximately 1985. From 1990 to 2005 general commercial businesses were noted along Tucker Road south of the site.

5.5. Oil and Gas Maps

According to the Regional Wildcat Map W1-1, Kern and Los Angeles County, supplied by the State of California, Department of Conservation, Division of Oil, Gas, and Geothermal Resources (DOGGR), the site does not lie within an active oil field.

5.6. Land Title Records

Historical land title records were not provided for review.

5.7. Historical Topographic Maps

Ninyo & Moore reviewed USGS 7.5 Minute Series, Tehachapi North, California, Topographic Quadrangle Map, dated 1992. Structures were not depicted on the site.

5.8. Property Tax Records

Historical property tax records were not provided for review.

5.9. Zoning/Land Use Records

The site is currently zoned C-3 for general commercial by the city of Tehachapi.

5.10. Interviews

A site representative was not available for interview during the site reconnaissance.

5.11. Previous Reports and Documents

No previous reports or documents were provided for review.

6. ENVIRONMENTAL DATABASE SEARCH

A computerized, environmental information database search was performed by Environmental Data Resources, Inc. (EDR), on November 11, 2008. The EDR database report included federal, state, and local databases. A summary of the environmental databases searched, their corresponding search radii, and number of noted sites of environmental concern is presented in Appendix C. In addition, a description of the assumptions and approach to the database search is provided in Appendix C. The review was conducted to evaluate whether the site or properties within the vicinity of the site have been reported as having experienced significant unauthorized releases of hazardous substances or other events with potentially adverse environmental effects. The subject site was not listed on the databases. In addition, several of the properties listed in the site vicinity were noted during the site reconnaissance as being further south and further east than were indicated in the EDR report. Based on the addresses provided for the properties, the distance from the site, and/or the types of databases on which these properties are listed, there is a low likelihood that the environmental integrity of the site has been adversely affected by these off-site sources.

The following paragraphs describe the databases that contain noted properties of environmental concern and include a discussion of the regulatory status of the facilities and potential environmental impact to the subject site.

6.1. National Priorities List (NPL): Distance Searched – 1 mile

The NPL is the United States Environmental Protection Agency's (EPA) database of uncontrolled or abandoned hazardous waste properties identified for priority remedial actions under the Superfund program.

Neither the site nor properties located within a 1-mile radius of the site were listed on this database.

6.2. National Priorities List (NPL) Delisted: Distance Searched – ½ mile

The NPL Delisted is the EPA database of uncontrolled or abandoned hazardous waste properties that have been removed from the Superfund program.

Neither the site nor properties located within a ½-mile radius of the site were listed on this database

6.3. Comprehensive Environmental Response, Compensation, and Liability Information System (CERCLIS) List – ½ mile

The CERCLIS database contains properties which are either proposed or on the NPL and properties which are in the screening and assessment phase for possible inclusion on the NPL.

Neither the site nor properties within a ½-mile radius of the site were listed on the database.

6.4. Comprehensive Environmental Response, Compensation, and Liability Information System (CERCLIS) No Further Remedial Action Planned (NFRAP) List – ½ mile

The CERCLIS-NFRAP database contains properties that were removed from the CERCLIS database.

Neither the site nor properties located within a ½-mile radius of the site were listed on this database

6.5. Corrective Action Report (CORRACTS): Distance Searched – 1 mile

The EPA maintains this database of Resource Conservation and Recovery Act (RCRA) facilities that are undergoing corrective action. A corrective action order is issued when there has been a release of hazardous waste or constituents into the environment from a RCRA facility.

Neither the site nor properties located within a 1-mile radius of the site were listed on this database.

6.6. Resource Conservation and Recovery Information System (RCRIS) Treatment, Storage, and Disposal (TSD) Facilities List – ½ mile

The RCRIS TSD database is a compilation by the EPA of facilities that report generation, storage, transportation, treatment, or disposal of hazardous waste.

Neither the site nor properties within a ½-mile radius of the site were listed on this database.

6.7. RCRA Generators List – Large and Small Quantity Generator – Site and Adjacent – ¼ mile

This list identifies sites that generate hazardous waste as defined by RCRA. Inclusion on these lists is for permitting purposes and is not indicative of a release.

The site was not listed on this database. One address, 320 West Tehachapi Boulevard, was listed as a RCRA small quantity generator. However, during the site reconnaissance it was noted that the above listed property is approximately one mile northeast of the site. Based on the distance from the site, this listing would not be considered an environmental concern to the site.

6.8. Emergency Response Notification System (ERNS) – Site and Adjacent

The ERNS database contains information of reported releases of oil and hazardous substances.

Neither the site nor adjacent properties were listed on this database.

6.9. United States Engineering Controls: Distance Searched – ½ mile.

This is an EPA listing of sites with engineering controls in place, such as various forms of caps, building foundations, liners, and treatment methods intended to eliminate pathways for regulated substances to enter environmental media or affect human health.

Neither the site nor properties located within ½-mile radius of the site were listed on this database.

6.10. United States Institutional Controls: Distance Searched – ½ mile

This is an EPA listing of sites with institutional controls in place, such as administrative measures, groundwater use restrictions, construction restrictions, property use restrictions, and post remediation care requirements, intended on preventing exposure to contaminants remaining on site.

Neither the site nor properties located within ½-mile radius of the site were listed on this database.

6.11. United States Brownfields: Distance Searched – ½ mile

This is an EPA listing of Brownfields properties addressed by Cooperative Agreement Recipients (CAR) and Brownfields properties addressed by Targeted Brownfields Assessments (TBA).

Neither the site nor properties located within a ½-mile radius of the site were listed on this database.

6.12. Calsites Database (Calsites): Distance Searched – 1 mile

The Calsites database is maintained by the California Environmental Protection Agency (Cal-EPA), DTSC. This database contains information on annual work plan sites (AWP) and both known and potentially contaminated properties. Two-thirds of these properties have been classified, based on available information, as needing no further action (NFA) by the

DTSC. The remaining properties are in various stages of review and remediation to determine if a problem exists.

Neither the site nor properties located within a 1-mile radius of the site were listed on this database.

6.13. Spills, Leaks, Investigation, and Cleanup (SLIC) – Site and Adjacent

The SLIC cost recovery database, maintained by the EPA, provides a record of any contaminated site that impacts groundwater or has the potential to impact groundwater.

Neither the site nor adjacent properties were listed on this database.

6.14. Solid Waste Facilities/Landfill Sites (SWF/LS): Distance Searched – ½ mile

The SWF/LS database consists of open and closed solid waste disposal facilities and transfer stations. The data comes from the Integrated Waste Management Board's (IWMB's) Solid Waste Information System (SWIS) and the State Water Resources Control Board (SWRCB's) Waste Management Unit Database (WMUD) database.

Neither the site nor properties within a ½-mile radius of the site were listed on this database.

6.15. Leaking Underground Storage Tank (LUST) Lists: Distance Searched – ½ mile

The EDR database of LUST information system is obtained from the SWRCB, the Regional Water Quality Control Board, Central Valley Region (RWQCB), an the RWQCB, Lahonton Region.

The site was not listed on this database. The EDR report lists the Department of Transportation (DOT) Garage (Caltrans), at 320 West Tehachapi Boulevard, located approximately ¼ mile north of and upgradient from the site as a LUST. The constituent of concern was listed as "diesel" and the media affected was listed as "soil only." The regulatory status was listed as "case closed" as of February 28, 1991. However, during the site reconnaissance it was noted that the above listed property is approximately one mile northeast of the site. Based on

the distance from the site and regulatory status of this facility, this listing would not be considered an environmental concern to the site.

6.16. Underground Storage Tank (UST) and Aboveground Storage Tank (AST) Registration List: Distance Searched – Site and Adjacent

UST and AST databases are provided by the SWRCB. Inclusion on these lists is for permitting purposes and is not indicative of a release.

The site was not listed on this database. Five facilities were listed as adjacent to the site. However, based on Ninyo & Moore's site reconnaissance the listed facilities are approximately ¼ to 1 mile from the site. Based on the distance from the site and the regulatory status of the facilities, these listings would not be considered an environmental concern to the site.

6.17. Deed Restriction Listing (DEED) – ½ mile

California DTSC maintains a list of deed-restricted sites – properties where the DTSC has placed limits or requirements on the future use of the property due to varying levels of cleanup possible, practical, or necessary at the site.

Neither the site nor facilities within a ½-mile radius of the site were listed on this database.

6.18. State Voluntary Cleanup Program (VCP) – ½ mile

The DTSC maintains a database of facilities that have voluntarily agreed to agency oversight for there properties.

Neither the site nor facilities within a ½-mile radius of the site were listed on this database.

7. ENVIRONMENTAL RECORDS REVIEW

File review requests were made for the site using its associated Kern County Assessor's parcel numbers as the site does not have an address. A summary of information obtained from the

agencies contacted is presented below. Correspondence and information obtained from agencies is provided in Appendix B.

7.1. Department of Toxic Substance Control (DTSC)

A request was made to the DTSC Clovis office to review available files and information regarding the site. According to the DTSC office, no files were found for the site.

7.2. Kern County Environmental Health Services Department (KCEHSD)

A request was submitted to the KCEHSD to review available files and information regarding the site. According to the KCEHSD, no files were found for the site.

7.3. Regional Water Quality Control Board (RWQCB)

The RWQCB maintains records for properties that have impacted. A request was submitted to both the Central Valley and Lanhontan RWQCBs. According to both RWQCBs, no files were found for the site.

7.4. Kern County Air Pollution Control District (KCAPCD)

The KCAPCD was contacted for information regarding the site. According to the KCAPCD, no files were found for the site.

7.5. Kern County Waste Management Department (KCWMD)

A request was made to the KCWMD to review available files and information regarding the site. To date, a response has not been received. If information is obtained from the KCWMD that changes the recommendations of this report, an addendum will be issued.

7.6. City of Tehachapi, Community Development Department (TCDD)

A request was made to the TCDD to review available files and information regarding the site. According to the TCDD, no files were found for the site. However a copy of the Master

Environmental Assessment (2002) for the property located northeast of the site was reviewed.

8. FINDINGS, OPINIONS, AND CONCLUSIONS

Based upon the results of this Phase I ESA, the following findings, opinions, and conclusions are provided.

8.1. Findings

The following presents a summary of findings and opinions associated with the Phase I ESA for the subject site, including known or suspect RECs, historical RECs, and de minimus environmental conditions (i.e., conditions that generally do not present a material risk of harm to public health or the environment).

- From at least the 1950s to the present, the site has been undeveloped, vacant land.
- A sewer lift station was observed on the northeast portion of the site (Figure 2). The lift station consisted of a compound approximately 50-feet by 50-feet enclosed by chain linked fence. Within the compound, two concrete vaults were observed. One was 10-foot by 10-foot with a breather vent and the other was 5-foot by 5-foot. Additionally a power generator, electrical and communication box, transfer switch, storage container, and a 15-gallon plastic drum were observed within the compound. The contents of the drum and storage container could not be confirmed due to lack of access. Evidence of leaks or stains were not observed.
- Records indicating the site used or stored hazardous materials or USTs were not found.
- Other potential on-or off-site sources of environmental concern were not identified.

8.2. Conclusions

Ninyo & Moore has performed a HMA, in conformance with the scope and limitations of the ASTM E 1527-00, for the approximately 25-acre property located southeast of the intersection of West Tehachapi Boulevard and Tucker Road in the city of Tehachapi, California. RECs were not observed in connection with the site.

9. RECOMMENDATIONS

Based on the results of this HMA, Ninyo & Moore has no recommendations for further evaluation.

As with all proposed construction projects, we recommend that the following be implemented during construction:

- The contractor should prepare a hazardous materials contingency plan addressing the potential for discovery of unidentified USTs, septic systems, hazardous materials, petroleum hydrocarbons, or hazardous or solid wastes encountered during construction. This contingency plan should address UST decommissioning, field screening and materials testing methods, mitigation and contaminant management requirements, and health and safety requirements.

- The contractor should prepare a soil monitoring plan prior to construction and should implement it during all phases of construction. Disturbed soils should be monitored for visual evidence of contamination (e.g., staining or discoloration). If visual evidence of contamination is observed, the soil should be monitored for the presence of VOCs using appropriate field instruments such as organic vapor measurement with PIDs or FIDs. If the monitoring procedures indicate the possible presence of contaminated soil, a contaminated soil contingency plan should be implemented and should include procedures for segregation, sampling, and chemical analysis of soil. Contaminated soil will be profiled for disposal and will be transported with appropriate hazardous or non-hazardous waste manifests by a state-certified hazardous material hauler to a state-certified disposal or recycling facility licensed to accept and treat the type of waste indicated by the profiling process. The contaminated soil contingency plan should be developed and in place during all construction activities. In the event that these processes generate any contaminated groundwater that must be disposed of outside of the dewatering/NPDES process, the groundwater should be profiled, manifested, hauled, and disposed of in the same manner.

10. REFERENCES

California Department of Conservation, Division of Oil and Gas, 1998, Wildcat Map W1-1, dated September 19.

California Department of Water Resources (CDWR), 2008, Groundwater Level Data: http://www.wdl.water.ca.gov

Environmental Data Resources, 2008a, EDR Radius Map with GeoCheck, dated November 11.

Environmental Data Resources, 2008b, EDR Certified Sanborn Map Report, dated November 11.

Environmental Data Resources, 2008c, EDR Historical Topographic Map Report, dated November 11.

Environmental Data Resources, 2008d, EDR Aerial Photo Decade Package, dated November 13.

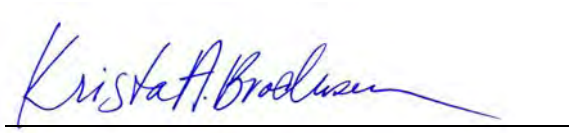
Environmental Data Resources, 2008e, EDR City Directory Abstract, dated November 24.

City of Tehachapi, 2002, Master Environmental Assessment for the Tehachapi Crossing Commercial Center, dated June 22.

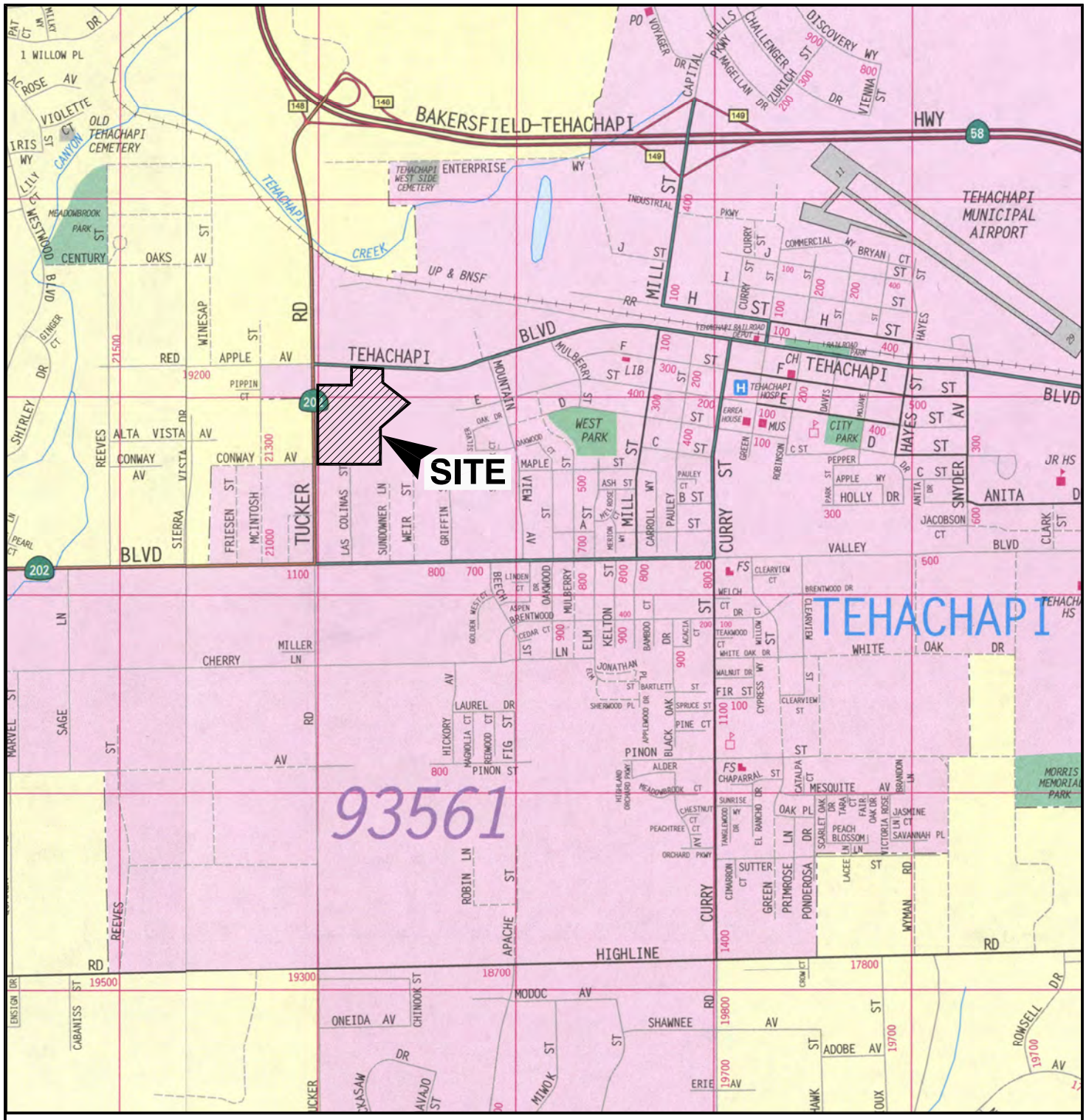
Norris, R.M., and Webb, R.W., 1990, Geology of California: John Wiley & Sons, 541 pp.

11. QUALIFICATIONS STATEMENT AND SIGNATURE OF ENVIRONMENTAL PROFESSIONAL

Ms. Krista Brodersen states that the Phase I ESA was performed under her direct supervision, and that she has reviewed and approved the report, and the methods and procedures employed in the development of the report confirm to the minimum industry standards. Ms. Brodersen certifies that Ninyo & Moore project personnel and subcontractors are properly licensed and/or certified to do the work described herein.



Krista A. Brodersen, R.E.A.
Project Scientist



REFERENCE: 2007 THOMAS GUIDE FOR KERN COUNTY, STREET GUIDE AND DIRECTORY – 16th EDITION.

APPROXIMATE SCALE IN FEET

0 1900 3800

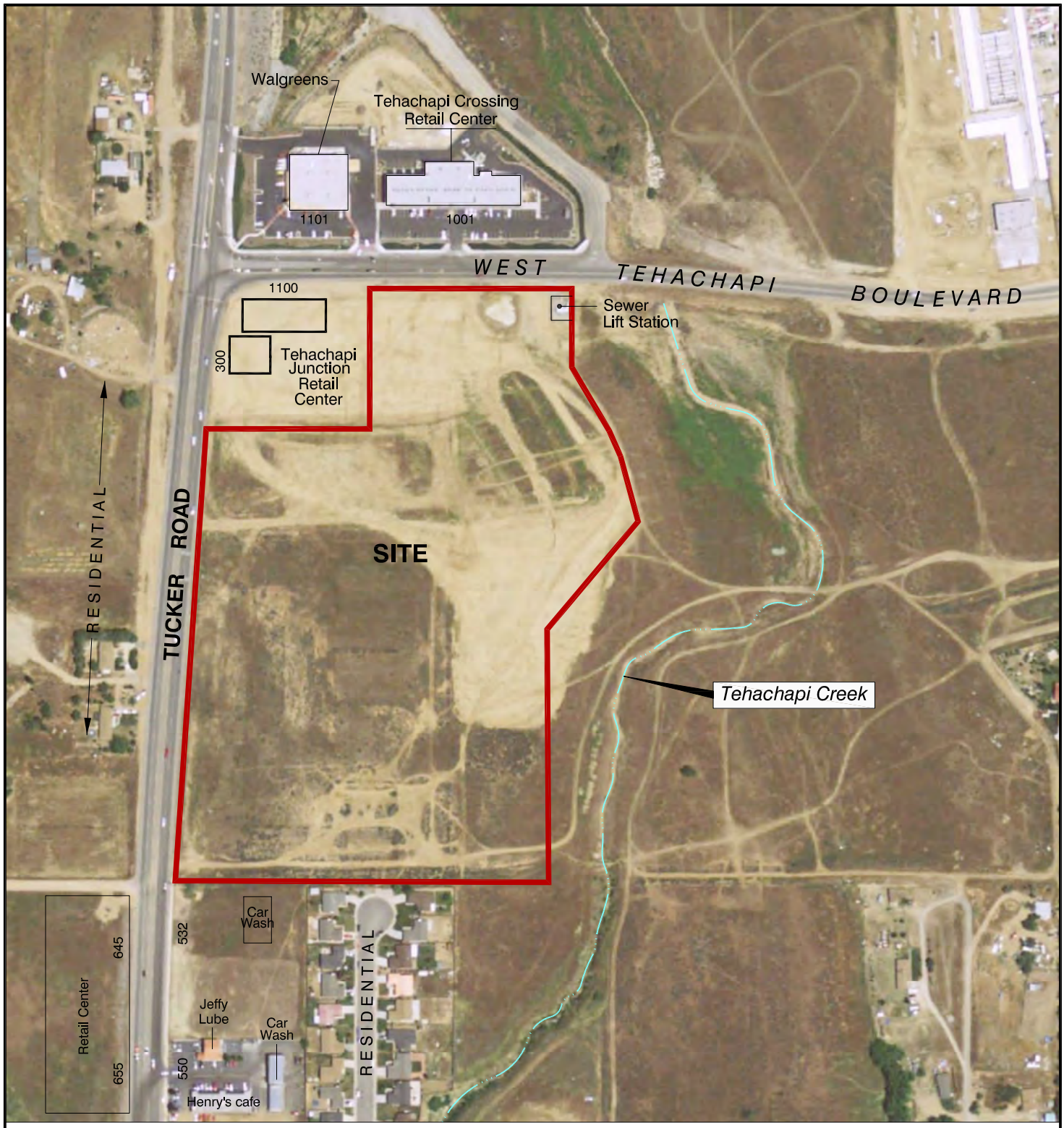
N

NOTE: ALL DIMENSIONS, DIRECTIONS AND LOCATIONS ARE APPROXIMATE.

Map © Rand McNally, R.L.07-S-129

2074370_A1.DWG

Ninyo & Moore	SITE LOCATION MAP	FIGURE
PROJECT NO. 207437002 / DATE 1/09	SOUTHWEST OF THE CORNER OF WEST TEHACHAPI BOULEVARD AND TUCKER ROAD TEHACHAPI, CALIFORNIA	1



REFERENCE: GOOGLE MAP 2008.

APPROXIMATE SCALE IN FEET

0 300 600

NOTE: ALL DIMENSIONS, DIRECTIONS AND LOCATIONS ARE APPROXIMATE.

N

LEGEND

APPROXIMATE SITE BOUNDARY

2074370_A2.DWG

Ninyo & Moore		SITE PLAN	FIGURE
PROJECT NO.	DATE	SOUTHWEST OF THE CORNER OF WEST TEHACHAPI BOULEVARD AND TUCKER ROAD TEHACHAPI, CALIFORNIA	2
207437002	1/09		

APPENDIX A

PHOTOGRAPHIC DOCUMENTATION

Photograph No. 1: **Northeast corner of site, facing northeast.**

Photograph No. 2: **Northeast corner of site, facing east.**

Photograph No. 3: **Northeast corner of site, facing south.**

Photograph No. 4: **Northern boundary of site along West Tehachapi Boulevard, facing west.**

Photograph No. 5: **Intersection of West Tehachapi Boulevard and Tucker Road, facing northwest.**

Photograph No. 6: **Eastern boundary of site along Tehachapi Creek, facing south.**

Photograph No. 7: **Eastern boundary of site along Tehachapi Creek, facing north.**

Photograph No. 8: **Eastern boundary of site, facing north, from center of site.**

Photograph No. 9: **Western boundary of site along Tucker Road, facing south.**

Photograph No. 10: **Western boundary of site along Tucker Road, facing north.**

Photograph No. 11: **Southern boundary of site, facing west.**

Photograph No. 12: **Southern boundary of site, facing east.**

Photograph No. 13: **Southern boundary of site, facing east from southeast corner of site.**

Photograph No. 14: **Site, facing northwest from southeast corner of site.**

Photograph No. 15: **Site, facing northeast, from center of site.**

Photograph No. 16: **Site, facing north, from center of site.**

Photograph No. 17: **Site, facing east, from center of site.**

Photograph No. 18: **Site, facing southeast, from center of site.**

Photograph No. 19: **Site, facing south, from center of site.**

Photograph No. 20: **Site, facing southwest, from center of site**

Photograph No. 21: **Sewer line running along southern boundary of site across creek.**

Photograph No. 22: **Sewer line running along southern boundary of site across creek.**

Photograph No. 23: Sewer lift station compound, facing southwest.

Photograph No. 24: Inside sewer lift station compound, facing south.

Photograph No. 25: **Inside sewer lift station, facing north.**

Photograph No. 26: **Inside sewer lift station, facing east.**

Photograph No. 27: **Inside sewer lift station compound, facing northeast.**

Photograph No. 28: **Commercial development south of site, facing southeast.**

Photograph No. 29: **Residential development west of site, facing west.**

Photograph No. 30: **Residential development west of site, facing southwest.**

Photograph No. 31: **Tehachapi Junction retail center, facing west.**

Photograph No. 32: **Tehachapi Crossing retail center, facing northeast.**

Photograph No. 33: **South of site along Tucker Road, facing south.**

Photograph No. 34: **Carwash south and adjacent to site, facing south.**

Photograph No. 35: Jiffy Lube south of site, facing south.

APPENDIX B

RELEVANT SITE INFORMATION

Tehachapi
Tehachapi Blvd/Tucker Rd
Tehachapi, CA 93561

Inquiry Number: 2359525.4
November 11, 2008

The EDR Historical Topographic Map Report

EDR® Environmental Data Resources Inc

440 Wheelers Farms Road
Milford, CT 06461
800.352.0050
www.edrnet.com

EDR Historical Topographic Map Report

Environmental Data Resources, Inc.s (EDR) Historical Topographic Map Report is designed to assist professionals in evaluating potential liability on a target property resulting from past activities. EDRs Historical Topographic Map Report includes a search of a collection of public and private color historical topographic maps, dating back to the early 1900s.

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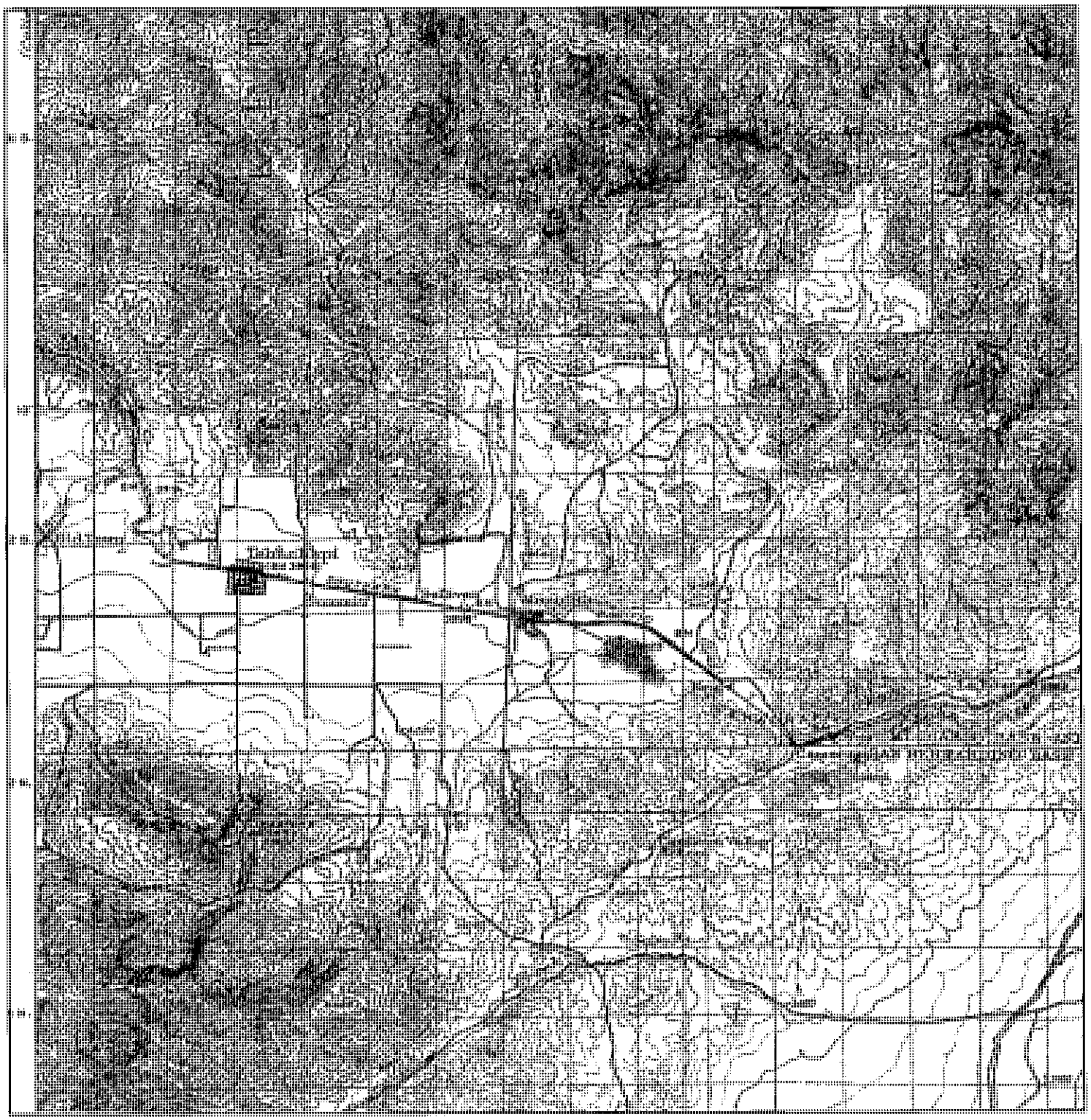
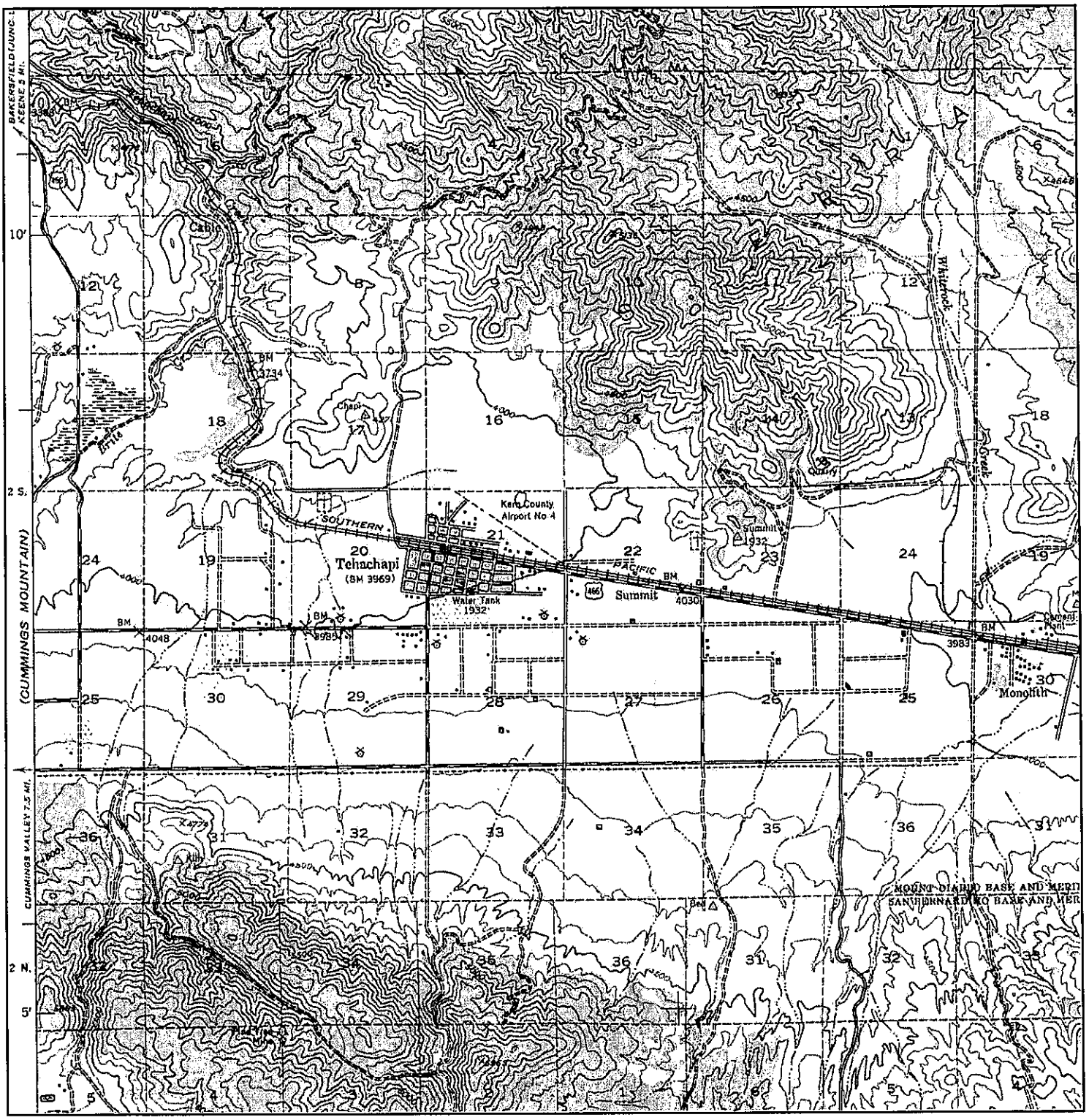
Historical Topographic Map



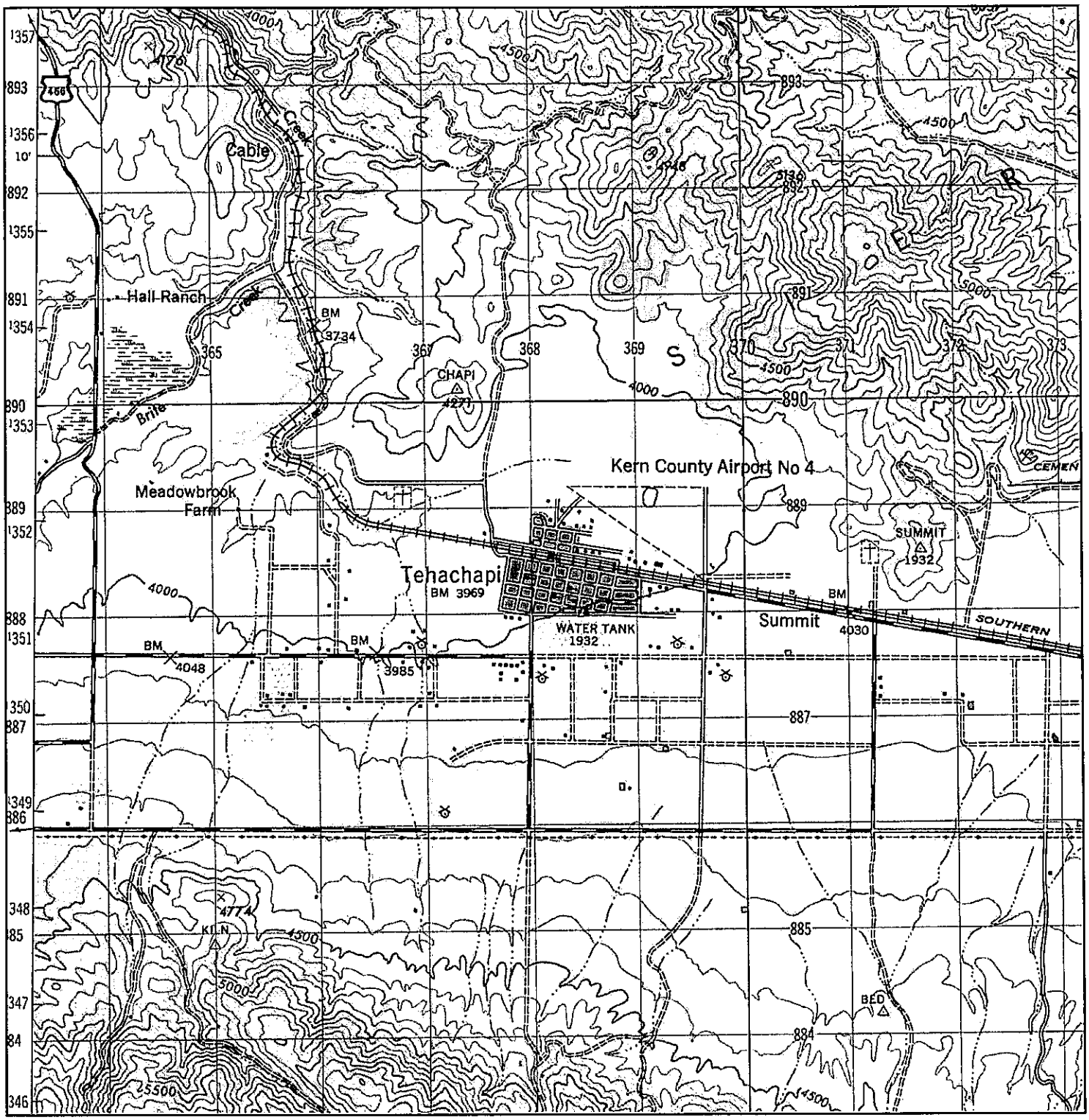
N	TARGET QUAD NAME: MOJAVE MAP YEAR: 1915 SERIES: 30 SCALE: 1:125000	SITE NAME: Tehachapi ADDRESS: Tehachapi Blvd/Tucker Rd Tehachapi, CA 93561 LAT/LONG: 35.1317 / 118.467	CLIENT: Ninyo & Moore CONTACT: Javier Perez INQUIRY#: 2359525.4 RESEARCH DATE: 11/11/2008

Historical Topographic Map



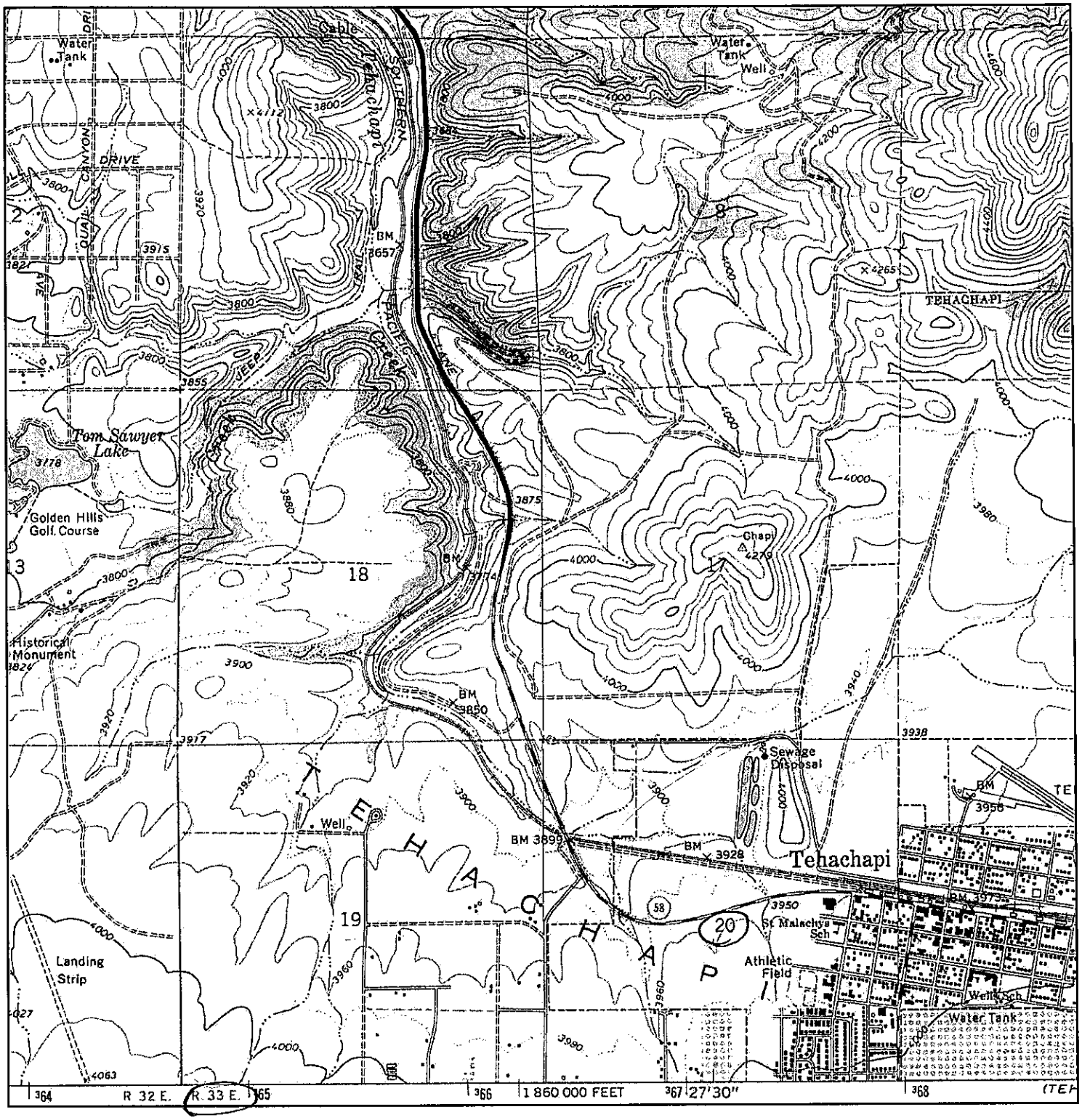
N	TARGET QUAD NAME: TEHACHAPI MAP YEAR: 1943 SERIES: 15 SCALE: 1:62500	SITE NAME: Tehachapi ADDRESS: Tehachapi Blvd/Tucker Rd Tehachapi, CA 93561 LAT/LONG: 35.1317 / 118.467	CLIENT: Ninyo & Moore CONTACT: Javier Perez INQUIRY#: 2359525.4 RESEARCH DATE: 11/11/2008

Historical Topographic Map



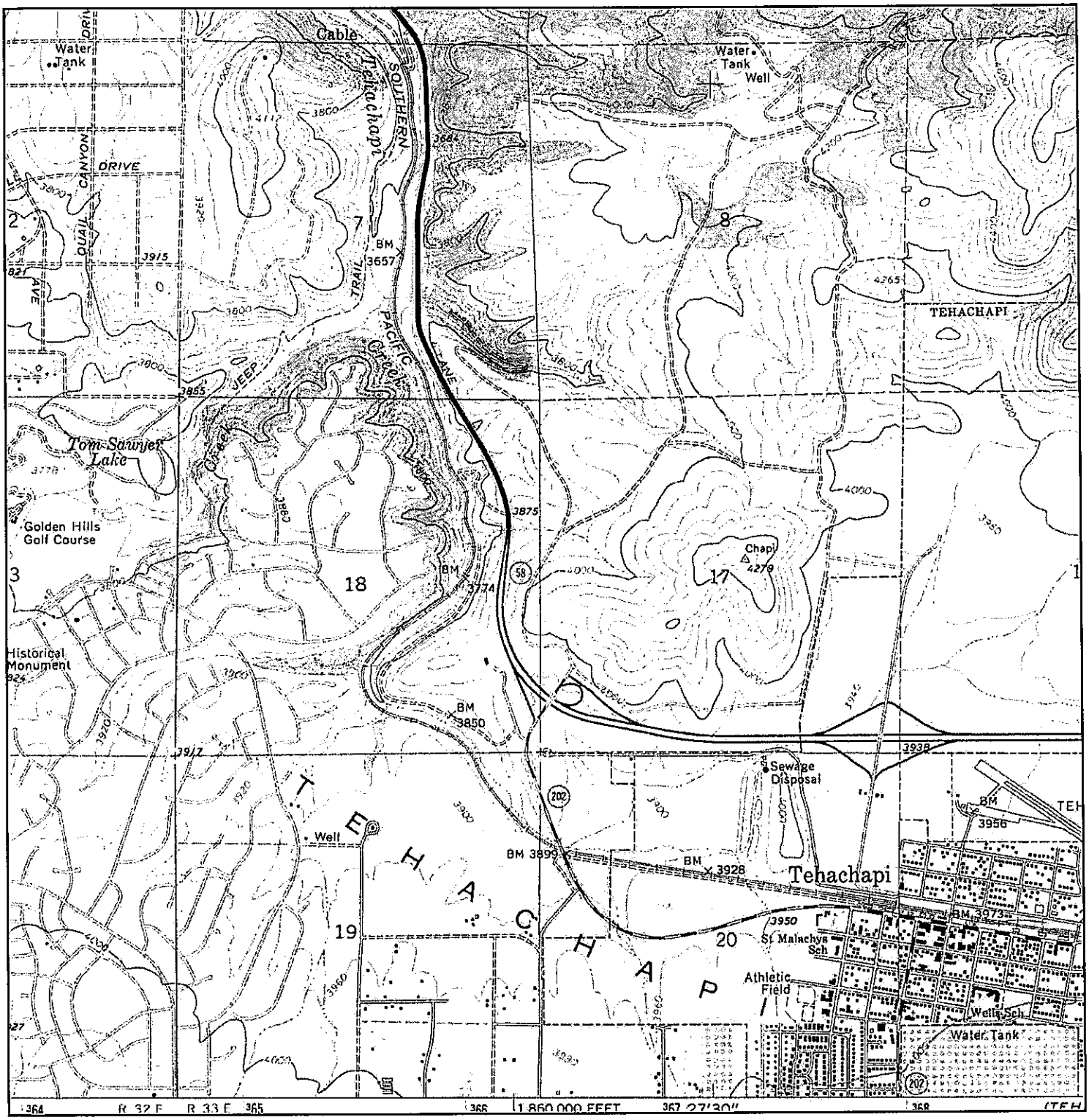
N	TARGET QUAD NAME: TEHACHAPI MAP YEAR: 1947 SERIES: 15 SCALE: 1:50000	SITE NAME: Tehachapi ADDRESS: Tehachapi Blvd/Tucker Rd Tehachapi, CA 93561 LAT/LONG: 35.1317 / 118.467	CLIENT: Ninyo & Moore CONTACT: Javier Perez INQUIRY#: 2359525.4 RESEARCH DATE: 11/11/2008

Historical Topographic Map



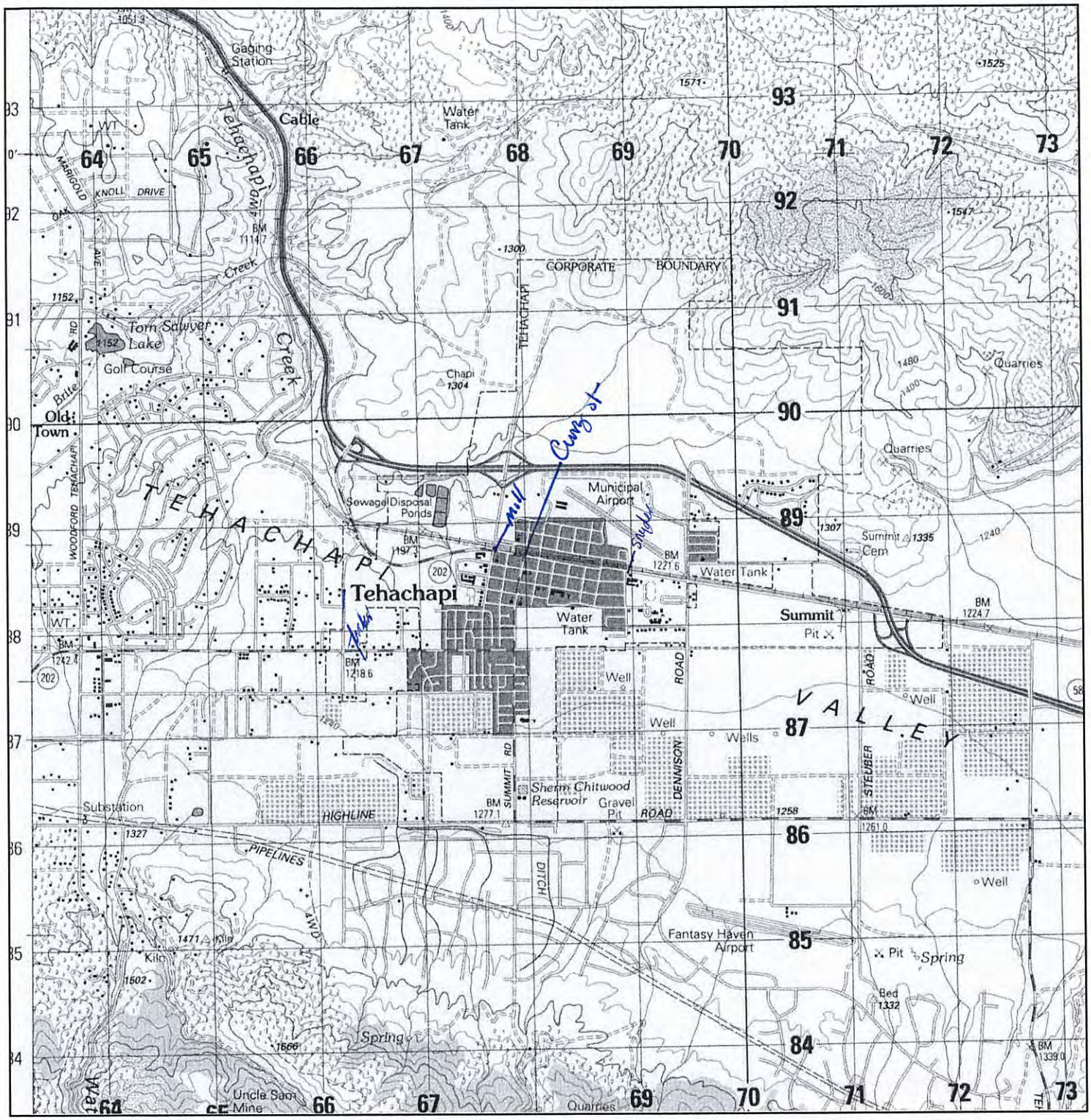
N	TARGET QUAD NAME: TEHACHAPI NORTH MAP YEAR: 1966 SERIES: 7.5 SCALE: 1:24000	SITE NAME: Tehachapi ADDRESS: Tehachapi Blvd/Tucker Rd Tehachapi, CA 93561 LAT/LONG: 35.1317 / 118.467	CLIENT: Ninyo & Moore CONTACT: Javier Perez INQUIRY#: 2359525.4 RESEARCH DATE: 11/11/2008

Historical Topographic Map



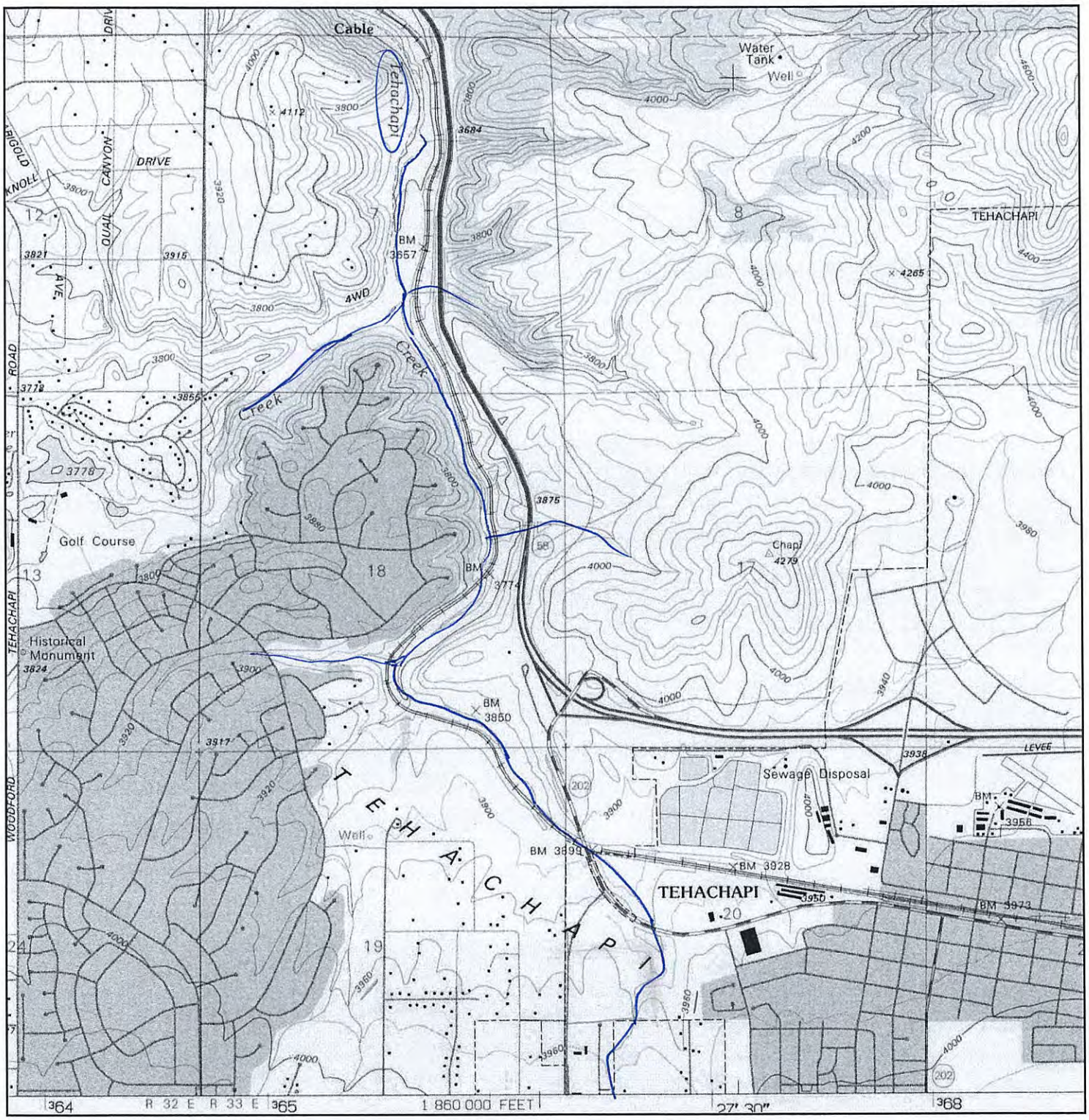
N	TARGET QUAD NAME: TEHACHAPI NORTH MAP YEAR: 1973 PHOTOREVISED FROM:1966 SERIES: 7.5 SCALE: 1:24000	SITE NAME: Tehachapi ADDRESS: Tehachapi Blvd/Tucker Rd Tehachapi, CA 93561 LAT/LONG: 35.1317 / 118.467	CLIENT: Ninyo & Moore CONTACT: Javier Perez INQUIRY#: 2359525.4 RESEARCH DATE: 11/11/2008

Historical Topographic Map



N	TARGET QUAD NAME: TEHACHAPI MAP YEAR: 1983 SERIES: 15 SCALE: 1:50000	SITE NAME: Tehachapi ADDRESS: Tehachapi Blvd/Tucker Rd Tehachapi, CA 93561 LAT/LONG: 35.1317 / 118.467	CLIENT: Ninyo & Moore CONTACT: Javier Perez INQUIRY#: 2359525.4 RESEARCH DATE: 11/11/2008

Historical Topographic Map



N	TARGET QUAD NAME: TEHACHAPI NORTH MAP YEAR: 1992 SERIES: 7.5 SCALE: 1:24000	SITE NAME: Tehachapi ADDRESS: Tehachapi Blvd/Tucker Rd Tehachapi, CA 93561 LAT/LONG: 35.1317 / 118.467	CLIENT: Ninyo & Moore CONTACT: Javier Perez INQUIRY#: 2359525.4 RESEARCH DATE: 11/11/2008

Tehachapi
841 Tucker Rd
Tehachapi, CA 93561

Inquiry Number: 2359525.6
November 24, 2008

The EDR-City Directory Abstract

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SUMMARY

- ***City Directories:***

Business directories including city, cross reference and telephone directories were reviewed, if available, at approximately five year intervals for the years spanning 1971 through 2006. (These years are not necessarily inclusive.) A summary of the information obtained is provided in the text of this report.

Date EDR Searched Historical Sources: November 24, 2008

Target Property:
841 Tucker Rd
Tehachapi, CA 93561

Year	Uses	Source
1971	Address Not Listed in Research Source	Haines Criss-Cross Directory
1976	Address Not Listed in Research Source	Haines Criss-Cross Directory
1981	Address Not Listed in Research Source	Haines Criss-Cross Directory
1986	Save Mart Bake Shop	Haines Criss-Cross Directory
1991	Save Mart Bake Shop	Haines Criss-Cross Directory
1996	Save Mart Bake Shop	Haines Criss-Cross Directory
2001	Save Mart Supermarkets	Haines Criss-Cross Directory
	Union Bank CA	Haines Criss-Cross Directory
2006	Save Mart Supermarkets	Haines Criss-Cross Directory
	Union Bank CA	Haines Criss-Cross Directory

Adjoining Properties

SURROUNDING

Multiple Addresses
Tehachapi, CA 93561

Year	Uses	Source
1971	Address Not Listed in Research Source	Haines Criss-Cross Directory
1976	Address Not Listed in Research Source	Haines Criss-Cross Directory
1981	Address Not Listed in Research Source	Haines Criss-Cross Directory
1986	**Tucker Road**	Haines Criss-Cross Directory
	Office Building (5 Occupants) (821)	Haines Criss-Cross Directory
	Beno's Family Fashions (831)	Haines Criss-Cross Directory
	Apartment Building (851)	Haines Criss-Cross Directory
	No other addresses in 821-999 range	Haines Criss-Cross Directory

Year	Uses	Source
1991	**Tucker Road**	Haines Criss-Cross Directory
	Office Building (5 Occupants) (821)	Haines Criss-Cross Directory
	Beno's Family Fashions (831)	Haines Criss-Cross Directory
	Apartment Building (851)	Haines Criss-Cross Directory
	No other addresses in 821-999 range	Haines Criss-Cross Directory
1996	**Tucker Road**	Haines Criss-Cross Directory
	Office Building (5 Occupants) (821)	Haines Criss-Cross Directory
	Beno's Family Fashions (831)	Haines Criss-Cross Directory
	Apartment Building (851)	Haines Criss-Cross Directory
	No other addresses in 821-999 range	Haines Criss-Cross Directory
2001	**Tucker Road**	Haines Criss-Cross Directory
	Office Building (5 Occupants) (821)	Haines Criss-Cross Directory
	Blockbuster Video (831)	Haines Criss-Cross Directory
	Sears General Information (835)	Haines Criss-Cross Directory
	Autozone (842)	Haines Criss-Cross Directory
	Apartment Building (851)	Haines Criss-Cross Directory
	No other addresses in 821-999 range	Haines Criss-Cross Directory
2006	**Tucker Road**	Haines Criss-Cross Directory
	Office Building (5 Occupants) (821)	Haines Criss-Cross Directory
	Blockbuster Video (831)	Haines Criss-Cross Directory
	Sears General Information (835)	Haines Criss-Cross Directory
	Autozone (842)	Haines Criss-Cross Directory
	Apartment Building (851)	Haines Criss-Cross Directory
	No other addresses in 821-999 range	Haines Criss-Cross Directory

Tehachapi
Tehachapi Blvd/Tucker Rd
Tehachapi, CA 93561

Inquiry Number: 2359525.3
November 11, 2008

Certified Sanborn® Map Report

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440 Wheelers Farms Road
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www.edrnet.com

Certified Sanborn® Map Report

11/11/08

Site Name:
Tehachapi
Tehachapi Blvd/Tucker Rd
Tehachapi, CA 93561

Client Name:
Ninyo & Moore
475 Goddard
Irvine, CA 92618

EDR Inquiry # 2359525.3

Contact: Javier Perez

EDR® Environmental Data Resources Inc

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Certified Sanborn Results:

Site Name: Tehachapi
Address: Tehachapi Blvd/Tucker Rd
City, State, Zip: Tehachapi, CA 93561
Cross Street:
P.O. # 207437002
Project: 207437002
Certification # DB28-4388-83A0

Sanborn® Library search results
Certification # DB28-4388-83A0

UNMAPPED PROPERTY

This report certifies that the complete holdings of the Sanborn Library, LLC collection have been searched based on client supplied target property information, and fire insurance maps covering the target property were not found.

The Sanborn Library includes more than 1.2 million Sanborn fire insurance maps, which track historical property usage in approximately 12,000 American cities and towns. Collections searched:

- ☑ Library of Congress
- ☑ University Publications of America
- ☑ EDR Private Collection

Total Maps: 0

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Tehachapi
Tehachapi Blvd/Tucker Rd
Tehachapi, CA 93561

Inquiry Number: 2359525.5
November 13, 2008

The EDR Aerial Photo Decade Package

EDR® Environmental Data Resources Inc

440 Wheelers Farms Road
Milford, CT 06461
800.352.0050
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EDR Aerial Photo Decade Package

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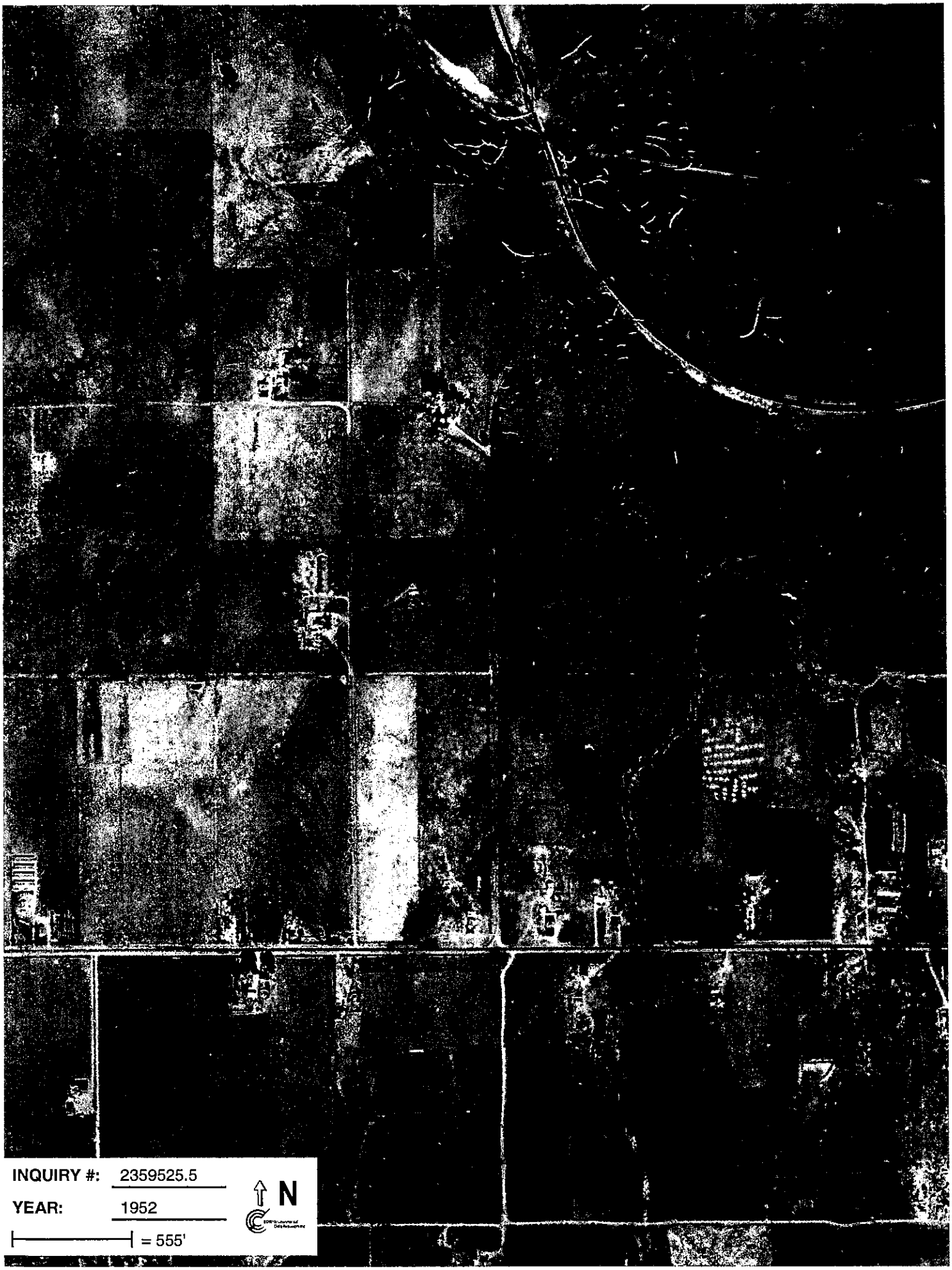
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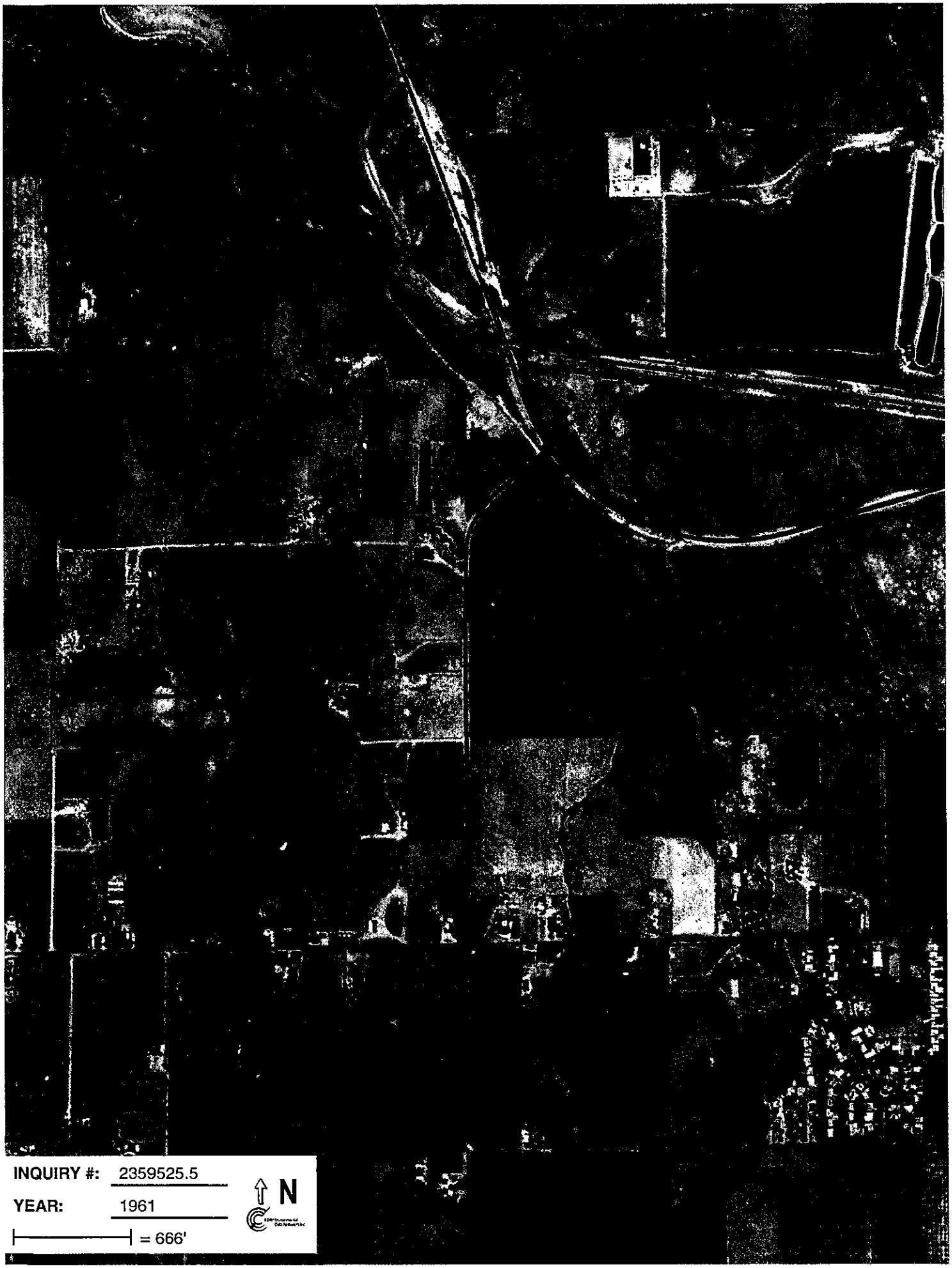
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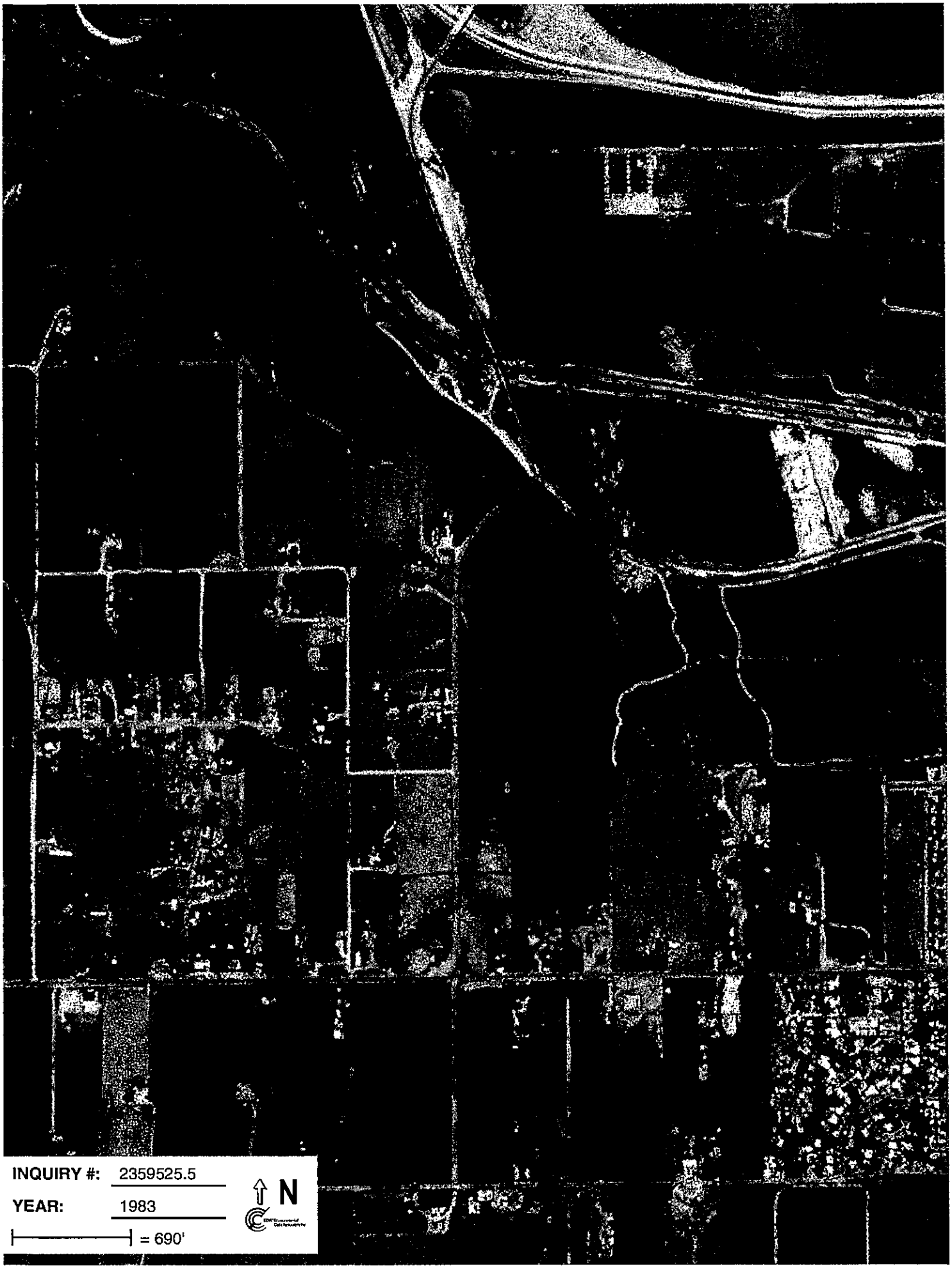
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= 690'
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1
INQUIRY #: 2359525.5
YEAR: 1994
= 666'
N

Date EDR Searched Historical Sources:

Aerial Photography November 13, 2008

Target Property:

Tehachapi Blvd/Tucker Rd
Tehachapi, CA 93561

Year	*Scale*	*Details*	*Source*
1952	Aerial Photograph. Scale: 1"=555'	Flight Year: 1952	Robinson
1961	Aerial Photograph. Scale: 1"=666'	Flight Year: 1961	Fairchild
1983	Aerial Photograph. Scale: 1"=690'	Flight Year: 1983	USGS
1994	Aerial Photograph. Scale: 1"=666'	Flight Year: 1994 Best Copy Available from original source	USGS
2002	Aerial Photograph. Scale: 1"=666'	Flight Year: 2002	USGS
2005	Aerial Photograph. Scale: 1"=484'	Flight Year: 2005	EDR

INQUIRY #: 2359525.5
YEAR: 2002
= 666'
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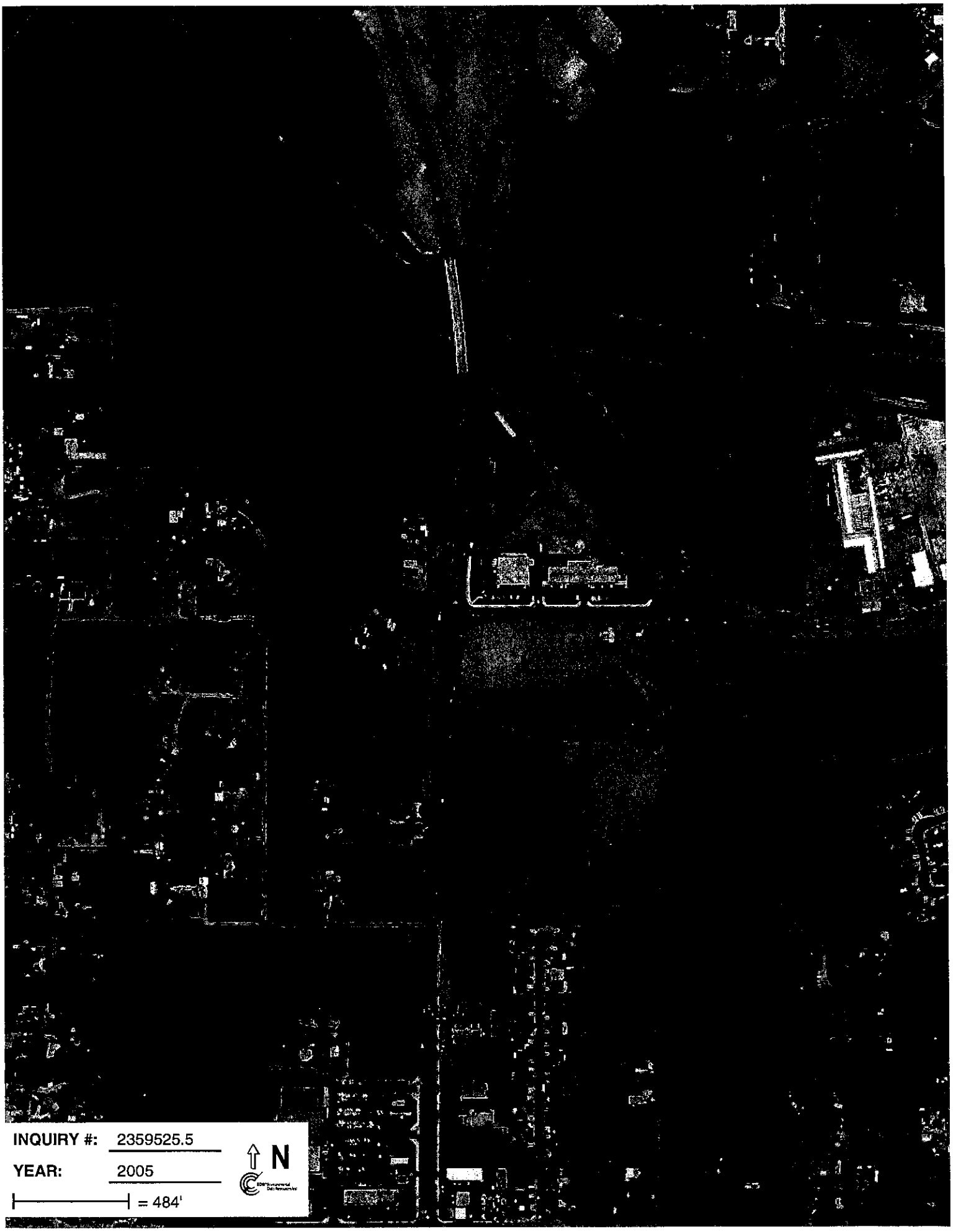

INQUIRY #: 2359525.5
YEAR: 2005
= 484'
N

NEGATIVE DECLARATION

TO WHOM IT MAY CONCERN:

Pursuant to the California Environmental Quality Act of 1970 (CEQA), the State CEQA Guidelines, and the City of Tehachapi Rules to Implement CEQA and State CEQA Guidelines, the City of Tehachapi Community Development Department has made an Initial Study of Possible Impacts of the following described project:

APPLICANT: Pacific Ridge Development, LLc and Arkanian Holdings

APPLICATION: Master Environmental Assessment for the Tehachapi Crossing Commercial Center conceptual site plan and Architectural Guidelines.

LOCATION: North and south of the new alignment of Tehachapi Boulevard, east of the new alignment of Tucker Road (Hwy 202) and west of Mountain View; being a portion of Section 20 T32S, R33E MDM, County of Kern, and City of Tehachapi.

PROJECT DESCRIPTION: The Master Environmental Assessment will cover approximately 36 acres and involve property owned by Pacific Ridge Land, LLc and the Akarankian holdings. While the subject site is owned by two (2) separate entities a conceptual site plan, depicting what can best be described in commercial development parlance as a retail power center, has been development encompassing both ownerships. In this regard the conceptual site plan provides an opportunity for a more comprehensive evaluation of how the subject site may ultimately develop. The land use assumptions applied to the conceptual site plan are based on the applicant's (Pacific Ridge Land, LLc) extensive experience in commercial development and the retail leakage analysis prepared by Burnes Consultants dated July 2000. In addition the various footprints identified on the site plan are also conceptual but never the less reflect prototypical configurations of recognizable retail establishments. In this regard the conceptual site plan can be characterized as a best guess as to how the subject site may ultimately develop. In addition to the conceptual site plan the project also consists of the adoption of architectural guidelines by which future developments within the Tehachapi Crossing project will be evaluated against. The purpose of the Master Environmental Assessment is to evaluate potential impacts and establish mitigation strategies over the entire area encompassed by the conceptual site plan. This approach is in contrast to the piece meal alternative of planning the area in question and evaluating the environmental implications of development on a project-by-project basis. From an environmental impact perspective the conceptual site plan can be characterized as the "most intensive land use" or "worst-case scenario". Case in point, the big box retailer illustrated on the conceptual site plan for example represents a typical Target or Wal-Mart super store. However, should a Target or Wal-Mart

ultimately locate on the subject site it will most likely be a scaled down footprint more conducive to Tehachapi's rural character and demographic profile.

It should be noted that the adoption of the Master Environmental Assessment is not a substitute for a site plan review and in this regard does not constitute an approval of any land use tacit or otherwise. As the area develops each project will still require site plan review and approval on a project-by-project basis. However, assuming the individual projects are relatively consistent with the conceptual site plan in terms of actual land use and intensity of land use the Master Environmental Assessment will serve as the basis for the environmental review of future individual site plans as they proceed through the planning process. In this same regard the appearance of a recognizable footprint should not imply that a definitive end user has committed to a given pad. Again, the conceptual site plan represents a best guess as to how the subject site may ultimately develop which gives the City of Tehachapi an opportunity to evaluate environmental impacts, particularly traffic in a more comprehensive manner. The conceptual site plan reflects the following land use assumptions and intensities and the Master Environmental Assessment has been prepared based on these assumptions.

USE	INTENSITY
Motel	40 Rooms
Retail	244,596 Square Feet
Fast Food Restaurant X 2	4,800 Square Feet
Service Station With Convenience Market	16 pumps and 3,500 sq. ft.

MITIGATION MEASURES: Included in the Proposed Project to Avoid Potentially Significant Effects (if required).

Traffic/Circulation
The applicant will be required to contribute on a pro-rata basis to various regional improvements such as signal lights and road improvements as outlined in the traffic analysis.

Public Services
The applicant will pay water and sewer connection fees to offset the incremental impacts to the City of Tehachapi's water distribution system and wastewater treatment system. In addition, the applicant will be required to pay school impact mitigation fees.

Cultural Resources
If cultural resources are exposed/discovered during the construction phase the applicant will be required to halt work until the resources can be properly retrieved and documented.

Seismic Safety
The applicant shall provide a geo-technical report to be incorporated into the project design in terms of grading and structural details pursuant to the Uniform Building Code.

FINDINGS: It has been found that said project will not have a significant effect on the environment and that an Environmental Impact Report (EIR) is therefore not required pursuant to CEQA.

Any person may object to dispensing with such EIR or respond to the findings contained in the Initial Study a copy of said Initial Study and other information relating to the proposed project are on file in the office of the Community Development Director, Tehachapi City Hall located at 115 South Robinson Street, Tehachapi, California, (661) 822-2200 ext. 107. Any person desiring to examine same or to obtain a copy of the Initial Study or this document, or seek information as to the time and manner to so object or respond, may do so by inquiring at said office during regular working hours.

A copy of the Initial Study; is attached hereto.

_____
DAVID A. JAMES, REA
Community Development Director

AGENCY CONSOLATION REQUIRED: ___X___ Yes ___ No

AGENCIES CONSULTED: CalTrans District 9, Tehachapi Unified School District, Southern California Edison, Pacific Bell, Tehachapi Cummings-County Water District, Kern COG, Kern County Air Pollution Control District, Tehachapi Public Works Department, Tehachapi City Engineer, Southern California Gas Company.

STATE CLEARING HOUSE NUMBER: N/A

INITIAL STUDY PREPARED BY: David A. James

DATE POSTED: June 24, 2002

NARRATIVE DISCUSSION OF ENVIRONMENTAL IMPACTS REGARDING THE TEHACHAPI CROSSING CONCEPTUAL SITE PLAN

A. EARTH

The soil underlying the project area is predominately Tehachapi Sandy Loam. This soil type is commonly found in the Tehachapi region and can be characterized as a well-drained alluvial soil. It is dark grayish brown and grayish brown, sandy loam underlain by dark brown and yellowish brown sandy clay loam subsoil. Permeability of the Tehachapi Sandy Loam soil is moderately rapid and erosion potential is characterized as slight. The Tehachapi Sandy Loam soil has low shrink/swell properties and its erosion hazard is moderate. Tehachapi Sandy Loam soils exhibit few development constraints; however, the applicant or successors in interest shall be required to submit a geologic report in conjunction with a grading plan. Based on the results of future soil studies and other geotechnical considerations at the development stage the subject site may require some degree of over-excavation and re-compaction particularly if liquefiable and/or expansive soil conditions are present. The Antelope Run Drainage skirts the sites eastern boundary; however there are no well-defined drainage courses that traverse the subject site and drainage appears to occur in predominantly a sheet flow condition. The project area does not appear to exhibit any unique geological features or topographic relief. Furthermore, the project will not create unstable earth conditions or changes in geological structures.

B. TRAFFIC/CIRCULATION

The Tehachapi Crossing conceptual plan achieves primary access off Tucker Road (SR 202), which represents a north/south orientated primary arterial within the City of Tehachapi hierarchy of Streets. Tehachapi Boulevard intersects with Tucker Road, which also provides the subject development with secondary or alternate source of ingress/egress. Tehachapi Boulevard represents an east/west orientated primary arterial within the street hierarchy. Regional transportation to the area is provided by State Route 58 located approximately one (1) mile north of the subject site with on and off ramps that accommodate both east and west bound traffic. Crenshaw Traffic Engineers prepared a Traffic Impact Analysis dated June 19, 2002 and contained herein as Appendix A. The purpose of the analysis was to determine the vehicle trips projected to be generated by the proposed development in terms of on street traffic volumes. This impact was analyzed in the context of existing and proposed street networks, segments and key intersections within the study area and general vicinity of the subject site. The project's contribution to existing and future traffic volumes (cumulative) were evaluated and the project's fare share or pro-rata contribution in terms of mitigation was assessed. It should be noted that the pro-rata share/contribution in terms of mitigation was based on the build out of the conceptual site plan and not on an individual project basis. As the individual

Environmental Checklist Form

1.	Project Title:	Tehachapi Crossing Commercial Center
2.	Lead Agency Name and Address:	City of Tehachapi 115 South Robinson Street Tehachapi, CA 93561
3.	Contact Person and Phone Number:	David A. James (661) 822-2200 ext. 107
4.	Project Location:	North and south of the new Tehachapi Blvd., alignment and east of Tucker Road
5.	Project Sponsor's Name and Address:	Pacific Ridge Land, LLc 2821 East Camelback Phoenix, AZ 85016
6.	General Plan Designation:	Community Commercial
7.	Zoning:	Existing: C-3
8.	Description of Project:	Master Environmental Assessment over a 36-acre conceptual site plan
9.	Surrounding Land Uses and Setting:	North: Vacant South: Vacant parcel to the immediate south with commercial development further south East: Vacant West: Single family residence and commercial
10.	Other agencies whose approval is required:	Kern County Building and Safety, Kern County Fire Department

Environmental Factors Potentially Affected:

The environmental factors checked below would be potentially affected by this project, involving at least one impact that is a "Potentially Significant Impact" or as indicated by the checklist on the following pages.

☐ Land Use and Planning	■ Transportation/Circulation	■ Public Services
☐ Population and Housing	☐ Biological Resources	■ Utilities and Service Systems
■ Geophysical	☐ Energy and Mineral Resources	☐ Aesthetics
■ Water	☐ Hazards	☐ Cultural Resources
☐ Air Quality	☐ Noise	☐ Recreation
	☐ Mandatory Findings of Significance	

Determination:

On the basis of this initial evaluation:

I find that the proposed project COULD NOT have a significant effect on the environment, and a NEGATIVE DECLARATION will be prepared. ☐

I find that although the proposed project could have a significant effect on they environment, there will not be a significant effect in this case because the mitigation measures described on an attached sheet have been added to the project. A NEGATIVE DECLARATION will be prepared. ■

I find that the proposed project MAY have a significant effect on the environment, and an ENVIRONMENTAL IMPACT REPORT is required. ☐

I find that the proposed project MAY have a significant effect(s) on the environment, but at least one effect 1) has been adequately analyzed in an earlier document pursuant to applicable legal standards, and 2) has been addressed by mitigation measures based on the earlier analysis as described on attached sheets, if the effect is a "potentially significant impact" or "potentially significant unless mitigated." An ENVIRONMENTAL IMPACT REPORT is required, but it must analyze only the effects that remain to be addressed. ☐

Signature of Community Development Director

June 26, 2002
Date sent out for public review

REGISTERED ENVIRONMENTAL ASSESSOR
DAVID A. JAMES
No. 03733
Expires: 7/2002
STATE OF CALIFORNIA

Issues:	Potentially Significant Impact	Negative Declaration: Significant Unless Mitigation Incorporated	Less Than Significant Impact	No Impact
Would the proposal result in potential impacts involving:				
Landslides or mudslides?	☐	☐	☐	■
I. LAND USE AND PLANNING. Would the proposal:				
a) Conflict with general plan designation or zoning?	☐	☐	☐	■
b) Conflict with applicable environmental plans or policies adopted by agencies with jurisdiction over the project?	☐	☐	☐	■
c) Be incompatible with existing land use in the vicinity?	☐	☐	☐	■
d) Affect agricultural resources or operations (e.g. impacts to soils or farmlands, or impacts from incompatible land uses)?	☐	☐	☐	■
e) Disrupt or divide the physical arrangement of an established community (including a low-income or minority community?	☐	☐	☐	■
II. POPULATION AND HOUSING. Would the proposal:				
a) Cumulatively exceed official regional or local population projections?	☐	☐	☐	■
b) Induce substantial growth in an area either directly or indirectly (e.g. through projects in an undeveloped area or extension of major infrastructure?	☐	☐	■	☐
c) Displace existing housing, especially affordable housing?	☐	☐	☐	■

Issues:	Potentially Significant Impact	Negative Declaration: Potentially Significant Unless Mitigation Incorporated	Less Than Significant Impact	No Impact
III. GEOLOGICAL PROBLEMS. Would the proposal result in or expose people to potential impacts involving:				
a) Fault rupture?	☐	☐	☐	■
b) Seismic ground shaking?	☐	■	☐	☐
c) Seismic ground failure, including liquefaction?	☐	■	☐	☐
d) Seich, Tsumani, or volcanic hazard?	☐	☐	☐	■
e) Landslides or mudflows?	☐	☐	☐	■
f) Erosion, changes in topography or unstable soil conditions from excavation, grading, or fill?	☐	☐	■	☐
g) Subsidence of the land?	☐	☐	☐	■
h) Expansive soils?	☐	☐	■	☐
i) Unique geologic or physical features?	☐	☐	☐	■
IV. WATER. Would the proposal result in:				
a) Changes in absorption rates, drainage patterns, or the rate and amount of surface runoff?	☐	☐	■	☐
b) Exposure of people or property to water related hazards such as flooding?	☐	☐	☐	■
c) Discharge into surface water or other alteration of surface water quality (e.g. temperature, dissolved oxygen or turbidity)?	☐	☐	☐	■

Issues:	Potentially Significant Impact	Negative Declaration: Potentially Significant Unless Mitigation Incorporated	Less Than Significant Impact	No Impact
d) Changes in the amount of surface water in any water body?	☐	☐	☐	■
e) Changes in currents, or the course or direction of water movements?	☐	☐	■	☐
f) Change in the quantity of ground waters, either through direct additions or withdrawals, or through interception of an aquifer by cuts or excavations or through substantial loss of groundwater recharge capability?	☐	☐	■	☐
g) Altered direction or rate of flow of groundwater?	☐	☐	☐	■
h) Impacts to groundwater quality?	☐	☐	■	☐
i) Substantial reduction in the amount of groundwater otherwise available for public water supplies?	☐	☐	■	☐
V. AIR QUALITY. Would the proposal:				
a) Violate any air quality standard or contribute to an existing or projected air quality violation?	☐	☐	☐	■
b) Expose sensitive receptors to pollutants?	☐	☐	☐	■
c) Alter air movement, moisture, or temperature, or cause any change in climate?	☐	☐	☐	■
d) Create objectionable odors?	☐	☐	☐	■

Issues:	Potentially Significant Impact	Negative Declaration: Potentially Significant Unless Mitigation Incorporated	Less Than Significant Impact	No Impact
VI. TRANSPORTATION/CIRCULATION. Would the proposal result in:				
a) Increased vehicle trips or traffic congestion?	☐	☐	■	☐
b) Hazards to safety from design features (e.g. sharp curves or dangerous intersections) or incompatible uses (e.g. farm equipment)?	☐	☐	☐	■
c) Inadequate emergency access or access to nearby uses?	☐	☐	☐	■
d) Insufficient parking capacity on-site or off-site?	☐	☐	☐	■
e) Hazards or barriers for pedestrians or bicyclists?	☐	☐	☐	■
f) Conflicts with adopted policies supporting alternative transportation (e.g. bus turnouts, bicycle racks)?	☐	☐	☐	■
g) Rail, waterborne or air traffic impacts?	☐	☐	☐	■
VII. BIOLOGICAL RESOURCES. Would the proposal result in impacts to:				
a) Endangered, threatened or rare species or their habitats (including but not limited to plants, fish, insects, animals, and birds)?	☐	☐	☐	■
b) Locally designated species (e.g. heritage trees)?	☐	☐	☐	■
c) Locally designated natural communities (e.g. oak forest, coastal habitat, etc.)?	☐	☐	☐	■

Issues:	Potentially Significant Impact	Negative Declaration: Potentially Significant Unless Mitigation Incorporated	Less Than Significant Impact	No Impact
d) Wetland habitat (e.g. marsh, riparian and vernal pool)?	☐	☐	☐	■
e) Wildlife dispersal or migration corridors?	☐	☐	☐	■
VIII. ENERGY AND MINERAL RESOURCES. Would the proposal:				
a) Conflict with adopted energy conservation plans?	☐	☐	☐	■
b) Use non-renewable resources in a wasteful and inefficient manner?	☐	☐	☐	■
c) Result in the loss of availability of a known mineral resource that would be of future value to the region and the residents of the State?	☐	☐	☐	■
IX. HAZARDS. Would the proposal involve:				
a) A risk of accidental explosion or release of hazardous substances (including, but not limited to: oil, pesticides, chemicals or radiation)?	☐	☐	☐	■
b) Possible interference with an emergency response plan or emergency evacuation plan?	☐	☐	☐	■
c) The creation of any health hazard or potential health hazards?	☐	☐	☐	■
d) Exposure of people to existing sources of potential health hazards?	☐	☐	☐	■

Issues:	Potentially Significant Impact	Negative Declaration: Potentially Significant Unless Mitigation Incorporated	Less Than Significant Impact	No Impact
e) Increased fire hazard in areas with flammable brush, grass, or trees?	☐	☐	☐	■
X. NOISE. Would the proposal result in:				
a) Increases in existing noise levels?	☐	☐	☐	■
b) Exposure of people to severe noise levels?	☐	☐	■	☐
XI. PUBLIC SERVICES. Would the proposal have an effect upon, or result in a need for new or altered government services in any of the following areas:				
a) Fire protection?	☐	☐	■	☐
b) Police protection?	☐	☐	■	☐
c) Schools?	☐	☐	☐	■
d) Maintenance of public facilities, including roads?	☐	☐	■	☐
e) Other governmental services?	☐	☐	■	☐
XII. UTILITIES AND SERVICE SYSTEM. Would the proposal result in a need for new systems or supplies, or substantial alterations to the following utilities:				
a) Power or natural gas?	☐	☐	☐	■
b) Communications systems?	☐	☐	☐	■
c) Local or regional water treatment or distribution facilities?	☐	☐	☐	■

Issues:		Potentially Significant Impact	Negative Declaration: Potentially Significant Unless Mitigation Incorporated	Less Than Significant Impact	No Impact
d)	Sewer or septic tanks?	☐	☐	■	☐
e)	Storm water drainage?	☐	☐	■	☐
f)	Solid waste disposal?	☐	☐	■	☐
g)	Local or regional water supplies?	☐	☐	■	☐
XIII.	**AESTHETICS.** Would the proposal:				
a)	Affect a scenic vista or scenic highway?	☐	☐	☐	■
b)	Have a demonstrable negative aesthetic effect?	☐	☐	☐	■
c)	Create light or glare?	☐	☐	■	☐
XIV.	**CULTURAL RESOURCES.** Would the proposal:				
a)	Disturb paleontological resources?	☐	☐	☐	■
b)	Disturb archaeological resources?	☐	☐	☐	■
c)	Affect historical resources?	☐	☐	☐	■
d)	Have the potential to cause a physical change which would affect unique ethnic cultural values?	☐	☐	☐	■
e)	Restrict existing religious or sacred uses within the potential impact area?	☐	☐	☐	■
XV.	**RECREATION.** Would the proposal:				
a)	Increase the demand for neighborhood or regional parks or other recreational facilities?	☐	☐	☐	■

Issues:	Potentially Significant Impact	Negative Declaration: Potentially Significant Unless Mitigation Incorporated	Less Than Significant Impact	No Impact
b) Affect existing recreational opportunities?	☐	☐	☐	■
XVI. MANDATORY FINDINGS OF SIGNIFICANCE.				
a) Does the project have the potential to degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, reduce the number or restrict the range of a rare or endangered plant or animal or eliminate important examples of the major periods of California history or prehistory?	☐	☐	☐	■
b) Does the project have the potential to achieve short-term, to the disadvantage of long-term, environmental goals?	☐	☐	■	☐
c) Does the project have impacts that are individually limited, but cumulatively considerable? ("Cumulatively considerable" means that the incremental effects of a project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects)	☐	☐	■	
d) Does the project have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly?	☐	☐	☐	■

projects within the conceptual Master Plan proceed through the planning process the information contained in the traffic analysis will be used to ascertain the pro-rata contribution required of each of the individual project on a case-by-case basis. It should be noted that for the purposes of evaluating the traffic impacts associated with the conceptual site plan a build out date of 2007 was assumed.

The proposed project consists of the following land uses and corresponding intensities:

USE	INTENSITY
Motel	40 Rooms
Retail	244,596 Square Feet
Fast Food Restaurant X 2	4,800 Square Feet
Service Station With Convenience Market	16 pumps and 3,500 sq. ft.

The daily traffic volumes associated with the build out of the conceptual site plan have been estimated based on data obtained from the institute of Transportation Engineers (ITE), Trip Generation, 6th Edition dated January 1997. At full build out the Tehachapi Crossing conceptual site could generate up to 13,829 vehicle trips per day. The traffic study evaluated impacts associated with two (2) targeted growth periods, 2007 and 2020. In both instances traffic impacts and the corresponding level of service (LOS) analysis were evaluated with and without the Tehachapi Crossing proposal. Based on the traffic study all intersections within the study area, with the exception of Valley Boulevard/Tucker Road will continue to operate at a Level of Service (LOS) C or better providing the mitigation measures as outlined in the traffic study are implemented. With respect to the Valley Boulevard/Tucker Road intersection the traffic study suggests that if Red Apple Road is constructed adequate traffic volumes will be shunted away from the Tucker Road/Valley Boulevard intersection to bring said intersection back up to an LOS C. It should be noted that LOS C represents an acceptable threshold per the City of Tehachapi Circulation Element.

With respect to intersection capacity, in year 2007 the following intersections within the City limits will require signalization.

- Tehachapi Boulevard and Curry Street
- Valley Boulevard and Mountain View Avenue
- Valley Boulevard and Curry Street
- Valley Boulevard and Golden Hills Avenue

- Tehachapi Boulevard and Green Street
- Tehachapi Boulevard and Mill Street
- Tehachapi Boulevard and Mountain Avenue
- Tehachapi Boulevard and Tucker Road

With respect to road segment capacity the following street improvements will need to be constructed in order to maintain a LOS C in year 2007.

- Construct an additional two (2) lanes of pavement on Valley Boulevard from Mountain View Avenue to Tucker Road, producing an Undivided Arterial condition.
- Construct additional pavement and Median on Valley Boulevard from Tucker Road to Golden Hills Boulevard to produce a Divided Arterial condition.

Based on the year 2020 traffic projections the following improvements will need to be constructed/installed.

- The intersection of Tucker Road and Valley Boulevard will require upgrading to accommodate additional turn lanes for north bound (NB) Left and south bound (SB) right traffic movements. It should be noted that these improvements to Tucker Road and Valley Boulevard would not need to be installed if the Red Apple Way extension improvement is completed.
- Construction of additional pavement and Median Divider on Valley Boulevard from Mt. View Avenue to Tucker Road to produce a Divided Arterial condition.

With respect to the project's pro-rata mitigation, the following identifies the project's fair share of the cost to signalize the impacted intersections within the study area.

- Tehachapi Boulevard and Curry Street. (Pro-rata share 15%)
- Valley Boulevard and Mountain View Avenue. (Pro-rata share 13%)
- Valley Boulevard and Golden Hills Boulevard. (Pro-rata share 10%)
- Tehachapi Boulevard and Green Street. (Pro-rata share 8%)
- Tehachapi Boulevard and Mill Street. (Pro-rata share 30%)

- Tehachapi Boulevard and Mt. View Avenue. (Pro-rata share 27%)

- Valley Boulevard and Curry Street. (Pro-rata share 7%)

- Tehachapi Boulevard and Tucker Road. (Pro-rata share 30%)

The following represents the project's pro-rata contribution towards street segment improvements for year 2007.

- Construct an additional two (2) lanes of pavement on Valley Boulevard from Mountain View Avenue to Tucker Road, producing an Undivided Arterial condition. (Project's pro-rata share 8%).

- Construct additional pavement and Median on Valley Boulevard from Tucker Road to Golden Hills Boulevard to produce a Divided Arterial condition or alternatively construct two (2) travel lanes of the Red Apple Road extension. (Project's pro-rata share 9% or 8% respectively).

The following represents the project's pro-rata contribution towards street segment improvements for year 2020.

- The intersection of Tucker Road and Valley Boulevard will require upgrading to accommodate additional turn lanes for north bound (NB) Left and south bound (SB) right traffic movements. (Project's pro-rata share 14%).

- Construction of additional pavement and Median Divider on Valley Boulevard from Mt. View Avenue to Tucker Road to produce a Divided Arterial condition. (Project's pro-rata share 8%).

C. AIR

The development of the subject site for 125 single-family residential units will temperately increase the level of "Fugitive Dust" (particulate matter) in the air primarily during the grading phase of the project. This impact associated with particulate matter is commonly referred to as P. M. 10. In accordance with the Kern County Air Pollution Control Board the individual projects will be required as a condition of approval to water down the site and/or use soil binders to reduce dust emissions and implement the District's policies. It is anticipated that the individual projects will develop independently and not concurrently. Therefore, given the scale of the individual projects and the District's policies relative to P.M. 10, construction-related impacts will be kept to a minimum. It should be noted that it is anticipated that the development of the site will be phased and as such the grading will in all likelihood also be phased. In this regard the impacts to air quality relative to the P.M. 10 issue will occur over time rather that all at once which would be the case if the entire Tehachapi Crossing site were mass graded.

In terms of traffic related air quality issues, the buildout of the Tehachapi Crossing conceptual site plan could generate approximately 13,829 vehicle trips per day. As previously indicated in the Traffic/Circulation section of this report, the additional trips generated by this project can be absorbed by the area circulation network without causing the traffic flow to drop below an acceptable level of service providing the mitigation measures in the traffic report are implemented. Level of service and traffic congestion are directly related to the issue of air quality relative to auto exhausts emissions. The development activity and associated traffic generation may have an incremental impact on local air quality but will not individually or collectively cause a significant decrease in the regions air quality. The City of Tehachapi's inherent compact urban form will contribute to the maintenance of good air quality by reducing the trip lengths for local residents to drive to access shopping and employment destinations.

D. WATER

The build out of the Tehachapi Crossing project as depicted by the conceptual site plan could consume approximately 73,454 gallons per day (GPD) as calculated below for each of the anticipated uses.

- 40 room hotel x 80% occupancy X 127 gallons of water per unit per day = 4,064 gallons per day
- 244,596 Square feet of retail space X 114 gallons/day/1,000sq. ft. = 27,884 gallons/day
- 3,500 square foot convenience market X 114 gallons/day/1,000 sq. ft. = 399 gallons/day
- 4,800 square feet of restaurant space X 1,075 gallons/day/1,000 square feet = 5,160 gallons/day

The amount of water anticipated to be consumed by the Tehachapi Crossing conceptual site plan at build out is 73,454-gallons/day or .22 acre feet/day. This amount of water consumption will not have a significant impact on the availability of domestic water to the public. The "safe yield" of the ground water basin underlying the Tehachapi region has been established at 5,500-acre feet per year (AFY). The basin has been adjudicated and the City currently has a base right/pumping right of approximately 1,809-Acre Feet (AF) exclusive of any carryover from previous years and/or exchange pool resources. The City of Tehachapi typically uses approximately 1,600 AFY and based on a projected 3% growth rate the City should have adequate pumping rights through year 2007. It should be noted that over the last four (4) years there has been approximately a 1.5% growth within the City limits. To mitigate/offset the cost of expanding the City of Tehachapi municipal system in terms of new wells, additional storage facilities, etc., the developers of the Tehachapi Crossing project will be required

to pay an impact fee per Resolution No. 35-95 at the development stage. In addition, at the development stage the various developers will be required to convey their water rights or pay an equivalent in-lieu fee as a condition of development to offset/mitigate the incremental impact to the City of Tehachapi's water availability in terms of water rights and pumping rights.

With respect to water conservation practices, future retail, service commercial, hotel and restaurant uses within the project area will be required to comply with Title 20 and Title 245 of the California Administration Code relative to appliance efficiency standards such as water-conservation water closets, flow restricted shower heads, etc. In addition, the tentative map will be conditioned to utilize drought tolerant and native landscaping to the greatest extent possible pursuant to AB 325 and the City of Tehachapi Landscape Guidelines.

With respect to water quality related issues, impacts can be broken down into three (3) categories; grading, construction and project occupancy. At the development stage any non-point pollution and storm water discharge associated with grading activity and/or construction activity will be regulated under the Federal Clean Water Act Section 402. Any grading disturbance of over one (1) acre will necessitate a National Pollution Discharge Elimination System (NPDES) permit relative to non-point pollution associated with construction activity, processed through the Regional Water Quality Control Board (Central Valley Region). This permit process will require preparing a Storm Water Pollution Prevention Program (SWPP) employing "best management practices" (BMPs) relative to the long and short term control of erosion and sedimentation, and construction staging activity. In terms of the post construction or project occupancy phase, mitigation could include monthly street and parking lot sweeping to reduce the concentration of pollutants associated with run-off occurring during the "first flush" event. The highest concentration of urban related pollutants occurs following the first major storm of the year. This event is commonly referred to as the first flush. Additionally, in conjunction with the reconstruction and realignment of Tucker Road (SR 202) Caltrans has installed a regional retention basin located at west of the Tehachapi Crossing site. The retention basin has been sized/designed to accommodate the incremental runoff associated with existing and future development of property located within the Tucker Road drainage area. The presence of this offsite regional retention facility will capture storm water prior to being released to Tehachapi Creek whereby much of the heavy metal compounds will be intercepted and dissipated within the retention basin prior to reaching the Tehachapi Creek Drainage. Planting the retention basin or allowing the basin to seed naturally with hydrophilic plants such as cattails sedges and willows will increase the efficiency of purifying the storm water pollutants such as hydrocarbons and heavy metals associated with urban runoff. This technique will also create an artificial wetland environment and create conditions for species occupying mesic habitats, creating a positive benefit to wildlife. Retention or detention facilities can also serve to reduce the increased run-off resulting from an increase in impervious surfaces to

an amount equivalent to the pre-development stage and the Tucker Road facility has been designed to achieve that end.

E. SEWER

The development of the Tehachapi Crossing conceptual site plan as depicted will require connection to a municipal system as opposed to the individual septic tank alternative. Given the land use mix and intensities illustrated on the conceptual site plan the build out of the Tehachapi Crossing concept plan could generate up to 3,7418 gallons/day of wastewater per day as calculated below for each of the anticipated land uses.

- 40 room hotel x 80% occupancy X 130 gallons of wastewater/unit/day = 4,160 gallons of wastewater per day
- 244,596 Square feet of retail space X 104 gallons of wastewater/day/1,000sq. ft. = 27,883 gallons of wastewater /day
- 3,500 square foot convenience market X 104 gallons of wastewater/day/1,000 sq. ft. = 364 gallons/day
- 4,800 square feet of restaurant space X 1,044 gallons of wastewater/day/1,000 square feet = 5,011 gallons/day

The quantity of wastewater anticipated to be generated by the Tehachapi Crossing conceptual site plan at build out will not have a significant effect on the City of Tehachapi Wastewater Treatment Plant. The plant is designed as an advanced secondary treatment facility with a capacity to process up to 1.25 million gallons per day (MGD) and is currently operating at only half capacity. To mitigate/offset the incremental increase in wastewater future developments locating within the Tehachapi Crossing project will be required to pay sewer connection/mitigation fees at the development per Resolution No. 35-95. Currently the Tehachapi Crossing site lacks direct access to a sewer truck line. As an interim solution some of the less intensive uses depicted on the conceptual site plan can utilize a septic tank and leach field system until such time the municipal system is available. To that end, to serve the site a 12-inch truck line needs to be extended from its present terminus in Tucker Road a distance of approximately 1,500 feet north within the Tucker Road right-of-way. In addition the subject site is located below the grade of the sewer treatment plan and as such to serve the subject site and other properties located within the Tucker Road drainage basin a regional lift station and force main is planned and under design to address the access and capacity challenge. The location of the lift station and force main is north of the Tehachapi Crossing project and south of the Union Pacific Rail line at the lowest point in the Tucker Road Drainage basis in. Once the above referenced regional sewer collection system is constructed all of the potential developments depicted on the conceptual site plan will have

access to a municipal system. In additional all developments that have been allowed to proceed ahead of the Tucker Road sewer collection system by utilizing a septic system will be required to decommission the septic system and tie into the domestic system. Additionally, to offset the cost of constructing the Tucker Road Drainage sewer collection system future developments that located within the subject site and the Tucker Road Drainage area will be required to contribute $500.00 per equivalent dwelling unit (EDU) towards the Tucker Road Basin sewer fee area.

F. GEOLOGY/SEISMICITY

The subject site is considered seismically active, as is most of Kern County. All proposed structures and utility installations anticipated to occur at the development stage would be designed to withstand anticipated ground acceleration within an acceptable level of risk. It is assumed that the Garlock Fault located approximately nine (9) miles southeast of the project area will be the design fault by which construction parameters will be established in conjunction with other Uniform Building Code (UBC) seismic standards applicable to the project site and future development proposals. The Garlock Fault shows the characteristic features of high-angle faults with major strike-slip component. The Garlock Fault has a Richter Magnitude potential of 8.0 and a Peak Acceleration range of .409(g) to .904(g). Further, at the development stage the project proponent(s) shall be required to submit a geo-technical report. The findings of the geo-technical report shall be incorporated into the project design of future commercial developments on a project-by-project basis in terms of grading activity and structural details pursuant to the Uniform Building Code.

G. CULTURAL RESOURCES

The subject site is located within the ancestral home of the Kawaiisu cultural group also known as Nuooah who are linguistically related to the Shoshonean language family. Several archeological evaluations were conducted around the subject site in conjunction with the SR 202 realignment and reconstruction project and the Antelope Run restoration project. None of these studies produced any evidence of surface resources. In addition the subject site has been heavily disturbed by past ranching practices and by illegal off-road vehicle activity which continues as of this writing in spite of the Kern County Sheriff Departments attempts to control the off-road vehicle enthusiast. Therefore, given these conditions it is not likely that there are any surface artifacts present on the subject site that would warrant and/or justify the expense of a field investigation by an archeologist. However, if resources are excavated during the construction phase the project will be conditioned to cease grading and other construction activity until such time as the resources can be recovered and properly documented.

H. PLANT LIFE/WILDLIFE

The subject site has been disturbed by past agricultural practices and on going off-road vehicle activity. In addition the subject site is located within an area having an established pattern of urban development. There are several plant and animal species in the Tehachapi region that are of special concern. However, given the above referenced factors no form of unique, rare or endangered flora species, flora communities or fauna species could be sustained on the subject site. Therefore the City of Tehachapi will issue a "De Minimis of Impacts Finding" indicating that the project will not adversely impact any rare and/or endangered flora or fauna. Development of the 36-acre site for commercial type uses will reduce the amount of "open space" and relatively natural habitat available in the region. The cumulative loss of open space had already been considered within the Programmed Environmental Impact Report (EIR) prepared in conjunction with the 1999 City of Tehachapi General Plan update.

I. PUBLIC SERVICES

The project area at build-out may result in the need for increased law enforcement and fire protection facilities. This incremental level of need is not significant in relation to the overall population growth in the region and will be partially offset by the increase in future property tax, sales tax and transit occupancy tax to the City of Tehachapi produced by the development of the subject site in a manner consistent with the conceptual site plan prepared for the Tehachapi Crossing development. The project area will place an incremental increase on water and sewer facilities. The City of Tehachapi has completed a study of the cost of providing these services (City of Tehachapi Water and Waste Water System Development Fee Study) and the fees for services are equal to the cost of providing said services consistent with AB 1600. To mitigate/off-set the incremental impact/demand on the City of Tehachapi's municipal water and sewer system future developer(s) of the area will be required to pay an impact fee per Resolution No. 33-98 at the development stage. The development of the subject site will also have an indirect impact on the Tehachapi Unified School District based on an assumption that the additional employment opportunities made available by the development of the subject site will generate additional residence to the Tehachapi region.

To offset/mitigate these indirect impacts, school impact fees at .32 cents per square foot for the future commercial structures will be paid at the development stage on a project-by-project basis.

J. DRAINAGE/HYDROLOGY

The build out of 36-acre site for future commercial developments and associated street and parking lot improvements will increase the amount of impervious surface area and as such create a corresponding increase in storm water run-off. At the development stage, the applicant will be required to calculate and collect the storm water run-off in a storm drain system and convey the storm water run-off to an appropriate outlet. As indicated in the water quality section of this document in conjunction with the reconstruction and realignment of Tucker Road (SR 202) Caltrans has installed a regional retention basin located west of the Tehachapi Crossing site on the west side of the recently realigned Tucker Road (SR 202). The retention basin has been sized/designed to accommodate the incremental runoff associated with existing and future development of properties located within the Tucker Road drainage area. At the development stage the applicant(s) will be required to provide a hydrology/drainage study to demonstrate the manner in which storm water run off will be collected and conveyed to the above referenced regional retention facility.

K. POPULATION

The conceptual site plan, which is the basis for this Initial Study, does not identify specific end users. As indicated in the project description section of this document the footprints included on the conceptual site plan are for illustrative purposes only. As such it is impractical to predict with any specificity how many employment opportunities may result from the build out of the Tehachapi Crossing Center conceptual development plan. However, as a general rule retail establishments require between eight (8) and fifteen (15) employees per acre. The subject site is 36 aces and assuming a worst-case scenario of fifteen employees per acre the development as proposed could generate as many as 540 jobs. Further, assuming all of the employees were to relocate to the Tehachapi region from some other location the 540 employees could translate into a population increase of 1,296 individuals. Given The Tehachapi regions high unemployment and under employment rate is very likely that the majority of the jobs created by the development of the Tehachapi Crossing Center will be filled by residence already living in the region. However, the incremental increase in population under the worst case scenario will not alter population distribution in the area in any significant way and will not cause individually or collectively the population of the City of Tehachapi or the Tehachapi region to exceed current population projections and trends as adopted by the Kern Council of Governments (KernCOG).

ARCHITECTURAL DESIGN GUIDELINES

PREPARED FOR
TEHACHAPI CROSSING COMMERCIAL CENTER

PREPARED BY
CITY OF TEHACHAPI

JUNE 2002

BACKGROUND

As of this writing the City of Tehachapi does not have an urban design guideline and/or architectural design guideline criteria by which to evaluate commercial or industrial proposals relative to architectural quality. As the title of the project suggest the Tehachapi Crossing Commercial Center represents one of the market/gateway entrances to the City of Tehachapi. As such it is imperative that future development proposals within the Tehachapi Crossing project area reflect quality architectural standards. To that end in the absence of City wide architectural design criteria the City of Tehachapi has prepared an architectural design guideline specifically for the Tehachapi Crossing Commercial Center to be reviewed and adopted in conjunction with the Master Environmental Assessment prepared for the Tehachapi Crossing conceptual site plan. The subject site is owned by two (2) separate entities. However, a conceptual site plan has been development encompassing both ownerships. In this regard the conceptual site plan provides an opportunity for a more comprehensive evaluation of how the subject site may ultimately develop. The land use assumptions applied to the conceptual site plan are based on the applicant's (Pacific Ridge Land, LLc) extensive experience in commercial development and the retail leakage analysis prepared by Burnes Consultants dated July 2000. In addition the various footprints identified on the site plan are also conceptual but never the less reflect prototypical configurations of recognizable retail establishments. In this regard the conceptual site plan can be characterized as a best guess as to how the subject site may ultimately develop.

Should the City of Tehachapi subsequently adopt citywide architectural design guidelines it is anticipated that the citywide architectural guidelines and development criteria will supercede the guidelines prepared specifically for the Tehachapi Crossing project. However, in the interim the Tehachapi Crossing Architectural Guidelines will provide a mechanism by which to give the City of Tehachapi additional design flexibility and control over future projects as they proceed through the Architectural Design and Site Plan review process. As indicated the foot prints depicted on the Tehachapi Crossing conceptual site plan while generic do never the less reflect real world corporate configurations. In some instances retailers have off the shelf corporate architectural renderings that they prefer to use and often attempt to impose on communities. Case in point Wal-Mart. Often these off the shelf corporate designs lack even the most basic architectural elements. In this regard without adequate controls in place many communities are left with large square concrete boxes that have the appearance of being an industrial building or warehouse/distribution center.

PURPOSE

The purpose of the architectural guidelines is to define general design objectives for future commercial developments that locate within the Tehachapi Crossing Commercial Center and to complement the development standards that already exist within the relevant sections of the City of Tehachapi zoning ordinance. The purpose of the architectural design guidelines are not to promote sameness or a thematic design concept. Rather the intend of the guidelines are to promote quality, encourage originally, flexibility and innovation and to discourage monotonous, inappropriate and poorly designed commercial structures. The architectural design criteria established herein are not intended to be rigid or restrict creative design solutions. The Planning Commission, at its discretion, shall have the authority to

consider and accept alternative building designs that are determined to meet the general intent of the guidelines.

BUILDING FORM, MASS AND SCALE

Building massing is envisioned as a combination of one-story, two-story and three-story elements, with second story volumes concentrated at the center of building composites. Random and frequent variations of building masses will reinforce a timeless quality and lend distinctiveness to particular retail users.

Buildings should have offset building planes and recessed areas of the building façade to provide relief to long elevations and to create shade and shadow patterns. Interconnection and lapping of building forms and heights to break long expanses of blank walls help relieve monotony and are encouraged. Low decorative walls and walls utilized to enclose courtyards or screen service yards provide a gradual building up of massing and help relate buildings to the landscape.

Appropriate

- Building forms should be designed to create visual interest on all sides of the structure. The architectural concept should be consistent on all sides of the building.
- Combination of one and two-story volumes.
- Two-story volumes should be stepped, sloped or grouped with one-story volumes to reduce the apparent mass to human scale.
- Entries to individual buildings and public spaces between buildings should be emphasized with highlighted massing and articulated roof forms.
- Buildings devoted to larger major tenants such as supermarkets and drugstores should be well balanced and consistent in scale and proportion with other surrounding uses.
- Individual facades should be offset or otherwise articulated by projections, recesses, angled or curved surfaces.
- Facades should be designed to provide a variety of display and viewing opportunities.
- Architectural proportions and details should be sympathetic to a residential scale.

Inappropriate

- Large-scale uninterrupted walls, not otherwise articulated by form, fenestration or materials.
- Massive building elements, such as timbers, beams, columns, etc., that are out of scale with the architectural style.
- False facades and other applied ornamentation unrelated to the rest of the building or structure.

FENESTRATION

Exterior openings in commercial buildings, such as doors, windows or arcades, should be used in repetitive patterns to create rhythm and interest. Entries and entry doors are especially important as focal points to building elevations. Doorways should be deeply

recessed to create strong shadow lines and intimate entries to buildings. Architectural features and detail treatments at doors and entries are encouraged. Features and details may consist of tile accents, color accents, raised plaster molding, decorative wood moldings and pediments.

Windows should generally be recessed and designed to provide a variety of display and viewing opportunities, as opposed to continuous "storefront" glazing. Glazing should be transparent to enable pedestrians and motorists views into retail shops and other spaces.

A wide variety of storefronts may be utilized and should be designed to be compatible with the architectural character of the buildings. The use of colored storefront is preferred as opposed to natural or anodized aluminum.

Appropriate

- Building openings should be deeply recessed or provide bold projections to create shadow and visual interest.
- A wide variety of window and door treatments in elevation, compatible with the architectural character derived.
- A wide variety of display windows and merchandising windows.
- The use of colored storefront and clear glazing.
- Wood frame windows and doors are discretionary due to high maintenance.

Inappropriate

- Large expanses of conventional "storefront" glazing and large plate glass windows.
- Opaque or reflective glazing.
- Natural aluminum or anodized aluminum storefronts.

ROOF FORM AND MATERIALS

Primary roof forms within the Tehachapi Crossing Commercial Center shall predominately consist of a combination of pitched and flat roofs with parapets. Where appropriate, generous overhangs to create strong shadow lines are encouraged. Lower shed roofs or second-story projections that offer opportunities for covered walkways, arcades, porches and trellises, are encouraged to act as unifying architectural elements throughout the commercial center.

Simple pitched roofs and sloped roof treatments for design accents are encouraged. Sloped roofs should be carried through major portions of the building and be integral part of the building design.

Lower roof projections and overhangs are encouraged to humanize and scale down building masses and define building entrances.

The commercial center shall utilize the careful selection and balanced use of one predominant roofing material for all pitched roofs. Intermixing different roof material should

be avoided, with the exception of when in combination with flat roofs with parapets employing built-up roofing materials.

Appropriate

- Clay tile, integral color concrete tile and slate roofing.
- Standing or batten seam metal roofing.
- Built-up roofing (flat roofs only).
- Tile roof material palette should contain a mixture of tones to achieve a variegated appearance.
- Variation in ridge line height and alignment.
- Incorporation of details to add visual interest to the roofscape, such as dormers, cupolas, skylights, theme towers and stair towers.
- Variation in plate heights.
- Fascia and eave details that are sympathetic to a residential scale.

Inappropriate

- High contrast color, brightly colored glazed tile or highly reflective surfaces.
- Wood shake and composition shingles.

EXTERIOR MATERIALS AND COLOR

Materials and colors chosen for the commercial center must be appropriate and compatible with its location and expressive of the character and image of the community. The materials and colors utilized should relate directly to the motif, palette and scale of the surrounding residential development. The commercial development should express one dominant finish material, excluding roof materials and glazing. Accent materials are encouraged and when used should subtly complement the dominant materials of the buildings.

Materials include exterior plaster or stucco, masonry, concrete, stone and wood. Primary wall materials shall consist of either exterior plaster or stucco with a smooth, sand or light finish texture and/or integral color slump block. The simple use of tile, brick, stone or pre-cast concrete are permitted as design accents. Exposed wood sheathing shall be limited to the underside of roof structures, fascias and trims. Exposed wood timbers and glue-laminated timbers may be utilized provided that the minimum dimension is 6 inches.

All buildings within the commercial center should utilize light earthtone colors or natural colors of materials used. Darker or lighter accent colors are encouraged to highlight the character of the structure. Bold application of colors such as stripes, accents or super graphics are discouraged. Variations in color shall be kept to a minimum. Exposed wood sheathing and trim shall be stained with a semi-transparent stain or painted as accents.

Appropriate

- Predominantly exterior stucco and masonry as primary wall materials.
- Minimal use of wood except as trim or accent material.

- Smooth-textured stucco, may have uneven surface to recall hand-worked appearance.
- Where timber is utilized, it should be substantial in proportion and appearance.
- Apply architectural treatments to all elevations, especially where prominently visible.
- Light earthtone colors on primary wall surfaces.
- Contrasting trim colors.

Inappropriate

- Heavy textured stucco, such as Spanish lace, swirl or heavy trowel.
- Vinyl, corrugated metal or aluminum siding.
- Common plywood or masonite siding.
- Standard concrete block.
- Rustic materials utilized as primary wall surfaces and dark earthtone colors.
- Over application of bright accents or trim colors.

APPENDIX A

TRAFFIC IMPACT STUDY
COMMERCIAL DEVELOPMENT
TEHACHAPI CROSSING CONCEPT PLAN

PREPARED BY
CRENSHAW TRAFFIC ENGINEERING

JUNE 19, 2002

RESPONSE TO COMMENTS

TEHACHAPI CROSSING
MASTER ENVIRONMENTAL ASSESSMENT

STATE CLEARINGHOUSE NO. 2002071019

PREPARED BY
CITY OF TEHACHAPI

July 29, 2002

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD

Comment:

We reviewed the initial study and negative declaration dated 3 July 2002, for the proposed project, the conceptual commercial development plan over a 36-acre site zoned C-3 in the City of Tehachapi, Kern County. At build out, the commercial development could use approximately 73,500 gallons of water and generate up to 37,500 gallons per day of wastewater. The site does not have access to a sewer trunk line and the City will construct a regional sewer collection system for all the developments on the conceptual site plan. In the interim, the project proposes to use septic tank and leach field systems (septic systems) for some of the "less intensive uses" until the regional sewer collection system is completed. It requires decommission of the septic tank systems after connection to the regional sewer system.

Response:

Comment acknowledged.

Comment:

The City's wastewater treatment facility (WWTF), which is regulated by Waste Discharge Requirements (WDRs) Order No. 92-047, is currently operating at about 0.72 million gallons per day (mgd), just over half the permitted discharge of 1.25 mgd. The City appears to be complying with the WDR's requirements based on its recent self-monitoring reports.

Response:

Comment acknowledged.

Comment:

In the Negative Declaration, we recommend including the following mitigation measures under the "Water" environmental factor.

1. An evaluation of the impact on groundwater of "temporary" installation of septic systems for "less intensive uses" and require appropriate mitigation measures to minimize the impacts.

2. Compliance with Kern County septic system requirements or Regional Board's *Guidelines for Waste Disposal from Land Developments*, whichever is more restrictive.

3. Installation of sewer laterals stubbed out at the street for future connection to the regional sewer trunk line.

4. Requirement to connect to the regional sewer trunk line and decommission of the septic systems within 60 days after notice that sewer service is available.

Response:

Should any of the anticipated land uses within the Tehachapi Crossing Master Plan utilize a septic tank and leach field system as an interim sewage collection solution the applicant will be required to apply to the Kern County Environmental Health Department for a permit prior to the to construction of said system. The issue of water quality will be addressed through the permitting process. However, it should be noted that the City of Tehachapi has no wells in close proximity to the Tehachapi Crossing Master Plan site. All future projects within the Tehachapi Crossing Master Plan area that utilize a septic tank system as an interim solution will be required to install dry sewer laterals as a condition of approval in anticipation of the Tucker Road regional system being in place. With respect to the issue septic tank decommissioning, the City of Tehachapi and the Kern County Environmental Health Department policies require that when a municipal system becomes available any adjacent land uses utilizing a septic tank and leach field system must tie into the municipal system and decommission the existing septic tank system within 60 days of the municipal system becoming available. In addition future development proposals within the Tehachapi Crossing Master Plan area will be conditioned to tie into a municipal system once the Tucker Road regional sewage collection system is operational.

Comment:

In the Narrative Discussion of Environmental Impacts, Section D. WATER, we recommend including in the discussion:

1. Potential water quality impacts due to temporary use of septic systems by "less intensive use" entities as indicated in Section E. SEWERS (somewhere in the document, please define what "less intensive use" means). Such discussion should include a characterization of the groundwater, an evaluation of the potential adverse impact on the groundwater, and mitigation measures to minimize the impacts as appropriate.

2. Compliance with the requirements of the National Pollutant Discharge Elimination System (NPDES). Prior to start of construction activities, the applicant must submit to the State Water Resources Control Board, Notice of Intent (NOI) to be covered by General Permit No. CAS000002 for discharges of storm water related to construction activities and an accompanying Storm Water Pollution Prevention Plan (SWWP). The NOI and SWWWP should cover the entire 36-acre development so that individual construction projects need not apply for coverage under the general permit.

Response:

Comment acknowledged, per your recommendation the section of the Master Environmental Assessment has been modified to address you concerns over ground water contamination and compliance with the Notice of Intent (NOI) process.

Comment:

In the Narrative Discussion of Environmental Impacts, Section E. SEWERS, we recommend including in the discussion:

1. Compliance with Kern County requirements, or Regional Board's *Guidelines for Waste Disposal from Land Developments*, whichever is more restrictive, for the "temporary" installation of septic systems for the "less intensives uses."

2. Installation of sewer laterals to the street and stubbed out for future connection to the regional sewer trunk line.

3. Requirements to connect to the regional sewer trunk line and decommission of the septic systems within 60 days after notice that sewer service is available.

Response:

Comment acknowledged, future developments which are allowed to use a septic tank and leach field system will be required to design a system to meet the Kern County Environmental Health Departments requirements. It should be noted that there is no interim system per se. If a septic tank and leach field system is utilized even as an interim solution the system will be design and installed as if it were permanent solution. With respect to laterals, future development will be conditioned to design and install a dry lateral in anticipation of the Tucker Road municipal system being operational.

DEPARTMENT OF TRANSPORTATION

Comment:

The developer proposes to discharge runoff into the storm sewer system (including detention basin), that was recently constructed for full build out of the Commercial Development during the Caltrans SR 202/Tucker Road re-alignment project. A cooperative agreement between Caltrans and the City of Tehachapi was negotiated and by permit, the City assumed ownership and maintenance responsibility of the storm sewer system. The developer must obtain an encroachment permit from Caltrans for any work within our right-of-way (lateral connection to the storm sewer system). The developer will also need to obtain a permit from the City to connect to the storm sewer system.

Response:

Comment acknowledged, future development within the Tehachapi Crossing Master Plan Area will be required to procure an encroachment permit for all work proposed within the Tucker Road (SR 202) right-of-way.

Comment:

The Traffic Impact Study (TIS) turn movement analysis maps are difficult to follow with respect to the project. The TIS needs to include specific turn movement information on each driveway location for the proposed project. It should be determined if any driveway for the proposed project on SR 202 will cause conflicting turn movements with other assesses. If conflicts are likely, then they will need to be modeled and driveways will need to be redesigned to prevent conflicts. Please include these items in the TIS.

Response:

Comment acknowledged, the thrust of the traffic study was to determine the traffic impacts and traffic distribution patterns in terms of over all average daily trips (ADT's) and AM/PM peak hour conditions. In this regard the traffic study did not evaluate curb cuts for the anticipated individual projects delineated on the Master Plan. The adoption by the City of Tehachapi of the Tehachapi Crossing Master Environmental Assessment does not suggest implicit or explicit approval of any of the footprints delineated on the conceptual site plan. As the Master Plan area develops on a project-by-project basis each of the applications will be evaluated in greater detail relative to the issue of specific curb cuts and driveway locations. However, please be advised that the curb cut serving conceptual pad A is located in excess of 300 feet from the intersection of Tehachapi Boulevard and Tucker Road and as such meets the City of Tehachapi intersection spacing requirements.

Comment:

On the Conceptual Site Plan, the driveways that serve "PAD A" and "PAD D" from the State Route 202 may be too close to the intersection of State Route 202 and Tehachapi Boulevard, and may cause operational problems. Right turn in and right turn out restrictions may be required. This issue can be further addressed during the Caltrans encroachment permit application process.

Response:

Comment acknowledged, the site plans delineated on the Tehachapi Crossing Master Plan are conceptual. The specific locations of curb cuts and driveways will be evaluated in more detail at the site plan review stage.

Comment:

The service station pass by trip reductions cannot be used to decrease the total number of turn movements or driveway volumes. The turns take place for pass by trips just as they do for new trips. Please make corrections and changes to the turning movement volumes and calculations as necessary.

Response:

Comment acknowledged, the purpose of the 15% total decrease in traffic volumes associated with the service station was intended to reduce the overall ADTs associated with the Tehachapi Crossing Master Plan due to the fact that many of the trips to the service station area already in motion and were not generated specifically for the service as primary trip generator and/or primary destination. The traffic study does not suggest that the number of turning movements into the service station has been reduced only the amount of overall ADTs has been reduced by 15% to account for vehicle trips already in process whereas a trip to the service station is typically secondary.

Comment:

Curb, gutter and sidewalk will need to be constructed along SR 202, per the Caltrans HDM Topic 209 – Curbs and Gutters and Topic 105 – Pedestrian Facilities (Enclosures A and B). Driveways will need to be constructed per HDM Topic 205.3 – Urban Driveways (Enclosure C).

Response:

As each of the individual conceptual projects delineated on the site plan move forward through the planning/entitlement process they will be required to construct full frontage improvements as a condition of approval/development.

Comment:

Transit and bicycle use should be encouraged as transportation methods to service the proposed commercial center. Some of the Developer Fees could be utilized to subsidize stops and shelters for Kern Regional Transit, and bicycle paths and racks. A Park and ride facility should also be considered.

Response:

The City of Tehachapi is on the process of preparing a Master Bike Trails Plan. The draft plan identifies a Class II Bike Lane on Tucker Road (SR 202) and Tehachapi Boulevard. It is anticipated that the draft plan will go before the Tehachapi Planning Commission in September of 2002. The City of Tehachapi looks forward to Caltrans support and cooperation in establishing a Class II Bike Lane on Tucker Road (SR 202).

STATE OF CALIFORNIA

Governor's Office of Planning and Research

State Clearinghouse

Gray Davis
GOVERNOR

Tal Finney
INTERIM DIRECTOR

ACKNOWLEDGEMENT OF RECEIPT

DATE: July 22, 2002

RECEIVED
JUL 29 2002
CITY OF TEHACHAPI

TO: David A. James
City of Tehachapi
115 South Robinson Street
Tehachapi, CA 93561

RE: Master Environmental Assessment for the Tehachapi Crossing Commercial Center

SCH#: 2002071019

This is to acknowledge that the State Clearinghouse has received your environmental document for state review. The review period assigned by the State Clearinghouse is:

Review Start Date: July 3, 2002
Review End Date: August 1, 2002

We have distributed your document to the following agencies and departments:

California Highway Patrol
Caltrans, District 6
Department of Conservation
Department of Fish and Game, Region 4
Department of Housing and Community Development
Department of Parks and Recreation
Department of Water Resources
Native American Heritage Commission
Public Utilities Commission
Regional Water Quality Control Bd., Region 5 (Fresno)
Resources Agency
State Lands Commission

The State Clearinghouse will provide a closing letter with any state agency comments to your attention on the date following the close of the review period.

Thank you for your participation in the State Clearinghouse review process.

1400 TENTH STREET P.O. BOX 3044 SACRAMENTO, CALIFORNIA 95812-3044
916-445-0613 FAX 916-323-3018 www.opr.ca.gov

APPENDIX A

AVAILABLE UPON REQUEST

NEGATIVE DECLARATION

TO WHOM IT MAY CONCERN:

Pursuant to the California Environmental Quality Act of 1970 (CEQA), the State CEQA Guidelines, and the City of Tehachapi Rules to Implement CEQA and State CEQA Guidelines, the City of Tehachapi Community Development Department has made an Initial Study of Possible Impacts of the following described project:

APPLICANT: Pacific Ridge Development, LLc and Arkanian Holdings

APPLICATION: Master Environmental Assessment for the Tehachapi Crossing Commercial Center conceptual site plan and Architectural Guidelines.

LOCATION: North and south of the new alignment of Tehachapi Boulevard, east of the new alignment of Tucker Road (Hwy 202) and west of Mountain View; being a portion of Section 20 T32S, R33E MDM, County of Kern, and City of Tehachapi.

PROJECT DESCRIPTION: The Master Environmental Assessment will cover approximately 36 acres and involve property owned by Pacific Ridge Land, LLc and the Akarankian holdings. While the subject site is owned by two (2) separate entities a conceptual site plan, depicting what can best be described in commercial development parlance as a retail power center, has been development encompassing both ownerships. In this regard the conceptual site plan provides an opportunity for a more comprehensive evaluation of how the subject site may ultimately develop. The land use assumptions applied to the conceptual site plan are based on the applicant's (Pacific Ridge Land, LLc) extensive experience in commercial development and the retail leakage analysis prepared by Burnes Consultants dated July 2000. In addition the various footprints identified on the site plan are also conceptual but never the less reflect prototypical configurations of recognizable retail establishments. In this regard the conceptual site plan can be characterized as a best guess as to how the subject site may ultimately develop. In addition to the conceptual site plan the project also consists of the adoption of architectural guidelines by which future developments within the Tehachapi Crossing project will be evaluated against. The purpose of the Master Environmental Assessment is to evaluate potential impacts and establish mitigation strategies over the entire area encompassed by the conceptual site plan. This approach is in contrast to the piece meal alternative of planning the area in question and evaluating the environmental implications of development on a project-by-project basis. From an environmental impact perspective the conceptual site plan can be characterized as the "most intensive land use" or "worst-case scenario". Case in point, the big box retailer illustrated on the conceptual site plan for example represents a typical Target or Wal-Mart super store. However, should a Target or Wal-Mart

ultimately locate on the subject site it will most likely be a scaled down footprint more conducive to Tehachapi's rural character and demographic profile.

It should be noted that the adoption of the Master Environmental Assessment is not a substitute for a site plan review and in this regard does not constitute an approval of any land use tacit or otherwise. As the area develops each project will still require site plan review and approval on a project-by-project basis. However, assuming the individual projects are relatively consistent with the conceptual site plan in terms of actual land use and intensity of land use the Master Environmental Assessment will serve as the basis for the environmental review of future individual site plans as they proceed through the planning process. In this same regard the appearance of a recognizable footprint should not imply that a definitive end user has committed to a given pad. Again, the conceptual site plan represents a best guess as to how the subject site may ultimately develop which gives the City of Tehachapi an opportunity to evaluate environmental impacts, particularly traffic in a more comprehensive manner. The conceptual site plan reflects the following land use assumptions and intensities and the Master Environmental Assessment has been prepared based on these assumptions.

USE	INTENSITY
Motel	40 Rooms
Retail	244,596 Square Feet
Fast Food Restaurant X 2	4,800 Square Feet
Service Station With Convenience Market	16 pumps and 3,500 sq. ft.

MITIGATION MEASURES: Included in the Proposed Project to Avoid Potentially Significant Effects (if required).

Traffic/Circulation

The applicant will be required to contribute on a pro-rata basis to various regional improvements such as signal lights and road improvements as outlined in the traffic analysis.

Public Services

The applicant will pay water and sewer connection fees to offset the incremental impacts to the City of Tehachapi's water distribution system and wastewater treatment system. In addition, the applicant will be required to pay school impact mitigation fees.

Cultural Resources
If cultural resources are exposed/discovered during the construction phase the applicant will be required to halt work until the resources can be properly retrieved and documented.

Seismic Safety
The applicant shall provide a geo-technical report to be incorporated into the project design in terms of grading and structural details pursuant to the Uniform Building Code.

FINDINGS: It has been found that said project will not have a significant effect on the environment and that an Environmental Impact Report (EIR) is therefore not required pursuant to CEQA.

Any person may object to dispensing with such EIR or respond to the findings contained in the Initial Study a copy of said Initial Study and other information relating to the proposed project are on file in the office of the Community Development Director, Tehachapi City Hall located at 115 South Robinson Street, Tehachapi, California, (661) 822-2200 ext. 107. Any person desiring to examine same or to obtain a copy of the Initial Study or this document, or seek information as to the time and manner to so object or respond, may do so by inquiring at said office during regular working hours.

A copy of the Initial Study; is attached hereto.

DAVID A. JAMES, REA
Community Development Director

AGENCY CONSOLATION REQUIRED: ___X___ Yes ___ No

AGENCIES CONSULTED: CalTrans District 9, Tehachapi Unified School District, Southern California Edison, Pacific Bell, Tehachapi Cummings-County Water District, Kern COG, Kern County Air Pollution Control District, Tehachapi Public Works Department, Tehachapi City Engineer, Southern California Gas Company.

STATE CLEARING HOUSE NUMBER: N/A

INITIAL STUDY PREPARED BY: David A. James

DATE POSTED: June 24, 2002

NARRATIVE DISCUSSION OF ENVIRONMENTAL IMPACTS REGARDING THE TEHACHAPI CROSSING CONCEPTUAL SITE PLAN

A. EARTH

The soil underlying the project area is predominately Tehachapi Sandy Loam. This soil type is commonly found in the Tehachapi region and can be characterized as a well-drained alluvial soil. It is dark grayish brown and grayish brown, sandy loam underlain by dark brown and yellowish brown sandy clay loam subsoil. Permeability of the Tehachapi Sandy Loam soil is moderately rapid and erosion potential is characterized as slight. The Tehachapi Sandy Loam soil has low shrink/swell properties and its erosion hazard is moderate. Tehachapi Sandy Loam soils exhibit few development constraints; however, the applicant or successors in interest shall be required to submit a geologic report in conjunction with a grading plan. Based on the results of future soil studies and other geotechnical considerations at the development stage the subject site may require some degree of over-excavation and re-compaction particularly if liquefiable and/or expansive soil conditions are present. The Antelope Run Drainage skirts the sites eastern boundary; however there are no well-defined drainage courses that traverse the subject site and drainage appears to occur in predominantly a sheet flow condition. The project area does not appear to exhibit any unique geological features or topographic relief. Furthermore, the project will not create unstable earth conditions or changes in geological structures.

B. TRAFFIC/CIRCULATION

The Tehachapi Crossing conceptual plan achieves primary access off Tucker Road (SR 202), which represents a north/south orientated primary arterial within the City of Tehachapi hierarchy of Streets. Tehachapi Boulevard intersects with Tucker Road, which also provides the subject development with secondary or alternate source of ingress/egress. Tehachapi Boulevard represents an east/west orientated primary arterial within the street hierarchy. Regional transportation to the area is provided by State Route 58 located approximately one (1) mile north of the subject site with on and off ramps that accommodate both east and west bound traffic. Crenshaw Traffic Engineers prepared a Traffic Impact Analysis dated June 19, 2002 and contained herein as Appendix A. The purpose of the analysis was to determine the vehicle trips projected to be generated by the proposed development in terms of on street traffic volumes. This impact was analyzed in the context of existing and proposed street networks, segments and key intersections within the study area and general vicinity of the subject site. The project's contribution to existing and future traffic volumes (cumulative) were evaluated and the project's fare share or pro-rata contribution in terms of mitigation was assessed. It should be noted that the pro-rata share/contribution in terms of mitigation was based on the build out of the conceptual site plan and not on an individual project basis. As the individual

projects within the conceptual Master Plan proceed through the planning process the information contained in the traffic analysis will be used to ascertain the pro-rata contribution required of each of the individual project on a case-by-case basis. It should be noted that for the purposes of evaluating the traffic impacts associated with the conceptual site plan a build out date of 2007 was assumed.

The proposed project consists of the following land uses and corresponding intensities:

USE	INTENSITY
Motel	40 Rooms
Retail	244,596 Square Feet
Fast Food Restaurant X 2	4,800 Square Feet
Service Station With Convenience Market	16 pumps and 3,500 sq. ft.

The daily traffic volumes associated with the build out of the conceptual site plan have been estimated based on data obtained from the institute of Transportation Engineers (ITE), Trip Generation, 6th Edition dated January 1997. At full build out the Tehachapi Crossing conceptual site could generate up to 13,829 vehicle trips per day. The traffic study evaluated impacts associated with two (2) targeted growth periods, 2007 and 2020. In both instances traffic impacts and the corresponding level of service (LOS) analysis were evaluated with and without the Tehachapi Crossing proposal. Based on the traffic study all intersections within the study area, with the exception of Valley Boulevard/Tucker Road will continue to operate at a Level of Service (LOS) C or better providing the mitigation measures as outlined in the traffic study are implemented. With respect to the Valley Boulevard/Tucker Road intersection the traffic study suggests that if Red Apple Road is constructed adequate traffic volumes will be shunted away from the Tucker Road/Valley Boulevard intersection to bring said intersection back up to an LOS C. It should be noted that LOS C represents an acceptable threshold per the City of Tehachapi Circulation Element.

With respect to intersection capacity, in year 2007 the following intersections within the City limits will require signalization.

- Tehachapi Boulevard and Curry Street
- Valley Boulevard and Mountain View Avenue
- Valley Boulevard and Curry Street
- Valley Boulevard and Golden Hills Avenue

- Tehachapi Boulevard and Green Street
- Tehachapi Boulevard and Mill Street
- Tehachapi Boulevard and Mountain Avenue
- Tehachapi Boulevard and Tucker Road

With respect to road segment capacity the following street improvements will need to be constructed in order to maintain a LOS C in year 2007.

- Construct an additional two (2) lanes of pavement on Valley Boulevard from Mountain View Avenue to Tucker Road, producing an Undivided Arterial condition.
- Construct additional pavement and Median on Valley Boulevard from Tucker Road to Golden Hills Boulevard to produce a Divided Arterial condition.

Based on the year 2020 traffic projections the following improvements will need to be constructed/installed.

- The intersection of Tucker Road and Valley Boulevard will require upgrading to accommodate additional turn lanes for north bound (NB) Left and south bound (SB) right traffic movements. It should be noted that these improvements to Tucker Road and Valley Boulevard would not need to be installed if the Red Apple Way extension improvement is completed.
- Construction of additional pavement and Median Divider on Valley Boulevard from Mt. View Avenue to Tucker Road to produce a Divided Arterial condition.

With respect to the project's pro-rata mitigation, the following identifies the project's fair share of the cost to signalize the impacted intersections within the study area.

- Tehachapi Boulevard and Curry Street. (Pro-rata share 15%)
- Valley Boulevard and Mountain View Avenue. (Pro-rata share 13%)
- Valley Boulevard and Golden Hills Boulevard. (Pro-rata share 10%)
- Tehachapi Boulevard and Green Street. (Pro-rata share 8%)
- Tehachapi Boulevard and Mill Street. (Pro-rata share 30%)

- Tehachapi Boulevard and Mt. View Avenue. (Pro-rata share 27%)

- Valley Boulevard and Curry Street. (Pro-rata share 7%)

- Tehachapi Boulevard and Tucker Road. (Pro-rata share 30%)

The following represents the project's pro-rata contribution towards street segment improvements for year 2007.

- Construct an additional two (2) lanes of pavement on Valley Boulevard from Mountain View Avenue to Tucker Road, producing an Undivided Arterial condition. (Project's pro-rata share 8%).

- Construct additional pavement and Median on Valley Boulevard from Tucker Road to Golden Hills Boulevard to produce a Divided Arterial condition or alternatively construct two (2) travel lanes of the Red Apple Road extension. (Project's pro-rata share 9% or 8% respectively).

The following represents the project's pro-rata contribution towards street segment improvements for year 2020.

- The intersection of Tucker Road and Valley Boulevard will require upgrading to accommodate additional turn lanes for north bound (NB) Left and south bound (SB) right traffic movements. (Project's pro-rata share 14%).

- Construction of additional pavement and Median Divider on Valley Boulevard from Mt. View Avenue to Tucker Road to produce a Divided Arterial condition. (Project's pro-rata share 8%).

C. AIR

The development of the subject site for 125 single-family residential units will temperately increase the level of "Fugitive Dust" (particulate matter) in the air primarily during the grading phase of the project. This impact associated with particulate matter is commonly referred to as P. M. 10. In accordance with the Kern County Air Pollution Control Board the individual projects will be required as a condition of approval to water down the site and/or use soil binders to reduce dust emissions and implement the District's policies. It is anticipated that the individual projects will develop independently and not concurrently. Therefore, given the scale of the individual projects and the District's policies relative to P.M. 10, construction-related impacts will be kept to a minimum. It should be noted that it is anticipated that the development of the site will be phased and as such the grading will in all likelihood also be phased. In this regard the impacts to air quality relative to the P.M. 10 issue will occur over time rather that all at once which would be the case if the entire Tehachapi Crossing site were mass graded.

In terms of traffic related air quality issues, the buildout of the Tehachapi Crossing conceptual site plan could generate approximately 13,829 vehicle trips per day. As previously indicated in the Traffic/Circulation section of this report, the additional trips generated by this project can be absorbed by the area circulation network without causing the traffic flow to drop below an acceptable level of service providing the mitigation measures in the traffic report are implemented. Level of service and traffic congestion are directly related to the issue of air quality relative to auto exhausts emissions. The development activity and associated traffic generation may have an incremental impact on local air quality but will not individually or collectively cause a significant decrease in the regions air quality. The City of Tehachapi's inherent compact urban form will contribute to the maintenance of good air quality by reducing the trip lengths for local residents to drive to access shopping and employment destinations.

D. WATER

The build out of the Tehachapi Crossing project as depicted by the conceptual site plan could consume approximately 73,454 gallons per day (GPD) as calculated below for each of the anticipated uses.

- 40 room hotel x 80% occupancy X 127 gallons of water per unit per day = 4,064 gallons per day

- 244,596 Square feet of retail space X 114 gallons/day/1,000sq. ft. = 27,884 gallons/day

- 3,500 square foot convenience market X 114 gallons/day/1,000 sq. ft. = 399 gallons/day

- 4,800 square feet of restaurant space X 1,075 gallons/day/1,000 square feet = 5,160 gallons/day

The amount of water anticipated to be consumed by the Tehachapi Crossing conceptual site plan at build out is 73,454-gallons/day or .22 acre feet/day. This amount of water consumption will not have a significant impact on the availability of domestic water to the public. The "safe yield" of the ground water basin underlying the Tehachapi region has been established at 5,500-acre feet per year (AFY). The basin has been adjudicated and the City currently has a base right/pumping right of approximately 1,809-Acre Feet (AF) exclusive of any carryover from previous years and/or exchange pool resources. The City of Tehachapi typically uses approximately 1,600 AFY and based on a projected 3% growth rate the City should have adequate pumping rights through year 2007. It should be noted that over the last four (4) years there has been approximately a 1.5% growth within the City limits. To mitigate/offset the cost of expanding the City of Tehachapi municipal system in terms of new wells, additional storage facilities, etc., the developers of the Tehachapi Crossing project will be required

to pay an impact fee per Resolution No. 35-95 at the development stage. In addition, at the development stage the various developers will be required to convey their water rights or pay an equivalent in-lieu fee as a condition of development to offset/mitigate the incremental impact to the City of Tehachapi's water availability in terms of water rights and pumping rights.

With respect to water conservation practices, future retail, service commercial, hotel and restaurant uses within the project area will be required to comply with Title 20 and Title 245 of the California Administration Code relative to appliance efficiency standards such as water-conservation water closets, flow restricted shower heads, etc. In addition, future site plans will be conditioned to utilize drought tolerant and native landscaping to the greatest extent possible pursuant to AB 325 and the City of Tehachapi Landscape Guidelines.

With respect to water quality related issues, impacts can be broken down into three (3) categories; grading, construction and project occupancy. At the development stage any non-point pollution and storm water discharge associated with grading activity and/or construction activity will be regulated under the Federal Clean Water Act Section 402. In addition future-grading activity must comply with the State water Resources Control Board, Notice of Intent (NOI). Additionally, any grading disturbance of over one (1) acre will necessitate a National Pollution Discharge Elimination System (NPDES) permit relative to non-point pollution associated with construction activity, processed through the Regional Water Quality Control Board (Central Valley Region). This permit process will require preparing a Storm Water Pollution Prevention Program (SWPP) employing "best management practices" (BMPs) relative to the long and short term control of erosion and sedimentation, and construction staging activity. In terms of the post construction or project occupancy phase, mitigation could include monthly street and parking lot sweeping to reduce the concentration of pollutants associated with run-off occurring during the "first flush" event. The highest concentration of urban related pollutants occurs following the first major storm of the year. This event is commonly referred to as the first flush. Additionally, in conjunction with the reconstruction and realignment of Tucker Road (SR 202) Caltrans has installed a regional retention basin located at west of the Tehachapi Crossing site. The retention basin has been sized/designed to accommodate the incremental runoff associated with existing and future development of property located within the Tucker Road drainage area. The presence of this offsite regional retention facility will capture storm water prior to being released to Tehachapi Creek whereby much of the heavy metal compounds will be intercepted and dissipated within the retention basin prior to reaching the Tehachapi Creek Drainage. Planting the retention basin or allowing the basin to seed naturally with hydrophilic plants such as cattails, sedges and willows will increase the efficiency of purifying the storm water pollutants such as hydrocarbons and heavy metals associated with urban runoff. This technique will also create an artificial wetland environment and create conditions for species occupying mesic habitats, creating a positive benefit to wildlife. Retention or

detention facilities can also serve to reduce the increased run-off resulting from an increase in impervious surfaces to an amount equivalent to the pre-development stage and the Tucker Road facility has been designed to achieve that end.

E. SEWER

The development of the Tehachapi Crossing conceptual site plan as depicted will require connection to a municipal system as opposed to the individual septic tank alternative. Given the land use mix and intensities illustrated on the conceptual site plan the build out of the Tehachapi Crossing concept plan could generate up to 3,7418 gallons/day of wastewater per day as calculated below for each of the anticipated land uses.

- 40 room hotel x 80% occupancy X 130 gallons of wastewater/unit/day = 4,160 gallons of wastewater per day

- 244,596 Square feet of retail space X 104 gallons of wastewater/day/1,000sq. ft. = 27,883 gallons of wastewater /day

- 3,500 square foot convenience market X 104 gallons of wastewater/day/1,000 sq. ft. = 364 gallons/day

- 4,800 square feet of restaurant space X 1,044 gallons of wastewater/day/1,000 square feet = 5,011 gallons/day

The quantity of wastewater anticipated to be generated by the Tehachapi Crossing conceptual site plan at build out will not have a significant effect on the City of Tehachapi Wastewater Treatment Plant. The plant is designed as an advanced secondary treatment facility with a capacity to process up to 1.25 million gallons per day (MGD) and is currently operating at only half capacity. To mitigate/offset the incremental increase in wastewater future developments locating within the Tehachapi Crossing project will be required to pay sewer connection/mitigation fees at the development per Resolution No. 35-95. Currently the Tehachapi Crossing site lacks direct access to a sewer truck line. As an interim solution some of the less intensive uses depicted on the conceptual site plan can utilize a septic tank and leach field system until such time the municipal system is available. The less intensive uses are those uses that have limited discharge such as a drug store and have no effluent other that associated with rest room facilities. Case in point a stand-alone drug store will produce only 37 percent the amount of effluent as a single-family residential unit. On the other hand the conceptual site plan also depicts a hotel user. The hotel user would not be considered a too intensive of a use to be allowed to utilize a septic system as an interim use. It should be noted however, that if a septic tank and leach filed system is utilized as an interim uses the system will never the less be designed to meet the Kern County Environmental Health Department requirements or

Regional Water Quality control Board requirements which ever is most restrictive. In this regard the system would be designed and installed as if it were a permanent solution and in this regard the concept of an "interim solution" is somewhat of a misnomer. To that end, to serve the site a 12-inch truck line needs to be extended from its present terminus in Tucker Road a distance of approximately 1,500 feet north within the Tucker Road right-of-way. In addition the subject site is located below the grade of the sewer treatment plan and as such to serve the subject site and other properties located within the Tucker Road drainage basin a regional lift station and force main is planned and under design to address the access and capacity challenge. The anticipated location of the lift station and force main is north of the Tehachapi Crossing project and south of the Union Pacific Rail line at the lowest point in the Tucker Road Drainage basis in. Once the above referenced regional sewer collection system is constructed all of the potential developments depicted on the conceptual site plan will have access to a municipal system. In additional all developments that have been allowed to proceed ahead of the Tucker Road sewer collection system by utilizing a septic system will be required to decommission the septic system and tie into the domestic system. Additionally, to offset the cost of constructing the Tucker Road Drainage sewer collection system future developments that located within the subject site and the Tucker Road Drainage area will be required to contribute $500.00 per equivalent dwelling unit (EDU) towards the Tucker Road Basin sewer fee area.

F. GEOLOGY/SEISMICITY

The subject site is considered seismically active, as is most of Kern County. All proposed structures and utility installations anticipated to occur at the development stage would be designed to withstand anticipated ground acceleration within an acceptable level of risk. It is assumed that the Garlock Fault located approximately nine (9) miles southeast of the project area will be the design fault by which construction parameters will be established in conjunction with other Uniform Building Code (UBC) seismic standards applicable to the project site and future development proposals. The Garlock Fault shows the characteristic features of high-angle faults with major strike-slip component. The Garlock Fault has a Richter Magnitude potential of 8.0 and a Peak Acceleration range of .409(g) to .904(g). Further, at the development stage the project proponent(s) shall be required to submit a geo-technical report. The findings of the geo-technical report shall be incorporated into the project design of future commercial developments on a project-by-project basis in terms of grading activity and structural details pursuant to the Uniform Building Code.

G. CULTURAL RESOURCES

The subject site is located within the ancestral home of the Kawaiisu cultural group also known as Nuooah who are linguistically related to the Shoshonean language family. Several archeological evaluations were conducted around the

subject site in conjunction with the SR 202 realignment and reconstruction project and the Antelope Run restoration project. None of these studies produced any evidence of surface resources. In addition the subject site has been heavily disturbed by past ranching practices and by illegal off-road vehicle activity which continues as of this writing in spite of the Kern County Sheriff Departments attempts to control the off-road vehicle enthusiast. Therefore, given these conditions it is not likely that there are any surface artifacts present on the subject site that would warrant and/or justify the expense of a field investigation by an archeologist. However, if resources are excavated during the construction phase the project will be conditioned to cease grading and other construction activity until such time as the resources can be recovered and properly documented.

H. PLANT LIFE/WILDLIFE

The subject site has been disturbed by past agricultural practices and on going off-road vehicle activity. In addition the subject site is located within an area having an established pattern of urban development. There are several plant and animal species in the Tehachapi region that are of special concern. However, given the above referenced factors no form of unique, rare or endangered flora species, flora communities or fauna species could be sustained on the subject site. Therefore the City of Tehachapi will issue a "De Minimis of Impacts Finding" indicating that the project will not adversely impact any rare and/or endangered flora or fauna. Development of the 36-acre site for commercial type uses will reduce the amount of "open space" and relatively natural habitat available in the region. The cumulative loss of open space had already been considered within the Programmed Environmental Impact Report (EIR) prepared in conjunction with the 1999 City of Tehachapi General Plan update.

I. PUBLIC SERVICES

The project area at build-out may result in the need for increased law enforcement and fire protection facilities. This incremental level of need is not significant in relation to the overall population growth in the region and will be partially offset by the increase in future property tax, sales tax and transit occupancy tax to the City of Tehachapi produced by the development of the subject site in a manner consistent with the conceptual site plan prepared for the Tehachapi Crossing development. The project area will place an incremental increase on water and sewer facilities. The City of Tehachapi has completed a study of the cost of providing these services (City of Tehachapi Water and Waste Water System Development Fee Study) and the fees for services are equal to the cost of providing said services consistent with AB 1600. To mitigate/off-set the incremental impact/demand on the City of Tehachapi's municipal water and sewer system future developer(s) of the area will be required to pay an impact fee per Resolution No. 33-98 at the development stage. The development of the

subject site will also have an indirect impact on the Tehachapi Unified School District based on an assumption that the additional employment opportunities made available by the development of the subject site will generate additional residence to the Tehachapi region.

To offset/mitigate these indirect impacts, school impact fees at .32 cents per square foot for the future commercial structures will be paid at the development stage on a project-by-project basis.

J. DRAINAGE/HYDROLOGY

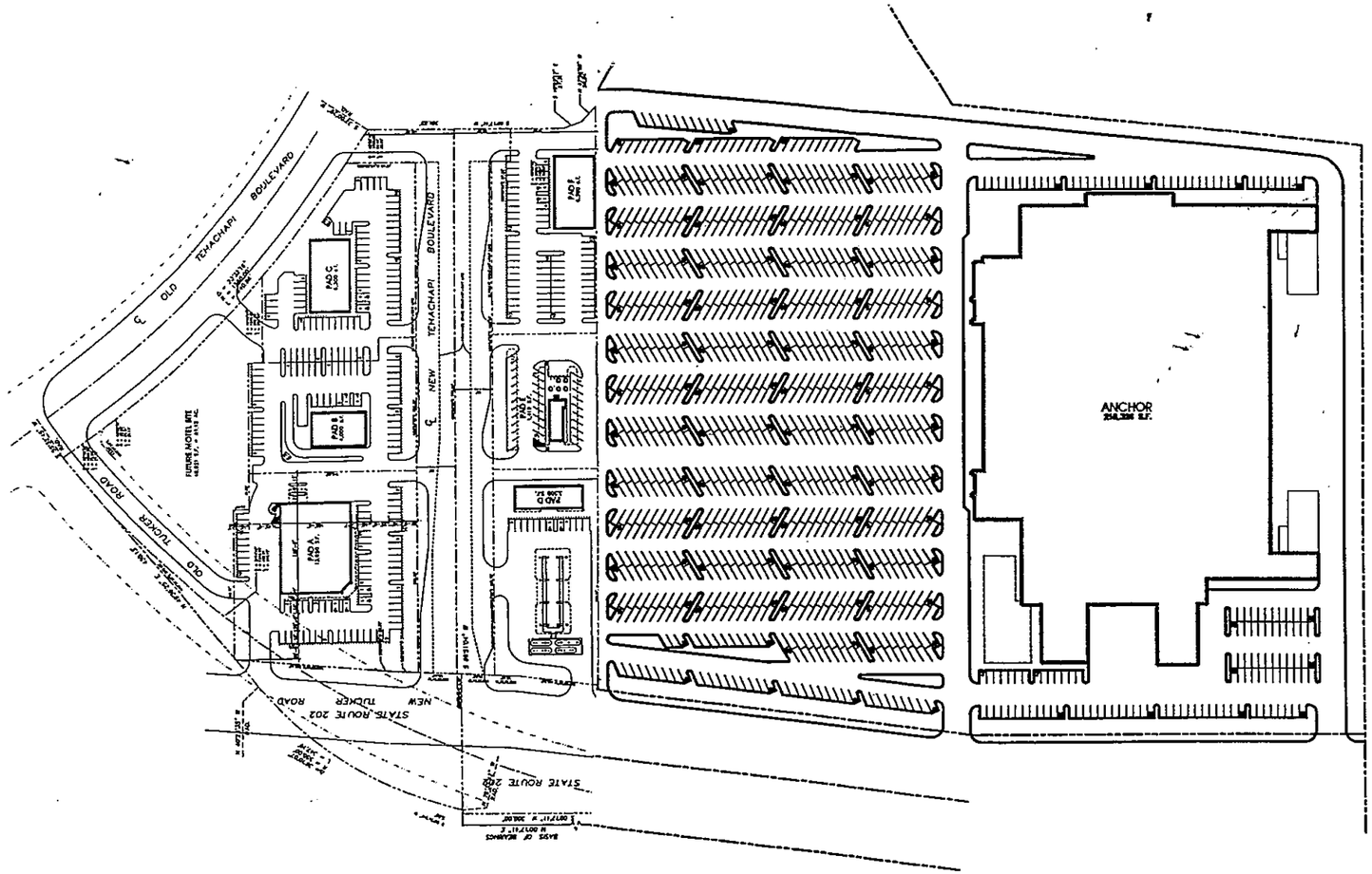
The build out of 36-acre site for future commercial developments and associated street and parking lot improvements will increase the amount of impervious surface area and as such create a corresponding increase in storm water run-off. At the development stage, the applicant will be required to calculate and collect the storm water run-off in a storm drain system and convey the storm water run-off to an appropriate outlet. As indicated in the water quality section of this document in conjunction with the reconstruction and realignment of Tucker Road (SR 202) Caltrans has installed a regional retention basin located west of the Tehachapi Crossing site on the west side of the recently realigned Tucker Road (SR 202). The retention basin has been sized/designed to accommodate the incremental runoff associated with existing and future development of properties located within the Tucker Road drainage area. At the development stage the applicant(s) will be required to provide a hydrology/drainage study to demonstrate the manner in which storm water run off will be collected and conveyed to the above referenced regional retention facility.

K. POPULATION

The conceptual site plan, which is the basis for this Initial Study, does not identify specific end users. As indicated in the project description section of this document the footprints included on the conceptual site plan are for illustrative purposes only. As such it is impractical to predict with any specificity how many employment opportunities may result from the build out of the Tehachapi Crossing Center conceptual development plan. However, as a general rule retail establishments require between eight (8) and fifteen (15) employees per acre. The subject site is 36 aces and assuming a worst-case scenario of fifteen employees per acre the development as proposed could generate as many as 540 jobs. Further, assuming all of the employees were to relocate to the Tehachapi region from some other location the 540 employees could translate into a population increase of 1,296 individuals. Given The Tehachapi regions high unemployment and under employment rate is very likely that the majority of the jobs created by the development of the Tehachapi Crossing Center will be filled by residence already living in the region. However, the incremental increase in population under the worst case scenario will not alter population distribution in the area in any significant way and will not cause individually or

collectively the population of the City of Tehachapi or the Tehachapi region to exceed current population projections and trends as adopted by the Kern Council of Governments (KernCOG).

I:\plan-com\CEQA\cklist\Tehachapi Crossing1



SITE DATA:

PROPOSED ZONING

LAND AREA:

PAD A	71,313 S.F.	= 1.63 AC.
PAD B	33,238 S.F.	= 0.76 AC.
PAD C	96,863 S.F.	= 2.22 AC.
PAD E	49,109 S.F.	= 1.13 AC.
PAD E	28,906 S.F.	= 0.66 AC.
PAD F	43,101 S.F.	= 0.98 AC.

BUILDING AREA:

PAD A	13,636 S.F.
PAD B	4,500 S.F.
PAD C	6,300 S.F.
PAD D	3,500 S.F.
PAD E	1,419 S.F.
PAD F	6,300 S.F.
TOTAL	35,169 S.F.

PARKING REQUIRED (1 SPACE PER 200 S.F. RETAIL)
(1 SPACE PER 100 S.F. RESTAURANT)

PAD A	69 SPACES
PAD B	40 SPACES
PAD C	63 SPACES
PAD D	18 SPACES
PAD E	15 SPACES
PAD F	63 SPACES
TOTAL	268 SPACES

PARKING PROVIDED

PAD A	71 SPACES
PAD B	40 SPACES
PAD C	72 SPACES
PAD E	15 SPACES
PAD E	30 SPACES
PAD F	68 SPACES
TOTAL	301 SPACES

North

TEHACHAPI CROSSING

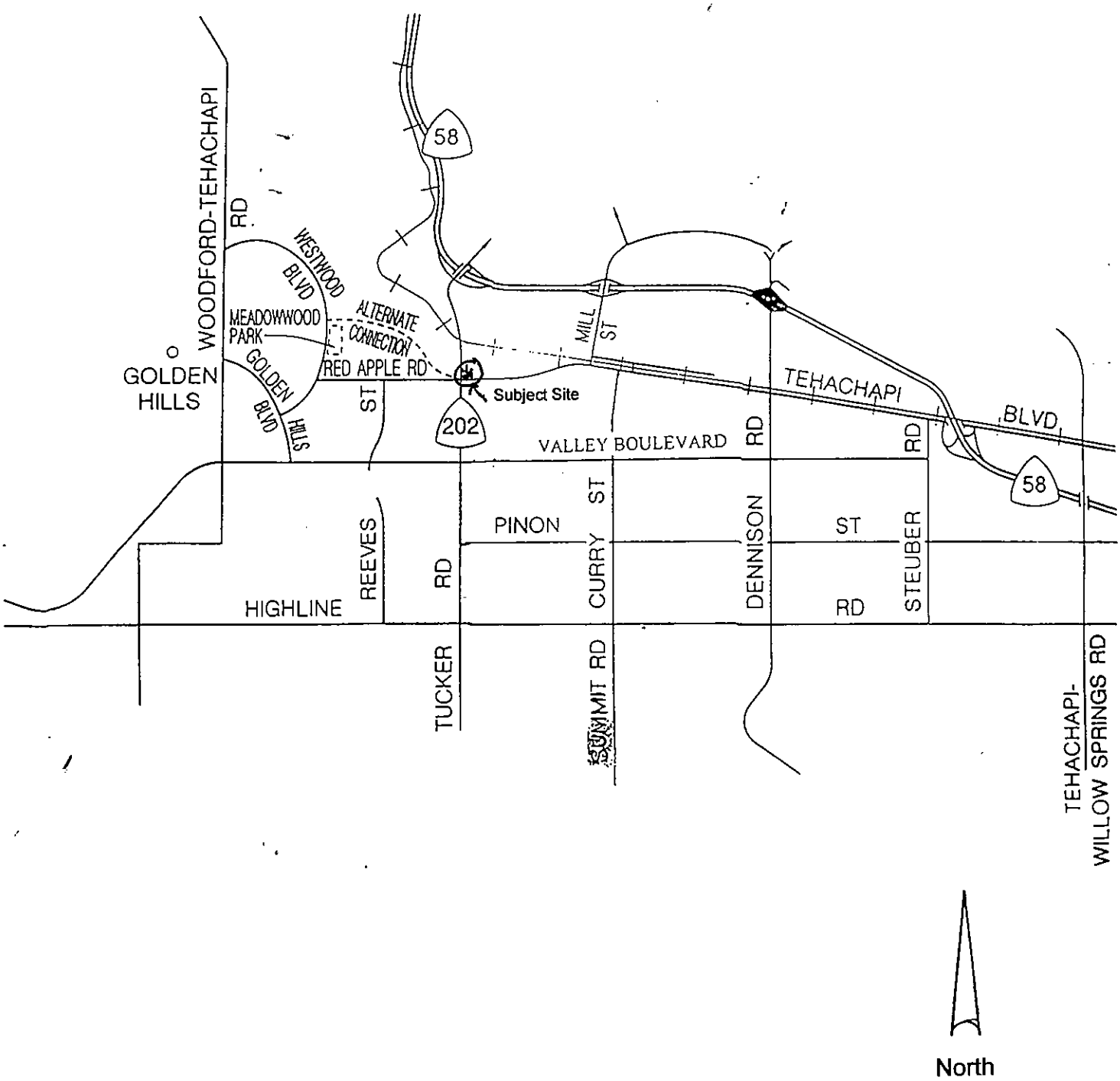
TUCKER ROAD and TEHACHAPI BOULEVARD
TEHACHAPI, CA.

PACIFIC RIDGE

CONCEPTUAL SITE PLAN

Tucker Road and Tehachapi Blvd.
Tehachapi, California
February 11, 2002

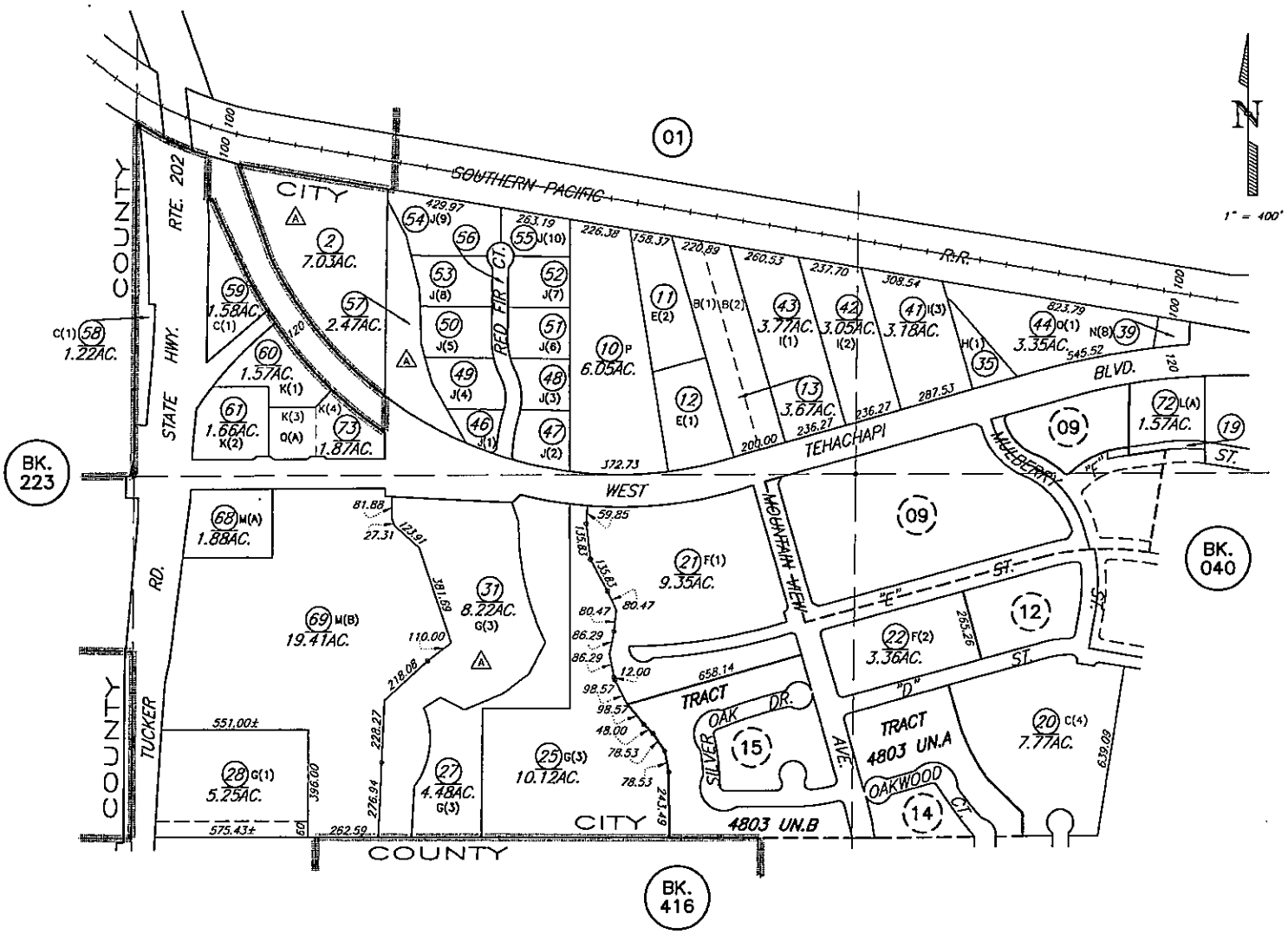
KURT D. REED ASSOCIATES, INC.



VICINITY MAP

PTN. SEC.20 T.32S. R.33E.

415-13



LEGEND

REVISED
March 7, 2008

JURISDICTION
CITY OF TEHACHAPI & VICINITY

SUBD. KEY

REF.	SUBD.
~~A.~~	~~PM 4647~~
~~B.~~	~~PM 5845~~
C.	PM 6121
~~D.~~	~~PM 6570~~
E.	PM 7665
F.	PM 7708
G.	PM 8598
H.	PM 9117
I.	PM 10531
J.	PM 10566
K.	PM 10844
L.	LLA 2002-03
M.	LLA 2002-04
N.	LLA 90-2
O.	LLA99-02
P.	PMW 21
Q.	LM 03-02

(LOT DESIGNATIONS IN PARENTHESIS)

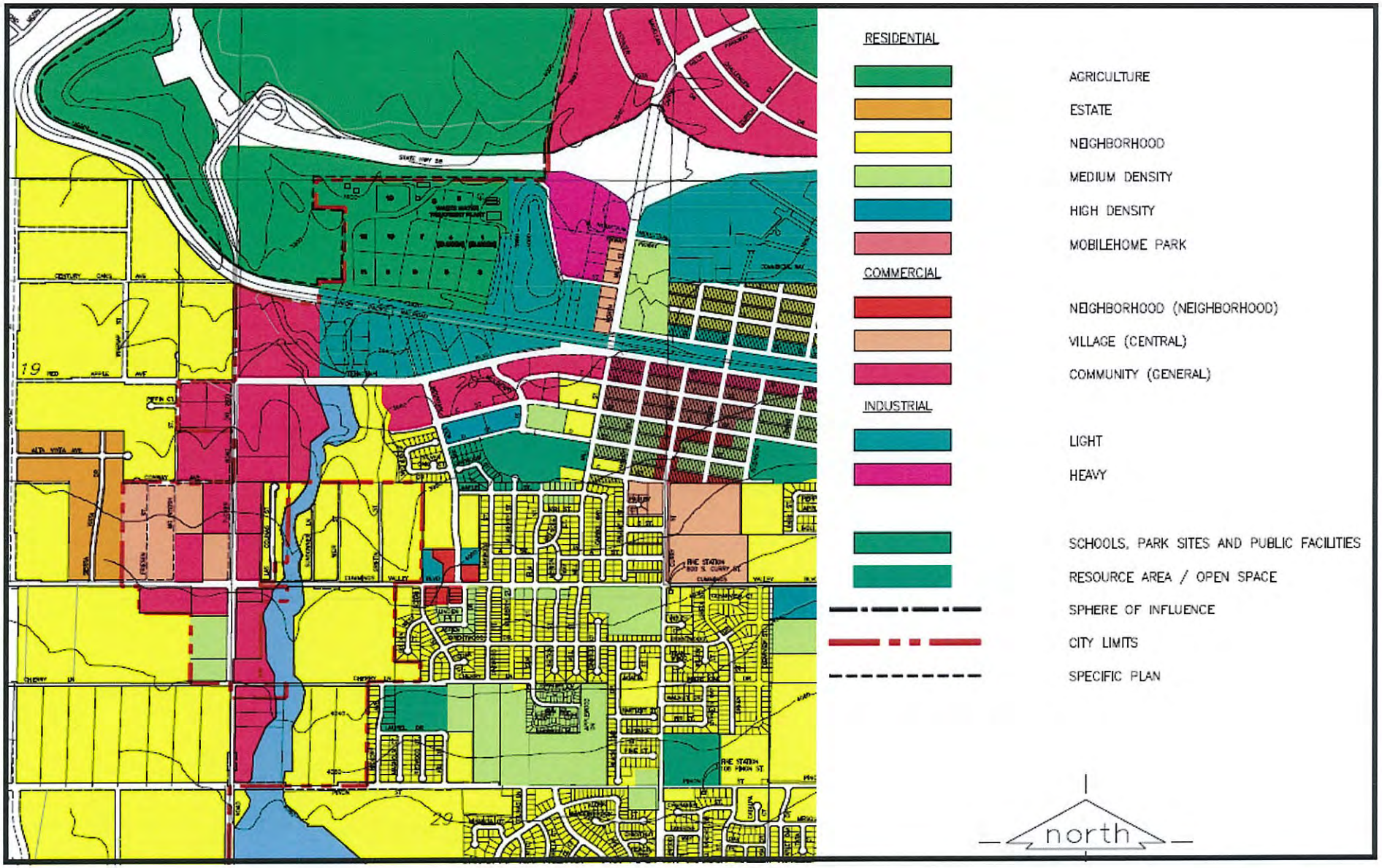
NOTES

A = T.C.C.W.D. Flowage Easement; R/S 14-87.

DISCLAIMER

This map is for assessment purposes only. It is not to be construed as portraying legal ownership or divisions of land for purposes of zoning or subdivision law.

ASSESSORS MAP NO. 415-13
COUNTY OF KERN


RESIDENTIAL
AGRICULTURE
ESTATE
NEIGHBORHOOD
MEDIUM DENSITY
HIGH DENSITY
MOBILEHOME PARK
COMMERCIAL
NEIGHBORHOOD (NEIGHBORHOOD)
VILLAGE (CENTRAL)
COMMUNITY (GENERAL)
INDUSTRIAL
LIGHT
HEAVY
SCHOOLS, PARK SITES AND PUBLIC FACILITIES
RESOURCE AREA / OPEN SPACE
SPHERE OF INFLUENCE
CITY LIMITS
SPECIFIC PLAN
north

DIRECTORY 2005

★ BKRSFLD HOMELESS CENTER ADMIN 661-322-9199 9
★ BKRSFLD HOMELESS CNTR SOCL SV 661-322-9264 9
★ BKRSFLD HOMELESS CT 661-322-8888 9

1701 ★ ALL AMERI HALL 3

X WAS 2005

★ 48 BUS 5 RES

TUCKER RD 93561
TEHACHAPI

WEALTH CODE 4

101	XXXX	OO	
103	XXXX	OO	
107	XXXX	OO	
550	★ HENRY'S CAFE	661-822-9732	3
	★ JIFFY LUBE	661-822-5300	1
	★ LAUNDRY EXPRESS	661-822-6233	1
758	★ BANK OF THE WEST TEHACHAPI	661-822-4491	2
760	★ IDY'S RESTAURANT	661-822-9333	4
	★ M & M SPORTS	661-823-1968	3
765	★ COLDWELL BKR BEST REALTY	661-822-5553	4
775	★ ALBERTSONS-SAV-ON	661-823-7090	6
	★ ALBERTSONS-SAV-ON	661-823-7094	6
	★ SAV-ON DRUGS	661-823-7094	3
785	★ BASKIN ROBBINS	661-822-3496	7
	★ CELLULAR WAREHOUSE	661-823-1700	3
	★ COMNWLTH LAND TITLE COMPANY	661-822-9790	3
	● FISKE Stephen	OO	2
	★ GABLE PAUL H	661-822-7249	3
	★ NAILS 2002	661-823-1992	2
	[illegible]	661-823-9818	6

19400 ● EMBRY G A 661-822-3206 0

X CHEYENNE AVE

19540 ● LONICH Athena OO +5

X ONEIDA AVE

20708 ★ TEHACHAPI LIGHTHSE PNTCSTL CH 661-822-4564
★ UNITD PENTECOSTAL CHURCH 661-822-4564 2

X CONWAY AVE

21315 ● KAPLAN Leon OO 6
21347 ● JOHNSON Jerry OO 3
21501 ● BURGESS Donald R 661-822-4824 6

★ 53 BUS 45 RES 19 NEW

TUCKER ST 93203
ARVIN

WEALTH CODE 0.2

X S DERBY ST

108	SERRANO Laura E	661-854-3593	+5
109	CABELLO A	661-854-3950	+5
	● CURTIS Alvis	OO	0
110	XXXX	OO	
112	CISNEROS Maria S	661-854-3483	1
116	○ GUTIERREZ Juan	661-854-7902	7
118	RODRIGUEZ Rosalio	661-854-4534	+5
119	● GORDON Johnny	661-854-2555	
120	MOJARRO Concepcion	661-854-4054	3
122	XXXX	OO	
124	● MCMULLIN Mattie	OO	0
	TUBBS Herbert F	661-854-2524	
129	● VALENCIANA Martha	OO	4
132	● NAVEJAS Olivia	661-854-4381	+5
139	● GOTAY D	OO	
	VASQUEZ Lidia	661-854-2565	2
140	● MENDOZA Margarita	661-854-5847	2
200	● VASQUEZ Lydia	661-854-1500	9
201	● CURTIS Alvis	OO	0
	MARQUEZ Jose Carmen	661-854-0487	3
208	GONZALEZ Francisco	661-854-7535	3
	LOPEZ Javier	661-854-2758	3
209	● BAUTISTA Jose	OO	1
[illegible]	[illegible]	661-854-8245	7

SERVICES	661-322-8888	
NS		
SERVICES	661-322-0426	
ELTER		
SERVICES	661-322-9294	9
ERV		
HOMELESS	661-322-9199	
ADMIN		
HOMELESS	661-322-9294	9
CL SV		
HOMELESS	661-322-0426	
SHLTR		
HOMELESS	661-322-8888	2
ATIONS		
	OO	
	OO	
	OO	
IRE SALES	661-323-2875	
	OO	
	OO	

2001

93203 ARVIN

TH CODE 0.2

	OO	
Joaquin	661-854-5789	+1
S Alvis	OO	0
ROS Maria S	661-854-3483	+1
NUEVA L	OO	0
	OO	
RREZ Juan	661-854-7902	7
NUEVA L	OO	0
ALEZ Antonio	661-854-7118	8
ON Johnny	661-854-2355	
LLIN Mattie	OO	0
S Herbert F	661-854-2624	
RO Pedro	OO	0
RATH Khampourh	OO	0
EDLOVE Laura	OO	0
DOZA Michael	OO	0
QUEZ Lydia	661-854-1502	9

5100	●PUTNAM Kenneth	661-392-0820	

X WELDON AV

5106	●BERTRAND Donald	OO	8
5107	●CHAVEZ Jose	OO	+1
5112	●RONGE William	OO	0
5113	●MCGAFFIN Russell	OO	8

★ 0 BUS 5 RES 1 NEW

TUCKER RD 93561 TEHACHAPI

WEALTH CODE 4.0

101	XXXX	OO	
103	SAWADE Gary A	661-822-0270	9

X CONWAY AV

550	★HENRYS CAFE	661-822-0732	3
	★JIFFY LUBE	661-822-5300	+1
	★LAUNDRY EXPRESS	661-822-6233	+1
	★TALIAFERRO CHIROPRACTIC	661-823-9355	9
758	★SANWA BANK CA	661-822-4491	+1
765	★PAPA O'S PIZZERIA	661-822-7700	0
775	★ALBERTSON'S FOOD&DRUG PHARMACY	661-823-7090	6
785	★BASKIN ROBBINS	661-822-3496	7
	★BEAR VLY AWARDS&ENGRAVING	661-821-0129	9
	★CHECK'N GO	661-823-7222	0
	★COMNWLTH LAND TITLE INS CO	661-822-9790	7
	GABLE Paul H	661-822-7249	+1
	★NATURE'S PANTRY	661-823-9818	6
	★OMNI SERVE WIRLESS	661-822-9384	0
	★PARK ARTHUR M MD	661-822-5758	7
	★POSTNET	661-822-7508	7
	★WINDOWS OF LIGHT BOOKS&GIFTS	661-823-9049	7
795	★MCDONALD'S RESTAURANT	661-822-0948	6
798	DENBESTEN Francine	661-822-4817	9
	★HOWARD'S MINI MKT OF TEHACHAPI	661-823-1118	2
	KOTZ Bill	661-822-3300	7
	★MOUNTAIN MORTGAGE CORP	661-822-1122	5
	★RE MAX TEHACHAPI	661-822-8888	0
	[illegible]	661-822-3300	7

	324-3933	3
	324-3933	3
	00	
	00	
	325-5722	
E CO	325-5722	
	325-5722	
	861-9735	1
	325-0701	
TSG	323-7589	7
GNT	325-0701	
	327-5928	
	00	
	322-0612	0
	00	
INC	327-0994	1
	322-3264	2
NC	322-3622	4
	861-0944	+5
	00	
	00	
	00	
	00	
	322-5801	+5
	[illegible]801	+5
		4

795

	[illegible]0	
	[illegible]0	
	[illegible]6	3
	00	
	633-2251	4
	633-0620	4
IG	327-5131	4
	327-5131	+5
TRY	326-8092	1
	322-1146	
	322-2569	
	322-2569	
	322-5933	9
	00	
	325-7886	7
D	328-0976	+5
	00	
	322-9962	+5

718	XXXX		00
730	XXXX		00
★	3 BUS	72 RES	9 NEW

TUCKER 93308 BAKERSFIELD

WEALTH CODE 7.0

5100	● PUTNAM Kenneth	392-0820	
5101	● WRIGHT Edward	00	
5106	● GONZALES Frank	00	+5
5107	● SWEARINGEN Cecil	00	
5112	EVERSON Patricia	399-8668	+5
★	0 BUS	5 RES	2 NEW

TUCKER RD 93561 TEHACHAPI

WEALTH CODE 4.7

550	★HENRYS CAFE	822-0732	3
	★LAUNDRY EXPRESS	822-9274	0
798	★ACTION 2 TV&VCR RPR	823-1853	+5
	★HOWARDS MINI MARKET	823-1118	2
	★MOUNTAIN MRTG CORP	822-1122	+5
	★RE MAX TEHACHAPI	822-8888	
	★REMAX TEHACHAPI	822-8888	
799	XXXX	00	
803	★CHIEF AUTO PARTS	822-8780	0
807	★FAGAN JOHN OD	822-1212	+5
	★JOHNNYS TAKE&BK PZA	822-9596	0
	★KOTZ BILL	822-3300	4
	★KRISPY DOUGHNUTS	822-4094	0
	★STATE FARM INS CO	822-3300	4
	★SUBWAY SANDWICHES	822-3970	0
811	★THRIFTY DRUG INFO	822-9230	0
	★THRIFTY DRUG PHAR	822-9232	0
815	★COST CUTTERS HAIR	822-9529	0
	★FLOWERS BY STERLING	822-4000	2
	★LITTLE CAESARS PZZA	822-7656	0

EXCEPT AS AUTHORIZED IN WRITING BY HAINES & CO., INC.

RVS	323-0611	+0
MD	327-0077	9
LGY	861-8255	9
J	325-1216	9
	323-6410	+0
	324-2488	+0
HD	325-1216	+0
PM	327-3218	8

S 113 NEW

1990

		3
	00	
	322-5385	
	325-5722	2
CO	325-5722	4
NTR	325-5722	2
	323-5772	9
	325-0701	
G	323-7589	7
	323-5223	7
NT	325-0701	
	325-2094	6
	327-5928	3
	327-5928	3
TL	325-4222	4
	322-0612	+0
	322-5894	+0
	00	
ND	325-6235	8
PNT	324-6948	+0
	328-9592	+0
	325-2161	+0
	00	
	00	
INC	327-0994	4
G	326-0966	1

5101	XXXX	392-0820	4
5106	GONZALES Frank A	00	
5112	DOUGHERTY Jas L	399-8568	8
	★ 0 BUS 4 RES	393-3521	6
		0 NEW	

TUCKER RD 93561 TEHACHAPI

101	CHURCH Melvin	822-6358	+0
	CHURCH Teresa	822-6358	+0
103	XXXX	00	
550	★LA PALOMA MXCN REST	822-5455	+0
	★LAUNDRY EXPRESS	822-9274	+0
798	★FIDELITY NATL TITLE	822-9474	+0
	★GOLDEN WEST APPRSLS	822-0511	+0
	★MERLE NORMAN CSMTCS	822-7977	+0
	★NORMAN MERLE CSMTCS	822-7977	+0
	★RE MAX TEHACHAPI	822-8888	
	★REMAX TEHACHAPI	822-8888	9
	★WORD AND PRINT	822-0522	+0
799	★HOWARDS MINI MARKET	822-4078	6
803	★CHIEF AUTO PARTS	822-8780	+0
807	★JOHNNYS TAKE&BK PZA	822-9596	+0
	★KRISPY DOUGHNUTS	822-4094	+0
	★SUBWAY SANDWICHES	822-3970	+0
811	★THRIFTY DRUG INFO	822-9230	+0
	★THRIFTY DRUG PHAR	822-9232	+0
815	★CEE CEES BOUTIQUE	822-1709	+0
	★COST CUTTERS HAIR	822-9529	+0
	★LITTLE CAESARS PZZA	822-7656	+0
	★VIDEO ZONE	822-7397	+0
	★VIDEO ZONE	822-0271	+0
821	★GATEWAY TO TRAVEL	822-3249	+0
	★HODGKINS JEWELERS	822-8077	+0
	★JENNIE MARIES CARDS	822-4737	+0
	★SPORTS LOCKER	822-3990	+0
	★TEHACHAPI HOBBY	822-3403	+0
	★WANDAS FASHIONS	822-1290	+0
831	★BENOS FAMILY FSHNS	822-1378	+0
841	★SAVE MART BAKE SHOP	822-8649	+0
851	INDIAN CREEK VILLAS		
	CONDE Roberto	822-8928	9
	★INDIAN CREEK VILLAS	822-1533	9

EXCEPT AS AUTHORIZED IN WRITING BY HAINES & CO., INC.

3305

323-6997
323-7151
ET 322-0738 9
00
322-5385 9
325-5722 2
CK 325-5722 4
TR 325-5722 2
325-3666 2
325-0701 7
323-5317 +5

1985

327-4373 3
327-4373 2
323-1327 4
322-5272
322-5272 3
323-7433 2
324-3978 4

718 MOLER GERTRUDE 854-
730 RICHARDS RICHARD J 854-
★ 2 BUS 69 RES 11 N

TUCKER 93308 OILDALE

5100 PUTNAM KENNETH 392-
5101 TAORMINA VIC JR 392-
TAORMINA VIC JR 392-
5106 BLACK R C 392-
★ 0 BUS 4 RES 3 NE

TUCKER RD 93561 TEHACHAPI

103 CHURCH MELVIN 822-6
19540 STRICKLER MICHAEL 822-4
NO # BURGEIS DONALD R 822-4
NO # CHURCH HENRY D 822-4
NO # CHURCH WANDA M 822-4
NO # FOWLER E L 822-4
★ 0 BUS 6 RES 1 NEW

TULARE 93305 BAKERSFIELD

99 TORTILLERIA DOLORES 322-79

PHOTOCOPIED, IN ANY MANNER WHATSOEVER EXCEPT AS AUTH

TY SEWER	861-2781	+1
TY ST DRNS	861-2781	+1
TY ST LGHT	861-2781	+1
TY ST MNTC	861-2781	+1
TY ST SWPG	861-2781	+1
TY TRAFFIC	861-2781	+1
TY TREE	861-2781	+1
TY WATER	861-2715	+1
TY YARD	861-2781	+1
159 RES	214 NEW	

93305

WELDNG&BIT	323-6997	6
&CONSTR	323-7151	
	00	
DM CABINET	[illegible]	9
OOK EXCH		
DWARD G		
TRUCTION		

1981

	533	XXXX	00
	600	SAMS J W&SONS MRTRY	854-5508 3
		SAMS JOHN W	854-5508 3
	615	GONZALES RAMIRO	854-3982 +1
	636	BAGUIO GAUDENCIO	854-2174 6
	640	TAMAYO LODOVICO M	854-2443 6
	648	AURELIO CIRIACO	854-2722 3
	700	MACKEY L J	854-5809 6
	701	FRONTERAS DELFINO	854-2132 3
	707	XXXX	00
	716	ANDERSON HELEN	854-2427 3
	718	MOLER GERTRUDE	854-2880 6
	730	RICHARDS RICHARD J	854-5061 +1
	★	1 BUS 66 RES	9 NEW

TUCKER RD 93561 TEHACHAPI

	103	CHURCH JOHN F	822-3530 6
	NO #	BURGEIS DONALD R	822-4624
	NO #	CHURCH HENRY D	822-4891
	NO #	CHURCH WANDA M	822-4891

NY MANNER WHATSOEVER EXCEPT AS AUTHORIZED IN WRITING BY HAINES & CO., INC

CONSTRCTN 322-4325
ROOFING 322-4325
NGS 323-2621 5
ELCTRNC 327-7929+6
327-7929+6
N 325-7191+6
LD 325-0701
INS CO 325-0701+6
R TERRY 325-0701
SANDSTONE 325-4222 5
EQP RNTL 325-4222+6
D FASHION

1976

IL CO
RLES L
DUNGE
00
GE 325-6844+6
CAFE 322-9992
324-5153
E 324-5153
MANNY 324-7110 4
ENCE&PATIO 324-7110 4
MOTOR CO 323-2946+6
ERS 325-8969+6
EXICN FOOD 327-0311 5
HARLAN L 327-5131
MOTORS 327-5131+6
CAR LSNG 323-5544

707 DOMINGUEZ ARTURO C 854-5295 5
708 SHADDEN BOBBY 854-5296+6
716 ANDERSON HELEN 854-2427 3
718 MOLER GERTRUDE 854-2880+6
* 2 BUS 61 RES 14 NEW

TUCKER RD 93561 TEHACHAPI

103 CHURCH JOHN F 822-3530+6
NO # BURGEIS DONALD R 822-4624
NO # CHURCH HENRY D 822-4891
NO # CHURCH WANDA M 822-4891
NO # FOWLER E L 822-4662
NO # PITTMAN FRED 822-3659 5
* 0 BUS 6 RES 1 NEW

TULARE 93305 BAKERSFIELD

99*CASA TORTILLA BKRY 322-7994
*SIESTA FOOD 322-7994
115 CORTEZ CRUZ 323-0762 4
117 XXXX 00
510*KERN MATERIALS 327-5928 3
*KERNCO WHSL BG MTRL 327-5928 5
516 SALAZAR DELFINA 323-3307 3
606 CASTRUITA ROSE M 324-2275 4
323-6991

924 LOPEZ M
942 PRECIOOO LUPE
1010 XXXX
1017 XXXX
1019 HERNANDEZ G J
1020 XXXX
1118 RAMBAUD NATAL
1119 WEBBER JOE
1121½ AVERY CHARLES
* 1 BUS 16

TULARE AV E 93261

127 PRENDEZ RON
140 LOLLAR JOHN
*SHAFTER CNVL
*SHAFTR CNVLS
250....KERN CREST
13 COTTON WALTER
FUNK J F
4 GAULT PAULINE
2 HIEBERT PETER
*KERN CREST MA
20 KLASSEN ALBER
METTLER KATY
20 SIEMENS G J
UNRUH LILLIAN
250.....
330 NEW CLAUDE L
NEW D

APPENDIX C

ENVIRONMENTAL DATABASE REPORT

Tehachapi
Tehachapi Blvd/Tucker Rd
Tehachapi, CA 93561

Inquiry Number: 2359525.2s
November 11, 2008

The EDR Radius Map™ Report with GeoCheck®

EDR® Environmental Data Resources Inc

440 Wheelers Farms Road
Milford, CT 06461
Toll Free: 800.352.0050
www.edrnet.com

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Orphan Summary	14
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GEOCHECK ADDENDUM

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Physical Setting Source Map Findings	A-11
Physical Setting Source Records Searched	A-19

Thank you for your business.
Please contact EDR at 1-800-352-0050
with any questions or comments.

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EXECUTIVE SUMMARY

A search of available environmental records was conducted by Environmental Data Resources, Inc (EDR). The report was designed to assist parties seeking to meet the search requirements of EPA's Standards and Practices for All Appropriate Inquiries (40 CFR Part 312), the ASTM Standard Practice for Environmental Site Assessments (E 1527-05) or custom requirements developed for the evaluation of environmental risk associated with a parcel of real estate.

TARGET PROPERTY INFORMATION

ADDRESS

TEHACHAPI BLVD/TUCKER RD
TEHACHAPI, CA 93561

COORDINATES

Latitude (North):	35.131740 - 35' 7' 54.3"
Longitude (West):	118.467350 - 118' 28' 2.5"
Universal Tranverse Mercator:	Zone 11
UTM X (Meters):	366308.8
UTM Y (Meters):	3888440.0
Elevation:	3939 ft. above sea level

USGS TOPOGRAPHIC MAP ASSOCIATED WITH TARGET PROPERTY

Target Property Map:	35118-B4 TEHACHAPI NORTH, CA
Most Recent Revision:	1980
South Map:	35118-A4 TEHACHAPI SOUTH, CA
Most Recent Revision:	1973

TARGET PROPERTY SEARCH RESULTS

The target property was not listed in any of the databases searched by EDR.

DATABASES WITH NO MAPPED SITES

No mapped sites were found in EDR's search of available ("reasonably ascertainable ") government records either on the target property or within the search radius around the target property for the following databases:

FEDERAL RECORDS

NPL..... National Priority List
Proposed NPL..... Proposed National Priority List Sites
Delisted NPL..... National Priority List Deletions
NPL LIENS..... Federal Superfund Liens
CERCLIS..... Comprehensive Environmental Response, Compensation, and Liability Information System
CERC-NFRAP..... CERCLIS No Further Remedial Action Planned
LIENS 2..... CERCLA Lien Information

EXECUTIVE SUMMARY

CORRACTS	Corrective Action Report
RCRA-TSDF	RCRA - Transporters, Storage and Disposal
RCRA-LQG	RCRA - Large Quantity Generators
RCRA-CESQG	RCRA - Conditionally Exempt Small Quantity Generator
RCRA-NonGen	RCRA - Non Generators
US ENG CONTROLS	Engineering Controls Sites List
US INST CONTROL	Sites with Institutional Controls
ERNS	Emergency Response Notification System
HMIRS	Hazardous Materials Information Reporting System
DOT OPS	Incident and Accident Data
US CDL	Clandestine Drug Labs
US BROWNFIELDS	A Listing of Brownfields Sites
DOD	Department of Defense Sites
FUDS	Formerly Used Defense Sites
LUCIS	Land Use Control Information System
CONSENT	Superfund (CERCLA) Consent Decrees
ROD	Records Of Decision
UMTRA	Uranium Mill Tailings Sites
DEBRIS REGION 9	Torres Martinez Reservation Illegal Dump Site Locations
ODI	Open Dump Inventory
MINES	Mines Master Index File
TRIS	Toxic Chemical Release Inventory System
TSCA	Toxic Substances Control Act
FTTS	FIFRA/ TSCA Tracking System - FIFRA (Federal Insecticide, Fungicide, & Rodenticide Act)/TSCA (Toxic Substances Control Act)
HIST FTTS	FIFRA/TSCA Tracking System Administrative Case Listing
SSTS	Section 7 Tracking Systems
ICIS	Integrated Compliance Information System
PADS	PCB Activity Database System
MLTS	Material Licensing Tracking System
RADINFO	Radiation Information Database
FINDS	Facility Index System/Facility Registry System
RAATS	RCRA Administrative Action Tracking System
SCRD DRYCLEANERS	State Coalition for Remediation of Drycleaners Listing

STATE AND LOCAL RECORDS

HIST Cal-Sites	Historical Calsites Database
CA BOND EXP. PLAN	Bond Expenditure Plan
SCH	School Property Evaluation Program
Toxic Pits	Toxic Pits Cleanup Act Sites
SWF/LF	Solid Waste Information System
WMUDS/SWAT	Waste Management Unit Database
CA WDS	Waste Discharge System
SLIC	Statewide SLIC Cases
LIENS	Environmental Liens Listing
CHMIRS	California Hazardous Material Incident Report System
DEED	Deed Restriction Listing
VCP	Voluntary Cleanup Program Properties
DRYCLEANERS	Cleaner Facilities
WIP	Well Investigation Program Case List
CDL	Clandestine Drug Labs
RESPONSE	State Response Sites
HAZNET	Facility and Manifest Data
EMI	Emissions Inventory Data

EXECUTIVE SUMMARY

HAULERS..... Registered Waste Tire Haulers Listing
ENVIROSTOR..... EnviroStor Database

TRIBAL RECORDS

INDIAN RESERV..... Indian Reservations
INDIAN ODI..... Report on the Status of Open Dumps on Indian Lands
INDIAN LUST..... Leaking Underground Storage Tanks on Indian Land
INDIAN UST..... Underground Storage Tanks on Indian Land
INDIAN VCP..... Voluntary Cleanup Priority Listing

EDR PROPRIETARY RECORDS

Manufactured Gas Plants..... EDR Proprietary Manufactured Gas Plants
EDR Historical Auto Stations.. EDR Proprietary Historic Gas Stations
EDR Historical Cleaners..... EDR Proprietary Historic Dry Cleaners

SURROUNDING SITES: SEARCH RESULTS

Surrounding sites were identified in the following databases.

Elevations have been determined from the USGS Digital Elevation Model and should be evaluated on a relative (not an absolute) basis. Relative elevation information between sites of close proximity should be field verified. Sites with an elevation equal to or higher than the target property have been differentiated below from sites with an elevation lower than the target property.
Page numbers and map identification numbers refer to the EDR Radius Map report where detailed data on individual sites can be reviewed.

Sites listed in ***bold italics*** are in multiple databases.

Unmappable (orphan) sites are not considered in the foregoing analysis.

FEDERAL RECORDS

RCRA-SQG: RCRAInfo is EPA's comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. The database includes selective information on sites which generate, transport, store, treat and/or dispose of hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA). Small quantity generators (SQGs) generate between 100 kg and 1,000 kg of hazardous waste per month.

A review of the RCRA-SQG list, as provided by EDR, and dated 09/10/2008 has revealed that there is 1 RCRA-SQG site within approximately 0.25 miles of the target property.

Lower Elevation	Address	Direction / Distance	Map ID	Page
CALTRANS DISTRICT 09	***320 W TEHACHAPI BLVD***	***N 1/8 - 1/4 (0.127 mi.)***	***B9***	***11***

STATE AND LOCAL RECORDS

Cortese: The sites for the list are designated by the State Water Resource Control Board (LUST), the Integrated Waste Board (SWF/LS), and the Department of Toxic Substances Control (Cal-Sites). This listing is no longer updated by the state agency.

A review of the Cortese list, as provided by EDR, and dated 04/01/2001 has revealed that there is 1

EXECUTIVE SUMMARY

Cortese site within approximately 0.5 miles of the target property.

Lower Elevation	Address	Direction / Distance	Map ID	Page
CALTRANS TEHACHAPI GARAGE	320 TEHACHAPI BLVD W	N 1/8 - 1/4 (0.127 mi.)	B7	9

SWRCY: A listing of recycling facilities in California.

A review of the SWRCY list, as provided by EDR, and dated 07/09/2008 has revealed that there are 2 SWRCY sites within approximately 0.5 miles of the target property.

Equal/Higher Elevation	Address	Direction / Distance	Map ID	Page
TOMRA PACIFIC INC/ALBERTSONS #	775 S TUCKER RD	W 0 - 1/8 (0.014 mi.)	A1	6
RECYCLO/SAVEMART STORE	841 TUCKER RD	W 0 - 1/8 (0.016 mi.)	3	6

LUST: The Leaking Underground Storage Tank Incident Reports contain an inventory of reported leaking underground storage tank incidents. The data come from the State Water Resources Control Board Leaking Underground Storage Tank Information System.

A review of the LUST list, as provided by EDR, and dated 07/03/2008 has revealed that there is 1 LUST site within approximately 0.5 miles of the target property.

Lower Elevation	Address	Direction / Distance	Map ID	Page
D.O.T. GARAGE (CALTRANS) Facility Status: Case Closed	320 TEHACHAPI BLVD W	N 1/8 - 1/4 (0.127 mi.)	B5	7

CA FID UST: The Facility Inventory Database contains active and inactive underground storage tank locations. The source is the State Water Resource Control Board.

A review of the CA FID UST list, as provided by EDR, and dated 10/31/1994 has revealed that there is 1 CA FID UST site within approximately 0.25 miles of the target property.

Lower Elevation	Address	Direction / Distance	Map ID	Page
TEHACHAPI	*320 W TEHACHAPI BLVD*	*N 1/8 - 1/4 (0.127 mi.)*	*B8*	*10*

UST: The Underground Storage Tank database contains registered USTs. USTs are regulated under Subtitle I of the Resource Conservation and Recovery Act (RCRA). The data come from the State Water Resources Control Board's Hazardous Substance Storage Container Database.

A review of the UST list, as provided by EDR, and dated 07/10/2008 has revealed that there are 3 UST sites within approximately 0.25 miles of the target property.

Equal/Higher Elevation	Address	Direction / Distance	Map ID	Page
HOWARDS MINI MART	799 TUCKER RD	W 0 - 1/8 (0.015 mi.)	A2	6
ALBERTSONS EXPRESS #1122	785 S TUCKER RD	S 1/8 - 1/4 (0.246 mi.)	C11	12
ALBERTSONS EXPRESS 6347	785 TUCKER RD	S 1/8 - 1/4 (0.246 mi.)	C12	13

EXECUTIVE SUMMARY

HIST UST: Historical UST Registered Database.

A review of the HIST UST list, as provided by EDR, and dated 10/15/1990 has revealed that there are 2 HIST UST sites within approximately 0.25 miles of the target property.

Lower Elevation	Address	Direction / Distance	Map ID	Page
TEHACHAPI LUMBER CO.	228 W TEHACHAPI BLVD	N 0 - 1/8 (0.116 mi.)	B4	7
TEHACHAPI	320 W TEHACHAPI BLVD	N 1/8 - 1/4 (0.127 mi.)	B6	9

AST: The Aboveground Storage Tank database contains registered ASTs. The data come from the State Water Resources Control Board's Hazardous Substance Storage Container Database.

A review of the AST list, as provided by EDR, and dated 11/01/2007 has revealed that there is 1 AST site within approximately 0.25 miles of the target property.

Lower Elevation	Address	Direction / Distance	Map ID	Page
TRIANGLE ROCK PRODUCTS	655 W TEHACHAPI BLVD	N 1/8 - 1/4 (0.170 mi.)	10	12

SWEEPS UST: Statewide Environmental Evaluation and Planning System. This underground storage tank listing was updated and maintained by a company contacted by the SWRCB in the early 1990's. The listing is no longer updated or maintained. The local agency is the contact for more information on a site on the SWEEPS list.

A review of the SWEEPS UST list, as provided by EDR, and dated 06/01/1994 has revealed that there is 1 SWEEPS UST site within approximately 0.25 miles of the target property.

Lower Elevation	Address	Direction / Distance	Map ID	Page
TEHACHAPI	*320 W TEHACHAPI BLVD*	*N 1/8 - 1/4 (0.127 mi.)*	*B8*	*10*

Notify 65: Notify 65 records contain facility notifications about any release that could impact drinking water and thereby expose the public to a potential health risk. The data come from the State Water Resources Control Board's Proposition 65 database.

A review of the Notify 65 list, as provided by EDR, and dated 10/21/1993 has revealed that there are 2 Notify 65 sites within approximately 1 mile of the target property.

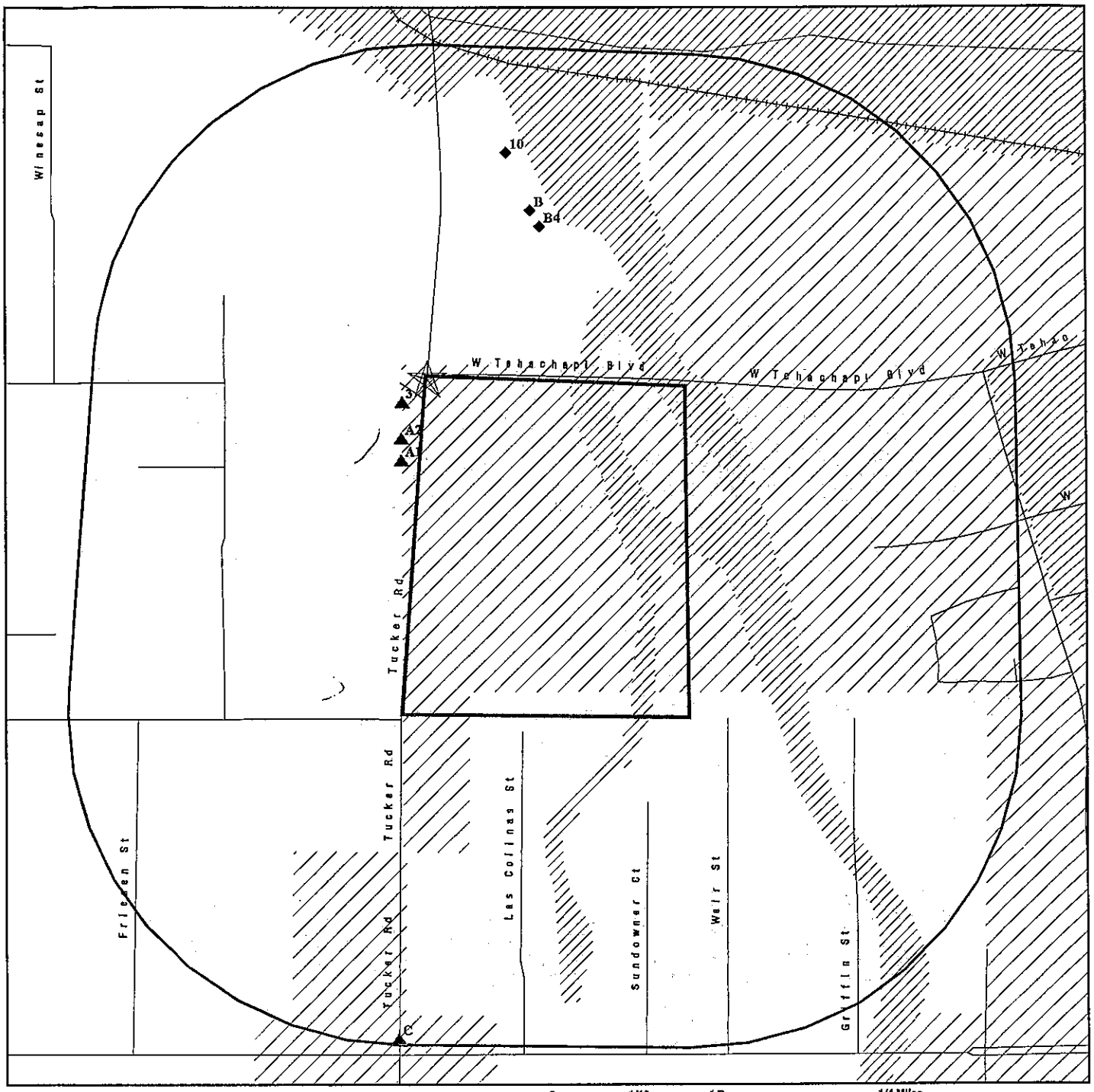
Equal/Higher Elevation	Address	Direction / Distance	Map ID	Page
CITY OF TEHACHAPI	WASTEWATER TREATMENT PE	NE 1/2 - 1 (0.689 mi.)	13	13
SOUTHERN PACIFIC - TEHACHAPI	101 WEST TEHACHAPI BOUL	E 1/2 - 1 (0.916 mi.)	14	13

EXECUTIVE SUMMARY

Due to poor or inadequate address information, the following sites were not mapped:

Site Name	Database(s)
TEHACHAPI CUMMINGS WATER DIST	CA FID UST, SWEEPS UST
TEHACHAPI CUMMINGS WATER DIST	SWEEPS UST
TEHACHAPI CUMMINGS WATER DIST	SWEEPS UST
HOWARDS MARKET	CA FID UST, SWEEPS UST
TEHACHAPI CUMMINGS WATER DIST	CA FID UST, SWEEPS UST
TEHACHAPI MOUNTAIN PARK	CA FID UST, SWEEPS UST
AUTO DEALERSHIP	LUST
TEHACHAPI MINUTE SERVE DAIRY	UST
TEHACHAPI MOUNTAIN PARK	UST
TEHACHAPI PEAK RADIO RELAY	UST
EG&G ENERGY MEASUREMENTS, INC	UST
AUTO DEALERSHIP	UST
CALIFORNIA CORRECTIONAL INST.	HIST UST
CALIFORNIA CORRECTIONAL INSTIT	HIST UST
TEHACHAPI	AST
TEHACHAPI CLASS II SURF IMPND	WMUDS/SWAT
TEHACHAPI CLASS III LANDFILL	WMUDS/SWAT
TEHACHAPI UNIFIED SCHOOL DISTRICT	HAZNET
TEHACHAPI UNIFIED SCHOOL DISTRICT	HAZNET
TEHACHAPI UNIFIED SCHOOL DISTRICT	HAZNET
TEHACHAPI PLANT	ERNS
CALIEN BODFISH JUST W OF TEHACHAPI	ERNS
7 MILES NW OF TEHACHAPI	ERNS
STATE ROUTE 58 EB AT TEHACHAPI OK	ERNS
OAK HILL GARDEN SCHOOL OF TEHACHAPI	FINDS
SPECIAL OZONE STUDY - TEHACHAPI CA - (WEST OF CABLE TV ANTEN	FINDS
WEST TEHACHAPI BURN DUMP	FINDS
TEHACHAPI CLASS II SURF IMPND	CA WDS
TEHACHAPI CORRECTIONAL INST	CA WDS
TEHACHAPI CLASS III LANDFILL	CA WDS

DETAIL MAP - 2359525.2s



0 1/16 1/8 1/4 Miles

- Target Property
- Sites at elevations higher than or equal to the target property
- Sites at elevations lower than the target property
- Manufactured Gas Plants
- Sensitive Receptors
- National Priority List Sites
- Dept. Defense Sites
- Indian Reservations BIA
- Oil & Gas pipelines
- 100-year flood zone
- 500-year flood zone
- Areas of Concern

This report includes Interactive Map Layers to display and/or hide map information. The legend includes only those icons for the default map view.

SITE NAME: Tehachapi ADDRESS: Tehachapi Blvd/Tucker Rd Tehachapi CA 93561 LAT/LONG: 35.1317 / 118.4673	CLIENT: Ninyo & Moore CONTACT: Javier Perez INQUIRY #: 2359525.2s DATE: November 11, 2008 9:06 am

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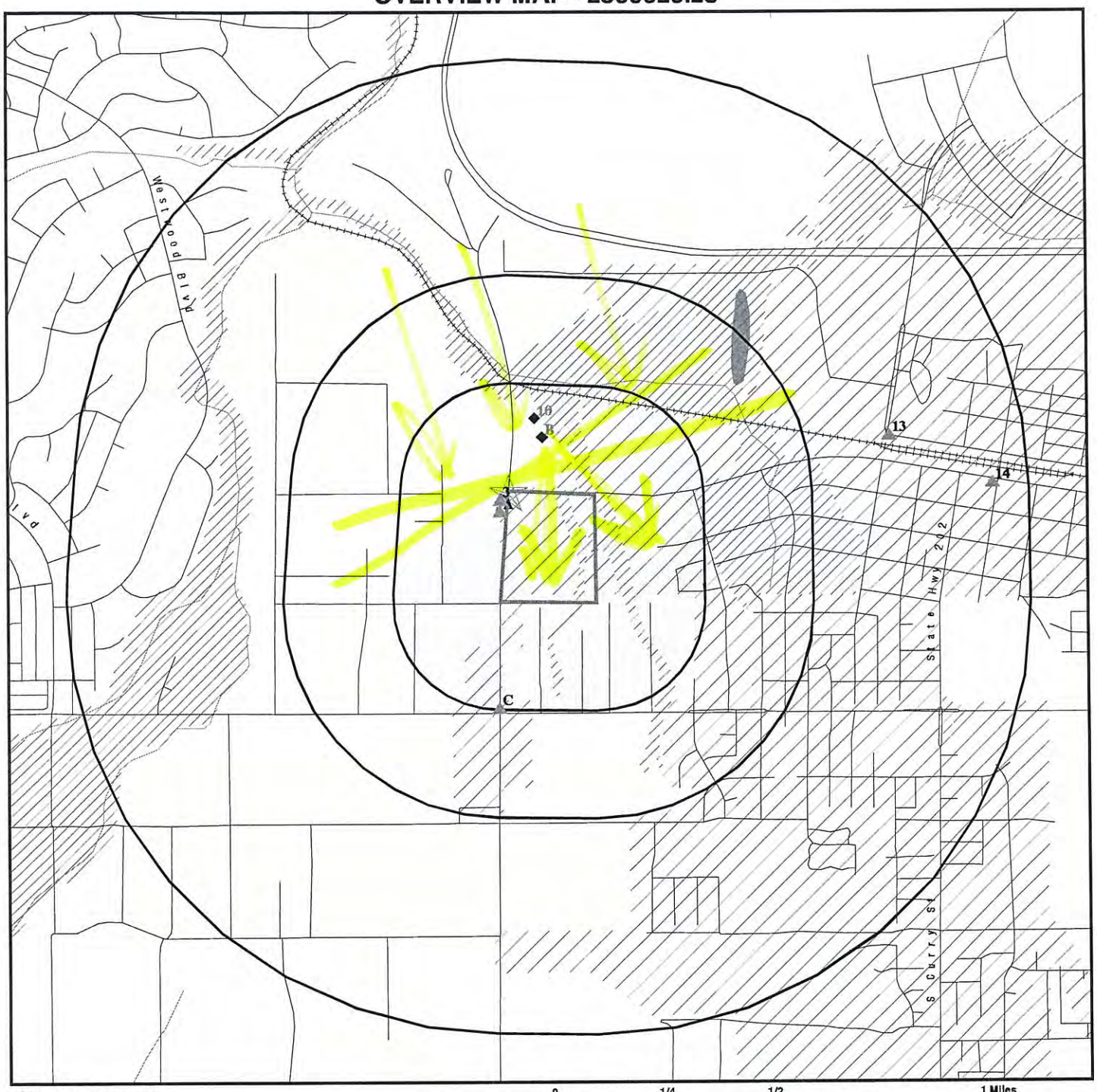
OVERVIEW MAP - 2359525.2s



Target Property

Sites at elevations higher than or equal to the target property

Sites at elevations lower than the target property

Manufactured Gas Plants

National Priority List Sites

Dept. Defense Sites

0 1/4 1/2 1 Miles

Indian Reservations BIA

Oil & Gas pipelines

100-year flood zone

500-year flood zone

Areas of Concern

This report includes Interactive Map Layers to display and/or hide map information. The legend includes only those icons for the default map view.

SITE NAME: Tehachapi ADDRESS: Tehachapi Blvd/Tucker Rd Tehachapi CA 93561 LAT/LONG: 35.1317 / 118.4673	CLIENT: Ninyo & Moore CONTACT: Javier Perez INQUIRY #: 2359525.2s DATE: November 11, 2008 9:06 am

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MAP FINDINGS SUMMARY

Database	Target Property	Search Distance (Miles)	< 1/8	1/8 - 1/4	1/4 - 1/2	1/2 - 1	> 1	Total Plotted
FEDERAL RECORDS								
NPL		1.000	0	0	0	0	NR	0
Proposed NPL		1.000	0	0	0	0	NR	0
Delisted NPL		1.000	0	0	0	0	NR	0
NPL LIENS		TP	NR	NR	NR	NR	NR	0
CERCLIS		0.500	0	0	0	NR	NR	0
CERC-NFRAP		0.500	0	0	0	NR	NR	0
LIENS 2		TP	NR	NR	NR	NR	NR	0
CORRACTS		1.000	0	0	0	0	NR	0
RCRA-TSDF		0.500	0	0	0	NR	NR	0
RCRA-LQG		0.250	0	0	NR	NR	NR	0
RCRA-SQG		0.250	0	1	NR	NR	NR	1
RCRA-CESQG		0.250	0	0	NR	NR	NR	0
RCRA-NonGen		0.250	0	0	NR	NR	NR	0
US ENG CONTROLS		0.500	0	0	0	NR	NR	0
US INST CONTROL		0.500	0	0	0	NR	NR	0
ERNS		TP	NR	NR	NR	NR	NR	0
HMIRS		TP	NR	NR	NR	NR	NR	0
DOT OPS		TP	NR	NR	NR	NR	NR	0
US CDL		TP	NR	NR	NR	NR	NR	0
US BROWNFIELDS		0.500	0	0	0	NR	NR	0
DOD		1.000	0	0	0	0	NR	0
FUDS		1.000	0	0	0	0	NR	0
LUCIS		0.500	0	0	0	NR	NR	0
CONSENT		1.000	0	0	0	0	NR	0
ROD		1.000	0	0	0	0	NR	0
UMTRA		0.500	0	0	0	NR	NR	0
DEBRIS REGION 9		0.500	0	0	0	NR	NR	0
ODI		0.500	0	0	0	NR	NR	0
MINES		0.250	0	0	NR	NR	NR	0
TRIS		TP	NR	NR	NR	NR	NR	0
TSCA		TP	NR	NR	NR	NR	NR	0
FTTS		TP	NR	NR	NR	NR	NR	0
HIST FTTS		TP	NR	NR	NR	NR	NR	0
SSTS		TP	NR	NR	NR	NR	NR	0
ICIS		TP	NR	NR	NR	NR	NR	0
PADS		TP	NR	NR	NR	NR	NR	0
MLTS		TP	NR	NR	NR	NR	NR	0
RADINFO		TP	NR	NR	NR	NR	NR	0
FINDS		TP	NR	NR	NR	NR	NR	0
RAATS		TP	NR	NR	NR	NR	NR	0
SCRD DRYCLEANERS		0.500	0	0	0	NR	NR	0
STATE AND LOCAL RECORDS								
HIST Cal-Sites		1.000	0	0	0	0	NR	0
CA BOND EXP. PLAN		1.000	0	0	0	0	NR	0
SCH		0.250	0	0	NR	NR	NR	0
Toxic Pits		1.000	0	0	0	0	NR	0

MAP FINDINGS SUMMARY

Database	Target Property	Search Distance (Miles)	< 1/8	1/8 - 1/4	1/4 - 1/2	1/2 - 1	> 1	Total Plotted
SWF/LF		0.500	0	0	0	NR	NR	0
WMUDS/SWAT		0.500	0	0	0	NR	NR	0
CA WDS		TP	NR	NR	NR	NR	NR	0
Cortese		0.500	0	1	0	NR	NR	1
SWRCY		0.500	2	0	0	NR	NR	2
LUST		0.500	0	1	0	NR	NR	1
CA FID UST		0.250	0	1	NR	NR	NR	1
SLIC		0.500	0	0	0	NR	NR	0
UST		0.250	1	2	NR	NR	NR	3
HIST UST		0.250	1	1	NR	NR	NR	2
AST		0.250	0	1	NR	NR	NR	1
LIENS		TP	NR	NR	NR	NR	NR	0
SWEEPS UST		0.250	0	1	NR	NR	NR	1
CHMIRS		TP	NR	NR	NR	NR	NR	0
Notify 65		1.000	0	0	0	2	NR	2
DEED		0.500	0	0	0	NR	NR	0
VCP		0.500	0	0	0	NR	NR	0
DRYCLEANERS		0.250	0	0	NR	NR	NR	0
WIP		0.250	0	0	NR	NR	NR	0
CDL		TP	NR	NR	NR	NR	NR	0
RESPONSE		1.000	0	0	0	0	NR	0
HAZNET		TP	NR	NR	NR	NR	NR	0
EMI		TP	NR	NR	NR	NR	NR	0
HAULERS		TP	NR	NR	NR	NR	NR	0
ENVIROSTOR		1.000	0	0	0	0	NR	0
TRIBAL RECORDS								
INDIAN RESERV		1.000	0	0	0	0	NR	0
INDIAN ODI		0.500	0	0	0	NR	NR	0
INDIAN LUST		0.500	0	0	0	NR	NR	0
INDIAN UST		0.250	0	0	NR	NR	NR	0
INDIAN VCP		0.500	0	0	0	NR	NR	0
EDR PROPRIETARY RECORDS								
Manufactured Gas Plants		1.000	0	0	0	0	NR	0
EDR Historical Auto Stations		0.250	0	0	NR	NR	NR	0
EDR Historical Cleaners		0.250	0	0	NR	NR	NR	0

NOTES:

TP = Target Property

NR = Not Requested at this Search Distance

Sites may be listed in more than one database

Map ID Direction Distance Elevation	Site	Database(s)	EDR ID Number EPA ID Number
A1 **West** **< 1/8** **0.014 mi.** **74 ft.**	**TOMRA PACIFIC INC/ALBERTSONS #6347** **775 S TUCKER RD** **TEHACHAPI, CA 93561** **Site 1 of 2 in cluster A**	**SWRCY**	**S107869697** **N/A**

Relative:
Higher

Actual:
3952 ft.

SWRCY:

Certification Status:	O
Facility Phone Number:	Not reported
Date facility became certified:	04/25/06
Date facility began operating:	05/10/06
Date facility ceased operating:	Still operating
Whether The Facility Is Grandfathered:	Not reported
Convenience Zone Where Faciltiy Located:	3466
Convenience Zone Where Faciltiy Located 2:	4430
Convenience Zone Where Faciltiy Located 3:	0
Convenience Zone Where Faciltiy Located 4:	0
Convenience Zone Where Faciltiy Located 5:	0
Convenience Zone Where Faciltiy Located 6:	0
Convenience Zone Where Faciltiy Located 7:	0
Aluminum Beverage Containers Redeemed:	AL
Glass Beverage Containers Redeemed:	GL
Plastic Beverage Containers Redeemed:	PL
Other mat beverage containers redeemed:	Not reported
Refillable Beverage Containers Redeemed:	Not reported

A2 **West** **< 1/8** **0.015 mi.** **81 ft.**	**HOWARDS MINI MART** **799 TUCKER RD** **TEHACHAPI, CA 93561** **Site 2 of 2 in cluster A**	**UST**	**U003981718** **N/A**

Relative:
Higher

Actual:
3949 ft.

UST:

Local Agency:	15000
Facility ID:	FA0003297

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3 **West** **< 1/8** **0.016 mi.** **87 ft.**	**RECYCLO/SAVEMART STORE** **841 TUCKER RD** **TEHACHAPI, CA 93561**	**SWRCY**	**S107137753** **N/A**

Relative:
Higher

Actual:
3941 ft.

SWRCY:

Certification Status:	R
Facility Phone Number:	(714) 474-1586
Date facility became certified:	05/23/91
Date facility began operating:	06/07/91
Date facility ceased operating:	08/17/92
Whether The Facility Is Grandfathered:	Not reported
Convenience Zone Where Faciltiy Located:	0
Convenience Zone Where Faciltiy Located 2:	0
Convenience Zone Where Faciltiy Located 3:	0
Convenience Zone Where Faciltiy Located 4:	0
Convenience Zone Where Faciltiy Located 5:	0
Convenience Zone Where Faciltiy Located 6:	0
Convenience Zone Where Faciltiy Located 7:	0
Aluminum Beverage Containers Redeemed:	AL
Glass Beverage Containers Redeemed:	GL

RECYCLO/SAVEMART STORE (Continued) **S107137753**

Plastic Beverage Containers Redeemed: PL
Other mat beverage containers redeemed: Not reported
Refillable Beverage Containers Redeemed: Not reported

B4 **TEHACHAPI LUMBER CO.** **HIST UST** **U001587168**
North **228 W TEHACHAPI BLVD** **N/A**
< 1/8 **TEHACHAPI, CA 93561**
0.116 mi.
612 ft. **Site 1 of 6 in cluster B**

Relative:
Lower

Actual:
3923 ft.

HIST UST:

Region:	STATE
Facility ID:	00000001449
Facility Type:	Other
Other Type:	RETAIL BUILDING MATE
Total Tanks:	0001
Contact Name:	Not reported
Telephone:	8058224481
Owner Name:	TEHACHAPI LUMBER CO.
Owner Address:	228 W. TEHACHAPI BLVD.
Owner City,St,Zip:	TEHACHAPI, CA 93561
Tank Num:	001
Container Num:	1
Year Installed:	Not reported
Tank Capacity:	00000500
Tank Used for:	PRODUCT
Type of Fuel:	REGULAR
Tank Construction:	Not reported
Leak Detection:	None

B5 **D.O.T. GARAGE (CALTRANS)** **LUST** **S104404337**
North **320 TEHACHAPI BLVD W** **N/A**
1/8-1/4 **TEHACHAPI, CA 93561**
0.127 mi.
673 ft. **Site 2 of 6 in cluster B**

Relative:
Lower

Actual:
3923 ft.

LUST:

Region:	STATE
Status:	Case Closed
Case Number:	5T15000360
Local Case #:	610007
Chemical:	Diesel
Qty Leaked:	Not reported
Abate Method:	Not reported
Release Date:	1989-12-05 00:00:00
Discover Date:	1989-12-05 00:00:00
Report Date:	1991-02-28 00:00:00
Enforcement Dt:	1965-01-01 00:00:00
Review Date:	Not reported
Enter Date:	1990-08-03 00:00:00
Stop Date:	Not reported
Confirm Leak:	1989-12-05 00:00:00
Case Type:	Soil only
Cross Street:	Not reported
Enf Type:	F

D.O.T. GARAGE (CALTRANS) (Continued) S104404337

Funding: Not reported
How Discovered: Not reported
How Stopped: Not reported
Leak Cause: Not reported
Leak Source: Not reported
Global Id: T0602900353
Workplan: Not reported
Prelim Assess: Not reported
Pollution Char: Not reported
Remed Plan: 1991-01-05 00:00:00
Remed Action: Not reported
Monitoring: Not reported
MTBE Date: Not reported
GW Qualifier: Not reported
Soil Qualifier: Not reported
Max MTBE GW ppb: Not reported
Max MTBE Soil ppb: Not reported
County: 15
Org Name: Not reported
Reg Board: 5F
Contact Person: Not reported
Responsible Party: STATE OF CALIFORNIA
RP Address: 400 "P" STREET 5TH FLOOR, SACRAMENTO, CA 95814
Interim: Not reported
Oversight Prgm: LUST
MTBE Class: *
MTBE Conc: 0
MTBE Fuel: 0
MTBE Tested: Not Required to be Tested.
Staff: JDW
Staff Initials: CAN
Lead Agency: Local Agency
Local Agency: 15000L
Hydr Basin #: TEHACHAPI VALLEY WES
Beneficial: Not reported
Priority: 4
Cleanup Fund Id: Not reported
Work Suspended: No
Operator: Not reported
Water System Name: Not reported
Well Name: Not reported
Distance To Lust: 0
Waste Discharge Global ID: Not reported
Waste Disch Assigned Name: Not reported
Summary: CASE CLOSED BY COUNTY ON 02/28/91.

LUST REG 5:
Region: 5
Status: Case Closed
Case Number: 5T15000360
Case Type: Soil only
Substance: DIESEL
Staff Initials: JDW
Lead Agency: Local
Program: LUST
MTBE Code: N/A

B6 **TEHACHAPI** **HIST UST** **U001587166**
North **320 W TEHACHAPI BLVD** **N/A**
1/8-1/4 **TEHACHAPI, CA 93561**
0.127 mi.
673 ft. **Site 3 of 6 in cluster B**

Relative:
Lower

Actual:
3923 ft.

HIST UST:

Region:	STATE
Facility ID:	00000068145
Facility Type:	Not reported
Other Type:	Not reported
Total Tanks:	0002
Contact Name:	Not reported
Telephone:	8058223226
Owner Name:	CALIF DEPT OF TRANSPORTATION
Owner Address:	1120 N STREET
Owner City,St,Zip:	SACRAMENTO, CA 95814
Tank Num:	001
Container Num:	0000000001
Year Installed:	1939
Tank Capacity:	00001000
Tank Used for:	PRODUCT
Type of Fuel:	DIESEL
Tank Construction:	Not reported
Leak Detection:	Not reported
Tank Num:	002
Container Num:	0000000002
Year Installed:	1960
Tank Capacity:	00002135
Tank Used for:	PRODUCT
Type of Fuel:	UNLEADED
Tank Construction:	Not reported
Leak Detection:	Not reported

B7 **CALTRANS TEHACHAPI GARAGE** **Cortese** **S100227862**
North **320 TEHACHAPI BLVD W** **N/A**
1/8-1/4 **TEHACHAPI, CA 93561**
0.127 mi.
673 ft. **Site 4 of 6 in cluster B**

Relative:
Lower

Actual:
3923 ft.

Cortese:

Region:	CORTESE
Facility Addr2:	320 TEHACHAPI BLVD W
Region:	CORTESE
Facility Addr2:	Not reported

B8 North 1/8-1/4 0.127 mi. 673 ft. — **TEHACHAPI**, **320 W TEHACHAPI BLVD**, **TEHACHAPI, CA 93561** — **CA FID UST** S101621012, **SWEEPS UST** N/A

Site 5 of 6 in cluster B

Relative: Lower

Actual: 3923 ft.

CA FID UST:

Facility ID:	15000442
Regulated By:	UTNKA
Regulated ID:	00068145
Cortese Code:	Not reported
SIC Code:	Not reported
Facility Phone:	8058223226
Mail To:	Not reported
Mailing Address:	320 W TEHACHAPI BLVD
Mailing Address 2:	Not reported
Mailing City,St,Zip:	TEHACHAPI 93561
Contact:	Not reported
Contact Phone:	Not reported
DUNs Number:	Not reported
NPDES Number:	Not reported
EPA ID:	Not reported
Comments:	Not reported
Status:	Active

SWEEPS UST:

Status:	A
Comp Number:	68145
Number:	9
Board Of Equalization:	44-006577
Ref Date:	07-01-85
Act Date:	Not reported
Created Date:	09-30-89
Tank Status:	A
Owner Tank Id:	1
Swrcb Tank Id:	15-000-068145-000001
Actv Date:	08-27-91
Capacity:	6000
Tank Use:	M.V. FUEL
Stg:	P
Content:	DIESEL
Number Of Tanks:	1

Status:	Not reported
Comp Number:	68145
Number:	Not reported
Board Of Equalization:	44-006577
Ref Date:	Not reported
Act Date:	Not reported
Created Date:	Not reported
Tank Status:	Not reported
Owner Tank Id:	Not reported
Swrcb Tank Id:	15-000-068145-000002
Actv Date:	Not reported
Capacity:	2135
Tank Use:	M.V. FUEL
Stg:	PRODUCT
Content:	REG UNLEADED
Number Of Tanks:	1

B9 North 1/8-1/4 0.127 mi. 673 ft. — **CALTRANS DISTRICT 09**, **320 W TEHACHAPI BLVD**, **TEHACHAPI, CA 93561** — **RCRA-SQG** **1000419515**, **FINDS** **CAD982040420**

Site 6 of 6 in cluster B

Relative: Lower

Actual: 3923 ft.

RCRA-SQG:

Date form received by agency:	09/01/1996
Facility name:	CALTRANS DISTRICT 09
Facility address:	320 W TEHACHAPI BLVD TEHACHAPI, CA 93561
EPA ID:	CAD982040420
Mailing address:	320 W TAHACHAPI BLVD TEHACHAPI, CA 93561
Contact:	Not reported
Contact address:	Not reported Not reported
Contact country:	Not reported
Contact telephone:	Not reported
Contact email:	Not reported
EPA Region:	09
Classification:	Small Small Quantity Generator
Description:	Handler: generates more than 100 and less than 1000 kg of hazardous waste during any calendar month and accumulates less than 6000 kg of hazardous waste at any time; or generates 100 kg or less of hazardous waste during any calendar month, and accumulates more than 1000 kg of hazardous waste at any time

Owner/Operator Summary:

Owner/operator name:	NOT REQUIRED
Owner/operator address:	NOT REQUIRED NOT REQUIRED, ME 99999
Owner/operator country:	Not reported
Owner/operator telephone:	(415) 555-1212
Legal status:	State
Owner/Operator Type:	Operator
Owner/Op start date:	Not reported
Owner/Op end date:	Not reported

Owner/operator name:	CA DEPT OF TRANS
Owner/operator address:	NOT REQUIRED NOT REQUIRED, ME 99999
Owner/operator country:	Not reported
Owner/operator telephone:	(415) 555-1212
Legal status:	State
Owner/Operator Type:	Owner
Owner/Op start date:	Not reported
Owner/Op end date:	Not reported

Handler Activities Summary:

U.S. importer of hazardous waste:	Unknown
Mixed waste (haz. and radioactive):	Unknown
Recycler of hazardous waste:	No
Transporter of hazardous waste:	No
Treater, storer or disposer of HW:	No
Underground injection activity:	No
On-site burner exemption:	Unknown
Furnace exemption:	Unknown

CALTRANS DISTRICT 09 (Continued) **1000419515**

Used oil fuel burner: No
Used oil processor: No
User oil refiner: No
Used oil fuel marketer to burner: No
Used oil Specification marketer: No
Used oil transfer facility: No
Used oil transporter: No
Off-site waste receiver: Commercial status unknown

Historical Generators:
Date form received by agency: 08/20/1987
Facility name: CALTRANS DISTRICT 09
Classification: Large Quantity Generator

Violation Status: No violations found

FINDS:
Other Pertinent Environmental Activity Identified at Site

California - Hazardous Waste Tracking System - Datamart

RCRAInfo is a national information system that supports the Resource Conservation and Recovery Act (RCRA) program through the tracking of events and activities related to facilities that generate, transport, and treat, store, or dispose of hazardous waste. RCRAInfo allows RCRA program staff to track the notification, permit, compliance, and corrective action activities required under RCRA.

10
North
1/8-1/4
0.170 mi.
900 ft.

TRIANGLE ROCK PRODUCTS
655 W TEHACHAPI BLVD
TEHACHAPI, CA 93561

AST **A100226680**
N/A

Relative:
Lower

Actual:
3924 ft.

AST:
Owner: TRIANGLE ROCK PRODUCTS
Total Gallons: 12000

C11
South
1/8-1/4
0.246 mi.
1297 ft.

ALBERTSONS EXPRESS #1122
785 S TUCKER RD
TEHACHAPI, CA 93561

UST **U004113911**
N/A

Site 1 of 2 in cluster C

Relative:
Higher

Actual:
3995 ft.

UST:
Region: Kern
Owner Id: 600055
Owner Name: NEW ALBERTSONS INC
Active Facility: Not reported
Bakersfield City: Not reported
APN: Not reported
Compliant: Yes
Number of Tanks: Not reported

Tank Num: 1

Map ID Direction Distance Elevation	Site	Database(s)	EDR ID Number EPA ID Number
	ALBERTSONS EXPRESS #1122 (Continued)		**U004113911**
	Tank Capacity: 15000 Common Name: UNLEADED		
	Tank Num: 2 Tank Capacity: 10000 Common Name: PREMIUM		
C12 South 1/8-1/4 0.246 mi. 1297 ft.	**ALBERTSONS EXPRESS 6347 785 TUCKER RD TEHACHAPI, CA 93561**	**UST**	**U003937403 N/A**
Relative: Higher	**Site 2 of 2 in cluster C**		
Actual: 3995 ft.	UST: Local Agency: 15000 Facility ID: FA0003826		
13 ENE 1/2-1 0.689 mi. 3637 ft.	**CITY OF TEHACHAPI WASTEWATER TREATMENT PLT TEHACHAPI, CA 91789**	**Notify 65**	**S100178529 N/A**
Relative: Higher	Notify 65:		
Actual: 3960 ft.	Date Reported: Not reported Staff Initials: Not reported Board File Number: Not reported Facility Type: Not reported Discharge Date: Not reported Incident Description: 91789		
14 East 1/2-1 0.916 mi. 4836 ft.	**SOUTHERN PACIFIC - TEHACHAPI 101 WEST TEHACHAPI BOULE TEHACHAPI, CA 91789**	**Notify 65**	**S100227863 N/A**
Relative: Higher	Notify 65:		
Actual: 3976 ft.	Date Reported: Not reported Staff Initials: Not reported Board File Number: Not reported Facility Type: Not reported Discharge Date: Not reported Incident Description: 91789		

ORPHAN SUMMARY

City		EDR ID	Site Name	Site Address	Zip	Database(s)
MONOLITH		91228756	TEHACHAPI PLANT	TEHACHAPI PLANT	93561	ERNS
TEHACHAPI		S101582422	TEHACHAPI CUMMINGS WATER DIST	T 11N R 18W SEC 14	93561	CA FID UST, SWEEPS UST
TEHACHAPI		S106932817	TEHACHAPI CUMMINGS WATER DIST	T 12N R 17W SEC 34	93561	SWEEPS UST
TEHACHAPI		S106932816	TEHACHAPI CUMMINGS WATER DIST	T 12N R 17W SEC 33	93561	SWEEPS UST
TEHACHAPI		S102360438	TEHACHAPI	HWY. 202 END OF		AST
TEHACHAPI		U004113913	TEHACHAPI MINUTE SERVE DAIRY	20521 HWY 202	93561	UST
TEHACHAPI		S101630912	HOWARDS MARKET	HWY 202 TUCKER NEC RD	93561	CA FID UST, SWEEPS UST
TEHACHAPI		S101582425	TEHACHAPI CUMMINGS WATER DIST	T 32S R 32E SEC 29	93561	CA FID UST, SWEEPS UST
TEHACHAPI		S105255399	TEHACHAPI CLASS II SURF IMPND	PO BOX 1031		CA WDS
TEHACHAPI		1004439468	OAK HILL GARDEN SCHOOL OF TEHACHAPI	P.O. BOX 1066	93561	FINDS
TEHACHAPI		92293553	CALIEN BODFISH JUST W OF TEHACHAPI	CALIEN BODFISH JUST W OF TEHACHAPI	93561	ERNS
TEHACHAPI		S105255398	TEHACHAPI CORRECTIONAL INST	CUMMINGS VALLEY RD		CA WDS
TEHACHAPI		S105255555	TEHACHAPI CLASS III LANDFILL	4.5 MI E OF TEHACHAPI		CA WDS
TEHACHAPI		U001587148	CALIFORNIA CORRECTIONAL INST.	END OF HIGHWAY 202	93561	HIST UST
TEHACHAPI		U001587149	CALIFORNIA CORRECTIONAL INSTIT	END OF HIGHWAY 202	93561	HIST UST
TEHACHAPI		S103650272	TEHACHAPI UNIFIED SCHOOL DISTRICT	29569 EUMATILLA	93561	HAZNET
TEHACHAPI		S102821404	TEHACHAPI UNIFIED SCHOOL DISTRICT	JACOBSEN JR HIGH SCHOOL	93561	HAZNET
TEHACHAPI		1008206260	SPECIAL OZONE STUDY - TEHACHAPI CA - (WEST OF CABLE TV ANTEN	JAMESON ROAD, TEHACHAPI (W OF ANTENNAS)	93561	FINDS
TEHACHAPI		S103990496	TEHACHAPI UNIFIED SCHOOL DISTRICT	MAINTENANCE YARD	93561	HAZNET
TEHACHAPI		2004745709	7 MILES NW OF TEHACHAPI	7 MILES NW OF TEHACHAPI		ERNS
TEHACHAPI		U004113469	TEHACHAPI MOUNTAIN PARK	T11N, R15W, SEC 04 & 09	93561	UST
TEHACHAPI		U004113474	TEHACHAPI PEAK RADIO RELAY	T09N, R18W, SEC 23	93561	UST
TEHACHAPI		1006834182	WEST TEHACHAPI BURN DUMP	T32S R33E, SECTION 17	93561	FINDS
TEHACHAPI		92268631	STATE ROUTE 58 EB AT TEHACHAPI OK	STATE ROUTE 58 EB AT TEHACHAPI OK	93561	ERNS
TEHACHAPI		U004113501	EG&G ENERGY MEASUREMENTS, INC	TEHACHAPI CITY AIRPORT	93561	UST
TEHACHAPI		U004113516	AUTO DEALERSHIP	200 TEHACHAPI BLVD	93561	UST
TEHACHAPI		U003991635	AUTO DEALERSHIP	200 TEHACHAPI BLVD	93561	LUST
TEHACHAPI		S101621005	TEHACHAPI MOUNTAIN PARK	WATER CANYON RD	93561	CA FID UST, SWEEPS UST
TEHACHAPI	CA	S103617208	TEHACHAPI CLASS II SURF IMPND	PO BOX 1031	93561	WMUDS/SWAT
TEHACHAPI	CA	S101612514	TEHACHAPI CLASS III LANDFILL	4.5 MI E OF TEHACHAPI	93561	WMUDS/SWAT

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

To maintain currency of the following federal and state databases, EDR contacts the appropriate governmental agency on a monthly or quarterly basis, as required.

Number of Days to Update: Provides confirmation that EDR is reporting records that have been updated within 90 days from the date the government agency made the information available to the public.

FEDERAL RECORDS

NPL: National Priority List

National Priorities List (Superfund). The NPL is a subset of CERCLIS and identifies over 1,200 sites for priority cleanup under the Superfund Program. NPL sites may encompass relatively large areas. As such, EDR provides polygon coverage for over 1,000 NPL site boundaries produced by EPA's Environmental Photographic Interpretation Center (EPIC) and regional EPA offices.

Date of Government Version: 08/13/2008
Date Data Arrived at EDR: 08/27/2008
Date Made Active in Reports: 09/23/2008
Number of Days to Update: 27

Source: EPA
Telephone: N/A
Last EDR Contact: 09/29/2008
Next Scheduled EDR Contact: 01/26/2009
Data Release Frequency: Quarterly

NPL Site Boundaries

Sources:

EPA's Environmental Photographic Interpretation Center (EPIC)
Telephone: 202-564-7333

EPA Region 1
Telephone 617-918-1143

EPA Region 3
Telephone 215-814-5418

EPA Region 4
Telephone 404-562-8033

EPA Region 5
Telephone 312-886-6686

EPA Region 10
Telephone 206-553-8665

EPA Region 6
Telephone: 214-655-6659

EPA Region 7
Telephone: 913-551-7247

EPA Region 8
Telephone: 303-312-6774

EPA Region 9
Telephone: 415-947-4246

Proposed NPL: Proposed National Priority List Sites

A site that has been proposed for listing on the National Priorities List through the issuance of a proposed rule in the Federal Register. EPA then accepts public comments on the site, responds to the comments, and places on the NPL those sites that continue to meet the requirements for listing.

Date of Government Version: 04/30/2008
Date Data Arrived at EDR: 05/06/2008
Date Made Active in Reports: 06/09/2008
Number of Days to Update: 34

Source: EPA
Telephone: N/A
Last EDR Contact: 09/29/2008
Next Scheduled EDR Contact: 01/26/2009
Data Release Frequency: Quarterly

DELISTED NPL: National Priority List Deletions

The National Oil and Hazardous Substances Pollution Contingency Plan (NCP) establishes the criteria that the EPA uses to delete sites from the NPL. In accordance with 40 CFR 300.425.(e), sites may be deleted from the NPL where no further response is appropriate.

Date of Government Version: 08/14/2008
Date Data Arrived at EDR: 08/27/2008
Date Made Active in Reports: 09/23/2008
Number of Days to Update: 27

Source: EPA
Telephone: N/A
Last EDR Contact: 09/29/2008
Next Scheduled EDR Contact: 01/26/2009
Data Release Frequency: Quarterly

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

NPL LIENS: Federal Superfund Liens

Federal Superfund Liens. Under the authority granted the USEPA by CERCLA of 1980, the USEPA has the authority to file liens against real property in order to recover remedial action expenditures or when the property owner received notification of potential liability. USEPA compiles a listing of filed notices of Superfund Liens.

Date of Government Version: 10/15/1991
Date Data Arrived at EDR: 02/02/1994
Date Made Active in Reports: 03/30/1994
Number of Days to Update: 56

Source: EPA
Telephone: 202-564-4267
Last EDR Contact: 08/18/2008
Next Scheduled EDR Contact: 11/17/2008
Data Release Frequency: No Update Planned

CERCLIS: Comprehensive Environmental Response, Compensation, and Liability Information System

CERCLIS contains data on potentially hazardous waste sites that have been reported to the USEPA by states, municipalities, private companies and private persons, pursuant to Section 103 of the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA). CERCLIS contains sites which are either proposed to or on the National Priorities List (NPL) and sites which are in the screening and assessment phase for possible inclusion on the NPL.

Date of Government Version: 07/09/2008
Date Data Arrived at EDR: 07/22/2008
Date Made Active in Reports: 08/25/2008
Number of Days to Update: 34

Source: EPA
Telephone: 703-412-9810
Last EDR Contact: 10/16/2008
Next Scheduled EDR Contact: 01/12/2009
Data Release Frequency: Quarterly

CERCLIS-NFRAP: CERCLIS No Further Remedial Action Planned

Archived sites are sites that have been removed and archived from the inventory of CERCLIS sites. Archived status indicates that, to the best of EPA's knowledge, assessment at a site has been completed and that EPA has determined no further steps will be taken to list this site on the National Priorities List (NPL), unless information indicates this decision was not appropriate or other considerations require a recommendation for listing at a later time. This decision does not necessarily mean that there is no hazard associated with a given site; it only means that, based upon available information, the location is not judged to be a potential NPL site.

Date of Government Version: 12/03/2007
Date Data Arrived at EDR: 12/06/2007
Date Made Active in Reports: 02/20/2008
Number of Days to Update: 76

Source: EPA
Telephone: 703-412-9810
Last EDR Contact: 09/15/2008
Next Scheduled EDR Contact: 12/15/2008
Data Release Frequency: Quarterly

LIENS 2: CERCLA Lien Information

A Federal CERCLA ('Supertund') lien can exist by operation of law at any site or property at which EPA has spent Superfund monies. These monies are spent to investigate and address releases and threatened releases of contamination. CERCLIS provides information as to the identity of these sites and properties.

Date of Government Version: 08/19/2008
Date Data Arrived at EDR: 08/29/2008
Date Made Active in Reports: 09/09/2008
Number of Days to Update: 11

Source: Environmental Protection Agency
Telephone: 202-564-6023
Last EDR Contact: 08/18/2008
Next Scheduled EDR Contact: 11/17/2008
Data Release Frequency: Varies

CORRACTS: Corrective Action Report

CORRACTS identifies hazardous waste handlers with RCRA corrective action activity.

Date of Government Version: 09/11/2008
Date Data Arrived at EDR: 09/19/2008
Date Made Active in Reports: 10/16/2008
Number of Days to Update: 27

Source: EPA
Telephone: 800-424-9346
Last EDR Contact: 09/02/2008
Next Scheduled EDR Contact: 12/01/2008
Data Release Frequency: Quarterly

RCRA-TSDF: RCRA - Transporters, Storage and Disposal

RCRAInfo is EPA's comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. The database includes selective information on sites which generate, transport, store, treat and/or dispose of hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA). Transporters are individuals or entities that move hazardous waste from the generator offsite to a facility that can recycle, treat, store, or dispose of the waste. TSDFs treat, store, or dispose of the waste.

Date of Government Version: 09/10/2008
Date Data Arrived at EDR: 09/23/2008
Date Made Active in Reports: 10/16/2008
Number of Days to Update: 23

Source: Environmental Protection Agency
Telephone: (415) 495-8895
Last EDR Contact: 09/23/2008
Next Scheduled EDR Contact: 11/17/2008
Data Release Frequency: Quarterly

RCRA-LQG: RCRA - Large Quantity Generators

RCRAInfo is EPA's comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. The database includes selective information on sites which generate, transport, store, treat and/or dispose of hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA). Large quantity generators (LQGs) generate over 1,000 kilograms (kg) of hazardous waste, or over 1 kg of acutely hazardous waste per month.

Date of Government Version: 09/10/2008
Date Data Arrived at EDR: 09/23/2008
Date Made Active in Reports: 10/16/2008
Number of Days to Update: 23

Source: Environmental Protection Agency
Telephone: (415) 495-8895
Last EDR Contact: 09/23/2008
Next Scheduled EDR Contact: 11/17/2008
Data Release Frequency: Quarterly

RCRA-SQG: RCRA - Small Quantity Generators

RCRAInfo is EPA's comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. The database includes selective information on sites which generate, transport, store, treat and/or dispose of hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA). Small quantity generators (SQGs) generate between 100 kg and 1,000 kg of hazardous waste per month.

Date of Government Version: 09/10/2008
Date Data Arrived at EDR: 09/23/2008
Date Made Active in Reports: 10/16/2008
Number of Days to Update: 23

Source: Environmental Protection Agency
Telephone: (415) 495-8895
Last EDR Contact: 09/23/2008
Next Scheduled EDR Contact: 11/17/2008
Data Release Frequency: Quarterly

RCRA-CESQG: RCRA - Conditionally Exempt Small Quantity Generators

RCRAInfo is EPA's comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. The database includes selective information on sites which generate, transport, store, treat and/or dispose of hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA). Conditionally exempt small quantity generators (CESQGs) generate less than 100 kg of hazardous waste, or less than 1 kg of acutely hazardous waste per month.

Date of Government Version: 09/10/2008
Date Data Arrived at EDR: 09/23/2008
Date Made Active in Reports: 10/16/2008
Number of Days to Update: 23

Source: Environmental Protection Agency
Telephone: (415) 495-8895
Last EDR Contact: 09/23/2008
Next Scheduled EDR Contact: 11/17/2008
Data Release Frequency: Varies

RCRA-NonGen: RCRA - Non Generators

RCRAInfo is EPA's comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. The database includes selective information on sites which generate, transport, store, treat and/or dispose of hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA). Non-Generators do not presently generate hazardous waste.

Date of Government Version: 09/10/2008
Date Data Arrived at EDR: 09/23/2008
Date Made Active in Reports: 10/16/2008
Number of Days to Update: 23

Source: Environmental Protection Agency
Telephone: (415) 495-8895
Last EDR Contact: 09/23/2008
Next Scheduled EDR Contact: 11/17/2008
Data Release Frequency: Varies

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

US ENG CONTROLS: Engineering Controls Sites List

A listing of sites with engineering controls in place. Engineering controls include various forms of caps, building foundations, liners, and treatment methods to create pathway elimination for regulated substances to enter environmental media or effect human health.

Date of Government Version: 07/23/2008
Date Data Arrived at EDR: 07/29/2008
Date Made Active in Reports: 08/25/2008
Number of Days to Update: 27

Source: Environmental Protection Agency
Telephone: 703-603-0695
Last EDR Contact: 09/29/2008
Next Scheduled EDR Contact: 12/29/2008
Data Release Frequency: Varies

US INST CONTROL: Sites with Institutional Controls

A listing of sites with institutional controls in place. Institutional controls include administrative measures, such as groundwater use restrictions, construction restrictions, property use restrictions, and post remediation care requirements intended to prevent exposure to contaminants remaining on site. Deed restrictions are generally required as part of the institutional controls.

Date of Government Version: 07/23/2008
Date Data Arrived at EDR: 07/29/2008
Date Made Active in Reports: 08/25/2008
Number of Days to Update: 27

Source: Environmental Protection Agency
Telephone: 703-603-0695
Last EDR Contact: 06/30/2008
Next Scheduled EDR Contact: 09/29/2008
Data Release Frequency: Varies

ERNS: Emergency Response Notification System

Emergency Response Notification System. ERNS records and stores information on reported releases of oil and hazardous substances.

Date of Government Version: 12/31/2007
Date Data Arrived at EDR: 01/23/2008
Date Made Active in Reports: 03/17/2008
Number of Days to Update: 54

Source: National Response Center, United States Coast Guard
Telephone: 202-267-2180
Last EDR Contact: 10/21/2008
Next Scheduled EDR Contact: 01/19/2009
Data Release Frequency: Annually

HMIRS: Hazardous Materials Information Reporting System

Hazardous Materials Incident Report System. HMIRS contains hazardous material spill incidents reported to DOT.

Date of Government Version: 04/30/2008
Date Data Arrived at EDR: 07/15/2008
Date Made Active in Reports: 08/25/2008
Number of Days to Update: 41

Source: U.S. Department of Transportation
Telephone: 202-366-4555
Last EDR Contact: 10/16/2008
Next Scheduled EDR Contact: 01/12/2009
Data Release Frequency: Annually

DOT OPS: Incident and Accident Data

Department of Transporation, Office of Pipeline Safety Incident and Accident data.

Date of Government Version: 05/14/2008
Date Data Arrived at EDR: 05/28/2008
Date Made Active in Reports: 08/08/2008
Number of Days to Update: 72

Source: Department of Transporation, Office of Pipeline Safety
Telephone: 202-366-4595
Last EDR Contact: 08/29/2008
Next Scheduled EDR Contact: 11/24/2008
Data Release Frequency: Varies

CDL: Clandestine Drug Labs

A listing of clandestine drug lab locations. The U.S. Department of Justice ("the Department") provides this web site as a public service. It contains addresses of some locations where law enforcement agencies reported they found chemicals or other items that indicated the presence of either clandestine drug laboratories or dumpsites. In most cases, the source of the entries is not the Department, and the Department has not verified the entry and does not guarantee its accuracy. Members of the public must verify the accuracy of all entries by, for example, contacting local law enforcement and local health departments.

Date of Government Version: 09/01/2007
Date Data Arrived at EDR: 12/03/2007
Date Made Active in Reports: 12/28/2007
Number of Days to Update: 25

Source: Drug Enforcement Administration
Telephone: 202-307-1000
Last EDR Contact: 10/31/2008
Next Scheduled EDR Contact: 12/22/2008
Data Release Frequency: Quarterly

US BROWNFIELDS: A Listing of Brownfields Sites

Included in the listing are brownfields properties addresses by Cooperative Agreement Recipients and brownfields properties addressed by Targeted Brownfields Assessments. Targeted Brownfields Assessments-EPA's Targeted Brownfields Assessments (TBA) program is designed to help states, tribes, and municipalities--especially those without EPA Brownfields Assessment Demonstration Pilots--minimize the uncertainties of contamination often associated with brownfields. Under the TBA program, EPA provides funding and/or technical assistance for environmental assessments at brownfields sites throughout the country. Targeted Brownfields Assessments supplement and work with other efforts under EPA's Brownfields Initiative to promote cleanup and redevelopment of brownfields. Cooperative Agreement Recipients-States, political subdivisions, territories, and Indian tribes become Brownfields Cleanup Revolving Loan Fund (BCRLF) cooperative agreement recipients when they enter into BCRLF cooperative agreements with the U.S. EPA. EPA selects BCRLF cooperative agreement recipients based on a proposal and application process. BCRLF cooperative agreement recipients must use EPA funds provided through BCRLF cooperative agreement for specified brownfields-related cleanup activities.

Date of Government Version: 07/01/2008
Date Data Arrived at EDR: 08/25/2008
Date Made Active in Reports: 09/09/2008
Number of Days to Update: 15

Source: Environmental Protection Agency
Telephone: 202-566-2777
Last EDR Contact: 10/16/2008
Next Scheduled EDR Contact: 01/12/2009
Data Release Frequency: Semi-Annually

DOD: Department of Defense Sites

This data set consists of federally owned or administered lands, administered by the Department of Defense, that have any area equal to or greater than 640 acres of the United States, Puerto Rico, and the U.S. Virgin Islands.

Date of Government Version: 12/31/2005
Date Data Arrived at EDR: 11/10/2006
Date Made Active in Reports: 01/11/2007
Number of Days to Update: 62

Source: USGS
Telephone: 703-692-8801
Last EDR Contact: 11/07/2008
Next Scheduled EDR Contact: 02/02/2009
Data Release Frequency: Semi-Annually

FUDS: Formerly Used Defense Sites

The listing includes locations of Formerly Used Defense Sites properties where the US Army Corps of Engineers is actively working or will take necessary cleanup actions.

Date of Government Version: 12/31/2007
Date Data Arrived at EDR: 09/05/2008
Date Made Active in Reports: 09/23/2008
Number of Days to Update: 18

Source: U.S. Army Corps of Engineers
Telephone: 202-528-4285
Last EDR Contact: 09/05/2008
Next Scheduled EDR Contact: 12/29/2008
Data Release Frequency: Varies

LUCIS: Land Use Control Information System

LUCIS contains records of land use control information pertaining to the former Navy Base Realignment and Closure properties.

Date of Government Version: 12/09/2005
Date Data Arrived at EDR: 12/11/2006
Date Made Active in Reports: 01/11/2007
Number of Days to Update: 31

Source: Department of the Navy
Telephone: 843-820-7326
Last EDR Contact: 09/09/2008
Next Scheduled EDR Contact: 12/08/2008
Data Release Frequency: Varies

CONSENT: Superfund (CERCLA) Consent Decrees

Major legal settlements that establish responsibility and standards for cleanup at NPL (Superfund) sites. Released periodically by United States District Courts after settlement by parties to litigation matters.

Date of Government Version: 04/25/2008
Date Data Arrived at EDR: 06/12/2008
Date Made Active in Reports: 08/25/2008
Number of Days to Update: 74

Source: Department of Justice, Consent Decree Library
Telephone: Varies
Last EDR Contact: 10/20/2008
Next Scheduled EDR Contact: 01/19/2009
Data Release Frequency: Varies

ROD: Records Of Decision
Record of Decision. ROD documents mandate a permanent remedy at an NPL (Superfund) site containing technical and health information to aid in the cleanup.

Date of Government Version: 06/18/2008
Date Data Arrived at EDR: 07/11/2008
Date Made Active in Reports: 08/25/2008
Number of Days to Update: 45

Source: EPA
Telephone: 703-416-0223
Last EDR Contact: 09/29/2008
Next Scheduled EDR Contact: 12/29/2008
Data Release Frequency: Annually

UMTRA: Uranium Mill Tailings Sites
Uranium ore was mined by private companies for federal government use in national defense programs. When the mills shut down, large piles of the sand-like material (mill tailings) remain after uranium has been extracted from the ore. Levels of human exposure to radioactive materials from the piles are low; however, in some cases tailings were used as construction materials before the potential health hazards of the tailings were recognized.

Date of Government Version: 07/13/2007
Date Data Arrived at EDR: 12/03/2007
Date Made Active in Reports: 01/24/2008
Number of Days to Update: 52

Source: Department of Energy
Telephone: 505-845-0011
Last EDR Contact: 09/15/2008
Next Scheduled EDR Contact: 12/15/2008
Data Release Frequency: Varies

ODI: Open Dump Inventory
An open dump is defined as a disposal facility that does not comply with one or more of the Part 257 or Part 258 Subtitle D Criteria.

Date of Government Version: 06/30/1985
Date Data Arrived at EDR: 08/09/2004
Date Made Active in Reports: 09/17/2004
Number of Days to Update: 39

Source: Environmental Protection Agency
Telephone: 800-424-9346
Last EDR Contact: 06/09/2004
Next Scheduled EDR Contact: N/A
Data Release Frequency: No Update Planned

DEBRIS REGION 9: Torres Martinez Reservation Illegal Dump Site Locations
A listing of illegal dump sites location on the Torres Martinez Indian Reservation located in eastern Riverside County and northern Imperial County, California.

Date of Government Version: 03/25/2008
Date Data Arrived at EDR: 04/17/2008
Date Made Active in Reports: 05/15/2008
Number of Days to Update: 28

Source: EPA, Region 9
Telephone: 415-972-3336
Last EDR Contact: 09/22/2008
Next Scheduled EDR Contact: 12/22/2008
Data Release Frequency: Varies

MINES: Mines Master Index File
Contains all mine identification numbers issued for mines active or opened since 1971. The data also includes violation information.

Date of Government Version: 08/07/2008
Date Data Arrived at EDR: 09/23/2008
Date Made Active in Reports: 10/16/2008
Number of Days to Update: 23

Source: Department of Labor, Mine Safety and Health Administration
Telephone: 303-231-5959
Last EDR Contact: 09/23/2008
Next Scheduled EDR Contact: 12/22/2008
Data Release Frequency: Semi-Annually

TRIS: Toxic Chemical Release Inventory System
Toxic Release Inventory System. TRIS identifies facilities which release toxic chemicals to the air, water and land in reportable quantities under SARA Title III Section 313.

Date of Government Version: 12/31/2006
Date Data Arrived at EDR: 02/29/2008
Date Made Active in Reports: 04/18/2008
Number of Days to Update: 49

Source: EPA
Telephone: 202-566-0250
Last EDR Contact: 09/19/2008
Next Scheduled EDR Contact: 12/15/2008
Data Release Frequency: Annually

TSCA: Toxic Substances Control Act
Toxic Substances Control Act. TSCA identifies manufacturers and importers of chemical substances included on the TSCA Chemical Substance Inventory list. It includes data on the production volume of these substances by plant site.

Date of Government Version: 12/31/2002
Date Data Arrived at EDR: 04/14/2006
Date Made Active in Reports: 05/30/2006
Number of Days to Update: 46

Source: EPA
Telephone: 202-260-5521
Last EDR Contact: 10/14/2008
Next Scheduled EDR Contact: 01/12/2009
Data Release Frequency: Every 4 Years

FTTS: FIFRA/ TSCA Tracking System - FIFRA (Federal Insecticide, Fungicide, & Rodenticide Act)/TSCA (Toxic Substances Control Act)
FTTS tracks administrative cases and pesticide enforcement actions and compliance activities related to FIFRA, TSCA and EPCRA (Emergency Planning and Community Right-to-Know Act). To maintain currency, EDR contacts the Agency on a quarterly basis.

Date of Government Version: 07/12/2008
Date Data Arrived at EDR: 07/18/2008
Date Made Active in Reports: 08/25/2008
Number of Days to Update: 38

Source: EPA/Office of Prevention, Pesticides and Toxic Substances
Telephone: 202-566-1667
Last EDR Contact: 09/15/2008
Next Scheduled EDR Contact: 12/15/2008
Data Release Frequency: Quarterly

FTTS INSP: FIFRA/ TSCA Tracking System - FIFRA (Federal Insecticide, Fungicide, & Rodenticide Act)/TSCA (Toxic Substances Control Act)
A listing of FIFRA/TSCA Tracking System (FTTS) inspections and enforcements.

Date of Government Version: 07/12/2008
Date Data Arrived at EDR: 07/18/2008
Date Made Active in Reports: 08/25/2008
Number of Days to Update: 38

Source: EPA
Telephone: 202-566-1667
Last EDR Contact: 09/15/2008
Next Scheduled EDR Contact: 12/15/2008
Data Release Frequency: Quarterly

HIST FTTS: FIFRA/TSCA Tracking System Administrative Case Listing
A complete administrative case listing from the FIFRA/TSCA Tracking System (FTTS) for all ten EPA regions. The information was obtained from the National Compliance Database (NCDB). NCDB supports the implementation of FIFRA (Federal Insecticide, Fungicide, and Rodenticide Act) and TSCA (Toxic Substances Control Act). Some EPA regions are now closing out records. Because of that, and the fact that some EPA regions are not providing EPA Headquarters with updated records, it was decided to create a HIST FTTS database. It included records that may not be included in the newer FTTS database updates. This database is no longer updated.

Date of Government Version: 10/19/2006
Date Data Arrived at EDR: 03/01/2007
Date Made Active in Reports: 04/10/2007
Number of Days to Update: 40

Source: Environmental Protection Agency
Telephone: 202-564-2501
Last EDR Contact: 12/17/2007
Next Scheduled EDR Contact: 03/17/2008
Data Release Frequency: No Update Planned

HIST FTTS INSP: FIFRA/TSCA Tracking System Inspection & Enforcement Case Listing
A complete inspection and enforcement case listing from the FIFRA/TSCA Tracking System (FTTS) for all ten EPA regions. The information was obtained from the National Compliance Database (NCDB). NCDB supports the implementation of FIFRA (Federal Insecticide, Fungicide, and Rodenticide Act) and TSCA (Toxic Substances Control Act). Some EPA regions are now closing out records. Because of that, and the fact that some EPA regions are not providing EPA Headquarters with updated records, it was decided to create a HIST FTTS database. It included records that may not be included in the newer FTTS database updates. This database is no longer updated.

Date of Government Version: 10/19/2006
Date Data Arrived at EDR: 03/01/2007
Date Made Active in Reports: 04/10/2007
Number of Days to Update: 40

Source: Environmental Protection Agency
Telephone: 202-564-2501
Last EDR Contact: 12/17/2008
Next Scheduled EDR Contact: 03/17/2008
Data Release Frequency: No Update Planned

SSTS: Section 7 Tracking Systems

Section 7 of the Federal Insecticide, Fungicide and Rodenticide Act, as amended (92 Stat. 829) requires all registered pesticide-producing establishments to submit a report to the Environmental Protection Agency by March 1st each year. Each establishment must report the types and amounts of pesticides, active ingredients and devices being produced, and those having been produced and sold or distributed in the past year.

Date of Government Version: 12/31/2006
Date Data Arrived at EDR: 03/14/2008
Date Made Active in Reports: 04/18/2008
Number of Days to Update: 35

Source: EPA
Telephone: 202-564-4203
Last EDR Contact: 10/14/2008
Next Scheduled EDR Contact: 01/12/2009
Data Release Frequency: Annually

ICIS: Integrated Compliance Information System

The Integrated Compliance Information System (ICIS) supports the information needs of the national enforcement and compliance program as well as the unique needs of the National Pollutant Discharge Elimination System (NPDES) program.

Date of Government Version: 07/31/2008
Date Data Arrived at EDR: 08/13/2008
Date Made Active in Reports: 09/09/2008
Number of Days to Update: 27

Source: Environmental Protection Agency
Telephone: 202-564-5088
Last EDR Contact: 10/14/2008
Next Scheduled EDR Contact: 01/12/2009
Data Release Frequency: Quarterly

PADS: PCB Activity Database System

PCB Activity Database. PADS Identifies generators, transporters, commercial storers and/or brokers and disposers of PCB's who are required to notify the EPA of such activities.

Date of Government Version: 12/04/2007
Date Data Arrived at EDR: 02/07/2008
Date Made Active in Reports: 03/17/2008
Number of Days to Update: 39

Source: EPA
Telephone: 202-566-0500
Last EDR Contact: 09/18/2008
Next Scheduled EDR Contact: 11/03/2008
Data Release Frequency: Annually

MLTS: Material Licensing Tracking System

MLTS is maintained by the Nuclear Regulatory Commission and contains a list of approximately 8,100 sites which possess or use radioactive materials and which are subject to NRC licensing requirements. To maintain currency, EDR contacts the Agency on a quarterly basis.

Date of Government Version: 07/08/2008
Date Data Arrived at EDR: 08/05/2008
Date Made Active in Reports: 08/25/2008
Number of Days to Update: 20

Source: Nuclear Regulatory Commission
Telephone: 301-415-7169
Last EDR Contact: 09/29/2008
Next Scheduled EDR Contact: 12/29/2008
Data Release Frequency: Quarterly

RADINFO: Radiation Information Database

The Radiation Information Database (RADINFO) contains information about facilities that are regulated by U.S. Environmental Protection Agency (EPA) regulations for radiation and radioactivity.

Date of Government Version: 07/29/2008
Date Data Arrived at EDR: 07/31/2008
Date Made Active in Reports: 08/25/2008
Number of Days to Update: 25

Source: Environmental Protection Agency
Telephone: 202-343-9775
Last EDR Contact: 10/29/2008
Next Scheduled EDR Contact: 01/26/2009
Data Release Frequency: Quarterly

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

FINDS: Facility Index System/Facility Registry System

Facility Index System. FINDS contains both facility information and 'pointers' to other sources that contain more detail. EDR includes the following FINDS databases in this report: PCS (Permit Compliance System), AIRS (Aerometric Information Retrieval System), DOCKET (Enforcement Docket used to manage and track information on civil judicial enforcement cases for all environmental statutes), FURS (Federal Underground Injection Control), C-DOCKET (Criminal Docket System used to track criminal enforcement actions for all environmental statutes), FFIS (Federal Facilities Information System), STATE (State Environmental Laws and Statutes), and PADS (PCB Activity Data System).

Date of Government Version: 07/01/2008
Date Data Arrived at EDR: 07/09/2008
Date Made Active in Reports: 08/25/2008
Number of Days to Update: 47

Source: EPA
Telephone: (415) 947-8000
Last EDR Contact: 09/29/2008
Next Scheduled EDR Contact: 12/29/2008
Data Release Frequency: Quarterly

RAATS: RCRA Administrative Action Tracking System

RCRA Administration Action Tracking System. RAATS contains records based on enforcement actions issued under RCRA pertaining to major violators and includes administrative and civil actions brought by the EPA. For administration actions after September 30, 1995, data entry in the RAATS database was discontinued. EPA will retain a copy of the database for historical records. It was necessary to terminate RAATS because a decrease in agency resources made it impossible to continue to update the information contained in the database.

Date of Government Version: 04/17/1995
Date Data Arrived at EDR: 07/03/1995
Date Made Active in Reports: 08/07/1995
Number of Days to Update: 35

Source: EPA
Telephone: 202-564-4104
Last EDR Contact: 06/02/2008
Next Scheduled EDR Contact: 09/01/2008
Data Release Frequency: No Update Planned

BRS: Biennial Reporting System

The Biennial Reporting System is a national system administered by the EPA that collects data on the generation and management of hazardous waste. BRS captures detailed data from two groups: Large Quantity Generators (LQG) and Treatment, Storage, and Disposal Facilities.

Date of Government Version: 12/31/2005
Date Data Arrived at EDR: 03/06/2007
Date Made Active in Reports: 04/13/2007
Number of Days to Update: 38

Source: EPA/NTIS
Telephone: 800-424-9346
Last EDR Contact: 09/12/2008
Next Scheduled EDR Contact: 12/08/2008
Data Release Frequency: Biennially

SCRD DRYCLEANERS: State Coalition for Remediation of Drycleaners Listing

The State Coalition for Remediation of Drycleaners was established in 1998, with support from the U.S. EPA Office of Superfund Remediation and Technology Innovation. It is comprised of representatives of states with established drycleaner remediation programs. Currently the member states are Alabama, Connecticut, Florida, Illinois, Kansas, Minnesota, Missouri, North Carolina, Oregon, South Carolina, Tennessee, Texas, and Wisconsin.

Date of Government Version: 09/08/2008
Date Data Arrived at EDR: 09/10/2008
Date Made Active in Reports: 09/23/2008
Number of Days to Update: 13

Source: Environmental Protection Agency
Telephone: 615-532-8599
Last EDR Contact: 11/10/2008
Next Scheduled EDR Contact: 02/09/2009
Data Release Frequency: Varies

STATE AND LOCAL RECORDS

HIST CAL-SITES: Calsites Database

The Calsites database contains potential or confirmed hazardous substance release properties. In 1996, California EPA reevaluated and significantly reduced the number of sites in the Calsites database. No longer updated by the state agency. It has been replaced by ENVIROSTOR.

Date of Government Version: 08/08/2005
Date Data Arrived at EDR: 08/03/2006
Date Made Active in Reports: 08/24/2006
Number of Days to Update: 21

Source: Department of Toxic Substance Control
Telephone: 916-323-3400
Last EDR Contact: 08/25/2008
Next Scheduled EDR Contact: 11/24/2008
Data Release Frequency: No Update Planned

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

CA BOND EXP. PLAN: Bond Expenditure Plan

Department of Health Services developed a site-specific expenditure plan as the basis for an appropriation of Hazardous Substance Cleanup Bond Act funds. It is not updated.

Date of Government Version: 01/01/1989
Date Data Arrived at EDR: 07/27/1994
Date Made Active in Reports: 08/02/1994
Number of Days to Update: 6

Source: Department of Health Services
Telephone: 916-255-2118
Last EDR Contact: 05/31/1994
Next Scheduled EDR Contact: N/A
Data Release Frequency: No Update Planned

SCH: School Property Evaluation Program

This category contains proposed and existing school sites that are being evaluated by DTSC for possible hazardous materials contamination. In some cases, these properties may be listed in the CalSites category depending on the level of threat to public health and safety or the environment they pose.

Date of Government Version: 08/25/2008
Date Data Arrived at EDR: 08/27/2008
Date Made Active in Reports: 09/03/2008
Number of Days to Update: 7

Source: Department of Toxic Substances Control
Telephone: 916-323-3400
Last EDR Contact: 08/27/2008
Next Scheduled EDR Contact: 11/24/2008
Data Release Frequency: Quarterly

TOXIC PITS: Toxic Pits Cleanup Act Sites

Toxic PITS Cleanup Act Sites. TOXIC PITS identifies sites suspected of containing hazardous substances where cleanup has not yet been completed.

Date of Government Version: 07/01/1995
Date Data Arrived at EDR: 08/30/1995
Date Made Active in Reports: 09/26/1995
Number of Days to Update: 27

Source: State Water Resources Control Board
Telephone: 916-227-4364
Last EDR Contact: 11/04/2008
Next Scheduled EDR Contact: 01/26/2009
Data Release Frequency: No Update Planned

SWF/LF (SWIS): Solid Waste Information System

Active, Closed and Inactive Landfills. SWF/LF records typically contain an inve ntory of solid waste disposal facilities or landfills. These may be active or i nactive facilities or open dumps that failed to meet RCRA Section 4004 criteria for solid waste landfills or disposal sites.

Date of Government Version: 09/08/2008
Date Data Arrived at EDR: 09/09/2008
Date Made Active in Reports: 09/18/2008
Number of Days to Update: 9

Source: Integrated Waste Management Board
Telephone: 916-341-6320
Last EDR Contact: 09/09/2008
Next Scheduled EDR Contact: 12/08/2008
Data Release Frequency: Quarterly

CA WDS: Waste Discharge System

Sites which have been issued waste discharge requirements.

Date of Government Version: 06/19/2007
Date Data Arrived at EDR: 06/20/2007
Date Made Active in Reports: 06/29/2007
Number of Days to Update: 9

Source: State Water Resources Control Board
Telephone: 916-341-5227
Last EDR Contact: 09/29/2008
Next Scheduled EDR Contact: 12/15/2008
Data Release Frequency: Quarterly

WMUDS/SWAT: Waste Management Unit Database

Waste Management Unit Database System. WMUDS is used by the State Water Resources Control Board staff and the Regional Water Quality Control Boards for program tracking and inventory of waste management units. WMUDS is composed of the following databases: Facility Information, Scheduled Inspections Information, Waste Management Unit Information, SWAT Program Information, SWAT Report Summary Information, SWAT Report Summary Data, Chapter 15 (formerly Subchapter 15) Information, Chapter 15 Monitoring Parameters, TPCA Program Information, RCRA Program Information, Closure Information, and Interested Parties Information.

Date of Government Version: 04/01/2000
Date Data Arrived at EDR: 04/10/2000
Date Made Active in Reports: 05/10/2000
Number of Days to Update: 30

Source: State Water Resources Control Board
Telephone: 916-227-4448
Last EDR Contact: 10/14/2008
Next Scheduled EDR Contact: 12/01/2008
Data Release Frequency: Quarterly

CORTESE: "Cortese" Hazardous Waste & Substances Sites List
The sites for the list are designated by the State Water Resource Control Board (LUST), the Integrated Waste Board (SWF/LS), and the Department of Toxic Substances Control (Cal-Sites). This listing is no longer updated by the state agency.

Date of Government Version: 04/01/2001
Date Data Arrived at EDR: 05/29/2001
Date Made Active in Reports: 07/26/2001
Number of Days to Update: 58

Source: CAL EPA/Office of Emergency Information
Telephone: 916-323-3400
Last EDR Contact: 10/20/2008
Next Scheduled EDR Contact: 01/19/2009
Data Release Frequency: No Update Planned

SWRCY: Recycler Database
A listing of recycling facilities in California.

Date of Government Version: 07/09/2008
Date Data Arrived at EDR: 07/10/2008
Date Made Active in Reports: 07/31/2008
Number of Days to Update: 21

Source: Department of Conservation
Telephone: 916-323-3836
Last EDR Contact: 10/08/2008
Next Scheduled EDR Contact: 01/05/2009
Data Release Frequency: Quarterly

LUST: Geotracker's Leaking Underground Fuel Tank Report
Leaking Underground Storage Tank Incident Reports. LUST records contain an inventory of reported leaking underground storage tank incidents. Not all states maintain these records, and the information stored varies by state. For more information on a particular leaking underground storage tank sites, please contact the appropriate regulatory agency.

Date of Government Version: 07/03/2008
Date Data Arrived at EDR: 07/11/2008
Date Made Active in Reports: 07/31/2008
Number of Days to Update: 20

Source: State Water Resources Control Board
Telephone: see region list
Last EDR Contact: 11/04/2008
Next Scheduled EDR Contact: 01/05/2009
Data Release Frequency: Quarterly

LUST REG 1: Active Toxic Site Investigation
Del Norte, Humboldt, Lake, Mendocino, Modoc, Siskiyou, Sonoma, Trinity counties. For more current information, please refer to the State Water Resources Control Board's LUST database.

Date of Government Version: 02/01/2001
Date Data Arrived at EDR: 02/28/2001
Date Made Active in Reports: 03/29/2001
Number of Days to Update: 29

Source: California Regional Water Quality Control Board North Coast (1)
Telephone: 707-570-3769
Last EDR Contact: 08/18/2008
Next Scheduled EDR Contact: 11/17/2008
Data Release Frequency: No Update Planned

LUST REG 2: Fuel Leak List
Leaking Underground Storage Tank locations. Alameda, Contra Costa, Marin, Napa, San Francisco, San Mateo, Santa Clara, Solano, Sonoma counties.

Date of Government Version: 09/30/2004
Date Data Arrived at EDR: 10/20/2004
Date Made Active in Reports: 11/19/2004
Number of Days to Update: 30

Source: California Regional Water Quality Control Board San Francisco Bay Region (2)
Telephone: 510-622-2433
Last EDR Contact: 10/06/2008
Next Scheduled EDR Contact: 01/05/2009
Data Release Frequency: Quarterly

LUST REG 3: Leaking Underground Storage Tank Database
Leaking Underground Storage Tank locations. Monterey, San Benito, San Luis Obispo, Santa Barbara, Santa Cruz counties.

Date of Government Version: 05/19/2003
Date Data Arrived at EDR: 05/19/2003
Date Made Active in Reports: 06/02/2003
Number of Days to Update: 14

Source: California Regional Water Quality Control Board Central Coast Region (3)
Telephone: 805-542-4786
Last EDR Contact: 11/10/2008
Next Scheduled EDR Contact: 02/02/2009
Data Release Frequency: No Update Planned

LUST REG 4: Underground Storage Tank Leak List
Los Angeles, Ventura counties. For more current information, please refer to the State Water Resources Control Board's LUST database.

Date of Government Version: 09/07/2004
Date Data Arrived at EDR: 09/07/2004
Date Made Active in Reports: 10/12/2004
Number of Days to Update: 35

Source: California Regional Water Quality Control Board Los Angeles Region (4)
Telephone: 213-576-6710
Last EDR Contact: 09/23/2008
Next Scheduled EDR Contact: 12/22/2008
Data Release Frequency: No Update Planned

LUST REG 5: Leaking Underground Storage Tank Database
Leaking Underground Storage Tank locations. Alameda, Alpine, Amador, Butte, Colusa, Contra Costa, Calveras, El Dorado, Fresno, Glenn, Kern, Kings, Lake, Lassen, Madera, Mariposa, Merced, Modoc, Napa, Nevada, Placer, Plumas, Sacramento, San Joaquin, Shasta, Solano, Stanislaus, Sutter, Tehama, Tulare, Tuolumne, Yolo, Yuba counties.

Date of Government Version: 07/01/2008
Date Data Arrived at EDR: 07/22/2008
Date Made Active in Reports: 07/31/2008
Number of Days to Update: 9

Source: California Regional Water Quality Control Board Central Valley Region (5)
Telephone: 916-464-4834
Last EDR Contact: 07/22/2008
Next Scheduled EDR Contact: 10/20/2008
Data Release Frequency: Quarterly

LUST REG 6L: Leaking Underground Storage Tank Case Listing
For more current information, please refer to the State Water Resources Control Board's LUST database.

Date of Government Version: 09/09/2003
Date Data Arrived at EDR: 09/10/2003
Date Made Active in Reports: 10/07/2003
Number of Days to Update: 27

Source: California Regional Water Quality Control Board Lahontan Region (6)
Telephone: 530-542-5572
Last EDR Contact: 09/02/2008
Next Scheduled EDR Contact: 12/01/2008
Data Release Frequency: No Update Planned

LUST REG 6V: Leaking Underground Storage Tank Case Listing
Leaking Underground Storage Tank locations. Inyo, Kern, Los Angeles, Mono, San Bernardino counties.

Date of Government Version: 06/07/2005
Date Data Arrived at EDR: 06/07/2005
Date Made Active in Reports: 06/29/2005
Number of Days to Update: 22

Source: California Regional Water Quality Control Board Victorville Branch Office (6)
Telephone: 760-241-7365
Last EDR Contact: 09/29/2008
Next Scheduled EDR Contact: 12/29/2008
Data Release Frequency: No Update Planned

LUST REG 7: Leaking Underground Storage Tank Case Listing
Leaking Underground Storage Tank locations. Imperial, Riverside, San Diego, Santa Barbara counties.

Date of Government Version: 02/26/2004
Date Data Arrived at EDR: 02/26/2004
Date Made Active in Reports: 03/24/2004
Number of Days to Update: 27

Source: California Regional Water Quality Control Board Colorado River Basin Region (7)
Telephone: 760-776-8943
Last EDR Contact: 08/18/2008
Next Scheduled EDR Contact: 11/17/2008
Data Release Frequency: No Update Planned

LUST REG 9: Leaking Underground Storage Tank Report
Orange, Riverside, San Diego counties. For more current information, please refer to the State Water Resources Control Board's LUST database.

Date of Government Version: 03/01/2001
Date Data Arrived at EDR: 04/23/2001
Date Made Active in Reports: 05/21/2001
Number of Days to Update: 28

Source: California Regional Water Quality Control Board San Diego Region (9)
Telephone: 858-637-5595
Last EDR Contact: 10/14/2008
Next Scheduled EDR Contact: 01/12/2009
Data Release Frequency: No Update Planned

LUST REG 8: Leaking Underground Storage Tanks
California Regional Water Quality Control Board Santa Ana Region (8). For more current information, please refer to the State Water Resources Control Board's LUST database.

Date of Government Version: 02/14/2005
Date Data Arrived at EDR: 02/15/2005
Date Made Active in Reports: 03/28/2005
Number of Days to Update: 41

Source: California Regional Water Quality Control Board Santa Ana Region (8)
Telephone: 909-782-4496
Last EDR Contact: 11/04/2008
Next Scheduled EDR Contact: 02/02/2009
Data Release Frequency: Varies

CA FID UST: Facility Inventory Database
The Facility Inventory Database (FID) contains a historical listing of active and inactive underground storage tank locations from the State Water Resource Control Board. Refer to local/county source for current data.

Date of Government Version: 10/31/1994
Date Data Arrived at EDR: 09/05/1995
Date Made Active in Reports: 09/29/1995
Number of Days to Update: 24

Source: California Environmental Protection Agency
Telephone: 916-341-5851
Last EDR Contact: 12/28/1998
Next Scheduled EDR Contact: N/A
Data Release Frequency: No Update Planned

SLIC: Statewide SLIC Cases
The SLIC (Spills, Leaks, Investigations and Cleanup) program is designed to protect and restore water quality from spills, leaks, and similar discharges.

Date of Government Version: 07/03/2008
Date Data Arrived at EDR: 07/11/2008
Date Made Active in Reports: 07/31/2008
Number of Days to Update: 20

Source: State Water Resources Control Board
Telephone: 866-480-1028
Last EDR Contact: 11/04/2008
Next Scheduled EDR Contact: 01/05/2009
Data Release Frequency: Varies

SLIC REG 1: Active Toxic Site Investigations
The SLIC (Spills, Leaks, Investigations and Cleanup) program is designed to protect and restore water quality from spills, leaks, and similar discharges.

Date of Government Version: 04/03/2003
Date Data Arrived at EDR: 04/07/2003
Date Made Active in Reports: 04/25/2003
Number of Days to Update: 18

Source: California Regional Water Quality Control Board, North Coast Region (1)
Telephone: 707-576-2220
Last EDR Contact: 08/18/2008
Next Scheduled EDR Contact: 11/17/2008
Data Release Frequency: No Update Planned

SLIC REG 2: Spills, Leaks, Investigation & Cleanup Cost Recovery Listing
The SLIC (Spills, Leaks, Investigations and Cleanup) program is designed to protect and restore water quality from spills, leaks, and similar discharges.

Date of Government Version: 09/30/2004
Date Data Arrived at EDR: 10/20/2004
Date Made Active in Reports: 11/19/2004
Number of Days to Update: 30

Source: Regional Water Quality Control Board San Francisco Bay Region (2)
Telephone: 510-286-0457
Last EDR Contact: 10/06/2008
Next Scheduled EDR Contact: 01/05/2009
Data Release Frequency: Quarterly

SLIC REG 3: Spills, Leaks, Investigation & Cleanup Cost Recovery Listing
The SLIC (Spills, Leaks, Investigations and Cleanup) program is designed to protect and restore water quality from spills, leaks, and similar discharges.

Date of Government Version: 05/18/2006
Date Data Arrived at EDR: 05/18/2006
Date Made Active in Reports: 06/15/2006
Number of Days to Update: 28

Source: California Regional Water Quality Control Board Central Coast Region (3)
Telephone: 805-549-3147
Last EDR Contact: 11/10/2008
Next Scheduled EDR Contact: 02/09/2009
Data Release Frequency: Semi-Annually

SLIC REG 4: Spills, Leaks, Investigation & Cleanup Cost Recovery Listing
The SLIC (Spills, Leaks, Investigations and Cleanup) program is designed to protect and restore water quality from spills, leaks, and similar discharges.

Date of Government Version: 11/17/2004
Date Data Arrived at EDR: 11/18/2004
Date Made Active in Reports: 01/04/2005
Number of Days to Update: 47

Source: Region Water Quality Control Board Los Angeles Region (4)
Telephone: 213-576-6600
Last EDR Contact: 10/20/2008
Next Scheduled EDR Contact: 01/19/2009
Data Release Frequency: Varies

SLIC REG 5: Spills, Leaks, Investigation & Cleanup Cost Recovery Listing
The SLIC (Spills, Leaks, Investigations and Cleanup) program is designed to protect and restore water quality from spills, leaks, and similar discharges.

Date of Government Version: 04/01/2005
Date Data Arrived at EDR: 04/05/2005
Date Made Active in Reports: 04/21/2005
Number of Days to Update: 16

Source: Regional Water Quality Control Board Central Valley Region (5)
Telephone: 916-464-3291
Last EDR Contact: 09/29/2008
Next Scheduled EDR Contact: 12/29/2008
Data Release Frequency: Semi-Annually

SLIC REG 6V: Spills, Leaks, Investigation & Cleanup Cost Recovery Listing
The SLIC (Spills, Leaks, Investigations and Cleanup) program is designed to protect and restore water quality from spills, leaks, and similar discharges.

Date of Government Version: 05/24/2005
Date Data Arrived at EDR: 05/25/2005
Date Made Active in Reports: 06/16/2005
Number of Days to Update: 22

Source: Regional Water Quality Control Board, Victorville Branch
Telephone: 619-241-6583
Last EDR Contact: 09/29/2008
Next Scheduled EDR Contact: 12/29/2008
Data Release Frequency: Semi-Annually

SLIC REG 6L: SLIC Sites
The SLIC (Spills, Leaks, Investigations and Cleanup) program is designed to protect and restore water quality from spills, leaks, and similar discharges.

Date of Government Version: 09/07/2004
Date Data Arrived at EDR: 09/07/2004
Date Made Active in Reports: 10/12/2004
Number of Days to Update: 35

Source: California Regional Water Quality Control Board, Lahontan Region
Telephone: 530-542-5574
Last EDR Contact: 09/02/2008
Next Scheduled EDR Contact: 12/01/2008
Data Release Frequency: No Update Planned

SLIC REG 7: SLIC List
The SLIC (Spills, Leaks, Investigations and Cleanup) program is designed to protect and restore water quality from spills, leaks, and similar discharges.

Date of Government Version: 11/24/2004
Date Data Arrived at EDR: 11/29/2004
Date Made Active in Reports: 01/04/2005
Number of Days to Update: 36

Source: California Regional Quality Control Board, Colorado River Basin Region
Telephone: 760-346-7491
Last EDR Contact: 08/18/2008
Next Scheduled EDR Contact: 11/17/2008
Data Release Frequency: No Update Planned

SLIC REG 8: Spills, Leaks, Investigation & Cleanup Cost Recovery Listing
The SLIC (Spills, Leaks, Investigations and Cleanup) program is designed to protect and restore water quality from spills, leaks, and similar discharges.

Date of Government Version: 04/03/2008
Date Data Arrived at EDR: 04/03/2008
Date Made Active in Reports: 04/14/2008
Number of Days to Update: 11

Source: California Region Water Quality Control Board Santa Ana Region (8)
Telephone: 951-782-3298
Last EDR Contact: 09/29/2008
Next Scheduled EDR Contact: 12/29/2008
Data Release Frequency: Semi-Annually

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

SLIC REG 9: Spills, Leaks, Investigation & Cleanup Cost Recovery Listing
The SLIC (Spills, Leaks, Investigations and Cleanup) program is designed to protect and restore water quality from spills, leaks, and similar discharges.

Date of Government Version: 09/10/2007
Date Data Arrived at EDR: 09/11/2007
Date Made Active in Reports: 09/28/2007
Number of Days to Update: 17

Source: California Regional Water Quality Control Board San Diego Region (9)
Telephone: 858-467-2980
Last EDR Contact: 08/25/2008
Next Scheduled EDR Contact: 11/24/2008
Data Release Frequency: Annually

UST: Active UST Facilities
Active UST facilities gathered from the local regulatory agencies

Date of Government Version: 07/10/2008
Date Data Arrived at EDR: 07/10/2008
Date Made Active in Reports: 07/25/2008
Number of Days to Update: 15

Source: SWRCB
Telephone: 916-480-1028
Last EDR Contact: 11/04/2008
Next Scheduled EDR Contact: 01/05/2009
Data Release Frequency: Semi-Annually

UST MENDOCINO: Mendocino County UST Database
A listing of underground storage tank locations in Mendocino County.

Date of Government Version: 10/06/2008
Date Data Arrived at EDR: 10/06/2008
Date Made Active in Reports: 10/16/2008
Number of Days to Update: 10

Source: Department of Public Health
Telephone: 707-463-4466
Last EDR Contact: 10/06/2008
Next Scheduled EDR Contact: 12/22/2008
Data Release Frequency: Varies

HIST UST: Hazardous Substance Storage Container Database
The Hazardous Substance Storage Container Database is a historical listing of UST sites. Refer to local/county source for current data.

Date of Government Version: 10/15/1990
Date Data Arrived at EDR: 01/25/1991
Date Made Active in Reports: 02/12/1991
Number of Days to Update: 18

Source: State Water Resources Control Board
Telephone: 916-341-5851
Last EDR Contact: 07/26/2001
Next Scheduled EDR Contact: N/A
Data Release Frequency: No Update Planned

AST: Aboveground Petroleum Storage Tank Facilities
Registered Aboveground Storage Tanks.

Date of Government Version: 11/01/2007
Date Data Arrived at EDR: 11/27/2007
Date Made Active in Reports: 02/14/2008
Number of Days to Update: 79

Source: State Water Resources Control Board
Telephone: 916-341-5712
Last EDR Contact: 10/27/2008
Next Scheduled EDR Contact: 01/26/2009
Data Release Frequency: Quarterly

LIENS: Environmental Liens Listing
A listing of property locations with environmental liens for California where DTSC is a lien holder.

Date of Government Version: 08/04/2008
Date Data Arrived at EDR: 08/08/2008
Date Made Active in Reports: 09/03/2008
Number of Days to Update: 26

Source: Department of Toxic Substances Control
Telephone: 916-323-3400
Last EDR Contact: 11/03/2008
Next Scheduled EDR Contact: 02/02/2009
Data Release Frequency: Varies

SWEEPS UST: SWEEPS UST Listing
Statewide Environmental Evaluation and Planning System. This underground storage tank listing was updated and maintained by a company contacted by the SWRCB in the early 1990's. The listing is no longer updated or maintained. The local agency is the contact for more information on a site on the SWEEPS list.

Date of Government Version: 06/01/1994
Date Data Arrived at EDR: 07/07/2005
Date Made Active in Reports: 08/11/2005
Number of Days to Update: 35

Source: State Water Resources Control Board
Telephone: N/A
Last EDR Contact: 06/03/2005
Next Scheduled EDR Contact: N/A
Data Release Frequency: No Update Planned

CHMIRS: California Hazardous Material Incident Report System
California Hazardous Material Incident Reporting System. CHMIRS contains information on reported hazardous material incidents (accidental releases or spills).

Date of Government Version: 12/31/2007
Date Data Arrived at EDR: 05/09/2008
Date Made Active in Reports: 06/20/2008
Number of Days to Update: 42

Source: Office of Emergency Services
Telephone: 916-845-8400
Last EDR Contact: 08/18/2008
Next Scheduled EDR Contact: 11/17/2008
Data Release Frequency: Varies

NOTIFY 65: Proposition 65 Records
Proposition 65 Notification Records. NOTIFY 65 contains facility notifications about any release which could impact drinking water and thereby expose the public to a potential health risk.

Date of Government Version: 10/21/1993
Date Data Arrived at EDR: 11/01/1993
Date Made Active in Reports: 11/19/1993
Number of Days to Update: 18

Source: State Water Resources Control Board
Telephone: 916-445-3846
Last EDR Contact: 10/14/2008
Next Scheduled EDR Contact: 01/12/2009
Data Release Frequency: No Update Planned

DEED: Deed Restriction Listing
Site Mitigation and Brownfields Reuse Program Facility Sites with Deed Restrictions & Hazardous Waste Management Program Facility Sites with Deed / Land Use Restriction. The DTSC Site Mitigation and Brownfields Reuse Program (SMBRP) list includes sites cleaned up under the program's oversight and generally does not include current or former hazardous waste facilities that required a hazardous waste facility permit. The list represents deed restrictions that are active. Some sites have multiple deed restrictions. The DTSC Hazardous Waste Management Program (HWMP) has developed a list of current or former hazardous waste facilities that have a recorded land use restriction at the local county recorder's office. The land use restrictions on this list were required by the DTSC HWMP as a result of the presence of hazardous substances that remain on site after the facility (or part of the facility) has been closed or cleaned up. The types of land use restriction include deed notice, deed restriction, or a land use restriction that binds current and future owners.

Date of Government Version: 09/30/2008
Date Data Arrived at EDR: 09/30/2008
Date Made Active in Reports: 10/13/2008
Number of Days to Update: 13

Source: Department of Toxic Substances Control
Telephone: 916-323-3400
Last EDR Contact: 09/30/2008
Next Scheduled EDR Contact: 12/29/2008
Data Release Frequency: Semi-Annually

VCP: Voluntary Cleanup Program Properties
Contains low threat level properties with either confirmed or unconfirmed releases and the project proponents have request that DTSC oversee investigation and/or cleanup activities and have agreed to provide coverage for DTSC's costs.

Date of Government Version: 08/25/2008
Date Data Arrived at EDR: 08/27/2008
Date Made Active in Reports: 09/03/2008
Number of Days to Update: 7

Source: Department of Toxic Substances Control
Telephone: 916-323-3400
Last EDR Contact: 08/27/2008
Next Scheduled EDR Contact: 11/24/2008
Data Release Frequency: Quarterly

DRYCLEANERS: Cleaner Facilities
A list of drycleaner related facilities that have EPA ID numbers. These are facilities with certain SIC codes: power laundries, family and commercial; garment pressing and cleaner's agents; linen supply; coin-operated laundries and cleaning; drycleaning plants, except rugs; carpet and upholster cleaning; industrial launderers; laundry and garment services.

Date of Government Version: 09/23/2008
Date Data Arrived at EDR: 09/24/2008
Date Made Active in Reports: 09/29/2008
Number of Days to Update: 5

Source: Department of Toxic Substance Control
Telephone: 916-327-4498
Last EDR Contact: 09/23/2008
Next Scheduled EDR Contact: 12/29/2008
Data Release Frequency: Annually

WIP: Well Investigation Program Case List
Well Investigation Program case in the San Gabriel and San Fernando Valley area.

Date of Government Version: 02/26/2008
Date Data Arrived at EDR: 04/23/2008
Date Made Active in Reports: 05/06/2008
Number of Days to Update: 13

Source: Los Angeles Water Quality Control Board
Telephone: 213-576-6726
Last EDR Contact: 11/03/2008
Next Scheduled EDR Contact: 01/19/2009
Data Release Frequency: Varies

CDL: Clandestine Drug Labs
A listing of drug lab locations. Listing of a location in this database does not indicate that any illegal drug lab materials were or were not present there, and does not constitute a determination that the location either requires or does not require additional cleanup work.

Date of Government Version: 09/30/2008
Date Data Arrived at EDR: 10/06/2008
Date Made Active in Reports: 10/13/2008
Number of Days to Update: 7

Source: Department of Toxic Substances Control
Telephone: 916-255-6504
Last EDR Contact: 09/29/2008
Next Scheduled EDR Contact: 01/19/2009
Data Release Frequency: Varies

RESPONSE: State Response Sites
Identifies confirmed release sites where DTSC is involved in remediation, either in a lead or oversight capacity. These confirmed release sites are generally high-priority and high potential risk.

Date of Government Version: 08/25/2008
Date Data Arrived at EDR: 08/27/2008
Date Made Active in Reports: 09/03/2008
Number of Days to Update: 7

Source: Department of Toxic Substances Control
Telephone: 916-323-3400
Last EDR Contact: 08/27/2008
Next Scheduled EDR Contact: 11/24/2008
Data Release Frequency: Quarterly

HAZNET: Facility and Manifest Data
Facility and Manifest Data. The data is extracted from the copies of hazardous waste manifests received each year by the DTSC. The annual volume of manifests is typically 700,000 - 1,000,000 annually, representing approximately 350,000 - 500,000 shipments. Data are from the manifests submitted without correction, and therefore many contain some invalid values for data elements such as generator ID, TSD ID, waste category, and disposal method.

Date of Government Version: 12/31/2006
Date Data Arrived at EDR: 10/04/2007
Date Made Active in Reports: 11/07/2007
Number of Days to Update: 34

Source: California Environmental Protection Agency
Telephone: 916-255-1136
Last EDR Contact: 11/07/2008
Next Scheduled EDR Contact: 02/02/2008
Data Release Frequency: Annually

EMI: Emissions Inventory Data
Toxics and criteria pollutant emissions data collected by the ARB and local air pollution agencies.

Date of Government Version: 12/31/2005
Date Data Arrived at EDR: 04/17/2007
Date Made Active in Reports: 05/10/2007
Number of Days to Update: 23

Source: California Air Resources Board
Telephone: 916-322-2990
Last EDR Contact: 10/16/2008
Next Scheduled EDR Contact: 01/12/2009
Data Release Frequency: Varies

HAULERS: Registered Waste Tire Haulers Listing
A listing of registered waste tire haulers.

Date of Government Version: 09/22/2008
Date Data Arrived at EDR: 09/22/2008
Date Made Active in Reports: 09/29/2008
Number of Days to Update: 7

Source: Integrated Waste Management Board
Telephone: 916-341-6422
Last EDR Contact: 09/08/2008
Next Scheduled EDR Contact: 12/08/2008
Data Release Frequency: Varies

ENVIROSTOR: EnviroStor Database

The Department of Toxic Substances Control's (DTSC's) Site Mitigation and Brownfields Reuse Program's (SMBRP's) EnviroStor database identifes sites that have known contamination or sites for which there may be reasons to investigate further. The database includes the following site types: Federal Superfund sites (National Priorities List (NPL)); State Response, including Military Facilities and State Superfund; Voluntary Cleanup; and School sites. EnviroStor provides similar information to the information that was available in CalSites, and provides additional site information, including, but not limited to, identification of formerly-contaminated properties that have been released for reuse, properties where environmental deed restrictions have been recorded to prevent inappropriate land uses, and risk characterization information that is used to assess potential impacts to public health and the environment at contaminated sites.

Date of Government Version: 08/25/2008
Date Data Arrived at EDR: 08/27/2008
Date Made Active in Reports: 09/03/2008
Number of Days to Update: 7

Source: Department of Toxic Substances Control
Telephone: 916-323-3400
Last EDR Contact: 08/27/2008
Next Scheduled EDR Contact: 11/24/2008
Data Release Frequency: Quarterly

TRIBAL RECORDS

INDIAN RESERV: Indian Reservations

This map layer portrays Indian administered lands of the United States that have any area equal to or greater than 640 acres.

Date of Government Version: 12/31/2005
Date Data Arrived at EDR: 12/08/2006
Date Made Active in Reports: 01/11/2007
Number of Days to Update: 34

Source: USGS
Telephone: 202-208-3710
Last EDR Contact: 11/07/2008
Next Scheduled EDR Contact: 02/02/2009
Data Release Frequency: Semi-Annually

INDIAN ODI: Report on the Status of Open Dumps on Indian Lands

Location of open dumps on Indian land.

Date of Government Version: 12/31/1998
Date Data Arrived at EDR: 12/03/2007
Date Made Active in Reports: 01/24/2008
Number of Days to Update: 52

Source: Environmental Protection Agency
Telephone: 703-308-8245
Last EDR Contact: 08/25/2008
Next Scheduled EDR Contact: 11/24/2008
Data Release Frequency: Varies

INDIAN LUST R8: Leaking Underground Storage Tanks on Indian Land

LUSTs on Indian land in Colorado, Montana, North Dakota, South Dakota, Utah and Wyoming.

Date of Government Version: 08/21/2008
Date Data Arrived at EDR: 09/04/2008
Date Made Active in Reports: 09/09/2008
Number of Days to Update: 5

Source: EPA Region 8
Telephone: 303-312-6271
Last EDR Contact: 08/18/2008
Next Scheduled EDR Contact: 11/17/2008
Data Release Frequency: Quarterly

INDIAN LUST R7: Leaking Underground Storage Tanks on Indian Land

LUSTs on Indian land in Iowa, Kansas, and Nebraska

Date of Government Version: 03/17/2008
Date Data Arrived at EDR: 03/27/2008
Date Made Active in Reports: 05/06/2008
Number of Days to Update: 40

Source: EPA Region 7
Telephone: 913-551-7003
Last EDR Contact: 08/18/2008
Next Scheduled EDR Contact: 11/17/2008
Data Release Frequency: Varies

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

INDIAN LUST R4: Leaking Underground Storage Tanks on Indian Land
LUSTs on Indian land in Florida, Mississippi and North Carolina.

Date of Government Version: 03/17/2008
Date Data Arrived at EDR: 03/27/2008
Date Made Active in Reports: 05/06/2008
Number of Days to Update: 40

Source: EPA Region 4
Telephone: 404-562-8677
Last EDR Contact: 08/18/2008
Next Scheduled EDR Contact: 11/17/2008
Data Release Frequency: Semi-Annually

INDIAN LUST R1: Leaking Underground Storage Tanks on Indian Land
A listing of leaking underground storage tank locations on Indian Land.

Date of Government Version: 03/12/2008
Date Data Arrived at EDR: 03/14/2008
Date Made Active in Reports: 03/20/2008
Number of Days to Update: 6

Source: EPA Region 1
Telephone: 617-918-1313
Last EDR Contact: 08/18/2008
Next Scheduled EDR Contact: 11/17/2008
Data Release Frequency: Varies

INDIAN LUST R9: Leaking Underground Storage Tanks on Indian Land
LUSTs on Indian land in Arizona, California, New Mexico and Nevada

Date of Government Version: 10/10/2008
Date Data Arrived at EDR: 10/10/2008
Date Made Active in Reports: 10/16/2008
Number of Days to Update: 6

Source: Environmental Protection Agency
Telephone: 415-972-3372
Last EDR Contact: 08/18/2008
Next Scheduled EDR Contact: 11/17/2008
Data Release Frequency: Quarterly

INDIAN LUST R10: Leaking Underground Storage Tanks on Indian Land
LUSTs on Indian land in Alaska, Idaho, Oregon and Washington.

Date of Government Version: 08/22/2008
Date Data Arrived at EDR: 08/22/2008
Date Made Active in Reports: 09/09/2008
Number of Days to Update: 18

Source: EPA Region 10
Telephone: 206-553-2857
Last EDR Contact: 08/18/2008
Next Scheduled EDR Contact: 11/17/2008
Data Release Frequency: Quarterly

INDIAN LUST R6: Leaking Underground Storage Tanks on Indian Land
LUSTs on Indian land in New Mexico and Oklahoma.

Date of Government Version: 09/05/2008
Date Data Arrived at EDR: 09/05/2008
Date Made Active in Reports: 09/23/2008
Number of Days to Update: 18

Source: EPA Region 6
Telephone: 214-665-6597
Last EDR Contact: 08/18/2008
Next Scheduled EDR Contact: 11/17/2008
Data Release Frequency: Varies

INDIAN UST R1: Underground Storage Tanks on Indian Land
A listing of underground storage tank locations on Indian Land.

Date of Government Version: 03/12/2008
Date Data Arrived at EDR: 03/14/2008
Date Made Active in Reports: 03/20/2008
Number of Days to Update: 6

Source: EPA, Region 1
Telephone: 617-918-1313
Last EDR Contact: 08/18/2008
Next Scheduled EDR Contact: 11/17/2008
Data Release Frequency: Varies

INDIAN UST R4: Underground Storage Tanks on Indian Land
No description is available for this data

Date of Government Version: 03/17/2008
Date Data Arrived at EDR: 03/27/2008
Date Made Active in Reports: 05/06/2008
Number of Days to Update: 40

Source: EPA Region 4
Telephone: 404-562-9424
Last EDR Contact: 08/18/2008
Next Scheduled EDR Contact: 11/17/2008
Data Release Frequency: Semi-Annually

INDIAN UST R5: Underground Storage Tanks on Indian Land
No description is available for this data

Date of Government Version: 09/08/2008
Date Data Arrived at EDR: 09/19/2008
Date Made Active in Reports: 10/16/2008
Number of Days to Update: 27

Source: EPA Region 5
Telephone: 312-886-6136
Last EDR Contact: 08/18/2008
Next Scheduled EDR Contact: 11/17/2008
Data Release Frequency: Varies

INDIAN UST R6: Underground Storage Tanks on Indian Land
No description is available for this data

Date of Government Version: 09/05/2008
Date Data Arrived at EDR: 09/05/2008
Date Made Active in Reports: 09/23/2008
Number of Days to Update: 18

Source: EPA Region 6
Telephone: 214-665-7591
Last EDR Contact: 08/18/2008
Next Scheduled EDR Contact: 11/17/2008
Data Release Frequency: Semi-Annually

INDIAN UST R7: Underground Storage Tanks on Indian Land
No description is available for this data

Date of Government Version: 06/01/2007
Date Data Arrived at EDR: 06/14/2007
Date Made Active in Reports: 07/05/2007
Number of Days to Update: 21

Source: EPA Region 7
Telephone: 913-551-7003
Last EDR Contact: 08/18/2008
Next Scheduled EDR Contact: 11/17/2008
Data Release Frequency: Varies

INDIAN UST R8: Underground Storage Tanks on Indian Land
No description is available for this data

Date of Government Version: 08/21/2008
Date Data Arrived at EDR: 09/04/2008
Date Made Active in Reports: 09/09/2008
Number of Days to Update: 5

Source: EPA Region 8
Telephone: 303-312-6137
Last EDR Contact: 08/18/2008
Next Scheduled EDR Contact: 11/17/2008
Data Release Frequency: Quarterly

INDIAN UST R9: Underground Storage Tanks on Indian Land
No description is available for this data

Date of Government Version: 09/05/2008
Date Data Arrived at EDR: 09/19/2008
Date Made Active in Reports: 10/16/2008
Number of Days to Update: 27

Source: EPA Region 9
Telephone: 415-972-3368
Last EDR Contact: 08/18/2008
Next Scheduled EDR Contact: 11/17/2008
Data Release Frequency: Quarterly

INDIAN UST R10: Underground Storage Tanks on Indian Land
No description is available for this data

Date of Government Version: 08/22/2008
Date Data Arrived at EDR: 08/22/2008
Date Made Active in Reports: 09/09/2008
Number of Days to Update: 18

Source: EPA Region 10
Telephone: 206-553-2857
Last EDR Contact: 08/18/2008
Next Scheduled EDR Contact: 11/17/2008
Data Release Frequency: Quarterly

INDIAN VCP R1: Voluntary Cleanup Priority Listing
A listing of voluntary cleanup priority sites located on Indian Land located in Region 1.

Date of Government Version: 04/02/2008
Date Data Arrived at EDR: 04/22/2008
Date Made Active in Reports: 05/19/2008
Number of Days to Update: 27

Source: EPA, Region 1
Telephone: 617-918-1102
Last EDR Contact: 10/20/2008
Next Scheduled EDR Contact: 01/19/2009
Data Release Frequency: Varies

INDIAN VCP R7: Voluntary Cleanup Priority Lisitng
A listing of voluntary cleanup priority sites located on Indian Land located in Region 7.

Date of Government Version: 03/20/2008
Date Data Arrived at EDR: 04/22/2008
Date Made Active in Reports: 05/19/2008
Number of Days to Update: 27

Source: EPA, Region 7
Telephone: 913-551-7365
Last EDR Contact: 10/20/2008
Next Scheduled EDR Contact: 01/19/2009
Data Release Frequency: Varies

EDR PROPRIETARY RECORDS

Manufactured Gas Plants: EDR Proprietary Manufactured Gas Plants
The EDR Proprietary Manufactured Gas Plant Database includes records of coal gas plants (manufactured gas plants) compiled by EDR's researchers. Manufactured gas sites were used in the United States from the 1800's to 1950's to produce a gas that could be distributed and used as fuel. These plants used whale oil, rosin, coal, or a mixture of coal, oil, and water that also produced a significant amount of waste. Many of the byproducts of the gas production, such as coal tar (oily waste containing volatile and non-volatile chemicals), sludges, oils and other compounds are potentially hazardous to human health and the environment. The byproduct from this process was frequently disposed of directly at the plant site and can remain or spread slowly, serving as a continuous source of soil and groundwater contamination.

Date of Government Version: N/A
Date Data Arrived at EDR: N/A
Date Made Active in Reports: N/A
Number of Days to Update: N/A

Source: EDR, Inc.
Telephone: N/A
Last EDR Contact: N/A
Next Scheduled EDR Contact: N/A
Data Release Frequency: No Update Planned

EDR Historical Auto Stations: EDR Proprietary Historic Gas Stations
EDR has searched selected national collections of business directories and has collected listings of potential gas station/filling station/service station sites that were available to EDR researchers. EDR's review was limited to those categories of sources that might, in EDR's opinion, include gas station/filling station/service station establishments. The categories reviewed included, but were not limited to gas, gas station, gasoline station, filling station, auto, automobile repair, auto service station, service station, etc.

Date of Government Version: N/A
Date Data Arrived at EDR: N/A
Date Made Active in Reports: N/A
Number of Days to Update: N/A

Source: EDR, Inc.
Telephone: N/A
Last EDR Contact: N/A
Next Scheduled EDR Contact: N/A
Data Release Frequency: Varies

EDR Historical Cleaners: EDR Proprietary Historic Dry Cleaners
EDR has searched selected national collections of business directories and has collected listings of potential dry cleaner sites that were available to EDR researchers. EDR's review was limited to those categories of sources that might, in EDR's opinion, include dry cleaning establishments. The categories reviewed included, but were not limited to dry cleaners, cleaners, laundry, laundromat, cleaning/laundry, wash & dry etc.

Date of Government Version: N/A
Date Data Arrived at EDR: N/A
Date Made Active in Reports: N/A
Number of Days to Update: N/A

Source: EDR, Inc.
Telephone: N/A
Last EDR Contact: N/A
Next Scheduled EDR Contact: N/A
Data Release Frequency: Varies

COUNTY RECORDS

ALAMEDA COUNTY:

Contaminated Sites
A listing of contaminated sites overseen by the Toxic Release Program (oil and groundwater contamination from chemical releases and spills) and the Leaking Underground Storage Tank Program (soil and ground water contamination from leaking petroleum USTs).

Date of Government Version: 08/21/2008
Date Data Arrived at EDR: 08/22/2008
Date Made Active in Reports: 09/03/2008
Number of Days to Update: 12

Source: Alameda County Environmental Health Services
Telephone: 510-567-6700
Last EDR Contact: 10/20/2008
Next Scheduled EDR Contact: 01/19/2009
Data Release Frequency: Semi-Annually

Underground Tanks

Underground storage tank sites located in Alameda county.

Date of Government Version: 08/21/2008
Date Data Arrived at EDR: 08/22/2008
Date Made Active in Reports: 08/29/2008
Number of Days to Update: 7

Source: Alameda County Environmental Health Services
Telephone: 510-567-6700
Last EDR Contact: 10/20/2008
Next Scheduled EDR Contact: 01/19/2009
Data Release Frequency: Semi-Annually

CONTRA COSTA COUNTY:

Site List

List includes sites from the underground tank, hazardous waste generator and business plan/2185 programs.

Date of Government Version: 09/03/2008
Date Data Arrived at EDR: 09/04/2008
Date Made Active in Reports: 09/18/2008
Number of Days to Update: 14

Source: Contra Costa Health Services Department
Telephone: 925-646-2286
Last EDR Contact: 08/25/2008
Next Scheduled EDR Contact: 11/24/2008
Data Release Frequency: Semi-Annually

FRESNO COUNTY:

CUPA Resources List

Certified Unified Program Agency. CUPA's are responsible for implementing a unified hazardous materials and hazardous waste management regulatory program. The agency provides oversight of businesses that deal with hazardous materials, operate underground storage tanks or aboveground storage tanks.

Date of Government Version: 08/07/2008
Date Data Arrived at EDR: 08/08/2008
Date Made Active in Reports: 09/03/2008
Number of Days to Update: 26

Source: Dept. of Community Health
Telephone: 559-445-3271
Last EDR Contact: 11/03/2008
Next Scheduled EDR Contact: 02/02/2009
Data Release Frequency: Semi-Annually

KERN COUNTY:

Underground Storage Tank Sites & Tank Listing

Kern County Sites and Tanks Listing.

Date of Government Version: 09/15/2008
Date Data Arrived at EDR: 09/16/2008
Date Made Active in Reports: 10/01/2008
Number of Days to Update: 15

Source: Kern County Environment Health Services Department
Telephone: 661-862-8700
Last EDR Contact: 09/15/2008
Next Scheduled EDR Contact: 12/01/2008
Data Release Frequency: Quarterly

LOS ANGELES COUNTY:

San Gabriel Valley Areas of Concern

San Gabriel Valley areas where VOC contamination is at or above the MCL as designated by region 9 EPA office.

Date of Government Version: 12/31/1998
Date Data Arrived at EDR: 07/07/1999
Date Made Active in Reports: N/A
Number of Days to Update: 0

Source: EPA Region 9
Telephone: 415-972-3178
Last EDR Contact: 10/14/2008
Next Scheduled EDR Contact: 01/12/2009
Data Release Frequency: No Update Planned

HMS: Street Number List
Industrial Waste and Underground Storage Tank Sites.

Date of Government Version: 04/30/2008
Date Data Arrived at EDR: 06/24/2008
Date Made Active in Reports: 07/31/2008
Number of Days to Update: 37

Source: Department of Public Works
Telephone: 626-458-3517
Last EDR Contact: 11/10/2008
Next Scheduled EDR Contact: 02/02/2009
Data Release Frequency: Semi-Annually

List of Solid Waste Facilities
Solid Waste Facilities in Los Angeles County.

Date of Government Version: 08/12/2008
Date Data Arrived at EDR: 08/22/2008
Date Made Active in Reports: 09/03/2008
Number of Days to Update: 12

Source: La County Department of Public Works
Telephone: 818-458-5185
Last EDR Contact: 08/13/2008
Next Scheduled EDR Contact: 11/10/2008
Data Release Frequency: Varies

City of Los Angeles Landfills
Landfills owned and maintained by the City of Los Angeles.

Date of Government Version: 03/01/2008
Date Data Arrived at EDR: 03/20/2008
Date Made Active in Reports: 04/14/2008
Number of Days to Update: 25

Source: Engineering & Construction Division
Telephone: 213-473-7869
Last EDR Contact: 09/08/2008
Next Scheduled EDR Contact: 12/08/2008
Data Release Frequency: Varies

Site Mitigation List
Industrial sites that have had some sort of spill or complaint.

Date of Government Version: 02/14/2008
Date Data Arrived at EDR: 04/10/2008
Date Made Active in Reports: 05/06/2008
Number of Days to Update: 26

Source: Community Health Services
Telephone: 323-890-7806
Last EDR Contact: 11/10/2008
Next Scheduled EDR Contact: 02/02/2009
Data Release Frequency: Annually

City of El Segundo Underground Storage Tank
Underground storage tank sites located in El Segundo city.

Date of Government Version: 09/19/2008
Date Data Arrived at EDR: 10/06/2008
Date Made Active in Reports: 10/16/2008
Number of Days to Update: 10

Source: City of El Segundo Fire Department
Telephone: 310-524-2236
Last EDR Contact: 11/10/2008
Next Scheduled EDR Contact: 02/02/2009
Data Release Frequency: Semi-Annually

City of Long Beach Underground Storage Tank
Underground storage tank sites located in the city of Long Beach.

Date of Government Version: 03/28/2003
Date Data Arrived at EDR: 10/23/2003
Date Made Active in Reports: 11/26/2003
Number of Days to Update: 34

Source: City of Long Beach Fire Department
Telephone: 562-570-2563
Last EDR Contact: 08/18/2008
Next Scheduled EDR Contact: 11/17/2008
Data Release Frequency: Annually

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

City of Torrance Underground Storage Tank
Underground storage tank sites located in the city of Torrance.

Date of Government Version: 08/26/2008
Date Data Arrived at EDR: 09/11/2008
Date Made Active in Reports: 10/01/2008
Number of Days to Update: 20

Source: City of Torrance Fire Department
Telephone: 310-618-2973
Last EDR Contact: 11/10/2008
Next Scheduled EDR Contact: 02/02/2009
Data Release Frequency: Semi-Annually

MARIN COUNTY:

Underground Storage Tank Sites
Currently permitted USTs in Marin County.

Date of Government Version: 08/04/2008
Date Data Arrived at EDR: 08/29/2008
Date Made Active in Reports: 09/15/2008
Number of Days to Update: 17

Source: Public Works Department Waste Management
Telephone: 415-499-6647
Last EDR Contact: 10/27/2008
Next Scheduled EDR Contact: 01/26/2009
Data Release Frequency: Semi-Annually

NAPA COUNTY:

Sites With Reported Contamination
A listing of leaking underground storage tank sites located in Napa county.

Date of Government Version: 07/09/2008
Date Data Arrived at EDR: 07/09/2008
Date Made Active in Reports: 07/31/2008
Number of Days to Update: 22

Source: Napa County Department of Environmental Management
Telephone: 707-253-4269
Last EDR Contact: 09/22/2008
Next Scheduled EDR Contact: 12/22/2008
Data Release Frequency: Semi-Annually

Closed and Operating Underground Storage Tank Sites
Underground storage tank sites located in Napa county.

Date of Government Version: 01/15/2008
Date Data Arrived at EDR: 01/16/2008
Date Made Active in Reports: 02/08/2008
Number of Days to Update: 23

Source: Napa County Department of Environmental Management
Telephone: 707-253-4269
Last EDR Contact: 09/22/2008
Next Scheduled EDR Contact: 12/22/2008
Data Release Frequency: Annually

ORANGE COUNTY:

List of Industrial Site Cleanups
Petroleum and non-petroleum spills.

Date of Government Version: 09/02/2008
Date Data Arrived at EDR: 09/16/2008
Date Made Active in Reports: 09/29/2008
Number of Days to Update: 13

Source: Health Care Agency
Telephone: 714-834-3446
Last EDR Contact: 09/04/2008
Next Scheduled EDR Contact: 12/01/2008
Data Release Frequency: Annually

List of Underground Storage Tank Cleanups
Orange County Underground Storage Tank Cleanups (LUST).

Date of Government Version: 09/02/2008
Date Data Arrived at EDR: 09/17/2008
Date Made Active in Reports: 09/29/2008
Number of Days to Update: 12

Source: Health Care Agency
Telephone: 714-834-3446
Last EDR Contact: 09/04/2008
Next Scheduled EDR Contact: 12/01/2008
Data Release Frequency: Quarterly

List of Underground Storage Tank Facilities
Orange County Underground Storage Tank Facilities (UST).

Date of Government Version: 09/02/2008
Date Data Arrived at EDR: 09/25/2008
Date Made Active in Reports: 10/01/2008
Number of Days to Update: 6

Source: Health Care Agency
Telephone: 714-834-3446
Last EDR Contact: 09/04/2008
Next Scheduled EDR Contact: 12/01/2008
Data Release Frequency: Quarterly

PLACER COUNTY:

Master List of Facilities
List includes aboveground tanks, underground tanks and cleanup sites.

Date of Government Version: 07/23/2007
Date Data Arrived at EDR: 07/23/2007
Date Made Active in Reports: 08/09/2007
Number of Days to Update: 17

Source: Placer County Health and Human Services
Telephone: 530-889-7312
Last EDR Contact: 09/15/2008
Next Scheduled EDR Contact: 12/15/2008
Data Release Frequency: Semi-Annually

RIVERSIDE COUNTY:

Listing of Underground Tank Cleanup Sites
Riverside County Underground Storage Tank Cleanup Sites (LUST).

Date of Government Version: 07/15/2008
Date Data Arrived at EDR: 07/18/2008
Date Made Active in Reports: 07/31/2008
Number of Days to Update: 13

Source: Department of Public Health
Telephone: 951-358-5055
Last EDR Contact: 10/14/2008
Next Scheduled EDR Contact: 01/12/2009
Data Release Frequency: Quarterly

Underground Storage Tank Tank List
Underground storage tank sites located in Riverside county.

Date of Government Version: 07/02/2008
Date Data Arrived at EDR: 07/29/2008
Date Made Active in Reports: 08/29/2008
Number of Days to Update: 31

Source: Health Services Agency
Telephone: 951-358-5055
Last EDR Contact: 10/14/2008
Next Scheduled EDR Contact: 01/12/2009
Data Release Frequency: Quarterly

SACRAMENTO COUNTY:

Contaminated Sites
List of sites where unauthorized releases of potentially hazardous materials have occurred.

Date of Government Version: 08/08/2008
Date Data Arrived at EDR: 08/08/2008
Date Made Active in Reports: 09/03/2008
Number of Days to Update: 26

Source: Sacramento County Environmental Management
Telephone: 916-875-8406
Last EDR Contact: 10/29/2008
Next Scheduled EDR Contact: 01/26/2009
Data Release Frequency: Quarterly

ML - Regulatory Compliance Master List
Any business that has hazardous materials on site - hazardous material storage sites, underground storage tanks, waste generators.

Date of Government Version: 08/08/2008
Date Data Arrived at EDR: 08/08/2008
Date Made Active in Reports: 09/03/2008
Number of Days to Update: 26

Source: Sacramento County Environmental Management
Telephone: 916-875-8406
Last EDR Contact: 10/29/2008
Next Scheduled EDR Contact: 01/26/2009
Data Release Frequency: Quarterly

SAN BERNARDINO COUNTY:

Hazardous Material Permits

This listing includes underground storage tanks, medical waste handlers/generators, hazardous materials handlers, hazardous waste generators, and waste oil generators/handlers.

Date of Government Version: 10/01/2008
Date Data Arrived at EDR: 10/06/2008
Date Made Active in Reports: 10/13/2008
Number of Days to Update: 7

Source: San Bernardino County Fire Department Hazardous Materials Division
Telephone: 909-387-3041
Last EDR Contact: 09/02/2008
Next Scheduled EDR Contact: 12/01/2008
Data Release Frequency: Quarterly

SAN DIEGO COUNTY:

Hazardous Materials Management Division Database

The database includes: HE58 - This report contains the business name, site address, business phone number, establishment 'H' permit number, type of permit, and the business status. HE17 - In addition to providing the same information provided in the HE58 listing, HE17 provides inspection dates, violations received by the establishment, hazardous waste generated, the quantity, method of storage, treatment/disposal of waste and the hauler, and information on underground storage tanks. Unauthorized Release List - Includes a summary of environmental contamination cases in San Diego County (underground tank cases, non-tank cases, groundwater contamination, and soil contamination are included.)

Date of Government Version: 05/16/2005
Date Data Arrived at EDR: 05/18/2005
Date Made Active in Reports: 06/16/2005
Number of Days to Update: 29

Source: Hazardous Materials Management Division
Telephone: 619-338-2268
Last EDR Contact: 10/29/2008
Next Scheduled EDR Contact: 12/29/2008
Data Release Frequency: Quarterly

Solid Waste Facilities

San Diego County Solid Waste Facilities.

Date of Government Version: 08/01/2007
Date Data Arrived at EDR: 02/05/2008
Date Made Active in Reports: 02/14/2008
Number of Days to Update: 9

Source: Department of Health Services
Telephone: 619-338-2209
Last EDR Contact: 09/02/2008
Next Scheduled EDR Contact: 11/17/2008
Data Release Frequency: Varies

Environmental Case Listing

The listing contains all underground tank release cases and projects pertaining to properties contaminated with hazardous substances that are actively under review by the Site Assessment and Mitigation Program.

Date of Government Version: 06/04/2008
Date Data Arrived at EDR: 07/25/2008
Date Made Active in Reports: 07/31/2008
Number of Days to Update: 6

Source: San Diego County Department of Environmental Health
Telephone: 619-338-2371
Last EDR Contact: 09/30/2008
Next Scheduled EDR Contact: 12/29/2008
Data Release Frequency: Varies

SAN FRANCISCO COUNTY:

Local Oversite Facilities

A listing of leaking underground storage tank sites located in San Francisco county.

Date of Government Version: 09/19/2008
Date Data Arrived at EDR: 09/19/2008
Date Made Active in Reports: 09/29/2008
Number of Days to Update: 10

Source: Department Of Public Health San Francisco County
Telephone: 415-252-3920
Last EDR Contact: 09/15/2008
Next Scheduled EDR Contact: 12/01/2008
Data Release Frequency: Quarterly

Underground Storage Tank Information
Underground storage tank sites located in San Francisco county.

Date of Government Version: 09/19/2008
Date Data Arrived at EDR: 09/19/2008
Date Made Active in Reports: 10/01/2008
Number of Days to Update: 12

Source: Department of Public Health
Telephone: 415-252-3920
Last EDR Contact: 09/15/2008
Next Scheduled EDR Contact: 12/01/2008
Data Release Frequency: Quarterly

SAN JOAQUIN COUNTY:

San Joaquin Co. UST
A listing of underground storage tank locations in San Joaquin county.

Date of Government Version: 08/26/2008
Date Data Arrived at EDR: 08/27/2008
Date Made Active in Reports: 09/15/2008
Number of Days to Update: 19

Source: Environmental Health Department
Telephone: N/A
Last EDR Contact: 10/14/2008
Next Scheduled EDR Contact: 01/12/2009
Data Release Frequency: Semi-Annually

SAN MATEO COUNTY:

Business Inventory
List includes Hazardous Materials Business Plan, hazardous waste generators, and underground storage tanks.

Date of Government Version: 06/18/2008
Date Data Arrived at EDR: 06/18/2008
Date Made Active in Reports: 06/20/2008
Number of Days to Update: 2

Source: San Mateo County Environmental Health Services Division
Telephone: 650-363-1921
Last EDR Contact: 10/06/2008
Next Scheduled EDR Contact: 01/05/2009
Data Release Frequency: Annually

Fuel Leak List
A listing of leaking underground storage tank sites located in San Mateo county.

Date of Government Version: 10/06/2008
Date Data Arrived at EDR: 10/07/2008
Date Made Active in Reports: 10/13/2008
Number of Days to Update: 6

Source: San Mateo County Environmental Health Services Division
Telephone: 650-363-1921
Last EDR Contact: 10/06/2008
Next Scheduled EDR Contact: 01/05/2009
Data Release Frequency: Semi-Annually

SANTA CLARA COUNTY:

HIST LUST - Fuel Leak Site Activity Report
A listing of open and closed leaking underground storage tanks. This listing is no longer updated by the county. Leaking underground storage tanks are now handled by the Department of Environmental Health.

Date of Government Version: 03/29/2005
Date Data Arrived at EDR: 03/30/2005
Date Made Active in Reports: 04/21/2005
Number of Days to Update: 22

Source: Santa Clara Valley Water District
Telephone: 408-265-2600
Last EDR Contact: 09/22/2008
Next Scheduled EDR Contact: 12/22/2008
Data Release Frequency: No Update Planned

LOP Listing
A listing of leaking underground storage tanks located in Santa Clara county.

Date of Government Version: 09/24/2008
Date Data Arrived at EDR: 09/25/2008
Date Made Active in Reports: 09/29/2008
Number of Days to Update: 4

Source: Department of Environmental Health
Telephone: 408-918-3417
Last EDR Contact: 09/22/2008
Next Scheduled EDR Contact: 12/22/2008
Data Release Frequency: Varies

Hazardous Material Facilities
Hazardous material facilities, including underground storage tank sites.

Date of Government Version: 09/02/2008
Date Data Arrived at EDR: 09/04/2008
Date Made Active in Reports: 09/18/2008
Number of Days to Update: 14

Source: City of San Jose Fire Department
Telephone: 408-277-4659
Last EDR Contact: 09/02/2008
Next Scheduled EDR Contact: 12/01/2008
Data Release Frequency: Annually

SOLANO COUNTY:

Leaking Underground Storage Tanks
A listing of leaking underground storage tank sites located in Solano county.

Date of Government Version: 09/22/2008
Date Data Arrived at EDR: 10/06/2008
Date Made Active in Reports: 10/13/2008
Number of Days to Update: 7

Source: Solano County Department of Environmental Management
Telephone: 707-784-6770
Last EDR Contact: 09/22/2008
Next Scheduled EDR Contact: 12/22/2008
Data Release Frequency: Quarterly

Underground Storage Tanks
Underground storage tank sites located in Solano county.

Date of Government Version: 06/22/2008
Date Data Arrived at EDR: 07/03/2008
Date Made Active in Reports: 07/25/2008
Number of Days to Update: 22

Source: Solano County Department of Environmental Management
Telephone: 707-784-6770
Last EDR Contact: 09/22/2008
Next Scheduled EDR Contact: 12/22/2008
Data Release Frequency: Quarterly

SONOMA COUNTY:

Leaking Underground Storage Tank Sites
A listing of leaking underground storage tank sites located in Sonoma county.

Date of Government Version: 07/01/2008
Date Data Arrived at EDR: 07/22/2008
Date Made Active in Reports: 07/31/2008
Number of Days to Update: 9

Source: Department of Health Services
Telephone: 707-565-6565
Last EDR Contact: 10/20/2008
Next Scheduled EDR Contact: 01/19/2009
Data Release Frequency: Quarterly

SUTTER COUNTY:

Underground Storage Tanks
Underground storage tank sites located in Sutter county.

Date of Government Version: 05/04/2007
Date Data Arrived at EDR: 05/04/2007
Date Made Active in Reports: 05/24/2007
Number of Days to Update: 20

Source: Sutter County Department of Agriculture
Telephone: 530-822-7500
Last EDR Contact: 09/29/2008
Next Scheduled EDR Contact: 12/29/2008
Data Release Frequency: Semi-Annually

VENTURA COUNTY:

Business Plan, Hazardous Waste Producers, and Operating Underground Tanks
The BWT list indicates by site address whether the Environmental Health Division has Business Plan (B), Waste Producer (W), and/or Underground Tank (T) information.

Date of Government Version: 05/29/2008
Date Data Arrived at EDR: 06/24/2008
Date Made Active in Reports: 07/31/2008
Number of Days to Update: 37

Source: Ventura County Environmental Health Division
Telephone: 805-654-2813
Last EDR Contact: 09/10/2008
Next Scheduled EDR Contact: 12/08/2008
Data Release Frequency: Quarterly

Inventory of Illegal Abandoned and Inactive Sites
Ventura County Inventory of Closed, Illegal Abandoned, and Inactive Sites.

Date of Government Version: 08/01/2008
Date Data Arrived at EDR: 09/04/2008
Date Made Active in Reports: 09/18/2008
Number of Days to Update: 14

Source: Environmental Health Division
Telephone: 805-654-2813
Last EDR Contact: 08/18/2008
Next Scheduled EDR Contact: 11/17/2008
Data Release Frequency: Annually

Listing of Underground Tank Cleanup Sites
Ventura County Underground Storage Tank Cleanup Sites (LUST).

Date of Government Version: 05/29/2008
Date Data Arrived at EDR: 06/24/2008
Date Made Active in Reports: 07/31/2008
Number of Days to Update: 37

Source: Environmental Health Division
Telephone: 805-654-2813
Last EDR Contact: 09/09/2008
Next Scheduled EDR Contact: 09/08/2008
Data Release Frequency: Quarterly

Underground Tank Closed Sites List
Ventura County Operating Underground Storage Tank Sites (UST)/Underground Tank Closed Sites List.

Date of Government Version: 10/01/2008
Date Data Arrived at EDR: 10/08/2008
Date Made Active in Reports: 10/16/2008
Number of Days to Update: 8

Source: Environmental Health Division
Telephone: 805-654-2813
Last EDR Contact: 10/08/2008
Next Scheduled EDR Contact: 01/05/2009
Data Release Frequency: Quarterly

YOLO COUNTY:

Underground Storage Tank Comprehensive Facility Report
Underground storage tank sites located in Yolo county.

Date of Government Version: 08/11/2008
Date Data Arrived at EDR: 08/29/2008
Date Made Active in Reports: 09/15/2008
Number of Days to Update: 17

Source: Yolo County Department of Health
Telephone: 530-666-8646
Last EDR Contact: 11/10/2008
Next Scheduled EDR Contact: 01/12/2009
Data Release Frequency: Annually

OTHER DATABASE(S)

Depending on the geographic area covered by this report, the data provided in these specialty databases may or may not be complete. For example, the existence of wetlands information data in a specific report does not mean that all wetlands in the area covered by the report are included. Moreover, the absence of any reported wetlands information does not necessarily mean that wetlands do not exist in the area covered by the report.

CT MANIFEST: Hazardous Waste Manifest Data
Facility and manifest data. Manifest is a document that lists and tracks hazardous waste from the generator through transporters to a tsd facility.

Date of Government Version: 12/31/2005
Date Data Arrived at EDR: 06/15/2007
Date Made Active in Reports: 08/20/2007
Number of Days to Update: 66

Source: Department of Environmental Protection
Telephone: 860-424-3375
Last EDR Contact: 09/12/2008
Next Scheduled EDR Contact: 12/08/2008
Data Release Frequency: Annually

NJ MANIFEST: Manifest Information
Hazardous waste manifest information.

Date of Government Version: 09/30/2007
Date Data Arrived at EDR: 12/04/2007
Date Made Active in Reports: 12/31/2007
Number of Days to Update: 27

Source: Department of Environmental Protection
Telephone: N/A
Last EDR Contact: 11/07/2008
Next Scheduled EDR Contact: 02/02/2009
Data Release Frequency: Annually

NY MANIFEST: Facility and Manifest Data
Manifest is a document that lists and tracks hazardous waste from the generator through transporters to a TSD facility.

Date of Government Version: 07/23/2008
Date Data Arrived at EDR: 08/28/2008
Date Made Active in Reports: 09/11/2008
Number of Days to Update: 14

Source: Department of Environmental Conservation
Telephone: 518-402-8651
Last EDR Contact: 08/28/2008
Next Scheduled EDR Contact: 11/24/2008
Data Release Frequency: Annually

PA MANIFEST: Manifest Information
Hazardous waste manifest information.

Date of Government Version: 12/31/2007
Date Data Arrived at EDR: 09/11/2008
Date Made Active in Reports: 10/02/2008
Number of Days to Update: 21

Source: Department of Environmental Protection
Telephone: N/A
Last EDR Contact: 09/08/2008
Next Scheduled EDR Contact: 12/08/2008
Data Release Frequency: Annually

RI MANIFEST: Manifest information
Hazardous waste manifest information

Date of Government Version: 10/07/2008
Date Data Arrived at EDR: 10/10/2008
Date Made Active in Reports: 10/28/2008
Number of Days to Update: 18

Source: Department of Environmental Management
Telephone: 401-222-2797
Last EDR Contact: 09/15/2008
Next Scheduled EDR Contact: 12/15/2008
Data Release Frequency: Annually

WI MANIFEST: Manifest Information
Hazardous waste manifest information.

Date of Government Version: 12/31/2007
Date Data Arrived at EDR: 08/22/2008
Date Made Active in Reports: 09/08/2008
Number of Days to Update: 17

Source: Department of Natural Resources
Telephone: N/A
Last EDR Contact: 10/06/2008
Next Scheduled EDR Contact: 01/05/2009
Data Release Frequency: Annually

Oil/Gas Pipelines: This data was obtained by EDR from the USGS in 1994. It is referred to by USGS as GeoData Digital Line Graphs from 1:100,000-Scale Maps. It was extracted from the transportation category including some oil, but primarily gas pipelines.

Electric Power Transmission Line Data
Source: PennWell Corporation
Telephone: (800) 823-6277
This map includes information copyrighted by PennWell Corporation. This information is provided on a best effort basis and PennWell Corporation does not guarantee its accuracy nor warrant its fitness for any particular purpose. Such information has been reprinted with the permission of PennWell.

Sensitive Receptors: There are individuals deemed sensitive receptors due to their fragile immune systems and special sensitivity to environmental discharges. These sensitive receptors typically include the elderly, the sick, and children. While the location of all sensitive receptors cannot be determined, EDR indicates those buildings and facilities - schools, daycares, hospitals, medical centers, and nursing homes - where individuals who are sensitive receptors are likely to be located.

AHA Hospitals:
Source: American Hospital Association, Inc.
Telephone: 312-280-5991
The database includes a listing of hospitals based on the American Hospital Association's annual survey of hospitals.

Medical Centers: Provider of Services Listing
Source: Centers for Medicare & Medicaid Services
Telephone: 410-786-3000
A listing of hospitals with Medicare provider number, produced by Centers of Medicare & Medicaid Services, a federal agency within the U.S. Department of Health and Human Services.

Nursing Homes
Source: National Institutes of Health
Telephone: 301-594-6248
Information on Medicare and Medicaid certified nursing homes in the United States.

Public Schools
Source: National Center for Education Statistics
Telephone: 202-502-7300
The National Center for Education Statistics' primary database on elementary and secondary public education in the United States. It is a comprehensive, annual, national statistical database of all public elementary and secondary schools and school districts, which contains data that are comparable across all states.

Private Schools
Source: National Center for Education Statistics
Telephone: 202-502-7300
The National Center for Education Statistics' primary database on private school locations in the United States.

Daycare Centers: Licensed Facilities
Source: Department of Social Services
Telephone: 916-657-4041

Flood Zone Data: This data, available in select counties across the country, was obtained by EDR in 1999 from the Federal Emergency Management Agency (FEMA). Data depicts 100-year and 500-year flood zones as defined by FEMA.

NWI: National Wetlands Inventory. This data, available in select counties across the country, was obtained by EDR in 2002 and 2005 from the U.S. Fish and Wildlife Service.

Scanned Digital USGS 7.5' Topographic Map (DRG)
Source: United States Geologic Survey
A digital raster graphic (DRG) is a scanned image of a U.S. Geological Survey topographic map. The map images are made by scanning published paper maps on high-resolution scanners. The raster image is georeferenced and fit to the Universal Transverse Mercator (UTM) projection.

STREET AND ADDRESS INFORMATION

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GEOCHECK®- PHYSICAL SETTING SOURCE ADDENDUM

TARGET PROPERTY ADDRESS

TEHACHAPI
TEHACHAPI BLVD/TUCKER RD
TEHACHAPI, CA 93561

TARGET PROPERTY COORDINATES

Latitude (North):	35.13174 - 35˚ 7' 54.3"
Longitude (West):	118.46735 - 118˚ 28' 2.4"
Universal Tranverse Mercator:	Zone 11
UTM X (Meters):	366308.8
UTM Y (Meters):	3888440.0
Elevation:	3939 ft. above sea level

USGS TOPOGRAPHIC MAP

Target Property Map:	35118-B4 TEHACHAPI NORTH, CA
Most Recent Revision:	1980
South Map:	35118-A4 TEHACHAPI SOUTH, CA
Most Recent Revision:	1973

EDR's GeoCheck Physical Setting Source Addendum is provided to assist the environmental professional in forming an opinion about the impact of potential contaminant migration.

Assessment of the impact of contaminant migration generally has two principle investigative components:

1. Groundwater flow direction, and
2. Groundwater flow velocity.

Groundwater flow direction may be impacted by surface topography, hydrology, hydrogeology, characteristics of the soil, and nearby wells. Groundwater flow velocity is generally impacted by the nature of the geologic strata.

GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

GROUNDWATER FLOW DIRECTION INFORMATION

Groundwater flow direction for a particular site is best determined by a qualified environmental professional using site-specific well data. If such data is not reasonably ascertainable, it may be necessary to rely on other sources of information, such as surface topographic information, hydrologic information, hydrogeologic data collected on nearby properties, and regional groundwater flow information (from deep aquifers).

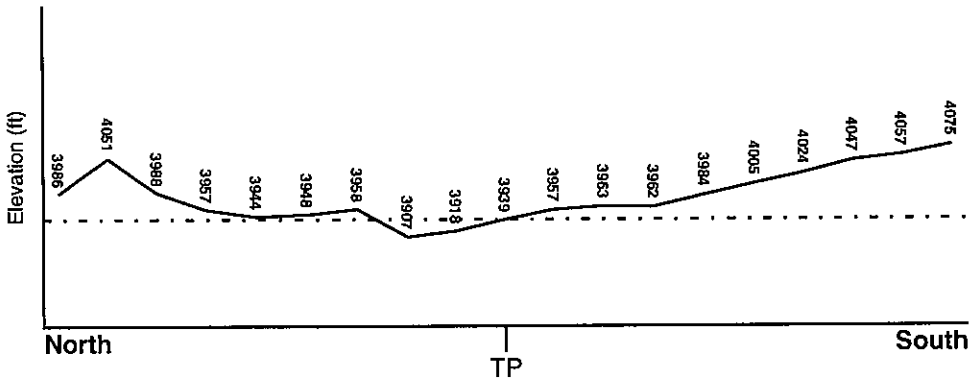
TOPOGRAPHIC INFORMATION

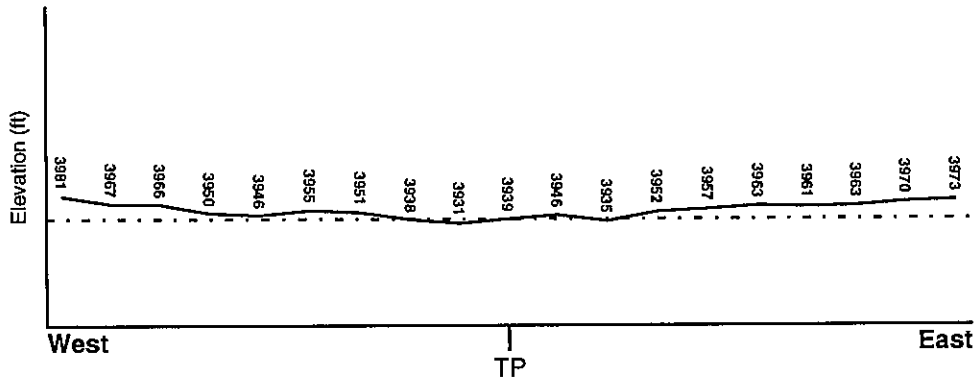
Surface topography may be indicative of the direction of surficial groundwater flow. This information can be used to assist the environmental professional in forming an opinion about the impact of nearby contaminated properties or, should contamination exist on the target property, what downgradient sites might be impacted.

TARGET PROPERTY TOPOGRAPHY

General Topographic Gradient: General North

SURROUNDING TOPOGRAPHY: ELEVATION PROFILES





Target Property Elevation: 3939 ft.

0 1/2 1 Miles

Source: Topography has been determined from the USGS 7.5' Digital Elevation Model and should be evaluated on a relative (not an absolute) basis. Relative elevation information between sites of close proximity should be field verified.

GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

HYDROLOGIC INFORMATION

Surface water can act as a hydrologic barrier to groundwater flow. Such hydrologic information can be used to assist the environmental professional in forming an opinion about the impact of nearby contaminated properties or, should contamination exist on the target property, what downgradient sites might be impacted.

Refer to the Physical Setting Source Map following this summary for hydrologic information (major waterways and bodies of water).

FEMA FLOOD ZONE

Target Property County	FEMA Flood Electronic Data
KERN, CA	YES - refer to the Overview Map and Detail Map

Flood Plain Panel at Target Property:	0600840002B
Additional Panels in search area:	0600751555B 0600751550B

NATIONAL WETLAND INVENTORY

NWI Quad at Target Property	NWI Electronic Data Coverage
TEHACHAPI NORTH	Not Available

HYDROGEOLOGIC INFORMATION

Hydrogeologic information obtained by installation of wells on a specific site can often be an indicator of groundwater flow direction in the immediate area. Such hydrogeologic information can be used to assist the environmental professional in forming an opinion about the impact of nearby contaminated properties or, should contamination exist on the target property, what downgradient sites might be impacted.

Site-Specific Hydrogeological Data*:

Search Radius:	1.25 miles
Status:	Not found

AQUIFLOW®

Search Radius: 1.000 Mile.

EDR has developed the AQUIFLOW Information System to provide data on the general direction of groundwater flow at specific points. EDR has reviewed reports submitted by environmental professionals to regulatory authorities at select sites and has extracted the date of the report, groundwater flow direction as determined hydrogeologically, and the depth to water table.

MAP ID	LOCATION FROM TP	GENERAL DIRECTION GROUNDWATER FLOW
Not Reported		

* ©1996 Site-specific hydrogeological data gathered by CERCLIS Alerts, Inc., Bainbridge Island, WA. All rights reserved. All of the information and opinions presented are those of the cited EPA report(s), which were completed under a Comprehensive Environmental Response Compensation and Liability Information System (CERCLIS) Investigation.

GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

GROUNDWATER FLOW VELOCITY INFORMATION

Groundwater flow velocity information for a particular site is best determined by a qualified environmental professional using site specific geologic and soil strata data. If such data are not reasonably ascertainable, it may be necessary to rely on other sources of information, including geologic age identification, rock stratigraphic unit and soil characteristics data collected on nearby properties and regional soil information. In general, contaminant plumes move more quickly through sandy-gravelly types of soils than silty-clayey types of soils.

GEOLOGIC INFORMATION IN GENERAL AREA OF TARGET PROPERTY

Geologic information can be used by the environmental professional in forming an opinion about the relative speed at which contaminant migration may be occurring.

ROCK STRATIGRAPHIC UNIT

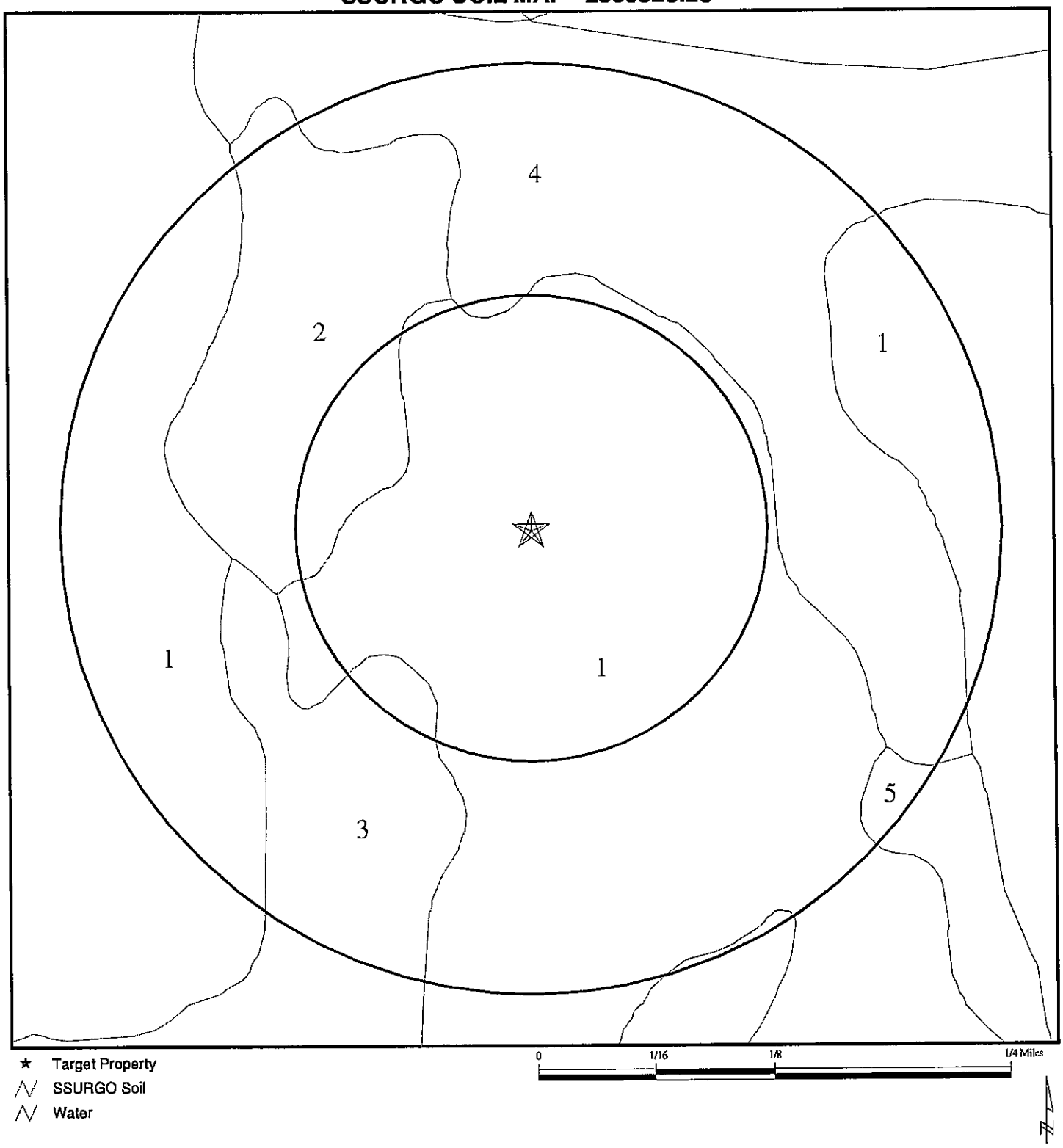
Era:	Cenozoic
System:	Quaternary
Series:	Quaternary
Code:	Q *(decoded above as Era, System & Series)*

GEOLOGIC AGE IDENTIFICATION

Category: Stratifed Sequence

Geologic Age and Rock Stratigraphic Unit Source: P.G. Schruben, R.E. Arndt and W.J. Bawiec, Geology of the Conterminous U.S. at 1:2,500,000 Scale - a digital representation of the 1974 P.B. King and H.M. Beikman Map, USGS Digital Data Series DDS - 11 (1994).

SSURGO SOIL MAP - 2359525.2s



SITE NAME: Tehachapi ADDRESS: Tehachapi Blvd/Tucker Rd Tehachapi CA 93561 LAT/LONG: 35.1317 / 118.4673	CLIENT: Ninyo & Moore CONTACT: Javier Perez INQUIRY #: 2359525.2s DATE: November 11, 2008 9:06 am

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GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

DOMINANT SOIL COMPOSITION IN GENERAL AREA OF TARGET PROPERTY

The U.S. Department of Agriculture's (USDA) Soil Conservation Service (SCS) leads the National Cooperative Soil Survey (NCSS) and is responsible for collecting, storing, maintaining and distributing soil survey information for privately owned lands in the United States. A soil map in a soil survey is a representation of soil patterns in a landscape. The following information is based on Soil Conservation Service SSURGO data.

Soil Map ID: 1

Soil Component Name: TEHACHAPI

Soil Surface Texture:
Hydrologic Group: Class C - Slow infiltration rates. Soils with layers impeding downward movement of water, or soils with moderately fine or fine textures.

Soil Drainage Class: Well drained

Hydric Status: Not hydric

Corrosion Potential - Uncoated Steel: High

Depth to Bedrock Min: > 0 inches

Depth to Watertable Min: > 0 inches

Soil Layer Information							
	Boundary			Classification		Saturated hydraulic conductivity micro m/sec	Soil Reaction (pH)
Layer	Upper	Lower	Soil Texture Class	AASHTO Group	Unified Soil		
1	0 inches	11 inches		Not reported	Not reported	Max: 14 Min: 4	Max: 8.4 Min: 6.1
2	11 inches	18 inches		Not reported	Not reported	Max: 14 Min: 4	Max: 8.4 Min: 6.1
3	18 inches	31 inches		Not reported	Not reported	Max: 14 Min: 4	Max: 8.4 Min: 6.1
4	31 inches	44 inches		Not reported	Not reported	Max: 14 Min: 4	Max: 8.4 Min: 6.1
5	44 inches	59 inches		Not reported	Not reported	Max: 14 Min: 4	Max: 8.4 Min: 6.1

Soil Map ID: 2

Soil Component Name: STEUBER

Soil Surface Texture:
Hydrologic Group: Class B - Moderate infiltration rates. Deep and moderately deep, moderately well and well drained soils with moderately coarse textures.

Soil Drainage Class: Well drained

Hydric Status: Not hydric

Corrosion Potential - Uncoated Steel: High

Depth to Bedrock Min: > 0 inches

Depth to Watertable Min: > 0 inches

Soil Layer Information							
	Boundary			Classification		Saturated hydraulic conductivity micro m/sec	Soil Reaction (pH)
Layer	Upper	Lower	Soil Texture Class	AASHTO Group	Unified Soil		
1	0 inches	11 inches		Not reported	Not reported	Max: 42 Min: 14	Max: 8.4 Min: 6.6
2	11 inches	59 inches		Not reported	Not reported	Max: 42 Min: 14	Max: 8.4 Min: 6.6

Soil Map ID: 3

Soil Component Name: HAVALA

Soil Surface Texture:

Hydrologic Group: Class B - Moderate infiltration rates. Deep and moderately deep, moderately well and well drained soils with moderately coarse textures.

Soil Drainage Class: Well drained

Hydric Status: Not hydric

Corrosion Potential - Uncoated Steel: High

Depth to Bedrock Min: > 0 inches

Depth to Watertable Min: > 0 inches

Soil Layer Information							
	Boundary			Classification		Saturated hydraulic conductivity micro m/sec	Soil Reaction (pH)
Layer	Upper	Lower	Soil Texture Class	AASHTO Group	Unified Soil		
1	0 inches	24 inches		Not reported	Not reported	Max: 42 Min: 14	Max: 8.4 Min: 6.6
2	24 inches	48 inches		Not reported	Not reported	Max: 42 Min: 14	Max: 8.4 Min: 6.6
3	48 inches	64 inches		Not reported	Not reported	Max: 42 Min: 14	Max: 8.4 Min: 6.6

Soil Map ID: 4

Soil Component Name: HAVALA

Soil Surface Texture:
Hydrologic Group: Class B - Moderate infiltration rates. Deep and moderately deep, moderately well and well drained soils with moderately coarse textures.

Soil Drainage Class: Well drained

Hydric Status: Not hydric

Corrosion Potential - Uncoated Steel: High

Depth to Bedrock Min: > 0 inches

Depth to Watertable Min: > 0 inches

Soil Layer Information							
	Boundary			Classification		Saturated hydraulic conductivity micro m/sec	Soil Reaction (pH)
Layer	Upper	Lower	Soil Texture Class	AASHTO Group	Unified Soil		
1	0 inches	24 inches		Not reported	Not reported	Max: 42 Min: 14	Max: 8.4 Min: 6.6
2	24 inches	48 inches		Not reported	Not reported	Max: 42 Min: 14	Max: 8.4 Min: 6.6
3	48 inches	64 inches		Not reported	Not reported	Max: 42 Min: 14	Max: 8.4 Min: 6.6

Soil Map ID: 5

Soil Component Name: STEUBER

Soil Surface Texture:
Hydrologic Group: Class B - Moderate infiltration rates. Deep and moderately deep, moderately well and well drained soils with moderately coarse textures.

Soil Drainage Class: Well drained

Hydric Status: Not hydric

Corrosion Potential - Uncoated Steel: High

Depth to Bedrock Min: > 0 inches

Depth to Watertable Min: > 0 inches

GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

Soil Layer Information							
	Boundary			Classification		Saturated hydraulic conductivity micro m/sec	Soil Reaction (pH)
Layer	Upper	Lower	Soil Texture Class	AASHTO Group	Unified Soil		
1	0 inches	11 inches		Not reported	Not reported	Max: 42 Min: 14	Max: 8.4 Min: 6.6
2	11 inches	59 inches		Not reported	Not reported	Max: 42 Min: 14	Max: 8.4 Min: 6.6

LOCAL / REGIONAL WATER AGENCY RECORDS

EDR Local/Regional Water Agency records provide water well information to assist the environmental professional in assessing sources that may impact ground water flow direction, and in forming an opinion about the impact of contaminant migration on nearby drinking water wells.

WELL SEARCH DISTANCE INFORMATION

DATABASE	SEARCH DISTANCE (miles)
Federal USGS	1.000
Federal FRDS PWS	Nearest PWS within 1 mile
State Database	1.000

FEDERAL USGS WELL INFORMATION

MAP ID	WELL ID	LOCATION FROM TP
No Wells Found		

FEDERAL FRDS PUBLIC WATER SUPPLY SYSTEM INFORMATION

MAP ID	WELL ID	LOCATION FROM TP
No PWS System Found		

Note: PWS System location is not always the same as well location.

STATE DATABASE WELL INFORMATION

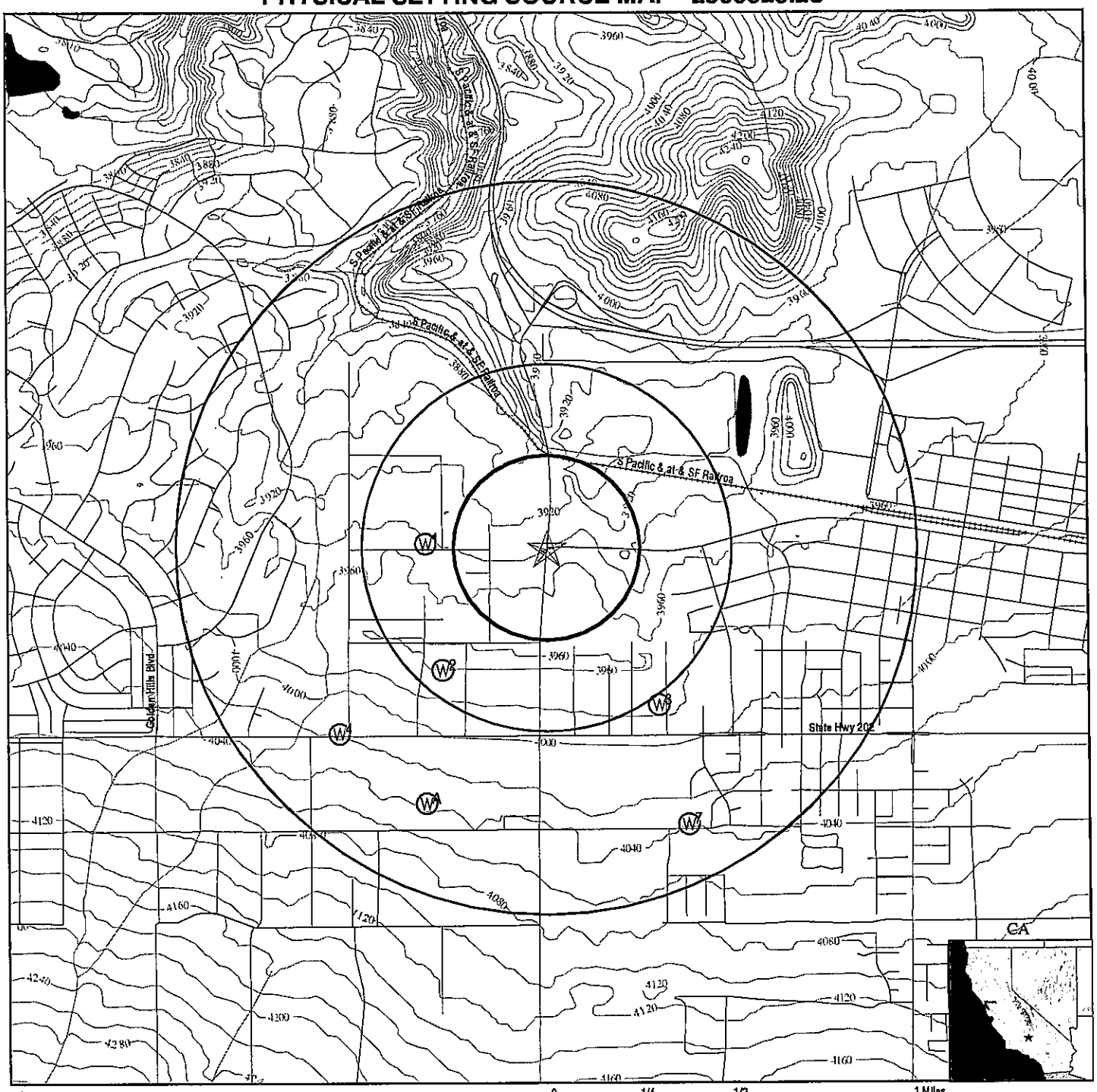
MAP ID	WELL ID	LOCATION FROM TP
1	18171	1/4 - 1/2 Mile West
2	18174	1/4 - 1/2 Mile SW
3	18175	1/2 - 1 Mile SE

GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

STATE DATABASE WELL INFORMATION

MAP ID	WELL ID	LOCATION FROM TP
4	18173	1/2 - 1 Mile SW
A5	23447	1/2 - 1 Mile SSW
A6	23448	1/2 - 1 Mile SSW
7	18182	1/2 - 1 Mile SSE

PHYSICAL SETTING SOURCE MAP - 2359525.2s



- County Boundary
- Major Roads
- Contour Lines
- Earthquake Fault Lines
- Earthquake epicenter, Richter 5 or greater
- Water Wells
- Public Water Supply Wells
- Cluster of Multiple Icons
- Groundwater Flow Direction
- (GI) Indeterminate Groundwater Flow at Location
- (GV) Groundwater Flow Varies at Location
- (HD) Closest Hydrogeological Data
- Oil, gas or related wells

SITE NAME: Tehachapi ADDRESS: Tehachapi Blvd/Tucker Rd Tehachapi CA 93561 LAT/LONG: 35.1317 / 118.4673	CLIENT: Ninyo & Moore CONTACT: Javier Perez INQUIRY #: 2359525.2s DATE: November 11, 2008 9:06 am

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GEOCHECK®- PHYSICAL SETTING SOURCE MAP FINDINGS

Map ID Direction Distance Elevation	Database	EDR ID Number
1 **West** **1/4 - 1/2 Mile** **Higher**	**CA WELLS**	**18171**

Water System Information:

Prime Station Code:	32S/33E-19L01 M	User ID:	CYA
FRDS Number:	1510045006	County:	Kern
District Number:	12	Station Type:	WELL/AMBANT/MUN/INTAKE
Water Type:	Well/Groundwater	Well Status:	Active Treated
Source Lat/Long:	350755.0 1182820.0	Precision:	100 Feet (one Second)
Source Name:	WELL RA-1 (RED APPLE WELL) - TREATED		
System Number:	1510045		
System Name:	GOLDEN HILLS CSD		
Organization That Operates System:			
	P.O. BOX 637 Tehachapi, CA 93581		
Pop Served:	6740	Connections:	2119
Area Served:	GOLDEN HILLS AREA		
Sample Collected:	02/14/2007 00:00:00	Findings:	1.2 PCI/L
Chemical:	URANIUM (PCI/L)		
Sample Collected:	02/14/2007 00:00:00	Findings:	.92 PCI/L
Chemical:	GROSS ALPHA COUNTING ERROR		
Sample Collected:	11/01/2006 00:00:00	Findings:	1.1 PCI/L
Chemical:	URANIUM (PCI/L)		
Sample Collected:	11/01/2006 00:00:00	Findings:	1.5 PCI/L
Chemical:	GROSS ALPHA COUNTING ERROR		
Sample Collected:	02/08/2006 00:00:00	Findings:	.89 PCI/L
Chemical:	GROSS ALPHA COUNTING ERROR		
Sample Collected:	02/08/2006 00:00:00	Findings:	2.1 UG/L
Chemical:	TETRACHLOROETHYLENE		
Sample Collected:	08/18/2004 00:00:00	Findings:	23.6 MG/L
Chemical:	NITRATE (AS NO3)		
Sample Collected:	06/02/2004 00:00:00	Findings:	2.2 UG/L
Chemical:	TETRACHLOROETHYLENE		
Sample Collected:	02/26/2004 00:00:00	Findings:	1 UNITS
Chemical:	COLOR		
Sample Collected:	02/26/2004 00:00:00	Findings:	530 US
Chemical:	SPECIFIC CONDUCTANCE		
Sample Collected:	02/26/2004 00:00:00	Findings:	8.38
Chemical:	PH, LABORATORY		
Sample Collected:	02/26/2004 00:00:00	Findings:	190 MG/L
Chemical:	ALKALINITY (TOTAL) AS CACO3		
Sample Collected:	02/26/2004 00:00:00	Findings:	230 MG/L
Chemical:	BICARBONATE ALKALINITY		
Sample Collected:	02/26/2004 00:00:00	Findings:	203 MG/L
Chemical:	HARDNESS (TOTAL) AS CACO3		
Sample Collected:	02/26/2004 00:00:00	Findings:	63 MG/L
Chemical:	CALCIUM		
Sample Collected:	02/26/2004 00:00:00	Findings:	11 MG/L
Chemical:	MAGNESIUM		

Sample Collected:	02/26/2004 00:00:00	Findings:	32 MG/L
Chemical:	SODIUM		
Sample Collected:	02/26/2004 00:00:00	Findings:	22 MG/L
Chemical:	CHLORIDE		
Sample Collected:	02/26/2004 00:00:00	Findings:	.24 MG/L
Chemical:	FLUORIDE (F) (NATURAL-SOURCE)		
Sample Collected:	02/26/2004 00:00:00	Findings:	3.3 UG/L
Chemical:	DIBROMOCHLOROMETHANE (THM)		
Sample Collected:	02/26/2004 00:00:00	Findings:	2.4 UG/L
Chemical:	TETRACHLOROETHYLENE		
Sample Collected:	02/26/2004 00:00:00	Findings:	320 MG/L
Chemical:	TOTAL DISSOLVED SOLIDS		
Sample Collected:	02/26/2004 00:00:00	Findings:	22.6 MG/L
Chemical:	NITRATE (AS NO3)		
Sample Collected:	02/26/2004 00:00:00	Findings:	3.3 UG/L
Chemical:	TOTAL TRIHALOMETHANES		
Sample Collected:	11/19/2003 00:00:00	Findings:	3.5 UG/L
Chemical:	TETRACHLOROETHYLENE		
Sample Collected:	11/19/2003 00:00:00	Findings:	25.5 MG/L
Chemical:	NITRATE (AS NO3)		
Sample Collected:	07/30/2003 00:00:00	Findings:	2 UG/L
Chemical:	TETRACHLOROETHYLENE		
Sample Collected:	07/30/2003 00:00:00	Findings:	23 MG/L
Chemical:	NITRATE (AS NO3)		
Sample Collected:	01/29/2003 00:00:00	Findings:	6.4 UG/L
Chemical:	TETRACHLOROETHYLENE		
Sample Collected:	07/17/2002 00:00:00	Findings:	15 UG/L
Chemical:	VANADIUM		
Sample Collected:	07/17/2002 00:00:00	Findings:	22.7 MG/L
Chemical:	NITRATE (AS NO3)		

2
SW **CA WELLS** **18174**
1/4 - 1/2 Mile
Higher

Water System Information:

Prime Station Code:	32S/33E-19Q05 M	User ID:	CYA
FRDS Number:	1500340001	County:	Kern
District Number:	12	Station Type:	WELL/AMBNT/MUN/INTAKE
Water Type:	Well/Groundwater	Well Status:	Active Untreated
Source Lat/Long:	350737.0 1182817.0	Precision:	0.5 Mile (30 Seconds)
Source Name:	WELL 01 SIERRA VISTA DRIVE		
System Number:	1500340		
System Name:	WEST TEHACHAPI MUTUAL		
Organization That Operates System:	STAR ROUTE 4, BOX 5015A TEHACHAPI, CA 93561		
Pop Served:	95	Connections:	31
Area Served:	Not Reported		
Sample Collected:	01/02/2008 00:00:00	Findings:	35 MG/L
Chemical:	NITRATE (AS NO3)		

GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS

Sample Collected:	11/14/2007 00:00:00	Findings:	.18 PCI/L
Chemical:	GROSS ALPHA COUNTING ERROR		
Sample Collected:	11/14/2007 00:00:00	Findings:	.21 PCI/L
Chemical:	RADIUM 228 COUNTING ERROR		
Sample Collected:	10/02/2007 00:00:00	Findings:	31.4 MG/L
Chemical:	NITRATE (AS NO3)		
Sample Collected:	08/06/2007 00:00:00	Findings:	1.1 PCI/L
Chemical:	RADIUM 228		
Sample Collected:	08/06/2007 00:00:00	Findings:	.3 PCI/L
Chemical:	RADIUM 228 COUNTING ERROR		
Sample Collected:	07/02/2007 00:00:00	Findings:	29.2 MG/L
Chemical:	NITRATE (AS NO3)		
Sample Collected:	04/02/2007 00:00:00	Findings:	35.4 MG/L
Chemical:	NITRATE (AS NO3)		
Sample Collected:	01/10/2007 00:00:00	Findings:	38 MG/L
Chemical:	NITRATE (AS NO3)		
Sample Collected:	07/06/2006 00:00:00	Findings:	32 MG/L
Chemical:	NITRATE (AS NO3)		
Sample Collected:	05/08/2006 00:00:00	Findings:	43.4 MG/L
Chemical:	NITRATE (AS NO3)		
Sample Collected:	01/10/2006 00:00:00	Findings:	39.8 MG/L
Chemical:	NITRATE (AS NO3)		
Sample Collected:	10/11/2005 00:00:00	Findings:	430 US
Chemical:	SPECIFIC CONDUCTANCE		
Sample Collected:	10/11/2005 00:00:00	Findings:	8.1
Chemical:	PH, LABORATORY		
Sample Collected:	10/11/2005 00:00:00	Findings:	140 MG/L
Chemical:	ALKALINITY (TOTAL) AS CACO3		
Sample Collected:	10/11/2005 00:00:00	Findings:	170 MG/L
Chemical:	BICARBONATE ALKALINITY		
Sample Collected:	10/11/2005 00:00:00	Findings:	150 MG/L
Chemical:	HARDNESS (TOTAL) AS CACO3		
Sample Collected:	10/11/2005 00:00:00	Findings:	48 MG/L
Chemical:	CALCIUM		
Sample Collected:	10/11/2005 00:00:00	Findings:	8.5 MG/L
Chemical:	MAGNESIUM		
Sample Collected:	10/11/2005 00:00:00	Findings:	26 MG/L
Chemical:	SODIUM		
Sample Collected:	10/11/2005 00:00:00	Findings:	17 MG/L
Chemical:	CHLORIDE		
Sample Collected:	10/11/2005 00:00:00	Findings:	270 MG/L
Chemical:	TOTAL DISSOLVED SOLIDS		
Sample Collected:	10/11/2005 00:00:00	Findings:	.58
Chemical:	LANGELIER INDEX @ 60 C		
Sample Collected:	10/11/2005 00:00:00	Findings:	32 MG/L
Chemical:	NITRATE (AS NO3)		
Sample Collected:	10/11/2005 00:00:00	Findings:	12
Chemical:	AGGRSSIVE INDEX (CORROSIVITY)		
Sample Collected:	10/11/2005 00:00:00	Findings:	.57 PCI/L
Chemical:	GROSS ALPHA COUNTING ERROR		

Sample Collected:	08/08/2005 00:00:00	Findings:	34 MG/L
Chemical:	NITRATE (AS NO3)		
Sample Collected:	04/05/2005 00:00:00	Findings:	34 MG/L
Chemical:	NITRATE (AS NO3)		
Sample Collected:	01/06/2005 00:00:00	Findings:	35.8 MG/L
Chemical:	NITRATE (AS NO3)		
Sample Collected:	10/05/2004 00:00:00	Findings:	32 MG/L
Chemical:	NITRATE (AS NO3)		
Sample Collected:	06/24/2004 00:00:00	Findings:	31 MG/L
Chemical:	NITRATE (AS NO3)		
Sample Collected:	03/23/2004 00:00:00	Findings:	34 MG/L
Chemical:	NITRATE (AS NO3)		
Sample Collected:	11/11/2003 00:00:00	Findings:	32 MG/L
Chemical:	NITRATE (AS NO3)		
Sample Collected:	04/16/2003 00:00:00	Findings:	32.4 MG/L
Chemical:	NITRATE (AS NO3)		
Sample Collected:	01/15/2003 00:00:00	Findings:	35.5 MG/L
Chemical:	NITRATE (AS NO3)		
Sample Collected:	10/15/2002 00:00:00	Findings:	32.3 MG/L
Chemical:	NITRATE (AS NO3)		
Sample Collected:	07/23/2002 00:00:00	Findings:	16 MG/L
Chemical:	CHLORIDE		
Sample Collected:	07/23/2002 00:00:00	Findings:	.2 MG/L
Chemical:	FLUORIDE (F) (NATURAL-SOURCE)		
Sample Collected:	07/23/2002 00:00:00	Findings:	270 MG/L
Chemical:	TOTAL DISSOLVED SOLIDS		
Sample Collected:	07/23/2002 00:00:00	Findings:	7.3 MG/L
Chemical:	NITRATE (AS NO3)		
Sample Collected:	07/23/2002 00:00:00	Findings:	1.3 MG/L
Chemical:	POTASSIUM		
Sample Collected:	07/23/2002 00:00:00	Findings:	23 MG/L
Chemical:	SODIUM		
Sample Collected:	07/23/2002 00:00:00	Findings:	9.1 MG/L
Chemical:	MAGNESIUM		
Sample Collected:	07/23/2002 00:00:00	Findings:	49 MG/L
Chemical:	CALCIUM		
Sample Collected:	07/23/2002 00:00:00	Findings:	150 MG/L
Chemical:	HARDNESS (TOTAL) AS CACO3		
Sample Collected:	07/23/2002 00:00:00	Findings:	140 MG/L
Chemical:	BICARBONATE ALKALINITY		
Sample Collected:	07/23/2002 00:00:00	Findings:	150 MG/L
Chemical:	ALKALINITY (TOTAL) AS CACO3		
Sample Collected:	07/23/2002 00:00:00	Findings:	8
Chemical:	PH, LABORATORY		
Sample Collected:	07/23/2002 00:00:00	Findings:	420 US
Chemical:	SPECIFIC CONDUCTANCE		
Sample Collected:	04/10/2002 00:00:00	Findings:	32.3 MG/L
Chemical:	NITRATE (AS NO3)		
Sample Collected:	01/15/2002 00:00:00	Findings:	29.8 MG/L
Chemical:	NITRATE (AS NO3)		

GEOCHECK®- PHYSICAL SETTING SOURCE MAP FINDINGS

Map ID Direction Distance Elevation	Database	EDR ID Number
3 **SE** **1/2 - 1 Mile** **Higher**	**CA WELLS**	**18175**

Water System Information:

Prime Station Code:	32S/33E-20P01 M	User ID:	15C
FRDS Number:	1502555001	County:	Kern
District Number:	45	Station Type:	WELL/AMBNT/MUN/INTAKE
Water Type:	Well/Groundwater	Well Status:	Active Raw
Source Lat/Long:	350732.0 1182740.0	Precision:	0.5 Mile (30 Seconds)
Source Name:	WELL 01		
System Number:	1502555		
System Name:	JARL WATER SYSTEM		
Organization That Operates System:			
	Not Reported		
Pop Served:	Unknown, Small System	Connections:	Unknown, Small System
Area Served:	Not Reported		

4 **SW** **1/2 - 1 Mile** **Higher**	**CA WELLS**	**18173**

Water System Information:

Prime Station Code:	32S/33E-19P01 M	User ID:	CYA
FRDS Number:	1510045007	County:	Kern
District Number:	12	Station Type:	WELL/AMBNT/MUN/INTAKE
Water Type:	Well/Groundwater	Well Status:	Active Treated
Source Lat/Long:	350728.0 1182835.0	Precision:	100 Feet (one Second)
Source Name:	WELL S1 - TREATED		
System Number:	1510045		
System Name:	GOLDEN HILLS CSD		
Organization That Operates System:			
	P.O. BOX 637		
	Tehachapi, CA 93581		
Pop Served:	6740	Connections:	2119
Area Served:	GOLDEN HILLS AREA		
Sample Collected:	10/31/2007 00:00:00	Findings:	.92 PCI/L
Chemical:	GROSS ALPHA COUNTING ERROR		
Sample Collected:	05/30/2007 00:00:00	Findings:	1.1 PCI/L
Chemical:	GROSS ALPHA COUNTING ERROR		
Sample Collected:	02/14/2007 00:00:00	Findings:	.94 PCI/L
Chemical:	GROSS ALPHA COUNTING ERROR		
Sample Collected:	08/18/2004 00:00:00	Findings:	8.81 MG/L
Chemical:	NITRATE (AS NO3)		
Sample Collected:	07/30/2003 00:00:00	Findings:	10.2 MG/L
Chemical:	NITRATE (AS NO3)		
Sample Collected:	07/24/2002 00:00:00	Findings:	14 UG/L
Chemical:	VANADIUM		
Sample Collected:	07/24/2002 00:00:00	Findings:	10.6 MG/L
Chemical:	NITRATE (AS NO3)		

Map ID Direction Distance Elevation	Database	EDR ID Number
A5 **SSW** **1/2 - 1 Mile** **Higher**	**CA WELLS**	**23447**

Water System Information:

Prime Station Code:	L15/045-TRPLRAW	User ID:	CYA
FRDS Number:	1510045002	County:	Kern
District Number:	12	Station Type:	STREAM/AMBNT/MUN/INTAKE
Water Type:	Surface Water	Well Status:	Active Raw
Source Lat/Long:	350718.0 1182820.0	Precision:	1,000 Feet (10 Seconds)
Source Name:	TREATMENT PLANT - RAW		
System Number:	1510045		
System Name:	GOLDEN HILLS CSD		
Organization That Operates System:			
	P.O. BOX 637		
	Tehachapi, CA 93581		
Pop Served:	6740	Connections:	2119
Area Served:	GOLDEN HILLS AREA		

A6 **SSW** **1/2 - 1 Mile** **Higher**	**CA WELLS**	**23448**

Water System Information:

Prime Station Code:	L15/045-TRPLTRT	User ID:	CYA
FRDS Number:	1510045003	County:	Kern
District Number:	12	Station Type:	STREAM/AMBNT/MUN/INTAKE
Water Type:	Surface Water	Well Status:	Active Treated
Source Lat/Long:	350718.0 1182820.0	Precision:	1,000 Feet (10 Seconds)
Source Name:	TREATMENT PLANT - TREATED		
System Number:	1510045		
System Name:	GOLDEN HILLS CSD		
Organization That Operates System:			
	P.O. BOX 637		
	Tehachapi, CA 93581		
Pop Served:	6740	Connections:	2119
Area Served:	GOLDEN HILLS AREA		

7 **SSE** **1/2 - 1 Mile** **Higher**	**CA WELLS**	**18182**

Water System Information:

Prime Station Code:	32S/33E-29C05 M	User ID:	15C
FRDS Number:	1502483001	County:	Kern
District Number:	45	Station Type:	WELL/AMBNT/MUN/INTAKE
Water Type:	Well/Groundwater	Well Status:	Active Raw
Source Lat/Long:	350715.0 1182735.0	Precision:	0.5 Mile (30 Seconds)
Source Name:	WELL 01		

GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS

System Number: 1502483
System Name: DON MATHEWS WATER SYSTEM
Organization That Operates System:
Not Reported
Pop Served: Unknown, Small System Connections: Unknown, Small System
Area Served: Not Reported

GEOCHECK®- PHYSICAL SETTING SOURCE MAP FINDINGS
RADON

AREA RADON INFORMATION

State Database: CA Radon

Radon Test Results

Zip	Total Sites	> 4 Pci/L	Pct. > 4 Pci/L
93561	12	2	16.67

Federal EPA Radon Zone for KERN County: 2

Note: Zone 1 indoor average level > 4 pCi/L.
: Zone 2 indoor average level >= 2 pCi/L and <= 4 pCi/L.
: Zone 3 indoor average level < 2 pCi/L.

Federal Area Radon Information for KERN COUNTY, CA

Number of sites tested: 94

Area	Average Activity	% <4 pCi/L	% 4-20 pCi/L	% >20 pCi/L
Living Area - 1st Floor	1.422 pCi/L	98%	2%	0%
Living Area - 2nd Floor	Not Reported	Not Reported	Not Reported	Not Reported
Basement	Not Reported	Not Reported	Not Reported	Not Reported

PHYSICAL SETTING SOURCE RECORDS SEARCHED

TOPOGRAPHIC INFORMATION

USGS 7.5' Digital Elevation Model (DEM)
Source: United States Geologic Survey
EDR acquired the USGS 7.5' Digital Elevation Model in 2002 and updated it in 2006. The 7.5 minute DEM corresponds to the USGS 1:24,000- and 1:25,000-scale topographic quadrangle maps. The DEM provides elevation data with consistent elevation units and projection.

Scanned Digital USGS 7.5' Topographic Map (DRG)
Source: United States Geologic Survey
A digital raster graphic (DRG) is a scanned image of a U.S. Geological Survey topographic map. The map images are made by scanning published paper maps on high-resolution scanners. The raster image is georeferenced and fit to the Universal Transverse Mercator (UTM) projection.

HYDROLOGIC INFORMATION

Flood Zone Data: This data, available in select counties across the country, was obtained by EDR in 1999 from the Federal Emergency Management Agency (FEMA). Data depicts 100-year and 500-year flood zones as defined by FEMA.

NWI: National Wetlands Inventory. This data, available in select counties across the country, was obtained by EDR in 2002 and 2005 from the U.S. Fish and Wildlife Service.

HYDROGEOLOGIC INFORMATION

AQUIFLOW[R] Information System
Source: EDR proprietary database of groundwater flow information
EDR has developed the AQUIFLOW Information System (AIS) to provide data on the general direction of groundwater flow at specific points. EDR has reviewed reports submitted to regulatory authorities at select sites and has extracted the date of the report, hydrogeologically determined groundwater flow direction and depth to water table information.

GEOLOGIC INFORMATION

Geologic Age and Rock Stratigraphic Unit
Source: P.G. Schruben, R.E. Arndt and W.J. Bawiec, Geology of the Conterminous U.S. at 1:2,500,000 Scale - A digital representation of the 1974 P.B. King and H.M. Beikman Map, USGS Digital Data Series DDS - 11 (1994).

STATSGO: State Soil Geographic Database
Source: Department of Agriculture, Natural Resources Conservation Services
The U.S. Department of Agriculture's (USDA) Natural Resources Conservation Service (NRCS) leads the national Conservation Soil Survey (NCSS) and is responsible for collecting, storing, maintaining and distributing soil survey information for privately owned lands in the United States. A soil map in a soil survey is a representation of soil patterns in a landscape. Soil maps for STATSGO are compiled by generalizing more detailed (SSURGO) soil survey maps.

SSURGO: Soil Survey Geographic Database
Source: Department of Agriculture, Natural Resources Conservation Services (NRCS)
Telephone: 800-672-5559
SSURGO is the most detailed level of mapping done by the Natural Resources Conservation Services, mapping scales generally range from 1:12,000 to 1:63,360. Field mapping methods using national standards are used to construct the soil maps in the Soil Survey Geographic (SSURGO) database. SSURGO digitizing duplicates the original soil survey maps. This level of mapping is designed for use by landowners, townships and county natural resource planning and management.

PHYSICAL SETTING SOURCE RECORDS SEARCHED

LOCAL / REGIONAL WATER AGENCY RECORDS

FEDERAL WATER WELLS

PWS: Public Water Systems
Source: EPA/Office of Drinking Water
Telephone: 202-564-3750
Public Water System data from the Federal Reporting Data System. A PWS is any water system which provides water to at least 25 people for at least 60 days annually. PWSs provide water from wells, rivers and other sources.

PWS ENF: Public Water Systems Violation and Enforcement Data
Source: EPA/Office of Drinking Water
Telephone: 202-564-3750
Violation and Enforcement data for Public Water Systems from the Safe Drinking Water Information System (SDWIS) after August 1995. Prior to August 1995, the data came from the Federal Reporting Data System (FRDS).

USGS Water Wells: USGS National Water Inventory System (NWIS)
This database contains descriptive information on sites where the USGS collects or has collected data on surface water and/or groundwater. The groundwater data includes information on wells, springs, and other sources of groundwater.

STATE RECORDS

Water Well Database
Source: Department of Water Resources
Telephone: 916-651-9648

California Drinking Water Quality Database
Source: Department of Health Services
Telephone: 916-324-2319
The database includes all drinking water compliance and special studies monitoring for the state of California since 1984. It consists of over 3,200,000 individual analyses along with well and water system information.

OTHER STATE DATABASE INFORMATION

California Oil and Gas Well Locations
Source: Department of Conservation
Telephone: 916-323-1779

RADON

State Database: CA Radon
Source: Department of Health Services
Telephone: 916-324-2208
Radon Database for California

Area Radon Information
Source: USGS
Telephone: 703-356-4020
The National Radon Database has been developed by the U.S. Environmental Protection Agency (USEPA) and is a compilation of the EPA/State Residential Radon Survey and the National Residential Radon Survey. The study covers the years 1986 - 1992. Where necessary data has been supplemented by information collected at private sources such as universities and research institutions.

EPA Radon Zones
Source: EPA
Telephone: 703-356-4020
Sections 307 & 309 of IRAA directed EPA to list and identify areas of U.S. with the potential for elevated indoor radon levels.

PHYSICAL SETTING SOURCE RECORDS SEARCHED

OTHER

Airport Landing Facilities: Private and public use landing facilities
Source: Federal Aviation Administration, 800-457-6656

Epicenters: World earthquake epicenters, Richter 5 or greater
Source: Department of Commerce, National Oceanic and Atmospheric Administration

California Earthquake Fault Lines: The fault lines displayed on EDR's Topographic map are digitized quaternary fault lines, prepared in 1975 by the United State Geological Survey. Additional information (also from 1975) regarding activity at specific fault lines comes from California's Preliminary Fault Activity Map prepared by the California Division of Mines and Geology.

STREET AND ADDRESS INFORMATION

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Appendix I

Hydrology Report

DEPARTMENT OF THE ARMY
U.S. ARMY ENGINEER DISTRICT, SACRAMENTO
CORPS OF ENGINEERS
1325 J STREET
SACRAMENTO CA 95814-2922

REPLY TO ATTENTION OF

August 11, 2009

Regulatory Division SPK-2006-00439

Farman Shir
Greenberg Farrow
1920 Main Street, Suite 1150
Irvine, California 92614

Dear Mr. Shir:

This concerns your proposed 25-Acre Commercial Site, Tehachapi project. The project is located in Section 20, Township 32 South, Range 33 East, MDB&M, southeast of the intersection of Tehachapi Boulevard and Tucker Road in the city of Tehachapi, Kern County, California.

Based on the information you have provided, we have determined that the proposed work, will not involve the discharge dredged or fill material within a waters of the United States. Therefore, a Department of the Army Permit is not required for this work. Measures should be taken to prevent construction materials and/or activities from entering any waters of the United States. Appropriate soil erosion and sediment controls should be implemented onsite to achieve this end.

Our disclaimer of jurisdiction is only for this activity as it pertains to Section 404 of the Federal Clean Water Act and does not refer to, nor affect jurisdiction over any waters present on site. Other Federal, State, and local laws may apply to your activities. Therefore, in addition to contacting other Federal and local agencies, you should also contact state regulatory authorities to determine whether your activities may require other authorizations or permits. In particular, your proposed activity may still be regulated by the State of California's Regional Water Quality Control Boards.

We appreciate your feedback. At your earliest convenience, please tell us how we are doing by completing the customer survey on our website under *Customer Service Survey*.

Please refer to identification number SPK-2006-00439 in any correspondence concerning this project. If you have any questions, please contact Ramon Aberasturi at , email *Ramon.Aberasturi@usace.army.mil*, or telephone 916-557-6865. For more information regarding our program, please visit our website at *www.spk.usace.army.mil/regulatory.html*.

Sincerely,

Paul Maniccia

Paul Maniccia
Chief, California South Branch

Copy furnished without enclosure(s):

Dale Harvey, California Regional Water Quality Control Board, 1685 E Street, Fresno, California 93706-2020
W.E. Loudermilk, Regional Manager, Central Region, California Department of Fish and Game, 1234 East Shaw Avenue, Fresno, California 93710-7802
Live Oak Associates, P.O. Box 2697, Oakhurst, California 93644

CORNERSTONE
ENGINEERING
CONSULTING CIVIL ENGINEERS & LAND SURVEYORS

Preliminary Drainage Study
For Proposed
WAL-MART
In
Tehachapi

APN #: 415-130-28, & 69

June 4, 2009

PREPARED BY: Hala Zahalan, EIT
REVIEWD AND APPROVED BY: Derrill Whitten, PE, PLS
CORNERSTONE ENGINEERING, INC

REGISTERED PROFESSIONAL ENGINEER
DERRILL G. WHITTEN, JR.
No. C-051930
Exp. Exp 6/30/10
CIVIL
STATE OF CALIFORNIA

Derrill Whitten, PE, RCE 51930 7/2/09

CEI Job # 348-01-00

208 Oak Street
Bakersfield, CA 93304-2433
Tel: 661.325.9474 - Fax 661.322.0129

620 Mission Avenue
Oceanside, CA 92054
Tel: 760.722.3495 - Fax 760.722.3490

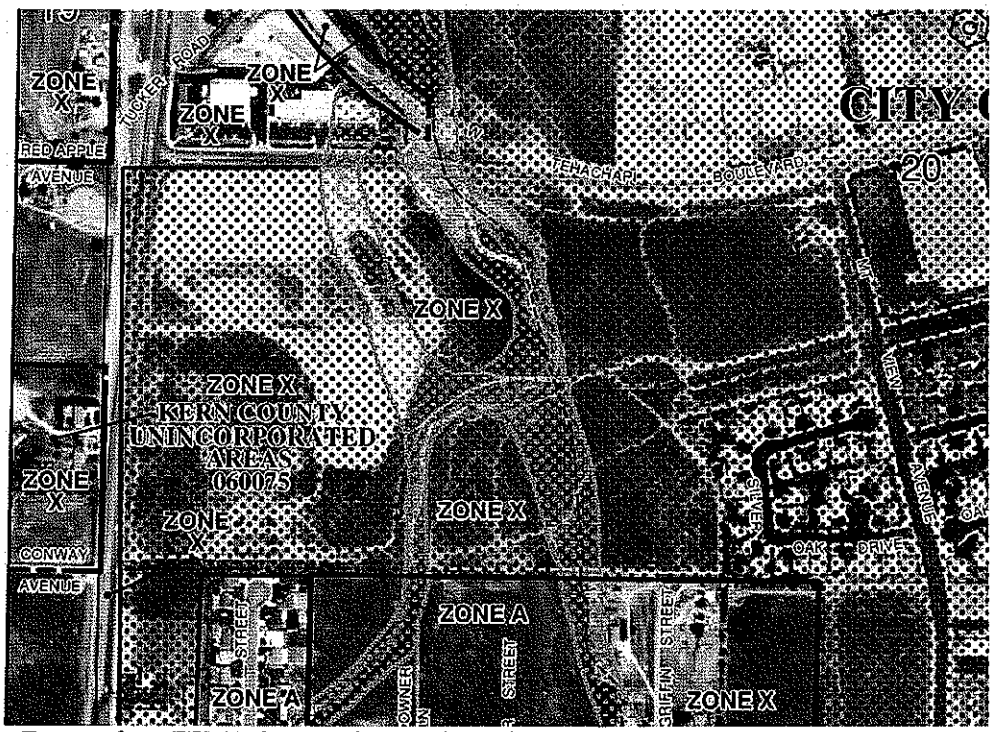
www.cornerstoneeng.com

INTRODUCTION

The proposed Tehachapi WAL-MART site is located southeast of Tehachapi Boulevard and Tucker Road. The project will be developed on a 25 acre parcel comprised of APNs 415-130-69 and 28. The project will consist of the WAL-Mart supercenter building, parking and landscape area, and three outlots on the south side of Tehachapi Boulevard. The site is a portion of Section 20, Township 32 South, Range 33 East, M.D.M. The purpose of this study is to evaluate the existing drainage and flood facilities, establish the drainage patterns of the proposed site, and demonstrate the feasibility of the proposed project.

DESCRIPTION OF EXISTING DRAINAGE CONDITIONS

The site is located on FEMA Community Panel Numbers 06029C2839E and lies predominantly within a Zone 'X' flood designation. There is also a portion of the site, in the NE quadrant that is within a Zone 'A' flood designation. Zone 'X' is an area that is subjected to minimal flooding, where Zone 'A' is an area that is subject to flood depths greater than 1 foot in the 100 year (1% annual) storm event. Site drainage generally flows to the west in the western half of the site and to the east and north in the eastern half.



Excerpt from FEMA Community Panel Numbers 06029C2839E

A storm drain conveyance system exists along the western side of Tucker Road and the northern side of Tehachapi Boulevard. This stormdrain system conveys storm water to a stormwater detention basin north of the site, along the east side of Tucker. The stormdrain system in Tucker Road consists mainly of 48" and 72" pipes that flow to the north on the west side of the road. Stormwater draining to Tehachapi Boulevard is conveyed to the west and north within an 18" stormsewer system. The detention basin is approximately 300 feet north of Tehachapi Boulevard on the east side of Tucker Road

and has an approximate surface area of 1 acre. This facility serves as both a detention structure and a stormwater pollution prevention structure.

Stormwater detention facility located to the northeast of Tucker and Tehachapi Blvd.

A drainage study for the Tucker Road Drainage system was obtained from Caltrans. This study is referenced herein to demonstrate the capacity and the ability of the existing system to support this project. A copy of the Caltrans Study is included in the appendix.

METHODOLOGY

The hydrology for this report was done in conformance with the Kern County Hydrology Manuel (1994). The Kern County Rational Method module of the Civil Design Software (Joseph Bonadaman and Associates) was utilized for the analysis. This program was developed for and is approved by the Kern County Engineering and Surveying Services for use in drainage analysis in Kern County. The Rational Method relates the peak runoff in a drainage area to a runoff coefficient, the rainfall intensity, and the size of the drainage area. The peak flow was calculated for a 10 year 24 hour storm as is the standard for the county.

For the purposes of this report, it was assumed that the rain fall from the design storms would fall uniformly over the entire site. The rain fall data for this report was taken from the Rainfall Isohyet Maps found in the Kern County Hydrology Manual.

All onsite stormwater is passed through storm water filter units, CDS units, before discharging offsite to the collection system on Tucker Road. These units are designed to filter out particles and also incorporate an oil trap baffle.

The project site was divided into different subareas draining to proposed onsite inlets and CDS units. The stormwater will then be conveyed to the 72" collection system on Tucker Road. All of the west half of the project site south of Tehachapi Junction will be designed to drain to Tucker Road. The stormwater will pass through CDS units #1 and #2 before entering the storm drains lines 11 and 12. The eastern subareas south of Tehachapi junction will be graded to drain to inlets on the north side of the parking area. The stormwater will then be conveyed through onsite 18 inch pipe to proposed CDS unit #3 abutting Tehachapi Boulevard. The three outlots of the project were considered as one drainage area that drains also to the proposed CDS unit on Tehachapi Boulevard. Runoff from CDS #3 will then be conveyed to a proposed 24" storm sewer on Tehachapi Boulevard. This proposed storm drain line connects to the 72" existing storm drain on Tucker Road.

Offsite subareas 8 to 10 will drain to the existing inlets E11 to E13 respectively. The offsite runoff from Tehachapi Junction will continue to drain to the existing 18" pipe on Tehachapi Boulevard.

POST DEVELOPMENT FLOW

The results from the rational method analysis are attached to the end of this report, along with a map showing the subareas and drainage paths used in the hydrology model. Please note that the final pipe design was not done in Civil Design. Instead AutoCAD Manning Pipe calculator was used to size and evaluate proposed pipes.

A few items in the hydrology should be noted:

- The USGS soil maps were used to determine the soil type of the project area. A soil type 'C' was used in all calculations.
- All of the sub-areas were modeled as having 90% impervious area, and all pervious areas were assumed to have an SCS curve number of 74.This was to account for any landscaping in the project site.

The area draining to CDS #1 is approximately 5.2 acres with a peak flow of 7.7 cfs for a 10 year storm. The area draining to CDS #2 is approximately 6.25 acres with a peak flow of 10.11 cfs. The 24 inch pipes that convey these drain flows to the 72 inch collection system have a full capacity of 22.5 cfs. The total area draining into CDS #3 has an acreage of 12.05 and a peak flow of 13.02 cfs. The existing collection system appears to have the capacity even to carry the 100 year storm event.

The offsite flows directly draining to inlets E11, E12 and E13 are 0.84, 0.94 and 0.81 cfs respectively. The 18 inch storm pipe on Tehachapi Boulevard will continue to receive the runoff from Tehachapi Junction.

MITIGATION

Onsite storm water treatment devices, CDS units, shall be installed at all offsite discharge points. These devices will filter out particles and incorporates an oil trap baffle.

These units are typically sized for a 'first flush' storm event. This is a storm that occurs every 3 to 6 months. The current NOAA Atlas for the Tehachapi area (NOAA Atlas 2) only gives rain fall intensities down to the 2, year, 6 hour interval. Therefore, the 2 year, 6 hour storm will be used to size the structures. Kern County uses an intensity of 0.2 in/hr (2 years 6 our storm) to calculate the water quality flow required to be treated.

The expected flow rate through unit #1 from the 2 year, 6 hour storm will be approximately 0.94 cubic feet per second. While the expected flow rates through units 2 and 3 will be 1.13 cfs and 2.16 cfs respectively. During a 10 year storm event, the units will bypass all the flow greater than their respective design flows.

The CDS models proposed for CDS # 1, 2 and 3 are PMSU 20_20, PMSU 20_25 and PMSU 30_25 respectively. Standard details for each of these units are enclosed.

Maintaining the offsite Tucker Road outlet shall be considered part of the mitigation measures for this site. The following Best Management Practices (BMPs) shall be implemented at the Tucker outlet:

- Remove Excess Vegetation
- Sediment Removal

The proposed CDS units and the offsite maintenance of the Tucker Road outlet shall serve to reduce pollution in urban stormwater. No other mitigation shall be required.

EXISTING SITE FLOODING

The project site is located within the Antelope Creek basin where Antelope Creek runs east of the project site. The FEMA flood zone maps show that the site lies partly within flood zone 'A'.

A Flood Control Project to protect the City of Tehachapi began in 1983 through initial congressional funding and the effort of Tehachapi-Cummings County Water District (TCCWD), City of Tehachapi, Kern County Water Agency and other sponsors. The TCCWD Flood Control Project included the following:

- ***Diversion Channel:*** This channel was designed to divert water from Highline Road north on Dennison Road to Tehachapi Airport, and into Tehachapi Creek. It was completed in 1988;
- ***Antelope Dam:*** - A 764 acre foot storm water collection facility which was completed in 1986;
- ***Blackburn Dam:*** - A 710 acre foot storm water collection facility, completed in 1990

The Antelope Dam spillway or reservoir is the primary source of the Antelope Run. The Antelope Run is a natural stream that is stretched for two miles along residential and commercial areas. During a 100-year storm the Antelope Run would flow in excess of 3,000 cfs in the area adjacent to the project site. One of the main concerns of the

Antelope Run is erosion and flooding. The Antelope Run project includes many components to ensure flood protection and erosion mitigation measures. One of these components was the removal by the Caltrans of the undersized culverts at the Tehachapi Blvd. crossing and installation of two large box culvert structures equipped to handle the 3,000 cfs that a 100-year storm would bring. The construction of Antelope Dam in 1986 and the subsequent upgrade of the Tehachapi Blvd crossing have significantly reduced the area of inundation in the vicinity of this project.

The current FEMA flood zone map does not reflect these flood protection facilities that have been constructed over the past 25 years. Because the site lies partially in a flood zone 'A', a detailed flood study will be necessary to evaluate the effect of these flood control facilities on the flood zone designation of the site. The detailed flood study shall be used as a basis for a Letter of Map Revision (LOMR) to FEMA in order to revise the current flood map. A preliminary study has already been done by the TCCWD. This study was used to set the boundary for the TCCWD easement on the eastern boundary of this project. Even though TCCWD used this study to acquire the Antelope Run Drainage Easements, a LOMR was never undertaken to correct the FEMA map. A LOMR shall be done by the project applicant to correct this oversight.

SUMMARY AND RECOMMENDATION

Storm water from 10 year storm event will be directed to an existing stormsewer collection system and detention basin off-site of the project. The conveyance system on Tucker Road is shown to have enough capacity to take the water generated on-site by a 10 year storm. Stormwater treatment devices, CDS units, will be installed at all offsite discharge points before entering the collection system on Tucker Road. A detailed drainage study is recommended to be prepared and submitted when a grading plan is submitted for approval by the City of Tehachapi.

Due to the many flood protection facilities that have been constructed along Antelope Creek in the past 25 years, it is recommended that a detailed flood study be prepared and submitted to FEMA in support of a LOMR.

ATTACHMENTS

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

DEPARTMENT OF TRANSPORTATION
2015 EAST SHIELDS, SUITE 100
FRESNO, CA 93726
TDD (559) 488-4066
OFFICE (559) 243-3445
FAX (559) 243-3426

April 11, 2002

Mr. David James
City of Tehachapi
115 South Robinson Street
Tehachapi, CA 93561-1722

File: Ker-202-8.9/12.1
EA 06-407701

Subject: Tucker Road/State Route 202 and Tehachapi Boulevard Realignment Issues

Dear Mr. James:

This is in response to your letter dated March 4, 2002 regarding relinquishment issues on Tucker Road (State Route 202) and Tehachapi Boulevard. The following is in response to your specific inquiries:

- In regards to the Tucker Road drainage area, please find the enclosed calculations and boundary map outlining the drainage area.

- It is my understanding that our design group has forwarded you a request form to obtain the final design information from our Office Engineer's branch in Sacramento. Once we have received the electronic copies of the layout sheets from Sacramento here in the District, our design group will electronically transmit them to your design consultant.

- In respect to the retaining the existing Tehachapi Creek Bridge as a bike path and train viewing station, there are several concerns that must be considered. First and foremost, the bridge deck and columns need to be rehabilitated or repaired. Secondly, the entire structure would need to be evaluated for seismic issues if it was to remain in place. This evaluation was not done because the plan has been to remove the old structure once the new one is in place. As you and I have previously discussed, the columns have been damaged by a previous seismic event. In addition to the necessary repairs that would need to be done and the cost associated with those repairs, we would need to address ownership and liability of the bridge. In light of these issues, our position remains that we proceed according to plan and remove the old bridge once the new bridge is in place and operational.

- In regards to the bridge design width, the bridge is currently designed for two- (2) lane facility. However, the bridge is configured to accommodate future expansion.

- The error in the horizontal location of one of the bridge columns has caused an approximate 4-month delay in the construction of the bridge. Due to the unseasonably mild winter we experienced this year, the contractor was able to complete other items of work that were weather dependent. Depending upon the remaining work to be done on the contract after the bridge is complete will determine the overall delay of the project.

I hope that this sufficiently answers your inquiries. I look forward to working with you and your staff through the remaining issues on this project. Should you have any questions, please contact me at (559) 243-3445.

Sincerely,

TERRY OGLE
Project Manager
Program/Project Management Division

Enclosure

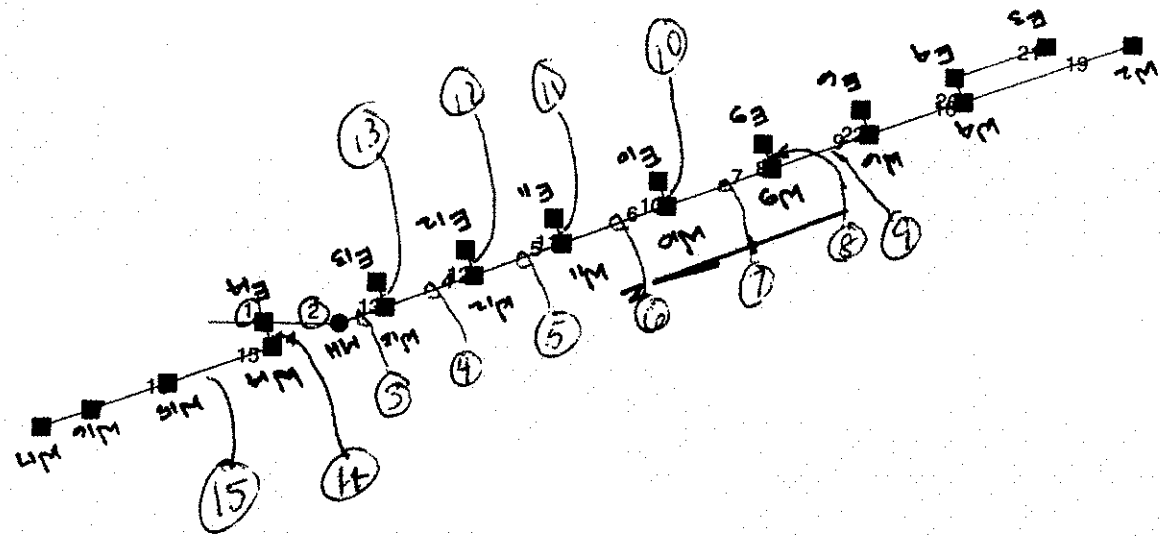
Storm Sewer Summary Report

Line No.	Line ID	Flow rate (cfs)	Line size (in)	Line length (ft)	Invert EL Dn (ft)	Invert EL Up (ft)	Line slope (%)	HGL down (ft)	HGL up (ft)	Minor loss (ft)	Dns line No.
1	1	235.01	72 c	164.0	3915.09	3918.37	2.000	3917.73	3921.01	3.59	End
2	2	211.27	72 c	223.1	3925.23	3931.17	2.662	3927.57	3933.51	3.98	1
3	3	211.27	72 c	144.4	3931.17	3935.30	2.861	3937.49	3939.17	1.49	2
4	4	201.52	72 c	278.9	3935.30	3943.28	2.862	3940.66	3947.06	1.08	3
5	5	192.33	72 c	278.9	3943.27	3951.27	2.869	3948.13	3954.96	1.04	4
6	6	182.04	72 c	328.1	3951.28	3960.53	2.819	3956.00	3964.12	0.99	5
7	7	172.29	72 c	328.1	3960.53	3961.90	0.418	3965.11	3965.42	0.93	6
8	8	4.88	24 c	76.8	3968.47	3969.23	0.990	3969.11	3969.87	0.50	7
9	9	164.19	72 c	301.8	3961.91	3963.20	0.427	3966.35	3966.61	0.91	7
10	11	5.88	24 c	76.8	3963.81	3964.57	0.990	3965.11	3965.43	0.32	6
11	12	6.21	24 c	76.8	3954.56	3955.32	0.990	3956.00	3956.20	0.34	5
12	13	5.54	24 c	76.8	3946.56	3947.32	0.990	3948.13	3948.15	0.31	4
13	14	5.88	24 c	76.8	3938.58	3939.34	0.990	3940.66	3940.68	0.11	3
14	15	17.60	30 c	76.8	3918.37	3919.02	0.847	3924.60*	3924.74*	0.20	1
15	16	9.62	24 c	328.1	3919.52	3921.16	0.500	3924.94*	3925.53*	0.09	14
16	17	1.49	18 c	239.5	3921.65	3922.87	0.509	3925.62*	3925.67*	0.01	15
17	18	0.33	18 c	154.2	3922.87	3925.16	1.485	3925.68	3925.68	0.00	16
18	19	155.61	48 c	288.7	3965.22	3972.43	2.497	3967.67	3974.88	3.45	9
19	20	141.79	48 c	515.6	3972.44	3983.78	2.199	3978.34	3987.38	1.32	18
20	21	8.14	24 c	76.8	3972.43	3973.20	1.003	3978.34*	3978.44*	0.10	18
21	22	5.28	18 c	280.0	3973.29	3980.29	2.500	3978.54	3981.17	0.38	20
22	23	5.07	24 c	76.8	3965.22	3983.79	24.189	3967.52	3984.59	0.29	9

PROJECT FILE: TEH-3ED.STM | I-D-F FILE: New.IDF | TOTAL NO. LINES: 22 | RUN DATE: 04-18-2002

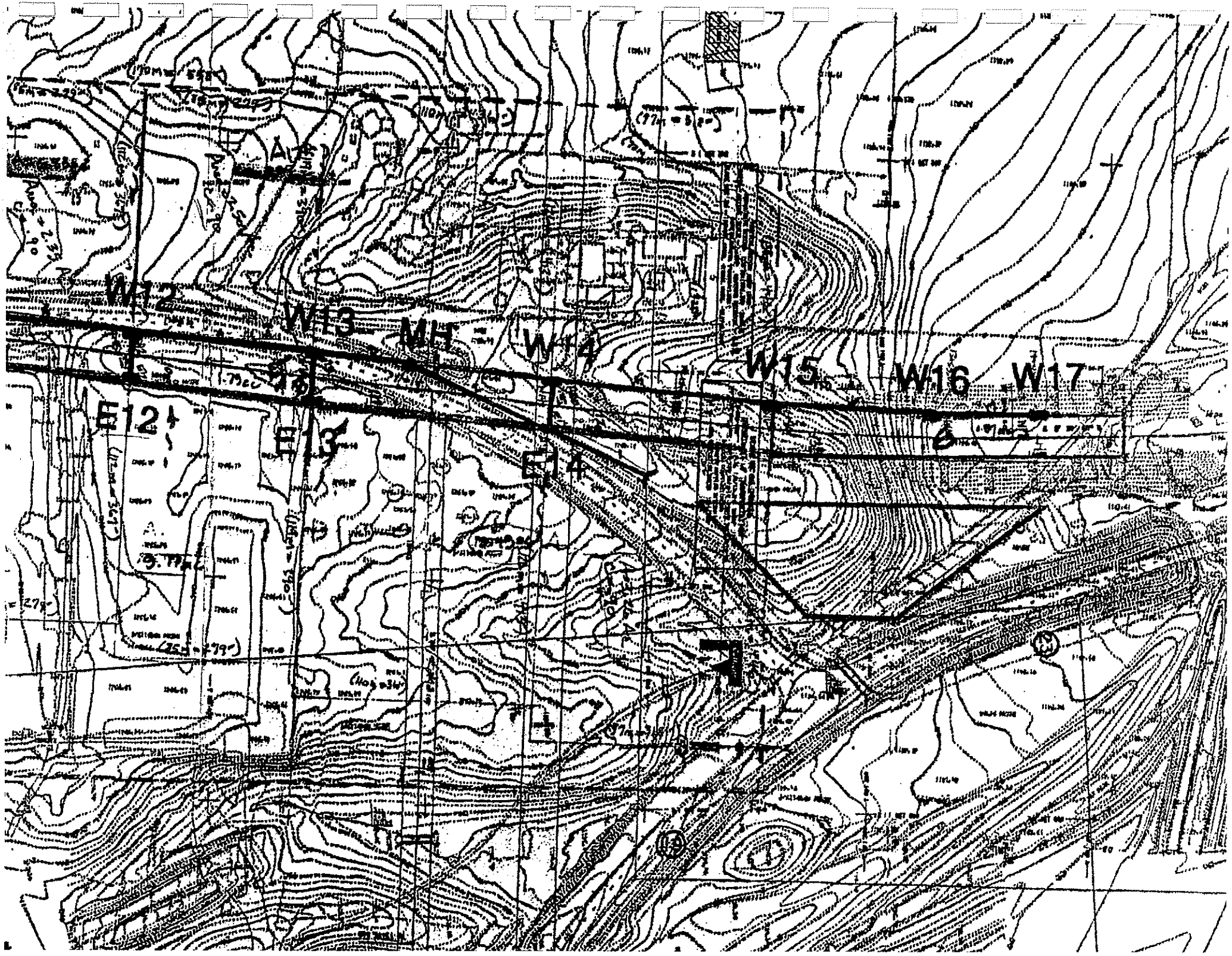
NOTES: c = circular; e = elliptical; b = box; Return period = 25 Yrs.; * Indicates surcharge condition.

Plan View



Proj. file: TEH-3ED.STM	IDF file: New.IDF	No. Lines: 22	04-18-2002

:r. :A	Sum CxA	Tc (min)	Rnfal inten (in/hr)	Total runoff (cfs)	Add. flow (cfs)	Total flow (cfs)	Capac. @ full (cfs)	Line size (in x in)	Line type	Line length (ft)	Line slope (%)	Veloc. up (ft/s)	Veloc. down (ft/s)	HGL up (ft)	HGL down (ft)	Invert up (ft)	Invert down (ft)	Dn Strm line No.
)0	0.00	13.31	0.00	0.00	6.14	235.01	598.96	72	Cir	164.04	2.00	19.63	19.63	3921.01	3917.73	3918.37	3915.09	End
)0	0.00	5.02	0.00	0.00	0.00	211.27	691.15	72	Cir	223.10	2.66	20.66	20.66	3933.51	3927.57	3931.17	3925.23	1
)0	0.00	4.76	0.00	0.00	3.87	211.27	716.46	72	Cir	144.36	2.86	10.96	7.47	3939.17	3937.49	3935.30	3931.17	2
)0	0.00	4.25	0.00	0.00	3.65	201.52	716.53	72	Cir	278.87	2.86	10.75	7.56	3947.06	3940.66	3943.28	3935.30	3
)0	0.00	3.75	0.00	0.00	4.08	192.33	717.42	72	Cir	278.87	2.87	10.54	7.83	3954.96	3948.13	3951.27	3943.27	4
)0	0.00	3.14	0.00	0.00	3.87	182.04	711.24	72	Cir	328.08	2.82	10.31	7.64	3964.12	3956.00	3960.53	3951.28	5
)0	0.00	2.51	0.00	0.00	3.22	172.29	273.70	72	Cir	328.08	0.42	9.98	7.44	3965.42	3965.11	3961.90	3960.53	6
)0	0.00	0.00	0.00	0.00	4.88	4.88	22.50	24	Cir	76.77	0.99	5.66	5.66	3969.87	3969.11	3969.23	3968.47	7
)0	0.00	1.92	0.00	0.00	3.51	164.19	276.91	72	Cir	301.84	0.43	9.90	7.32	3966.61	3966.35	3963.20	3961.91	7
)0	0.00	0.00	0.00	0.00	5.88	5.88	22.50	24	Cir	76.77	0.99	4.56	2.72	3965.43	3965.11	3964.57	3963.81	6
)0	0.00	0.00	0.00	0.00	6.21	6.21	22.50	24	Cir	76.77	0.99	4.65	2.57	3956.20	3956.00	3955.32	3954.56	5
)0	0.00	0.00	0.00	0.00	5.54	5.54	22.50	24	Cir	76.77	0.99	4.47	2.09	3948.15	3948.13	3947.32	3946.56	4
)0	0.00	0.00	0.00	0.00	5.88	5.88	22.50	24	Cir	76.77	0.99	2.63	1.87	3940.68	3940.66	3939.34	3938.58	3
)0	0.00	12.95	0.00	0.00	7.98	17.60	37.73	30	Cir	76.77	0.85	3.59	3.59	3924.74	3924.60	3919.02	3918.37	1
)0	0.00	11.17	0.00	0.00	8.13	9.62	15.99	24	Cir	328.08	0.50	3.06	3.06	3925.53	3924.94	3921.16	3919.52	14
)0	0.00	6.44	0.00	0.00	1.16	1.49	7.50	18	Cir	239.53	0.51	0.84	0.84	3925.67	3925.62	3922.87	3921.65	15
)0	0.00	0.00	0.00	0.00	0.33	0.33	12.80	18	Cir	154.17	1.49	0.61	0.19	3925.68	3925.68	3925.16	3922.87	16
)0	0.00	1.67	0.00	0.00	5.68	155.61	227.00	48	Cir	288.71	2.50	19.25	19.25	3974.88	3967.67	3972.43	3965.22	9
)0	0.00	0.00	0.00	0.00	141.79	141.79	213.04	48	Cir	515.58	2.20	11.90	11.29	3987.38	3978.34	3983.78	3972.44	18
)0	0.00	1.18	0.00	0.00	2.86	8.14	22.65	24	Cir	76.77	1.00	2.59	2.59	3978.44	3978.34	3973.20	3972.43	18
)0	0.00	0.00	0.00	0.00	5.28	5.28	16.60	18	Cir	280.00	2.50	4.92	2.99	3981.17	3978.54	3980.29	3973.29	20
)0	0.00	0.00	0.00	0.00	5.07	5.07	111.24	24	Cir	76.77	24.19	4.34	1.61	3984.59	3967.52	3983.79	3965.22	9


W12
W13
MH
W14
W15
W16
W17
E12
E13
E14

CIVIL DESIGN OUTPUT – HYDROLOGY

Kern County Rational Hydrology Program

(Hydrology Manual Dated 1992)

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  CIVILCADD/CIVILDESIGN  Engineering Software, (c) 2006   Version 7.2
        Rational Hydrology Study        Date: 06/04/09 File: 348E11.out
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Program License Serial Number 6027

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 *********   Hydrology Study Control Information **********

------------------------------------------------------------------------
ENGLISH UNITS USED FOR RAINFALL DATA


Rainfall map data: Year Storm    Hour    Rainfall
                          2        6       1.000(In.)
                          2       24       1.600(In.)
                        100        6       2.500(In.)
                        100       24       4.000(In.)
Latitude in degrees =  35.13
SAN JOAQUIN VALLEY area of study
Y2 =   0.422, Y100 =   1.035 or Y100 =   1.036
Note: Larger value of Y100 =   1.036 used
Slope used for rainfall intensity curve b =  0.5500

Remaining year storm values:

1 Hour Rainfall -  Year Storm
          0.422          2
          0.574          5
          0.674          10
          0.805          25
          0.924          50
          1.036          100

24 Hour Rainfall -  Year Storm
          1.600          2
          2.193          5
          2.586          10
          3.097          25
          3.562          50
          4.000          100

Note: Computer estimated pipe sizes use 10 year storm flow rates
NOTE: ENGLISH (IN-LB) INPUT DATA UNITS USED
NOTE: ENGLISH (IN-LB) OUTPUT DATA UNITS USED


++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
Process from Point        1.000 to Point        2.000
**** INITIAL AREA EVALUATION ****
______________________________________________________________________
COMMERCIAL subarea type
Decimal fraction soil group A = 0.000
Decimal fraction soil group B = 0.000
Decimal fraction soil group C = 1.000
Decimal fraction soil group D = 0.000
SCS curve number for soil AMC II  = 74.00
Pervious (Ap) = 0.100 Loss rate, Fm = 0.049(In/Hr), Fp = 0.486(In/Hr)
Subarea (Ai) = 0.9000; Subarea Yield Fraction(Y) =     0.850
Initial subarea data:
Initial area flow distance =   940.000(Ft.)
Top (of initial area) elevation =  3964.500(Ft.)
Bottom (of initial area) elevation =  3959.400(Ft.)
Difference in elevation =     5.100(Ft.)
```

Slope = 0.00543 s(%)= 0.54
TC = k(0.304)*[(length^3)/(elevation change)]^0.2
Initial area time of concentration = 13.342 min.
Rainfall intensity = 2.369(In/Hr) for a 100 year storm
Minimum Q (Qmin=0.9YIA) = 10.345(CFS)
Subarea runoff = 11.923(CFS)
Total initial stream area = 5.710(Ac.)

******* DATA FOR OTHER YEAR STORMS *******

Year	Area (Ac)	TC (Min)	Intensity (In/Hr)	Fm Avg (In/Hr)	Y Avg (In/Hr)	Qmin (cfs)	Qcalc (cfs)	Qtot (cfs)
5	5.7	13.34	1.31	0.05	0.83	5.6	6.5	6.5
10	5.7	13.34	1.54	0.05	0.84	6.6	7.7	7.7
25	5.7	13.34	1.84	0.05	0.84	8.0	9.2	9.2
50	5.7	13.34	2.11	0.05	0.85	9.2	10.6	10.6

End of computations, total study area = 5.710 (Ac.)

Kern County Rational Hydrology Program

(Hydrology Manual Dated 1992)

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  CIVILCADD/CIVILDESIGN  Engineering Software, (c) 2006   Version 7.2
        Rational Hydrology Study        Date: 06/03/09 File: 348E12A.out
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Program License Serial Number 6027

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 *********   Hydrology Study Control Information **********

-----------------------------------------------------------------------
ENGLISH UNITS USED FOR RAINFALL DATA


Rainfall map data: Year Storm    Hour    Rainfall
                          2        6       1.000(In.)
                          2       24       1.600(In.)
                        100        6       2.500(In.)
                        100       24       4.000(In.)
Latitude in degrees =  35.13
SAN JOAQUIN VALLEY area of study
Y2 =   0.422, Y100 =   1.035 or Y100 =   1.036
Note: Larger value of Y100 =   1.036 used
Slope used for rainfall intensity curve b =  0.5500

Remaining year storm values:

1 Hour Rainfall -  Year Storm
          0.422          2
          0.574          5
          0.674          10
          0.805          25
          0.924          50
          1.036          100

24 Hour Rainfall -  Year Storm
          1.600          2
          2.193          5
          2.586          10
          3.097          25
          3.562          50
          4.000          100

Note: Computer estimated pipe sizes use 10 year storm flow rates
NOTE: ENGLISH (IN-LB) INPUT DATA UNITS USED
NOTE: ENGLISH (IN-LB) OUTPUT DATA UNITS USED


++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
Process from Point        3.000 to Point        4.000
**** INITIAL AREA EVALUATION ****
______________________________________________________________________
COMMERCIAL subarea type
Decimal fraction soil group A = 0.000
Decimal fraction soil group B = 0.000
Decimal fraction soil group C = 1.000
Decimal fraction soil group D = 0.000
SCS curve number for soil AMC II  = 74.00
Pervious (Ap) = 0.100 Loss rate, Fm = 0.049(In/Hr), Fp = 0.486(In/Hr)
Subarea (Ai) = 0.9000; Subarea Yield Fraction(Y) =     0.850
Initial subarea data:
Initial area flow distance =   766.000(Ft.)
Top (of initial area) elevation =  3965.000(Ft.)
Bottom (of initial area) elevation =  3953.000(Ft.)
Difference in elevation =    12.000(Ft.)
```

Slope = 0.01567 s(%)= 1.57
TC = k(0.304)*[(length^3)/(elevation change)]^0.2
Initial area time of concentration = 9.944 min.
Rainfall intensity = 2.784(In/Hr) for a 100 year storm
Minimum Q (Qmin=0.9YIA) = 7.987(CFS)
Subarea runoff = 9.233(CFS)
Total initial stream area = 3.750(Ac.)

******* DATA FOR OTHER YEAR STORMS *******

Year	Area (Ac)	TC (Min)	Intensity (In/Hr)	Fm Avg (In/Hr)	Y Avg (In/Hr)	Qmin (cfs)	Qcalc (cfs)	Qtot (cfs)
5	3.8	9.94	1.54	0.05	0.83	4.3	5.0	5.0
10	3.8	9.94	1.81	0.05	0.84	5.1	6.0	6.0
25	3.8	9.94	2.16	0.05	0.84	6.1	7.1	7.1
50	3.8	9.94	2.48	0.05	0.85	7.1	8.2	8.2

End of computations, total study area = 3.750 (Ac.)

Kern County Rational Hydrology Program

(Hydrology Manual Dated 1992)

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  CIVILCADD/CIVILDESIGN  Engineering Software, (c) 2006   Version 7.2
        Rational Hydrology Study        Date: 06/03/09 File: 348E12B.out
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Program License Serial Number 6027

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 *********   Hydrology Study Control Information **********

---------------------------------------------------------------------------
ENGLISH UNITS USED FOR RAINFALL DATA


Rainfall map data: Year Storm    Hour    Rainfall
                          2        6        1.000(In.)
                          2       24        1.600(In.)
                        100        6        2.500(In.)
                        100       24        4.000(In.)
Latitude in degrees =  35.13
SAN JOAQUIN VALLEY area of study
Y2 =   0.422, Y100 =   1.035 or Y100 =   1.036
Note: Larger value of Y100 =   1.036 used
Slope used for rainfall intensity curve b =  0.5500

Remaining year storm values:

1 Hour Rainfall -  Year Storm
          0.422          2
          0.574          5
          0.674          10
          0.805          25
          0.924          50
          1.036          100

24 Hour Rainfall -  Year Storm
          1.600          2
          2.193          5
          2.586          10
          3.097          25
          3.562          50
          4.000          100

Note: Computer estimated pipe sizes use 10 year storm flow rates
NOTE: ENGLISH (IN-LB) INPUT DATA UNITS USED
NOTE: ENGLISH (IN-LB) OUTPUT DATA UNITS USED


++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
Process from Point        5.000 to Point        6.000
**** INITIAL AREA EVALUATION ****
______________________________________________________________________
COMMERCIAL subarea type
Decimal fraction soil group A = 0.000
Decimal fraction soil group B = 0.000
Decimal fraction soil group C = 1.000
Decimal fraction soil group D = 0.000
SCS curve number for soil AMC II  = 74.00
Pervious (Ap) = 0.100 Loss rate, Fm = 0.049(In/Hr), Fp = 0.486(In/Hr)
Subarea (Ai) = 0.9000; Subarea Yield Fraction(Y) =     0.850
Initial subarea data:
Initial area flow distance =   625.000(Ft.)
Top (of initial area) elevation =  3965.000(Ft.)
Bottom (of initial area) elevation =  3952.000(Ft.)
Difference in elevation =    13.000(Ft.)
```

Slope = 0.02080 s(%)= 2.08
TC = k(0.304)*[(length^3)/(elevation change)]^0.2
Initial area time of concentration = 8.662 min.
Rainfall intensity = 3.004(In/Hr) for a 100 year storm
Minimum Q (Qmin=0.9YIA) = 6.204(CFS)
Subarea runoff = 7.182(CFS)
Total initial stream area = 2.700(Ac.)

******* DATA FOR OTHER YEAR STORMS *******

Year	Area (Ac)	TC (Min)	Intensity (In/Hr)	Fm Avg (In/Hr)	Y Avg (In/Hr)	Qmin (cfs)	Qcalc (cfs)	Qtot (cfs)
5	2.7	8.66	1.66	0.05	0.83	3.4	3.9	3.9
10	2.7	8.66	1.95	0.05	0.84	4.0	4.6	4.6
25	2.7	8.66	2.33	0.05	0.84	4.8	5.6	5.6
50	2.7	8.66	2.68	0.05	0.85	5.5	6.4	6.4

End of computations, total study area = 2.700 (Ac.)

Kern County Rational Hydrology Program

(Hydrology Manual Dated 1992)

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        Rational Hydrology Study        Date: 06/03/09 File: 348NEWSD.out
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Program License Serial Number 6027

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 *********   Hydrology Study Control Information **********

------------------------------------------------------------------------
ENGLISH UNITS USED FOR RAINFALL DATA

Rainfall map data: Year Storm    Hour    Rainfall
                          2        6       1.000(In.)
                          2       24       1.600(In.)
                        100        6       2.500(In.)
                        100       24       4.000(In.)
Latitude in degrees =  35.13
SAN JOAQUIN VALLEY area of study
Y2 =   0.422, Y100 =   1.035 or Y100 =   1.036
Note: Larger value of Y100 =   1.036 used
Slope used for rainfall intensity curve b =  0.5500

Remaining year storm values:

1 Hour Rainfall -  Year Storm
          0.422          2
          0.574          5
          0.674          10
          0.805          25
          0.924          50
          1.036          100

24 Hour Rainfall -  Year Storm
          1.600          2
          2.193          5
          2.586          10
          3.097          25
          3.562          50
          4.000          100

Note: Computer estimated pipe sizes use 10 year storm flow rates
NOTE: ENGLISH (IN-LB) INPUT DATA UNITS USED
NOTE: ENGLISH (IN-LB) OUTPUT DATA UNITS USED


++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
Process from Point        7.000 to Point        8.000
**** INITIAL AREA EVALUATION ****
______________________________________________________________________
COMMERCIAL subarea type
Decimal fraction soil group A = 0.000
Decimal fraction soil group B = 0.000
Decimal fraction soil group C = 1.000
Decimal fraction soil group D = 0.000
SCS curve number for soil AMC II  = 74.00
Pervious (Ap) = 0.100 Loss rate, Fm = 0.049(In/Hr), Fp = 0.486(In/Hr)
Subarea (Ai) = 0.9000; Subarea Yield Fraction(Y) =     0.850
Initial subarea data:
Initial area flow distance =   794.000(Ft.)
Top (of initial area) elevation =  3964.500(Ft.)
Bottom (of initial area) elevation =  3963.300(Ft.)
Difference in elevation =     1.200(Ft.)
```

```
Slope =    0.00151  s(%)=       0.15
TC = k(0.304)*[(length^3)/(elevation change)]^0.2
Initial area time of concentration =   16.104 min.
Rainfall intensity =      2.136(In/Hr) for a 100 year storm
Minimum Q (Qmin=0.9YIA) =   7.025(CFS)
Subarea runoff =      8.078(CFS)
Total initial stream area =        4.300(Ac.)
----------------------------------------------------------------
                 *******  DATA FOR OTHER YEAR STORMS *******
  Year  Area    TC    Intensity  Fm Avg  Y Avg   Qmin  Qcalc Qtot
        (Ac)   (Min)  (In/Hr)   (In/Hr) (In/Hr) (cfs) (cfs) (cfs)
   5    4.3   16.10     1.18      0.05    0.83     3.8   4.4   4.4
  10    4.3   16.10     1.39      0.05    0.84     4.5   5.2   5.2
  25    4.3   16.10     1.66      0.05    0.84     5.4   6.2   6.2
  50    4.3   16.10     1.90      0.05    0.85     6.2   7.2   7.2
----------------------------------------------------------------


++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
Process from Point        8.000 to Point        9.000
**** IRREGULAR CHANNEL FLOW TRAVEL TIME ****
____________________________________________________________________
Estimated mean flow rate at midpoint of channel =      9.872(CFS)
Depth of flow =   0.402(Ft.), Average velocity =   7.655(Ft/s)
!!Warning: Water is above left or right bank elevations
        ******* Irregular Channel Data ***********
----------------------------------------------------------------
Information entered for subchannel number 1 :
Point number      'X' coordinate     'Y' coordinate
        1              0.00              0.16
        2              2.00              0.00
        3              4.00              0.16
Manning's 'N' friction factor =   0.015
----------------------------------------------------------------
Sub-Channel flow  =      9.872(CFS)
  '       '         flow top width =      4.000(Ft.)
  '       '     velocity=    7.655(Ft/s)
  '       '         area =      1.290(Sq.Ft)
  '       '         Froude number =     2.376

Upstream point elevation = 3963.300(Ft.)
Downstream point elevation = 3949.900(Ft.)
Flow length = 494.000(Ft.)  Slope = 0.0271 Ft/Ft
Travel time  =    1.08 min.
Time of concentration =   17.18 min.
Depth of flow =   0.402(Ft.)
Average velocity =   7.655(Ft/s)
Total irregular channel flow =     9.872(CFS)
Irregular channel normal depth above invert elev. =   0.402(Ft.)
Average velocity of channel(s) =   7.655(Ft/s)
!!Warning: Water is above left or right bank elevations

Sub-Channel No. 1 Critical depth =      0.656(Ft.)
  '       '       '     Critical flow top width =      4.000(Ft.)
  '       '       '     Critical flow velocity=    4.283(Ft/s)
  '       '       '     Critical flow area =      2.305(Sq.Ft)

 Adding area flow to channel
COMMERCIAL subarea type
Decimal fraction soil group A = 0.000
Decimal fraction soil group B = 0.000
Decimal fraction soil group C = 1.000
Decimal fraction soil group D = 0.000
SCS curve number for soil AMC II  = 74.00
Pervious (Ap) = 0.100 Loss rate, Fm = 0.049(In/Hr), Fp = 0.486(In/Hr)
Subarea (Ai) = 0.9000; Subarea Yield Fraction(Y) =     0.850
Area Averaged (Ai) = 0.9000; Average Yield Fraction(Y) =     0.850
Area averaged Fm = 0.049(In/Hr), Area Averaged Fp = 0.486(In/Hr)
Minimum Q (Qmin=0.9YIA) =   9.791(CFS)
Rainfall intensity =      2.061(In/Hr) for a 100 year storm
```

```
Subarea runoff =       3.171(CFS) for    1.910(Ac.)
Total runoff =      11.249(CFS)  Total area =        6.21(Ac.)
----------------------------------------------------------------
                 *******  DATA FOR OTHER YEAR STORMS *******
  Year  Area    TC    Intensity  Fm Avg  Y Avg   Qmin  Qcalc Qtot
        (Ac)    (Min)  (In/Hr)   (In/Hr) (In/Hr) (cfs) (cfs) (cfs)
   5    6.2   20.62     1.03      0.05    0.83     4.8   5.5   5.5
  10    6.2   19.58     1.25      0.05    0.84     5.8   6.7   6.7
  25    6.2   18.38     1.54      0.05    0.84     7.3   8.4   8.4
  50    6.2   17.69     1.81      0.05    0.85     8.6   9.8   9.8
----------------------------------------------------------------
----------------------------------------------------------------
       ******  OTHER STORM YEAR DEPTHS AT END OF CHANNEL  ******
** 5 year storm **
Depth of flow =   0.290(Ft.), Average velocity =   5.750(Ft/s)
!!Warning: Water is above left or right bank elevations
** 10 year storm **
Depth of flow =   0.316(Ft.), Average velocity =   6.223(Ft/s)
!!Warning: Water is above left or right bank elevations
** 25 year storm **
Depth of flow =   0.350(Ft.), Average velocity =   6.795(Ft/s)
!!Warning: Water is above left or right bank elevations
** 50 year storm **
Depth of flow =   0.377(Ft.), Average velocity =   7.255(Ft/s)
!!Warning: Water is above left or right bank elevations
----------------------------------------------------------------
End of computations, total study area =          6.210 (Ac.)
```

Kern County Rational Hydrology Program

(Hydrology Manual Dated 1992)

```
  CIVILCADD/CIVILDESIGN  Engineering Software, (c) 2006   Version 7.2
        Rational Hydrology Study        Date: 06/03/09 File: 348NEWSD2.out
------------------------------------------------------------------------


Program License Serial Number 6027

------------------------------------------------------------------------
 *********   Hydrology Study Control Information **********

------------------------------------------------------------------------
ENGLISH UNITS USED FOR RAINFALL DATA


Rainfall map data: Year Storm    Hour    Rainfall
                          2        6       1.000(In.)
                          2       24       1.600(In.)
                        100        6       2.500(In.)
                        100       24       4.000(In.)
Latitude in degrees =  35.13
SAN JOAQUIN VALLEY area of study
Y2 =   0.422, Y100 =   1.035 or Y100 =   1.036
Note: Larger value of Y100 =   1.036 used
Slope used for rainfall intensity curve b =  0.5500

Remaining year storm values:

1 Hour Rainfall -  Year Storm
          0.422          2
          0.574          5
          0.674          10
          0.805          25
          0.924          50
          1.036          100

24 Hour Rainfall -  Year Storm
          1.600          2
          2.193          5
          2.586          10
          3.097          25
          3.562          50
          4.000          100

Note: Computer estimated pipe sizes use 10 year storm flow rates
NOTE: ENGLISH (IN-LB) INPUT DATA UNITS USED
NOTE: ENGLISH (IN-LB) OUTPUT DATA UNITS USED


++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
Process from Point       10.000 to Point       11.000
**** INITIAL AREA EVALUATION ****
______________________________________________________________________
COMMERCIAL subarea type
Decimal fraction soil group A = 0.000
Decimal fraction soil group B = 0.000
Decimal fraction soil group C = 1.000
Decimal fraction soil group D = 0.000
SCS curve number for soil AMC II  = 74.00
Pervious (Ap) = 0.100 Loss rate, Fm = 0.049(In/Hr), Fp = 0.486(In/Hr)
Subarea (Ai) = 0.9000; Subarea Yield Fraction(Y) =     0.850
Initial subarea data:
Initial area flow distance =   493.000(Ft.)
Top (of initial area) elevation =  3964.400(Ft.)
Bottom (of initial area) elevation =  3953.900(Ft.)
Difference in elevation =    10.500(Ft.)
```

Slope = 0.02130 s(%)= 2.13
TC = k(0.304)*[(length^3)/(elevation change)]^0.2
Initial area time of concentration = 7.841 min.
Rainfall intensity = 3.173(In/Hr) for a 100 year storm
Minimum Q (Qmin=0.9YIA) = 4.466(CFS)
Subarea runoff = 5.174(CFS)
Total initial stream area = 1.840(Ac.)

******* DATA FOR OTHER YEAR STORMS *******

Year	Area (Ac)	TC (Min)	Intensity (In/Hr)	Fm Avg (In/Hr)	Y Avg (In/Hr)	Qmin (cfs)	Qcalc (cfs)	Qtot (cfs)
5	1.8	7.84	1.76	0.05	0.83	2.4	2.8	2.8
10	1.8	7.84	2.06	0.05	0.84	2.9	3.3	3.3
25	1.8	7.84	2.47	0.05	0.84	3.4	4.0	4.0
50	1.8	7.84	2.83	0.05	0.85	4.0	4.6	4.6

End of computations, total study area = 1.840 (Ac.)

Kern County Rational Hydrology Program

(Hydrology Manual Dated 1992)

```
  CIVILCADD/CIVILDESIGN  Engineering Software, (c) 2006   Version 7.2
        Rational Hydrology Study        Date: 06/03/09 File: 348NEWSD3.out
---------------------------------------------------------------------------


Program License Serial Number 6027

---------------------------------------------------------------------------
 *********   Hydrology Study Control Information **********

---------------------------------------------------------------------------
ENGLISH UNITS USED FOR RAINFALL DATA


Rainfall map data: Year Storm    Hour    Rainfall
                          2        6        1.000(In.)
                          2       24        1.600(In.)
                        100        6        2.500(In.)
                        100       24        4.000(In.)
Latitude in degrees =  35.13
SAN JOAQUIN VALLEY area of study
Y2 =   0.422, Y100 =   1.035 or Y100 =   1.036
Note: Larger value of Y100 =   1.036 used
Slope used for rainfall intensity curve b =  0.5500

Remaining year storm values:

1 Hour Rainfall -  Year Storm
          0.422          2
          0.574          5
          0.674          10
          0.805          25
          0.924          50
          1.036          100

24 Hour Rainfall -  Year Storm
          1.600          2
          2.193          5
          2.586          10
          3.097          25
          3.562          50
          4.000          100

Note: Computer estimated pipe sizes use 10 year storm flow rates
NOTE: ENGLISH (IN-LB) INPUT DATA UNITS USED
NOTE: ENGLISH (IN-LB) OUTPUT DATA UNITS USED


++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
Process from Point       12.000 to Point       13.000
**** INITIAL AREA EVALUATION ****
______________________________________________________________________
COMMERCIAL subarea type
Decimal fraction soil group A = 0.000
Decimal fraction soil group B = 0.000
Decimal fraction soil group C = 1.000
Decimal fraction soil group D = 0.000
SCS curve number for soil AMC II  = 74.00
Pervious (Ap) = 0.100 Loss rate, Fm = 0.049(In/Hr), Fp = 0.486(In/Hr)
Subarea (Ai) = 0.9000; Subarea Yield Fraction(Y) =     0.850
Initial subarea data:
Initial area flow distance =   652.000(Ft.)
Top (of initial area) elevation =  3962.880(Ft.)
Bottom (of initial area) elevation =  3934.350(Ft.)
Difference in elevation =    28.530(Ft.)
```

Slope = 0.04376 s(%)= 4.38
TC = k(0.304)*[(length^3)/(elevation change)]^0.2
Initial area time of concentration = 7.592 min.
Rainfall intensity = 3.230(In/Hr) for a 100 year storm
Minimum Q (Qmin=0.9YIA) = 9.882(CFS)
Subarea runoff = 11.452(CFS)
Total initial stream area = 4.000(Ac.)

******* DATA FOR OTHER YEAR STORMS *******

Year	Area (Ac)	TC (Min)	Intensity (In/Hr)	Fm Avg (In/Hr)	Y Avg (In/Hr)	Qmin (cfs)	Qcalc (cfs)	Qtot (cfs)
5	4.0	7.59	1.79	0.05	0.83	5.3	6.3	6.3
10	4.0	7.59	2.10	0.05	0.84	6.3	7.4	7.4
25	4.0	7.59	2.51	0.05	0.84	7.6	8.9	8.9
50	4.0	7.59	2.88	0.05	0.85	8.8	10.2	10.2

End of computations, total study area = 4.000 (Ac.)

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JOB 348-01
SHEET NO. ____ OF ____
CALCULATED BY ____ DATE 4/22/09
CHECKED BY ____ DATE ____
SCALE ____

Walmart - Tehachapi

Area 4

flow @ Subarea 4(3) and pipe

pipe flow $Q_1 = 8.1$ cfs $t_1 = 19.6$ min

subarea 4(3) $Q_2 = 4$ cfs $t_2 = 7.84$

$t_1 = t_c$ (area 4(1) & 4(2)) + t (pipe)

from AutoCAD Manning Output $V_{pipe} = 5.7$ ft/sec
$L = 139$ ft
$\therefore t = 0.41$ min

t_c (area 4(1) & 4(2)) = 19.17 → Civil Design Output

$$Q_{max} = \left(\frac{T_1 + T_2}{2T_1}\right) Q_2 + Q_1$$

$$= 15.23 \text{ cfs}$$

PIPES OUTPUT

Manning Pipe Calculator

Given Input Data:

Shape ..... Circular
Solving for ..... Depth of Flow
Diameter ..... 18.0000 in
Flowrate ..... 6.7000 cfs
Slope ..... 0.0170 ft/ft
Manning's n 0.0130

Computed Results:

Depth ..... 8.8852 in
Area 1.7671 ft2
Wetted Area 0.8692 ft2
Wetted Perimeter ..... 28.0448 in
Perimeter ..... 56.5487 in
Velocity ..... 7.7080 fps
Hydraulic Radius ..... 4.4632 in
Percent Full ..... 49.3624 %
Full flow Flowrate ..... 13.6960 cfs
Full flow velocity ..... 7.7503 fps

Manning Pipe Calculator

Given Input Data:

Shape ..... Circular
Solving for ..... Depth of Flow
Diameter ..... 18.0000 in
Flowrate ..... 8.9800 cfs
Slope ..... 0.0290 ft/ft
Manning's n 0.0130

Computed Results:

Depth ..... 9.0213 in
Area 1.7671 ft2
Wetted Area 0.8862 ft2
Wetted Perimeter ..... 28.3169 in
Perimeter ..... 56.5487 in
Velocity ..... 10.1328 fps
Hydraulic Radius ..... 4.5068 in
Percent Full ..... 50.1181 %
Full flow Flowrate ..... 17.8882 cfs
Full flow velocity ..... 10.1227 fps

Manning Pipe Calculator

Given Input Data:

Shape ..... Circular
Solving for ..... Depth of Flow
Diameter ..... 24.0000 in
Flowrate ..... 13.0200 cfs
Slope ..... 0.0050 ft/ft
Manning's n 0.0130

Computed Results:

Depth ..... 16.4462 in
Area 3.1416 ft2
Wetted Area 2.2945 ft2
Wetted Perimeter ..... 46.8086 in
Perimeter ..... 75.3982 in
Velocity ..... 5.6744 fps
Hydraulic Radius ..... 7.0587 in
Percent Full ..... 68.5256 %
Full flow Flowrate ..... 15.9965 cfs
Full flow velocity ..... 5.0918 fps

Manning Pipe Calculator

Given Input Data:

Shape ..... Circular
Solving for ..... Depth of Flow
Diameter ..... 18.0000 in
Flowrate ..... 6.0000 cfs
Slope ..... 0.0080 ft/ft
Manning's n 0.0130

Computed Results:

Depth ..... 10.4520 in
Area 1.7671 ft2
Wetted Area 1.0643 ft2
Wetted Perimeter ..... 31.1911 in
Perimeter ..... 56.5487 in
Velocity ..... 5.6376 fps
Hydraulic Radius ..... 4.9135 in
Percent Full ..... 58.0668 %
Full flow Flowrate ..... 9.3954 cfs
Full flow velocity ..... 5.3167 fps

CALCULATIONS

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SHEET NO. 1 OF 76
CALCULATED BY HZ DATE 6/3/09
CHECKED BY DATE
SCALE

Time/Flow Pipes

Pipe 1 (@ P.O.C 9)

From Civil Design Output - Rational Method

$Q = 6.7$ cfs (Area 4 & 5 exhibit)

Slope : 1.6%

Dia : 18 inch

Length : 134 ft

From AutoCAD - Manning Calculator

Velocity = 7.71 ft/s

$\Rightarrow t_{pipe\,1} = \frac{134}{7.71} \approx 0.29$ minutes

Pipe 2: (@ P.O.C 11)

Flow into pipe 2 $Q = I \Sigma CA$

A = area 4, 5 & 6 (exhibit map) = 8.05 acre

C = 0.9

$\Sigma CA = 7.25$

I @ t (max of $t_{pipe\,1} + t_{P.O.C\,9}$) and ($t_{Area\,6\ P.O.C\,11}$)

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SCALE

$t_{P.O.C\ (9)} = 19.58$ min
$t_{pipe_1} = 0.29$ min
$\Big\} \; t = 19.87$ min

$t_{P.O.C\ (11)} = 7.84$ min

$\therefore I \text{ @ } t = 19.87 = 1.24$ in/hr

$Q_{pipe\ 2} = 1.24 \times 7.25 = 8.98$ cfs

Pipe 2 $\longrightarrow$ dia = 18"
Length = 509'
Slope = 24 %

Velocity = 10.13 (AutoCAD Manning Calculator)

$t_{pipe\ 2} = \dfrac{\text{length}}{\text{velocity}} = \dfrac{509}{10.13} = 0.84$ minutes

Pipe 3

Flow @ P.O.C. (14)

$Q = 7.4 \quad t_c = 7.59$ (Civil Design Output for Area 7)

Flow into pipe $Q = I \Sigma CA$

I @ t [max of ($t_{pipe\ 2} + t_{Area\ (4+5+6)}$) and ($t_c$ of area 7)

t = max of (20.71) and (7.59)
$= 20.71$

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SHEET NO. 3 OF 7
CALCULATED BY DATE 6/3/09
CHECKED BY DATE
SCALE

@ t = 20.71

I = 1.2 in/hr

Q = 1.2 (8.05 + 4) x 0.9

= 13.02 cfs

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Pipe 4 :

Length = 265'

Dia = 18"

slope = 0.8 %

Q = 6 cfs (Area 2 - Civil Design Output)

From AutoCAD - Manning Calculator Velocity = 5.64 ft/s

$t_{pipe\,4}$ = 0.78 minute

Flow into CDS #2 (@ P.O.C. 6)

$Q = I \Sigma CA$ A = Area 2 + Area 3

$\Sigma CA = (3.75 + 2.7)\,0.9 = 5.81$

From Civil Design Output Area 3

Q = 4.6 cfs & t_c = 8.66 for 10 yr storm

I @ max of ($t_{pipe\,4} + t_{Area\,2}$) and ($t_{area\,3}$)

@ max of (0.78 + 9.94) and (8.66)

I @ 10.72 minutes

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SHEET NO. 5 OF 7
CALCULATED BY DATE 6/3/09
CHECKED BY DATE
SCALE

$\Rightarrow I_{10.72} = 1.74$

$Q = 1.74 \times 5.81$

$= 10.11$ cfs (into CDS # 2)

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CALCULATED BY HZ DATE 6/4/09
CHECKED BY DATE
SCALE

Area 10 (Flow into Inlet E 13)

A = 0.44

t_c = 6.5 minutes (L = 325' ✓ Fig D-1 KCHM)

I = 2.05 in/hr

Q = C I A

Q = 0.9 X 2.05 X 0.44

= 0.81 cfs

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SHEET NO. 7 OF 7
CALCULATED BY HZ DATE 6/4/09
CHECKED BY DATE
SCALE

Offsite Area 8, 9 & 10 Flows

Area 8 (Flow into Inlet E 11)

$Q = CIA$ (Rational Method)

$A = 0.48$

$C = 0.9$ (street)

$t_c = 7$ minutes from Fig D-1 of the Kern County Hydrology Manual with $L = 325'$

$I = 1.96$ in/hr (Fig D-4 KCHM)

$Q = 0.9 \times 1.96 \times 0.48$

$= 0.84$ cfs

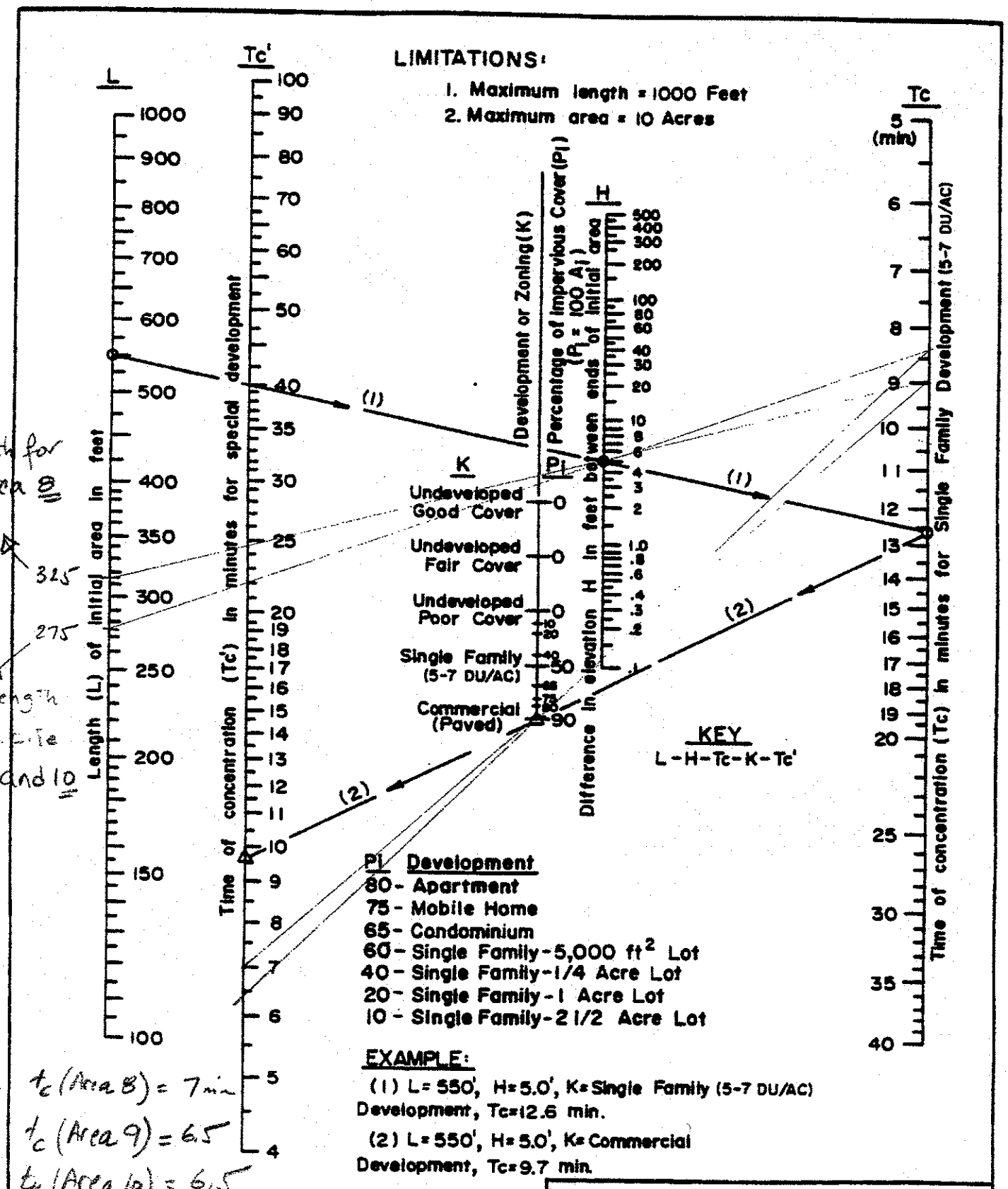
Area 9 (Flow into Inlet E 12)

$A = 0.51$

$t_c = 6.5$ ($L = 275'$) Fig D-1 KCHM

$I = 2.05$ (Fig D-4 KCHM)

$Q = 0.94$ cfs



KERN COUNTY

HYDROLOGY MANUAL

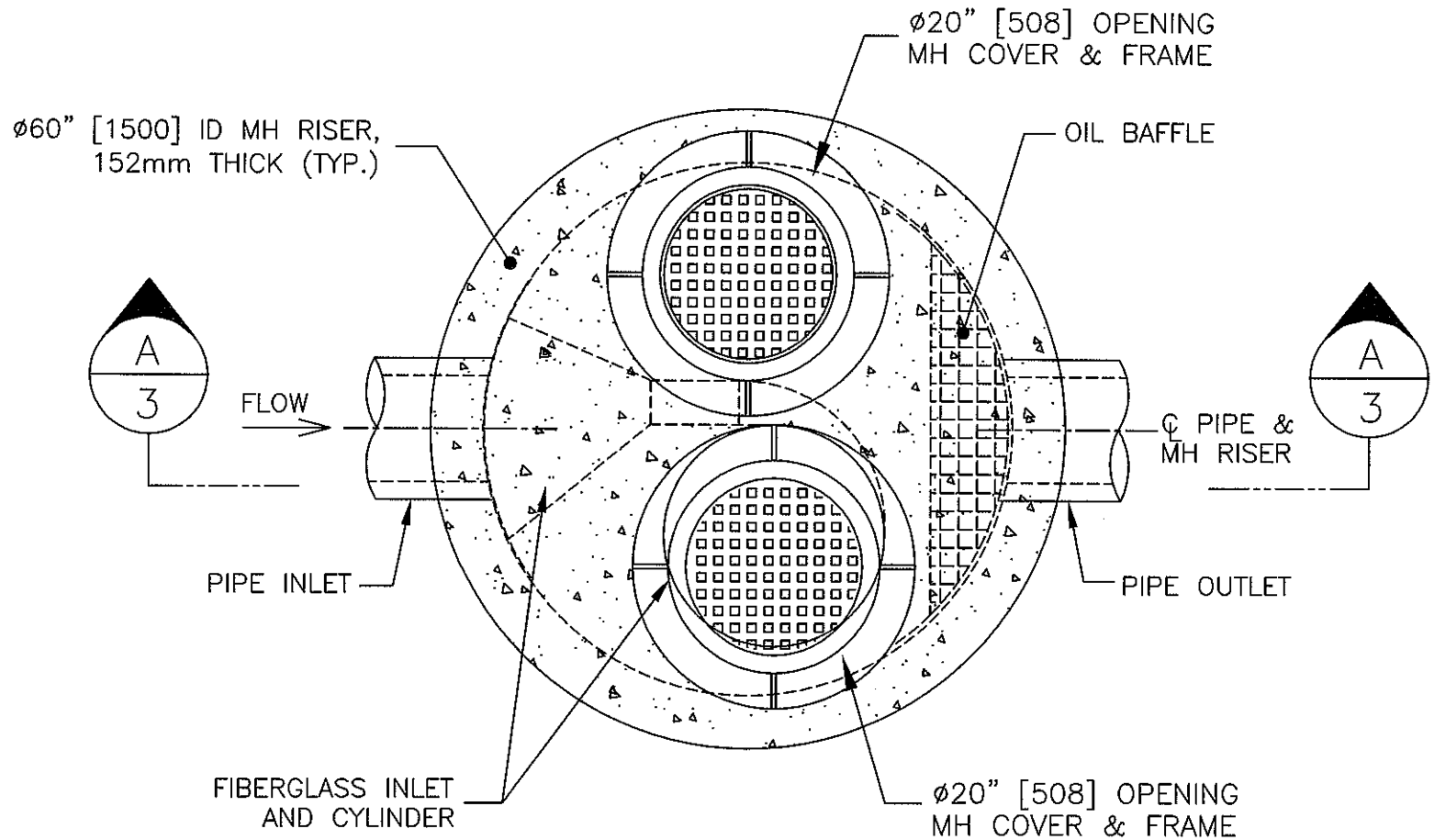
TIME OF CONCENTRATION NOMOGRAPH FOR INITIAL SUBAREA

Figure D-1

CDS STANDARD DETAILS

PLAN VIEW

TYPICAL / GENERIC INSTALLATION



NOTE:
THE INTERNAL COMPONENTS ARE SHOWN IN THE RIGHT–HAND CONFIGURATION–THESE COMPONENTS MAY BE FURNISHED IN THE MIRROR IMAGE TO THAT SHOWN (LEFT–HAND CONFIGURATION).

CDS MODEL PMSU20_20
STORM WATER TREATMENT UNIT

CDS TECHNOLOGIES™

PROJECT NAME

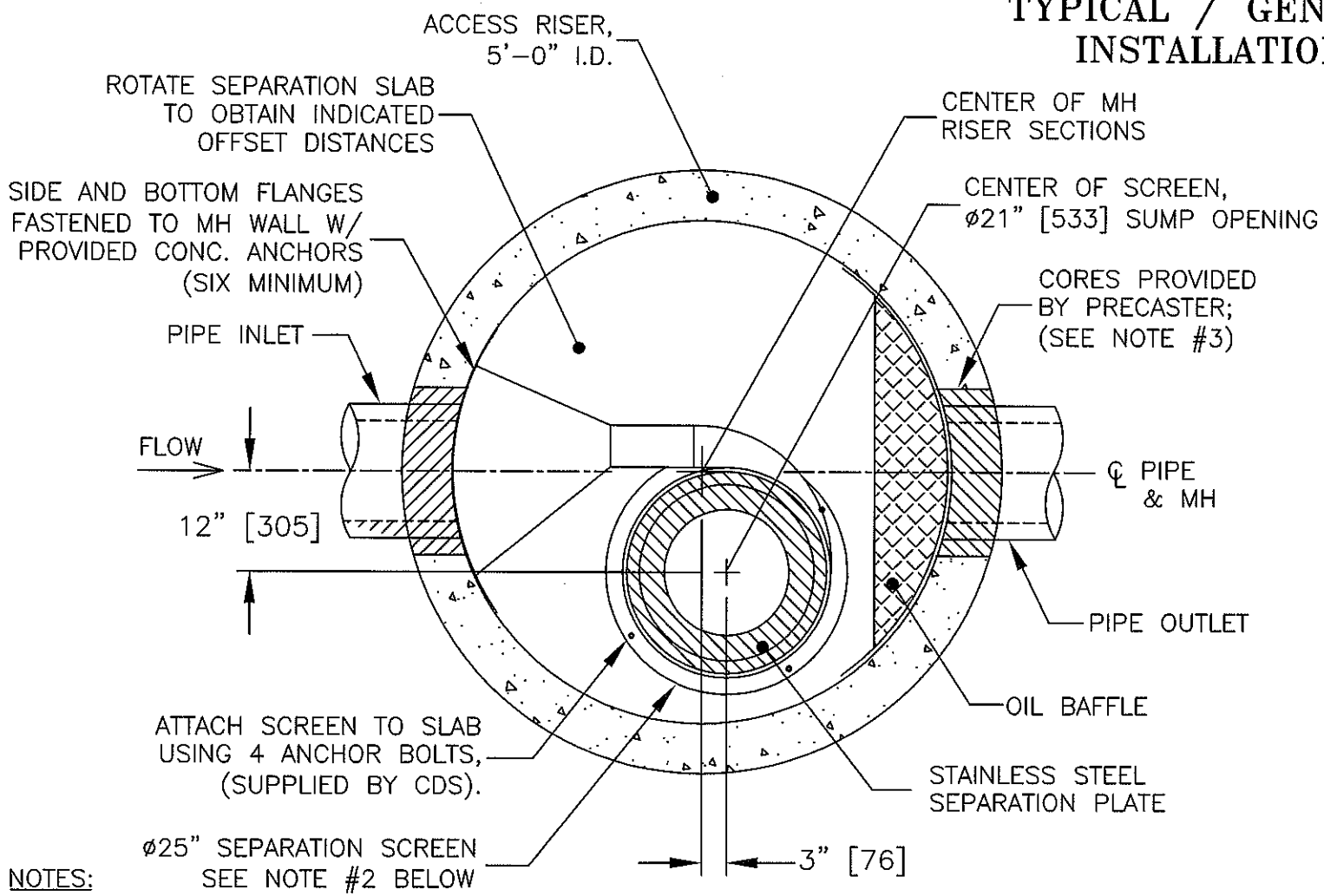
JOB#
DATE:
DRAWN:
APPROV.

SCALE 1:20
SHEET 1

16360 S. MONTEREY RD. SUITE 250 MORGAN HILL, CA. 95037 TEL: (888) 535-7559

SECTION B–B

TYPICAL / GENERIC INSTALLATION



NOTES:

1. THE INTERNAL COMPONENTS ARE SHOWN IN THE RIGHT–HAND CONFIGURATION.
2. FOR PROPER INSTALLATION, GREEN FLANGE ON SCREEN FACES UP, RED FLANGE FACES DOWN FASTENING TO SEPARATION SLAB.
3. OVERSIZED CORES ARE PROVIDED TO ACCOUNT FOR DIFFERENT PIPEWALL THICKNESSES–ENSURE SUFFICIENT EXCAVATION DEPTH TO ATTAIN (EXTERNAL) SUMP INVERT ELEVATION (SEE SHEET 3).

CDS MODEL PMSU20_20 STORM WATER TREATMENT UNIT

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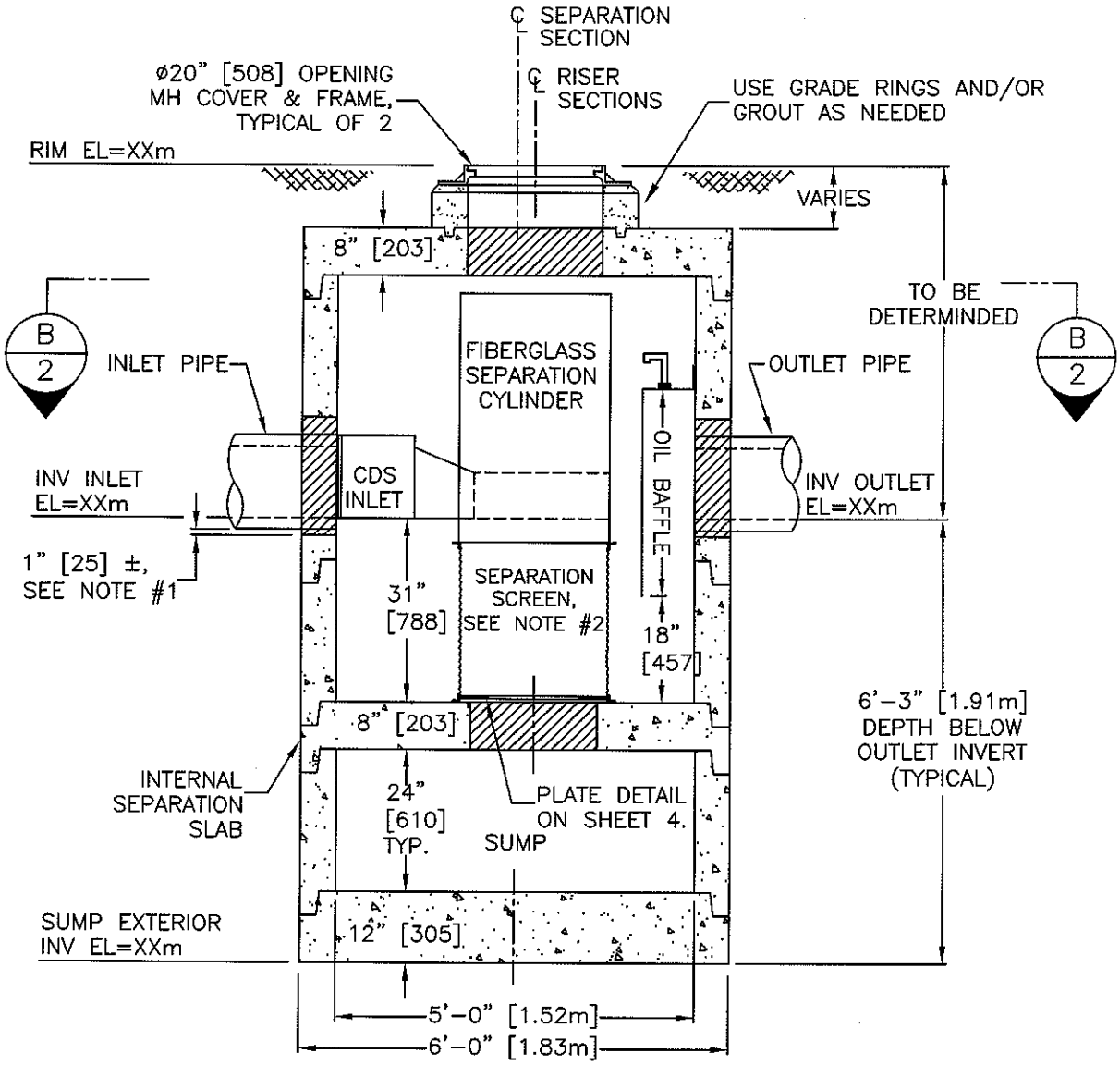
PROJECT NAME

JOB#
DATE:
DRAWN:
APPROV.

SCALE 1:20
SHEET 2

SECTION A–A
ELEVATION VIEW

TYPICAL / GENERIC INSTALLATION



NOTES:

1. OVERSIZED CORES ARE PROVIDED TO ACCOUNT FOR DIFFERENT PIPEWALL THICKNESSES–ENSURE SUFFICIENT EXCAVATION DEPTH TO ATTAIN INDICATED (EXTERNAL) SUMP INVERT ELEVATION.
2. FOR PROPER INSTALLATION, GREEN FLANGE ON SCREEN FACES UP AND FASTENS TO FIBERGLASS CYLINDER FLANGE; RED FLANGE FASTENS TO SEPARATION SLAB WITH PROVIDED ANCHOR BOLTS.

CDS MODEL PMSU20_20 STORM WATER TREATMENT UNIT

CDS TECHNOLOGIES™	PROJECT NAME	JOB#	SCALE 1:30
		DATE:	SHEET 3
		DRAWN:	
		APPROV.	

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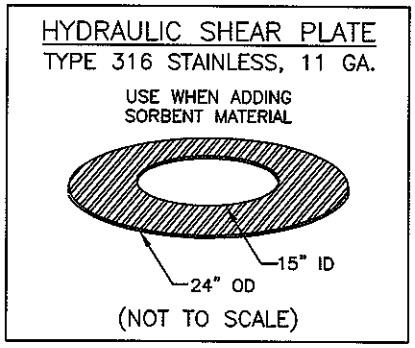
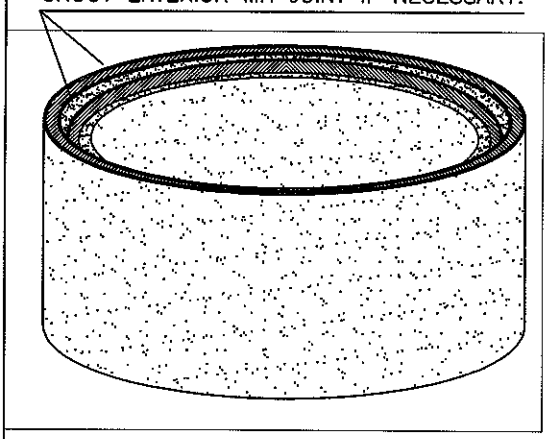
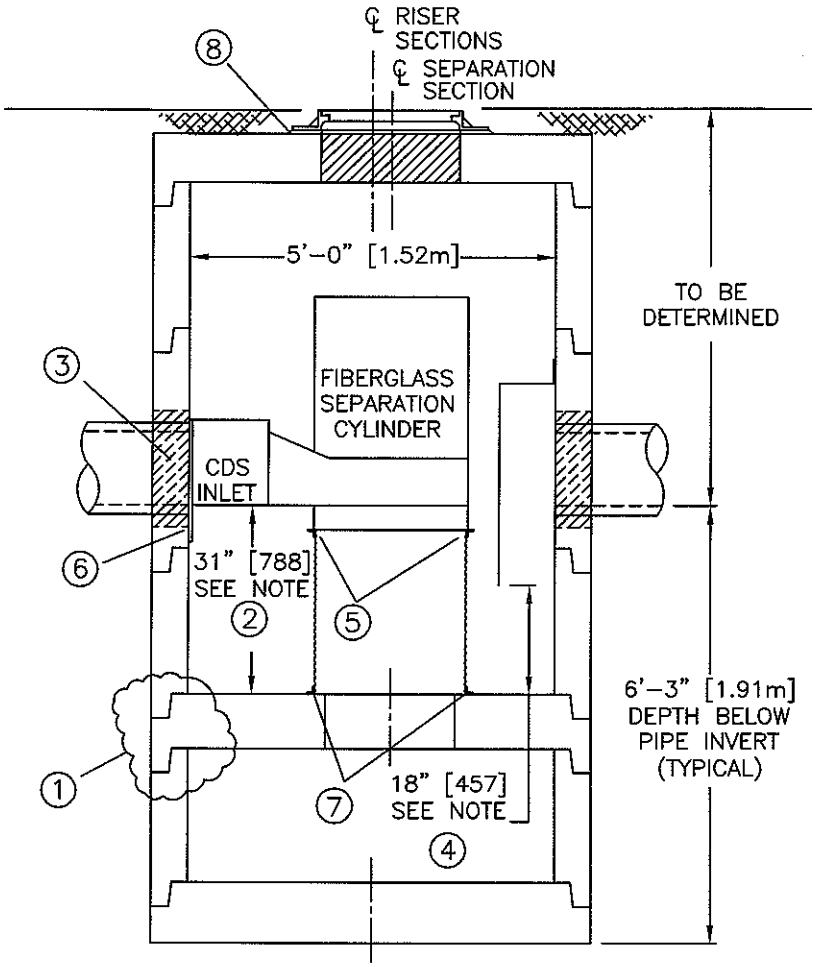


PLACE 2x CONTINUOUS BANDS OF MASTIC ROPE ON VERTICAL AND HORIZONTAL SURFACES OF SUMP (MH BASE) T&G JOINT; GROUT EXTERIOR MH JOINT IF NECESSARY.





CONSTRUCTION NOTES:

1. APPLY BUTYL MASTIC AND/OR GROUT TO SEAL JOINTS OF MANHOLE STRUCTURE; APPLY LOAD TO MASTIC SEAL IN JOINTS OF MH SECTIONS TO COMPRESS SEALANT IF NECESSARY–UNIT MUST BE WATER TIGHT, HOLDING WATER UP TO FLOWLINE INVERT (MINIMUM).
2. IF SEPARATION SLAB IS NON–INTEGRAL TO THE SEPARATION SECTION OF THE UNIT, SET AND VERIFY TOP ELEVATION BEFORE PLACING MORE PRECAST COMPONENTS OR BACKFILLING; ENSURE 31" [788mm] FROM TOP OF SEPARATION SLAB TO PIPE INVERT.
3. SET BOTTOM OF OIL BAFFLE 18" [457mm] ABOVE SEPARATION SLAB FLOOR; DRILL AND INSERT A MINIMUM OF TEN (10) $\frac{3}{8}$" x 3 $\frac{3}{4}$" SS EXPANSION BOLTS @ 304mm O.C. EQUALLY SPACED TO SECURE FIBERGLASS OIL BAFFLE FLANGE TO RISER WALL–(TYPE 316 STAINLESS STEEL HARDWARE PROVIDED BY CDS TECHNOLOGIES).
4. FASTEN FIBERGLASS INLET/CHAMBER TO SCREEN ASSEMBLY USING FOUR (4) SETS OF PROVIDED $\frac{1}{2}$" x 1 $\frac{1}{2}$" 316SS HEX HEAD BOLTS W/ NUTS AND WASHERS – FOR LEFT–HAND CONFIGURED UNITS, THE RED PAINTED FLANGE ON THE SCREEN CYLINDER SHALL FACE UP; IN THE RIGHT–HANDED CONFIGURATION, THE GREEN FLANGE SHALL FACE UP.
5. CENTER SCREEN ASSEMBLY OVER SUMP OPENING AND POSITION FIBERGLASS INLET AGAINST RISER WALL; DRILL AND INSERT A MINIMUM OF SIX (6) $\frac{3}{8}$" x 3 $\frac{3}{4}$" SS EXPANSION BOLTS EQUALLY SPACED TO SECURE FIBERGLASS INLET FLANGE TO RISER WALL–(HARDWARE SUPPLIED BY CDS TECHNOLOGIES).
6. VERIFY THAT SCREEN ASSEMBLY IS CENTERED OVER SUMP ACCESS HOLE AND ADJUST IF NECESSARY; FASTEN SCREEN TO SEPARATION SLAB USING FOUR (4) $\frac{3}{8}$" x 3 $\frac{3}{4}$" SS EXPANSION BOLTS–(HARDWARE SUPPLIED BY CDS TECHNOLOGIES).
7. GROUT PIPE CONNECTIONS TO SEAL JOINT.
8. GRADE RINGS AND/OR GROUT TO MATCH FINISHED GRADE AS NEEDED.

CDS™ TECHNOLOGIES	PMSU20_20 CONSTRUCTION NOTES	JOB#	SCALE N.T.S.
		DATE:	SHEET 4
		DRAWN:	
		APPROV.	

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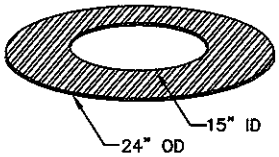
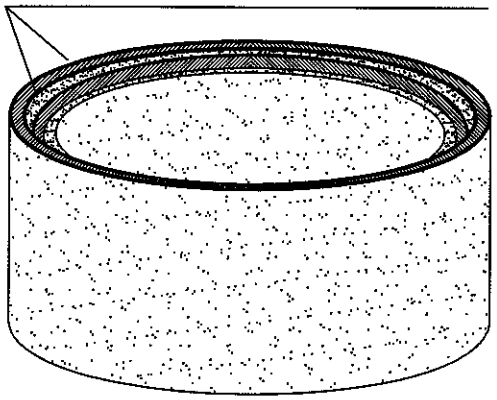
HYDRAULIC SHEAR PLATE
TYPE 316 STAINLESS, 11 GA.

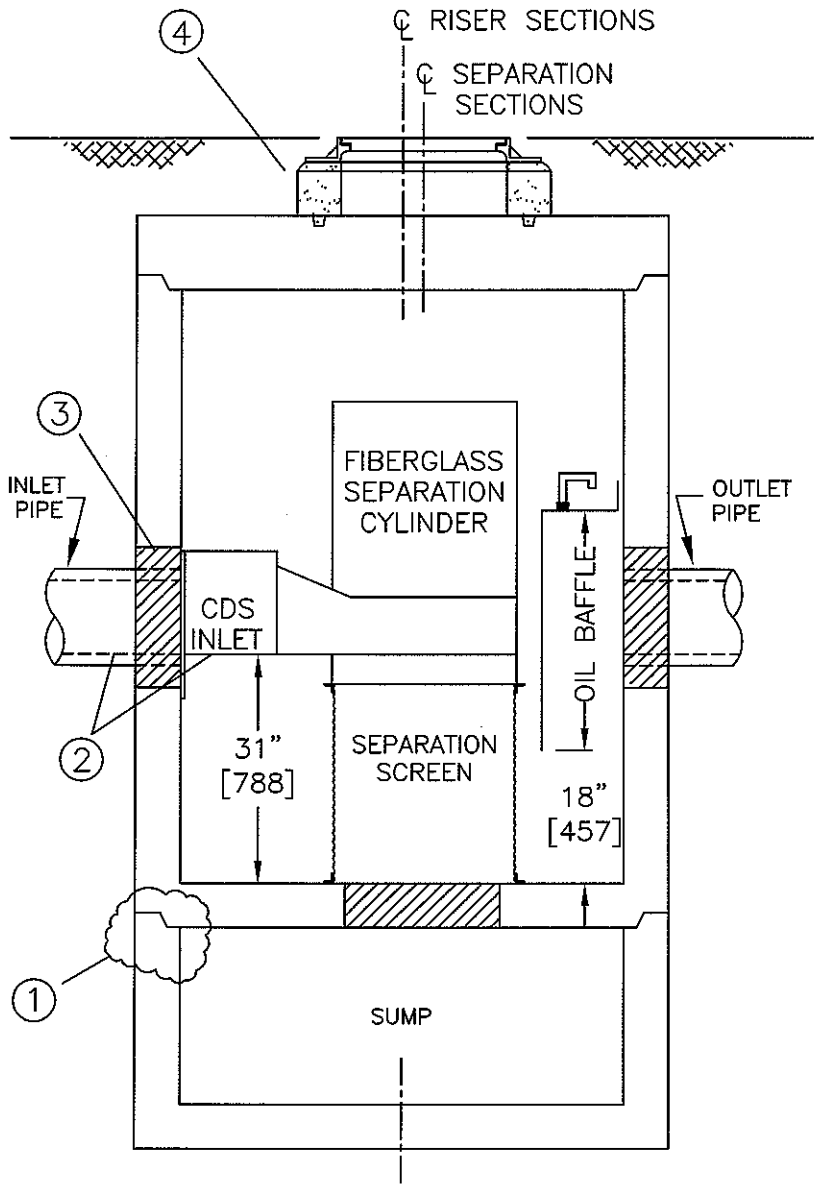
USE WHEN ADDING SORBENT MATERIAL



(NOT TO SCALE)

PLACE 2x CONTINUOUS BANDS OF MASTIC ROPE ON VERTICAL AND HORIZONTAL SURFACES OF SUMP (MH BASE) T&G JOINT; GROUT EXTERIOR MH JOINT IF NECESSARY.





CONSTRUCTION NOTES:

1. APPLY BUTYL MASTIC TO SEAL JOINTS OF MANHOLE STRUCTURE (SEE INSET DETAIL DRAWING); APPLY GROUT TO EXTERIOR T&G JOINTS OF MH SECTIONS TO COMPLETELY SEAL IF NECESSARY (UNIT MUST BE WATER TIGHT, HOLDING WATER UP TO FLOWLINE INVERT, MINIMUM).
2. BEFORE PLACING MORE PRECAST COMPONENTS OR BACKFILLING, ENSURE FIBERGLASS INLET AND PIPE INLET INVERTS MATCH ELEVATIONS (CERTAIN JOBS WILL HAVE INLET PIPE HIGHER THAN FIBERGLASS INLET).
3. GROUT PIPE CONNECTIONS TO SEAL JOINT.
4. USE GRADE RINGS, BLOCKS AND/OR GROUT TO ENSURE COVER RIM MATCHES FINISHED GRADE. SEAL AS REQ'D.

GENERAL NOTES:

1. THE CDS UNITS ARRIVES TO THE JOB SITE WITH THE STAINLESS STEEL SCREEN CYLINDER, FIBERGLASS CYLINDER/INLET AND OIL BAFFLE PRE-INSTALLED.
2. INSTALL CDS UNIT PER CDS INSTALLATION SPECIFICATIONS.
3. CONTRACTOR TO BE EQUIPPED TO HANDLE THE HEAVIEST PICK SECTION (APPROX. 5,350 LBS.).

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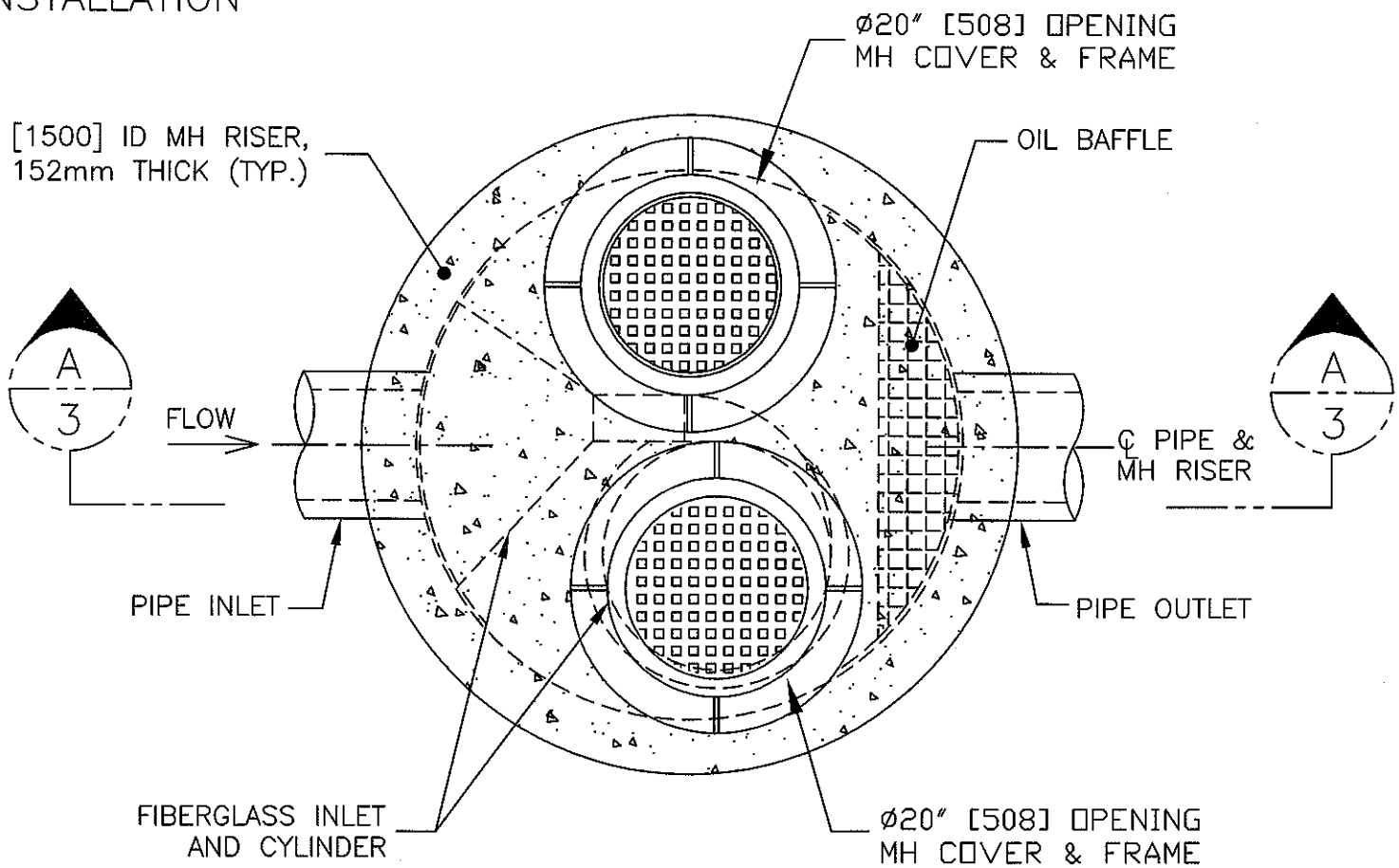
PLAN VIEW

TYPICAL / GENERIC INSTALLATION



NOTE:
THE INTERNAL COMPONENTS ARE SHOWN IN THE RIGHT-HAND CONFIGURATION-THESE COMPONENTS MAY BE FURNISHED IN THE MIRROR IMAGE TO THAT SHOWN (LEFT-HAND CONFIGURATION).

CDS MODEL PMSU20_25
STORM WATER TREATMENT UNIT

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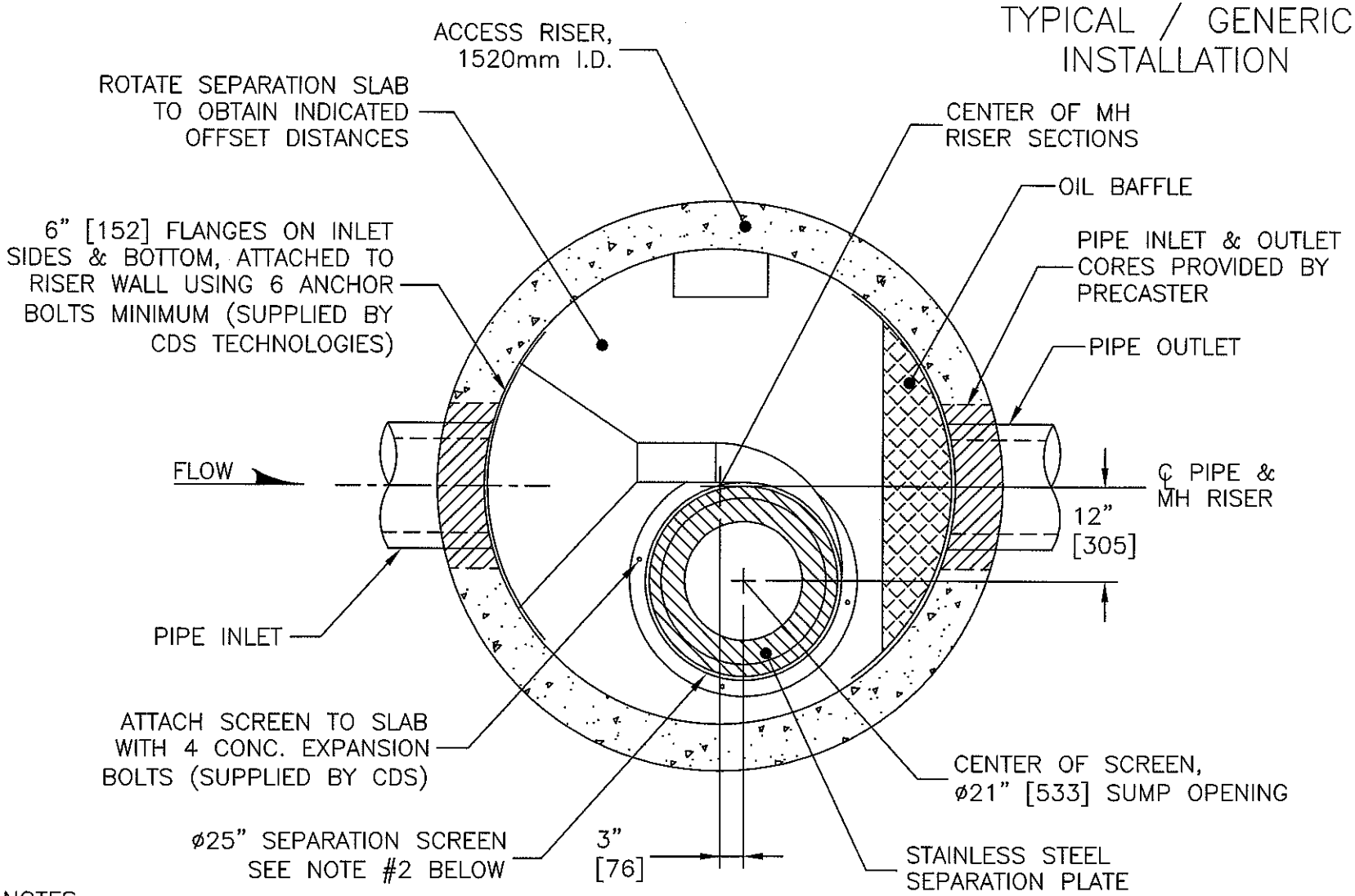
SHEET 1

SECTION B–B

TYPICAL / GENERIC INSTALLATION



NOTES:

1. THE INTERNAL COMPONENTS ARE SHOWN IN THE RIGHT–HAND CONFIGURATION–THESE COMPONENTS MAY BE FURNISHED IN THE MIRROR IMAGE TO THAT SHOWN (LEFT–HAND CONFIGURATION).
2. FOR PROPER INSTALLATION, GREEN FLANGE ON SCREEN FACES UP FOR RIGHT–HAND INSTALLATIONS, RED FLANGE FACES UP FOR LEFT–HAND ORIENTED UNITS.

CDS MODEL PMSU20_25 STORM WATER TREATMENT UNIT

CDS TECHNOLOGIES™

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PROJECT NAME

JOB#

DATE:

DRAWN:

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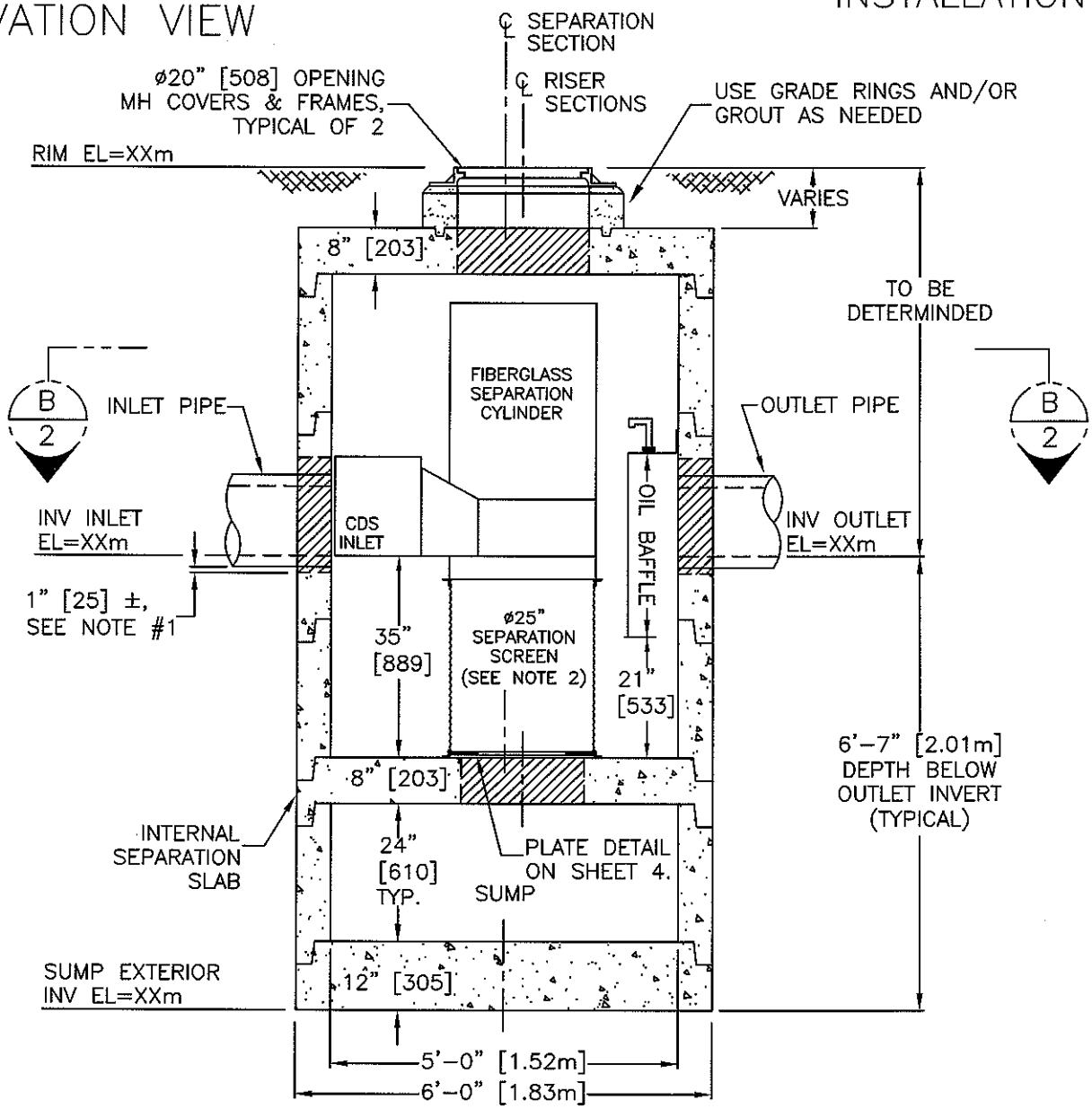
SCALE 1:20

SHEET 2

SECTION A–A
ELEVATION VIEW

TYPICAL / GENERIC INSTALLATION



NOTES:

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2. FOR PROPER INSTALLATION, GREEN FLANGE ON SCREEN FACES UP FOR RIGHT–HAND INSTALLATIONS, RED FLANGE FACES UP FOR LEFT–HAND ORIENTED UNITS.

CDS MODEL PMSU20_25
STORM WATER TREATMENT UNIT

CDS TECHNOLOGIES™	PROJECT NAME	JOB#	SCALE 1:30
		DATE:	SHEET 3
		DRAWN:	
		APPROV.	

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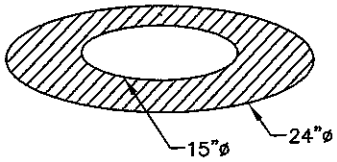
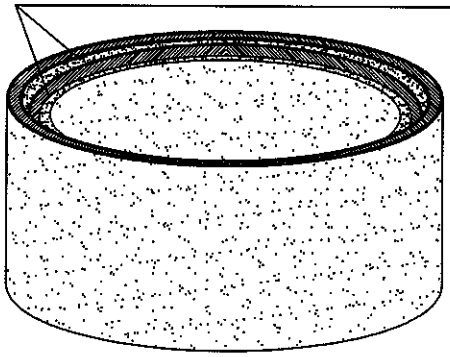
11 GA. STAINLESS STEEL SEPARATION PLATE

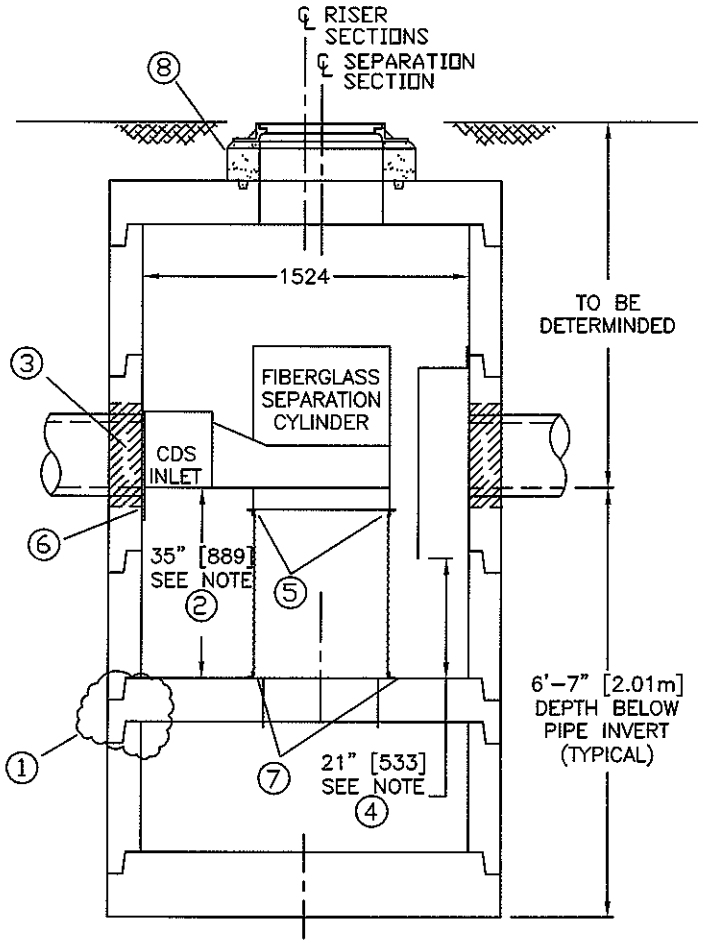
(FOR USE WITH SORBENTS–TYP.)



NOT TO SCALE

PLACE 2x CONTINUOUS BANDS OF MASTIC ROPE ON VERTICAL AND HORIZONTAL SURFACES OF SUMP (MH BASE) T&G JOINT; GROUT EXTERIOR MH JOINT IF NECESSARY.





CONSTRUCTION NOTES:

1. APPLY BUTYL MASTIC AND/OR GROUT TO SEAL JOINTS OF MANHOLE STRUCTURE. APPLY LOAD TO MASTIC SEAL IN JOINTS OF MH SECTIONS TO COMPRESS SEALANT IF NECESSARY. UNIT MUST BE WATER TIGHT, HOLDING WATER UP TO FLOWLINE INVERT (MINIMUM).
2. IF SEPARATION SLAB IS NON–INTEGRAL TO THE SEPARATION SECTION OF THE UNIT, SET AND VERIFY TOP ELEVATION BEFORE PLACING MORE PRECAST COMPONENTS OR BACKFILLING. ENSURE 889mm (35") FROM TOP OF SEPARATION SLAB TO PIPE INVERT.
3. ROTO–HAMMER OR SAW–CUT OPENINGS FOR PIPE INLET AND OUTLET AS NECESSARY; GROUT PIPE CONNECTIONS TO SEAL JOINT.
4. SET BOTTOM OF OIL BAFFLE 533mm (21") ABOVE SEPARATION SLAB FLOOR; DRILL AND INSERT A MINIMUM OF TEN (10) 3/8" x 3 3/4" SS EXPANSION BOLTS @ 304mm O.C. EQUALLY SPACED TO SECURE FIBERGLASS OIL BAFFLE FLANGE TO RISER WALL–(HARDWARE SUPPLIED BY CDS TECHNOLOGIES).
5. FASTEN FIBERGLASS CYLINDER/INLET TO SCREEN ASSEMBLY USING FOUR (4) SETS OF $\frac{1}{2}$" x 1 $\frac{1}{2}$" SS HEX HEAD BOLTS W/ NUTS AND WASHERS–(HARDWARE SUPPLIED BY CDS TECHNOLOGIES). IN THE LEFT–HANDED CONFIGURATION THE "RED" COLORED FLANGE ON THE SCREEN CYLINDER SHALL FACE UP. IN THE RIGHT–HANDED CONFIGURATION, THE "GREEN" COLORED FLANGE SHALL FACE UP.
6. CENTER SCREEN ASSEMBLY OVER SUMP OPENING AND POSITION FIBERGLASS INLET AGAINST RISER WALL; DRILL AND INSERT A MINIMUM OF SIX (6) $\frac{3}{8}$" x 3 3/4" SS EXPANSION BOLTS EQUALLY SPACED TO SECURE FIBERGLASS INLET FLANGE TO RISER WALL–(HARDWARE SUPPLIED BY CDS TECHNOLOGIES).
7. VERIFY THAT SCREEN ASSEMBLY IS CENTERED OVER SUMP ACCESS HOLE AND ADJUST IF NECESSARY; FASTEN SCREEN TO SEPARATION SLAB USING FOUR (4) $\frac{3}{8}$" x 3 3/4" SS EXPANSION BOLTS–(HARDWARE SUPPLIED BY CDS TECHNOLOGIES).
8. BLOCK AND GROUT SEAL TO MATCH GRADE AS REQUIRED.

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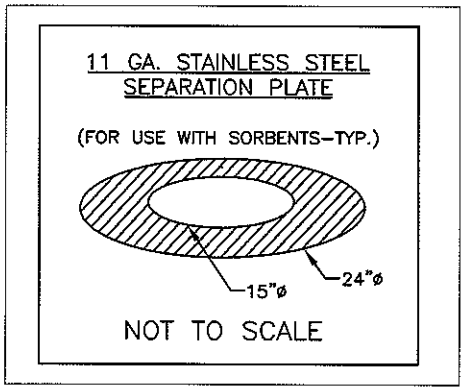

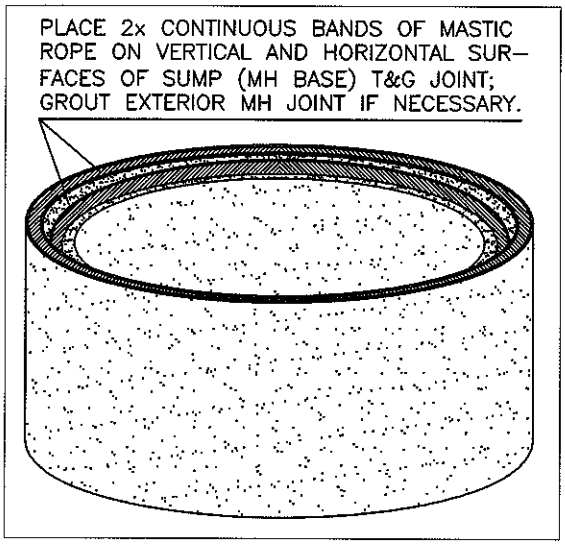

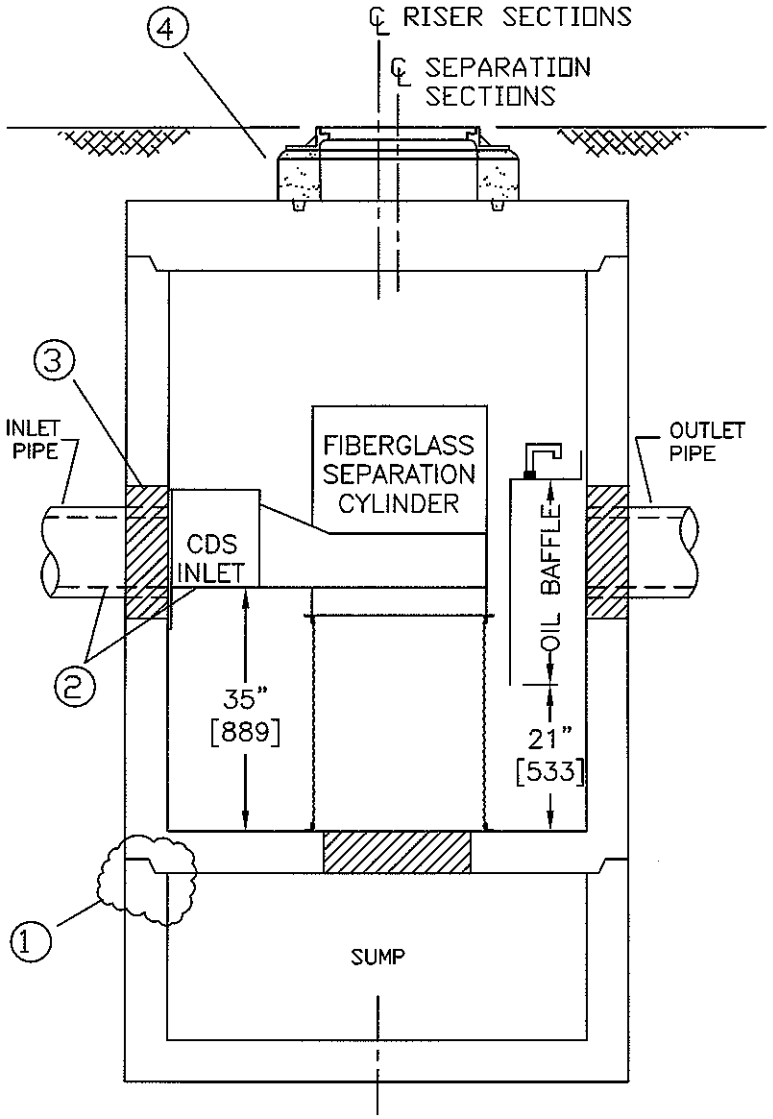

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B. INSTALL CDS UNIT PER CDS INSTALLATION SPECIFICATIONS.
C. CONTRACTOR TO BE EQUIPPED TO HANDLE THE HEAVIEST PICK SECTION (APPROX. 5,350 LBS.).

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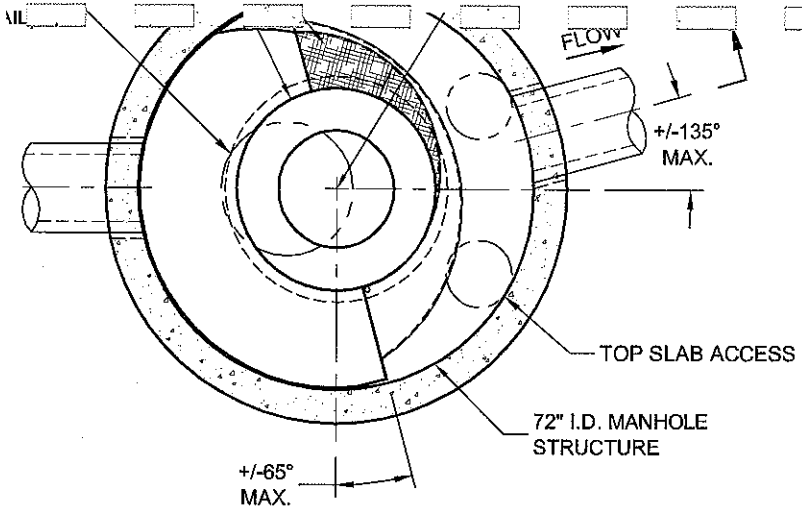
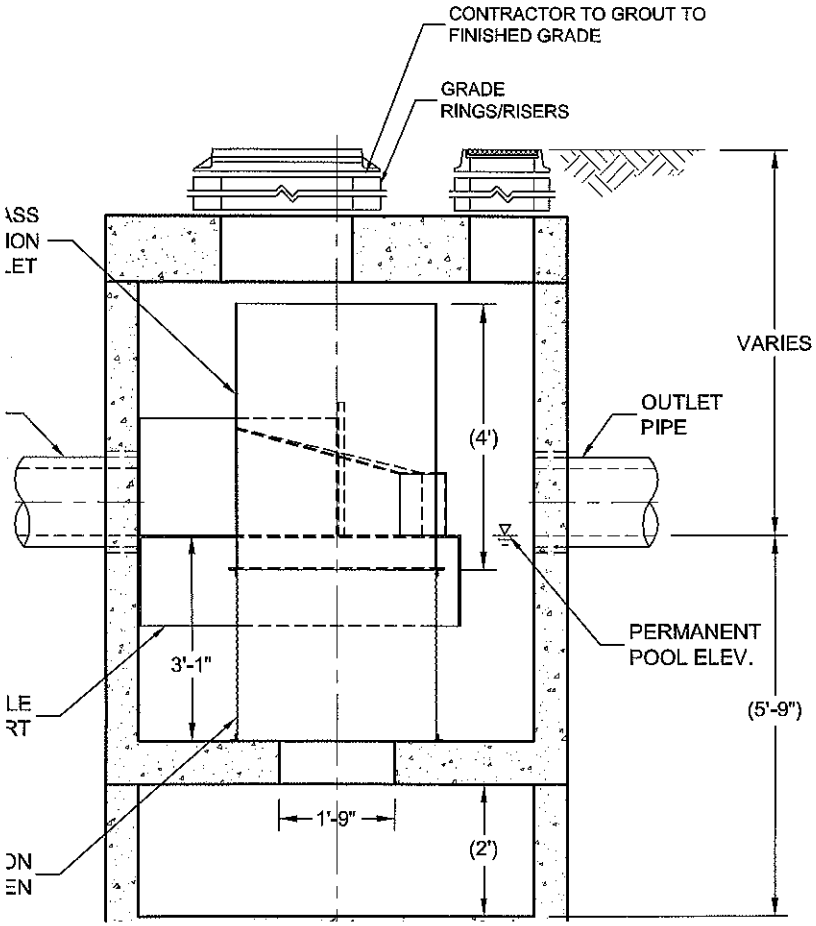


PLAN VIEW
N.T.S.

DES[illegible]TION (MODEL SUFFIX)	CONFIGURATION DESCRIPTION
G	GRATED INLET ONLY (NO INLET PIPE)
GP	GRATED INLET WITH INLET PIPE OR PIPES
K	CURB INLET ONLY (NO INLET PIPE)
KP	CURB INLET WITH INLET PIPE OR PIPES
B	SEPARATE OIL BAFFLE (SINGLE INLET PIPE REQUIRED FOR THIS C
W	SEDIMENT WEIR FOR NJDEP / NJCAT CONFORMING UNITS

FRAME AND COVER
(DIAMETER VARIES)
N.T.S.



GENERAL NOTES
1. CONTECH TO PROVIDE ALL MATERIALS UNLESS NOTED OTHERWISE.
2. DIMENSIONS MARKED WITH ( ) ARE REFERENCE DIMENSIONS. ACTUAL DIMENSIC
3. FOR FABRICATION DRAWINGS WITH DETAILED STRUCTURE DIMENSIONS AND WE CONTACT YOUR CONTECH STORMWATER SOLUTIONS REPRESENTATIVE. www.c
4. CDS WATER QUALITY STRUCTURE SHALL BE IN ACCORDANCE WITH ALL DESIGN CONTAINED IN THIS DRAWING.
5. STRUCTURE AND CASTINGS SHALL MEET AASHTO HS20 LOAD RATING.

INSTALLATION NOTES
1. ANY SUB-BASE, BACKFILL DEPTH, AND/OR ANTI-FLOTATION PROVISIONS ARE SITI CONSIDERATIONS AND SHALL BE SPECIFIED BY ENGINEER OF RECORD.
2. CONTRACTOR TO PROVIDE EQUIPMENT WITH SUFFICIENT LIFTING AND REACH C SET THE CDS MANHOLE STRUCTURE (LIFTING CLUTCHES PROVIDED).
3. CONTRACTOR TO ADD JOINT SEALANT BETWEEN ALL STRUCTURE SECTIONS, AN STRUCTURE.
4. CONTRACTOR TO PROVIDE, INSTALL, AND GROUT PIPES. MATCH PIPE INVERTS V SHOWN.
5. CONTRACTOR TO TAKE APPROPRIATE MEASURES TO ASSURE UNIT IS WATER TI FLOWLINE INVERT MINIMUM. IT IS SUGGESTED THAT ALL JOINTS BELOW PIPE IN

DEPARTMENT OF THE ARMY
U.S. ARMY ENGINEER DISTRICT, SACRAMENTO
CORPS OF ENGINEERS
1325 J STREET
SACRAMENTO CA 95814-2922

REPLY TO ATTENTION OF

August 11, 2009

Regulatory Division SPK-2006-00439

Farman Shir
Greenberg Farrow
1920 Main Street, Suite 1150
Irvine, California 92614

Dear Mr. Shir:

This concerns your proposed 25-Acre Commercial Site, Tehachapi project. The project is located in Section 20, Township 32 South, Range 33 East, MDB&M, southeast of the intersection of Tehachapi Boulevard and Tucker Road in the city of Tehachapi, Kern County, California.

Based on the information you have provided, we have determined that the proposed work, will not involve the discharge dredged or fill material within a waters of the United States. Therefore, a Department of the Army Permit is not required for this work. Measures should be taken to prevent construction materials and/or activities from entering any waters of the United States. Appropriate soil erosion and sediment controls should be implemented onsite to achieve this end.

Our disclaimer of jurisdiction is only for this activity as it pertains to Section 404 of the Federal Clean Water Act and does not refer to, nor affect jurisdiction over any waters present on site. Other Federal, State, and local laws may apply to your activities. Therefore, in addition to contacting other Federal and local agencies, you should also contact state regulatory authorities to determine whether your activities may require other authorizations or permits. In particular, your proposed activity may still be regulated by the State of California's Regional Water Quality Control Boards.

We appreciate your feedback. At your earliest convenience, please tell us how we are doing by completing the customer survey on our website under *Customer Service Survey*.

Please refer to identification number SPK-2006-00439 in any correspondence concerning this project. If you have any questions, please contact Ramon Aberasturi at , email *Ramon.Aberasturi@usace.army.mil*, or telephone 916-557-6865. For more information regarding our program, please visit our website at *www.spk.usace.army.mil/regulatory.html*.

Sincerely,

Paul Maniccia

Paul Maniccia
Chief, California South Branch

Copy furnished without enclosure(s):

Dale Harvey, California Regional Water Quality Control Board, 1685 E Street, Fresno, California 93706-2020
W.E. Loudermilk, Regional Manager, Central Region, California Department of Fish and Game, 1234 East Shaw Avenue, Fresno, California 93710-7802
Live Oak Associates, P.O. Box 2697, Oakhurst, California 93644

Draft Existing Conditions Report
Greater Tehachapi Area Specific Plan
Water Supply & Sewer Availability

Respectfully Submitted by:

Integrated Resource Management, LLC

July 2008

Contacts

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Integrated Resource Management, LLC
Robert Bowcock
405 North Indian Hill Boulevard
Claremont, California 91711
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Appendix I: Tehachapi-Cummings Amendment to Judgment

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1.0 INTRODUCTION

The Greater Tehachapi region is located in eastern Kern County along California Highway 58 between the San Joaquin Valley and the Mojave Desert. The Greater Tehachapi region is known for its four seasons, rural communities, Tehachapi Loop, electricity generating wind turbines, proximity to Edwards Air Force Base, and gliding. The Greater Tehachapi region generally refers to the City of Tehachapi and the surrounding rural communities of Alpine Forest, Golden Hills, Stallion Springs, Bear Valley Springs, Cummings Valley, Cummings Ranch, Keene, Cameron Canyon, Sand Canyon, Mendiburu Springs, Monolith, Old Towne, Old West Ranch, and Brite Valley. Since 2000, the region's population has grown from approximately 28,400 to approximately 35,000, an increase of about 23 percent.

In response to this growth, the County of Kern is updating the planning and environmental information for most of the unincorporated portions of the Greater Tehachapi region. The County is preparing a new program-level Specific Plan that will rescind and consolidate the existing specific and other community plans in the region. This new Specific Plan will allow the County to identify and coordinate implementation strategies and policies for future land uses by balancing the competing social, economic, resource and environmental factors for any future growth in the unincorporated area.

This planning effort is entitled the Greater Tehachapi Area Specific Plan (GTASP). The planning area of the GTASP is the Greater Tehachapi Area (GTA). The GTA generally refers to the rural communities of Alpine Forest, Golden Hills, Stallion Springs, Bear Valley Springs, Cummings Valley, Cummings Ranch, Mendiburu Springs, Monolith, Old Towne, Old West Ranch, and Brite Valley.

The GTA encompasses approximately 275 square miles or 176,000 acres as shown on Figure 1-1. The eastern boundary of the GTA is predominantly west of Tehachapi Willow Springs Road and Oak Creek Pass. The western boundary is near Hart Flat Road just east of Highway 223. The northern boundary of the GTA is Orejano Ridge on the west to just south of Stevenson Peak on the east. The southern boundary is generally defined by Cummings Mountain, Double Mountain and Tehachapi Mountain, each of which has peaks at elevations above 7,700 feet in the Tehachapi Mountain range.

The County's 2004 General Plan outlines the growth opportunities and challenges facing all of Kern County. These opportunities and challenges that are particularly relevant to the GTA area include, but are not limited to:

- Promoting managed economic growth
- Providing for continued agricultural use and resource conservation
- Promoting smart growth concepts to effectively manage the County's future development
- Enhancing the linkage between land use and water supply planning
- Air quality's role in land use planning
- Kern County's importance in energy development

The GTASP will become the future development guidance for this 275-square mile GTA working in tandem with the County's 2004 General Plan and 2007 Zoning Ordinance. Consistent with State and County requirements, the GTASP will set forth a definitive land use development

plan, development regulations, and implementation plans and programs designed to ensure any future development is consistent with the goals and policies of the County's 2004 General Plan.

The purpose of the proposed GTASP is to more specifically identify and build upon growth opportunities and challenges for the GTA. This planning process is three-fold:

- Identify existing conditions in the GTA;
- Establish a uniform set of planning assumptions (land use constraints and opportunities); and
- Implement 2004 General Plan goals and/or policies by coordinating and identifying implementation strategies and policies for any future land use development in the GTA.

The GTASP planning effort will include three basic tasks:

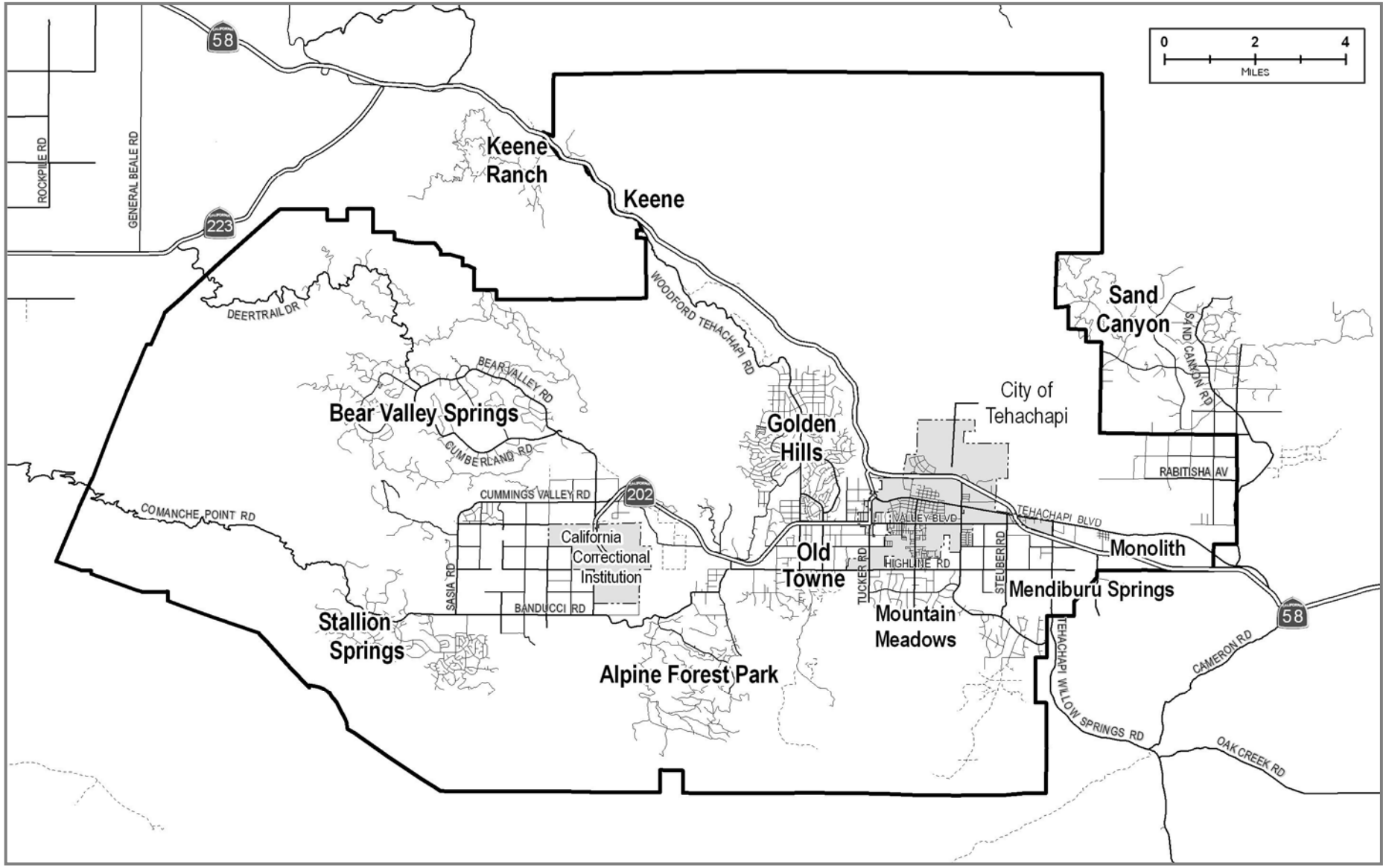
1) Accumulation and consolidation of known information on existing conditions, particularly water availability;

2) Preparation of the Specific Plan document, and;

3) Preparation of a Program Environmental Impact Report (Program EIR).

The GTASP process is expected to take about two years with completion in late 2009. The public and other public agencies will be included in this planning process at all stages of the planning effort.

Figure 1-1 Project Location Map



2.0 SUMMARY OF EXISTING CONDITIONS

2.1 Groundwater Availability

Groundwater is the primary source of water in the GTA. There are three adjudicated groundwater basins which provide assured water supply presently within specific and well managed safe yields.

2.1.1 Brite Basin

Brite Basin has a safe yield of 500 acre feet, with an overlying adjudicated water management system, which may sustain development of approximately 1,000 dwelling units with an allocation for commensurate commercial and industrial uses within said development. Current groundwater production is approximately 229 acre feet for agriculture and 99 acre feet for municipal and domestic purposes, totaling 328 acre feet. Presently, the Brite Basin has excess storage from seepage of the Brite Lake, which the Tehachapi-Cummings County Water District anticipates recovering. The basin water levels continue to increase and there are no restrictions on production within the basin.

2.1.2 Cummings Basin

Cummings Basin is also an adjudicated overlying system of groundwater management. The basin's safe yield is 4,090 acre feet, with approximately 3,900 acre feet produced annually, 2,989 acre feet for agricultural use and 911 acre feet for municipal and industrial purposes. The basin is in a well maintained equilibrium state with a managed conjunctive use plan, return flows and well planned water recharge program.

2.1.3 Tehachapi Basin

The Tehachapi Basin is an adjudicated appropriative managed groundwater system. The safe yield has been established by the California Superior court case 97210 (The Tehachapi Basin Case) to be 5,500 acre feet. On November 20, 1973, the "Amendment to Judgment" was filed in the Tehachapi Basin Case 97210 that established the physical solution to meet the parties' water needs, including exchange pool provisions that are available. This reduced the historic base water rights that were established during the adjudication by 1/3 to equal the safe yield of the Tehachapi Groundwater basin. This created "allowed pumping allocations" for each party and party domestic rights which restricted total annual extractions within the Tehachapi Basin to the safe yield of 5,500 acre feet.

In addition to restricting groundwater extractions, the Judgment and Amendment to the Judgment did the following:

1. With certain exceptions specified in the Judgment, enjoined and restrained the parties from exporting groundwater extracted from Tehachapi Basin outside of the Tehachapi Basin area.

2. Enjoined and restrained parties from exporting outside of the Tehachapi Basin watershed surface water diverted within the Tehachapi basin watershed.

3. Enjoined and restrained the parties from making any diversions of surface waters within Tehachapi Basin watershed, except to the extent of diversions having been made by any party as of the water year prior to the commencement of said action No. 97210.

In summary, existing unexercised groundwater availability is shown on Table 2-1. This does not include stored waters consisting of: Carryover, Imported Recharged, In Lieu or Conjunctive Use. Unexercised Water represents an unused amount of 1,492.285 acre-feet. The combined total of non-programmatic groundwater available could be as much as 3,005.285 acre-feet.

Table 2-1 Water Availability

Basin	Safe Yield (AF)	Allowed Pumping (AF)	2006 Current Production (AF)	2006 Unexercised (AF)
Brite Basin	500	500	328	172
Cummings Basin	4,090	4,090	3,900	190
Tehachapi Basin	5,500	5,500	4,211	1,289
Subtotals	**10,090**	**10,090**	**8,439**	**1,651**
Unexercised	-	-	-	1,492
Grand Total	**-**	**-**	**-**	**3,143**

2.1.4 Adjudicated Water Rights

The only prescriptive production rights in the GTA are located within the Tehachapi Basin. Of the allowed pumping allocation component there are over 1,000 acre feet of water rights after the ordered reduction, which are unexercised annually. From the 63 +/- water rights holders in the Tehachapi Basin only 14 produced water in 2006. Over 50 water rights holders conserve their water rights in carryover accounts. As this water is returned to the market, additional development may be secured against those entitlements.

2.1.5 Agriculture Conversions

Many of the water rights owners in the Tehachapi Basin are agricultural holders who have elected to take in lieu surface water deliveries, employ conservation measures or dry farm, or discontinue farming.

Agricultural use in the GTA presently accounts for approximately 3,905 acre feet of allowed groundwater production, or 46%.

Further, as agricultural land is rezoned, or otherwise develops, some water right utilities require the dedication of the water rights used by the agricultural lands to the utility. In the overlying Cummings Basins, agricultural conversion will likely make more groundwater available depending on the permitted densities. In most cases, depending on the crop, agricultural land requires more water demand than municipal and industrial development.

2.1.6 Industrial Conversions

Some of the water rights owners in the Tehachapi Basin are industrial holders, who have either gone out of business, connected to municipal utilities or have employed water conservation measures which have resulted in unused water resources.

By way of example, Golden Hills Community Services District leases excess unexercised water rights from Lehigh Southwest Cement Company. Lehigh Southwest Company recently employed facility water conservation measures which freed up its unexercised water resources for lease by Golden Hills Community Services District which they will ultimately put to beneficial use.

2.2 Surface Water Availability

No measurable local surface water is available or in use, other than certain storm flows which are captured in Brite Lake which is owned and operated by the Tehachapi-Cummings County Water District. Storm flows on average barely offset surface water evaporation; however, the District aggressively attempts to capture and conserve storm and surface flows for groundwater recharge within the watershed.

2.2.1 California State Water Project Allocation

Imported surface water from the Tehachapi-Cummings County Water District is available in a portion of the GTA that is adjacent to the Tehachapi-Cummings County Water District Mainline or distribution laterals. The deliveries may be either direct pipeline connections or indirect deliveries such as conjunctive use percolated groundwater.

The District's 20,000 acre foot per year water allocation (Table A Amount) is secured by a contract with the Kern County Water Agency. The Kern Count Water Agency has a contract with the California Department of Water Resources.

Tehachapi-Cummings County Water District can not expect 100% delivery of their allocation (Table A Amount) each year. In fact, the State Water Project delivery percentages vary with snow pack conditions and reservoir storage conditions within the SWP.

Additionally, environmental constraints have effectively reduced allocation (Table A Amount) percentages and will continue to hold deliveries short of 100%. Table 2-2 demonstrates a reduced State Water Project allocation (Table A Amount) wherein only 3 out of 10 years yield a full allocation (Table A Amount).

Table 2-2 State Water Project Allocation (Table A Amount)

Year	% of Allocation	AF
2009	30	6,000
2010	60	12,000
2011	100	20,000
2012	30	6,000
2013	60	12,000
2014	100	20,000
2015	30	6,000
2016	60	12,000
2017	100	20,000
2018	30	6,000
2019	60	12,000

Tehachapi-Cummings County Water District has had increasing demands for State Water Project imports through out its years of operation. Although the TCCWD has increased its demand, it has never imported 50% of its allocation or 10,000 AF.

Interestingly in 2004, 7,886 acre feet were imported and in 2007, 7,868 acre feet were imported and delivered to the Greater Tehachapi Area.

Because there is a tremendous amount of flexibility afforded Tehachapi-Cummings County Water District by its ability to provide either direct deliveries of State Water Project or conjunctive use alternatives and wheeled water deliveries, fluctuations of State Water Project entitlements will have little impact upon water available in the Greater Tehachapi Area.

In 2006, only 6,424 acre feet of State Water Project water was directly delivered to the GTA. Much of this was exchanged or taken in lieu of production of groundwater which was stored. At a 30% allocation (Table A Amount) year to State Water Project water, 6,000 acre feet would be available. This water can be supplemented by Tehachapi-Cummings County Water District groundwater wells which produce water for delivery into the distribution system, or from Brite Lake, its State Water Project storage facility.

2.3 Recycled Water Availability

In the Cummings Basin, Tehachapi-Cummings County Water District has recently entered into an agreement to purchase recycled effluent from the California Department of Corrections and Rehabilitation. Presently, the California Department of Corrections and Rehabilitation has only secondary treatment and a land application Waste Discharge Order & Requirements from the Central Valley Regional Water Quality Control Board. Since the agreement has been signed, this water has not been used. The contract calls for an estimated flow of between 1,000 and 1,200 acre feet of water. This is counted as new supply to the basin as the prior discharge was 100% consumptive by regulation. The California Department of Corrections and Rehabilitation is currently in the process of upgrading their wastewater treatment plant to tertiary treatment.

The City of Tehachapi, Stallion Springs Community Services District, Golden Hill Sanitation Company and the California Department of Corrections and Rehabilitation existing treatment systems provide for only secondary quality treated effluent which limits its reuse potential. California Code of Regulation, Title 22, governs the discharge of water effluents for reuse and groundwater recharge. Secondary effluents are generally land applied to forage crops on non-consumptive grasses. Land application permits for wastewater must demonstrate that there is NO percolation to groundwater.

As the flows from the wastewater treatment systems are deemed suitable for regulated purposes offsetting existing demand. New water is thereby deemed added to the system.

The costs for upgrading the secondary wastewater treatment plants from secondary to tertiary systems may come from dedication of these new water supplies. For utilities that require dedication of water rights, recycled water should be considered for that portion of water that is not delivered by Tehachapi-Cummings County Water District as substituting for State Water Project water.

2.4 Water System Infrastructure Access

The water facility infrastructure provided by the six permitted water utilities in the GTA is readily available for connections within their current tariff or annexed service areas. Service to additional development will be primarily the cost of construction of additional production, transmission storage and distribution facilities. Some utilities require the dedication of water rights with a will serve letter.

Expansion into additional service areas, or development of satellite service areas, or the creation of new water service utilities should not have an impact upon the existing infrastructure. Provided a developer meets all of the requirements of Kern County and satisfies concerned regulatory agencies and completes an environmental review process, construction of the appropriate infrastructure is a decision subject to developer economic evaluation.

2.5 Sewer System Infrastructure Access

Only the City of Tehachapi, California Department of Corrections and Rehabilitation in total and parts of Bear Valley Community Services District, Stallion Springs Community Services District and Golden Hills Community Services District (provided by Golden Hills Sanitation Company) have sanitary sewer collection and treatment services. Currently, the only tertiary treated effluent available is from Bear Valley Community Services District within the GTA.

Future permitting of subdivisions with multiple source and single source septic tanks systems should be discouraged in order to protect the water quality of the susceptible and well exercised groundwater basins in the GTA.

Expansion into additional service areas, or development of satellite service areas, or the creation of new sewer service utilities should not have an impact upon the existing infrastructure. Provided a developer meets all of the requirements of Kern County and satisfies concerned regulatory agencies and completes an environmental review process, construction of the appropriate infrastructure is a decision subject to developer economic evaluation.

3.0 KERN COUNTY GENERAL PLAN

The Kern County General Plan is a policy document that gives long-range guidance affecting the growth, development, and resources for the unincorporated areas under County jurisdiction. The General Plan outlines broad objectives and the growth opportunities and challenges facing Kern County. The General Plan includes the following elements: Land Use/Conservation/Open Space; Circulation; Noise; Safety; Energy; Military Readiness; and Housing. Each of these topical elements establishes issues, goals, policies, and implementation measures.

3.1 Objectives

The County's General Plan includes the objective of *"Ensuring the protection of environmental resources and the development of adequate infrastructure with specific emphasis on conserving agricultural areas, discouraging unplanned urban growth, ensuring water supplies and acceptable quality for future growth, and addressing air quality issues."*[1]

3.2 Growth Opportunities and Challenges

The General Plan also identifies several growth opportunities and challenges facing Kern County related to water supply and sewer availability. They are:[2]

- *"Promoting Managed Economic Growth – Kern County as a geographic orientation in California that is advantageous for continued economic growth. It is recognized that land use, circulation, changing economic circumstances, and other factors, are dynamic and may change over time due to changing market forces, economic factors and community needs. The County is strategically situated proximate to a large southern California urban area with available land, water, an available workforce, and resources that will provide for continued economic prosperity into the future….*
- *Providing for Continued Agricultural Use - Agriculture continues to be Kern County's most economically productive industry that contributes to the nation and world's needs. Similar to the statewide trend, the County's agricultural areas are facing increasing pressure to convert productive farmland to housing, industrial, and commercial development. The General Plan Land Use, Open Space, and Conservation Element incorporates policies and programs that recognize the importance of agriculture and the necessity to manage this resource for future use. The planning document also recognizes that tax and economic incentives, available markets, and water are important factors to ensuring the long-term retention of agricultural use….*
- *Promoting smart growth concepts to effectively manage the County's future development - …The Land Use, Open Space, and Conservation Element of the General Plan incorporates policies and implementation measures that are designed to avoid unplanned growth which causes traffic congestion, air pollution, and premature farmland conversion….Land use compatibility measures, air quality provisions, water conservation, and other policy and implementation programs are incorporated to ensure that the character of future growth effectively manages County resources while promoting a vibrant economy in the coming years….Pursuit of smart growth concepts within Kern County addresses the questions of how best to plan for and manage growth,*

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[1] Kern County General Plan, Introduction, p. iv.
[2] Ibid., pp. vii-viii.

when and where new rural and urban economic development should be built and located, and how to provide and finance the infrastructure required for serving a growing population….

- *Enhancing the Linkage between Land Use and Water Supply Planning – This planning document recognizes that the relationship between water supply and land use planning is important to promoting future growth and a strong economy for Kern County's future. Recent State laws require local governments to ensure that development approvals occur with substantive, realistic assessments of the availability of a reliable water supply. The new laws require the verification of sufficient water supplies as a condition for approving certain developments and compel urban water suppliers to provide more information on the reliability of groundwater for a long-term time frame. Long-term water supply planning is important to ensuring that rural and urban economic growth can be accommodated into the future."*

3.3 Land Use, Open Space, and Conservation Element

The County's Land Use, Open Space, and Conservation Element addresses physical and environmental constraints. The Land Use, Open Space, and Conservation Element provides for a variety of land uses for future economic growth while also assuring the conservation of the County's agricultural, natural, and resource attributes.

3.3.1 Resource Map Codes

The County's General Plan land use designations are presented as map codes. There are no map codes for water supply and sewer availability.

3.4 Water Supply and Sewer Availability Issues

The Land Use, Open Space, and Conservation Element identifies the following relevant issue associated with water supply and sewer availability-related physical and environmental constraints:

- *"The economical and efficient delivery of public services is one of the main purposes and benefits of effective land use planning.*
- *New residential, industrial, and commercial land uses will demand the provision of adequate public services and facilities which will add to existing public service or facility deficiencies.*
- *Continued use of individual septic systems may cause an impact on the groundwater quality.*

3.5 Water Supply and Sewer Availability Goals

The Land Use, Open Space, and Conservation Element identifies the following relevant goal associated with water supply and sewer availability:

- *"Kern County residents and business should receive adequate and cost effective public services and facilities. The County will compare new urban development proposals and land use changes to the required public services and facilities needed for the proposed project.*

- *Promote an urban growth pattern in areas where adequate public service infrastructure exists or can be provided.*
- *Distribute the cost of new services or facilities equitably among the beneficiaries.*
- *Provide a healthful and sanitary means of collecting, treating, and disposing of sewage and refuse for the residents and industries of Kern County.*
- *Facilitate the provision of reliable and cost effective utility services to residents of Kern County.*

3.6 Water Supply and Sewer Availability Policies

The Land Use, Open Space, and Conservation Element identifies the following water supply and sewer availability-related policies:

1. *"New discretionary development will be required to pay its proportional share of the local costs of infrastructure improvements required to service such development.*

2. *The efficient and cost-effective delivery of public services and facilities will be promoted by designating areas for urban development which occur within or adjacent to areas with adequate public service and facility capacity.*

    a. *Ensure that water quality standards are met for existing users and future development.*

    b. *Ensure that adequate storage, treatment, and transmission facilities are constructed concurrently with planned growth.*

    c. *Ensure the maintenance and repair of existing water systems.*

    d. *Encourage the utilization of wastewater treatment facilities which provide for the reuse of wastewater.*

    e. *Encourage the consolidation or elimination of small water systems.*

    f. *Encourage the conversion of private sewer systems (septic tanks) to public systems.*

    g. *Ensure that adequate collection, treatment, and disposal facilities are constructed concurrently with planned growth.*

    h. *Ensure that appropriate funding mechanisms are in place to fund the needed improvements which result from development and subsequent growth.*

3. *Individual projects will provide availability of public utility service as per approved guidelines of the serving utility."*

General provisions policies for water supply and sewer availability are:

9. *New development should pay its pro rata share of the local cost of expansions in services, facilities, and infrastructure which it generates and upon which it is dependent.*

10. *Community sewage treatment and disposal facilities with collection systems will be required for all developments of 75 or more lots proposed as one development or cumulatively with other developments in a community area, unless soils engineering studies performed at the time of any land division project and approved by the Kern*

County Environmental Health Services Department, indicate that alternative septic systems, either individual or community design, are equal to or better than a community collection, treatment, and disposal system.

12. *All methods of sewage disposal and water supply shall meet the requirements of the Kern County Environmental Health Services Department and the California Regional Water Quality Control Board. The Environmental Health Department shall periodically review and modify, as necessary, its requirements for sewage disposal and water supply, and shall comply with any new standards adopted by the State for implementation of Government Code Division 7 of the Water Code, Chapter 4.5 (Section 13290-13291.7). (Assembly Bill 885)(2000).*

14. *The County will explore financing and methods of installation of public sewage systems, which will be encouraged both in areas of existing urban density serviced by septic systems and in existing communities experiencing repeated septic system failures.*

15. *Prior to approval of any discretionary permit, the County shall make the finding, based on information provided by California Environmental Quality Act (CEQA) documents, staff analysis and the applicant, that adequate public or private services and resources are available to serve the proposed development.*

16. *The developer shall assume full responsibility for costs incurred in service extensions or improvements that are required to serve the project. Cost sharing or other forms of recovery shall be available when the service extensions or improvements have a specific quantifiable regional significance.*

17. *The extent of community-type public services and facilities required for urban densities in the Mountain, Valley and Desert regions vary according to the following criteria:*

    b. *Within the Mountain Region, new residential development sites less than or equal to 2 ½ acres gross lot size density, commercial, and industrial land uses shall be serviced by necessary and appropriate sewer and water systems.*

33. *Water related infrastructure shall be provided in an efficient and cost effective manner.*

35. *Ensure that adequate water storage, treatment, and transmission facilities are constructed concurrently with planned growth.*

36. *Ensure that appropriate funding mechanisms for water are in place to fund the needed improvements resulting from growth and subsequent development.*

37. *Ensure maintenance and repair of existing water systems.*

39. *Encourage the development of the County's groundwater supply to sustain and ensure water quality and quantity for existing users, planned growth, and maintenance of the natural environment.*

40. *Encourage utilization of community water systems rather than the reliance on individual wells.*

41. *Review development proposals to ensure adequate water is available to accommodate projected growth.*

42. *Encourage water supply purveyors to prepare master water plans for those areas of the County approaching existing design thresholds, including documentation of areas in need of system maintenance and repair.*

45. *New high consumptive water uses, such as lakes and golf courses, should require evidence of additional verified sources of water other than local groundwater. Other sources may include recycled stormwater or wastewater.*

3.7 Water Supply and Sewer Availability Implementation Measures

The Land Use, Open Space, and Conservation Element identifies the following relevant implementation measures associated with water supply and sewer availability:

A. *"Continue to administer the Capital Improvement Program (CIP) and coordinate with public utility providers listing the necessary improvements to Kern County's public services and facilities in collaboration with key service providing agencies and the County Administrative Office as a first step toward the preparation of a long-term Public Services Plan for Kern County….*

B. *Determine local costs of County facility and infrastructure improvements and expansion which are necessitated by new development of any type and prepare a schedule of charges to be levied on the developer at the time of approval of the Final Map. This implementation can be effectuated by the formation of a County work group.*

C. *Project developers shall coordinate with the local utility service providers to supply adequate public utility services.*

D. *Involve utility providers in the land use and zoning review process.*

K. *The appropriate agency should develop sewer and water master plans in areas of where these services are lacking or deficient and in areas where urban development exists or is designated."*

General implementation measures for water supply and sewer availability are:

D. *The appropriate agency should develop sewer and water master plans in areas where these services are lacking or deficient and in areas where urban development exists or is designated….*

E. *All new discretionary development projects shall be subject to the Standards for Sewage, Water Supply and Preservation of Environmental Health Rules and Regulations administered by the Environmental Health Services Department. Those projects having percolation rates of less than five minutes per inch shall provide a preliminary soils study and site specific documentation that characterizes the quality of upper groundwater in the project vicinity and evaluation of the extent to which, if any, the proposed use of alternative septic systems will adversely impact groundwater quality. If the evaluation indicates that the uppermost groundwater at the proposed site already exceeds groundwater quality objectives of the Regional Water Quality Control Board or would if the alternative septic system is installed, the applicant shall be required to supply sewage collection, treatment and disposal facilities.*

T. *The Kern County Environmental Health Services Department will develop guidelines which will establish criteria for development of proposed new water systems when an existing water system, within a reasonable distance, is able to supply water.*

V. *Water and sewer purveying agencies should development long-term sewer and water master plans in areas where these services are lacking or deficient and in areas where urban development exists or is designated.*

W. *Applications for General or Specific Plan amendments will include sufficient data for review to facilitate desirable new development proposals consistent with General Plan policies, using the following criteria and guidelines:*

   i. *The provision of adequate water, sewer, and other public services to be used.*

   ii. *The provision of adequate on-site nonpublic water supply and sewage disposal if no public systems are available or used.*

X. *Encourage effective groundwater resource management for the long-term benefit of the County through the following:*

   i. *Promote groundwater recharge activities in various zone districts.*

   ii. *Support for the development of Urban Water Management Plans and promote Department of Water Resources grant funding for all water providers.*

   iii. *Support the development of Groundwater Management Plans.*

   iv. *Support the development of future sources of additional surface water and groundwater, including conjunctive use, recycled water, conservation, additional storage of surface water, and groundwater and desalination.*

Y. *Promote efficient water use by utilizing measures such as:*

   i. *Requiring water-conserving design and equipment in new construction.*

   ii. *Encouraging water-conserving landscaping and irrigation methods.*

   iii. *Encouraging the retrofitting of existing development with water conserving devices.*

Z. *General Plan Amendments subject to environmental review and not otherwise subject to California Water Code Section 10910 shall demonstrate through a water supply assessment that a long-term water supply for a 20-year timeframe is available. The water assessment shall include, but not limited to, the following:*

   i. *Source and quantity of historical water use on the site.*

   ii. *Estimated water consumption of the proposed development.*

   iii. *Estimated storage, if any, in meeting the projected need.*

   iv. *Recommendations for additional sources of water to address demand shortage. Such measures may include, but not limited to, development of future sources of additional surface water and groundwater, including water transfers, conjunctive use, recycled water conservation, and additional storage of surface water, groundwater, and desalination.*

   Written acknowledgement that water will be provided by a community or public water system with an adopted Urban Water Management Plan shall constitute compliance with this requirement.

4.0 OTHER REGULATORY STANDARDS

Numerous federal, State, and County laws, regulations, and guidelines address water supply and sewer availability in California.

4.1 California Code of Regulations

Title 23, Water, and Title 27, Environmental Protection, both provide regulations for water in the State.

4.2 Kern County Development Standards and Ordinance

The County's various development standards and ordinances address water supply and sewer availability. The County's Engineering and Survey Services Department is responsible for implementing the NPDES Storm Water Program for projects disturbing one acre or greater. This department has developed Best Management Practices (BMPs) instructions that outline examples of effective erosion and sediment control during construction.

4.3 SB 610

SB 610 requires the preparation of a water assessment (as defined in Water Code 10912{a}) for specified type and size of projects. These projects are:

- Proposed residential development of more than 500 dwelling units;
- Proposed shopping center or business establishment with more than 1,000 employees or 500,000 square feet of floor space;
- Proposed commercial office building with more than 1,000 employees or more than 250,000 square feet of floor space;
- Proposed hotel or motel with more than 500 rooms;
- Proposed industrial, manufacturing, or processing plant or industrial park housing more than 1,000 people, occupying more than 40 acres, or having more than 650,000 square feet of floor area;
- Mixed-use project with one or more of the previously specified projects;
- Project that would demand water equivalent to amount needed for a 500-dwelling unit project.

5.0 THRESHOLDS OF SIGNIFICANCE – CEQA AND OTHER

The California Environmental Quality Act (CEQA) is the foundation of environmental law and policy in California. The main objectives of CEQA are to disclose to decision-makers and the public the significant environmental effects of a proposed project and to require agencies to avoid or reduce these environmental effects by implementing feasible alternatives or mitigation measures. To determine whether these environmental effects are significant, CEQA suggests thresholds of significance but also allows public agencies to adopt their own thresholds of significance. A threshold of significance is an identifiable quantitative, qualitative or performance level of a particular environmental effect, non-compliance with which means the effect will normally be determined to be significant by the agency and compliance with which means the effect normally will be determined to be less than significant. There are basically four levels of environmental effects: no impact, less than significant impact, less than significant with mitigation incorporation, and potentially significant impact.

Kern County has adopted its own Thresholds of Significance under CEQA. The applicable thresholds for water supply and sewer availability are as follows:

"Would the project:

- *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 of 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)?*
- *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?*
- *Have sufficient water supplies available to serve the project from existing entitlements and resources, or are new or expanded entitlements needed?*
- *Result in a determination by the wastewater treatment provider which serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments?*

6.0 EXISTING CONDITIONS

6.1 Background

The purpose of this Existing Conditions Report is to outline existing water resource conditions and sewer availability in the GTA as the County prepares to update its planning documents. At the heart of future planning discussions will be the question "What type of community will the GTA be?" Answering this question requires consideration of the extent to which the community can grow; how and when infrastructure will be provided; and how water resources will be protected and enhanced.

6.2 Scope of Work

This Existing Conditions Report characterizes and evaluates the Greater Tehachapi Area of Kern County's existing water demand, sources of supply and sewer system availability. The majority of information in this report comes from the Tehachapi-Cummings County Water District (TCCWD), its retail water purveyor agencies and other related service providers.

The existing conditions analysis establishes measurable benchmarks for determining future needs and anticipated growth. Existing conditions are meant to be a *simple* statement about the present; representing a virtual "snapshot" in time. More importantly, they become the critical building blocks for predicting future outcomes by understanding past trends and present conditions.

6.3 Documentation Review

The following documents were reviewed for this report:

- Kern County 2004 General Plan & Amendments
- Kern County Code, Title 14: Utilities
- Brite Basin Judgment
- Cummings Basin Judgment
- Tehachapi Basin Judgment
- Cummings Basin 2006 Annual Report
- Tehachapi Basin 2006 Annual Report
- Fugro West Inc., Groundwater Modeling Study
- City of Tehachapi Municipal Codes
- Local Agency Ordinances & Resolutions
- Tehachapi-Cummings County Water District Resolutions
- Water Purveyor Production Records
- Agency Formation Documents
- Articles of Incorporation
- Agency Annual Reports
- Various Newspaper Articles
- Personal Interview Notes

6.4 Definitions

For the purposes of this report, the terms below will be defined as follows:

- **Acre-Foot (AF)** - The volume of water necessary to cover one acre to a depth of one foot; equal to 43,560 cubic feet or 325,851 gallons.
- **Acre-Foot per Year (AF/Y)** - The volume of water that is available for use over a given twelve month period.
- **Adjudication** - A case that has been heard and decided by a judge. In the context of an adjudicated groundwater basin, landowners or other parties have turned to the courts to settle disputes over how much groundwater can be extracted by each party to the decision.
- **Alluvial** - Of or pertaining to or composed of alluvium.
- **Alluvium** - A general term for clay, silt, sand, gravel, or similar unconsolidated detrital material, deposited during comparatively recent geologic time by a stream or other body of running water, as a sorted or semi sorted sediment in the bed of the stream or on its floodplain or delta, as a cone or fan at the base of a mountain slope.
- **Appropriative Right** - The right to use water that is diverted or extracted by a non-riparian or non-overlying party for non-riparian or non-overlying uses. In California, surface water appropriative rights are subject to a statutory permitting process while groundwater appropriation is not.
- **Aquitard** - A confining bed and/or formation composed of rock or sediment that retards but does not prevent the flow of water to or from an adjacent aquifer. It does not readily yield water to wells or springs, but stores ground water.
- **Aquifer** - A body of rock or sediment that is sufficiently porous and permeable to store, transmit, and yield significant or economic quantities of groundwater to wells and springs.
- **Artesian Aquifer** - A body of rock or sediment containing groundwater that is under greater than hydrostatic pressure; that is, a confined aquifer. When an artesian aquifer is penetrated by a well, the water level will rise above the top of the aquifer.
- **Artesian Pressure** - Hydrostatic pressure of artesian water, often expressed in terms of pounds per square inch; or the height, in feet above the land surface, of a column of water that would be supported by the pressure.
- **Artificial Recharge** - The addition of water to a groundwater reservoir by human activity, such as putting surface water into dug or constructed spreading basins or injecting water through wells.
- **Borehole Geophysics** - The general field of geophysics developed around the lowering of a variety of probes into a boring or well. Borehole logging provides additional information concerning physical, electrical, acoustic, nuclear and chemical aspects of the soils and rock encountered during drilling.
- **Community Service District (CSD)** – A CSD provides various public services and facilities to a community instead of or in addition to the services provided by a city or County.

- **Confined Aquifer** - An aquifer that is bounded above and below by formations of distinctly lower permeability than that of the aquifer itself. An aquifer containing confined ground water.
- **Conjunctive Use** - The coordinated and planned management of both surface and groundwater resources in order to maximize the efficient use of the resource; that is, the planned and managed operation of a groundwater basin and a surface water storage system combined through a coordinated conveyance infrastructure. Water is stored in the groundwater basin for later and planned use by intentionally recharging the basin during years of above-average surface water supply.
- **Contaminant** - Any substance or property preventing the use or reducing the usability of the water for ordinary purposes such as drinking, preparing food, bathing washing, recreation, and cooling. Any solute or cause of change in physical properties that renders water unfit for a given use. (Generally considered synonymous with pollutant).
- **Deep Percolation** - Percolation of water through the ground and beyond the lower limit of the root zone of plants into groundwater.
- **Desalination** - A process that converts seawater or brackish water to fresh water or an otherwise more usable condition through removal of dissolved solids.
- **Domestic Well** - Water well used to supply water for the domestic needs of an individual residence or systems of four or fewer service connections.
- **Electrical Conductivity (EC)** - The measure of the ability of water to conduct an electrical current, the magnitude of which depends on the dissolved mineral content of the water.
- **Effective Porosity** - The volume of voids or open spaces in alluvium and rocks that is interconnected and can transmit fluids.
- **Evapotranspiration (ET)** - The quantity of water transpired (given off), retained in plant tissues, and evaporated from plant tissues and surrounding soil surfaces.
- **Groundwater Basin** - An alluvial aquifer or a stacked series of alluvial aquifers with reasonably well-defined boundaries in a lateral direction and having a definable bottom.
- **Groundwater Mining** - The process, deliberate or inadvertent, of extracting groundwater from a source at a rate in excess of the replenishment rate such that the groundwater level declines persistently, threatening exhaustion of the supply or at least a decline of pumping levels to uneconomic depths, pits, ditches, furrows, streambed modifications, or injection wells.
- **Groundwater Recharge** - The natural or intentional infiltration of surface water into the zone of saturation.
- **Groundwater Table** - The upper surface of the zone of saturation in an unconfined aquifer.
- **Groundwater** - Water that occurs beneath the land surface and fills the pore spaces of the alluvium, soil, or rock formation in which it is situated. It excludes soil moisture, which refers to water held by capillary action in the upper unsaturated zones of soil or rock.

- **Hydraulic Barrier** - A barrier created by injecting fresh water to control seawater intrusion in an aquifer, or created by water injection to control migration of contaminants in an aquifer.
- **Hydraulic Conductivity** - A measure of the capacity for a rock or soil to transmit water; generally has the units of feet/day or cm/sec.
- **Hydrograph** - A graph that shows some property of groundwater or surface water as a function of time.
- **Hydrologic Cycle** - The circulation of water from the ocean through the atmosphere to the land and ultimately back to the ocean.
- **Hydrostratigraphy** - A geologic framework consisting of a body of rock having considerable lateral extent and composing a reasonably distinct hydrologic system.
- **Hyporheic Zone** - The region of saturated sediments beneath and beside the active channel and that contain some proportion of surface water that was part of the flow in the surface channel and went back underground and can mix with groundwater.
- **Infiltration** - The flow of water downward from the land surface into and through the upper soil layers.
- **Infiltration Capacity** - The maximum rate at which infiltration can occur under specific conditions of soil moisture.
- **In-lieu Recharge** - The practice of providing surplus surface water to historic groundwater users, thereby leaving groundwater in storage for later use.
- **Land Subsidence** - The lowering of the natural land surface due to groundwater extraction.
- **Lithologic Log** - A record of the lithology of the soils, sediments and/or rock encountered in a borehole from the surface to the bottom.
- **Lithology** - The description of rocks, especially in hand specimen and in outcrop, on the basis of such characteristics as color, mineralogical composition, and grain size.
- **Losing Stream** - A stream or reach of a stream that is losing water by seepage into the ground.
- **Natural Recharge** - Natural replenishment of an aquifer generally from snowmelt and runoff; through seepage from the surface.
- **Non-Potable Water** – Water that is fit for uses other than human consumption; meets non-potable water standards as set down by DHS. For an overview of non-potable water regulations, see the Water Quality Evaluation complementary existing condition report. This includes untreated California State Water Project deliveries that are recharged for groundwater replenishment or conjunctive use.
- **Overlying Right** - Property owners above a common aquifer possess a mutual right to the reasonable and beneficial use of a groundwater resource on land overlying the aquifer from which the water is taken. Overlying rights are correlative (related to each other) and overlying users of a common water source must share the resource on a pro rata basis in times of shortage. A proper overlying use takes precedence over all non-overlying uses.

- **Perched Groundwater** - Groundwater supported by a zone of material of low permeability located above an underlying main body of groundwater.
- **Permeability** - The capability of soil or other geologic formations to transmit water. See hydraulic conductivity.
- **Porosity** - The ratio of the voids or open spaces in alluvium and rocks to the total volume of the alluvium or rock mass.
- **Potable Water** – Water that is fit for human consumption; meets drinking water standards as set down by the California Department of Health Services (DHS). For an overview of potable water regulations, see the Water Quality Evaluation complementary existing condition report.
- **Prescriptive Right** - Rights obtained through the open and notorious adverse use of another's water rights. By definition, adverse use is not use of a surplus, but the use of non-surplus water to the direct detriment of the original rights holder.
- **Primary Porosity** - Voids or open spaces that were present when alluvium and rocks were originally deposited or formed.
- **Recharge** - Water added to an aquifer or the process of adding water to an aquifer. Ground water recharge occurs either naturally as the net gain from precipitation, or artificially as the result of human influence.
- **Recharge Basin** - A surface facility constructed to infiltrate surface water into a groundwater basin.
- **Reclaimed Water** – Water that is discharged and reused outside the ownership or control of the original site or jurisdiction of use. Used in this report exclusively in reference to non-potable water sources.
- **Recycled Water** – Water that is reused within the ownership or control of its original site or jurisdiction of use. Used in this report exclusively in reference to non-potable water sources.
- **Riparian Right** - A right to use surface water, such right derived from the fact that the land in question abuts upon the banks of streams.
- **Runoff** - The volume of surface flow from an area.
- **Safe Yield** - The maximum quantity of water that can be annually withdrawn from a groundwater basin without adverse effect.
- **Salinity** - Generally, the concentration of mineral salts dissolved in water. Salinity may be expressed in terms of a concentration or as electrical conductivity. When describing salinity influenced by seawater, salinity often refers to the concentration of chlorides in the water. See also total dissolved solids.
- **Saturated Zone** - The zone in which all interconnected openings are filled with water, usually underlying the unsaturated zone.
- **Secondary Porosity** - Voids in a rock formed after the rock has been deposited; not formed with the genesis of the rock, but later due to other processes. Fractures in granite and caverns in limestone are examples of secondary openings.

- **Seepage** - The gradual movement of water into, through or from a porous medium. Also the loss of water by infiltration into the soil from a canal, ditches, laterals, watercourse, reservoir, storage facilities, or other body of water, or from a field.
- **Semi-confined Aquifer** - A semi-confined aquifer or leaky confined aquifer is an aquifer that has aquitards either above or below that allow water to leak into or out of the aquifer depending on the direction of the hydraulic gradient.
- **Specific Retention** - The ratio of the volume of water a rock or sediment will retain against the pull of gravity to the total volume of the rock or sediment.
- **Specific Yield** - The ratio of the volume of water a rock or soil will yield by gravity drainage to the total volume of the rock or soil.
- **Spring** - A location where groundwater flows naturally to the land surface or a surface water body.
- **Stratigraphy** - The science of rocks: It is concerned with the original succession and age relations of rock strata and their form, distribution, lithologic composition, fossil content, geophysical and geochemical properties-all characters and attributes of rocks as strata-and their interpretation in terms of environment and mode of origin and geologic history.
- **Subterranean Stream** - Subterranean streams "flowing through known and definite channels" are regulated by California's surface water rights system.
- **Surface Supply** - Water supply obtained from streams, lakes, and reservoirs.
- **Transmissivity** -The product of hydraulic conductivity and aquifer thickness; a measure of a volume of water to move through an aquifer. Transmissivity generally has the units of ft^2/day or gallons per day/foot. Transmissivity is a measure of the subsurface's ability to transmit groundwater horizontally through its entire saturated thickness and affects the potential yield of wells.
- **Transpiration** - An essential physiological process in which plant tissues give off water vapor to the atmosphere.
- **Unconfined Aquifer** - An aquifer which is not bounded on top by an aquitard. The upper surface of an unconfined aquifer is the water table.
- **Underground Stream** - Body of water flowing as a definite current in a distinct channel below the surface of the ground, usually in an area characterized by joints or fissures. Application of the term to ordinary aquifers is incorrect.
- **Unsaturated Zone** - The zone below the land surface in which pore spaces contain both water and air.
- **Water District** – A wholesale provider/manager of water to a large region.
- **Water Quality** - Description of the chemical, physical, and biological characteristics of water, usually in regard to its suitability for a particular purpose or use.
- **Watershed** - The land area from which water drains into a stream, river, or reservoir.

6.5 Water Use Community

6.5.1 Water Purveyors and Other Service Providers

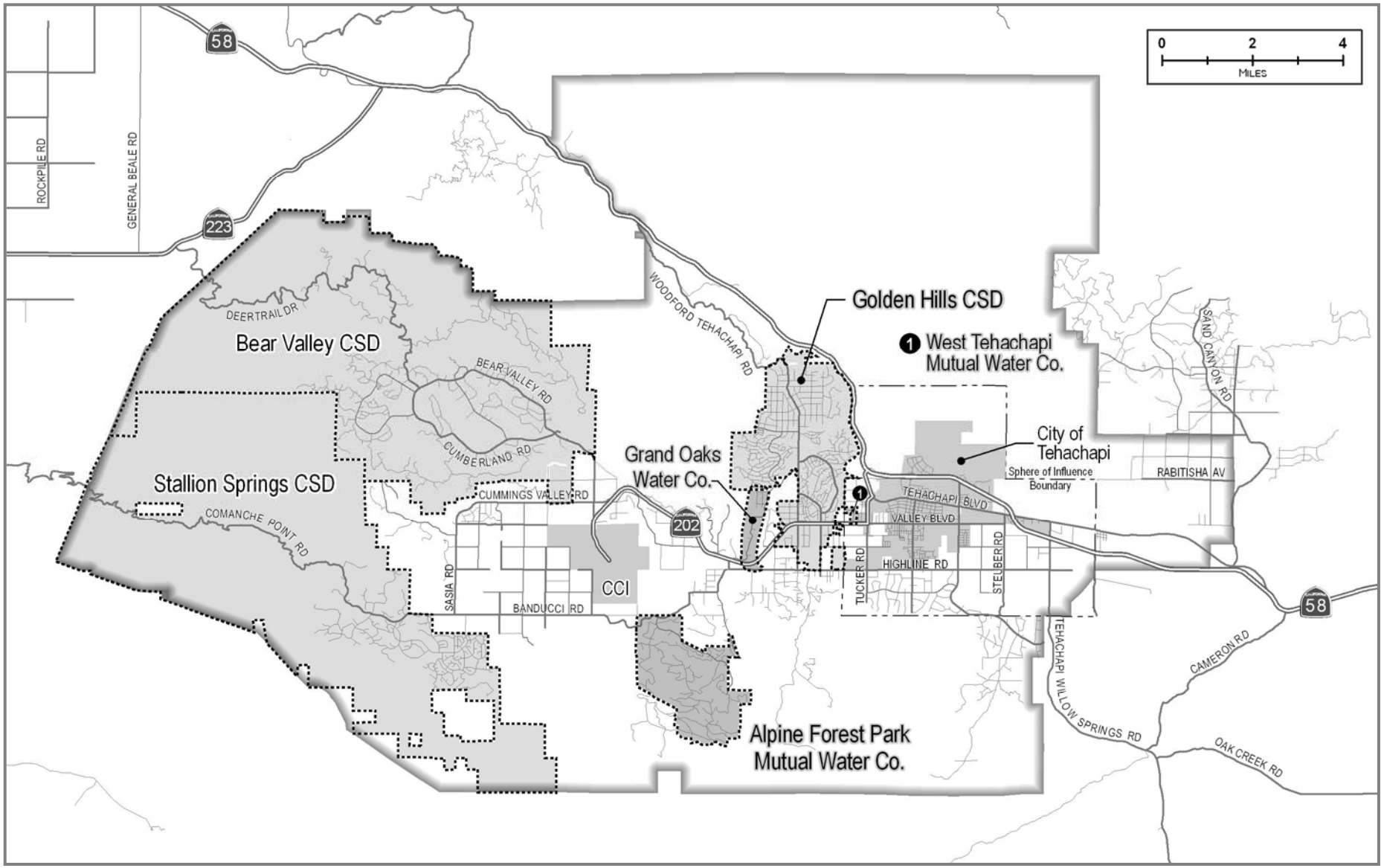
The Tehachapi-Cummings County Water District (TCCWD) encompasses most of the GTA. The TCCWD encompasses approximately 266,000 acres and provides an imported water supply, water resource management and flood protection in the Greater Tehachapi region. The three groundwater basins managed by TCCWD are, the Brite, Cummings and Tehachapi. The District imports supplemental water through the California Aqueduct. The District sells this water to community service districts (CSDs), City of Tehachapi, California Department of Corrections and Rehabilitation and other retail water agencies within TCCWD through conjunctive use,

Figure 6-1 shows the approximate service areas for CSDs providing both water and sewer service in the GTA, as well as retail water agencies in the TCCWD. Table 6-1 provides a summary of basin groundwater basin rights per water purveyor. The following sections describe the general facilities and operating capacities of each. Although not part of the GTA, the City of Tehachapi is described because its influence on water and wastewater issues extends well beyond its corporate limits into the GTA.

Table 6-1 Summary of Basin Groundwater Rights

Producer	Tehachapi Basin (AF)	Cummings Basin	Brite Basin
Bear Valley Community Services District		Overlying	
Golden Hills Community Services District	865.667		
Stallion Springs Community Services District		Overlying	
Alpine Forest Park Mutual Water Company			Prescriptive
Grand Oaks Water Company	4.000		
West Tehachapi Mutual Water Company	9.667		
City of Tehachapi	1,822.000		
Industrial	1,278.000	Overlying	Prescriptive
Institutional	100.667	Overlying	Prescriptive
Agriculture	1,281.521	Overlying	Prescriptive
Domestic Wells	138.478		
Total	**5,500**	**N/A**	**N/A**

Figure 6-1 Service Area Map



6.5.1.1 Bear Valley Community Services District

The Bear Valley Community Services District was organized May 4, 1970 under provisions of the California Community Services District Law (Sections 61000 et seq. of the Government Code of the State of California) to provide and acquire municipal facilities for the 25,000 acres known as Bear Valley Springs. Bear Valley Springs is located eleven miles west of the City of Tehachapi. Bear Valley Community Services District comprises a grassland valley at an average elevation of 4,000 feet, surrounded by mountains rising to over 6,900 feet. Over 8,500 acres are set aside for wilderness and green belt areas.

The Bear Valley Community Services District is governed by a five-member Board of Directors. The District has operated under the council-manager form of government since its inception. Policy making and legislative authority are vested in the Board of Directors. The Board is responsible for passing ordinances, adopting the budget and hiring the general manager, legal counsel and auditor. The general manager is responsible for carrying out the policies of the Board, for overseeing the day-to-day operations of the District and the hiring of all District employees.

Home sites have been limited to 3,800 with current assessable lots of 3,734 due to consolidation of existing lots over the years. Residential lots range in size from 1/3 acre to over 100 acres. Approximately 2 acres has been devoted to commercial use. The District serves a population of approximately 7,373. There are 2,874 water service connections and 468 sewer service connections.

Water System:

Miles of water mains	120
Number of wells	28
Number of reservoirs	43
Storage capacity in gallons	4,570,000
Number of pneumatic pressure tanks	8
Number of booster pumps	80
Number of pressure zones	40
Number of service connections	2,874
Number of fire hydrants	600
Daily average well production in gallons	1,098,500
Maximum day well production in gallons	2,132,800

Sewerage System:

Miles of sanitary sewers	6
Daily treatment capacity of treatment plant in gallons	250,000
Number of service connections	468
Daily average treatment in gallons	82,100
Maximum day treatment in gallons	179,000

Overlying Water Rights Cummings Basin	**Limited to overlying land within the basin**

Bear Valley Community Services District may produce as much water as is beneficially used on properties or service territory which overlie the surface area of the groundwater basin. The production quantity is limited only by the collective safe yield of the aquifer.

6.5.1.2 Golden Hills Community Services District

Located adjacent the City of Tehachapi, Golden Hills Community Services District began operation in the 1960s. Golden Hills Community Services District is governed by a five member elected Board of Directors.

Golden Hills Community Services District consists of approximately 4,000 parcels ranging in size from ¼-acre to over 6-acre. The District serves a population of approximately 8,700. There are 2,834 water service connections and 287 sewer service connections.

Water System:

Miles of water mains	63
Number of wells	15
Number of reservoirs	8
Storage capacity in gallons	3,750,000
Number of pneumatic pressure tanks	4
Number of booster pumps	2
Number of pressure zones	7
Number of service connections	2,834
Number of fire hydrants	337
Daily average well production in gallons	1,300,000
Maximum day well production in gallons	2,800,000

Sewerage System (Golden Hills Sanitation Company):

The Company serves a population of approximately 700.

Miles of sanitary sewers	Unknown
Daily treatment capacity of treatment plant in gallons	100,000
Number of service connections	286
Daily average treatment in gallons	Unknown
Maximum day treatment in gallons	Unknown
Allowable Water Rights Tehachapi Basin (AF/Y)	**865.667**
Base Water Right (AF/Y)	**1,299.000**

Golden Hills Community Services District water production is limited to its Allowable Water Rights. Additional water rights may be purchased or leased from other parties to the Judgment.

6.5.1.3 Stallion Springs Community Services District

Stallion Springs Community Services District was originally created and recognized in 1970 as the Tehachapi Mountain Community Services District. The Stallion Springs Community Services District is operated under the direction of a publicly elected five-member Board of Directors. Operating revenue is derived from property tax money, water bills, sewer bills, solid waste bills, road assessment, water and sewer availability charges, as well as other miscellaneous charges.

There are approximately 2,510 lots in the SSCSD. The District serves a population of approximately 3,600. There are 1,170 water service connections and 325 sewer service connections.

Water System:

Miles of water mains	40
Number of wells	7(active) 3(inactive)
Number of reservoirs	6
Storage capacity in gallons	1,400,000
Number of pneumatic pressure tanks	1
Number of booster pumps	6
Number of pressure zones	12
Number of service connections	1,170
Number of fire hydrants	285
Daily average well production in gallons	-
Maximum day well production in gallons	1,764,000

Sewerage System:

Miles of sanitary sewers	-
Daily treatment capacity of treatment plant in gallons	250,000
Number of service connections	325
Daily average treatment in gallons	38,000
Maximum day treatment in gallons	89,000
Overlying Water Rights Cummings Basin	**Limited to overlying land within the basin**

Stallion Springs Community Services District may produce as much water as is beneficially used on properties or service territory which overlie the surface area of the groundwater basin. The production quantity is limited only by the collective safe yield of the aquifer.

6.5.1.4 Alpine Forest Park Mutual Water Company

Alpine Forest is approximately 5,000 acres in the Tehachapi Mountain, located about ten miles southwest of the City of Tehachapi. There are approximately 1,100 lots up to twenty acres in size situated on elevations from 4,600 feet to 6,600 feet in five tracts. Alpine Forest Park Mutual Water Company provides water service to Tract 3423. The Company serves a population of approximately 600. There are 210 water service connections.

The other four tracts are on individual domestic wells. There are approximately 30 miles of roads in Alpine Forest, which are maintained by the Alpine Forest Park Property Owners Association, established as a non-profit corporation in 1970.

Water System:

Miles of water mains	10
Number of wells	4
Number of reservoirs	1
Storage capacity in gallons	210,000
Number of pneumatic pressure tanks	0
Number of booster pumps	0
Number of pressure zones	1
Number of service connections	210
Number of fire hydrants	25
Daily average well production in gallons	79,500
Maximum day well production in gallons	130,000
Overlying Water Rights Brite Basin	**Limited to overlying land within the basin**

Alpine Forest Mutual Water Company may produce as much water as is beneficially used on properties or service territory which overlie the surface area of the groundwater basin. The production quantity is limited only by the collective safe yield of the aquifer.

6.5.1.5 Grand Oaks Water Company (California Water Service Corporation)

Grand Oaks Water Company is a division of California Water Service Corporation headquartered in San Jose, California. Water Utility Service is regulated by the California Public Utilities Commission.

The Company serves a population of approximately 121 with 55 water service connections.

Water System:

Miles of water mains	4
Number of wells	2
Number of reservoirs	0
Storage capacity in gallons	0
Number of pneumatic pressure tanks	1
Number of booster pumps	0
Number of pressure zones	1
Number of service connections	55
Number of fire hydrants	1
Daily average well production in gallons	36,780
Maximum day well production in gallons	Unknown
Water Rights Tehachapi Basin (AF/Y)	**4.000**
Base Water Right (AF/Y)	**6.000**

Grand Oaks Water Company water production is limited to its Allowable Water Rights. Additional water rights may be purchased or leased from other parties to the Judgment.

6.5.1.6 West Tehachapi Mutual Water Company

West Tehachapi Mutual Water Company is a small mutual water company established as a non-profit mutual benefit corporation. Its shareholder found economies of scale in cooperative operation of a single well and infrastructure. Mutual Water Companies in California are regulated by the California Corporations Commission and the State Legislature.

The Company serves a population of approximately 100 with 36 water service connections.

Water System:

Miles of water mains	0.5
Number of wells	1
Number of reservoirs	1 Holding Tank
Storage capacity in gallons	20,000 Holding Tank
Number of pneumatic pressure tanks	0
Number of booster pumps	0
Number of pressure zones	1
Number of service connections	36
Number of fire hydrants	3
Daily average well production in gallons	300,000
Maximum day well production in gallons	700,000
Water Rights Tehachapi Basin (AF/Y)	**9.667**
Base Water Right (AF/Y)	**13.000**

West Tehachapi Mutual Water Company water production is limited to its Allowable Water Rights. Additional water rights may be purchased or leased from other parties to the Judgment.

6.5.1.7 City of Tehachapi

The City of Tehachapi is not part of the GTA; however, because it is a major water resource consumption factor, its role in the use of groundwater, imported water a wastewater resources is an important component which requires analysis.

The City of Tehachapi produces groundwater pumped from the Tehachapi Basin. Seven deep wells within the city continually refill approximately three million gallons of storage facilities and the 50 miles of transmission lines that bring water to the homes, schools and businesses served by the system.

The City of Tehachapi operates five pressure zones, four of which are used and tested. Monthly bacteriological testing is done in all active zones as well as in the storage tanks and wells themselves. Of the seven wells operated by the city, one is equipped with standby power for use in case of an emergency. The wells are located on the opposite ends of town from each other and are configured so that water can be diverted in different directions in the event of a catastrophic line rupture.

The City of Tehachapi performs water quality testing in accordance with all federal and state criteria. The city's water sampling (both chemical and bacteriological) is done by a state-certified water treatment plant operator and analyzed by a state-certified laboratory to ensure accuracy in testing.

The City of Tehachapi has conducted a Water Source Assessment and Protection Programs for all of its groundwater wells. These Water Source Assessments are management tools for evaluation of proposed developments. While they do not impose land use restrictions, they do identify vulnerabilities for groundwater contamination from sources such as septic tanks, underground storage tanks, known plumes of contamination (natural and pollution generated) and commercial and industrial facilities with known hazardous chemical storage. The City's wells and their potential quality vulnerabilities are described below:

- No contaminants have been detected in the water supply for the **Mojave Well**; however the assessment identified vulnerabilities from activities located near the drinking water source. The source is considered most vulnerable to sewer collection systems and to a historic gas station within the two-year time of travel. The source has a 100-foot sanitary seal and a depth of 182 feet to the uppermost perforation. Any microbiological activity would have to travel this vertical distance to the aquifer before it could begin horizontal travel to the well. The gas station has not had any problems associated with it, and no gas products have ever been detected in Mojave Well.
- No contaminants have been detected in the water supply for the **Dennison Well**; however, the assessment identified vulnerabilities from activities located nearby. These vulnerabilities include high–density housing and the close proximity of other supply wells, which violates specifications requiring distances far enough so that contaminants would take a minimum of two years to reach the water supply. Both of these vulnerabilities pose a relatively low-ranking risk, as does potential leaching from gas stations—both active and historic—and confirmed leaking from a tank within the ten-year time of travel. The sanitary seal at the Dennison Wells is set at 82-feet below grade.
- **Snyder Well** is considered most vulnerable to sewer collection systems. No contaminants have been detected in the water supply; however, the source is still considered vulnerable to activities located near the drinking water source. The sanitary seal at the Snyder well is set at 50-feet below grade.
- **Pinon Well** is considered most vulnerable to septic systems—both low density and sewer collection systems. No contaminants have been detected in the water supply; however, the source is considered vulnerable to activities located near the drinking water source. This source has a very deep 300-foot sanitary seal. In addition, the depth to the uppermost perforation is 400 feet. Any microbiological activity would have to travel this vertical distance to the aquifer before it could begin horizontal travel to the well.
- **Curry Street Well** is also considered most vulnerable to sewer collection systems. No contaminants have been detected in the water supply; however, the source is considered vulnerable to activities located near the drinking water source. This source has a very deep 375-foot sanitary seal.
- **Wahlstrom Well** is considered most vulnerable to septic systems—both low density and sewer collection systems. No contaminants have been detected in the water supply;

however, the source is considered vulnerable to activities located near the drinking water source. This source has a very deep 255-foot sanitary seal.

- **Minton Well** too is considered most vulnerable to high density housing and sewer collection systems. No contaminants have been detected in the water supply; however, the source is considered vulnerable to activities located near the drinking water source. This source has a very deep 285-foot sanitary seal.

The City serves a population of approximately 6,800 with 2,850 water service connections and 2,600 sewer service connections.

Water System:

Miles of water mains	50
Number of wells	7
Number of reservoirs	3
Storage capacity in gallons	2,700,000
Number of pneumatic pressure tanks	1
Number of booster pumps	3
Number of pressure zones	6
Number of service connections	2,850
Number of fire hydrants	405
Daily average well production in gallons	1,990,000
Maximum day well production in gallons	5,791,680

Sewerage System:

Miles of sanitary sewers	35
Daily treatment capacity of treatment plant in gallons	1,250,000
Number of service connections	2,600
Daily average treatment in gallons	830,000
Maximum day treatment in gallons	1,000,000
Water Rights Tehachapi Basin (AF/Y)	**1,822.000**
Base Water Right (AF/Y)	**2,733.000**

The City of Tehachapi's water production is limited to its Allowable Water Rights. Additional water rights may be purchased or leased from other parties to the Judgment.

6.5.2 Industrial/Commercial Producer Water Rights

Lehigh Southwest Cement Company	Tehachapi Basin	1,162.667 AF
Union Pacific Transportation	Tehachapi Basin	65.333 AF
Stockdale Investment Group, Inc.	Tehachapi Basin	50.000 AF
	Total	**1,278.000 AF/Y**

6.5.3 Institutional Producer Water Rights

*Tehachapi Public Cemetery District	Tehachapi Basin	7.333 AF
Tehachapi Hospital	Tehachapi Basin	38.667 AF
*Tehachapi Unified School District	Tehachapi Basin	4.667 AF

Mojave Public Utility District	Tehachapi Basin	50.000 AF

**** Also take direct State Project Water (Non-Potable Irrigation) Deliveries***

Total 100.667 AF/Y

6.5.4 Agricultural Producer Water Rights

Table 6-2 shows the amount of Agricultural Water Rights and Carryover in 2006.

Table 6-2 Tehachapi Basin Agriculture Producer Water Rights

Party and/or Successor	Allowed Pumping Allocation (AF/Y)	Allowable Carryover (AF)
Abel Trustee, Diana P.	11.046	5.524
Abel, Mirta	8.283	4.142
Arnds, Theodore	6.000	0.00
Baker, Scott	6.000	3.000
Barnes, Betty and David	6.000	3.000
Benz, Paul	6.000	3.000
Bozenich, Gary	21.333	10.666
Burgeis, Donald & Betty	16.000	8.000
Continuity I, LLC	39.333	19.666
Cooper, W.W. & Alice	10.222	5.110
Crystal Organic Farms	0.000	58.573
Dye, Lewis M., Jr.	6.000	3.000
Frezieres, Grant	26.000	6.500
Ha, Kun Sik and Kyung Ran	66.140	33.070
Ha, Kun Sik and Kyung Ran and Hailu and Enan Ejigu	23.860	11.930
Hammond, Jon	13.333	6.667
Hwang, Richard T.	17.355	8.678
Jones, Gwendolyn	6.666	3.333
Keel, Alice	3.000	1.500
Knaus, Alice	6.000	3.000
Kolesar, John	1.500	0.000
Kubicek Trust	203.333	0.000
Larson, Russell	3.000	1.500
Lees, Spencer H.	6.000	0.000
Lokey, John R. & Adele	3.000	0.000
Mathews, Don	4.667	2.334
Mendez, Frank	12.000	6.000
Mills, John E. & Gracie E.	12.667	6.334
Neely, Leattrice	3.000	0.000
N.I.R.S. Investment Company, Inc.	31.333	7.833
Pulford, John	0.000	9.778
Robb, Paul R.	3.335	1.668
Robison, William	3.000	0.000
Safier, Lester A. et al	300.667	150.332
Schultz Enterprises	18.000	9.000
Scott, Robert R. & Dorothy	30.000	15.000
Starbird, John H., et al	6.667	3.334

Party and/or Successor	Allowed Pumping Allocation (AF/Y)	Allowable Carryover (AF)
Stiekman Trust, Gerson	15.333	7.666
Sullivan, Grant D., et al	28.667	0.000
Sun Trail, Inc.	203.333	50.833
Tehachapi-ET Ventures	51.333	25.666
Volz, Herbert	6.667	4.834
Vukich, Gerald	6.000	0.000
Warner, Gary	6.670	0.000
Weir, Juanita	12.000	6.000
Wietsman, Harry	3.000	0.000
Wilder, Gary & Wanda, et al	1.778	0.890
Worrel, W.W.	3.000	1.500
Yeager, Louise	3.000	1.500
Total	**1281.521**	**510.361**

Water rights holders in the Tehachapi Basin are permitted by the Judgment to "Carryover" unexercised water rights equal to twenty-five percent of their unproduced water right holding for two consecutive years, or up to fifty percent of their water right. Parties may not carry over more than fifty percent of their unproduced water right.

Agricultural producers make up the largest block of Carryover water. Unexercised Agricultural water rights are restated below, with all water rights holders with Carryover water, to demonstrate the total water available back to the Tehachapi Basin.

The Cummings Basin and Brite Basin are Overlying Basins which presently do not exceed the Safe Yield of the aquifer. There is no recognition or quantification of the water rights unexercised in the Cummings or Brite Basins.

6.5.5 Unexercised Water Rights

Table 6-3 lists the parties with carryover of Unexercised water rights in 2006. The 1,492.285 acre-feet is added to the allowable production allocation.

Parties identified by shading in Table 6-3 are not presently producing or exercising their water rights and are carrying over the maximum fifty percent each year, which currently totals 982.178 acre feet.

Table 6-3 Tehachapi Basin Unexercised Water Rights

Party and/or Successor	Allowed Pumping Allocation (AF/Y)	Allowed Carryover (AF)
Abel Trustee, Diana P.	11.046	5.524
Abel, Mirta	8.283	4.142
Baker, Scott	6.000	3.000
Barnes, Betty and David	6.000	3.000
Benz, Paul	6.000	3.000
Benz Visco Youth Park		(4.421)
Bozenich, Gary	21.333	10.666

Party and/or Successor	Allowed Pumping Allocation (AF/Y)	Allowed Carryover (AF)
Burgeis, Donald & Betty	16.000	8.000
Continuity I, LLC	39.333	19.666
Cooper, W.W. & Alice	10.222	5.110
Crystal Organic Farms	0.000	58.573
Dye, Lewis M., Jr.	6.000	3.000
Frezieres, Grant	26.000	6.500
Golden Hills CSD	865.667	349.226
Grand Oaks Water Corp.	4.000	(20.163)
Ha, Kun Sik & Kyung Ran	66.140	33.070
Ha, Kun Sik & Kyung Ran & Hailu & Enan Ejigu	23.860	11.930
Hammond, Jon	13.333	6.667
Hwang, Richard T.	17.355	8.678
Jones, Gwendolyn	6.666	3.333
Keel, Alice	3.000	1.500
Knaus, Alice	6.000	3.000
Larson, Russell	3.000	1.500
Lehigh Southwest Cement Co	1,162.667	581.334
Mathews, Don	4.667	2.334
Mendez, Frank	12.000	6.000
Mills, John E. & Gracie E.	12.667	6.334
Mojave PUD	50.000	25.000
N.I.R.S Investment Co. Inc.	31.333	7.833
Pulford, John	0.000	9.778**
Robb, Paul R.	3.335	1.668
Safier, Lester A. et al	300.667	150.332
Schultz Enterprises	18.000	9.000
Scott, Robert R. & Dorothy	30.000	15.000
Starbird, John H., et al	6.667	3.334
Stiekman Trust, Gerson	15.333	7.666
Sun Trail, Inc.	203.333	50.833
Tehachapi-ET Ventures	51.333	25.666
Tehachapi Hospital	38.667	19.334
Tehachapi Public Cemetery	7.333	3.666
Tehachapi Unified SD	4.667	2.334
Volz, Herbert	6.667	4.834
Weir, Juanita	12.000	6.000
West Tehachapi Mutual Water	9.667	0.614
Wilder, Gary & Wanda, et al	1.778	0.890
Worrel, W.W.	3.000	1.500
Yeager, Louise	3.000	1.500
Zond Systems, Inc.	50.000	25.000
Total	**3,204.019**	1,492.285

( ) Overpumped

***** Leased Right Carryover***

Cummings Basin is an Overlying Basin which presently does not exceed the Safe Yield of the aquifer.

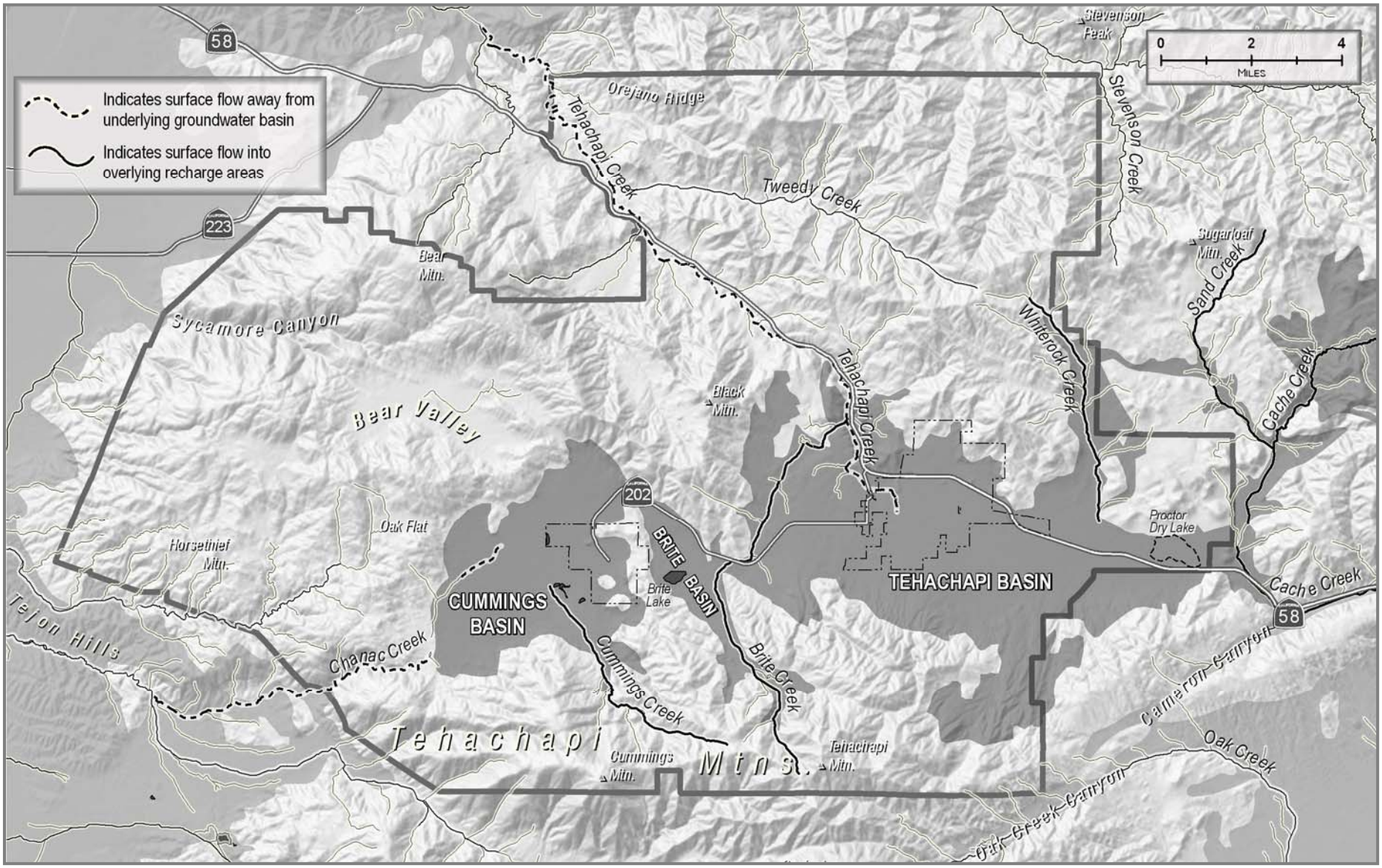
6.6 Greater Tehachapi Hydrology

6.6.1 Groundwater Basins

The Cummings and Tehachapi basins are relatively flat at an altitude of approximately 4,000 feet. The Tehachapi Mountains rise 7,700 feet south of the Cummings basin, and over 8,000 feet to the south of the Tehachapi Basin. Precipitation in the City of Tehachapi (4,017 ft) averages eleven inches per year, with 80 to 90 percent falling between November and April (California Department of Water Resources, 2007). Winter precipitation falls mostly as snow at elevations above 5,000 ft.

The Cummings, Brite, Tehachapi groundwater basins (see Figure 6-2) are all bounded by the Tehachapi Mountains to the south and the Sierra Nevada to the north. The primary water-bearing units are Pleistocene to Recent alluvial fans around the margins of the basins deposited by creeks draining the Tehachapi Mountains and Sierra Nevada, and floodplain deposits in the centers of the basins (Dibblee and Warne, 1970; Dibblee and Louke, 1970; Michael and McCann, 1962). The sediments are arkosic cobbles, gravels, sands, silts, and clays, with the coarser materials in the alluvial fans and the finer sediments in the floodplains.

Figure 6-2 Groundwater Basins and Surface Water Features



6.6.2 Tehachapi Watershed

The Tehachapi Watershed contains 50.6 square miles or 32,420 acres. Elevations within the watershed range from 3,800 ft. to 7,960 ft. above sea level.

The drainages within the watershed include Brite Creek, Water Canyon Creek, Antelope Creek, and Blackburn Creek. Tehachapi Creek receives flows from Water Canyon and drainages to the north, and flows westward from Tehachapi Valley. Both Antelope and Blackburn Canyon watershed drainages are now controlled by flood control reservoirs and channels which facilitate improved water conservation and recharge.

Another flood control channel is located along Dennison Road and is situated in a north-south direction channeling floodwaters from Antelope Canyon and drainages east of Antelope, water from the Antelope Canyon drainage and the Dennison Road Channel drain floodwaters to fields north and east of the City of Tehachapi, which eventually flow into Tehachapi Creek. Blackburn Creek reservoir empties into the Proctor Dry Lake bed, to the northeast of the City of Tehachapi.

Culverts and ditches carry the storm water runoff onto and across the Tehachapi City Airport and eventually into Tehachapi Creek.

There are two additional man-made diversion channels located in the Mountain Meadows development. These channels divert and direct storm water run off into Antelope and Blackburn retention reservoirs.

Blackburn retention reservoir drains and can over flow towards Proctor Lake, an intermittent lake, usually dry, at the far east limits of the Tehachapi Basin.

Antelope retention reservoir drains westerly into the Antelope Run channel, then north into Tehachapi Creek; although if there is a spillway condition which will occur if there is a storm exceeding a 100-year calculated occurrence, then water will flow in the Dennison Road corridor and into the previously mentioned Units I and II of the P.L. 566 program.

6.7 Existing Groundwater Sources

6.7.1 Tehachapi Valley Groundwater Basin

The Tehachapi Valley Groundwater Basin surface is the Tehachapi Valley floor, encircled on the west by the foothill area of the low-lying ridge running north and south between the Tehachapi Mountains and the Sierra Nevada. It is bound on the north by the Sierra Nevada; on the south by the Tehachapi Mountains; and on the east by a ridge of the Sierra Nevada and the Tehachapi Mountains, separated by the Proctor Gap, a subsurface barrier ridge. The Tehachapi Groundwater Basin is generally elongated east and west approximately nine miles wide and approximately oval-shaped and five miles at its widest. The Tehachapi Groundwater Basin may be pictured as a bowl, the bottom and sides of which are composed of impervious materials. The bowl is filled with heterogeneous pervious alluvium deposited through geologic time by the streams carrying eroded materials from the surrounded watershed areas.

Surface outflow from Tehachapi Valley occurs during time of heavy storms via Tehachapi Creek to the west and Cache Creek to the east. Surface and subsurface basin inflow occurs from the creeks of the surrounding watershed areas and replenishes the groundwater within the basin. Subsurface outflow is restricted by the impervious rock outcroppings in the Tehachapi Creek

outlet on the west and by the narrow Proctor Gap. Groundwater is stored within the alluvium of the basin. The average annual safe yield of groundwater within the basin has been determined to be 5,500 acre feet by the judgment.

6.7.2 Cummings Valley Groundwater Basin

The Cummings Valley Groundwater Basin surface is generally the Cummings Valley floor, bordered on the south by the Tehachapi Mountains, on the north by the Sierra Nevada, with low-lying ridges connecting these two ranges on the east and west sides of the basin. The Cummings Groundwater Basin is generally elongated in a northeasterly manner, approximately six miles at the longest point and four miles at the widest point.

Inflow of surface and subsurface water from the surrounding watershed including Cummings Creek replenishes the basin. Surface inflow from Chanac Creek draining a portion of the Brite Valley also flows into the Cummings Groundwater Basin. Surface outflow is by Chanac Creek to the west. Subsurface outflow from the basin does not occur to any appreciable extent due to the rock outcroppings in the channel of Chanac Creek.

Groundwater is stored within the alluvium of the basin. The average annual safe yield of the groundwater within the basin was established in the Judgment, California Superior Court, Kern County, Case No. 97209, of the Cummings Basin to be 4,090-acre feet per year as of the time of trial.

6.7.3 Brite Valley Groundwater Basin

The Brite Valley Groundwater Basin is a northwest to southeast trending valley basin bounded on the north by the Sierra Nevada and on the south by the Tehachapi Mountains, with low-lying ridges connecting the two ranges on its east and west sides. The elevation ranges from 4,200 to 5,000 feet. The southeast portion of the basin is drained by Brite Creek which flows into Tehachapi Valley. The northwest portion of the basin is drained by an Chanac Creek which flows into Cummings Valley. Average precipitation values range from 10 to 14 inches per year.

Pre-Cretaceous metamorphic rocks including limestone and dolomite units generally surround the basin. Small areas of Pre-Cenozoic and Mesozoic granitic rocks bound the basin in the north and east (Smith 1964). These rocks form a basement over which Quaternary alluvium has been deposited. Alluvium in the Brite Valley is represented by alluvial fan and floodplain material deposited by Brite Creek in the south and east portions of the basin and intermittent streams to the north and west. Average thickness of the alluvium has been estimated at 119 feet with a maximum thickness of up to 500 feet on the northeast side of the basin (Michael 1962). Typical of alluvial settings, coarser material (gravels and cobbles) exist in the upper fans at the valley margins and finer grained materials (clay and sandy clay) near the valley center. Review of well completion reports on file in California Department of Water Resources' San Joaquin District show moderately thick clay-rich layers commonly inter-bedded with sands and gravels.

Groundwater recharge likely occurs primarily from percolation of precipitation from the Brite Creek watershed and Chanac Creek. Tehachapi-Cummings County Water District owns and operates a reservoir in the basin which receives State Project Water and acts as storage and recharge facility. From the 1960s to the present, the groundwater levels have been relatively constant. Evidence that the basin is full can be seen in the northwest portion of the basin where groundwater is at the surface and exiting the basin by Chanac Creek.

6.8 Adjudicated Groundwater Basins

California does not have a statewide program to manage groundwater or a mandatory State groundwater management statute. Groundwater management in California is a local responsibility accomplished under the authority of the California Water Code and a number of court decisions. Under present law, groundwater management is achieved by a combination of one or more of the six following methods:

- Overlying rights
- Local agencies
- Adjudicated basins
- Special Act Districts with groundwater management authority
- Assembly Bill 3030 Groundwater Management Plans
- Local Groundwater Ordinances

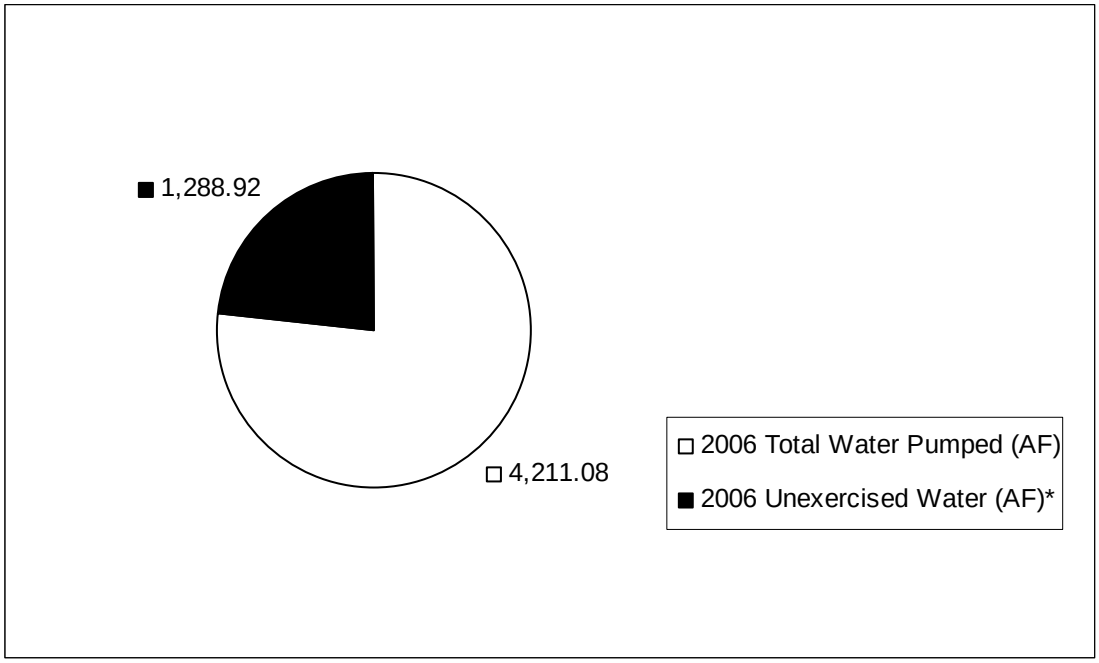
The need for imported water to supplement the Tehachapi area's dwindling groundwater supply was foreseen as early as 1947. From 1947 until 1965, the Tehachapi Soil Conservation District and the Tehachapi-Cummings Valley Water Conservation District developed basic groundwater and watershed studies. In 1966, lawsuits were filed in Superior Court in each of the three groundwater basins: Brite, Cummings and Tehachapi.

6.8.1 Tehachapi Groundwater Basin

California Superior Court, Kern County, Case No. 97210 was filed 1971. By 1972, the Tehachapi Groundwater Basin was nearly depleted. In 1973, the amended judgment (see Appendix I) was filed and determined the following:

- Safe yield is 5,500 acre feet annually;
- Initial Base Water Right of 8,200 acre feet.
- Established an Annual Allowed Pumping Allocation of approximately 66 2/3% (5,500 acre feet) of the Initial Base Water Right (prescriptive right);
- Provided for domestic users to pump up to three acre feet per year (not reduced);
- Appointed Tehachapi-Cummings County Water District as Watermaster and designated duties, powers, and responsibilities;
- Established Exchange Pool as part of the physical solution;
- Established necessary rules and regulations; and
- Injunction against exporting water.

Figure 6-3 Tehachapi Basin Pumped Water vs. Unexercised Water (in Acre-Feet/Year)



6.8.2 Cummings Groundwater Basin

California Superior Court, Kern County, Case No. 97209, was filed in 1972. Since there was no overdraft at the time of judgment, it was decided that the Court would establish "cutbacks" in the event of future overdraft. The judgment determined the following:

- Safe Yield is 4,090 acre feet annually;
- Injunction against exporting water; and
- Overlying Rights.

6.8.3 Brite Groundwater Basin

California Superior Court, Kern County, Case No. 97211, was filed in 1970. The judgment determined the following:

- Safe Yield is 500 acre feet annually;
- Overlying rights;
- No injunction against pumping; and
- Under continuing jurisdiction of the Court.

6.9 Existing Imported Water Supply

6.9.1 Background

On December 16, 1966, Tehachapi-Cummings County Water District executed two contracts with the Kern County Water Agency for access to the State Water Project. One contract is for 5,000 acre feet of Agricultural Water and the second for 15,000 acre feet of Municipal & Industrial Water.

On June 8, 1971, in a special District election, 65% of the voters turned out to support an election to obtain a federal loan under Public Law 984 in the amount of $6.5 million, and approved by a 91% margin a general obligation bond in the amount of $2.5 million for construction of the pipeline and pump stations required to deliver California State Water Project water to the Greater Tehachapi Area.

In May 1972, construction of the Tehachapi-Cummings County Water District facilities began.

On November 4, 1973, the first water was delivered from TCCWD – WRM turn out on the State Water Project near the A.D. Edmonston Pumping Plant to the Tehachapi-Cummings County Water District reservoir located in Brite Valley and other locations in the Greater Tehachapi area. The mainline is 31 miles long and varies from 27 to 39 inches in diameter. The operational capacity of the line is up to 13,500 gallons per minute or 30 cubic feet per second. Water is lifted through the mainline at a total of 3,425 feet by four pumping plants. Pumping plants 1, 2, and 3 have a lift of 1,025 feet while pumping plant 4 has a lift of only 350 feet. Deliveries have been made each season since 1973.

6.9.2 1994 Monterey Agreement

The 1994 Monterey Agreement originated in Monterey, California, among the California Department of Water Resources and the State Water Project Contractors to address fundamental contract issues by amending the long-term water supply contracts. This understanding produced a set of guidelines, known as the Monterey Principles, to amend the contracts to resolve some long-standing concerns of State Water Project Contractors and provide more flexibility in administering those contracts. Those principles and subsequent amendments were intended to significantly revise the complex State Water Project contracts, written more than 30 years prior to 1994. Despite careful crafting, the contracts could not easily accommodate the shifts in water policy and management that occurred since their execution.

The Monterey Agreement combined the original separate contracts, 5,000 acre feet of Agricultural Water and 15,000 acre feet of Municipal & Industrial Water, into a single contract for 20,000 acre feet for the Tehachapi-Cummings County Water District.

The State Water Project Principles for the Monterey Agreement are:

1. **Water Allocations.** Allocations are based on entitlement.

2. **Water Allocations When Requests Exceed Available Supply.** Initial agricultural deficiency is eliminated; Article 18(b) [permanent shortage provision] is eliminated.

3. **Kern Water Bank.** Kern Fan Element property is transferred to agricultural contractors; agricultural contractors permanently retire 45,000 acre feet of entitlement.

4. **Permanent Sales of Entitlement.** Agricultural contractors commit to allow up to 130,000 acre-feet of entitlement to be sold to urban contractors, on a willing buyer-willing seller basis.

5. **Restructuring to Ensure Financial Integrity of the State Water Project.** Contractor payments in excess of State Water Project financial obligations are returned to the contractors as follows: money for agricultural contractors is put into a trust fund for rate management; money for urban contractors is distributed directly to them.

6. **Terminal Reservoirs Points of Delivery.** The contractors paying for the terminal reservoirs gain increased control/management of those reservoirs.

7. **Interruptible Water Service Program.** Current categories of surplus, wet weather and Article 12(d) [shortage makeup provision] water are replaced by a single category of interruptible water, which is allocated based on entitlement and delivered at the melded State Water Project power rate.

8. **Non-project Water Transport.** Contractors have the right to transport non-project water in State Water Project facilities, at the melded State Water Project power rate.

9. **Water Storage Outside Service Area.** Rules for carryover in State Water Project conservation facilities are expanded; there are no limits on groundwater storage of State Water Project water outside a contractor's service area.

10. **Turn-Back Water Pool Sales.** An annual turn-back pool is created under which water allocated but not needed by a contractor may be sold to interested contractors and/or California Department of Water Resources at a percentage of the Delta Water Rate, or to non-contractors.

11. **Conforming Contract Amendments.** State Water Project contracts are to be amended to conform to these principles.

12. **Project Improvements.** California Department of Water Resources reaffirms its obligation to complete the State Water Project.

13. **Integrated Package.** The principles come as a package—a contractor can participate in all or none of the provisions.

14. **No Precedent.** If the amendments are not entered into, the parties agree not to use these principles in court proceedings.

6.9.3 Understanding State Water Project Allocation

6.9.3.1 Water Allocations and Water Service

In years of shortage, Agricultural Table A water will no longer be the first to be reduced. Water allocation will be based on **all** Table A, Agricultural, Municipal and Industrial, amounts. Table A refers to the California State Water Contract among the contracting parties; wherein, Table A lists the quantities of water subscribed by each agency.

Surplus, wet weather, and Article 12(d) water will be replaced by a single category of Article 21 water, allocated on the basis of Table A water amount and delivered at the same power rate as Table A water. The categories that make up the new class of Article 21 water where previously special categories of water made available to Table A contractors, when available, on a pro rata basis at reduced rates. Article 21 water is usually made available when all of the reservoirs are full, and the demand is seasonally reduced. When the water is available is most often purchased by agencies with groundwater recharge facilities and groundwater storage capacity.

Transfers of Table A water and Land: An annual Table A of 45,000 acre-feet of agricultural water—4,330 acre-feet from Dudley Ridge Water District and 40,670 acre-feet from Kern County Water Agency—was permanently transferred to California Department of Water Resources and retired. One hundred and thirty thousand acre-feet of agricultural Table A water became available for permanent sale to other State Water Project contractors for urban use from the Kern County Water Agency.

6.9.3.2 Financial Restructuring

California Department of Water Resources is developing financial programs with State Water Project funds to establish an operating reserve; a State Water Project facilities capital account to support certain otherwise unfunded planning studies; a water rate management program to reduce charges for all signing urban contractors when State Water Project cash flow permits; and a rate management trust fund for signing agricultural contractors.

6.9.3.3 Water Storage and Transportation

Contractors may transport non-project water in State Water Project facilities at the melded State Water Project power rate. Carryover rules for State Water Project surface conservation reservoirs will expand, allowing year-to-year storage by contractors when space is available. Within certain constraints, State Water Project water may be stored from year to year in non-State Water Project surface storage facilities that lie outside a contractor's service area for later use within the service area. There will be no limits on groundwater storage of SWP water outside a contractor's service area for later use within the service area.

Contractors not storing in any one particular year can participate in an annual turn-back pool of allocated but unneeded water, which will be sold at a percentage of the Delta Water Rate to either the California Department of Water Resources or other contractors. Contractors can also temporarily, for a period of years, reduce their Table A amount and receive rate reductions.

6.9.4 Historic Imported Water Deliveries

Table 6-4 Tehachapi-Cummings (TCCWD) Historic State Water Project Delivery Record

Year	Total SWP Imported (AF)	% of SWP Allocation (Table A Amount) (AF)	TCCWD-SWP Water Sold to I.D. 4 (AF)	AG Water (AF)	M & I Water (AF)	Conjunctive Use Water (AF)
1974	5,191	-	-	5,500	387	-
1975	6,793	-	-	5,218	386	-
1976	4,857	-	-	3,389	506	-
1977	3,420	-	-	2,086	504	-
1978	2,809	100	10,600	1,284	319	-
1979	3,789	100	10,600	1,565	452	-
1980	3,041	100	10,600	2,339	375	-
1981	3,092	100	10,600	2,035	330	-
1982	1,117	100	10,600	1,337	212	-
1983	666	100	10,600	534	91	-
1984	1,170	100	10,600	508	115	-

Year	Total SWP Imported (AF)	% of SWP Allocation (Table A Amount) (AF)	TCCWD-SWP Water Sold to I.D. 4 (AF)	AG Water (AF)	M & I Water (AF)	Conjunctive Use Water (AF)
1985	1,307	100	10,600	489	176	-
1986	2,136	100	10,600	1,023	181	-
1987	1,471	100	10,600	1,091	410	-
1988	3,234	100	10,600	1,789	1,450	-
1989	3,884	100	10,829	1,413	3,774	-
1990	5,112	AG+50/M&I-100	12,200	1,964	1,916	-
1991	2,213	AG-0/M&I-30	1,500	1,645	1,460	-
1992	3,508	45	4,650	1,739	1,292	-
1993	4,140	100	10,310	1,658	1,052	-
1994	5,277	50	5,300	1,740	1,052	-
1995	5,355	100	11,100	2,912	657	-
1996	6,335	100	11,100	387	867	-
1997	6,601	100	11,000	4,812	778	448
1998	6,288	100	10,800	3,695	648	307
1999	7,576	100	10,600	5,716	881	481
2000	6,364	90	9,620	4,976	878	537
2001	3,965	39	3,180	2,811	825	673
2002	7,553	70	4,795	1,335	987	1,631
2003	7,429	90	9,620	4,682	764	682
2004	7,886	65	4,795	4,982	911	1,133
2005	6,443	90	9,620	4,609	431	1,505
2006	6,424	100	10,600	4,139	463	1,485
Total	**146,446**	**-**	**-**	**85,402**	**25,530**	-

6.9.5 M & I Customers

Table 6-5 Tehachapi-Cummings (TCCWD) Municipal/Industrial Imported Water Use

User Name	2003 (AF)	2004 (AF)	2005 (AF)	2006 (AF)
Bear Valley CSD	558.088	659.835	652.313	699.431
Cal Portland	48.513	63.680	17.972	42.528
CCI				
C11S*	280.869	0.699	0.000	0.000
Conjunctive Use	460.000	303.000	657.000	595.000
City of Tehachapi				
American Carriage	1.374	5.518	3.944	3.787
Chemtool	10.065	11.481	3.240	9.335
Henway	1.691	0.320	0.161	0.863
Golden Hills CSD				
Conjunctive Use	168.997	0.000	5.001	0.000
T5(AN)**	0.000	141.489	0.000	0.000
Stallion Springs CSD				
Stallion Springs Well 1 -Superior Sod	0.000	54.384	17.248	0.000
Conjunctive Use	124.000	163.830	192.270	190.605
Golf Course	280.869	349.227	222.084	200.457
Miscellaneous	103.071	176.929	30.152	22.37
Oak Tree Affiliates	0.000	0.000	0.000	0.000
Tehachapi Public Cemetery	22.303	29.169	25.542	27.360
Tehachapi Unified School District	125.288	129.478	123.626	156.783
Tehachapi Valley Rec. & Parks	6.417	2.479	1.524	.0.432
Total M&I	**2,191.545**	**2,091.518**	**1,952.077**	**1,948.519**

**C11S – Turnout 11 in the Cummings Basin for CCI*

***T5 – Turnout 5 in the Tehachapi Basin for Golden Hills(East of original turnout 5, north of the pipeline)*

6.10 Recycled/Reclaimed (Return Flows) Water Sources

Resolution No. 8-73 of the Board of Directors of the Tehachapi-Cummings County Water District was adopted June 13, 1973 claiming a right to waste, seepage and return flows. In general, the Tehachapi-Cummings County Water District laid claim to all right, title and interest in and to all return flow into any of the three groundwater basins resulting from water imported by the District, along with the right to recapture and reuse said water. The claim extended to return flows whether from waste or seepage before any delivery of water delivered by the District, and from percolation after or as a result of use or reuse of imported waters by any water user.

Tehachapi-Cummings County Water District further expressed a reservation of its intentions for the future to later recapture said water. Tehachapi-Cummings County Water District reiterated its claim through Resolution No. 16-79 on December 15, 1976.

Three of the four wastewater treatment plants within the GTA are secondary quality treated only, which limits its reuse potential. California Code of Regulation, Title 22, governs the discharge of water effluents for reuse and groundwater recharge. Secondary effluents are general land applied to forage crops on non-consumptive grasses. Land application permits must demonstrate that there is NO percolation to groundwater.

Tertiary treatment of these effluents could produce a substantial amount of additional water supply.

6.10.1 Cummings Basin Return Flow Water Program

Table 6-6 Cummings Basin Return Flows

Return Flow	2002 (AF)	2003 (AF)	2004 (AF)	2005 (AF)	2006 (AF)
Return Flow Accumulated to Jan 1, 2006	5,672	5,511	5,781	5,936	6,531
Return Flow to Basins for 2006	157	658	690	595	572
Return Flow Water Pumped by CCI	(318)	(460)	(535)	-	-
Accumulated Return Flow Available	**5,511**	**5,709**	**5,936**	**6,531**	**7,103**

6.10.2 Tehachapi Basin Return Flow Water Program

Table 6-7 Tehachapi Basin Return Flows

Return Flow	2002 (AF)	2003 (AF)	2004 (AF)	2005 (AF)	2006 (AF)
Return Flow Accumulated to Jan 1, 2006	5,229	5,418	5,575	5,767	4,727
Return Flow to Basins for 2006	189	157	192	160	117
Return Flow Water Pumped by TCCWD	-	-	-	(1,200)	(383)
Accumulated Return Flow Available	**5,418**	**5,575**	**5,767**	**4,727**	**4,461**

6.10.3 Brite Basin Return Flow Water Program

Table 6-8 Brite Basin Return Flows

Return Flow	2002 (AF)	2003 (AF)	2004 (AF)	2005 (AF)	2006 (AF)
Return Flow Accumulated to Jan 1, 2006	4	6	8	8	10
Return Flow to Basins for 2006	2	2	2	2	2
Accumulated Return Flow Available	**6**	**8**	**10**	**10**	**12**

6.11 Conjunctive Use Recharge

Conjunctive use of imported State Project Water through storage in the ground water basins has been and will continue to be a priority program within the Tehachapi-Cummings County Water District and the Greater Tehachapi area.

On March 20, 1996, the Tehachapi-Cummings County Water District Board of Directors adopted Resolution No. 03-96 which has been subsequently amended. This Resolution specifically authorized the pumping of ground water in conjunction with the recharging of the ground water basin with imported State Water Project water or any other non-native water by Tehachapi-Cummings County Water District. The conjunctive use delivery is in lieu of surface delivery of State Water Project water to a customer.

The District, in cooperation with the City of Tehachapi, constructed a ground water recharge facility in Antelope Reservoir that enables the District to spread and percolate imported State Water Project water for subsequent extraction and beneficial use by the buyer.

Conjunctive use activities currently take place both in Tehachapi Basin and Cummings Basin.

6.11.1 Cummings Basin Conjunctive Use Program

Table 6-9 Cummings Basin Conjunctive Use

Conjunctive Use	**2002**	**2003**	**2004**	**2005**	**2006**
Water Stored	**AF**	**AF**	**AF**	**AF**	**AF**
Recharge Water Stored as of Jan 1, 2006	(303)	(478)	(211)	20	(540)
Tehachapi-Cummings CWD	664	812	1,090	945	1,653
Water Pumped	**AF**	**AF**	**AF**	**AF**	**AF**
Bear Valley CSD	705	558	660	652	699
California Correctional Institution	-	-	-	657	595
Stallion Springs CSD	139	124	194	196	191
TCCWD Accumulated Stored Recharge	(483)	(348)	20	(540)	372

6.11.2 Tehachapi Basin Conjunctive Use Program

Table 6-10 Tehachapi Basin Conjunctive Use

Conjunctive Use	**2002**	**2003**	**2004**	**2005**	**2006**
Water Stored	**AF**	**AF**	**AF**	**AF**	**AF**
Recharge Water Stored as of Jan 1, 2006	-	238	262	262	515
Tehachapi-Cummings CWD	-	184	-	253	246
Golden Hills CSD as of	250	169	250	5	
City of Tehachapi as of	-	78	103	181	
Water Pumped	**AF**	**AF**	**AF**	**AF**	**AF**
Golden Hills CSD	250	-	-	-	-
TCCWD Accumulated Stored Recharge	-	169	262	515	761

6.12 Storm Water Control

The Tehachapi Watershed Planning Project funded by the California Resources Agency began operation in 1961. In 1983, initial congressional funding, PL 566, was obtained for a flood control project to protect the City of Tehachapi. This project was made possible through the efforts of the following sponsors: Tehachapi- Cummings Water District, Tehachapi Resource Conservation District, the United States Department of Agricultural Soil Conservation Service, City of Tehachapi and the Kern County Water Agency.

The Tehachapi Watershed Planning Project Flood Control Project includes:

- Units 1 & 2 - Highline Road to the north on Dennison Road to Tehachapi Airport, and into Tehachapi Creek, completed in 1988.
- Antelope Dam - A 764 acre foot storm water collection and groundwater recharge facility, completed in 1986 and associated inlet channel.
- Blackburn Dam - A 710 acre foot storm water collection facility, completed in 1990 and the associated west/east diversion channel.

6.13 Existing Water Demand

6.13.1 Municipal / Industrial

Table 6-11 Tehachapi Basin M & I Water Demand

Municipal & Industrial	2002 (AF)	2003 (AF)	2004 (AF)	2005 (AF)	2006 (AF)
Groundwater Pumped (Metered)	3,156	4,546	3,360	3,142	3,531
Groundwater Pumped (Unmetered)	239	239	239	239	239
Imported Water Sales	267	319	560	209	263
Wheeled Water	-	-	74	64	73
Total	**3,662**	**5,104**	**4,233**	**3,654**	**4,106**

Table 6-12 Cummings Basin M & I Water Demand

Municipal & Industrial	2002 (AF)	2003 (AF)	2004 (AF)	2005 (AF)	2006 (AF)
Groundwater Pumped (Metered)	679	679	703	732	739
Groundwater Pumped (Unmetered)	114	114	172	172	172
Imported Water Sales	720	445	351	222	200
Total	**1,513**	**1,238**	**1,226**	**1,126**	**1,111**

Table 6-13 Brite Basin M & I Water Demand

Municipal & Industrial	2002 (AF)	2003 (AF)	2004 (AF)	2005 (AF)	2006 (AF)
Groundwater Pumped (Metered)	50	39	39	39	39
Groundwater Pumped (Unmetered)	60	60	60	60	60
Total	**110**	**99**	**99**	**99**	**99**

6.13.2 Agricultural

Table 6-14 Tehachapi Basin Agriculture Water Demand

Agriculture	2002 (AF)	2003 (AF)	2004 (AF)	2005 (AF)	2006 (AF)
Groundwater Pumped (Metered)	21	18	20	25	95
Groundwater Pumped (Unmetered)	136	138	136	136	143
Wheeled Water Pumped	-	827	559	709	567
Imported Water Sales	993	727	720	855	519
Total	**1,150**	**1,710**	**1,435**	**1,725**	**1,324**

Table 6-15 Cummings Basin Agriculture Water Demand

Agriculture	2002 (AF)	2003 (AF)	2004 (AF)	2005 (AF)	2006 (AF)
Groundwater Pumped (Metered)	3,496	2,728	2,874	2,604	2,848
Groundwater Pumped (Unmetered)	120	140	140	140	141
Imported Water Sales	326	3,944	4,251	3,742	3,610
Total	**3,942**	**6,812**	**7,265**	**6,486**	**6,599**

Table 6-16 Brite Basin Agriculture Water Demand

Agriculture	2002 (AF)	2003 (AF)	2004 (AF)	2005 (AF)	2006 (AF)
Groundwater Pumped (Metered)	-	-	-	-	-
Groundwater Pumped (Unmetered)	226	226	226	226	229
Imported Water Sales	16	11	11	12	10
Total	**242**	**237**	**237**	**238**	**239**

“Wheeled water” is groundwater produced on behalf of a water rights holder or lessor in the Tehachapi Basin, pumped into the Tehachapi-Cummings County Water District surface water delivery system, and delivered to another location within the Basin for the benefit of the party requesting wheeling service. The ability to “wheel water” within the Tehachapi Basin is a valuable water resource management tool which enables the Watermaster to not only aid parties in need, but also to direct production activities best suited for aquifer conditions.

6.14 Water Resource Ordinance, Rules, Regulations and Policies

6.14.1 Kern County

Kern County has an extensive Water Code (Kern County Code, Title 14) which governs water resources and water utility service. (Appendix A) The Code is directly applicable to the GTA and predominately applicable to the City of Tehachapi.

Most notable in the Code is the County’s prohibition of export from the County native groundwater.

6.14.1.1 Kern County Ordinance No. G-6502

An Ordinance of the Board of Supervisors of the County of Kern, State of California, adding Subsection 19.102.190(K) to Chapter 19.102 and adding Chapter 19.118 to the Kern County Code relating to Regulating Transportation or Transfers of Native Groundwater both outside Kern County and its Watersheds, including those thorough joint water conveyance facilities and sales to owners of water conveyance facilities.

6.14.2 Tehachapi-Cummings County Water District

Tehachapi-Cummings County Water District serves three unique and separate functions related to water supply, first, as the wholesale water importer to the Greater Tehachapi region; second, as the Court Appointed Watermaster which oversees and administers the Judgments for the Brite, Cummings and Tehachapi Basins; and third, operation and maintenance of selected flood control structures and channels in the Tehachapi area.

As the Board of Directors of the Tehachapi-Cummings County Water District, the District imposes Rules and Regulations concerning delivery of imported State Water Project water, use of its facilities and agency subventions.

As Watermaster, the Board adopts Resolutions (Appendix B through H) and seeks California Superior Court amendments to its Judgment (Appendix I).

6.14.3 Golden Hills Community Services District

Golden Hills Community Services District establishes, by Resolution of the Board of Directors, Water Service Policies and terms for water service extension. (Appendix K)

The GHCSD Board established a formal Water Conservation program in July 1993, Resolution 745.

Per the GHCSD annexation guidelines, water rights, water supply or equivalent must be provided by the developer or owner.,

6.14.4 Bear Valley Community Services District

Bear Valley Community Services District establishes, by Resolution of the Board of Directors, Water Service Policies and terms for water service extension. (Appendix L)

Water rights dedication is not required by the Bear Valley Community Services District (which would not be consistent with the Cummings Basin Judgment).

Bear Valley Community Services District Board has adopted an extensive Water Conservation program or policy.

6.14.5 Stallion Springs Community Services District

Similarly, by Resolution of the Board of Directors, Stallion Springs Community Services District adopts Ordinances, which govern water utility service. (Appendix M).

Stallion Springs Community Services District does not have a requirement for dedication of water rights (which would not be consistent with the Cummings Basin Judgment). While Stallion Springs Community Services District does not have a formal Water Conservation Plan, wasting water is prohibited by Ordinance.

6.14.6 City of Tehachapi

The City of Tehachapi has not adopted an Urban Water Management Plan. It does, however, have an extensive Water Code (Appendix J) and special Municipal Ordinances for administering the water utility and new developments.

Specific Municipal Ordinances, which are highlighted below, require dedication of water rights for all new developments and the establishment of an extensive water conservation plan.

6.14.6.1 Ordinance 07-09-694, October 10, 2007

Requires developers seeking a zone change or conditional use permit to convey water rights to the City of Tehachapi to serve its development or Subdivision.

6.14.6.2 Ordinance 01-02-656, February 20, 2001

Requires compliance with Water Conservation Goals and Irrigation of Landscaping.

6.14.6.3 Ordinance 98-04-638, July 6, 1998

Establishes Two Water Zones

Zone A and Zone B for the purpose of billing separate water uses formulas. Zone A is within the City Limits and Zone B is all other areas provided water utility service.

6.14.6.4 Ordinance 90-14-576, September 17, 1990

Establishes the Water Conservation Program

6.14.6.5 Ordinance 90-03-566, March 5, 1990

Establishes the Cross Connection Control Program

6.15 Sewer Systems and Services

6.15.1 Bear Valley Community Services District

Bear Valley Community Services District owns and operates a wastewater collection, treatment, and disposal system, and provides sewerage service to about 1,000 residents in the unincorporated community of Bear Valley Springs. The wastewater treatment facility (WWTF) is on an approximately 5-acre property owned by the District in Section 9, T32S, R31E, MDB&M, about 15 miles west of Tehachapi.

Treated municipal wastewater is discharged to Sycamore Creek, at latitude 35º 9' 55" North and longitude 118º 39' 24," and used to irrigate the 70-acre Bear Valley Oak Tree Country Club in Sections 4 and 9, T32S, R31E, MDB&M.

On August 8, 1996 the California Regional Water Quality Control Board adopted Waste Discharge Regulations, Order No. 96-190, a National Pollutant Discharge Elimination System (NPDES) permit, for a monthly average discharge of 0.25 million gallons per day to Sycamore Creek. The Order also covers the recycling of effluent water on the "Use Area", an unrestricted access golf course. In July, 2001, Bear Valley Community Services District applied to renew its NPDES permit to discharge waste to Sycamore Creek.

The wastewater treatment facility is a 0.25-mgd-capacity tertiary treatment system consisting of a bar screen, an oxidation ditch, a secondary clarifier, a chlorinator and contact chamber, two continuous backwash sand filters (used alternately), and a final chlorine contact chamber (no chlorine added at this unit). The Discharger stores effluent in a lined, 240,000-gallon-capacity storage pond before discharging to Sycamore Creek or recycling on the Use Area. The WWTF has a standby generator and a laboratory. Sludge is dried in six concrete lined sludge drying beds. Dried sludge is disposed of off-site for agriculture purposes. Screenings are disposed of off-site in the Tehachapi Class III Landfill regulated by Lahontan Regional Board.

The discharge flow has increased slightly over the years, from a monthly daily average of 0.060 to the current 0.083 mgd.

California Department of Health Service (DHS), which has primary responsibility for protecting public health, has established statewide criteria in Title 22, California Code of Regulations (CCR), Division 4, Chapter 3, Section 60301 et seq. (Title 22) for the use of recycled water, and has developed guidelines for specific uses. Revisions of the water recycling criteria in Title 22 became effective on December 2000. The revised Title 22 expands the range of allowable uses of recycled water, establishes criteria for these uses, and clarifies some of the ambiguity contained in the previous regulations. The 1988 Memorandum of Agreement between DHS and the State Water Resources Control Board on the use of recycled water establishes basic principles relative to the agencies and the regional boards. In addition, the Memorandum of Agreement allocates primary areas of responsibility and authority between agencies, and provides for methods and mechanisms necessary to assure ongoing, continuous future coordination of activities relative to the use of recycled water in California.

Section 60304 of Title 22 requires that wastewater used to irrigate unrestricted access to golf courses be disinfected tertiary recycled water. Section 60301.230 of Title 22 establishes disinfection process criteria for disinfected tertiary recycled water.

Bear Valley Community Services District owns the land encompassing the Use Area, which includes a horseshoe shaped golf course, surrounded by private residences, with boundaries adjacent to the sprinkler irrigated areas. Bear Valley Springs Association manages the Use Area. The Use Area is irrigated with effluent only at night while the golf course is closed.

Since the Use Area is operated as an unrestricted access golf course, the current WWTF treatment process includes tertiary filtration and disinfection. However, the treatment process bypasses coagulation. Section 60304(a) of Title 22 allows tertiary treatment without coagulation provided that the filter effluent turbidity does not exceed 2 Nephelometric units (NTU); the turbidity of the influent to the filters is continuously measured and does not exceed 5 NTU for more than 15 minutes. This Order includes these requirements to ensure that the treatment process meets the Title 22 requirements.

Title 22 requires Bear Valley Community Services District comply with general requirements of design for the WWTF, including alarm devices, reliability of power supply, and reliability of treatment processes, as indicated in Articles 8 and 10. The WWTF has a standby generator capable of operating the entire WWTF and the raw wastewater lift station immediately upstream of the WWTF for 24 hours. The Discharger also has standby equipment for immediate replacement in case of emergency (i.e., oxidation drive and motor and tertiary influent pump). The Discharger alternates use of the WWTF's two tertiary filters, so one is available for standby.

The WWTF effluent has an average total nitrogen concentration of 15.5 mg/L (based on three samples). Using an average of 40 percent of the total effluent being discharged to the 70-acre Use Area, or 10.2 million gallons per year (0.070 mgd x 356 days/year x 0.40), the total nitrogen in effluent applied to the Use Area is 1,320 lbs/year. This amount results in a nitrogen loading of 19 lbs/acre/year. Using a annual nitrogen uptake rate of 200 lbs/acre/year for turf grass, the nitrogen loading from applied effluent is much less than the nitrogen uptake rate. The hydraulic loading is 0.45 acre-feet/acre/year. Both loadings assume uniform distribution of recycled water over the entire Use Area.

The WWTF, the discharge point, and Use Area lie within the Tulare Lake Basin, specifically the Tejon Creek Hydrologic Area (HA 556.20) in the Grapevine Hydrologic Unit (HU 556) as depicted in the interagency hydrologic map prepared by the California Department of Water Resources (DWR) in August 1986. The nearest surface waterway is the Sycamore Creek, an ephemeral stream, which flows adjacent to the WWTF and through the Use Area. Sycamore Creek flows into and terminates in the valley floor in the Arvin-Wheeler Ridge Hydrological Area (HA 557.30) in the South Valley Hydrologic Unit (HU 557).

Upstream of the WWTF, Sycamore Creek is dammed and forms the Four Island Lake, which is in the center of the Use Area. Water in the lake is used to supplement recycled water to irrigate the Use Area. Sycamore Creek flows past the WWTF only when flow in the stream fills Four Island Lake and crests the dam. Areal topography indicates Sycamore Creek flows at a slope of about 1 foot per 250 feet towards the west at the discharge point. The stream exits Bear Valley about one-half mile downstream of the WWTF at an elevation of 4,020 feet and drops to an elevation of 700 feet in about six miles. Sycamore Creek downstream of the discharge point can be characterized as having a rocky streambed in steep and rough terrain, isolated, inaccessible

by road, difficult to walk along, and has no nearby habitation. The lower reach of Sycamore Creek is flat where it terminates and discharges to the lower San Joaquin Valley floor.

6.15.2 Golden Hills Sanitation Company

Golden Hills Community Services District and the Golden Hills Sanitation Company collectively submitted a Report of Waste Discharge to the California Regional Water Quality Control Board for the treatment and disposal of 0.2 mgd of domestic wastewater for a design population of about 2,000.

The treatment facilities is located on a portion of Section 7 T32S, R33E, MDB&M on 168 acres of land belonging to the Golden Hills Community Services District, approximately five miles west of the City of Tehachapi. The plant consists of an extended aeration package treatment plant, chlorination facilities, multimedia pressure filter approximately 2,500 feet of 6" force main leading to the golf course and a wet weather storage reservoir of approximately 110 acre-feet for treated effluent.

Disposal of treated effluent was initially to be accompanied by spray irrigation on the front nine fairways of the Golden Hills Country Club golf course, which is presently closed. Wastewater Reclamation Requirements are currently being considered to govern the proposed disposal operation.

Brite Creek transects the Golden Hills golf course. Water flows in the creek during rainy periods and is dry the remainder of the year. An alternate disposal area is located within Brite Creek Canyon consisting of approximately 40 acres of irrigable meadow lands and 45 acres of side hills. Soils and percolation tests show that this alternate area has sufficient capacity to accommodate anticipated treatment effluent flows.

Golden Hills Sanitation Company is arranging the financing for the treatment facilities and will maintain responsibility for the plant until operational stability has been demonstrated.

In 2001, Golden Hills Community Services District dedicated the treatment site property to the Golden Hills Sanitation Company. At that time, GHCSD revoked its name from the RWQCB Waste Discharge permit, and terminated any contractual relationships with the Golden Hills Sanitation Company.

6.15.3 Stallion Springs Community Services District

Stallion Springs Community Services District wastewater collection system was constructed in 1971. Currently it provides service to approximately 300 customers. The treatment plant is a secondary treatment plant regulated by the California Regional Water Quality Control Board. An excellent record of compliance has been maintained and management constantly reviews the operating system so that they are able to keep up with the growth of the community as well as the changes of state and federal regulations.

The original developers of Stallion Springs provided a wastewater collection system for a limited number of lots. Although currently there are 300 lots connected to the sewer system the ability exists for another 200 lots to be tied into sewer when homes are built on those designated lots. A list of lots is kept at the District offices that have sewer connection ability. Lots not on the sewer zone list require septic systems.

Sewer connection approval must go through the Stallion Springs Community Services District, while septic systems must be approved by Kern County.

All wastewater is pumped via a centrally located lift station to the 500,000 gallon per day wastewater treatment facility located directly behind the District offices. The treatment plant is a secondary treatment plant and the visible "pond" is the treated effluent that is to be discharged into Chanac Creek. The wastewater operation is handled by District employees certified by the State of California and regulated by the State Water Quality Control Board.

The wastewater treatment facility (WWTF) is on property owned by the District in Section 6, T11N, R16W, SBB&M, about 15 miles southwest of the City of Tehachapi. The WWTF is a 0.25-mgd-capacity oxidation ditch package treatment plant. It consists of a bar screen, tow oxidation ditches in parallel, a clarifier, a chlorinator and contact chamber, four concrete-lined sludge beds, and a concrete-lined effluent storage pond. The WWTF has a standby generator, standby package treatment plant and laboratory. Dried sludge and screenings are disposed of off site in the Tehachapi Class III Landfill regulated by Waste Discharge Requirements Order No 01-035, adopted by the Lahontan Regional Water Quality Control Board.

October 25, 1996 the Regional Board adopted Waste Discharge Requirements, Order No. 96-261, a National Pollutant Discharge Elimination System permit that prescribes requirements for an average dry weather discharge flow of 0.10 million gallons per day of disinfected secondary treated domestic wastewater to (a) Chanac Creek, a water of the United States, at latitude 35° 04’ 52” and longitude 118° 38’ 14”, and (b) Horse Thief Country Club (HTCC) golf course Fairway No. 3 during summer and early fall and when weather permits spray irrigation.

In 2001, Stallion Springs Community Services District requested to discharge all of the effluent to Chanac Creek. The Regional Board evaluated the circumstances of the request to discharge all of the effluent to Chanac Creek and found the request to be reasonable based on the following:

> *The discharge flows have not increased significantly during the past several years, and the Discharger indicates that it does not expect a significant increase in the near future. The Discharger could comply with the setback requirements prescribed by Order 96-261 because it lacks control and authority and the golf course owner will not perform work necessary to achieve compliance (e.g. move sprinklers). While eliminating recycling was not consistent with Regional Board recycling policies, it was reasonable under the circumstances to allow Stallion Springs Community Services District to discharge all effluent to Chanac Creek until such time as development increases in the Discharger’s sewerage service area to produce flow that supports a separate water recycling project.*

Uniform Guidelines for Wastewater Disinfection from the California Department of Health Services (DHS) recommends that where a median coliform MPN of 23/100 mL or 240/100 mL is required, bacteriological samples should be collected at least twice per week. The median total coliform bacteria number should be based on the last seven samples for which the analyses have been completed, according to the Uniform Guidelines. When discharge is to ephemeral streams with limited access or little to no natural flow during all or part of the year, the Uniform Guidelines recommend that effluent not have a median coliform MPN exceeding 23/100 mL. The circumstances of Chanac Creek reflect this situation and the DHS Uniform Guidelines are appropriately applied here.

The WWTF is in the Tulare Lake Basin, specifically within the Tejon Creek Hydrologic Area (HA 556.20), as depicted in the interagency hydrologic map prepared by the California Department of Water Resources (DWR) in August 1986. Specifically, the WWTF is at the easterly end of Cummings Valley in the Tehachapi Mountains at an elevation of about 4,000 feet above sea level. The nearest surface waterway is Chanac Creek, which flows immediately adjacent to the WWTF. Chanac Creek is tributary to Tejon Creek, an eastside stream that terminates on the San Joaquin Valley floor in the Arvin-Wheeler Ridge Hydrologic Area (HA 557.30).

The Cummings Valley is characterized by warm, dry summers and cool, wet winters. The area receives an average annual precipitation of about 15 inches and an additional 20-inch average snowfall. The average annual evapotranspiration in Tehachapi is about 53 inches, according to information published by DWR.

Chanac Creek is a seasonal stream that originates in the small northwestern portion of Brite Valley and flows through Cummings Valley. It exits the valley about 1000 feet downstream from the WWTF. The reach downstream of the discharge and prior to exiting the Cummings Valley is accessible for recreational use. Once it exits Cummings Valley, Chanac Creek drops from and elevation of about 3,900 to 1,200 feet above sea level in nine miles where it converges with Tejon Creek. Most Chanac Creek in this reach has a rocky streambed traversing steep and rough terrain that is inaccessible by road and supports little recreation use. The lower reaches of Tejon Creek is relatively flat, has no nearby habitation, but is accessible for recreational use.

Land use in the southwester end of the Cummings Valley in the immediate vicinity of the WWTF is residential and recreational (e.g., golf course). However, the other parts of the valley support agriculture and a correctional facility, as well as recreational uses. Valley crops include field and truck crops (e.g., carrots, broccoli, cabbage, lettuce, onions, and garlic), grain crops, irrigated and non-irrigated pasture, fruit trees (apples), and turf sod in turf farms. Crops grown in the San Joaquin Valley where Tejon Creek terminates include field and truck crops (e.g., cotton, corn, carrots, peppers), grain crops, pasture crops (alfalfa), fruit trees (apricots, peaches/nectarines, cherries, apples), citrus (oranges), and vineyards.

6.15.4 California Department of Corrections and Rehabilitation

The California Department of Corrections and Rehabilitation is presently upgrading its Wastewater Treatment Plant to a tertiary treatment plant. All effluent water is under contract to be purchased by Tehachapi-Cummings County Water District. Recovered effluent water falls under the jurisdiction of the California Department of Health rather than a State Water Resources Control Board Waste Discharge Order and Requirements.

6.15.5 City of Tehachapi

The City of Tehachapi submitted a Report of Waste Discharge to the State of California on September, 19, 1991 for an increase in the flow and for interim changes and improvements in the method of treatment and disposal of its wastewater.

The City of Tehachapi operates an existing wastewater treatment facility (WWTF) that provides sewerage service to about 6,000 residents and local businesses. The existing WWTF includes two equalization tanks (in parallel), a trickling filter, 14 evaporation/percolation ponds for effluent disposal, and a 140-acre parcel for land application discharge.

The ponds are adjacent to Tehachapi Creek. A storm drain channel, tributary to Tehachapi Creek, cuts across the WWTF and conveys storm water runoff from approximately 2,800 acres north of Highway 58.

The discharge from the existing WWTF is predominantly domestic wastes, with some light industrial discharges, and is governed by Waste Discharge Requirements Order No. 91-153 and Cease and Desist Order No. 91-154, both adopted by the Board on 28 June 1991. Order No. 91-153 prescribes requirements for a discharge of 0.63 million gallons per day. Order No. 91-154 was adopted by the Board because of unauthorized discharges to Tehachapi Creek and violations of effluent limitations prescribed by waste discharge requirements.

The 140-acre land application area is adjacent to the Tehachapi Kern County Airport No. 4, about 125 feet from the main runway. A residential tract is about 500 feet east of the reclamations area. Soils at the reclamation area are classified as sandy silts, silty sands, and clays, with permeability varying from 9x10-9 to 6x10-6 cm/sec.

The City of Tehachapi also owns a 100 acre-foot storage reservoir. The reservoir is about 2½ miles southeast of the existing WWTF and is surrounded by predominantly agricultural land. The reservoir is about 30 feet deep and has a bottom surface area of 10 acres. The City of Tehachapi has built a 10-foot high berm across the reservoir to divide it into two cells with a combined storage capacity of 100 acre-feet. Based on three borings conducted in 1990, soils beneath the reservoir were classified as clayey silt and silty clay with low permeability.

The California State Board, Central Valley Region adopted a Water Quality Control Plan for the Tulare Lake Basin, which contains water quality objectives for all waters of the Basin. These requirements were implemented in the Basin Plan. The Basin Plan states that the minimum treatment level for WWTFs that discharge more than 1.0 mgd is secondary treatment, which is defined in the Basin Plan as 80 percent removal of BODs and suspended solids, for reduction to 40 mg/l, whichever is more restrictive.

Tehachapi Creek is an ephemeral westside stream. It originates in the Tehachapi Valley, about two miles south of the City. Tehachapi Valley has a 39,700-acre watershed area. Kern County Water Agency reports that flows in Tehachapi Creek reached a maximum of 33.7 cubic feet per second in December of 1988. The stream exits the Valley at an elevation of 3,900 feet (MSL), cuts across Keene Ranch, and joins Caliente Creek one-half mile west of the town of Caliente. Caliente Creek is also an ephemeral stream that drains to the valley floor.

6.16 Sewer System Ordinances, Rules & Regulations and Policies

6.16.1 Kern County

In Kern County, most new urban development (commercial, industrial and residential at densities greater than one dwelling unit or equivalent per three gross acres) located one thousand (1,000) feet or closer to available public sewer must connect to the sewer system. Single residential lots less than three (3) gross acres that require a ministerial permit shall connect to public sewer when located two hundred (200) feet or closer to available public sewer. Where lots are more than two hundred (200) feet from public sewer, dry sewer must be installed in accordance with the requirements of engineering and survey services. (Ord. G-6746 § 23, 2001: prior code § 3645) In rural, mountain communities, restriction may be greater.

Other Sewer Service related Codes have also been adopted by the County Board of Supervisor which govern sewage collection and treatment. (Appendix A)

6.16.2 Golden Hills Sanitation Company

Golden Hills Sanitation Company is governed by the California Public Utilities Commission General Rules & Regulations. There are no unique or special rules for the Company.

6.16.3 Bear Valley Community Services District

Bear Valley Community Services District also has within its Ordinances the provision requiring connection to the sewer system where it is available. Further, it has adopted the Kern County guideline Codes for sewer collection, treatment and disposal. (Appendix L)

6.16.4 Stallion Springs Community Services District

Likewise, Stallion Springs Community Services District also has within its Ordinances the provision requiring connection to the sewer system where it is available. Further, it has adopted the Kern County guideline Codes for sewer collection, treatment and disposal. (Appendix M)

6.16.5 City of Tehachapi

Likewise, the City of Tehachapi by Resolution of the City Council in February 1998, adopted an Ordinance requiring connection to the Municipal Sewer System.

Additional Resolutions and Ordinances formulate the City's Sewer Code which provide for good governance. (Appendix J)

6.16.5.1 Ordinance 98-07-641, October 5, 1998

Allows the City to connect certain residences to the City's Sewer System at the property owner's expense and to allow the property owner to repay the City in installments.

6.16.5.2 Ordinance 98-02-636, February 17, 1998

Mandates connection to the City's Sewer System.

6.16.5.3 Ordinance 98-01-635, February 2, 1998

Adopts Sewer System Connection fees.

6.16.5.4 Ordinance 93-04-614, May 17, 1993

Establishes the Policy & Procedures for discharge of Domestic Wastes.

6.16.5.5 Ordinance 90-15-577, September 17, 1990

Establishes the Policy & Procedures for discharge of Industrial Wastes.

7.0 SIGNIFICANCE STATUS OF EXISTING CONDITIONS

7.1 Water Supply

7.1.1 Groundwater Availability

Groundwater is the primary source of water in the GTA. The three adjudicated groundwater basins in the GTA currently provide assured water supply presently within specific and well managed safe yields. Groundwater availability is shown on Table 7-1.

Table 7-1 Water Availability

Basin	Safe Yield (AF)	Allowed Pumping (AF)	2006 Current Production (AF)	2006 Unexercised (AF)
Brite Basin	500	500	328	172
Cummings Basin	4,090	4,090	3,900	190
Tehachapi Basin	5,500	5,500	4,211	1,289
Subtotals	**10,090**	**10,090**	**8,439**	**1,651**
Unexercised	-	-	-	1,492
Grand Total	**-**	**-**	**-**	**3,143**

As shown, the GTA currently uses approximately 8,439 AF of water. Agricultural uses in the GTA presently account for use about 3,456 AF or 42% of existing groundwater production. The combined total of non-programmatic surplus groundwater available could be more than 3,000 AF.

7.1.2 Surface Water Availability

Within the GTA, surface water and spring water have historically been stored in ponds and storage tanks to provide water for livestock within the watershed. There are also pre-1914 surface water rights owned by a few individual landowners within the watershed areas. Currently, surface water rights are being exercised by a landowner in the Brite Creek watershed. This particular usage of surface water has a long history. The TCCWD has rights to certain storm flows, which are captured in Brite Lake and used for groundwater recharge.

7.1.3 California State Water Project Allocation

The TCCWD has an allocation (Table A Amount) of 20,000 AF from the State Water Project. State Water Project deliveries may no longer be considered reliable. Therefore, projections of full allocations (Table A Amount) have gone from 7 out of 10 years to 3 out of 10 years for reliability planning. However, based on the tremendous amount of flexibility afforded to the TCCWD and its ability to provide conjunctive use alternatives, fluctuation of State Water Project allocation (Table A Amount) will have little impact upon water availability in the GTA.

In 2006, only 6,424 AF of State Water Project water was directly delivered to the GTA. Much of this water was exchanged or taken in lieu of groundwater production which was stored. At a

30% allocation (Table A Amount) year of State Water Project water, 6,000 AF would still be available. This water can be supplemented by TCCWD groundwater wells which produce State Water Project stored water for delivery into the distribution system, or from Brite Lake, the TCCWD's State Water Project storage facility.

7.1.4 Recycled Water Availability

In the Cummings Basin, the TCCWD has recently entered into an agreement to purchase recycled effluent from the California Department of Corrections and Rehabilitation (CCI). The contract calls for an estimated flow of between 1,000 and 1,200 AF. This is counted as a new water supply to the GTA.

At this time, the only tertiary treated effluent available is from Bear Valley Community Services District within the GTA.

7.1.5 Water System Infrastructure Access

The water system infrastructure provided by the six permitted water utilities in the GTA is readily available for connections with their service areas. Any service to additional development would be primarily the cost of construction of additional production, transmission storage and distribution facilities. Some of the water utilities require the dedication of water rights with a will-serve letter or approval of an annexation.

Expansion into additional service or satellite service areas or the creation of new water service utilities should not have an impact upon the existing infrastructure provided that all requirements of Kern County and applicable regulatory agencies are met.

7.2 Sewer Systems and Services

7.2.1 Sewer Availability

Sewer collection and treatment services are limited to CCI and the City of Tehachapi in total and parts of Bear Valley CSD, Stallion Springs CSD and Golden Hills CSD (provided by Golden Hills Sanitation Company).

Other rural development in the GTA relies on multiple source and single source septic tank systems. These existing septic systems and future septic systems have the potential to adversely impact the water quality of the susceptible and well exercised groundwater basins in the GTA.

7.2.2 Sewer System Infrastructure Access

Expansion of sewer system infrastructure into additional service areas, development of satellite service areas, or the creation of new sewer service utilities should not have an impact upon the existing sewer system infrastructure provided that all requirements of Kern County and applicable regulatory agencies are met.

8.0 ENVIRONMENTAL ISSUES FOR GTASP

The linkage between land use and water supply planning is as important to the GTA as it is to the rest of Kern County. The new laws require the verification of sufficient water supplies as a condition for approving certain developments and compel urban water suppliers to provide more information on the reliability of groundwater for a long-term time frame. Long-term water supply planning is important to ensuring that rural and urban economic growth can be accommodated into the future.

Water supply is available to serve existing development in the GTA with a reserve of water supply for future development. The questionable reliability of State Water Project should not adversely affect the existing water supply in the GTA. The availability of water and sewer facilities varies by location within the GTA.

In conclusion, the purpose of this Existing Conditions Report is to provide a temporal snapshot of the public services, public facilities, and utilities provided to the GTA in 2006. It is not the purpose of the Existing Conditions Report to forecast or predict any specific conclusions. This report creates a baseline that may be used in subsequent stages of the GTASP planning process.

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Appendix E: Tehachapi-Cummings Resolution TW1-92

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Appendix I: Tehachapi-Cummings Amendment to Judgment

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Appendix K: Golden Hills Community Services District Rules and Regulations

Appendix L: Bear Valley Community Services District Rules and Regulations

Appendix M: Stallion Springs Community Services District Rules and Regulations

Appendix A

Kern County Water Code, Title 14 Utilities

Appendix B

Tehachapi-Cummings Resolution TW1-73

Appendix C

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Appendix I

Tehachapi-Cummings Amendment to Judgment

Appendix J

City of Tehachapi Rules and Regulations

Appendix K

Golden Hills Community Services District Rules and Regulations

Appendix L

Bear Valley Community Services District Rules and Regulations

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Stallion Springs Community Services District Rules and Regulations

Appendix J

Noise Data

Off-SITE TRAFFIC NOISE LEVELS AND NOISE CONTOURS

Project: Tehachapi Wal-Mart

Background Information

Model Description: FHWA Highway Noise Prediction Model (FHWA-RD-77-108) with California Vehicle Noise (CALVENO) Emission Levels.

Analysis Scenario(s): Existing (2008) and Future (2011)

Source of Traffic Volumes: Linscott, Law & Greenspan, Enigneers

Assumed 24-Hour Traffic	Day	Evening	Night
Total ADT Volumes	77.70%	12.70%	9.60%
Medium-Duty Trucks	87.43%	5.05%	7.52%
Heavy-Duty Trucks	89.10%	2.84%	8.06%

Community Noise Descriptor: L_{dn}: X CNEL: _____

Analysis Condition Roadway Name / Roadway Segment	Land Use	Lanes	Median Width	Peak Hour Volume	ADT Volume	Posted Speed (mph)	Dist. from Center to Receptor	Alpha Factor	Barrier Attn. dB(A)	Vehicle Mix Medium Trucks	Vehicle Mix Heavy Trucks	Peak Hour dB(A) L_{eq}	24-Hour dB(A) Ldn
Existing (2008) Traffic Volumes													
Valley Boulevard (SR-202)													
west of Sierra Vista Drive	Open Space	2	12	1,441	11,528	40	50	0.5	0	1.8%	0.7%	68.7	64.7
east of Sierra Vista Drive	Rural Residential	2	12	1,445	11,560	40	50	0.5	0	1.8%	0.7%	68.7	64.7
west of Tucker Road	Commercial	4	12	1,333	10,664	40	100	0.5	0	1.8%	0.7%	63.8	59.9
east of Tucker Road	Commercial	4	12	1,082	8,656	40	50	0.5	0	1.8%	0.7%	68.1	64.1
west of Mountain View Avenue	Commercial	2	12	1,003	8,024	40	100	0.5	0	1.8%	0.7%	62.4	58.5
east of Mountain View Avenue	Residential	2	12	866	6,928	40	50	0.5	0	1.8%	0.7%	66.5	62.5
west of Curry Street	Residential	2	12	640	5,120	40	50	0.5	0	1.8%	0.7%	65.2	61.2
east of Curry Street	Commercial	2	12	431	3,448	40	100	0.5	0	1.8%	0.7%	58.8	54.8
Red Apple Avenue													
east of Westwood Boulevard	Residential	2	0	1,157	9,256	45	50	0.5	0	1.8%	0.7%	68.9	64.8
west of Tehachapi/Tucker	Commercial	2	0	1,024	8,192	45	50	0.5	0	1.8%	0.7%	68.4	64.3
Tehachapi Boulevard													
east of Tehachapi/Tucker Road	Commercial	4	12	1,012	8,096	35	100	0.5	0	1.8%	0.7%	61.2	57.4
west of Mountain View Avenue	Commercial	4	12	1,081	8,648	35	100	0.5	0	1.8%	0.7%	61.5	57.6

east of Mountain View Avenue	Commercial	4	12	1,030	8,240	35	100	0.5	0	1.8%	0.7%	61.3	57.4
west of Mulberry Street	Commercial	4	12	1,100	8,800	35	100	0.5	0	1.8%	0.7%	61.6	57.7
east of Mulberry Street	Commercial	4	12	1,104	8,832	35	100	0.5	0	1.8%	0.7%	61.6	57.7
west of Mill Street	Commercial	4	0	765	6,120	35	100	0.5	0	1.8%	0.7%	59.9	56.1
Conway Avenue													
west of Tucker Road	Commercial	2	0	148	1,184	35	100	0.5	0	1.8%	0.7%	52.7	48.8
Sierra Vista Road													
north of Valley Boulevard (SR-202)	Residential	2	0	20	160	35	50	0.5	0	1.8%	0.7%	48.5	44.7
Tucker Road													
north of Tehachapi/Red Apple	Commercial	2	12	950	7,600	40	100	0.5	0	1.8%	0.7%	62.2	58.2
north of Conway Avenue	Commercial	4	12	1,624	12,992	40	100	0.5	0	1.8%	0.7%	64.7	60.7
south of Conway Avenue	Commercial	4	12	1,539	12,312	40	100	0.5	0	1.8%	0.7%	64.5	60.5
south of Valley Boulevard (SR-202)	Commercial	4	12	944	7,552	40	100	0.5	0	1.8%	0.7%	62.3	58.4
Mountain View Avenue													
south of Tehachapi Boulevard	Commercial	2	0	152	1,216	45	100	0.5	0	1.8%	0.7%	55.5	51.4
north of Valley Boulevard (SR-202)	Open Space	2	0	205	1,640	45	100	0.5	0	1.8%	0.7%	56.8	52.7
Mulberry Street													
south of Tehachapi Boulevard	Commercial	2	0	2	16	40	100	0.5	0	1.8%	0.7%	35.4	31.4
Future (2011) WITHOUT Project													
Valley Boulevard (SR-202)													
west of Sierra Vista Drive	Open Space	2	12	1,877	15,016	40	50	0.5	0	1.8%	0.7%	69.8	65.9
east of Sierra Vista Drive	Rural Residential	2	12	1,911	15,288	40	50	0.5	0	1.8%	0.7%	69.9	65.9
west of Tucker Road	Commercial	4	12	1,789	14,312	40	100	0.5	0	1.8%	0.7%	65.1	61.1
east of Tucker Road	Commercial	4	12	1,421	11,368	40	50	0.5	0	1.8%	0.7%	69.3	65.3
west of Mountain View Avenue	Commercial	2	12	1,344	10,752	40	100	0.5	0	1.8%	0.7%	63.7	59.8
east of Mountain View Avenue	Residential	2	12	1,208	9,664	40	50	0.5	0	1.8%	0.7%	67.9	63.9
west of Curry Street	Residential	2	12	980	7,840	40	50	0.5	0	1.8%	0.7%	67.0	63.0
east of Curry Street	Commercial	2	12	589	4,712	40	100	0.5	0	1.8%	0.7%	60.1	56.2
Red Apple Avenue													
east of Westwood Boulevard	Residential	2	0	1,467	11,736	45	50	0.5	0	1.8%	0.7%	69.9	65.8
west of Tehachapi/Tucker	Commercial	2	0	1,309	10,472	45	50	0.5	0	1.8%	0.7%	69.4	65.3
Tehachapi Boulevard													
east of Tehachapi/Tucker Road	Commercial	4	12	1,296	10,368	35	100	0.5	0	1.8%	0.7%	62.3	58.4
west of Mountain View Avenue	Commercial	4	12	1,372	10,976	35	100	0.5	0	1.8%	0.7%	62.5	58.7
east of Mountain View Avenue	Commercial	4	12	1,346	10,768	35	100	0.5	0	1.8%	0.7%	62.4	58.6

west of Mulberry Street	Commercial	4	12	1,422	11,376	35	100	0.5	0	1.8%	0.7%	62.7	58.8
east of Mulberry Street	Commercial	4	12	1,421	11,368	35	100	0.5	0	1.8%	0.7%	62.7	58.8
west of Mill Street	Commercial	4	0	1,039	8,312	35	100	0.5	0	1.8%	0.7%	61.2	57.4
Conway Avenue													
west of Tucker Road	Commercial	2	0	154	1,232	35	100	0.5	0	1.8%	0.7%	52.8	49.0
Sierra Vista Road													
north of Valley Boulevard (SR-202)	Residential	2	0	20	160	35	50	0.5	0	1.8%	0.7%	48.5	44.7
Tucker Road													
north of Tehachapi/Red Apple	Commercial	2	12	1,320	10,560	40	100	0.5	0	1.8%	0.7%	63.6	59.7
north of Conway Avenue	Commercial	4	12	2,193	17,544	40	100	0.5	0	1.8%	0.7%	66.0	62.0
south of Conway Avenue	Commercial	4	12	2,146	17,168	40	100	0.5	0	1.8%	0.7%	65.9	61.9
south of Valley Boulevard (SR-202)	Commercial	4	12	1,252	10,016	40	100	0.5	0	1.8%	0.7%	63.6	59.6
Mountain View Avenue													
south of Tehachapi Boulevard	Commercial	2	0	215	1,720	45	100	0.5	0	1.8%	0.7%	57.0	53.0
north of Valley Boulevard (SR-202)	Open Space	2	0	226	1,808	45	100	0.5	0	1.8%	0.7%	57.2	53.2
Mulberry Street													
south of Tehachapi Boulevard	Commercial	2	0	14	112	40	100	0.5	0	1.8%	0.7%	43.9	39.9
Future (2011) WITH Project													
Valley Boulevard (SR-202)													
west of Sierra Vista Drive	Open Space	2	12	2,040	16,320	40	50	0.5	0	1.8%	0.7%	70.2	66.2
east of Sierra Vista Drive	Rural Residential	2	12	2,044	16,352	40	50	0.5	0	1.8%	0.7%	70.2	66.2
west of Tucker Road	Commercial	4	12	1,923	15,384	40	100	0.5	0	1.8%	0.7%	65.4	61.5
east of Tucker Road	Commercial	4	12	1,555	12,440	40	50	0.5	0	1.8%	0.7%	69.7	65.7
west of Mountain View Avenue	Commercial	2	12	1,478	11,824	40	100	0.5	0	1.8%	0.7%	64.1	60.2
east of Mountain View Avenue	Residential	2	12	1,342	10,736	40	50	0.5	0	1.8%	0.7%	68.4	64.4
west of Curry Street	Residential	2	12	1,095	8,760	40	50	0.5	0	1.8%	0.7%	67.5	63.5
east of Curry Street	Commercial	2	12	623	4,984	40	100	0.5	0	1.8%	0.7%	60.4	56.4
Red Apple Avenue													
east of Westwood Boulevard	Residential	2	0	1,635	13,080	45	50	0.5	0	1.8%	0.7%	70.4	66.3
west of Tehachapi/Tucker	Commercial	2	0	1,477	11,816	45	50	0.5	0	1.8%	0.7%	69.9	65.9
Tehachapi Boulevard													
east of Tehachapi/Tucker Road	Commercial	4	12	1,425	11,400	35	100	0.5	0	1.8%	0.7%	62.7	58.8
west of Mountain View Avenue	Commercial	4	12	1,505	12,040	35	100	0.5	0	1.8%	0.7%	62.9	59.1
east of Mountain View Avenue	Commercial	4	12	1,473	11,784	35	100	0.5	0	1.8%	0.7%	62.8	59.0
west of Mulberry Street	Commercial	4	12	1,550	12,400	35	100	0.5	0	1.8%	0.7%	63.0	59.2

east of Mulberry Street	Commercial	4	12	1,542	12,336	35	100	0.5	0	1.8%	0.7%	63.0	59.2
west of Mill Street	Commercial	4	0	1,159	9,272	35	100	0.5	0	1.8%	0.7%	61.7	57.9
Conway Avenue													
west of Tucker Road	Commercial	2	0	154	1,232	35	100	0.5	0	1.8%	0.7%	52.8	49.0
Sierra Vista Road													
north of Valley Boulevard (SR-202)	Residential	2	0	20	160	35	50	0.5	0	1.8%	0.7%	48.5	44.7
Tucker Road													
north of Tehachapi/Red Apple	Commercial	2	12	1,387	11,096	40	100	0.5	0	1.8%	0.7%	63.9	59.9
north of Conway Avenue	Commercial	4	12	2,491	19,928	40	100	0.5	0	1.8%	0.7%	66.5	62.6
south of Conway Avenue	Commercial	4	12	2,446	19,568	40	100	0.5	0	1.8%	0.7%	66.5	62.5
south of Valley Boulevard (SR-202)	Commercial	4	12	1,285	10,280	40	100	0.5	0	1.8%	0.7%	63.7	59.7
Mountain View Avenue													
south of Tehachapi Boulevard	Commercial	2	0	221	1,768	45	100	0.5	0	1.8%	0.7%	57.1	53.1
north of Valley Boulevard (SR-202)	Open Space	2	0	226	1,808	45	100	0.5	0	1.8%	0.7%	57.2	53.2
Mulberry Street													
south of Tehachapi Boulevard	Commercial	2	0	21	168	40	100	0.5	0	1.8%	0.7%	45.6	41.7
Driveway 1 (WITH Project Only)													
east of Tucker Road	Commercial	2	12	39	312	35	100	0.5	0	1.8%	0.7%	46.9	43.1
Driveway 2 (WITH Project Only)													
east of Tucker Road	Commercial	2	12	518	4,144	35	100	0.5	0	1.8%	0.7%	58.1	54.3
Driveway 3 (WITH Project Only)													
east of Tucker Road	Commercial	2	0	31	248	35	100	0.5	0	1.8%	0.7%	45.9	42.0
Driveway 4 (WITH Project Only)													
south of Tehachapi Boulevard	Commercial	2	12	203	1,624	35	100	0.5	0	1.8%	0.7%	54.1	50.2
Driveway 5 (WITH Project Only)													
south of Tehachapi Boulevard	Commercial	2	12	300	2,400	35	100	0.5	0	1.8%	0.7%	55.8	51.9

Appendix K

Traffic Report

LINSCOTT
LAW &
GREENSPAN
engineers

FINAL
TRAFFIC IMPACT ANALYSIS REPORT

WALMART

Tehachapi, California
February 24, 2010
(Update of November 17, 2009 Report)

Prepared for:
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LLG Ref. 2-08-3001-1

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EXECUTIVE SUMMARY

1. The proposed Project consists of developing 5,200 square-feet (SF) of retail space, 6,600 SF of fast-food restaurant space and a 165,000 SF Walmart store. Project access is proposed along Tucker Road via two driveways and Tehachapi Boulevard via two driveways. The Project site consists of approximately 24.96 acres of vacant land located on the southeast quadrant of Tucker Road and Red Apple Avenue/Tehachapi Boulevard in the City of Tehachapi, California. A total of 926 on-site parking spaces will be provided for the proposed mix of uses of the Project (823 spaces for Walmart and 103 spaces for outparcel). The proposed Project is anticipated to be completed by Year 2011.

2. The proposed Project is expected to generate 11,043 net daily trips (one half arriving, one half departing), with 419 net trips (227 inbound, 192 outbound) produced in the AM peak hour and 669 net trips (331 inbound, 338 outbound) produced in the PM peak hour on a "typical" weekday.

3. The Project study area covers nineteen (19) key study intersections for the Year 2011 Intersection Capacity Analysis and six (6) key study intersections for the General Plan Buildout Intersection Capacity Analysis based on City of Tehachapi criteria, listed as follows:

    1. Woodford Tehachapi Road at Valley Boulevard (SR-202)
    2. South Street at Valley Boulevard (SR-202)
    3. Santa Lucia Street at Valley Boulevard (SR-202)
    4. Golden Hills Boulevard at Valley Boulevard (SR-202)
    5. Westwood Boulevard at Red Apple Avenue
    6. Sierra Vista Drive at Valley Boulevard (SR-202)
    7. Tucker Road at SR-58 Eastbound Ramps
    8. Tucker Road at Red Apple Avenue/Tehachapi Boulevard
    9. Tucker Road at Conway Avenue/Walmart Project Driveway 3
    10. Tucker Road at Valley Boulevard (SR-202)
    11. Tucker Road at Highline Road
    12. Mountain View Avenue at Valley Boulevard
    13. Mountain View Avenue at Tehachapi Boulevard
    14. Mulberry Street at Tehachapi Boulevard
    15. Mill Street at Tehachapi Boulevard
    16. Curry Street at Tehachapi Boulevard
    17. Curry Street at Valley Boulevard (SR-202)
    18. Curry Street/Summit Road at Highline Road
    19. Green Street at Tehachapi Boulevard

4. The Project study area covers twelve (12) key roadway links for the Year 2011 Roadway Link Analysis and seven (7) key roadway links for the General Plan Buildout Roadway Link Analysis based on City of Tehachapi criteria, listed as follows:

   A. Valley Boulevard (SR-202) *between* Woodford Tehachapi Roads and Sage Lane
   B. Valley Boulevard (SR-202) *between* Sierra Vista Drive and Tucker Road
   C. Red Apple Avenue *between* Reeves Street and Tucker Road
   D. Tucker Road *between* SR-58 Eastbound Ramps and Red Apple Avenue/Tehachapi Boulevard
   E. Tucker Road *between* Red Apple Avenue/Tehachapi Boulevard and Conway Avenue
   F. Tucker Road *between* Conway Avenue and Valley Boulevard (SR-202)
   G. Tucker Road *between* Valley Boulevard (SR-202) and Cherry Lane
   H. Valley Boulevard *between* Weir Street and Beach Street
   I. Valley Boulevard *between* Mill Street and Curry Street
   J. Tehachapi Boulevard *between* Tucker Road and Mountain View Avenue
   K. Tehachapi Boulevard *between* Mulberry Street and Mill Street
   L. Curry Street *between* Valley Boulevard and Highland Road

5. Fourteen cumulative projects have been identified within the vicinity of the Project that are anticipated to be built and occupied by year 2011. The cumulative projects are expected to generate a combined total 28,548 daily trips (one half arriving, one half departing) on a "typical" weekday, with 1,553 trips (717 inbound and 836 outbound) forecast during the AM peak hour and 2,091 trips (1,059 inbound and 1,032 outbound) forecast during the PM peak hour.

6. In the Project horizon Year 2011, Project traffic combined with Cumulative traffic (existing plus cumulative ambient growth plus cumulative projects) is forecasted to significantly impact nine (9) of the nineteen (19) key study intersections based on the LOS impact criteria mentioned in this report. It should be noted that eight (8) of the nine (9) significantly impacted intersections have cumulative significant impacts and one (1) intersection has a direct significant impact per the City of Tehachapi criteria. The impacted study intersections are:

	AM Peak Hour		PM Peak Hour	
Key Intersection	Delay	LOS	Delay	LOS
3. Santa Lucia St at Valley Blvd (SR-202)	--	--	39.2	E
5. Westwood Blvd at Red Apple Ave	33.5	D	115.4	F
6. Sierra Vista Dr at Valley Blvd (SR-202)	--	--	66.3	F
7. Tucker Rd at SR-58 EB Ramps	--	--	49.1	F
8. Tucker Rd at Red Apple Ave/Tehachapi Blvd	--	--	40.4	D

9. Tucker Rd at Conway Ave	216.8	F	724.0	F
10. Tucker Rd at Valley Blvd (SR-202)	56.3	E	86.0	F
12. Mountain View Ave at Valley Blvd	--	--	32.7	D
19. Green St at Tehachapi Blvd	--	--	39.2	E

7. In the Project horizon Year 2011, Project traffic combined with Cumulative traffic (existing plus cumulative ambient growth plus cumulative projects), is not forecast to impact any roadway links per the City of Tehachapi criteria.

8. The following recommended intersection mitigation traffic improvements listed below have been identified to improve the Year 2011 Cumulative plus Project level of service to an acceptable level of service at the nine (9) intersections that are significantly impacted and forecast to operate at adverse levels of service in the Year 2011 Cumulative plus Project traffic conditions:

- Santa Lucia Street at Valley Boulevard (SR-202): Install a traffic signal and design for five-phase operation with protected eastbound and westbound left-turns on Valley Boulevard (SR-202). ***Appendix G*** contains the traffic signal warrant analysis worksheets. ***It should be noted that this improvement is a part of the Tehachapi Region Transportation Impact Fee Program Facilities List, which is contained in Appendix L***.
- Westwood Boulevard at Red Apple Avenue: Install a traffic signal and design for three-phase operation. Install a northbound right-turn overlap phase on Westwood Boulevard. Install a westbound right-turn overlap phase on Red Apple Avenue. ***Appendix G*** contains the traffic signal warrant analysis worksheets. ***It should be noted that this improvement is a part of the Tehachapi Region Transportation Impact Fee Program Facilities List***.
- Sierra Vista Drive at Valley Boulevard (SR-202): Re-stripe Valley Boulevard (SR-202) to provide a two-way-left-turn-lane (TWLTL) for the storage of two (2) cars for the southbound left-turn movement.
- Tucker Road at SR-58 Eastbound Ramps: Widen and restripe the SR-58 Eastbound Ramp to provide a free right-turn and re-stripe the eastbound through/left-turn lane to a left-turn lane only. ***It should be noted that the receiving lane on Tucker Road is included in the Tehachapi Region Transportation Impact Fee Program Facilities List***.
- Tucker Road at Red Apple Avenue/Tehachapi Boulevard: Widen and/or restripe Tehachapi Boulevard to provide a 2nd westbound left-turn lane. Install a southbound right-turn overlap phase on Tucker Road. Modify existing traffic signal. ***It should be noted that the traffic signal modification is included in the Tehachapi Region Transportation Impact Fee Program Facilities List***.

- Tucker Road at Conway Avenue/Driveway 2: Re-stripe Conway Avenue to provide a right-turn only lane to restrict the eastbound through and left-turn movements. Re-stripe Walmart Project Driveway 3 to provide a right-turn only lane to restrict the westbound through and left-turn movements.
- Tucker Road at Valley Boulevard (SR-202): Re-stripe Tucker Road to convert the de-facto southbound shared through-right-turn lane to an exclusive southbound right-turn lane. Widen and/or restripe Tucker Road to add a 2nd southbound left-turn lane. Widen and/or restripe Valley Boulevard to add a 2nd eastbound left-turn lane and a 2nd westbound through lane. Install a southbound right-turn overlap phase on Tucker Road. Install a westbound right-turn overlap phase on Valley Boulevard (SR-202). Modify existing traffic signal.
- Mountain View Avenue at Valley Boulevard: Re-stripe Valley Boulevard (SR-202) to provide a one (1) car storage median for the southbound left-turn movement.
- Green Street at Tehachapi Boulevard: Install a traffic signal and design for two-phase operation. ***Appendix G*** contains the traffic signal warrant analysis worksheets. ***It should be noted that this improvement is a part of the Tehachapi Region Transportation Impact Fee Program Facilities List***.

9. The Project fair share percentages (worse time period impacted) for the nine impacted intersections for the Year 2011 Cumulative plus Project traffic conditions are shown below. Additionally, the Project fair share percentages shown below the intersection correspond directly to the two different project development parcels (165,000 SF Walmart vs. 11,800 SF Commercial Outparcel) based on the Project's trip generation forecast.

Santa Lucia St at Valley Blvd (SR-202)	**7.05 %**
Commercial Outparcel	1.28 %
Walmart	5.77 %
Westwood Blvd at Red Apple Ave	**10.02 %**
Commercial Outparcel	4.11 %
Walmart	5.91 %
Sierra Vista Dr at Valley Blvd (SR-202)	**6.48 %**
Commercial Outparcel	1.17 %
Walmart	5.31 %
Tucker Road at SR-58 EB Ramps	**4.39 %**
Commercial Outparcel	0.79 %
Walmart	3.60 %

- **Tucker Road at Red Apple Ave/Tehachapi Blvd** **9.45 %**
  - Commercial Outparcel 1.71 %
  - Walmart 7.74 %
- **Tucker Rd at Conway Ave** **12.26 %**
  - Commercial Outparcel 2.22 %
  - Walmart 10.04 %
- **Tucker Rd at Valley Blvd (SR-202)** **8.61 %**
  - Commercial Outparcel 1.56 %
  - Walmart 7.05 %
- **Mountain View Ave at Valley Blvd** **8.80 %**
  - Commercial Outparcel 1.59 %
  - Walmart 7.21 %
- **Green St at Tehachapi Blvd** **5.26 %**
  - Commercial Outparcel 0.95 %
  - Walmart 4.31 %

10. It should be noted that the Project Fair Share Contribution percentage for the roadway segment for the Year 2011 Cumulative plus Project traffic conditions shown below is for informational purposes only:

- **Tehachapi Blvd *between* Tucker Rd and Mountain View Ave** **14.82 %**
  - Commercial Outparcel 4.23 %
  - Walmart 10.59 %

11. In the General Plan Buildout with Project condition, three (3) key study intersections are significantly impacted and forecast to operate at adverse levels of service per the City of Tehachapi criteria. The impacted study intersections are:

	AM Peak Hour		PM Peak Hour	
Key Intersection	**Delay (s/v)**	**LOS**	**Delay (s/v)**	**LOS**
7. Tucker Road at SR-58 EB Ramps	--	--	53.5	F
8. Tucker Road at Red Apple Ave/Tehachapi Blvd	--	--	41.3	D
10. Tucker Road at Valley Boulevard (SR-202)	--	--	58.1	E

12. In the General Plan Buildout with Project conditions, the proposed Project is not expected to impact any roadway link per the City of Tehachapi criteria.

13. The General Plan Buildout with Project traffic conditions level of service analysis indicate that the proposed Project will significantly impact three (3) of the of the six (6) key study intersections. The improvements listed below have been identified to address the traffic

impacts at the intersections significantly impacted by the General Plan Buildout with Project traffic:

- Tucker Road at SR-58 Eastbound Ramps: Widen and/or restripe the SR-58 Eastbound Ramp to provide a free right-turn and re-stripe the eastbound through/left-turn lane to a left-turn lane only. ***It should be noted that the receiving lane on Tucker Road is included in the Tehachapi Region Transportation Impact Fee Program Facilities List***.
- Tucker Road at Red Apple Avenue/Tehachapi Boulevard: Widen and/or restripe Tehachapi Boulevard to provide a 2nd westbound left-turn lane. Install a southbound right-turn overlap phase on Tucker Road. Modify existing traffic signal. ***It should be noted that the traffic signal modification is included in the Tehachapi Region Transportation Impact Fee Program Facilities List***.
- Tucker Road at Valley Boulevard (SR-202): Widen and/or restripe Tucker Road to add a 2nd northbound left-turn lane, an exclusive northbound right-turn lane. Re-stripe Tucker Road to convert the de-facto southbound shared through-right-turn lane to an exclusive southbound right-turn lane. Widen and/or restripe Tucker Road to add a 2nd southbound left-turn lane. Install a northbound and southbound right-turn overlap phase on Tucker Road. Install a westbound right-turn overlap phase on Valley Boulevard (SR-202). Modify existing traffic signal.

14. The Project fair share percentages (worse time period impacted) for the three impacted intersections for the General Plan Buildout With Project traffic conditions are shown below. Additionally, the Project fair share percentages shown below the intersection correspond directly to the two different land uses based on the Project's description and trip generation potential.

Tucker Rd at SR-58 EB Ramps	**4.65 %**
Commercial Outparcel	0.72 %
Walmart	3.26 %
Tucker Rd at Red Apple Ave/Tehachapi Blvd	**8.66 %**
Commercial Outparcel	1.57 %
Walmart	7.09 %
Tucker Rd at Valley Blvd (SR-202)	**9.26 %**
Commercial Outparcel	1.67 %
Walmart	7.59 %

15. Under the Year 2011 Cumulative Plus Project traffic conditions, the following key unsignalized intersections have future traffic conditions that would exceed the volume thresholds of MUTCD Warrant #3, Part A and Part B:

- 2. South Street at Valley Boulevard (SR-202)
- 3. Santa Lucia Street at Valley Boulevard (SR-202)
- 5. Westwood Boulevard at Red Apple Avenue
- 7. Tucker Road at SR-58 Eastbound Ramps
- 9. Tucker Road at Conway Avenue/Driveway 3
- 12. Mountain View Avenue at Valley Boulevard
- 13. Mountain View Avenue at Tehachapi Boulevard
- 16. Curry Street at Tehachapi Boulevard
- 19. Green Street at Tehachapi Boulevard

16. Under the General Plan Buildout With Project traffic conditions, the following key unsignalized intersections have future traffic conditions that would exceed the volume thresholds of MUTCD Warrant #3, Part A and Part B:

    - 7. Tucker Road at SR-58 Eastbound Ramps
    - 19. Green Street at Tehachapi Boulevard

17. Based on the Synchro traffic analysis associated with the Concept Median Plan for Tucker Road and Tehachapi Boulevard adequate storage is provided for all movements, under Year 2011 Cumulative Plus Project Traffic Conditions except for the intersections of Tucker Road at Red Apple Avenue/Tehachapi Boulevard and Tucker Road at Valley Boulevard. However, with the implementation of the recommended improvements under Year 2011 Cumulative plus Project with Mitigation traffic conditions, all stacking/queuing issues are offset. Also, the internal throating at the Project driveways are adequate to accommodate the proposed vehicle queuing.

18. The results of the Traffic Signal Analysis for the intersection of Tucker Road and Jiffy Lube/Orchid Plaza Driveway for the Year 2011 Cumulative plus Project traffic conditions are:

    - The intersection capacity analysis indicates that the intersection of Tucker Road and Jiffy Lube/Orchid Plaza Driveway is forecast to operate at unacceptable LOS F during the PM peak hour.
    - The Traffic Signal Warrant for the intersection of Tucker Road and Jiffy Lube/Orchid Plaza Driveway is not satisfied, but the installation of a traffic signal is justified at this intersection based on the intersection capacity analysis results, since this intersection operates at LOS F during the PM peak hour and no reasonable alternative is feasible.
    - The Project fair share percentage (based on greatest peak hour impact) for the intersection of Tucker Road and Jiffy Lube/Orchid Plaza Driveway is 13.52%.

19. The on-site circulation was evaluated in terms of vehicle-pedestrian conflicts. Based on our review of the preliminary site plan, the overall layout does not create any unsafe vehicle-pedestrian conflict points and the driveway throating is sufficient such that access to parking spaces is not impacted by internal vehicle queuing/stacking. Curb return radii have been confirmed and are adequate for service/delivery trucks and trash trucks. Adequate ingress and egress for the drive-thru lanes at the fast-food restaurants should be confirmed prior to finalizing the proposed site plan for the Project. Project traffic is not anticipated to cause significant queuing/stacking on the Project driveways after the recommended improvements. The on-site circulation is very good based on our review of the proposed site plan, whereas the alignment, spacing, and throating of the two Project driveways is adequate. The circulation around the buildings is adequate with sufficient sight distance along the drive aisles.

FINAL
TRAFFIC IMPACT ANALYSIS REPORT

WALMART

Tehachapi, California
February 24, 2010
(Update of November 17, 2009 Report)

1.0 INTRODUCTION

This traffic impact analysis evaluates the potential traffic impacts of the proposed Walmart project (hereinafter referred to as Project), on the area traffic circulation. The proposed Project consists of developing 5,200 square-feet (SF) of retail space, 6,600 SF of fast-food restaurant space and a 165,000 SF Walmart store. Project access is proposed along Tucker Road via two driveways and Tehachapi Boulevard via two driveways. The Project site consists of approximately 24.96 acres of vacant land located on the southeast quadrant of Tucker Road and Red Apple Avenue/Tehachapi Boulevard in the City of Tehachapi, California. A total of 926 on-site parking spaces will be provided for the proposed mix of uses of the Project (823 spaces for Walmart and 103 spaces for outparcel). The proposed Project is anticipated to be completed by Year 2011.

The Project site has been visited and an inventory of adjacent area roadways and intersections made. In support of detailed intersection capacity analyses, existing traffic count information has been compiled. The work program for this traffic study was developed in conjunction with the City of Tehachapi staff. ***Appendix A*** contains a copy of the approved City of Tehachapi Traffic Study Scope of Work Agreement.

This traffic report analyzes existing and future weekday AM and PM peak hour and daily traffic conditions for a near-term (Year 2011) traffic setting upon completion of the Project as well as a long-term (General Plan Buildout) traffic setting with and without Project traffic. Horizon year, background traffic growth estimates have been calculated using a cumulative ambient growth factor. The ambient traffic growth factor is intended to include unknown and future cumulative projects in the study area, as well as account for regular growth in traffic volumes due to the development of projects outside the study area. Peak hour and daily traffic forecasts for the Year 2011 traffic conditions have been projected by increasing existing traffic volumes by an annual cumulative growth rate of compounding two percent per year and adding the traffic from fourteen (14) cumulative projects.

In addition, peak hour and daily forecasts for the General Plan Buildout traffic conditions have been provided by Kimley-Horn and Associates, Inc, the City's consultant for the General Plan Update. It should be noted that the General Plan Buildout volumes for the intersections of Tucker Road at SR-58 Eastbound Ramps and Tucker Road at Red Apple Avenue/Tehachapi Boulevard were manually forecast as there was no data available for the General Plan Buildout traffic conditions. The General Plan Buildout with Project traffic volumes were forecast by growing the existing traffic volumes by

one percent per year and adding the trips generated from the fourteen (14) cumulative projects plus the Project.

1.1 Study Area

Nineteen (19) key study intersections and twelve (12) roadway segments were designated for evaluation based on City of Tehachapi criteria and discussions with City staff for the near-term (Year 2011) analysis. Four (4) Project driveways were also analyzed for the Year 2011 Cumulative plus Project traffic conditions. The nineteen (19) key area intersections selected for evaluation in this report provide local and regional access to the study area and are listed as follows:

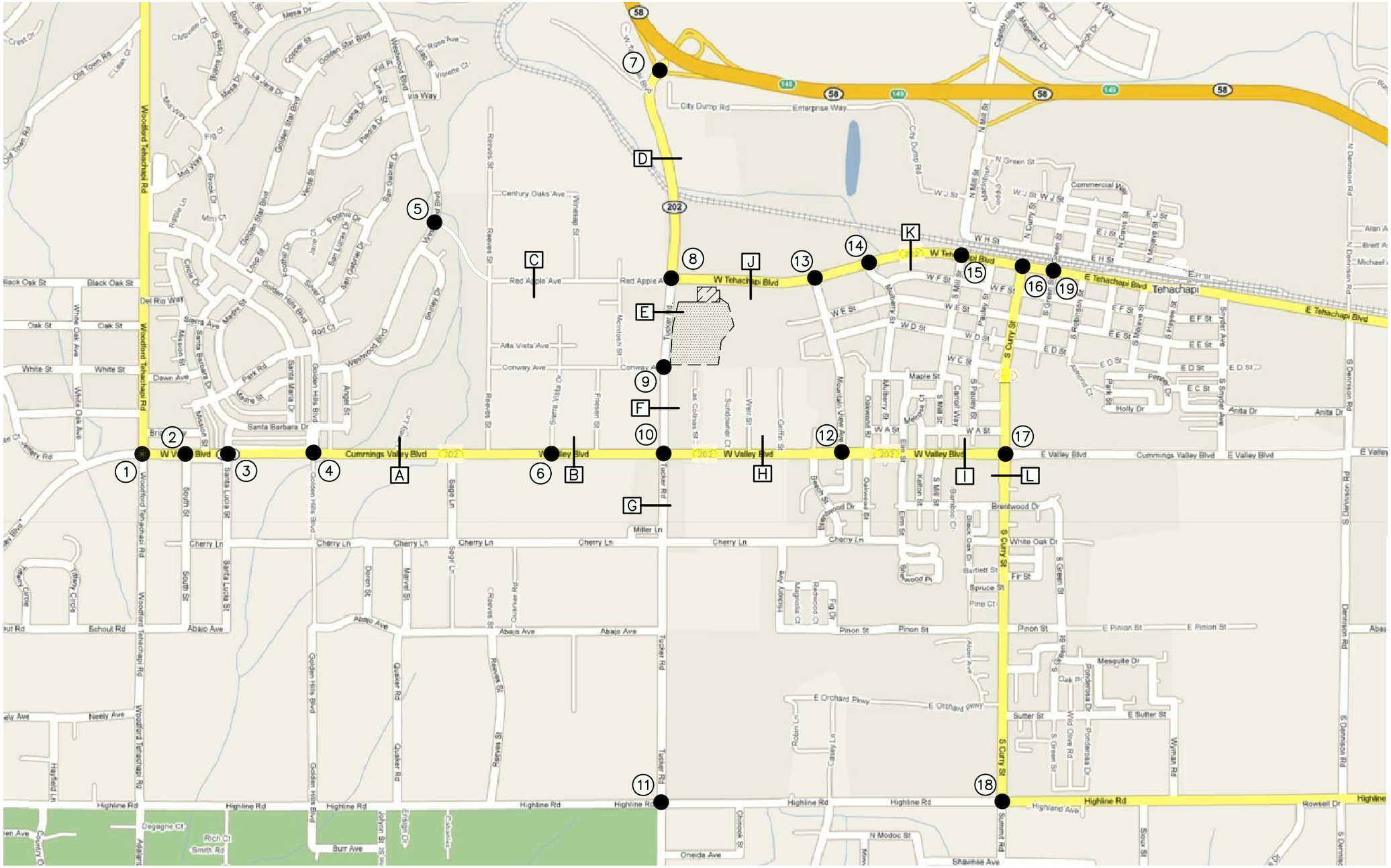
1. Woodford Tehachapi Road at Valley Boulevard (SR-202) – [Kern County, Caltrans]
2. South Street at Valley Boulevard (SR-202) – [Kern County, Caltrans]
3. Santa Lucia Street at Valley Boulevard (SR-202) – [Kern County, Caltrans]
4. Golden Hills Boulevard at Valley Boulevard (SR-202) – [Kern County, Caltrans]
5. Westwood Boulevard at Red Apple Avenue – [Kern County]
6. Sierra Vista Drive at Valley Boulevard (SR-202) – [Kern County, Caltrans]
7. Tucker Road at SR-58 Eastbound Ramps – [Kern County, Caltrans]
8. Tucker Road at Red Apple Avenue/Tehachapi Boulevard – [City of Tehachapi, Caltrans]
9. Tucker Road at Conway Avenue/Walmart Project Driveway 3 – [City of Tehachapi, Caltrans]
10. Tucker Road at Valley Boulevard (SR-202) – [City of Tehachapi, Caltrans]
11. Tucker Road at Highline Road – [City of Tehachapi]
12. Mountain View Avenue at Valley Boulevard – [City of Tehachapi]
13. Mountain View Avenue at Tehachapi Boulevard – [City of Tehachapi]
14. Mulberry Street at Tehachapi Boulevard – [City of Tehachapi]
15. Mill Street at Tehachapi Boulevard – [City of Tehachapi]
16. Curry Street at Tehachapi Boulevard – [City of Tehachapi]
17. Curry Street at Valley Boulevard – [City of Tehachapi]
18. Curry Street/Summit Road at Highline Road – [City of Tehachapi]
19. Green Street at Tehachapi Boulevard – [City of Tehachapi]

The twelve (12) key area roadway segments selected for evaluation in this report provide local and regional access to the study area and are listed as follows:

A. Valley Boulevard (SR-202) *between* Woodford Tehachapi Road and Sage Lane – [Kern County, Caltrans]
B. Valley Boulevard (SR-202) *between* Sierra Vista Drive and Tucker Road – [City of Tehachapi, Caltrans]
C. Red Apple Avenue *between* Reeves Street and Tucker Road – [Kern County]

D. Tucker Road *between* SR-58 Eastbound Ramps and Red Apple Avenue/Tehachapi Boulevard – [Kern County, Caltrans]
E. Tucker Road *between* Red Apple Avenue/Tehachapi Boulevard and Conway Avenue [City of Tehachapi, Caltrans]
F. Tucker Road *between* Conway Avenue and Valley Boulevard (SR-202) – [City of Tehachapi, Caltrans]
G. Tucker Road *between* Valley Boulevard (SR-202) and Cherry Lane – [City of Tehachapi]
H. Valley Boulevard *between* Weir Street and Beach Street – [Kern County]
I. Valley Boulevard *between* Mill Street and Curry Street – [City of Tehachapi]
J. Tehachapi Boulevard *between* Tucker Road and Mountain View Avenue – [City of Tehachapi]
K. Tehachapi Boulevard *between* Mulberry Street and Mill Street – [City of Tehachapi]
L. Curry Street *between* Valley Boulevard and Highland Road – [City of Tehachapi]

Figure 1-1 presents a Vicinity Map, which illustrates the general location of the Project and depicts the surrounding street system.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White St
Del Rio Way
Dawn Ave
Santa Barbara Dr
Maple St
Anita Dr
Holly Dr
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Pine Ct
Bartlett St
Commercial Way
N Green St
Enterprise Way
City Dump Rd
Century Oaks Ave
Alta Vista Ave
Mesa Dr
Golden Star Blvd
Westwood Blvd
Iris Way
Rose Ave
Violette Ct
Reeves St
Quaker Rd
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Hayfield Ln
Degagne Ct
Rich Ct
Smith Rd
Mesquite Dr
Pondeosa Dr
Wild Olive Rd
Wymale Rd
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Hickory Ln
Redwood Ct
Fig Dr
Magnolia Ct
Oak Pl
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Elm St
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Bamboo Ct
Black Oak Dr
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Mulberry St
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Sundowner Ct
Griffin St
Wren St
Mcintosh St
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Tucker Rd
Miller Ln
Cherry Ln
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Highland Ave
Rowsell Dr
Sioux St
Summit Rd
Chinook St

2.0 PROJECT DESCRIPTION AND LOCATION

The proposed Project is located on the southeast quadrant of Tucker Road and Red Apple Avenue/Tehachapi Boulevard in the City of Tehachapi, California. The Project site consists of approximately 24.96 acres of vacant land. As presented in ***Table 2-1,*** the proposed Project includes development of 5,200 square-feet (SF) of retail space, 6,600 SF of fast-food restaurant space, which is located on the adjacent outparcel north of the Walmart site, and a 165,000 SF Walmart store, for a development total of 176,800 SF. A total of 926 on-site parking spaces will be provided for the proposed mix of uses of the Project (823 spaces for Walmart and 103 spaces for outparcel). In addition, internal access will be provided between the retail/restaurant site (outparcel) and the Walmart site.

Figure 2-1 presents the existing site. ***Figure 2-2*** presents the proposed Project site plan prepared by Greenberg Farrow, the Project Civil Engineer. As shown in ***Figure 2-2***, access to the Project site will be provided along Tucker Road via two (2) driveways and along Tehachapi Boulevard via two (2) driveways. Describing the driveways from north to south along Tucker Road; Driveway 1 is signalized and will provide full access to the Project site, Driveway 2 is unsignalized and was proposed to provide full-access to the Project site, but based on the results of the analysis, it is recommended that Driveway 2 only provide right-in, right-out and left-in access to the Project site and restrict the eastbound and westbound through and left turn movements. Describing the driveways from west to east along Tehachapi Boulevard; Driveway 3 is unsignalized and will provide left-in, right-in and right-out only access to the Project site and Driveway 4 will be signalized and provide full access to the Project site. A total of 926 on-site parking spaces will be provided for the proposed Project.

TABLE 2-1

PROJECT DEVELOPMENT SUMMARY[1]

Land Use / Project Description	Proposed Development Size
▪ Commercial/Retail	5,200 SF
▪ Fast-Food Restaurant with Drive-Through	3,500 SF
▪ Fast-Food Restaurant with Drive-Through	3,100 SF
▪ Walmart	165,000 SF
Total Project Summary	**176,800 SF**

Notes:

- SF = Square-Feet

[1] Source: Greenberg Farrow

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LINSCOTT LAW & GREENSPAN engineers

N NO SCALE

SOURCE: MSN LOCAL LIVE

KEY

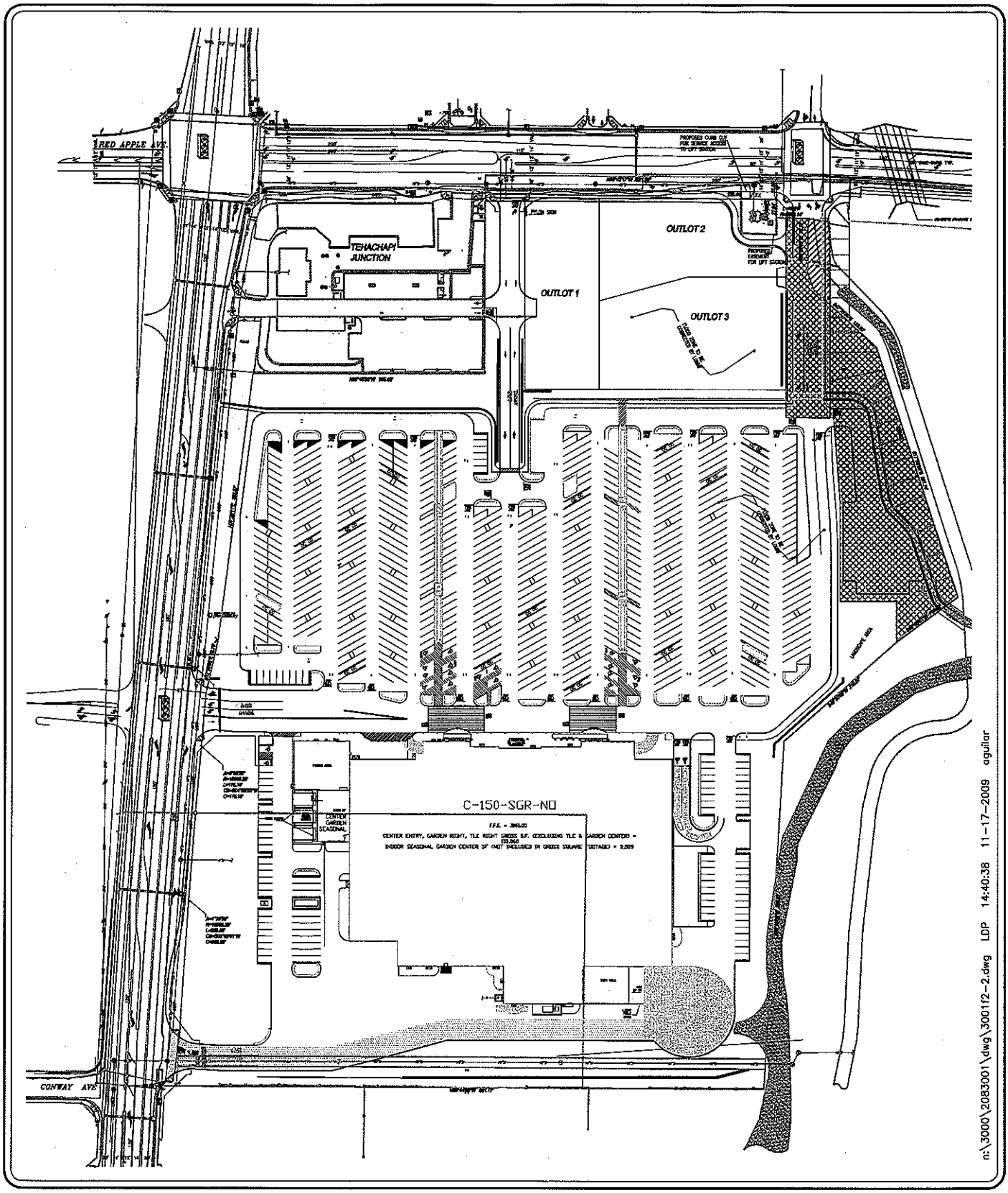
= WALMART SITE

= RETAIL SITE

FIGURE 2-1

EXISTING SITE

WALMART, TEHACHAPI



SOURCE: GREENBERG FARROW

LINSCOTT LAW & GREENSPAN engineers

N NO SCALE

FIGURE 2-2

PROPOSED SITE PLAN
WALMART, TEHACHAPI

3.0 EXISTING CONDITIONS

The principal local network of streets serving the site consists of Tucker Road, Tehachapi Boulevard, Red Apple Avenue, Valley Boulevard (SR-202), Woodford Tehachapi Road, South Street, Santa Lucia Street, Golden Hills Boulevard, Westwood Boulevard, Sierra Vista Drive, Mountain View Avenue, Mulberry Street, Mill Street, Curry Street, Cherry Lane and Highland Road. The following discussion provides a brief synopsis of the key area streets.

3.1 Existing Street Network

State Route 58 (SR-58) provides regional access to the Project site. The SR-58 is located north of the Project site.

Woodford Tehachapi Road is a north-south, two-lane, undivided roadway west of the Project site. Parking is permitted on both sides of the roadway within the vicinity of the Project. The intersection of Woodford Tehachapi Road and Valley Boulevard (SR-202) is controlled by a 5-phase traffic signal. Woodford Tehachapi Road is classified as an arterial roadway in the Kern County Circulation Element.

South Street is a north-south, two-lane, undivided roadway west of the Project site. Parking is permitted on both sides of the roadway within the vicinity of the Project. The intersection of South Street and Valley Boulevard (SR-202) is one-way stop-controlled in the north-south direction. South Street is classified as a collector roadway in the City of Tehachapi's Circulation Element.

Santa Lucia Street is a north-south, two-lane, undivided roadway west of the Project site. Parking is permitted on both sides of the roadway within the vicinity of the Project. The intersection of Santa Lucia and Valley Boulevard (SR-202) is two-way stop-controlled in the north-south direction. Santa Lucia Street is classified as a collector roadway in the City of Tehachapi's Circulation Element.

Golden Hills Boulevard is a north-south, four-lane, undivided roadway west of the Project site. The speed limit on Golden Hills Boulevard is 45 miles per hour (mph). Parking is generally permitted on both sides of the roadway within the vicinity of the Project. The intersection of Golden Hills Boulevard and Valley Boulevard (SR-202) is controlled by a 3-phase traffic signal with a north-south split phase. Golden Hills Boulevard is classified as an arterial roadway in the City of Tehachapi's Circulation Element.

Westwood Boulevard is a north-south, two-lane, undivided roadway west of the Project site. Parking is permitted on both sides of the roadway within the vicinity of the Project. The intersection of Westwood Boulevard and Red Apple Avenue is all-way stop-controlled. Westwood Boulevard is classified as an arterial roadway in the City of Tehachapi's Circulation Element.

Sierra Vista Drive is an east-west, two-lane, undivided roadway within the Project Vicinity. It is a north-south, two-lane, undivided roadway west of the Project site. Parking is permitted on both sides of the roadway within the vicinity of the Project. The intersection of Sierra Vista Drive and Valley

Boulevard (SR-202) is one-way stop-controlled in the north-south direction. Sierra Vista Drive is classified as a collector roadway in the City of Tehachapi's Circulation Element.

Tucker Road is a north-south, four-lane, divided roadway west of the Project site with a posted speed limit of 45 mph. The roadway provides three access points for the Project. North of the intersection of Tucker Road and Red Apple/Tehachapi Boulevard, Tucker Road is two-lane divided roadway. Parking is generally only permitted in the southbound direction within the vicinity of the Project south of the intersection of Tucker Road and Red Apple/Tehachapi Boulevard. The intersection at Tucker Road and SR-58 Eastbound Ramp is one-way stop controlled, Tucker Road and Red Apple Road/Tehachapi Boulevard is controlled by a 8-phase traffic signal, Tucker Road and Conway Avenue is two-way stop controlled and Tucker Road and Highland Road is all-way stop-controlled. Tucker Road is classified as an arterial roadway segment in the City of Tehachapi's Circulation Element.

Mountain View Avenue is a north-south, two-lane, undivided roadway east of the Project site. The speed limit on Mountain View Avenue is 45 mph. Parking is permitted on both sides of the roadway within the vicinity of the Project. The intersection of Mountain View Avenue and Tehachapi Boulevard is two-way stop-controlled and the intersection of Mountain View Avenue and Valley Boulevard is one-way stop-controlled. Mountain View Avenue is classified as a collector roadway segment in the City of Tehachapi's Circulation Element.

Mulberry Street is a north-south, two-lane, undivided roadway east of the Project site with a posted speed limit of 25 mph. Parking is permitted on both sides of the roadway within the vicinity of the Project. The intersection of Mulberry Street and Tehachapi Boulevard is two-way stop-controlled. Mulberry Street is classified as a collector roadway segment in the City of Tehachapi's Circulation Element.

Mill Street is a north-south, two-lane, undivided roadway east of the Project site. The speed limit on Mill Street is 25 mph. Parking is permitted on both sides of the roadway within the vicinity of the Project. The intersection of Mill Street and Tehachapi Boulevard is one-way stop-controlled. Mill Street is classified as a collector roadway segment in the City of Tehachapi's Circulation Element.

Curry Street is a north-south, two-lane roadway east of the Project site. Curry Street is an undivided roadway with a posted speed limit of 35 mph north of Valley Boulevard and divided with a speed limit of 45 mph south of Valley Boulevard. Parking is permitted on both sides of the roadway within the vicinity of the Project. The intersection of Curry Street and Tehachapi Boulevard is all-way stop-controlled, the intersection of Curry Street and Valley Boulevard is a 5-phase signal and the intersection Curry Street and Highland Road is two-way stop-controlled. Curry Street is classified as an arterial roadway segment in the City of Tehachapi's Circulation Element.

Green Street is a north-south oriented roadway west of the Project site. Green Street consists of two lanes, one in each direction, north of Tehachapi Boulevard and is a one lane one-way roadway south of Tehachapi Boulevard. Parking is permitted on both sides of Green Street within the Project

vicinity. The intersection of Green Street and Tehachapi Boulevard is all-way stop controlled. Green Street is classified as a collector roadway segment in the City of Tehachapi's Circulation Element.

Tehachapi Boulevard is a four lane, east-west roadway that borders the Project Site to the north and provides two access points for the Project. The speed limit on Tehachapi Boulevard east of the intersection of Tucker Road and Red Apple Avenue/Tehachapi Boulevard is 35 mph. Parking is permitted on both sides of the roadway within the vicinity of the Project. Tehachapi Boulevard is classified as an arterial roadway segment in the City of Tehachapi's Circulation Element.

Red Apple Avenue is an east-west roadway, two-lane, undivided roadway that is located west of the Project site. The speed limit on red Apple Avenue is 45 mph. Parking is not permitted on either side of the roadway within the vicinity of the Project. Red Apple Avenue is classified as an arterial roadway segment in the City of Tehachapi's Circulation Element.

Valley Boulevard (SR-202) is an east-west, two-lane roadway that is located south of the Project site. The roadway is two-lane, divided west of Tucker Road and two-lane, undivided east of Tucker Road. The speed limit on red Valley Boulevard is 40 mph. Parking is permitted on both sides of the roadway within the vicinity of the Project. Valley Boulevard is classified as an arterial roadway segment in the City of Tehachapi's Circulation Element.

Cherry Lane is an east-west, two-lane, undivided roadway that is located south of the Project site. The speed limit on Cherry Lane is 25 mph west of Tucker Road and 40 mph east of Tucker Road. Parking is permitted on both sides of the roadway within the vicinity of the Project. Cherry Lane is classified as a collector roadway segment in the City of Tehachapi's Circulation Element.

Highland Road is an east-west, two-lane, undivided roadway that is located south of the Project site. The speed limit on Highland Road is 55 mph. Parking is permitted on both sides of the roadway within the vicinity of the Project. Highland Road is classified as an arterial roadway segment in the City of Tehachapi's Circulation Element.

Figure 3-1 presents the City of Tehachapi Circulation Element, which identifies the roadway classifications that are identified in this study. Additionally, ***Figure 3-2*** presents an inventory of the existing roadway conditions for the intersections evaluated in this report. The number of travel lanes and intersection controls for the key area intersections and roadway segments are identified.

3.2 Existing Area Traffic Volumes

Existing AM and PM peak hour and daily traffic volumes at the nineteen (19) key study intersections and twelve (12) key roadway links evaluated in this report were collected in May 2008, June 2008 and February 2009 by City Traffic Counters. ***Appendix B*** contains the detailed traffic count data. The nineteen (19) key study intersections and twelve (12) key roadway links were designated for evaluation based on the City of Tehachapi criteria, discussions with City staff and knowledge of the area circulation system.

Figures 3-3 and ***3-4*** present the existing AM and PM peak hour traffic volumes, respectively, for the nineteen (19) key study intersections. ***Figure 3-5*** presents the existing daily traffic volumes for the twelve (12) key study roadway links.

3.3 Existing Intersection Conditions

3.3.1 *Highway Capacity Manual (HCM) Method of Analysis (Signalized Intersections)*

In conformance with the City of Tehachapi, Kern County and Caltrans requirements, existing AM and PM peak hour operating conditions for the key study intersections were evaluated using the *Highway Capacity Manual (HCM) 2000* Methodology for signalized intersections. Based on the HCM operations method of analysis, level of service for signalized intersections is defined in terms of control delay, which is a measure of driver discomfort, frustration, fuel consumption, and lost travel time. The delay experienced by a motorist is made up of a number of factors that relate to control, geometries, traffic, and incidents. Total delay is the difference between the travel time actually experienced and the reference travel time that would result during ideal conditions: in the absence of traffic control, in the absence of geometric delay, in the absence of any incidents, and when there are no other vehicles on the road.

In Chapter 16 of the HCM, only the portion of total delay attributed to the control facility (study intersection) is quantified. This delay is called *control delay*. Control delay includes initial deceleration delay, queue move-up time, stopped delay, and final acceleration delay. In contrast, in previous versions of the HCM (1994 and earlier), delay included only stopped delay. Specifically, LOS criteria for traffic signals are stated in terms of the average control delay per vehicle. The six qualitative categories of Level of Service that have been defined along with the corresponding HCM control delay (seconds per vehicle) value range for signalized intersections are shown in ***Table 3-1***.

3.3.2 *Highway Capacity Manual (HCM) Method of Analysis (Unsignalized Intersections)*

The *Highway Capacity Manual (HCM) 2000* Methodology for unsignalized intersections was utilized in the analysis of stop-controlled intersections. For all-way stop-controlled intersections, this methodology estimates the average control delay for each of the subject movements and determines the level of service for each movement. The overall average control delay measured in seconds per vehicle, and level of service is then calculated for the entire intersection. The HCM control delay value translates to a Level of Service (LOS) estimate, which is a relative measure of the intersection performance.

For one-way and two-way stop-controlled (minor street stop-controlled) intersections, this methodology estimates the worst side street delay, measured in seconds per vehicle and determines the level of service for that approach. The HCM delay value translates to a Level of Service (LOS) estimate, which is a relative measure of the intersection performance. The six qualitative categories of Level of Service have been defined along with the corresponding HCM control delay value range, as shown in ***Table 3-2.***

3.3.3 *Volume to Capacity (V/C) Method of Analysis (Roadway Segments)*

In conformance with the City of Tehachapi and Kern County requirements criteria, existing daily operating conditions for the key existing study roadway links have been investigated according to the volume-to-capacity (V/C) of each link. The V/C relationship is used to estimate the LOS of the roadway segment with the volume based on the 24-hour traffic count data and the existing capacity based on the City's classification of each roadway.

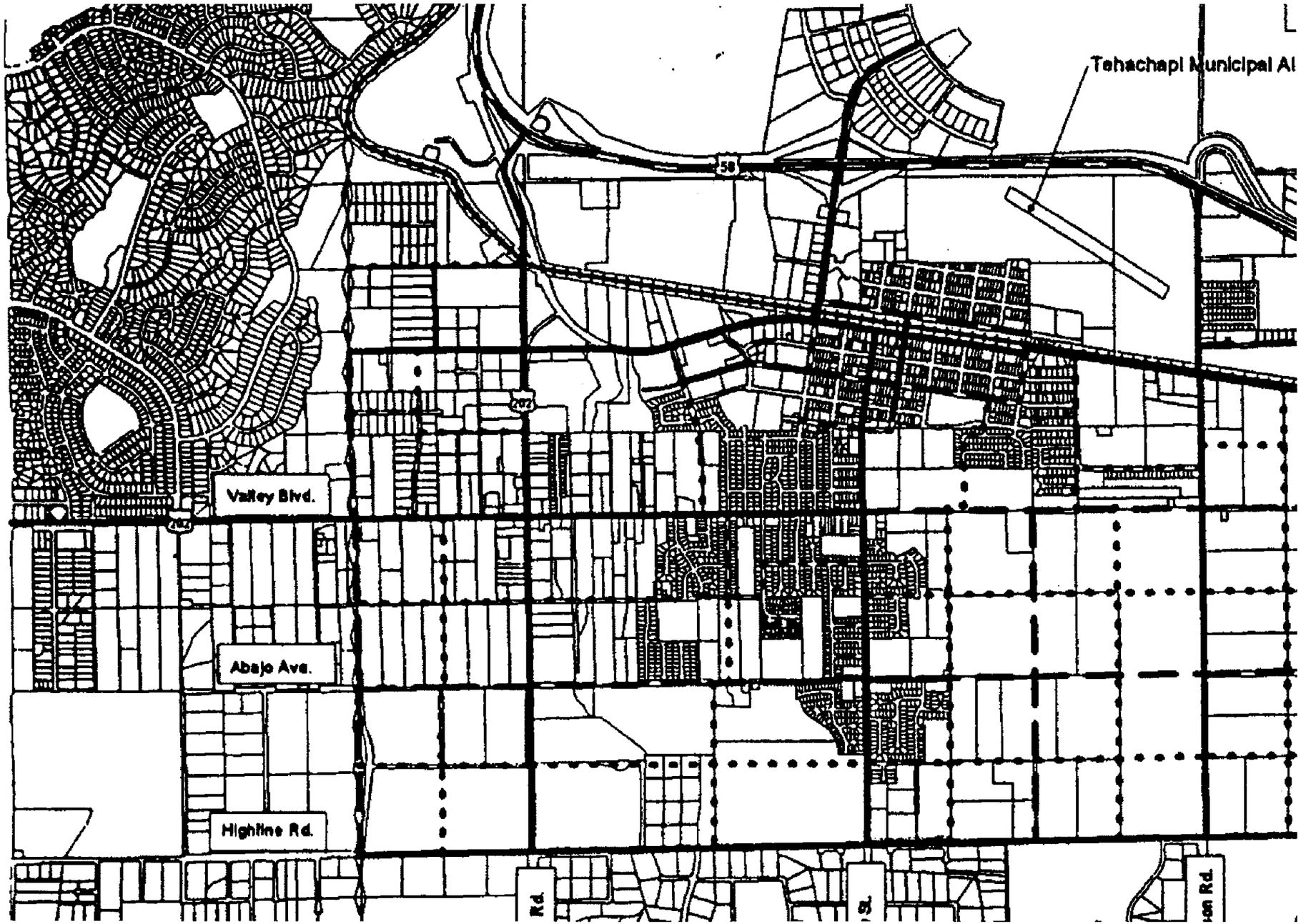
The six qualitative categories of Level of Service have been defined along with the corresponding Volume to Capacity (V/C) value range and are shown in ***Table 3-3***.

The roadway link daily capacity of each street classification, according to the City's Circulation Element, is presented in ***Table 3-4.***

3.4 Impact Criteria and Thresholds

The City of Tehachapi and Kern County considers LOS C to be the minimum acceptable LOS for all intersections and roadway segments.

Caltrans considers LOS D to be the minimum acceptable LOS for all Caltrans intersections.



LEGEND

Circulation Plan
- Arterial
- Collector
- Local Collector
- Union Pacific Railroad
- State Highway
- Sphere of Influence

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SOURCE: QUAD KNOPF

LINSCOTT LAW & GREENSPAN engineers

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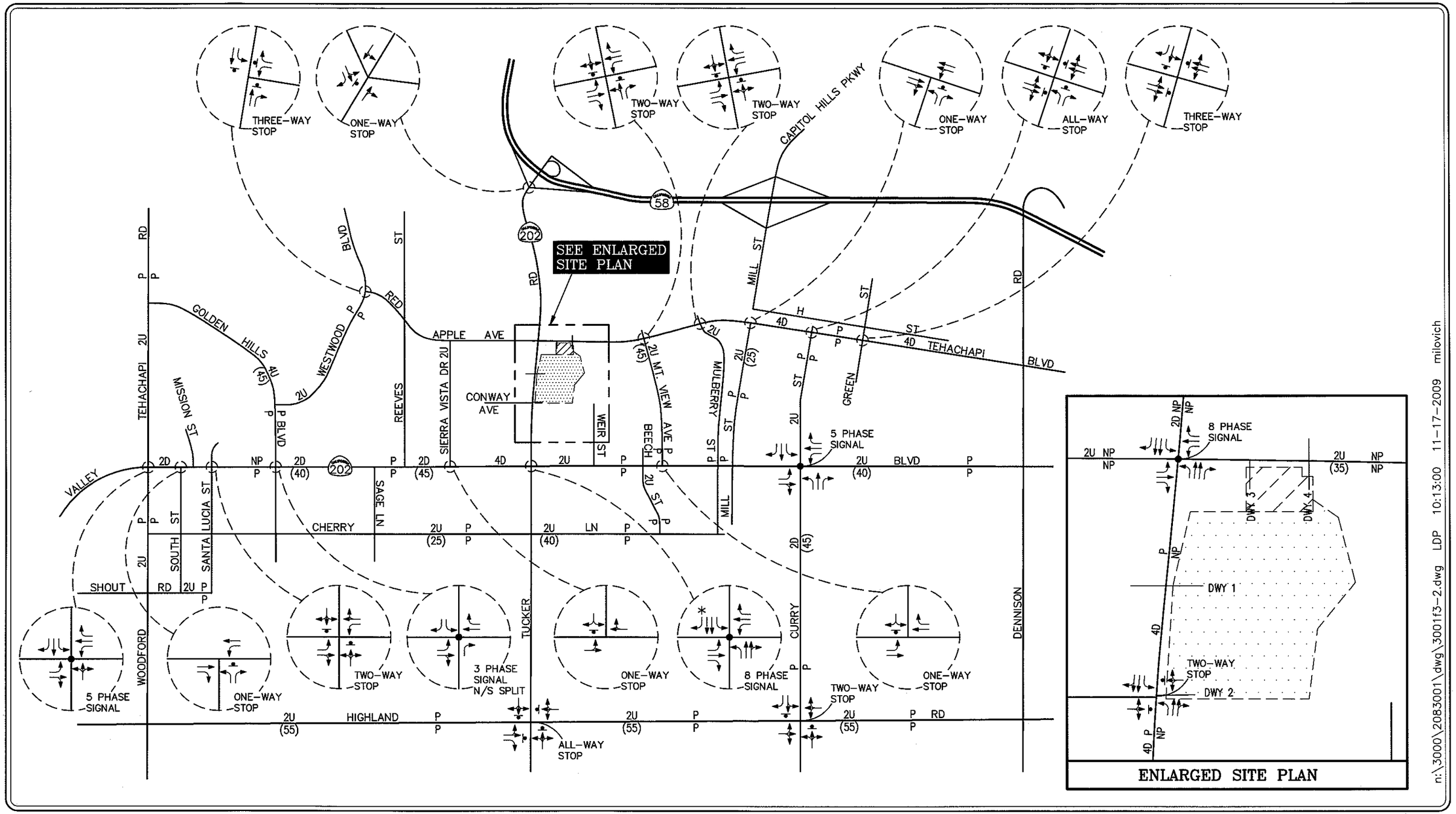
FIGURE 3-1

TEHACHAPI CIRCULATION ELEMENT

WALMART, TEHACHAPI



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NO SCALE

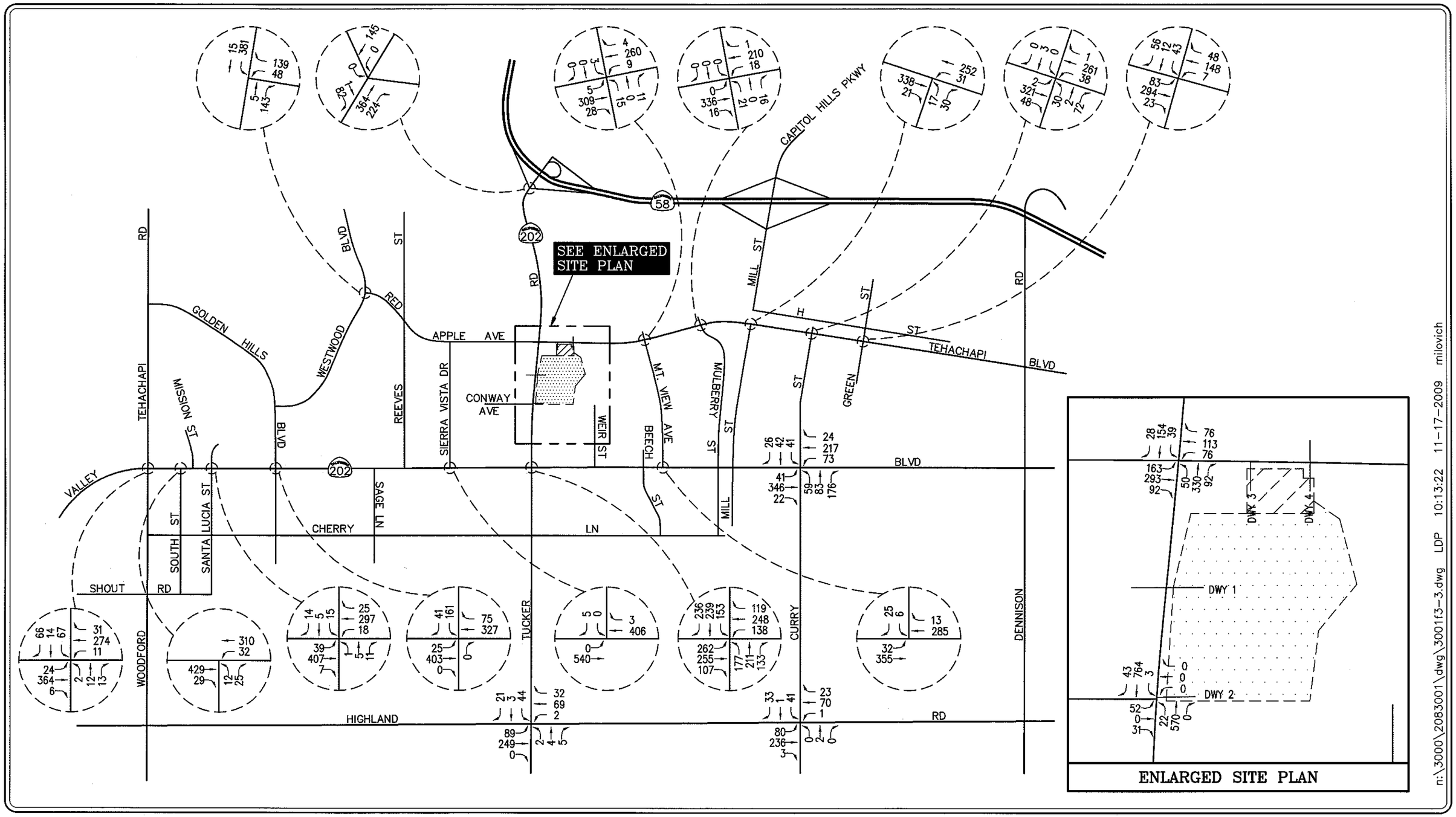
KEY

- ← = APPROACH LANE ASSIGNMENT
- ● = TRAFFIC SIGNAL, STOP SIGN
- = WALMART SITE
- = RETAIL SITE
- P = PARKING, NP = NO PARKING
- U = UNDIVIDED, D = DIVIDED
- 2 = NUMBER OF TRAVEL LANES
- (XX)= POSTED SPEED LIMIT (MPH)
- * = DE-FACTO RIGHT-TURN

FIGURE 3-2

EXISTING ROADWAY CONDITIONS AND INTERSECTION CONTROLS

WALMART, TEHACHAPI



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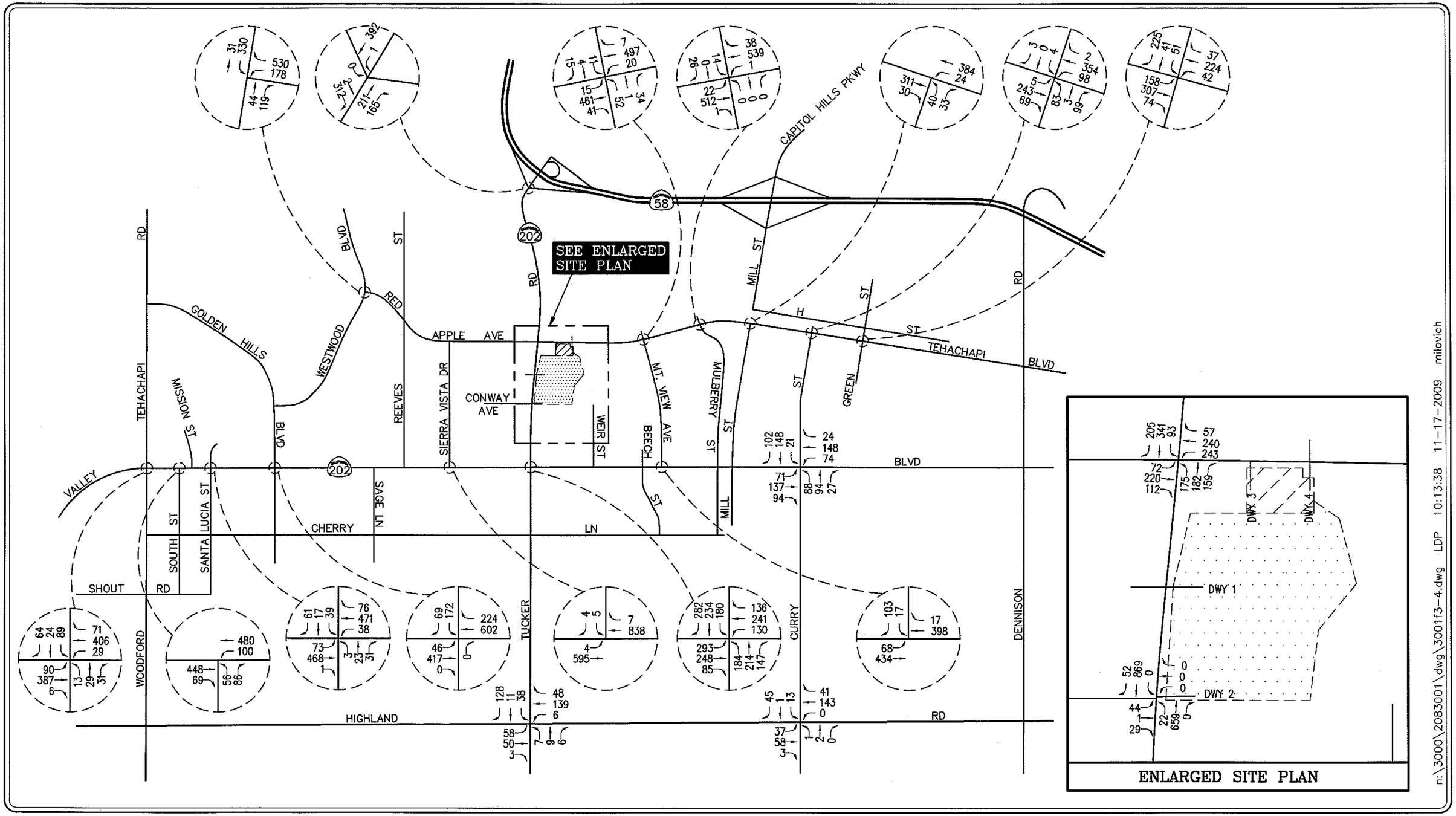
KEY
= WALMART SITE
= RETAIL SITE

FIGURE 3-3

EXISTING AM PEAK HOUR TRAFFIC VOLUMES

WALMART, TEHACHAPI



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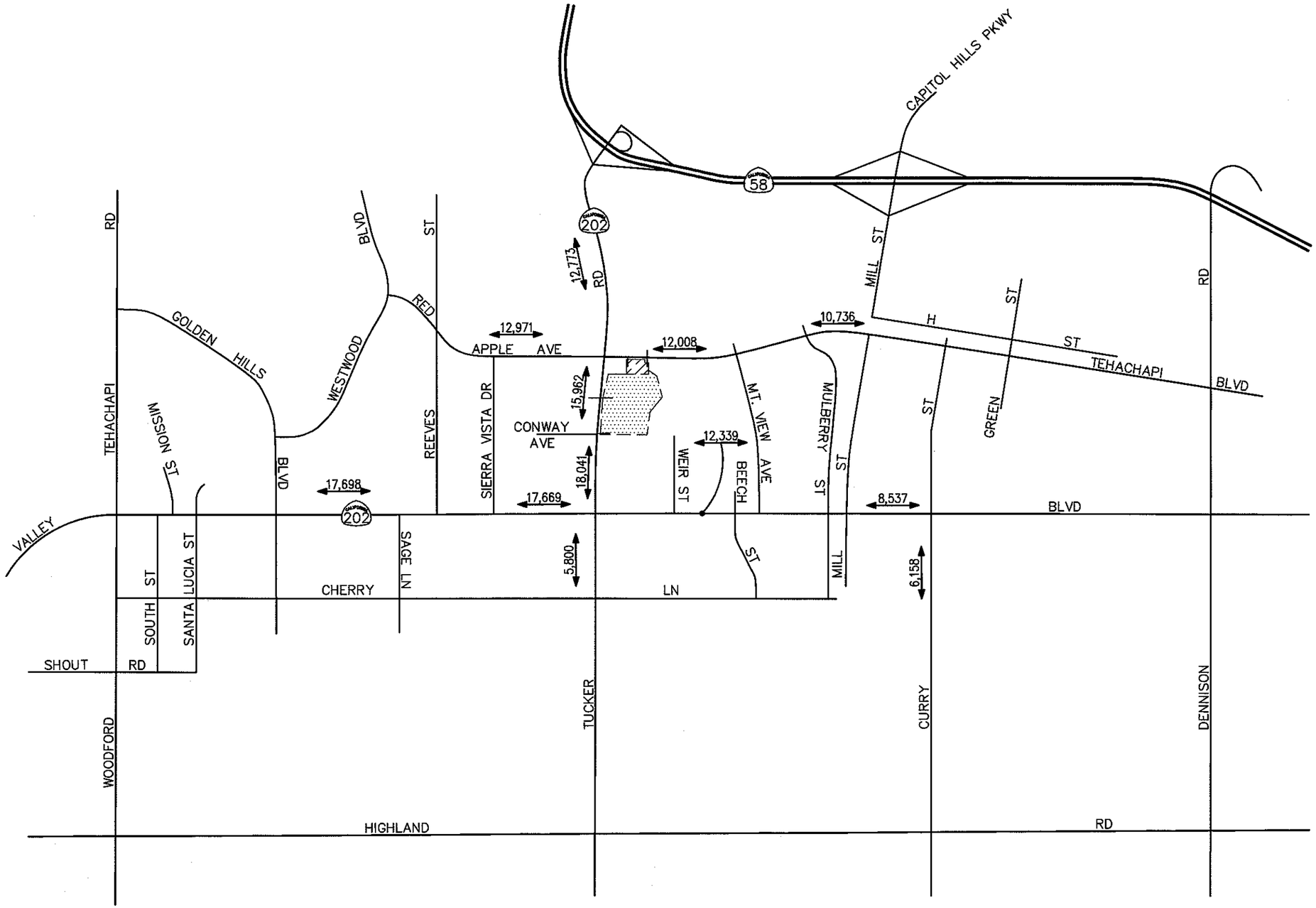
NO SCALE

KEY
= WALMART SITE
= RETAIL SITE

FIGURE 3-4

EXISTING PM PEAK HOUR TRAFFIC VOLUMES

WALMART, TEHACHAPI



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LINSCOTT LAW & GREENSPAN engineers

N NO SCALE

KEY
= WALMART SITE
= RETAIL SITE
##,### = DAILY TRAFFIC VOLUMES

FIGURE 3-5

EXISTING DAILY TRAFFIC VOLUMES

WALMART, TEHACHAPI

TABLE 3-1

LEVEL OF SERVICE CRITERIA FOR SIGNALIZED INTERSECTIONS (HCM)[2]

Level of Service (LOS)	Control Delay Per Vehicle (seconds/vehicle)	Level of Service Description
A	≤ 10.0	This level of service occurs when progression is extremely favorable and most vehicles arrive during the green phase. Most vehicles do not stop at all. Short cycle lengths may also contribute to low delay.
B	> 10.0 and ≤ 20.0	This level generally occurs with good progression, short cycle lengths, or both. More vehicles stop than with LOS A, causing higher levels of average delay.
C	> 20.0 and ≤ 35.0	Average traffic delays. These higher delays may result from fair progression, longer cycle lengths, or both. Individual cycle failures may begin to appear at this level. The number of vehicles stopping is significant at this level, though many still pass through the intersection without stopping.
D	> 35.0 and ≤ 55.0	Long traffic delays. At level D, the influence of congestion becomes more noticeable. Longer delays may result from some combination of unfavorable progression, long cycle lengths, or high v/c ratios. Many vehicles stop, and the proportion of vehicles not stopping declines. Individual cycle failures are noticeable.
E	> 55.0 and ≤ 80.0	Very long traffic delays. This level is considered by many agencies to be the limit of acceptable delay. These high delay values generally indicate poor progression, long cycle lengths, and high v/c ratios. Individual cycle failures are frequent occurrences.
-F	≥ 80.0	Severe congestion. This level, considered to be unacceptable to most drivers, often occurs with over saturation, that is, when arrival flow rates exceed the capacity of the intersection. It may also occur at high v/c ratios below 1.0 with many individual cycle failures. Poor progression and long cycle lengths may also be major contributing factors to such delay levels.

[2] Source: *Highway Capacity Manual 2000*, Chapter 16 (Signalized Intersections).

TABLE 3-2

LEVEL OF SERVICE CRITERIA FOR UNSIGNALIZED INTERSECTIONS (HCM)[3]

Level of Service (LOS)	Highway Capacity Manual (HCM) Delay Value (sec/veh)	Level of Service Description
A	≤ 10.0	Little or no delay
B	> 10.0 and ≤ 15.0	Short traffic delays
C	> 15.0 and ≤ 25.0	Average traffic delays
D	> 25.0 and ≤ 35.0	Long traffic delays
E	> 35.0 and ≤ 50.0	Very long traffic delays
F	> 50.0	Severe congestion

[3] Source: *Highway Capacity Manual 2000*, Chapter 17 (Unsignalized Intersections).

TABLE 3-3

LEVEL OF SERVICE CRITERIA FOR ROADWAY SEGMENTS (V/C METHODOLOGY)[4]

Level of Service (LOS)	Intersection Capacity Utilization Value (V/C)	Level of Service Description
A	≤ 0.600	EXCELLENT. No vehicle waits longer than one red light, and no approach phase is fully used.
B	0.601 – 0.700	VERY GOOD. An occasional approach phase is fully utilized; many drivers begin to feel somewhat restricted within groups of vehicles.
C	0.701 – 0.800	GOOD. Occasionally drivers may have to wait through more than one red light; backups may develop behind turning vehicles.
D	0.801 – 0.900	FAIR. Delays may be substantial during portions of the rush hours, but enough lower volume periods occur to permit clearing of developing lines, preventing excessive backups.
E	0.901 – 1.000	POOR. Represents the most vehicles intersection approaches can accommodate; may be long lines of waiting vehicles through several signal cycles.
F	> 1.000	FAILURE. Backups from nearby locations or on cross streets may restrict or prevent movement of vehicles out of the intersection approaches. Potentially very long delays with continuously increasing queue lengths.

[4] Source: *Transportation Research Board Circular 212 - Interim Materials on Highway Capacity*.

TABLE 3-4

DAILY ROADWAY LINK CAPACITIES[5]

Type of Arterial	LOS E Capacity (VPD)
8-Lane Divided Major Arterial	72,000
6-Lane Divided Urban Major Arterial	60,000
6-Lane Divided Major Arterial	54,000
4-Lane Divided Urban Major Arterial	40,000
4-Lane Divided Major Arterial	36,000
2-Lane Divided Major Arterial	18,000
4-Lane Undivided Major Arterial	30,000
2-Lane Undivided Major Arterial	15,000
4-Lane Divided Minor Arterial	28,000
2-Lane Divided Minor Arterial	14,000
4-Lane Undivided Minor Arterial	24,000
2-Lane Undivided Minor Arterial	12,000

Notes:

- VPD = Vehicles per Day

[5] Source: *Commercial Development Traffic Impact Study, Tehachapi, California, dated: November 9, 2007.* Prepared by Crenshaw Traffic Engineering.

3.5 Existing Level of Service Results

3.5.1 *Intersections*

Table 3-5 summarizes the existing peak hour service level calculations for the nineteen (19) key study intersections based on existing traffic volumes and current street geometry. Review of ***Table 3-5*** indicates that based on the HCM method of analysis and the LOS criteria mentioned in this report, four of the nineteen (19) key study intersections currently operate at unacceptable levels of service. The remaining fifteen (15) key study intersections currently operate at acceptable level of service LOS C or better during the AM and PM peak hours. The intersections operating at adverse levels of service are:

	AM Peak Hour		**PM Peak Hour**	
Key Intersection	**Delay (s/v)**	**LOS**	**Delay (s/v)**	**LOS**
5. Westwood Boulevard at Red Apple Avenue	--	--	28.7	D
6. Sierra Vista Drive at Valley Boulevard (SR-202)	--	--	28.5	D
9. Tucker Road at Conway Avenue	32.0	D	40.9	E
10. Tucker Road at Valley Boulevard (SR-202)	--	--	36.3	D

Appendix C contains the existing conditions Delay/LOS level of service calculation worksheets for the nineteen (19) key study intersections.

3.5.2 *Roadway Links*

Table 3-6 summarizes the existing service level calculations for the twelve (12) key study roadway links based on existing 24-hour traffic volumes and current roadway geometry. Review of ***Table 3-6*** indicates that based on the daily V/C method of analysis and the LOS criteria mentioned in this report, four of the twelve (12) key study roadway segments currently operate at unacceptable levels of service. The remaining eight (8) key study roadway links operate at acceptable LOS C or better on a daily basis. The roadway segments operating at adverse levels of service are:

Key Roadway Link	**V/C Ratio**	**LOS**
A. Valley Blvd (SR-202) *between* Woodford Tehachapi Road and Sage Lane	0.983	E
B. Valley Blvd (SR-202) *between* Sierra Vista Drive and Tucker Road	0.982	E
C. Red Apple Avenue *between* Reeves Street and Tucker Road	0.865	D
H. Valley Blvd *between* Weir Street and Beach Street	0.827	D

TABLE 3-5

EXISTING INTERSECTION PEAK HOUR LEVELS OF SERVICE SUMMARY[6]

Key Intersections		Time Period	Control Type	Delay (s/v)	LOS
1.	Woodford Tehachapi Road at	AM	5Ø Traffic	15.7	B
	Valley Boulevard (SR-202)	PM	Signal	18.4	B
2.	South Street at	AM	One-Way	11.7	B
	Valley Boulevard (SR-202)	PM	Stop	14.3	B
3.	Santa Lucia Street at	AM	Two-Way	12.9	B
	Valley Boulevard (SR-202)	PM	Stop	20.8	C
4.	Golden Hills Boulevard at	AM	4Ø Traffic	14.8	B
	Valley Boulevard (SR-202)	PM	Signal	13.9	B
5.	Westwood Boulevard at	AM	All-Way	14.5	B
	Red Apple Avenue	PM	Stop	**28.7**	**D**
6.	Sierra Vista Drive at	AM	One-Way	10.9	B
	Valley Boulevard (SR-202)	PM	Stop	**28.5**	**D**
7.	Tucker Road at	AM	One-Way	9.6	A
	SR-58 Eastbound Ramps	PM	Stop	17.7	C
8.	Tucker Road at	AM	8Ø Traffic	27.7	C
	Red Apple Avenue/Tehachapi Boulevard	PM	Signal	32.5	C
9.	Tucker Road at	AM	Two-Way	**32.0**	**D**
	Conway Avenue	PM	Stop	**40.9**	**E**
10.	Tucker Road at	AM	8Ø Traffic	34.4	C
	Valley Boulevard (SR-202)	PM	Signal	**36.3**	**D**

Notes:

- s/v = seconds per vehicle
- LOS = Level of Service, please refer to *Tables 3-1* and *3-2* for the LOS definitions.
- Ø = Phase
- **Bold Delay/LOS values** indicate adverse service levels based on City of Tehachapi and Kern County Criteria.

[6] *Appendix C* contains the Delay/LOS calculation worksheets for all study intersections.

TABLE 3-5 (CONTINUED)

EXISTING INTERSECTION PEAK HOUR LEVELS OF SERVICE SUMMARY[7]

Key Intersections		Time Period	Control Type	Delay (s/v)	LOS
11.	Tucker Road at	AM	All-Way	11.2	B
	Highline Road	PM	Stop	9.0	A
12.	Mountain View Avenue at	AM	One-Way	11.3	B
	Valley Boulevard	PM	Stop	14.8	B
13.	Mountain View Avenue at	AM	Two-Way	11.9	B
	Tehachapi Boulevard	PM	Stop	15.2	C
14.	Mulberry Street at	AM	Two-Way	11.1	B
	Tehachapi Boulevard	PM	Stop	13.6	B
15.	Mill Street at	AM	One-Way	11.1	B
	Tehachapi Boulevard	PM	Stop	12.4	B
16.	Curry Street at	AM	All-Way	9.7	A
	Tehachapi Boulevard	PM	Stop	11.1	B
17.	Curry Street at	AM	5Ø Traffic	22.1	C
	Valley Boulevard	PM	Signal	23.7	C
18.	Curry Street/Summit Road at	AM	Two-Way	13.6	B
	Highline Road	PM	Stop	11.5	B
19.	Green Street at	AM	All-Way	9.6	A
	Tehachapi Boulevard	PM	Stop	13.2	B

Notes:

- s/v = seconds per vehicle
- LOS = Level of Service, please refer to *Tables 3-1* and *3-2* for the LOS definitions.
- Ø = Phase
- **Bold Delay/LOS values** indicate adverse service levels based on City of Tehachapi and Kern County Criteria.

[7] *Appendix C* contains the Delay/LOS calculation worksheets for all study intersections.

TABLE 3-6

EXISTING ROADWAY LINK DAILY LEVELS OF SERVICE SUMMARY

Key Roadway Segment		(1) Type of Arterial	(2) LOS E Capacity (VPD)	(3) Existing Lanes	(4) Existing Traffic Conditions		
					Daily Volume	V/C Ratio	LOS
A.	Valley Boulevard (SR-202) *between* Woodford Tehachapi Road and Sage Lane	Major Arterial	18,000	2D	**17,698**	**0.983**	**E**
B.	Valley Boulevard (SR-202) *between* Sierra Vista Drive and Tucker Road	Major Arterial	18,000	2D	**17,669**	**0.982**	**E**
C.	Red Apple Avenue *between* Reeves Street and Tucker Road	Major Arterial	15,000	2U	**12,971**	**0.865**	**D**
D.	Tucker Road *between* SR-58 EB Ramps and Red Apple Ave/Teha. Blvd	Major Arterial	18,000	2D	12,773	0.710	C
E.	Tucker Road *between* Red Apple Ave/Tehachapi Blvd and Conway Ave	Major Arterial	36,000	4D	15,962	0.443	A
F.	Tucker Road *between* Conway Avenue and Valley Boulevard (SR-202)	Major Arterial	36,000	4D	18,041	0.501	A
G.	Tucker Road *between* Valley Boulevard (SR-202) and Cherry Lane	Major Arterial	36,000	4D	5,800	0.161	A
H.	Valley Boulevard *between* Weir Street and Beach Street	Major Arterial	15,000	2U	**12,339**	**0.827**	**D**
I.	Valley Boulevard *between* Mill Street and Curry Street	Major Arterial	15,000	2U	8,537	0.569	A
J.	Tehachapi Boulevard *between* Tucker Rd and Mountain View Ave	Major Arterial	18,000	2D	12,008	0.667	B
K.	Tehachapi Boulevard *between* Mulberry Street and Mill Street	Major Arterial	36,000	4D	10,736	0.298	A
L.	Curry Street *between* Valley Boulevard and Highland Road	Major Arterial	18,000	2D	6,158	0.342	A

Notes:

- VPD = Vehicles per Day
- V/C = Volume to Capacity Ratio
- LOS = Level of Service, please refer to *Table 3-3* for the LOS definitions

4.0 TRAFFIC FORECASTING METHODOLOGY

In order to estimate the traffic impact characteristics of the Project, a multi-step process has been utilized. The first step is traffic generation, which estimates the total arriving and departing traffic on a peak hour and daily basis. The traffic generation potential is forecast by applying the appropriate vehicle trip generation equations or rates to the Project development tabulation.

The second step of the forecasting process is traffic distribution, which identifies the origins and destinations of inbound and outbound Project traffic. These origins and destinations are typically based on demographics and existing/expected future travel patterns in the study area.

The third step is traffic assignment, which involves the allocation of Project traffic to study area streets and intersections. Traffic assignment is typically based on minimization of travel time, which may or may not involve the shortest route, depending on prevailing operating conditions and travel speeds.

Traffic distribution patterns are indicated by general percentage orientation, while traffic assignment allocates specific volume forecasts to individual roadway links and intersection turning movements throughout the study area.

With the forecasting process complete and Project traffic assignments developed, the impact of the Project is isolated by comparing operational (LOS) conditions at selected key intersections using expected future traffic volumes with and without forecast Project traffic. If necessary, the need for site-specific and/or cumulative local area traffic improvements can then be evaluated.

5.0 PROJECT TRAFFIC CHARACTERISTICS

5.1 Project Traffic Generation Forecast

Traffic generation is expressed in vehicle trip ends, defined as one-way vehicular movements, either entering or exiting the generating land use. Generation equations and/or rates used in the traffic forecasting procedure are found in the Eighth Edition of *Trip Generation*, published by the Institute of Transportation Engineers (ITE) [Washington D.C., 2008].

The first part of ***Table 5-1*** summarizes the trip generation rates used in forecasting the vehicular trips generated by the proposed Project and the lower part presents the forecast daily and peak hour Project traffic volumes for a "typical" weekday. The trip generation potential for the proposed Project was forecast using ITE Land Use Code 820: Shopping Center rates, ITE Land Use Code 814: Specialty Retail Center rates, ITE Land Use Code 934: Fast-Food Restaurant with Drive-Thru rates and ITE Land Use Code 813: Free-Standing Discount Superstore rates.

As shown in the lower portion of ***Table 5-1***, the proposed Project is expected to generate 11,043 net daily trips (one half arriving, one half departing), with 419 net trips (227 inbound, 192 outbound) produced in the AM peak hour and 669 net trips (331 inbound, 338 outbound) produced in the PM peak hour on a “typical” weekday. The trip generation methodology and forecasts were approved by the City of Tehachapi staff prior to proceeding with further analysis.

Further, to account for trips that come directly from the everyday traffic stream on the adjoining streets (i.e., Tucker Road and Tehachapi Boulevard), applicable pass-by reduction factors were incorporated into the daily, AM and PM peak hour traffic forecasts for the retail components. For the retail component, average pass-by reduction factors of 10%, 10% and 25% were assumed for the ADT, AM and PM peak hours, respectively. For the fast-food restaurant component, the *Trip Generation Handbook, 2nd Edition*, published by ITE, June 2004 recommends average pass-by reduction factors of 49% and 50% for the AM and PM peak hours, respectively. A pass-by reduction factor of 10% was assumed for the daily 2-Way traffic. For the Walmart (Free-Standing Discount Superstore) component, the *Trip Generation Handbook, 2nd Edition*, published by ITE, June 2004 recommends an average pass-by reduction factor of 28% for the PM peak hour. Pass-by reduction factors of 10% were assumed for daily 2-Way traffic and the AM peak

Potential traffic impacts of the aforementioned net Project trips (after applying the applicable pass-by reduction factors) are evaluated in the traffic analysis section of this report.

5.2 Project Traffic Distribution and Assignment

The directional traffic distribution pattern for the Walmart component and the retail/fast-food restaurant with drive-through component of the Project are presented in ***Figures 5-1*** and ***5-2***, respectively. Project traffic volumes, both entering and exiting the site, have been distributed and assigned to the adjacent street system based on the following considerations:

- the site's proximity to major traffic carriers (i.e. SR-58 Freeway, etc.),

- expected localized traffic flow patterns based on adjacent street channelization and presence of traffic signals,
- the traffic-carrying capacity and travel speed available on roadways serving the Project site,
- existing intersection traffic volumes,
- ingress/egress availability at the Project site, and
- input from City of Tehachapi staff.

The Project trip distribution pattern was submitted to the City staff for their review and approval prior to proceeding with further analyses.

The anticipated AM and PM peak hour Project traffic volumes at the nineteen (19) key study intersections are presented in ***Figures 5-3*** and ***5-4***, respectively. In addition, ***Figure 5-5*** presents the daily Project traffic volumes at the twelve (12) key study roadway links. The traffic volume assignment presented in the above mentioned figures reflect the traffic distribution characteristics shown in ***Figures 5-1*** and ***5-2*** and the traffic generation forecast presented in the lower portion of ***Table 5-1***.

.

TABLE 5-1

PROJECT TRAFFIC GENERATION RATES AND FORECAST

Land Use	Daily	AM Peak Hour			PM Peak Hour		
		Enter	Exit	Total	Enter	Exit	Total
Trip Generation Factors[8]:							
▪ 820: Shopping Center (TE/TSF)	42.94	0.61	0.39	1.00	1.83	1.90	3.73
▪ 814: Specialty Retail Center (TE/TSF)	44.32	--	--	--	1.19	1.52	2.71
▪ 934: Fast-Food Restaurant with Drive-Thru (TE/TSF)	496.12	25.17	24.18	49.35	17.60	16.24	33.84
▪ 813: Free-Standing Discount Superstore (TE/TSF)	53.13	0.94	0.73	1.67	2.26	2.35	4.61
Proposed Project Trip Generation Forecast:							
▪ Retail - (5,200 SF)[9]	230	3	2	5	6	8	14
Pass-By Reduction (ADT: 10%, AM: 10%, PM: 25%)[10]	*-23*	*0*	*0*	*0*	*-2*	*-2*	*-4*
Subtotal	***207***	***3***	***2***	***5***	***4***	***6***	***10***
▪ Fast-Food Restaurant with Drive Thru - (3,500 SF & 3,100 SF)	3,274	166	160	326	116	107	223
Pass-By Reduction (ADT: 10%, AM: 49%, PM: 50%)[11]	*-327*	*-81*	*-78*	*-159*	*-58*	*-54*	*-112*
Subtotal	***2,947***	***85***	***82***	***167***	***58***	***53***	***111***
▪ Free-Standing Discount Superstore - (165,000 SF)	8,766	155	120	275	373	388	761
Pass-By Reduction (ADT: 10%, AM: 10%, PM: 28%)[12]	*-877*	*-16*	*-12*	*-28*	*-104*	*-109*	*-213*
Subtotal	*7,889*	*139*	*108*	*247*	*269*	*279*	*548*
Proposed Project Trip Generation Forecast	***11,043***	***227***	***192***	***419***	***331***	***338***	***669***

Notes:

- TE/TSF = Trip ends per 1,000 square-feet of development
- SF = Square-feet of gross floor area

[8] Source: *Trip Generation, 8th Edition, Institute of Transportation Engineers (ITE), Washington, D.C. (2008)*. Average rates used.

[9] AM forecast based on 820: Shopping Center AM rates. ADT and PM forecast based on 814: Specialty Retail Center ADT and PM rates.

[10] Pass-by trips are trips made as intermediate stops on the way from an origin to a primary trip destination. Pass-by trips are attracted from traffic passing the site on adjacent streets, which contain direct access to the generator. Average pass-by reduction factors of 10%, 10% and 25% were assumed for the ADT, AM and PM peak hours, respectively.

[11] Average pass-by reduction factors of 49% and 50% were used for the AM and PM peak hours, respectively. (Source: *Trip Generation Handbook, 2nd Edition, June 2004*). A pass-by reduction factor of 10% was assumed for Daily 2-Way traffic.

[12] An average pass-by reduction factor of 28% was used for the PM peak hour. (Source: *Trip Generation Handbook, 2nd Edition, June 2004*). Pass-by reduction factors of 10% were assumed for Daily 2-Way traffic and the AM peak hour.

SEE ENLARGED SITE PLAN

ENLARGED SITE PLAN

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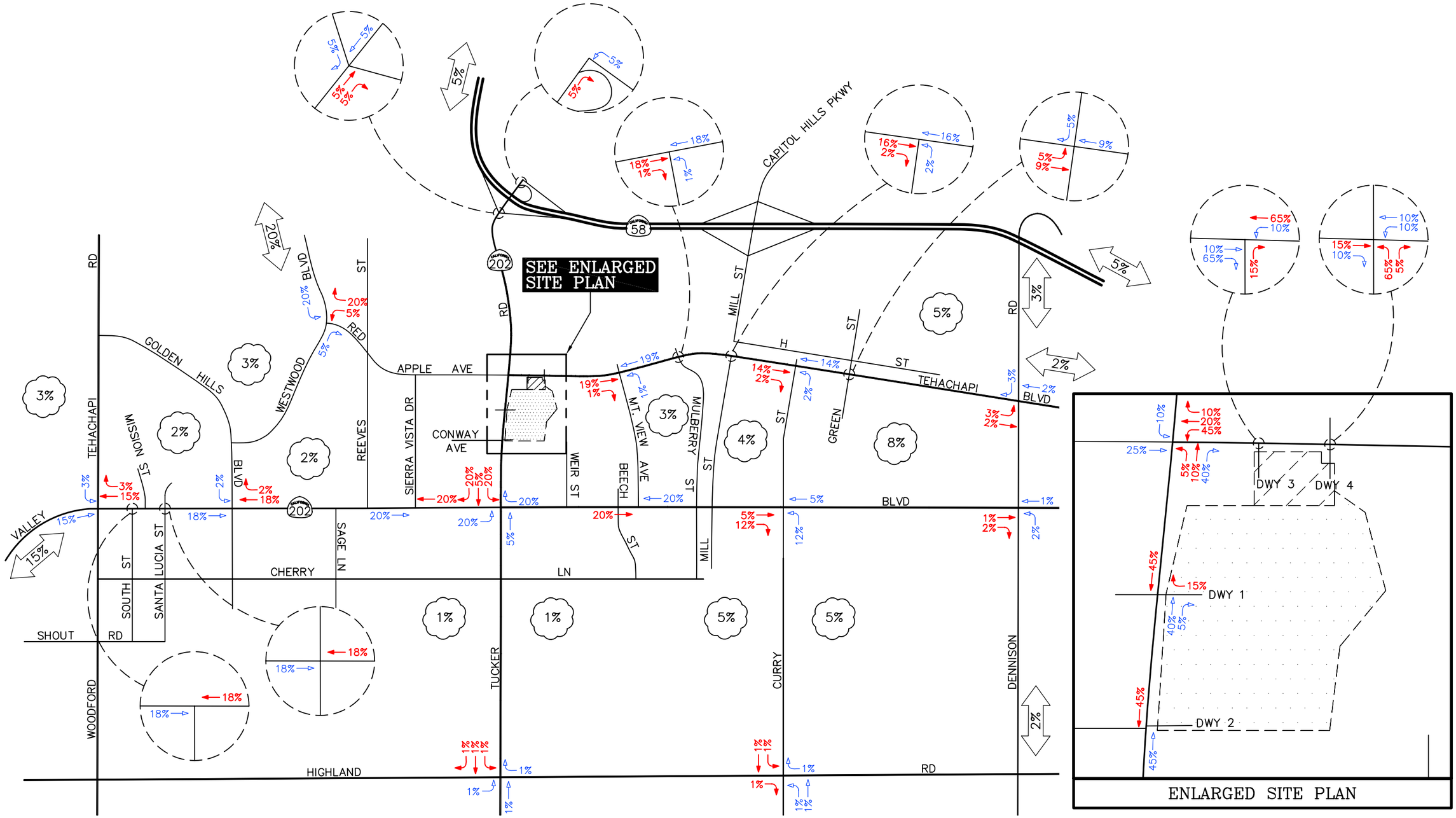
N NO SCALE

KEY
= INBOUND PERCENTAGE
= OUTBOUND PERCENTAGE
= WALMART PROJECT SITE
= RETAIL PROJECT SITE

FIGURE 5-1

WALMART TRIP DISTRIBUTION PATTERN
WALMART, TEHACHAPI



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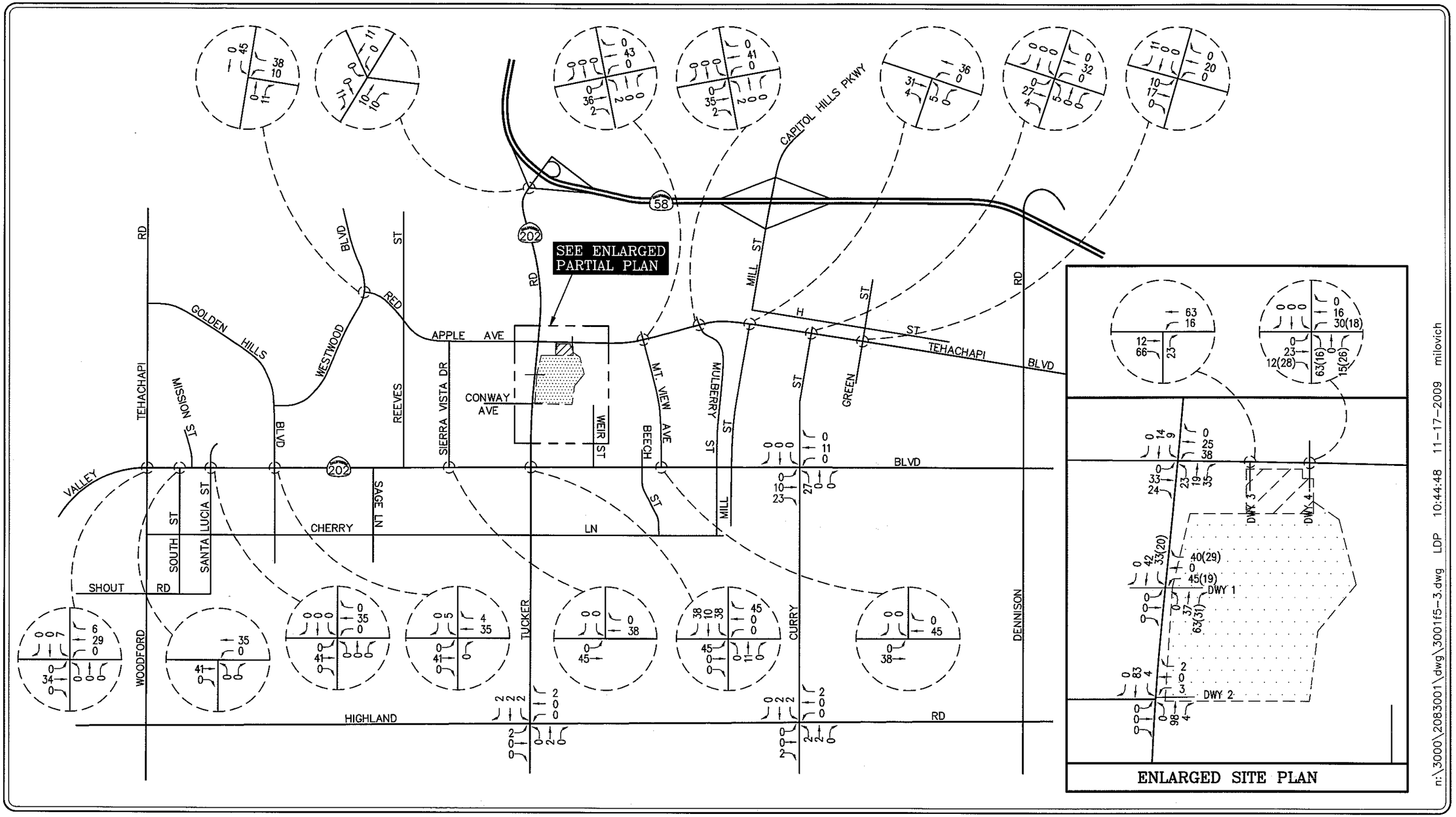
N NO SCALE

KEY
= INBOUND PERCENTAGE
= OUTBOUND PERCENTAGE
= WAL-MART PROJECT SITE
= RETAIL PROJECT SITE

FIGURE 5-2

RETAIL TRIP DISTRIBUTION PATTERN
WALMART, TEHACHAPI



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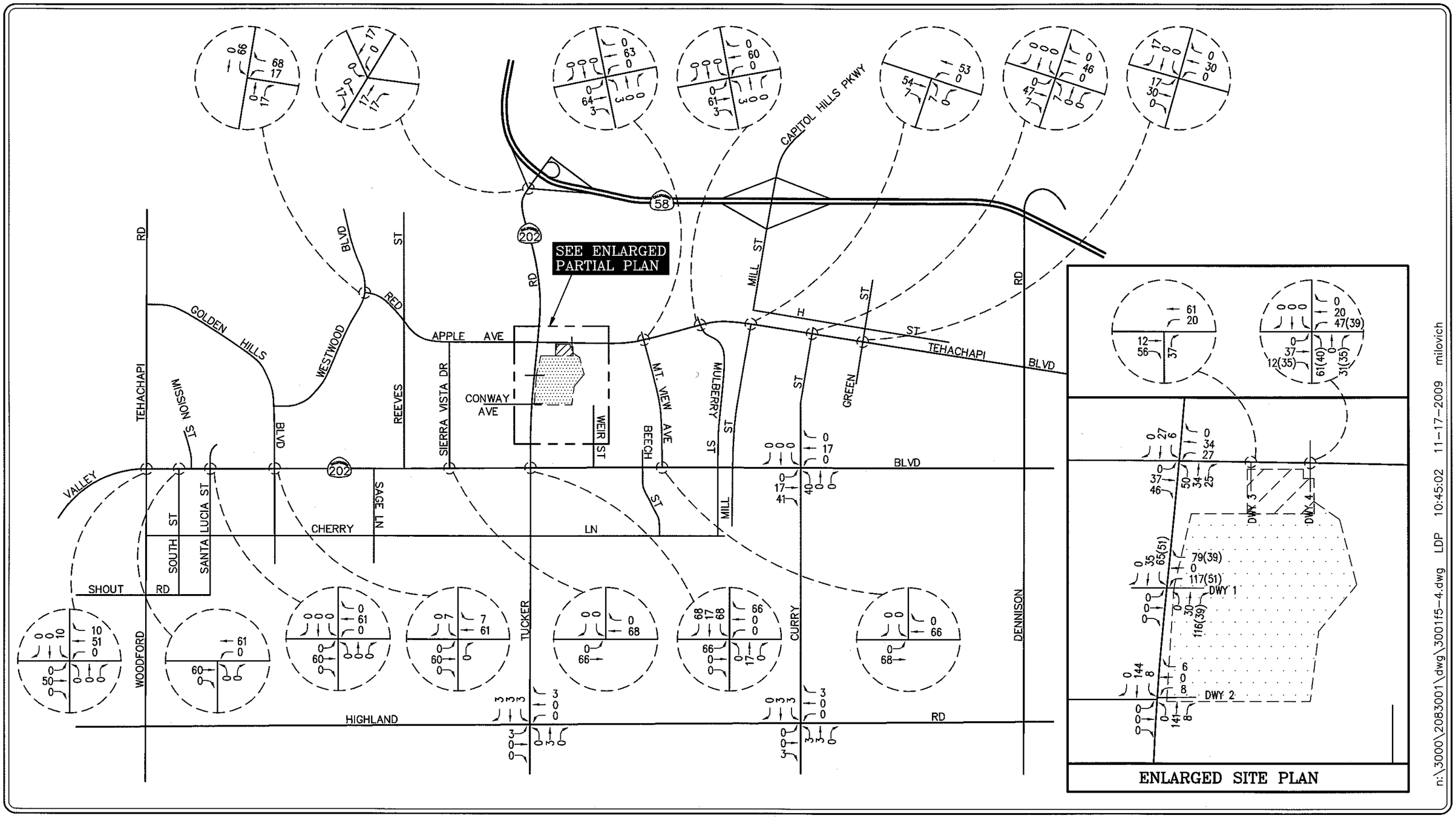
N NO SCALE

KEY
= WALMART SITE
= RETAIL SITE
(XX) = PASSBY TRIPS

FIGURE 5-3

AM PEAK HOUR PROJECT TRAFFIC VOLUMES
WALMART, TEHACHAPI



LINSCOTT LAW & GREENSPAN engineers

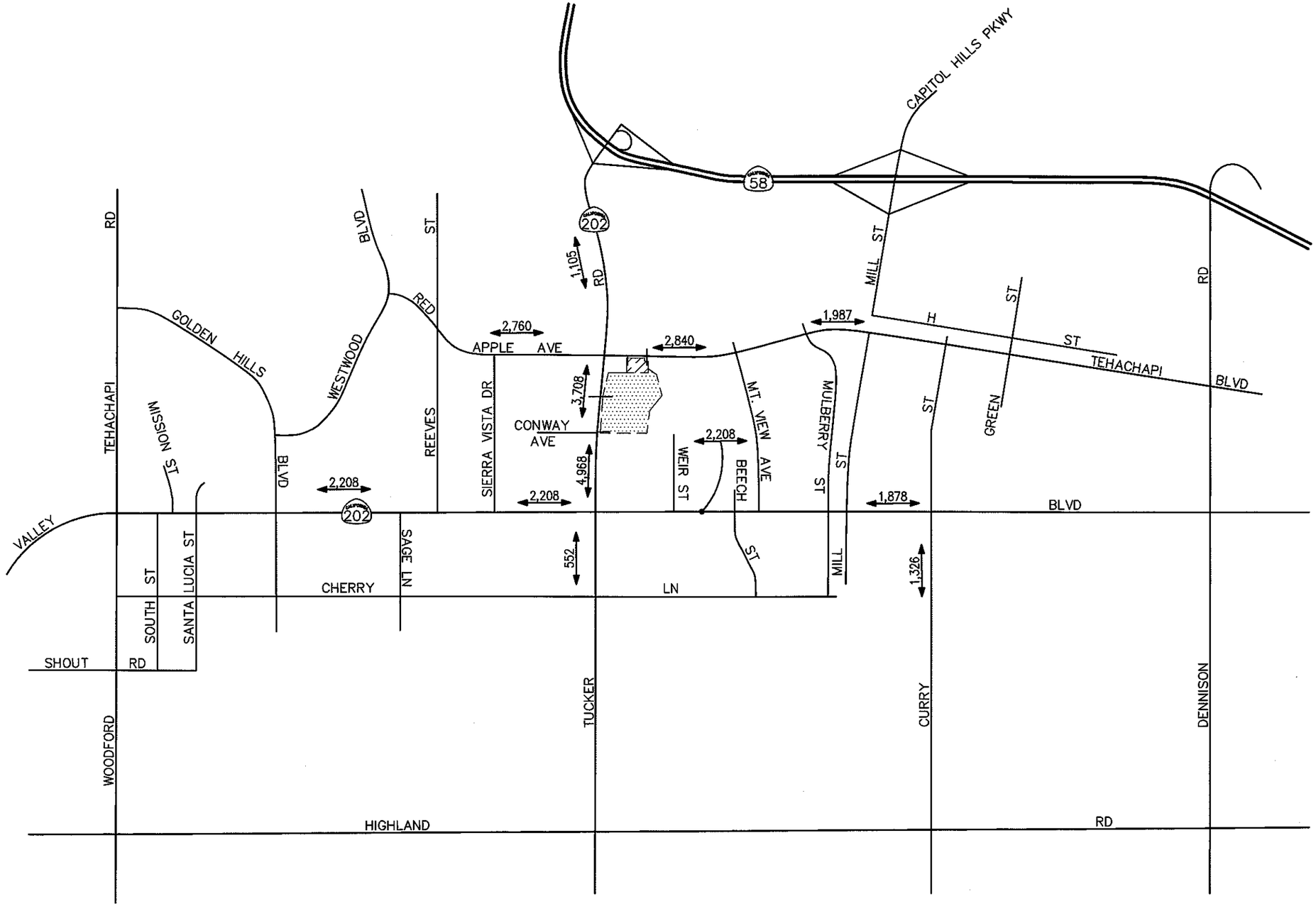
NO SCALE

KEY
= WALMART SITE
= RETAIL SITE
(XX) = PASSBY TRIPS

FIGURE 5-4

PM PEAK HOUR PROJECT TRAFFIC VOLUMES

WALMART, TEHACHAPI



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LINSCOTT LAW & GREENSPAN engineers

N NO SCALE

KEY
= WALMART SITE
= RETAIL SITE
##,### = DAILY TRAFFIC VOLUMES

FIGURE 5-5

DAILY PROJECT TRAFFIC VOLUMES

WALMART, TEHACHAPI

6.0 YEAR 2011 TRAFFIC CONDITIONS

6.1 Year 2011 Cumulative Traffic

6.1.1 *Ambient Traffic*

A cumulative ambient growth rate of compounding two percent per year was applied to the nineteen (19) key study intersections and twelve (12) key roadway links.

6.1.2 *Cumulative Projects Traffic*

Based on our research at the City of Tehachapi and Kern County, there are fourteen (14) cumulative projects within the Project study area. Cumulative projects, as defined by Section 15355 of the CEQA Guidelines, are "closely related past, present, and reasonably foreseeable probable future projects. This Traffic Impact Analysis assumes that all of these cumulative projects will be developed and operational when the proposed Project is operational. This is the most conservative, worst-case approach, since it is likely that not all of these projects will be operational when the proposed project is operational. In addition, impacts for these cumulative projects would likely be, or have been, subject to mitigation measures, which could reduce potential impacts. Under this analysis, however, those mitigation measures are not considered. The locations of the fourteen (14) cumulative projects are presented in ***Figure 6-1***.

Table 6-1 presents the locations and development totals of the fourteen (14) cumulative projects. ***Table 6-2*** presents the resultant trip generation for the fourteen (14) cumulative projects. As shown in ***Table 6-2***, the fourteen (14) cumulative projects are expected to generate a combined total of 28,548 daily trips (one half arriving, one half departing) on a "typical" weekday, with 1,553 trips (717 inbound and 836 outbound) forecast during the AM peak hour and 2,091 trips (1,059 inbound and 1,032 outbound) forecast during the PM peak hour.

The anticipated AM and PM peak hour cumulative projects traffic volumes at the nineteen (19) key study intersections are presented in ***Figures 6-2*** and ***6-3***, respectively. In addition, ***Figure 6-4*** presents the cumulative projects daily traffic volumes at the twelve (12) key study roadway links. The traffic volume assignments presented in the above mentioned figures are based on data obtained traffic studies on file with the City of Tehachapi and assumptions for data that was not available.

Figures 6-5 and ***6-6*** present AM and PM peak hour Year 2011 Cumulative traffic volumes at the nineteen (19) key study intersections, respectively. In addition, ***Figure 6-7*** presents the daily Year 2011 Cumulative traffic volumes at the twelve (12) key study roadway links. It should be noted that the Year 2011 Cumulative traffic volumes include four percent (4%) cumulative ambient traffic growth as well as the fourteen (14) cumulative projects.

6.2 Year 2011 Cumulative Plus Project Traffic

The estimates of Project-generated traffic volumes were added to the Year 2011 Cumulative conditions to develop traffic projections for the Year 2011 Cumulative plus Project traffic conditions. The resulting traffic volumes during the AM and PM peak hour at the nineteen (19) key study intersections are illustrated in ***Figures 6-8*** and ***6-9***, respectively. In addition, ***Figure 6-10*** presents the daily Year 2011 Cumulative plus Project traffic volumes at the twelve (12) key study roadway links.

TABLE 6-1

LOCATION AND DESCRIPTION OF CUMULATIVE PROJECTS[13]

Cumulative Project		Location/Address	Description	Size
1.	Tract Map No. 6062	South side of Pinon Street, west of Dennison Road, east of Curry Street and north of Highland Road	Single Family Residence	125 DU 50% Built
2.	Tract Map No. 6216	South side of Pinon Street, west of Curry Street and north of Highland Road	Single Family Residence	384 DU 62 DU occupied
3.	Tract Map No. 6497	North of Highland Road, south of Tehachapi High School and Morris Park and west of Dennison Road	Single Family Residence	60 DU
4.	Tract Map No. 6507	North and adjacent to Pinon Street and West and adjacent to future extension of Applewood Drive	Condominiums	96 DU
5.	Tract Map No. 6554	North and adjacent to Valley Boulevard, west and adjacent to Dennison Road and north of Tehachapi High School	Single Family Residence	95 DU
6.	Tract Map No. 6714	North and adjacent to Pinon Street, south and adjacent to Cherry Lane	Single Family Residence	75 DU
7.	Tehachapi Hospital	North of and contiguous to existing city limits line at the terminus of Voyager Drive, north of Parcel Map 9423	Hospital	54,147 SF
8.	Mill Street Retail Center	North east corner of Mill Street and Industrial Parkway	Retail	36,750 SF
9.	Marriott Fairfield Inn & Suites	South of Tehachapi Boulevard, east of Mulberry Street and north of "F" Street	Hotel	83 Rooms
10.	Global Premier Development	Northeast corner of West H Street and North Mill Street	Apartments	81 DU
11.	Aspen Street Architects	Located in Capital Hills, north and adjacent to Athens Street, east of Voyager, west of Challenger	Medical Office Building	66,000 SF
12.	Tehachapi Junction	Located at the southeast corner of Tehachapi Boulevard/Red Apple Avenue and Tucker Road	Retail	22,400 SF
13.	Tehachapi Marketplace	Located at the southwest corner of Tehachapi Boulevard/Red Apple Avenue and Tucker Road	Retail	159,291 SF
14.	Golden Hills Mixed-Use Project	Located at the southwest corner of Valley Boulevard/SR-202 and Golden Hills Boulevard	Mixed-Use	182,890 SF

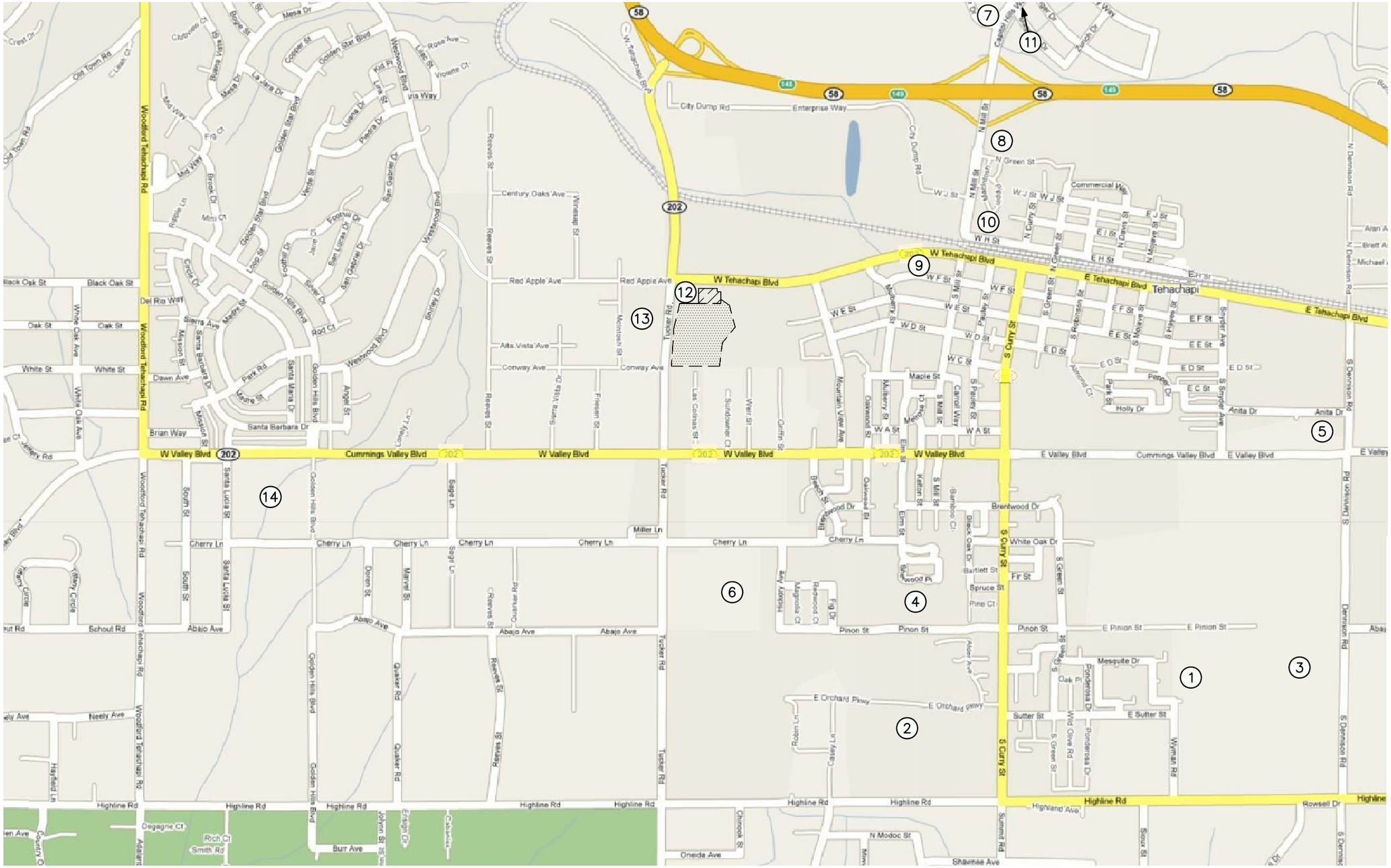
[13] Source: *City of Tehachapi*

TABLE 6-2

CUMULATIVE PROJECTS TRAFFIC GENERATION FORECAST[14]

Cumulative Projects Description	Daily 2-Way	AM Peak Hour			PM Peak Hour		
		In	Out	Total	In	Out	Total
1. Tract Map No. 6062	603	12	35	47	40	23	63
2. Tract Map No. 6216	3,082	60	181	241	208	117	325
3. Tract Map No. 6497	574	11	34	45	38	22	60
4. Tract Map No. 6507	563	7	36	43	34	16	50
5. Tract Map No. 6554	909	18	53	71	61	35	96
6. Tract Map No. 6714	718	14	42	56	48	28	76
7. Tehachapi Hospital	951	44	21	65	21	43	64
8. Mill Street Retail Center	2,835	101	97	198	65	71	136
9. Marriott Fairfield Inn and Suites	740	32	23	55	28	30	58
10. Global Premier Development	539	8	33	41	32	18	50
11. Aspen Street Architects	2,385	120	32	152	61	167	228
12. Tehachapi Junction	687	42	39	81	17	14	31
13. Tehachapi Marketplace	8,048	109	69	178	271	282	553
14. Golden Hills Mixed-Use Project	5,914	139	141	280	135	166	301
Total Cumulative Projects Trip Generation	**28,548**	**717**	**836**	**1,553**	**1,059**	**1,032**	**2,091**

[14] Source: Traffic Studies on file with the *City of Tehachapi* and *Trip Generation*, 8th Edition, Institute of Transportation Engineers (ITE), [Washington, D.C. (2008)].



SOURCE: GOOGLE MAPS

KEY

(#) = RELATED PROJECT LOCATION

= WALMART SITE

= RETAIL SITE

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N NO SCALE

FIGURE 6–1

LOCATION OF CUMULATIVE PROJECTS

WALMART, TEHACHAPI

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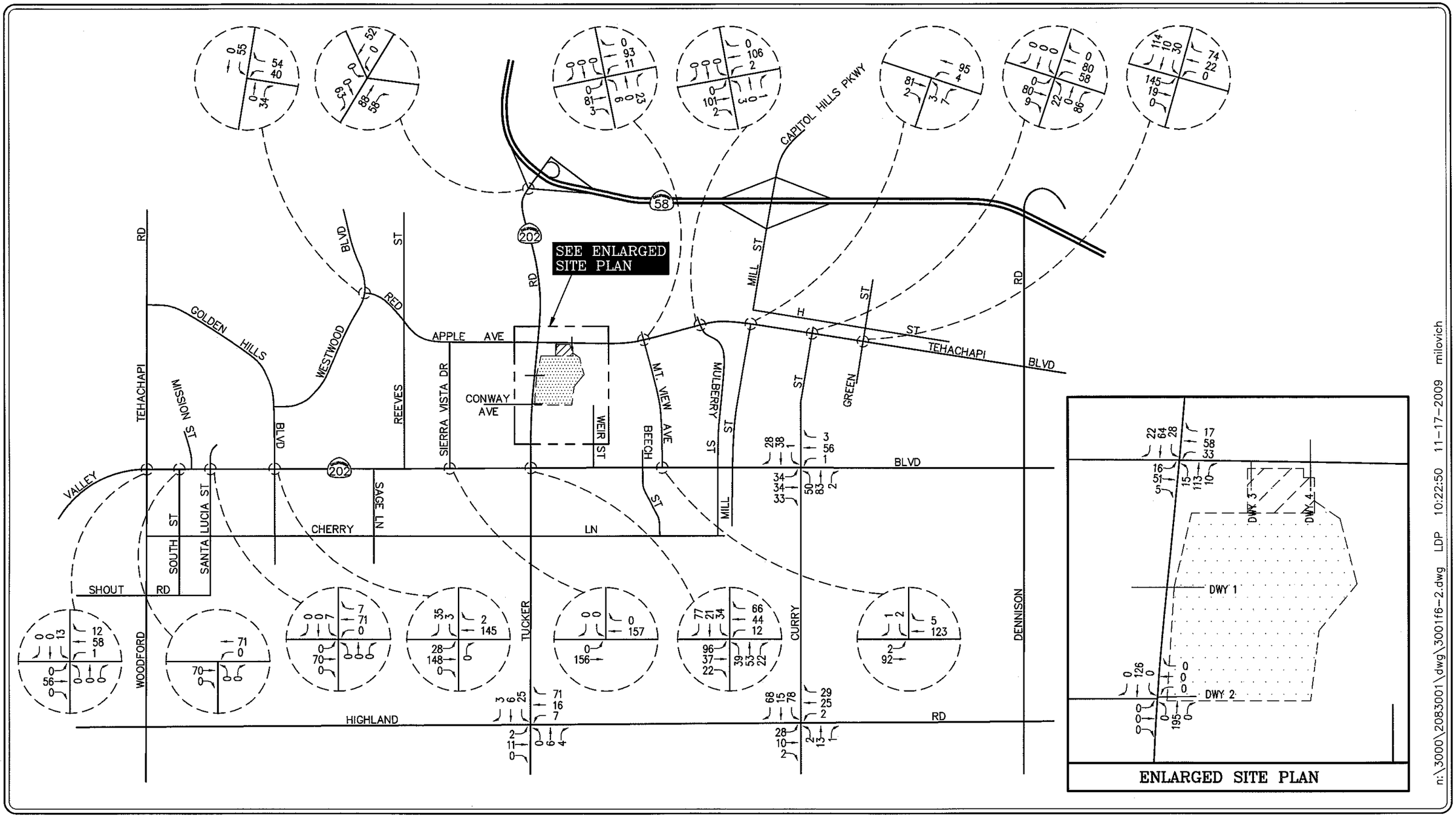

LINSCOTT LAW & GREENSPAN engineers

NO SCALE

KEY
= WALMART SITE
= RETAIL SITE

FIGURE 6-2

AM PEAK HOUR CUMULATIVE PROJECTS TRAFFIC VOLUMES

WALMART, TEHACHAPI

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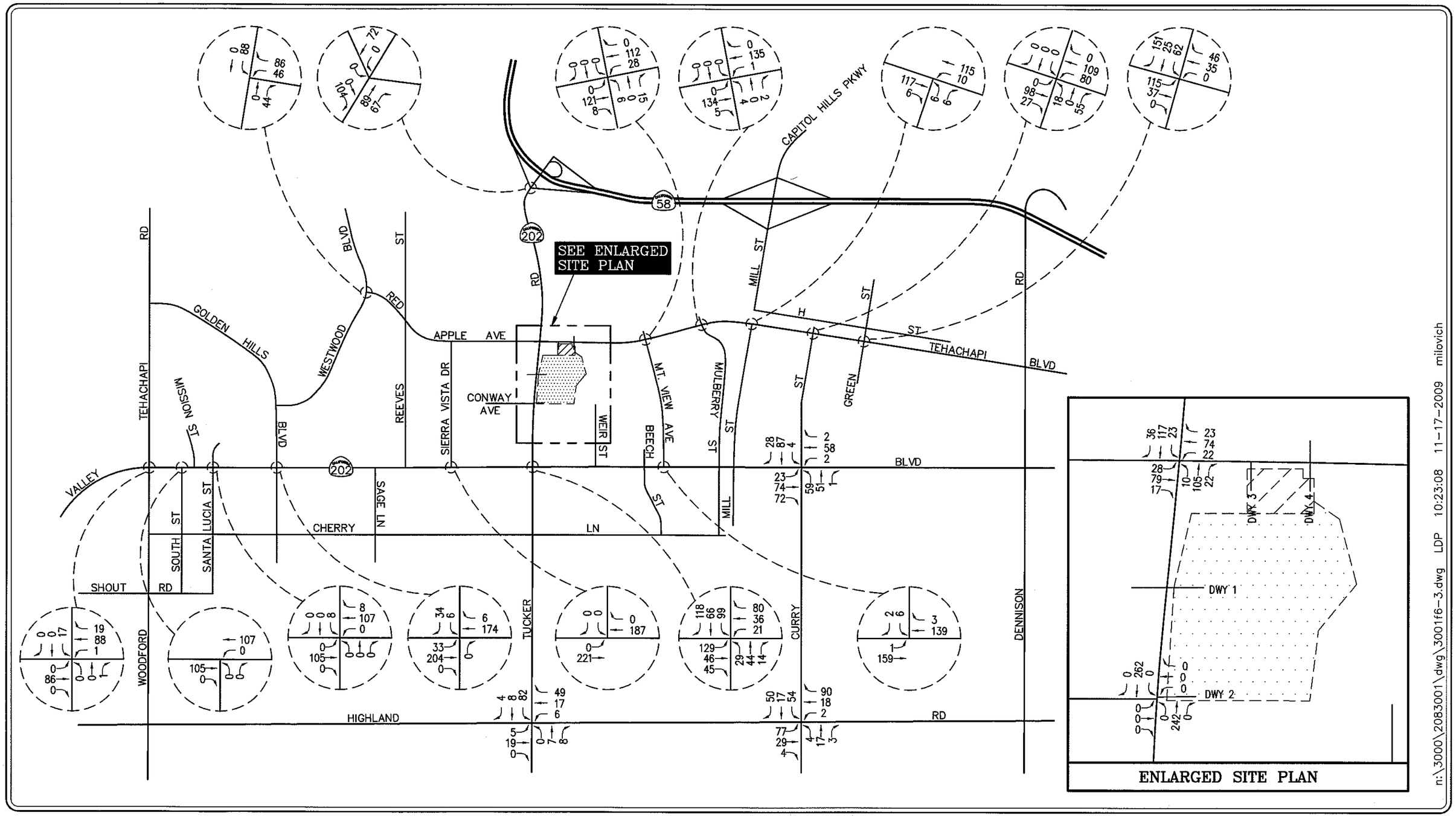


LINSCOTT LAW & GREENSPAN engineers

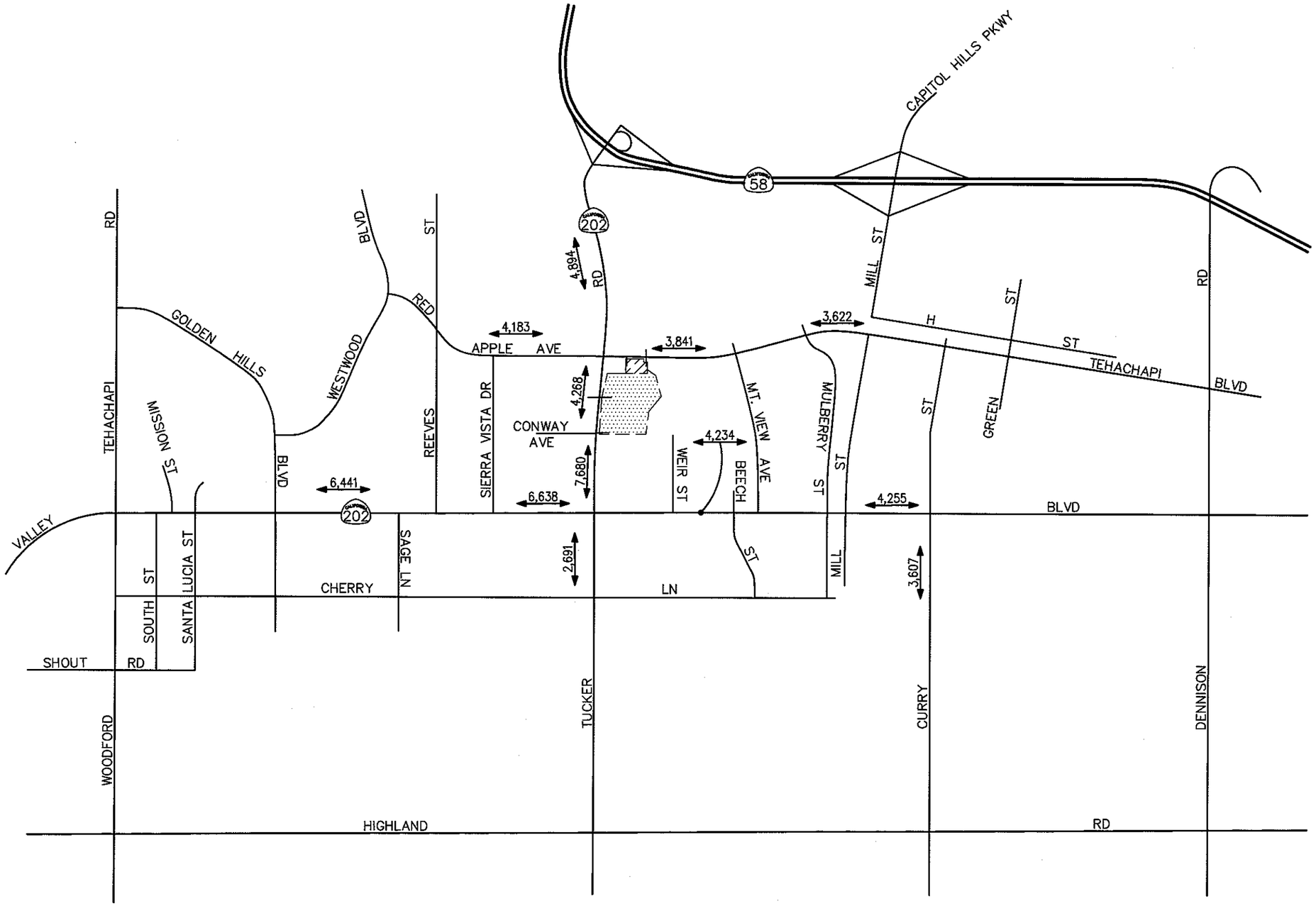
NO SCALE

KEY
= WALMART SITE
= RETAIL SITE

FIGURE 6-3

PM PEAK HOUR CUMULATIVE PROJECTS TRAFFIC VOLUMES

WALMART, TEHACHAPI



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LINSCOTT LAW & GREENSPAN engineers

N NO SCALE

KEY
= WALMART SITE
= RETAIL SITE
##,### = DAILY TRAFFIC VOLUMES

FIGURE 6-4

DAILY CUMULATIVE PROJECTS TRAFFIC VOLUMES

WALMART, TEHACHAPI

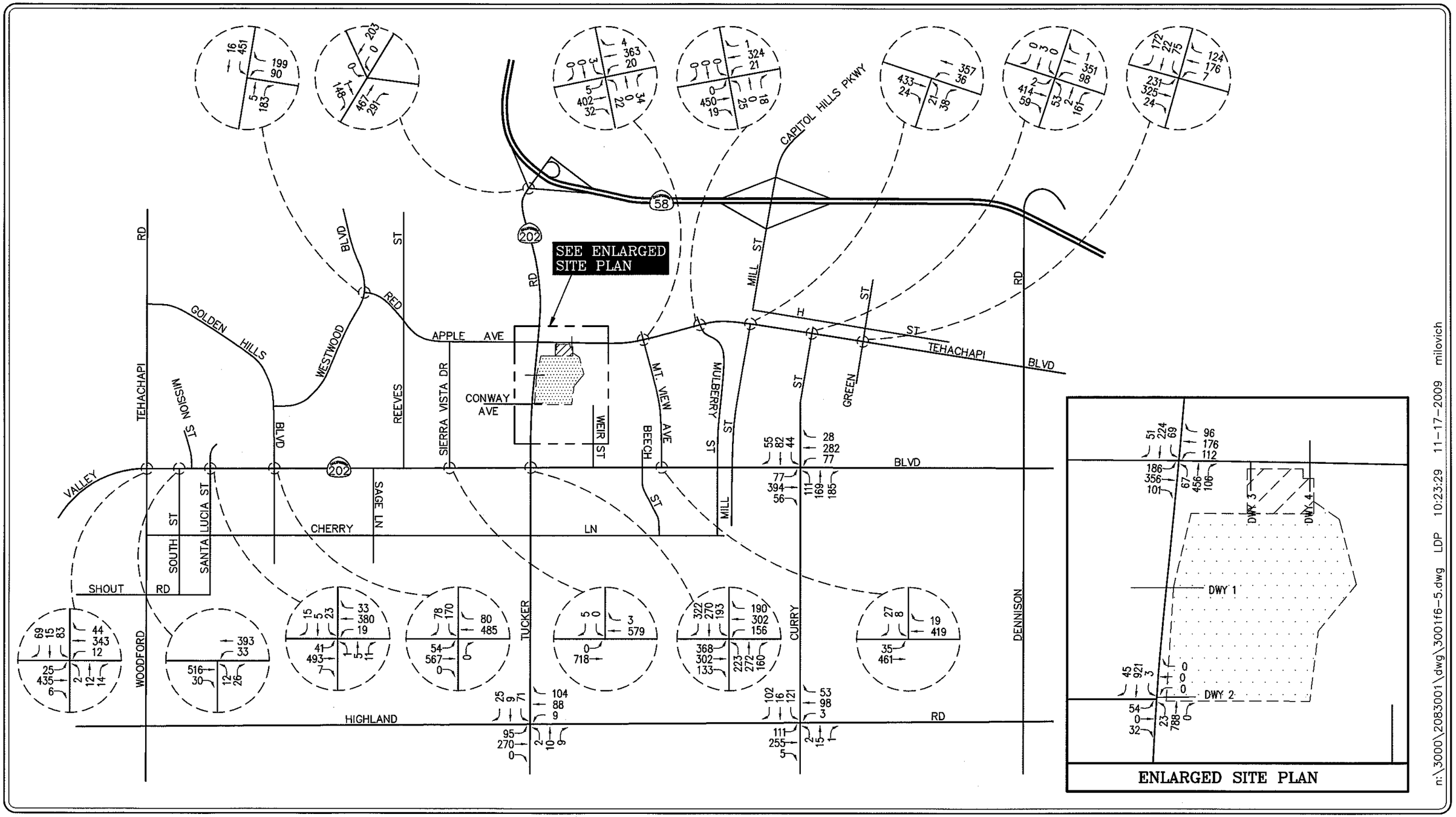
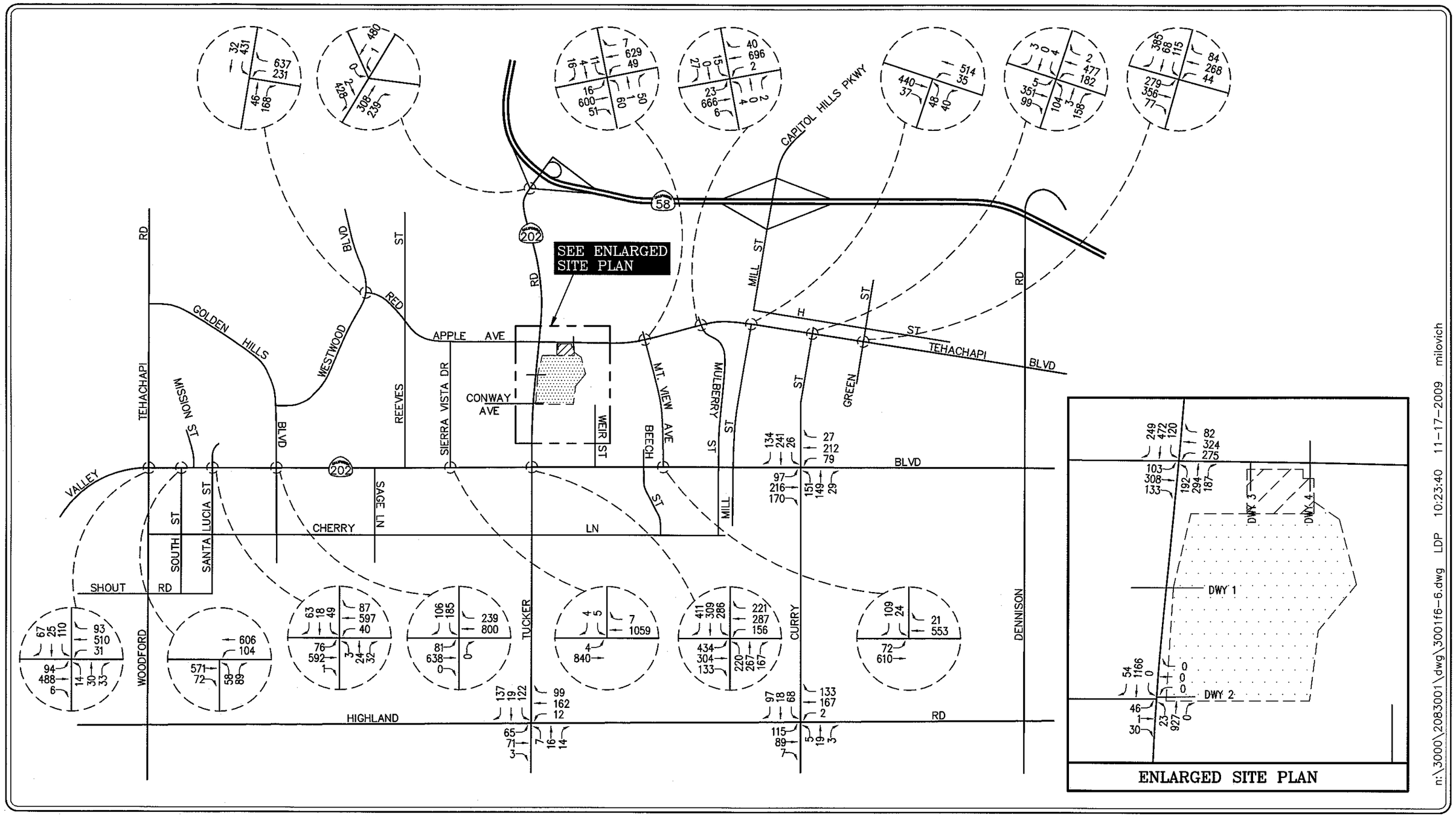


FIGURE 6-5

YEAR 2011 AM PEAK HOUR CUMULATIVE TRAFFIC VOLUMES

WALMART, TEHACHAPI



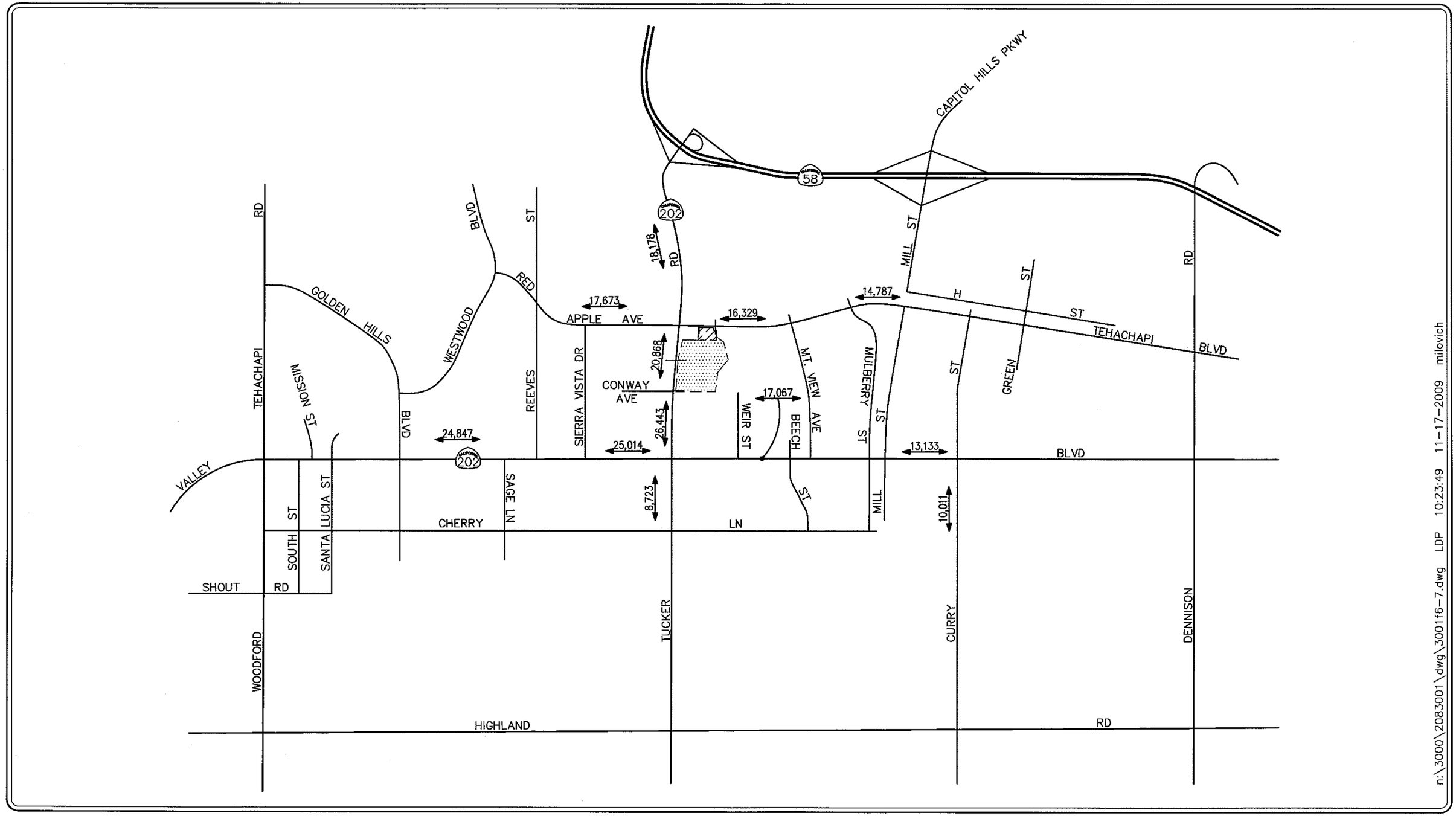
LINSCOTT LAW & GREENSPAN engineers

NO SCALE

KEY
= WALMART SITE
= RETAIL SITE

FIGURE 6-6

YEAR 2011 PM PEAK HOUR CUMULATIVE TRAFFIC VOLUMES
WALMART, TEHACHAPI



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LINSCOTT LAW & GREENSPAN engineers

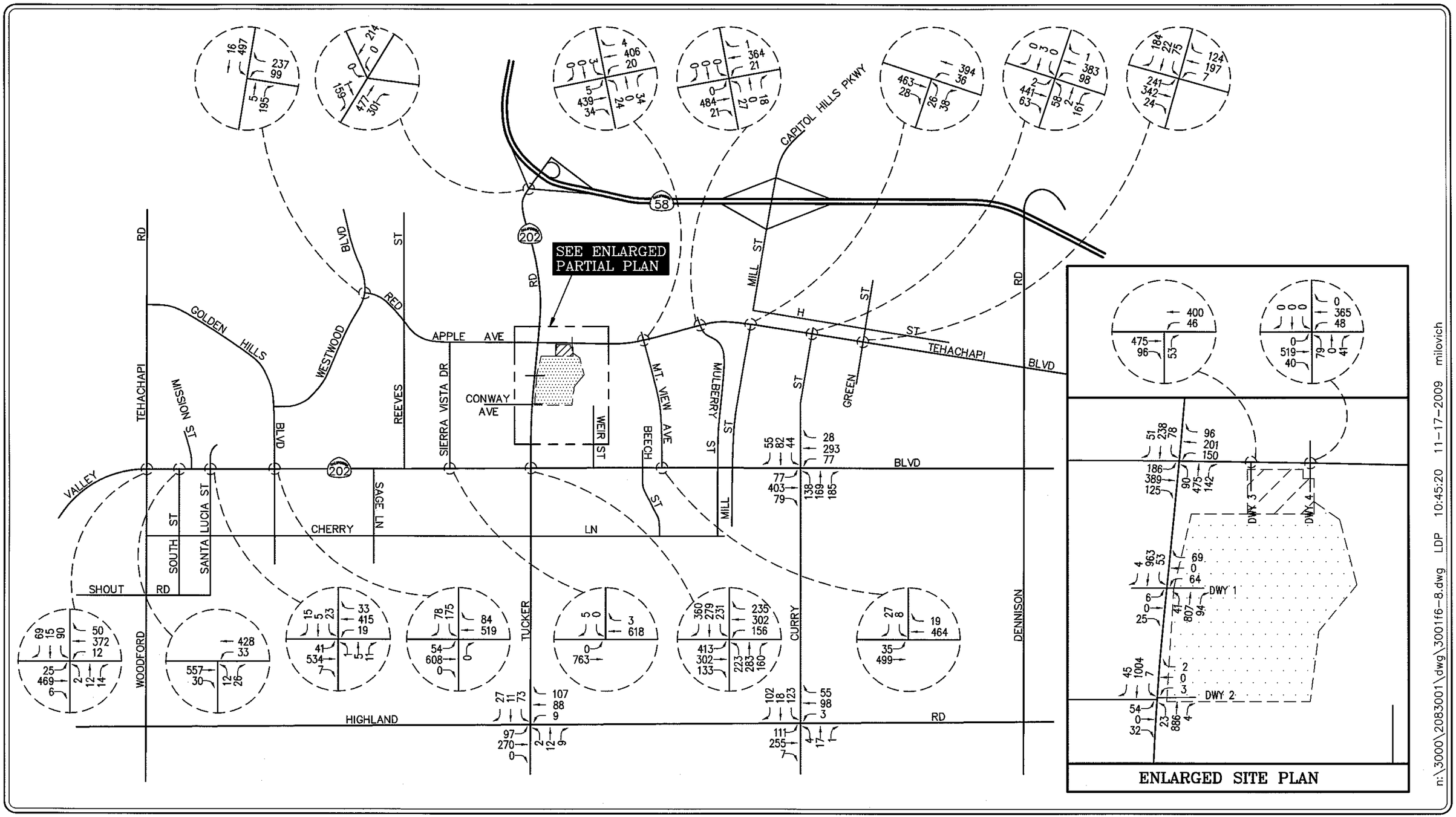
N NO SCALE

KEY
= WALMART SITE
= RETAIL SITE
##,### = DAILY TRAFFIC VOLUMES

FIGURE 6-7

YEAR 2011 DAILY CUMULATIVE TRAFFIC VOLUMES

WALMART, TEHACHAPI



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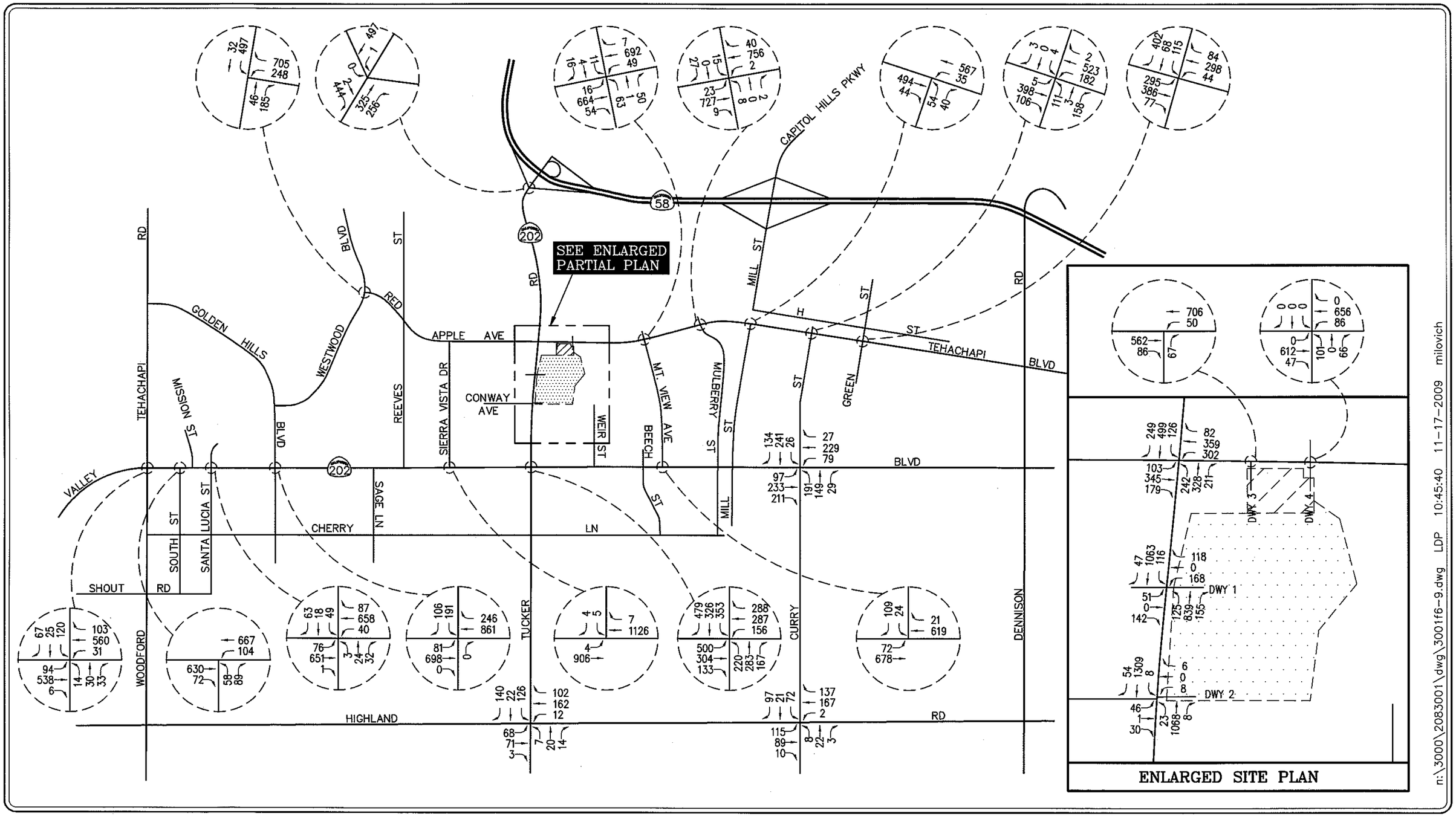
LINSCOTT LAW & GREENSPAN engineers

N NO SCALE

KEY
= WALMART SITE
= RETAIL SITE

FIGURE 6-8

YEAR 2011 AM PEAK HOUR
CUMULATIVE PLUS PROJECT TRAFFIC VOLUMES
WALMART, TEHACHAPI



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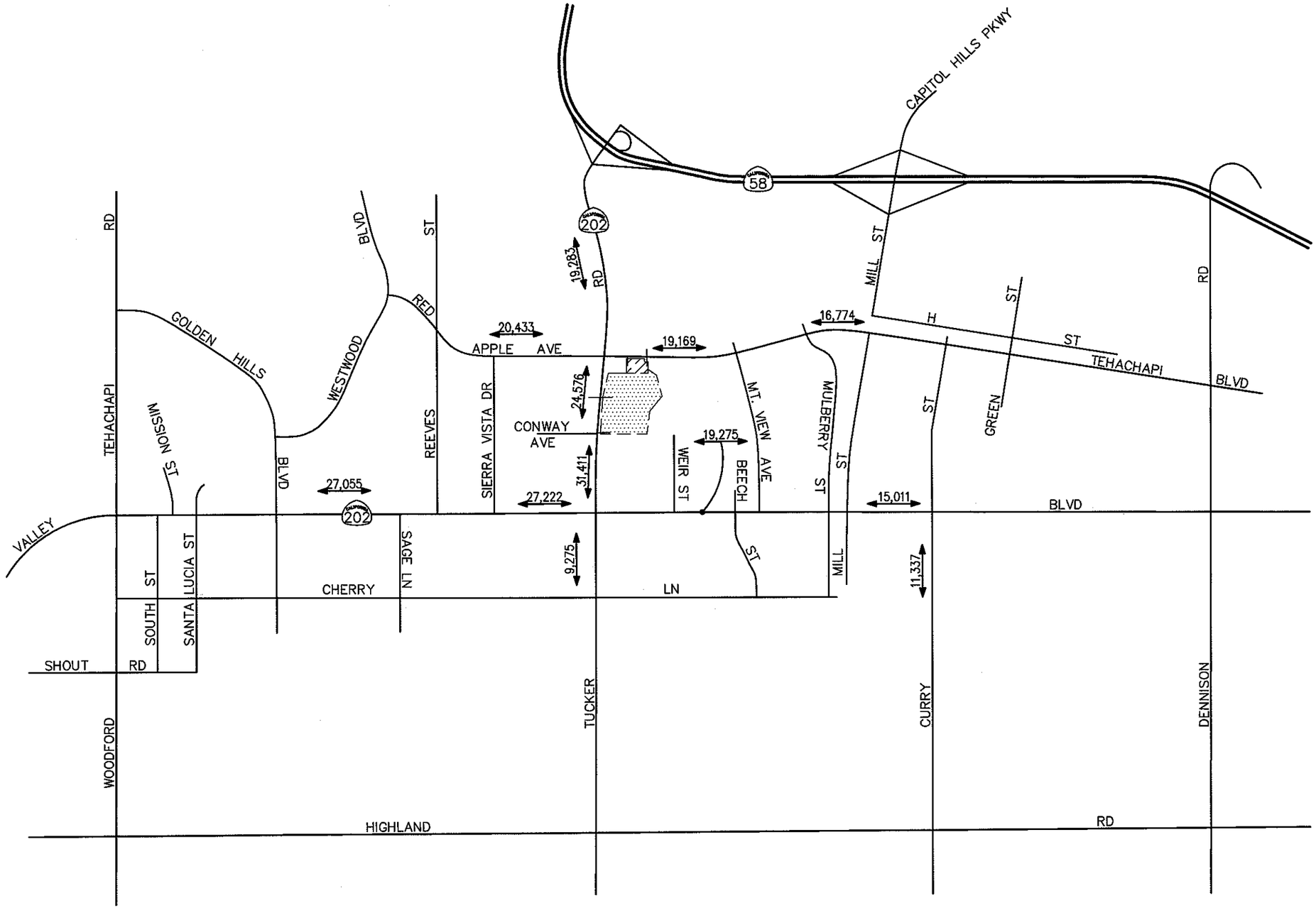
LINSCOTT LAW & GREENSPAN engineers

N NO SCALE

KEY
= WALMART SITE
= RETAIL SITE

FIGURE 6-9

YEAR 2011 PM PEAK HOUR
CUMULATIVE PLUS PROJECT TRAFFIC VOLUMES
WALMART, TEHACHAPI



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LINSCOTT LAW & GREENSPAN engineers

N NO SCALE

KEY
= WALMART SITE
= RETAIL SITE
##,### = DAILY TRAFFIC VOLUMES

FIGURE 6-10

YEAR 2011 DAILY CUMULATIVE PLUS PROJECT TRAFFIC VOLUMES

WALMART, TEHACHAPI

7.0 YEAR 2011 TRAFFIC IMPACT ANALYSIS

The relative impact of the added Project traffic volumes generated by the proposed Project during the AM and PM peak hours was evaluated based on analysis of future operating conditions at the nineteen (19) key study area intersections, with and without, the proposed Project. The previously discussed capacity analysis procedures were utilized to investigate the future delay relationships and service level characteristics at each study intersection. The significance of the potential impacts of the Project at each key intersection was then evaluated using the traffic impact criteria mentioned in this report.

7.1 Significance of Impacts

7.1.1 *Impact Criteria and Thresholds*

For purposes of this Traffic Impact Analysis, the following traffic impacts would be considered significant if the proposed Project:

- Caused 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).
- Exceeds, either individually or cumulative, a level of service standard established for a roadway or intersection by the applicable jurisdiction.

The City of Tehachapi and Kern County considers LOS C to be the minimum acceptable LOS for all intersections and roadway segments.

Caltrans considers LOS D to be the minimum acceptable LOS for all Caltrans intersections.

Additionally, the City of Tehachapi requires that if the Daily V/C ratio increases by 0.02 or 2% for locations operating at LOS “D”, “E” or “F”, as a result of project volumes being added to Year 2011 Cumulative volumes or General Plan Buildout without Project Volumes (Year 2030), the developer has the responsibility to mitigate the impact.

7.1.2 *Traffic Impact Analysis Scenarios*

The following scenarios are those for which Delay/LOS calculations have been performed at the key nineteen (19) intersections and twelve (12) roadway links for the existing Year 2009 and future Year 2011 traffic conditions:

A. 2009: Existing Traffic Conditions;
B. 2011: Future Cumulative traffic conditions (existing plus cumulative ambient growth to horizon year 2011 at compounding 2.0% per year plus cumulative projects);
C. 2011: Future Cumulative traffic conditions plus Project traffic; and
D. Scenario (C) with mitigation, if necessary.

7.2 Year 2011 Intersection Capacity Analysis

Table 7-1 summarizes the AM and PM peak hour Level of Service results at the nineteen (19) key study intersections during a "typical" weekday for the Year 2011 Cumulative plus Project traffic conditions. The first column (1) of Delay/LOS values in ***Table 7-1*** presents a summary of existing AM and PM peak hour traffic conditions (which were also presented in ***Table 3-5***). The second column (2) lists forecast Year 2011 Cumulative traffic conditions based on existing intersection geometry. The third column (3) lists forecast Year 2011 Cumulative plus Project traffic conditions and the fourth column (4) indicates whether the traffic associated with the Project will have a significant impact based on the significant traffic impact criteria mention in this report. The fifth column (5) presents the resultant level of service with the inclusion of recommended traffic improvements to achieve an acceptable level of service.

7.2.1 *Year 2009 Existing Conditions*

As previously presented in ***Table 3-5***, review of this table indicates that based on the HCM method of analysis and the LOS criteria mentioned in this report, four (4) of the nineteen (19) key study intersections currently operate at an unacceptable levels of service during the AM and/or PM peak hours. The remaining fifteen (15) key study intersections currently operate at acceptable levels of service, LOS C or better during the AM and PM peak hours. The intersections operating at adverse levels of service are:

	AM Peak Hour		**PM Peak Hour**	
Key Intersection	**Delay (s/v)**	**LOS**	**Delay (s/v)**	**LOS**
5. Westwood Boulevard at Red Apple Avenue	--	--	28.7	D
6. Sierra Vista Drive at Valley Boulevard (SR-202)	--	--	28.5	D
9. Tucker Road at Conway Avenue	32.0	D	40.9	E
10. Tucker Road at Valley Boulevard (SR-202)	--	--	36.3	D

7.2.2 *Year 2011 Cumulative Traffic Conditions*

Review of Column (2) of ***Table 7-1*** shows that eight (8) key study intersections are forecast to operate at unacceptable levels of service during the AM and/or PM peak hours under Year 2011 Cumulative Traffic conditions. The remaining eleven (11) key study intersections operate at acceptable levels of service, LOS C or better during the AM and PM peak hours. The intersections operating at adverse levels of service are:

	AM Peak Hour		**PM Peak Hour**	
Key Intersection	**Delay (s/v)**	**LOS**	**Delay (s/v)**	**LOS**
3. Santa Lucia Street at Valley Boulevard (SR-202)	--	--	32.3	D
5. Westwood Boulevard at Red Apple Avenue	--	--	76.8	F
6. Sierra Vista Drive at Valley Boulevard (SR-202)	--	--	53.8	F
7. Tucker Road at SR-58 Eastbound Ramps	--	--	39.9	E
8. Tucker Road at Red Apple Ave/Tehachapi Blvd	--	--	35.8	E

9. Tucker Road at Conway Avenue	66.0	F	167.6	F
10. Tucker Road at Valley Boulevard (SR-202)	46.7	D	64.6	E
19. Green Street at Tehachapi Boulevard	--	--	26.7	D

7.2.3 *Year 2011 Cumulative Plus Project Traffic Conditions*

Review of Columns (3) and (4) of ***Table 7-1*** shows that nine (9) of the nineteen (19) key study intersections will be significantly impacted with the addition of Project traffic based on the LOS impact criteria mentioned in this report. It should be noted that eight (8) of the nine (9) significantly impacted intersections have cumulative significant impacts and one (1) intersection has a direct significant impact. The eight (8) intersections that have cumulative significant impacts are forecast to operate at unacceptable LOS under the Year 2011 Cumulative Traffic conditions.

The eight (8) cumulatively impacted intersections under the Year 2011 Cumulative Plus Project Traffic conditions are:

	AM Peak Hour		**PM Peak Hour**	
Key Intersection	**Delay (s/v)**	**LOS**	**Delay (s/v)**	**LOS**
3. Santa Lucia Street at Valley Boulevard (SR-202)	--	--	39.2	E
5. Westwood Boulevard at Red Apple Avenue	33.5	D	115.4	F
6. Sierra Vista Drive at Valley Boulevard (SR-202)	--	--	66.3	F
7. Tucker Road at SR-58 Eastbound Ramps	--	--	49.1	F
8. Tucker Road at Red Apple Ave/Tehachapi Blvd	--	--	40.4	D
9. Tucker Road at Conway Ave	216.8	F	724.0	F
10. Tucker Road at Valley Blvd (SR-202)	56.3	E	86.0	F
19. Green St at Tehachapi Blvd	--	--	32.7	D

The one (1) directly impacted intersection under the Year 2011 Cumulative Plus Project Traffic conditions is:

	AM Peak Hour		**PM Peak Hour**	
Key Intersection	**Delay (s/v)**	**LOS**	**Delay (s/v)**	**LOS**
12. Mountain View Ave at Valley Blvd	--	--	29.6	D

The remaining ten (10) key study intersections operate at acceptable levels of service, LOS C or better during the AM and PM peak hours. It should be noted that with the implementation of the recommended improvements, the impacted intersections would operate at acceptable levels of service, LOS C or better.

Appendix D contains the Year 2011 traffic conditions Highway Capacity Manual (HCM) level of service calculation worksheets.

TABLE 7-1

YEAR 2011 CUMULATIVE PLUS PROJECT INTERSECTION PEAK HOUR LEVELS OF SERVICE SUMMARY[15]

Key Intersections		Time Period	(1) Existing Traffic Conditions		(2) Year 2011 Cumulative Traffic Conditions		(3) Year 2011 Cumulative Plus Project Traffic Conditions		(4) Significant Impact	(5) Year 2011 Cumulative Plus Project with Mitigation	
			Delay (s/v)	LOS	Delay (s/v)	LOS	Delay (s/v)	LOS	Yes/No	Delay (s/v)	LOS
1.	Woodford Tehachapi Road at	AM	15.7	B	15.4	B	15.2	B	No	--	--
	Valley Boulevard (SR-202)	PM	18.4	B	17.9	B	17.9	B	No	--	--
2.	South Street at	AM	11.7	B	12.7	B	13.2	B	No	--	--
	Valley Boulevard (SR-202)	PM	14.3	B	16.9	C	18.3	C	No	--	--
3.	Santa Lucia Street at	AM	12.9	B	15.0	B	15.7	C	No	10.1	B
	Valley Boulevard (SR-202)	PM	20.8	C	**32.3**	**D**	**39.2**	**E**	**Yes**	17.1	B
4.	Golden Hills Boulevard at	AM	14.8	B	14.7	B	14.7	B	No	--	--
	Valley Boulevard (SR-202)	PM	13.9	B	16.3	B	17.1	B	No	--	--
5.	Westwood Boulevard at	AM	14.5	B	22.5	C	**33.5**	**D**	**Yes**	14.9	B
	Red Apple Avenue	PM	**28.7**	**D**	**76.8**	**F**	**115.4**	**F**	**Yes**	25.5	C
6.	Sierra Vista Drive at	AM	10.9	B	12.7	B	13.1	B	No	13.1	B
	Valley Boulevard (SR-202)	PM	**28.5**	**D**	**53.8**	**F**	**66.3**	**F**	**Yes**	23.2	C
7.	Tucker Road at	AM	9.6	A	10.6	B	10.8	B	No	0.0	A
	SR-58 Eastbound Ramps	PM	17.7	C	**39.9**	**E**	**49.1**	**E**	**Yes**	8.8	A

Notes:

- s/v = seconds per vehicle (delay).
- LOS = Level of Service, please refer to *Tables 3-1 and 3-2* for the LOS definitions.
- **Bold LOS values** indicate adverse service levels based on City of Tehachapi and Kern County LOS standards.

[15] *Appendices C* and *D* contain the Delay/LOS calculation worksheets for all study intersections.

TABLE 7-1 (CONTINUED)

YEAR 2011 CUMULATIVE PLUS PROJECT INTERSECTION PEAK HOUR LEVELS OF SERVICE SUMMARY[16]

Key Intersections		Time Period	(1) Existing Traffic Conditions		(2) Year 2011 Cumulative Traffic Conditions		(3) Year 2011 Cumulative Plus Project Traffic Conditions		(4) Significant Impact	(5) Year 2011 Cumulative Plus Project with Mitigation	
			Delay (s/v)	LOS	Delay (s/v)	LOS	Delay (s/v)	LOS	Yes/No	Delay (s/v)	LOS
8.	Tucker Road at	AM	27.7	C	29.7	C	31.0	C	No	29.3	C
	Red Apple Ave/Tehachapi Blvd	PM	32.5	C	**35.8**	**D**	**40.4**	**D**	**Yes**	33.9	C
9.	Tucker Road at	AM	**32.0**	**D**	**66.0**	**F**	**216.8**	**F**	**Yes**	14.9	B
	Conway Avenue	PM	**40.9**	**E**	**167.6**	**F**	**724.0**	**F**	**Yes**	18.5	C
10.	Tucker Road at	AM	34.4	C	**46.7**	**D**	**56.3**	**E**	**Yes**	30.8	C
	Valley Boulevard (SR-202)	PM	**36.3**	**D**	**64.6**	**E**	**86.0**	**F**	**Yes**	31.7	C
11.	Tucker Road at	AM	11.2	B	12.3	B	12.5	B	No	--	--
	Highline Road	PM	9.0	A	11.1	B	11.3	B	No	--	--
12.	Mountain View Avenue at	AM	11.3	B	13.8	B	14.7	B	No	12.9	B
	Valley Boulevard	PM	14.8	B	23.8	C	**29.6**	**D**	**Yes**	19.8	C
13.	Mountain View Avenue at	AM	11.9	B	13.9	B	14.6	B	No	--	--
	Tehachapi Boulevard	PM	15.2	C	19.7	C	22.4	C	No	--	--
14.	Mulberry Street at	AM	11.1	B	12.5	B	13.0	B	No	--	--
	Tehachapi Boulevard	PM	13.6	B	18.1	C	20.9	C	No	--	--

Notes:

- s/v = seconds per vehicle (delay).
- LOS = Level of Service, please refer to *Tables 3-1 and 3-2* for the LOS definitions.
- **Bold LOS values** indicate adverse service levels based on City of Tehachapi and Kern County LOS standards.

[16] *Appendices C* and *D* contain the Delay/LOS calculation worksheets for all study intersections.

TABLE 7-1 (CONTINUED)

YEAR 2011 CUMULATIVE PLUS PROJECT INTERSECTION PEAK HOUR LEVELS OF SERVICE SUMMARY[17]

Key Intersections		Time Period	(1) Existing Traffic Conditions		(2) Year 2011 Cumulative Traffic Conditions		(3) Year 2011 Cumulative Plus Project Traffic Conditions		(4) Significant Impact	(5) Year 2011 Cumulative Plus Project with Mitigation	
			Delay (s/v)	**LOS**	**Delay (s/v)**	**LOS**	**Delay (s/v)**	**LOS**	**Yes/No**	**Delay (s/v)**	**LOS**
15.	Mill Street at	AM	11.1	B	12.4	B	13.4	B	No	--	--
	Tehachapi Boulevard	PM	12.4	B	15.8	C	18.2	C	No	--	--
16.	Curry Street at	AM	9.7	A	12.5	B	13.2	B	No	--	--
	Tehachapi Boulevard	PM	11.1	B	16.4	C	18.7	C	No	--	--
17.	Curry Street at	AM	22.1	C	23.0	C	23.2	C	No	--	--
	Valley Boulevard	PM	23.7	C	23.7	C	24.6	C	No	--	--
18.	Curry Street/Summit Road at	AM	13.6	B	18.6	C	19.2	C	No	--	--
	Highline Road	PM	11.5	B	16.7	C	17.4	C	No	--	--
19.	Green Street at	AM	9.6	A	13.3	B	14.1	B	No	12.5	B
	Tehachapi Boulevard	PM	13.2	B	**26.7**	**D**	**32.7**	**D**	**Yes**	19.0	B

Notes:

- s/v = seconds per vehicle (delay).
- LOS = Level of Service, please refer to *Tables 3-1 and 3-2* for the LOS definitions.
- **Bold LOS values** indicate adverse service levels based on City of Tehachapi and Kern County LOS standards.

[17] *Appendices C* and *D* contain the Delay/LOS calculation worksheets for all study intersections.

7.3 Year 2011 Roadway Link Capacity Analysis

Table 7-2 summarizes the daily level of service results at the twelve (12) key study roadway links during a "typical" weekday for the Year 2011 Cumulative plus Project traffic conditions. The first column (1) in ***Table 7-2*** presents the daily LOS E capacity values for the roadway link based on the Criteria mentioned in this report. The second column (2) lists the existing number of travel lanes and the third column (3) indicates the existing daily traffic volume, the volume to capacity ratio (V/C), and the level of service (LOS). The fourth column (4) forecasts Year 2011 Cumulative traffic conditions and the fifth column (5) forecasts Year 2011 Cumulative plus Project traffic conditions. The sixth column (6) indicates whether the Project traffic causes a significant impact based on the traffic impact criteria mentioned in this report.

7.3.1 *Year 2009 Existing Conditions*

As previously presented in ***Table 3-6***, review of ***Table 7-2*** indicates that based on the V/C method of analysis and the LOS criteria mentioned in this report, four (4) of the twelve (12) key study roadway segments currently operate at unacceptable levels of service. The remaining eight (8) key study roadway links operate at acceptable LOS C or better on a daily basis. The roadway segments operating at adverse level of service are:

Key Roadway Links	V/C Ratio	LOS
A. Valley Boulevard (SR-202) *between* Woodford Tehachapi Road and Sage Lane	0.983	E
B. Valley Boulevard (SR-202) *between* Sierra Vista Drive and Tucker Road	0.982	E
C. Red Apple Avenue *between* Reeves Street and Tucker Road	0.865	D
H. Valley Boulevard *between* Weir Street and Beach Street	0.827	D

7.3.2 *Year 2011 Cumulative Traffic Conditions*

Review of Column (4) of ***Table 7-2*** shows that seven (7) of the twelve (12) key study roadway links are forecasted to operate at adverse service levels within a cumulative traffic setting. The remaining five (5) key study roadway links operate at acceptable LOS C or better on a daily basis. The roadway links forecasted to operate at adverse levels are:

Key Roadway Links	V/C Ratio	LOS
A. Valley Boulevard (SR-202) *between* Woodford Tehachapi Road and Sage Lane	1.380	F
B. Valley Boulevard (SR-202) *between* Sierra Vista Drive and Tucker Road	1.390	F
C. Red Apple Avenue *between* Reeves Street and Tucker Road	1.178	F

D. Tucker Road *between* SR-58 EB Ramps and Red Apple Avenue/Tehachapi Boulevard	1.010	F
H. Valley Boulevard *between* Weir Street and Beach Street	1.138	F
I. Valley Boulevard *between* Mill Street and Curry Street	0.876	D
J. Tehachapi Boulevard *between* Tucker Road and Mountain View Avenue	0.907	E

7.3.3 *Year 2011 Cumulative Plus Project Traffic Conditions*

Review of Columns (5) and (6) of ***Table 7-2*** shows that eight (8) of the twelve (12) key study roadway links operate adversely under the Year 2011 Cumulative Plus Project traffic conditions. The remaining four (4) key study roadway links operate at acceptable LOS C or better on a daily basis. The roadway links forecasted to operate at adverse levels are:

Key Roadway Links	V/C Ratio	LOS
A. Valley Boulevard (SR-202) *between* Woodford Tehachapi Road and Sage Lane	1.503	F
B. Valley Boulevard (SR-202) *between* Sierra Vista Drive and Tucker Road	1.512	F
C. Red Apple Avenue *between* Reeves Street and Tucker Road	1.362	F
D. Tucker Road *between* SR-58 EB Ramps and Red Apple Avenue/Tehachapi Boulevard	1.071	F
F. Tucker Road *between* Conway Avenue and Valley Boulevard (SR-202)	0.873	D
H. Valley Boulevard *between* Weir Street and Beach Street	1.285	F
I. Valley Boulevard *between* Mill Street and Curry Street	1.001	F
J. Tehachapi Boulevard *between* Tucker Road and Mountain View Avenue	1.065	F

Peak Hour V/C ratio method of analysis was utilized for all the roadway segments that are significantly impacted based on the Daily V/C ratio method of analysis. Review of ***Table 7-***3, indicates that during the AM and PM peak hour all the eight (8) key roadway links that were operating adversely based on the Daily V/C ratio method of analysis operate at acceptable level of service during the peak hours, therefore, none of the links pose a significant impact.

TABLE 7-2

YEAR 2011 CUMULATIVE PLUS PROJECT ROADWAY LINK DAILY LEVELS OF SERVICE SUMMARY

Key Roadway Segment	Type of Arterial	(1) LOS E Capacity (VPD)	(2) Lanes	(3) Existing Traffic Conditions			(4) Year 2011 Cumulative Traffic Conditions			(5) Year 2011 Cumulative Plus Project Traffic Conditions			(6) Significant Impact	
				Daily Volume	V/C Ratio	LOS	Daily Volume	V/C Ratio	LOS	Daily Volume	V/C Ratio	LOS	V/C Inc.	Yes/ No
A. Valley Boulevard (SR-202) *between* Woodford Tehachapi Road and Sage Lane	Major Arterial	18,000	2D	**17,698**	**0.983**	**E**	**24,847**	**1.380**	**F**	**27,055**	**1.503**	**F**	**0.123**	**Yes**
B. Valley Boulevard (SR-202) between Sierra Vista Drive and Tucker Road	Major Arterial	18,000	2D	**17,669**	**0.982**	**E**	**25,014**	**1.390**	**F**	**27,222**	**1.512**	**F**	**0.122**	**Yes**
C. Red Apple Avenue *between* Reeves Street and Tucker Road	Major Arterial	15,000	2U	**12,971**	**0.865**	**D**	**17,673**	**1.178**	**F**	**20,433**	**1.362**	**F**	**0.184**	**Yes**
D. Tucker Road *between* SR-58 EB Ramps and Red Apple Ave/Tehachapi Blvd	Major Arterial	18,000	2D	12,773	0.710	C	**18,178**	**1.010**	**F**	**19,283**	**1.071**	**F**	**0.061**	**Yes**
E. Tucker Road *between* Red Apple Ave/Tehachapi Blvd and Conway Ave	Major Arterial	36,000	4D	15,962	0.443	A	20,868	0.580	A	24,576	0.683	B	0.103	No
F. Tucker Road *between* Conway Avenue and Valley Boulevard (SR-202)	Major Arterial	36,000	4D	18,041	0.501	A	26,443	0.735	C	**31,411**	**0.873**	**D**	**0.138**	**Yes**

Notes:

- VPD = Vehicles per Day, V/C = Volume to Capacity Ratio
- LOS = Level of Service, please refer to *Table 3-3* for the LOS definitions.
- Significant Impact if V/C Increase is greater than 0.02 or more and LOS is "D," "E" or "F"
- V/C Inc. = V/C Increase
- **Bold LOS values** indicate adverse service levels based on City of Tehachapi and Kern County LOS standards.

TABLE 7-2 (CONTINUED)

YEAR 2011 CUMULATIVE PLUS PROJECT ROADWAY LINK DAILY LEVELS OF SERVICE SUMMARY

Key Roadway Segment	Type of Arterial	(1) LOS E Capacity (VPD)	(2) Lanes	(3) Existing Traffic Conditions			(4) Year 2011 Cumulative Traffic Conditions			(5) Year 2011 Cumulative Plus Project Traffic Conditions			(6) Significant Impact	
				Daily Volume	V/C Ratio	LOS	Daily Volume	V/C Ratio	LOS	Daily Volume	V/C Ratio	LOS	V/C Inc.	Yes/ No
G. Tucker Road *between* Valley Boulevard (SR-202) and Cherry Lane	Major Arterial	36,000	4D	5,800	0.161	A	8,723	0.242	A	9,275	0.258	A	0.016	No
H. Valley Boulevard *between* Weir Street and Beach Street	Major Arterial	15,000	2U	**12,339**	**0.827**	**D**	**17,067**	**1.138**	**F**	**19,275**	**1.285**	**F**	**0.147**	**Yes**
I. Valley Boulevard *between* Mill Street and Curry Street	Major Arterial	15,000	2U	8,537	0.569	A	**13,133**	**0.876**	**D**	**15,011**	**1.001**	**F**	**0.125**	**Yes**
J. Tehachapi Boulevard *between* Tucker Rd and Mountain View Ave	Major Arterial	18,000	2D	12,008	0.667	B	**16,329**	**0.907**	**E**	**19,169**	**1.065**	**F**	**0.158**	**Yes**
K. Tehachapi Boulevard *between* Mulberry Street and Mill Street	Major Arterial	36,000	4D	10,736	0.298	A	14,787	0.411	A	16,774	0.466	A	0.055	No
L. Curry Street *between* Valley Boulevard and Highland Road	Major Arterial	18,000	2D	6,158	0.342	A	10,011	0.556	A	11,337	0.630	B	0.074	No

Notes:

- VPD = Vehicles per Day, V/C = Volume to Capacity Ratio
- LOS = Level of Service, please refer to *Table 3-3* for the LOS definitions.
- Significant Impact if V/C Increase is greater than 0.02 or more and LOS is "D," "E" or "F"
- V/C Inc. = V/C Increase
- **Bold LOS values** indicate adverse service levels based on City of Tehachapi and Kern County LOS standards.

TABLE 7-3

YEAR 2011 CUMULATIVE PLUS PROJECT PEAK HOUR ROADWAY LINK LEVEL OF SERVICE SUMMARY

Key Roadway Segment	(1) Type of Arterial	(2) Time Period	(3) Approach	(4) Link Capacity (VPHPL)	(5) Lanes	(6) Total Link Capacity (VPH)	(7) Year 2011 Cumulative Plus Project Traffic Conditions		
							Peak Hour Volume	V/C Ratio	LOS
A. Valley Blvd (SR-202) *between* Woodford Tehachapi Rd and Sage Ln	Major Arterial	AM	EB	1,600	1	1,600	784	0.490	A
			WB	1,600	1	1,600	603	0.377	A
		PM	EB	1,600	1	1,600	889	0.556	A
			WB	1,600	1	1,600	1,107	0.692	B
B. Valley Blvd (SR-202) *between* Sierra Vista Dr and Tucker Rd	Major Arterial	AM	EB	1,600	1	1,600	763	0.477	A
			WB	1,600	1	1,600	621	0.388	A
		PM	EB	1,600	1	1,600	911	0.569	A
			WB	1,600	1	1,600	1,133	0.708	C
C. Red Apple Ave *between* Reeves St and Tucker Rd	Major Arterial	AM	EB	1,600	1	1,600	692	0.433	A
			WB	1,600	1	1,600	335	0.209	A
		PM	EB	1,600	1	1,600	682	0.426	A
			WB	1,600	1	1,600	953	0.596	B
D. Tucker Rd *between* SR-58 EB Ramps and Red Apple Ave/Tehachapi Blvd	Major Arterial	AM	NB	1,600	1	1,600	757	0.473	A
			SB	1,600	1	1,600	367	0.229	A
		PM	NB	1,600	1	1,600	513	0.321	A
			SB	1,600	1	1,600	874	0.546	A

Notes:

- VPHPL = Vehicles Per Hour Per Lane, VPH = Vehicles Per Hour
- V/C = Volume to Capacity Ratio
- LOS = Level of Service, please refer to *Table 3-3* for the LOS definitions.

TABLE 7-3 (CONTINUED)

YEAR 2011 CUMULATIVE PLUS PROJECT PEAK HOUR ROADWAY LINK LEVEL OF SERVICE SUMMARY

Key Roadway Segment	(1) Type of Arterial	(2) Time Period	(3) Approach	(4) LOS Capacity (VPHPL)	(5) Lanes	(6) Total Link Capacity (VPH)	(7) Year 2011 Phase I Cumulative Plus Project Traffic Conditions		
							Peak Hour Volume	V/C Ratio	LOS
F. Tucker Rd *between* Conway Ave and Valley Blvd (SR-202)	Major Arterial	AM	NB	1,600	2	3,200	932	0.291	A
			SB	1,600	2	3,200	870	0.272	A
		PM	NB	1,600	2	3,200	1,071	0.335	A
			SB	1,600	2	3,200	1,159	0.362	A
H. Valley Blvd *between* Weir St and Beach St	Major Arterial	AM	EB	1,600	1	1,600	534	0.334	A
			WB	1,600	1	1,600	491	0.307	A
		PM	EB	1,600	1	1,600	750	0.469	A
			WB	1,600	1	1,600	728	0.455	A
I. Valley Blvd *between* Mill St and Curry St	Major Arterial	AM	EB	1,600	1	1,600	558	0.349	A
			WB	1,600	1	1,600	486	0.304	A
		PM	EB	1,600	1	1,600	541	0.338	A
			WB	1,600	1	1,600	554	0.346	A
J. Tehachapi Blvd *between* Tucker Rd and Mountain View Ave	Major Arterial	AM	EB	1,600	1	1,600	608	0.380	A
			WB	1,600	1	1,600	447	0.279	A
		PM	EB	1,600	1	1,600	682	0.426	A
			WB	1,600	1	1,600	743	0.464	A

Notes:

- VPHPL = Vehicles Per Hour Per Lane, VPH = Vehicles Per Hour
- V/C = Volume to Capacity Ratio
- LOS = Level of Service, please refer to *Table 3-3* for the LOS definitions.

8.0 YEAR 2011 AREA-WIDE IMPROVEMENTS

For those intersections and roadway links where projected traffic volumes are expected to result in unacceptable operating conditions, this report recommends traffic improvements that change the intersection and/or roadway links geometry to increase capacity. These capacity improvements involve roadway widening and/or re-striping to reconfigure (add lanes) roadways to specific approaches of a key intersection and /or roadway links. The identified improvements are expected to:

- Address the impact of existing traffic, Project traffic and future non-project (cumulative ambient traffic growth and cumulative projects) traffic, and
- Improve Levels of Service to an acceptable range and/or to pre-project conditions.
- Identify mitigation measures that are included in the Tehachapi Region Transportation Impact Fee Program Facilities List.

8.1 Intersections

The results of the Year 2011 Cumulative plus Project traffic conditions level of service analysis indicate that the proposed Project will significantly impact nine (9) of the of the nineteen (19) key study intersections. It should be noted that eight (8) of the nine (9) significantly impacted intersections have cumulative significant impacts and one (1) intersection has a direct significant impact. The eight (8) intersections that have cumulative significant impacts are forecast to operate at unacceptable LOS under the Year 2011 Cumulative Traffic conditions. The improvements listed below have been identified to address the traffic impacts at the intersections significantly impacted, both cumulatively and directly, by the Year 2011 Cumulative plus Project traffic.

- Santa Lucia Street at Valley Boulevard (SR-202): Install a traffic signal and design for five-phase operation with protected eastbound and westbound left-turns on Valley Boulevard (SR-202). ***Appendix G*** contains the traffic signal warrant analysis worksheets. ***It should be noted that this improvement is a part of the Tehachapi Region Transportation Impact Fee Program Facilities List, which is contained in Appendix L***.

- Westwood Boulevard at Red Apple Avenue: Install a traffic signal and design for three-phase operation. Install a northbound right-turn overlap phase on Westwood Boulevard. Install a westbound right-turn overlap phase on Red Apple Avenue. ***Appendix G*** contains the traffic signal warrant analysis worksheets. ***It should be noted that this improvement is a part of the Tehachapi Region Transportation Impact Fee Program Facilities List, which is contained in Appendix L.***

- Sierra Vista Drive at Valley Boulevard (SR-202): Re-stripe Valley Boulevard (SR-202) to provide a two-way-left-turn-lane (TWLTL) for the storage of two (2) cars for the southbound left-turn movement.

- Tucker Road at SR-58 Eastbound Ramps: Widen and restripe the SR-58 Eastbound Ramp to provide a free right-turn and re-stripe the eastbound through/left-turn lane to a left-turn lane only.

It should be noted that the receiving lane on Tucker Road is included in the Tehachapi Region Transportation Impact Fee Program Facilities List, which is contained in Appendix L.

- Tucker Road at Red Apple Avenue/Tehachapi Boulevard: Widen and/or restripe Tehachapi Boulevard to provide a 2nd westbound left-turn lane. Install a southbound right-turn overlap phase on Tucker Road. Modify existing traffic signal. ***It should be noted that the traffic signal modification is included in the Tehachapi Region Transportation Impact Fee Program Facilities List, which is contained in Appendix L.***

- Tucker Road at Conway Avenue/Driveway 2: Re-stripe Conway Avenue to provide a right-turn only lane and restrict the eastbound through and left-turn movements. Re-stripe Walmart Project Driveway 3 to provide a right-turn only lane and restrict the westbound through and left-turn movements.

- Tucker Road at Valley Boulevard (SR-202): Re-stripe Tucker Road to convert the de-facto southbound shared through-right-turn lane to an exclusive southbound right-turn lane. Widen and/or restripe Tucker Road to add a 2nd southbound left-turn lane. Widen and/or restripe Valley Boulevard to add a 2nd eastbound left-turn lane and a 2nd westbound through lane. Install a southbound right-turn overlap phase on Tucker Road. Install a westbound right-turn overlap phase on Valley Boulevard (SR-202). Modify existing traffic signal.

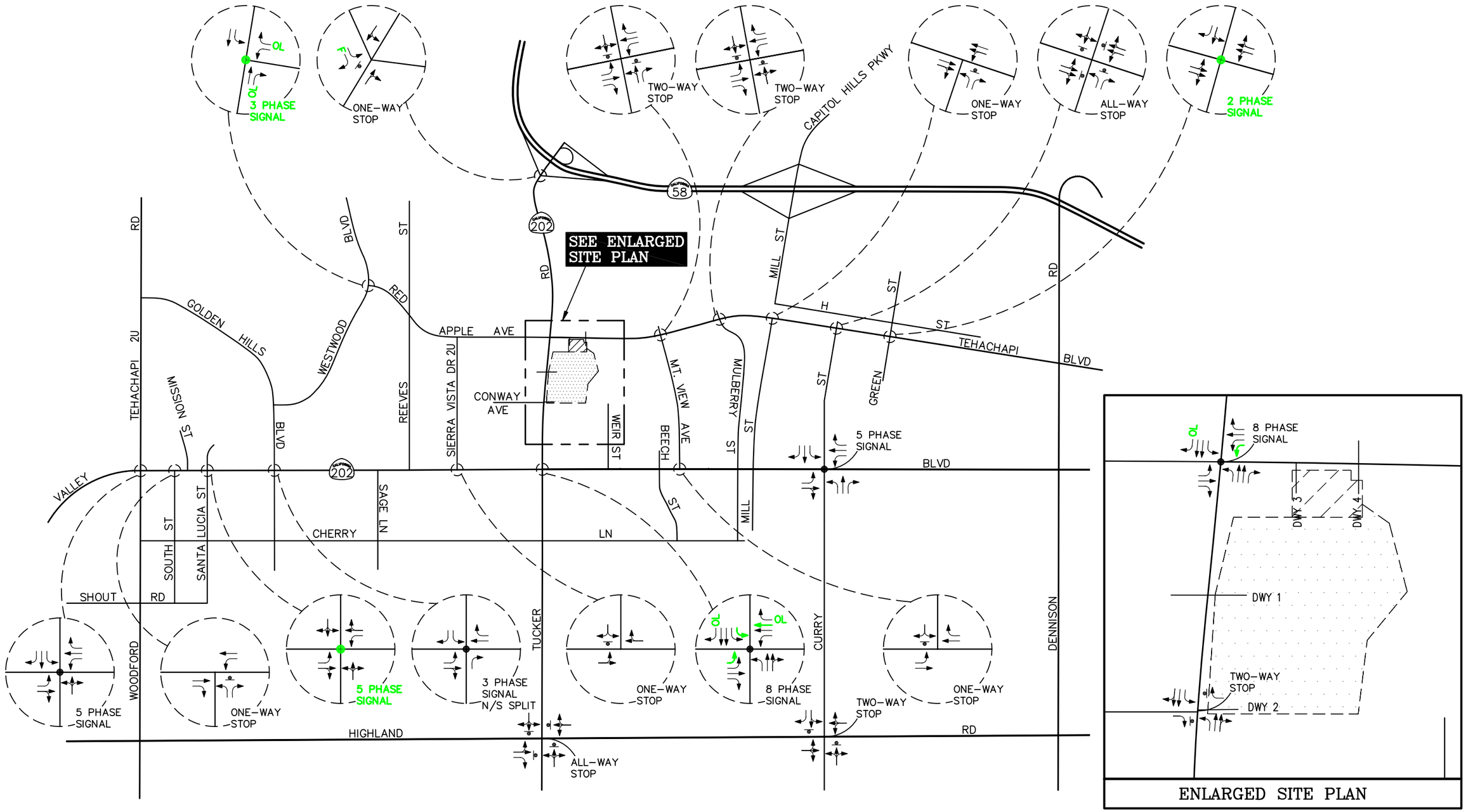
- Mountain View Avenue at Valley Boulevard: Re-stripe Valley Boulevard (SR-202) to provide a one (1) car storage median for the southbound left-turn movement.

- Green Street at Tehachapi Boulevard: Install a traffic signal and design for two-phase operation. ***Appendix G*** contains the traffic signal warrant analysis worksheets. ***It should be noted that this improvement is a part of the Tehachapi Region Transportation Impact Fee Program Facilities List, which is contained in Appendix L.***

Figure 8-1 presents the recommended traffic improvements and intersection controls for the eight (8) impacted key study intersections for the Year 2011 Cumulative plus Project traffic conditions capacity analyses detailed above.

8.2 Roadway Links

The results of the roadway link analyses summarized in *Tables 7-2* and *7-3* indicate that the proposed Project is not forecast to have a significant impact at any of the twelve (12) key roadway links. As there are no significant impacts, no traffic mitigation measures are required or recommended for the roadway links.



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N NO SCALE

KEY

- = APPROACH LANE ASSIGNMENT
- = RECOMMENDED IMPROVEMENTS
- = TRAFFIC SIGNAL
- = RECOMMENDED TRAFFIC SIGNAL
- = STOP SIGN
- OL = OVERLAP PHASE
- F = FREE RIGHT-TURN
- = WALMART SITE
- = RETAIL SITE

FIGURE 8-1

YEAR 2011 CUMULATIVE PLUS PROJECT CONDITIONS RECOMMENDED IMPROVEMENTS

WALMART, TEHACHAPI

9.0 YEAR 2011 PROJECT FAIR SHARE ANALYSIS

The transportation impacts associated with the development of the Project were determined based on the Year 2011 analysis. As summarized in ***Table 7-1***, the development of the Project is anticipated to create nine (9) significant impacts in the Year 2011. It should be noted that eight (8) of the nine (9) impacted intersections have cumulative significant impacts and one (1) intersection has a direct significant impact. The eight (8) intersections that have cumulative significant impacts are forecast to operate at unacceptable LOS under the Year 2011 Cumulative Traffic conditions. As such, the Project may be expected to construct improvements and/or pay a proportional "fair-share" of the improvement costs of the impacted intersections to mitigate the Project's traffic impacts. It should be noted that recommended mitigation improvements identified above in ***Section 8.1*** that are included in the Tehachapi Region Transportation Impact Fee Program Facilities List will not require a fair share contribution.

9.1 Intersections

As presented in ***Table 9-1***, the first column (1) presents a total of all intersection peak hour movements for existing conditions. The second column (2) presents Year 2011 Cumulative traffic conditions. The third column (3) presents Year 2011 Cumulative traffic conditions with Project traffic. The fourth column (4) represents the Project's fair share based on the following formula:

- Project Fair Share (4) = [Column (3) – Column (2)] / Column (3) *100

The Project fair share percentages (based on greatest peak hour impact) for the nine impacted intersections for the Year 2011 Cumulative plus Project traffic conditions are shown below. Additionally, the Project fair share percentages shown below the intersection correspond directly to the two project development parcels (165,000 SF Walmart vs. 11,800 SF Commercial Outparcel) based on the Project's trip generation forecast.

- **Santa Lucia St at Valley Blvd (SR-202)** **7.05 %**
  - Commercial Outparcel 1.28 %
  - Walmart 5.77 %
- **Westwood Blvd at Red Apple Ave** **10.02 %**
  - Commercial Outparcel 4.11 %
  - Walmart 5.91 %
- **Sierra Vista Dr at Valley Blvd (SR-202)** **6.48 %**
  - Commercial Outparcel 1.17 %
  - Walmart 5.31 %
- **Tucker Road at SR-58 EB Ramps** **4.39 %**
  - Commercial Outparcel 0.79 %
  - Walmart 3.60 %
- **Tucker Road at Red Apple Ave/Tehachapi Blvd** **9.45 %**
  - Commercial Outparcel 1.71 %

- Walmart 7.74 %
- **Tucker Rd at Conway Ave** **12.26 %**
  - Commercial Outparcel 2.22 %
  - Walmart 10.04 %
- **Tucker Rd at Valley Blvd (SR-202)** **8.61 %**
  - Commercial Outparcel 1.56 %
  - Walmart 7.05 %
- **Mountain View Ave at Valley Blvd** **8.80 %**
  - Commercial Outparcel 1.59 %
  - Walmart 7.21 %
- **Green St at Tehachapi Blvd** **5.26 %**
  - Commercial Outparcel 0.95 %
  - Walmart 4.31 %

9.2 Roadway Links

The results of the roadway link analyses summarized in ***Tables 7-2*** and ***7-3*** indicates that the proposed Project is not forecast to have a significant impact at any of the twelve (12) key roadway links. As there are no significant impacts, no Project Fair Share calculation is needed.

It should be noted that the Project Fair Share Contribution percentage for the roadway segment of Tehachapi Boulevard between Tucker Road and Mountain View Avenue that is provided in ***Table 9-2*** is for informational purposes only, as requested by City staff, and may be utilized should this project be requested to construct Tehachapi Boulevard east of Old Tehachapi Road.

As presented in ***Table 9-2***, the first column (1) presents a total of the roadway segment daily traffic for existing conditions. The second column (2) presents Year 2011 Cumulative traffic conditions. The third column (3) presents Year 2011 Cumulative traffic conditions with Project traffic. The fourth column (4) represents the Project's fair share based on the following formula:

- Project Fair Share (4) = [Column (3) – Column (2)] / Column (3) *100

The Project fair share percentage for the Year 2011 Cumulative plus Project traffic conditions is shown below:

- **Tehachapi Blvd *between* Tucker Rd and Mountain View Ave** **14.82 %**
  - Commercial Outparcel 4.23 %
  - Walmart 10.59 %

TABLE 9-1

YEAR 2011 INTERSECTION PROJECT FAIR SHARE CONTRIBUTION

Key Intersection		Impacted Time Period	(1) Existing Traffic	(2) Year 2011 Cumulative Traffic	(3) Year 2011 Cumulative Plus Project Traffic	(4) Net Project Percent Increase
3.	Santa Lucia Street at	--	--	--	--	--
	Valley Boulevard (SR-202)	PM	1,301	1,581	1,701	**7.05%**
5.	Westwood Boulevard at	AM	731	943	1,048	**10.02%**
	Red Apple Avenue	PM	1,232	1,545	1,713	9.81%
6.	Sierra Vista Drive at	--	--	--	--	--
	Valley Boulevard (SR-202)	PM	1,453	1,919	2,052	**6.48%**
7.	Tucker Road at	--	--	--	--	--
	SR-58 Eastbound Ramps	PM	1,083	1,458	1,525	**4.39%**
8.	Tucker Road at	--	--	--	--	--
	Red Apple Ave/Tehachapi Blvd	PM	2,099	2,739	3,025	**9.45%**
9.	Tucker Road at	AM	1,485	1,865	2,059	9.42%
	Conway Avenue	PM	1,676	2,247	2,561	**12.26%**
10.	Tucker Road at	AM	2,278	2,892	3,078	6.04%
	Valley Boulevard (SR-202)	PM	2,374	3,196	3,497	**8.61%**
12.	Mountain View Avenue at	--	--	--	--	--
	Valley Boulevard	PM	1,037	1,388	1,522	**8.80%**
19.	Green Street at	--	--	--	--	--
	Tehachapi Boulevard	PM	1,159	1,676	1,769	**5.26%**

Notes:

- Net Project Percent Increase (4) = [Column (3) – Column (2)] / Column (3)
- **Bold Net Project Percent Increase** is based on worse case.

TABLE 9-2

YEAR 2011 ROADWAY SEGMENT PROJECT FAIR SHARE CONTRIBUTION

Key Roadway Segment	(1) Existing Traffic	(2) Year 2011 Cumulative Traffic	(3) Year 2011 Cumulative Plus Project Traffic	(4) Net Project Percent Increase
J. Tehachapi Blvd *between* Tucker Rd and Mountain View Ave	12,008	16,329	19,169	**14.82%**

Notes:

- Net Project Percent Increase (4) = [Column (3) – Column (2)] / Column (3)

10.0 GENERAL PLAN BUILDOUT TRAFFIC CONDITIONS

Six (6) intersections and seven (7) roadway links were analyzed for the General Plan Buildout traffic conditions. The peak hour traffic volumes for four (4) intersections and daily traffic volumes for seven (7) roadway links under the General Plan Buildout traffic conditions were provided by Kimley-Horn and Associates, Inc, the City's consultant for the General Plan Update. ***Appendix E*** contains the detailed traffic count data.

It should be noted that the General Plan Buildout volumes for the two (2) remaining intersections, intersections of Tucker Road at SR-58 Eastbound Ramps and Tucker Road at Red Apple Avenue/Tehachapi Boulevard were manually forecast as there was no data available for the General Plan Buildout traffic conditions. The General Plan Buildout with Project traffic volumes were forecast by growing the existing traffic volumes by one percent per year and adding the trips generated from the fourteen (14) cumulative projects and the Project.

Appendix E contains the detailed traffic count data for the six (6) intersections and seven (7) roadway links that were analyzed for the General Plan Buildout traffic conditions.

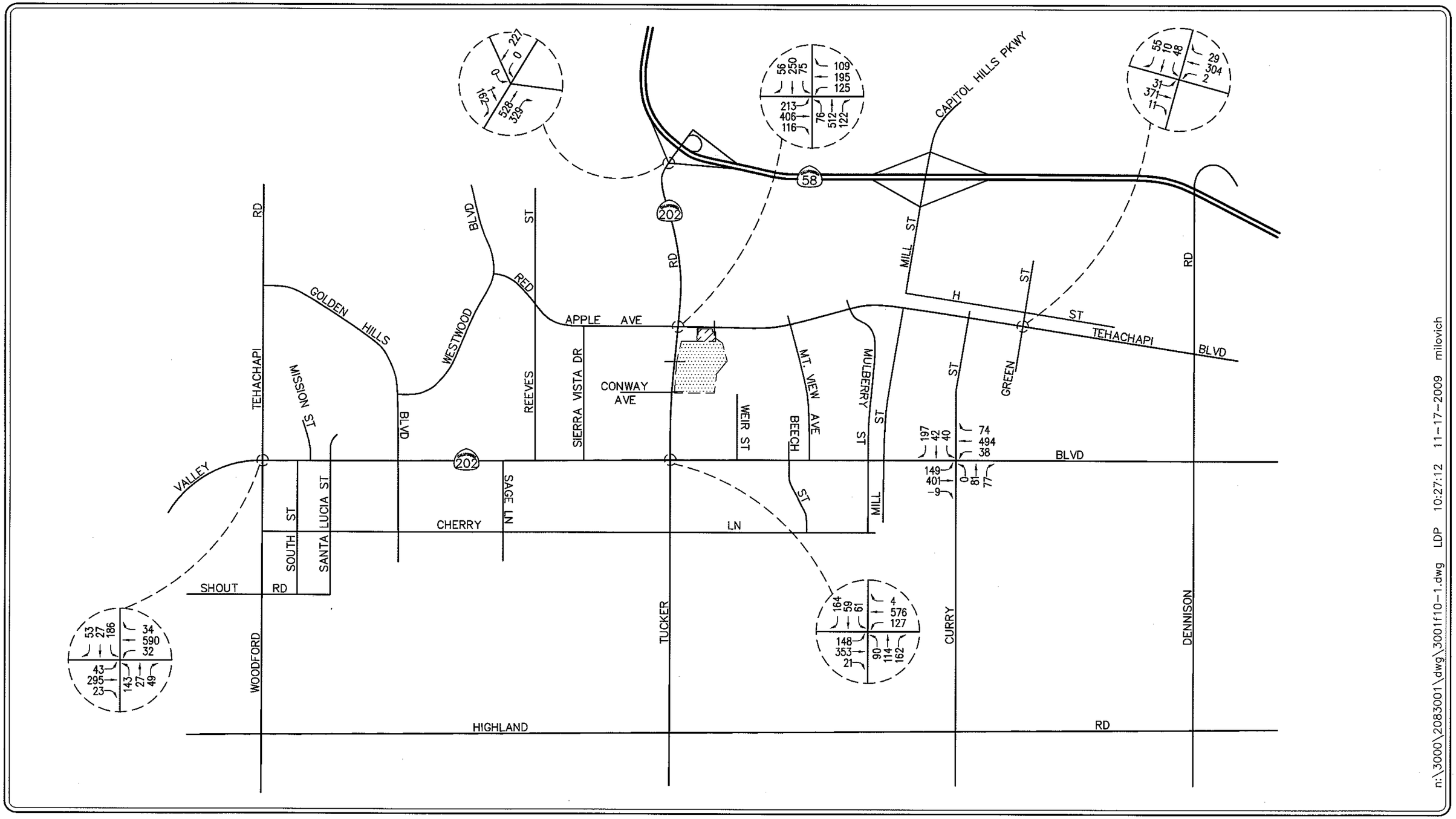
10.1 General Plan Buildout Without Project Traffic

The anticipated AM and PM peak hour traffic volumes at the six (6) key study intersections associated with the General Plan Buildout without Project traffic conditions are presented in ***Figures 10-1*** and ***10-2***, respectively. ***Figure 10-3*** presents the daily General Plan Buildout without Project traffic volumes at the seven (7) key study roadway links.

The General Plan Buildout without Project traffic volumes were obtained by subtracting the Project trips from the General Plan Buildout with Project traffic volumes.

10.2 General Plan Buildout With Project Traffic

Figures 10-4 and ***10-5*** present the AM and PM peak hour traffic volumes at the six (6) key study intersections under the General Plan Buildout with Project conditions, respectively. ***Figure 10-6*** presents the General Plan Buildout with Project traffic volumes at the seven (7) key study roadway links.



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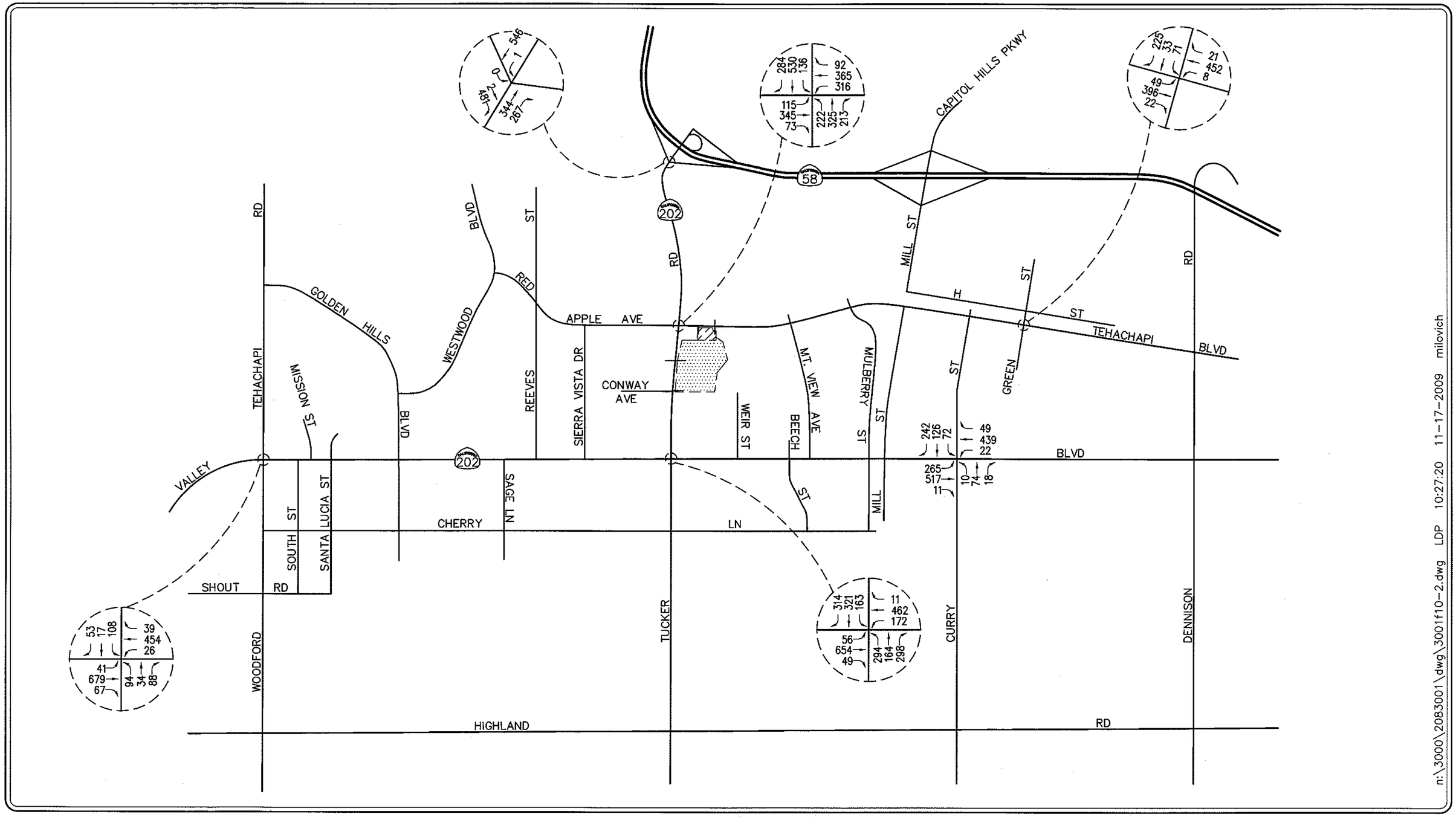
N NO SCALE

KEY
= WALMART SITE
= RETAIL SITE

FIGURE 10-1

GENERAL PLAN BUILDOUT WITHOUT PROJECT AM PEAK HOUR TRAFFIC VOLUMES

WALMART, TEHACHAPI



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N NO SCALE

KEY
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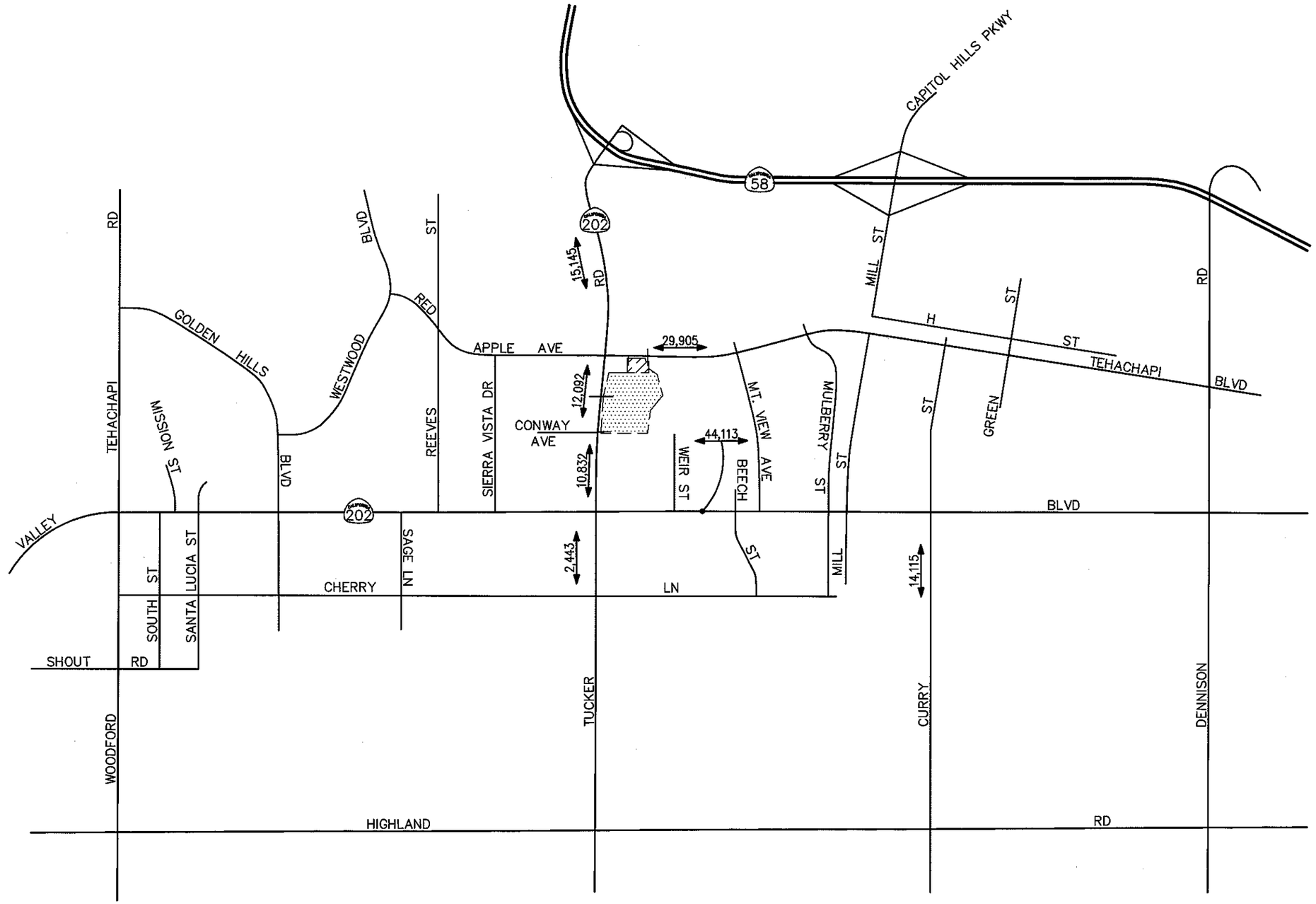
= RETAIL SITE

FIGURE 10-2

GENERAL PLAN BUILDOUT WITHOUT PROJECT PM PEAK HOUR TRAFFIC VOLUMES

WALMART, TEHACHAPI



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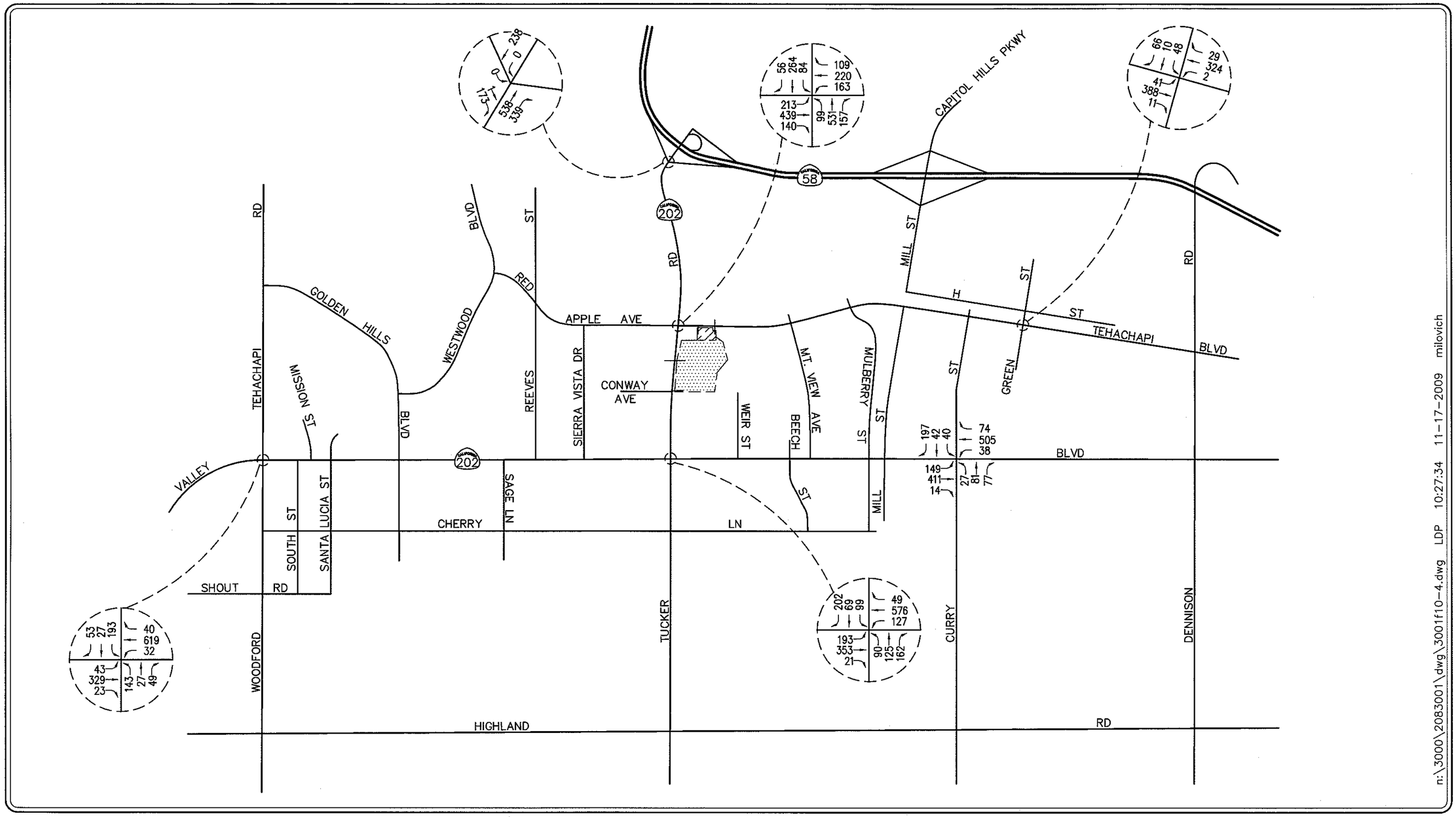
N NO SCALE

KEY
= WALMART SITE
= RETAIL SITE
##,### = DAILY TRAFFIC VOLUMES

FIGURE 10-3

GENERAL PLAN BUILDOUT WITHOUT PROJECT DAILY TRAFFIC VOLUMES

WALMART, TEHACHAPI



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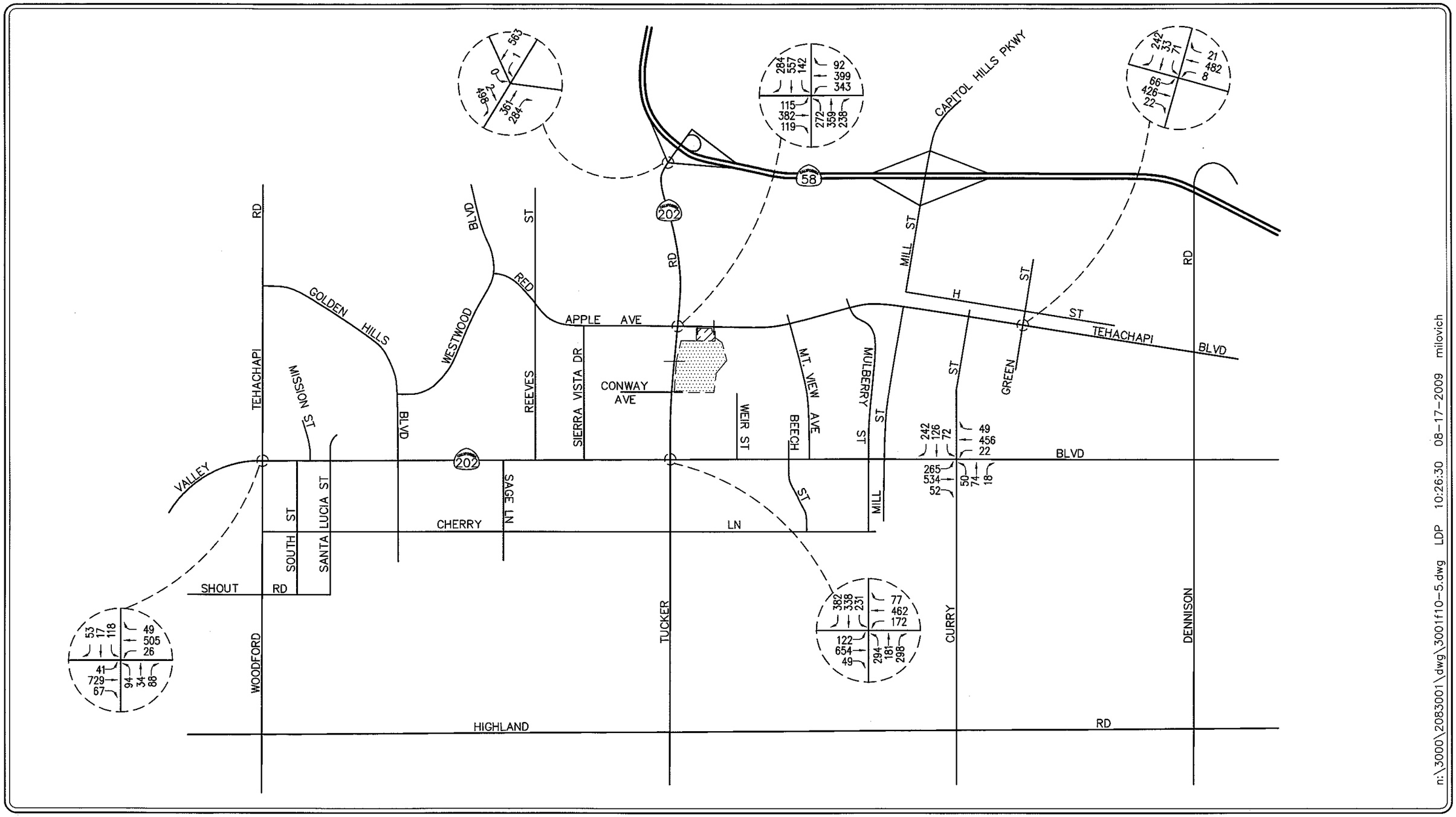
N NO SCALE

KEY
= WALMART SITE
= RETAIL SITE

FIGURE 10-4

GENERAL PLAN BUILDOUT WITH PROJECT AM PEAK HOUR TRAFFIC VOLUMES

WALMART, TEHACHAPI



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N NO SCALE

KEY
= WALMART SITE
= RETAIL SITE

FIGURE 10-5

GENERAL PLAN BUILDOUT WITH PROJECT PM PEAK HOUR TRAFFIC VOLUMES

WALMART, TEHACHAPI

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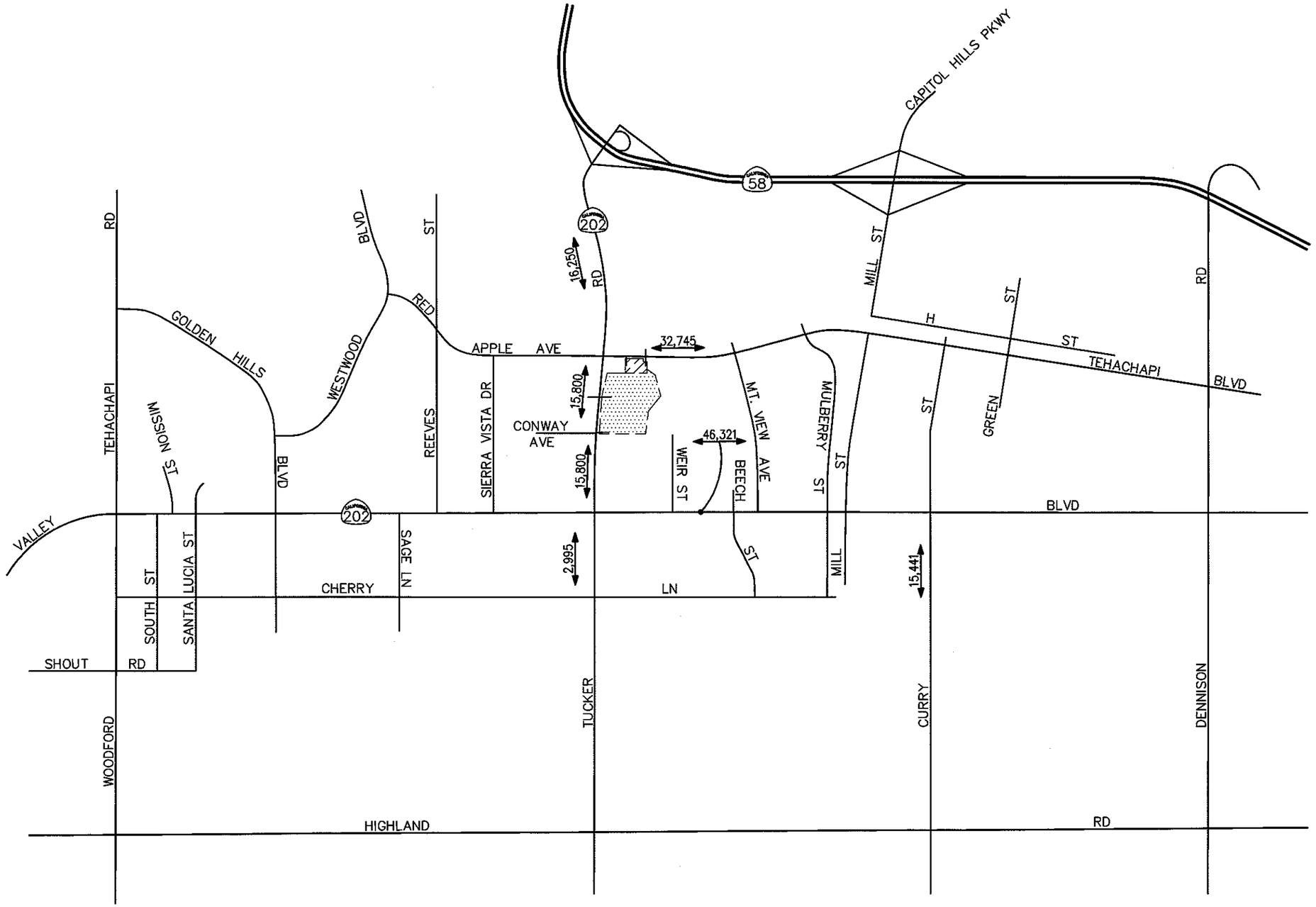

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N NO SCALE

KEY
= WALMART SITE
= RETAIL SITE
##,### = DAILY TRAFFIC VOLUMES

FIGURE 10-6

GENERAL PLAN BUILDOUT WITH PROJECT DAILY TRAFFIC VOLUMES

WALMART, TEHACHAPI

11.0 GENERAL PLAN BUILDOUT TRAFFIC IMPACT ANALYSIS

The relative impact of the General Plan Buildout with Project traffic conditions was evaluated based on analysis of the General Plan Buildout conditions at six (6) key study intersections and seven (7) key study roadway segments.

11.1 Significance of Impacts

11.1.1 *Impact Criteria and Thresholds*

The City of Tehachapi and Kern County consider LOS C to be the minimum acceptable LOS for all intersections and roadway segments.

Caltrans considers LOS D to be the minimum acceptable LOS for all Caltrans intersections.

11.1.2 *Traffic Impact Analysis Scenarios*

The following scenarios are those for which LOS calculations have been performed:

A. General Plan Buildout without Project traffic conditions,
B. General Plan Buildout with Project traffic conditions, and
C. Scenario (B) with Improvements, if necessary.

11.2 General Plan Buildout Intersection Capacity Analysis

Table 11-1 summarizes the peak hour level of service results at the six (6) key study intersections for the General Plan Buildout conditions. The first column (1) presents existing AM and PM peak hour traffic conditions (which were also presented in ***Tables 3-5*** and ***7-1***). The second column (2) presents General Plan Buildout without Project traffic conditions. The third column (3) presents General Plan Buildout with Project traffic conditions. The forth column (4) indicates whether the traffic associated with the General Plan Buildout with Project conditions will have a significant impact based on the LOS criteria mentioned in this report and column (5) presents the resultant level of service with the inclusion of recommended traffic improvements to achieve an acceptable level of service.

11.2.1 *General Plan Buildout Without Project Traffic Conditions*

Review of Column (2) of ***Table 11-1*** shows that three (3) of the six (6) key study intersections for the General Plan Buildout without Project conditions are forecast to operate at adverse level of service during the AM and/or PM peak hours. The remaining three (3) key study intersections will continue to operate at acceptable LOS C or better during the AM and PM peak hours. The intersections operating at adverse level of service are:

	AM Peak Hour		PM Peak Hour	
Key Intersection	**Delay (s/v)**	**LOS**	**Delay (s/v)**	**LOS**
7. Tucker Road at SR-58 Eastbound Ramps	--	--	43.8	E
8. Tucker Road at Red Apple Ave/Tehachapi Blvd	--	--	36.7	D
10. Tucker Road at Valley Boulevard (SR-202)	--	--	51.2	D

11.2.2 *General Plan Buildout With Project Traffic Conditions*

Review of Columns (3) and (4) of ***Table 11-1*** shows that three (3) of the six (6) key study intersections under the General Plan Buildout with Project conditions are significantly impacted and forecast to operate at adverse level of service during the AM and/or PM peak hours based on the impact criteria mentioned in this report. The impacted intersections are:

	AM Peak Hour		**PM Peak Hour**	
Key Intersection	**Delay (s/v)**	**LOS**	**Delay (s/v)**	**LOS**
7. Tucker Road at SR-58 Eastbound Ramps	--	--	53.5	F
8. Tucker Road at Red Apple Ave/Tehachapi Blvd	--	--	41.3	D
10. Tucker Road at Valley Boulevard (SR-202)	--	--	58.1	E

The remaining three (3) key study intersections operate at acceptable levels of service, LOS C or better during the AM and PM peak hours. It should be noted that with the implementation of the recommended improvements, the impacted intersections would operate at acceptable levels of service, LOS C or better.

Appendix F contains the General Plan Buildout Highway Capacity Manual (HCM) Level of Service calculation worksheets.

TABLE 11-1

GENERAL PLAN BUILDOUT WITH PROJECT INTERSECTION PEAK HOUR LEVELS OF SERVICE SUMMARY[18]

Key Intersections		Time Period	(1) Existing Traffic Conditions		(2) General Plan Buildout Without Project Traffic Conditions		(3) General Plan Buildout With Project Traffic Conditions		(4) Significant Impact	(5) General Plan Buildout With Project with Mitigation	
			Delay (s/v)	LOS	Delay (s/v)	LOS	Delay (s/v)	LOS	Yes/No	Delay (s/v)	LOS
1.	Woodford Tehachapi Road at	AM	15.7	B	21.2	C	21.1	C	No	--	--
	Valley Boulevard (SR-202)	PM	18.4	B	19.8	B	20.0	B	No	--	--
7.	Tucker Road at	AM	9.6	A	10.6	B	10.8	B	No	0.0	A
	SR-58 Eastbound Ramps	PM	17.7	C	**43.8**	**E**	**53.5**	**F**	**Yes**	8.8	A
8.	Tucker Road at	AM	27.7	C	29.8	C	30.9	C	No	29.2	C
	Red Apple Ave/Tehachapi Blvd	PM	32.5	C	**36.7**	**D**	**41.3**	**D**	**Yes**	34.1	C
10.	Tucker Road at	AM	34.4	C	30.1	C	32.1	C	No	25.7	C
	Valley Boulevard (SR-202)	PM	**36.3**	**D**	**51.2**	**D**	**58.1**	**E**	**Yes**	34.9	C
17.	Curry Street at	AM	22.1	C	22.1	C	22.1	C	No	--	--
	Valley Boulevard	PM	23.7	C	24.7	C	24.8	C	No	--	--
19.	Green Street at	AM	9.6	A	9.7	A	10.0	B	No	--	--
	Tehachapi Boulevard	PM	13.2	B	12.6	B	13.5	B	No	--	--

Notes:

- s/v = seconds per vehicle (delay).
- LOS = Level of Service, please refer to *Tables 3-1 and 3-2* for the LOS definitions.
- **Bold LOS values** indicate adverse service levels based on City of Tehachapi and Kern County LOS standards.

[18] *Appendices C* and *F* contain the Delay/LOS calculation worksheets for all study intersections.

11.3 General Plan Buildout Roadway Link Capacity Analysis

Table 11-2 summarizes the daily level of service results at the seven (7) key study links during a "typical" weekday for the General Plan Buildout traffic conditions. The first column (1) in ***Table 11-2*** presents the daily LOS E capacity values for the roadway link based on the criteria mentioned in this report. The second column (2) lists the number of travel lanes and the third column (3) indicates the existing daily traffic volume, the volume to capacity ratio (V/C), and the level of service (LOS). The fourth column (4) forecasts General Plan Buildout without Project traffic conditions and the fifth column (5) forecasts General Plan Buildout with Project traffic conditions. The sixth column (6) indicates whether the Project traffic causes a significant impact based on the traffic impact criteria mentioned in this report.

11.3.1 *General Plan Buildout Without Project Traffic Conditions*

Review of Column (4) of ***Table 11-2*** shows that three (3) of the seven (7) key study roadway links are forecasted to operate at adverse service levels under General Plan Buildout without Project conditions. The remaining four (4) key study roadway links operate at acceptable LOS C or better on a daily basis. The roadway links forecasted to operate at adverse levels are:

Key Roadway Links	V/C Ratio	LOS
D. Tucker Rd *between* SR-58 EB Ramps and Red Apple Ave/Tehachapi Blvd	0.841	D
H. Valley Blvd *between* Weir St and Beach St	2.941	F
J. Tehachapi Blvd *between* Tucker Rd and Mountain View Ave	1.661	F

11.3.2 *General Plan Buildout With Project Traffic Conditions*

Review of Columns (5) and (6) of ***Table 11-2*** shows that four (4) of the seven (7) key study roadway links are forecast to operate at adverse level of service under the General Plan Buildout with Project traffic conditions. The remaining three (3) key study roadway links operate at acceptable LOS C or better on a daily basis. The roadway links forecasted to operate at adverse levels are:

Key Roadway Links	V/C Ratio	LOS
D. Tucker Rd *between* SR-58 EB Ramps and Red Apple Ave/Tehachapi Blvd	0.903	E
H. Valley Blvd *between* Weir St and Beach St	3.088	F
J. Tehachapi Blvd *between* Tucker Rd and Mountain View Ave	1.819	F
L. Curry St *between* Valley Blvd and Highland Rd	0.858	D

Peak Hour V/C ratio method of analysis was utilized for all the roadway segments that are adversely affected based on the Daily V/C ratio method of analysis. Review of ***Table 11-***3, indicates that during the AM and PM peak hour all the four (4) key roadway links that were adversely affected based on the Daily V/C ratio method of analysis operate at acceptable level of service during the peak hours, therefore, none of the links pose a significant impact

TABLE 11-2

GENERAL PLAN BUILDOUT WITH PROJECT ROADWAY LINK DAILY LEVELS OF SERVICE SUMMARY

Key Roadway Segment	Type of Arterial	(1) LOS E Capacity (VPD)	(2) Lanes	(3) Existing Traffic Conditions			(4) General Plan Buildout Without Project Traffic Conditions			(5) General Plan Buildout With Project Traffic Conditions			(6) Significant Impact	
				Daily Volume	V/C Ratio	LOS	Daily Volume	V/C Ratio	LOS	Daily Volume	V/C Ratio	LOS	V/C Inc.	Yes/ No
D. Tucker Road *between* SR-58 EB Ramps and Red Apple Ave/Tehachapi Blvd	Major Arterial	18,000	2D	12,773	0.710	C	**15,145**	**0.841**	**D**	**16,250**	**0.903**	**E**	**0.072**	**Yes**
E. Tucker Road *between* Red Apple Ave/Tehachapi Blvd and Conway Ave	Major Arterial	36,000	4D	15,962	0.443	A	12,092	0.336	A	15,800	0.434	A	0.112	No
F. Tucker Road *between* Conway Avenue and Valley Boulevard (SR-202)	Major Arterial	36,000	4D	18,041	0.501	A	10,832	0.301	A	15,800	0.434	A	0.157	No
G. Tucker Road *between* Valley Boulevard (SR-202) and Cherry Lane	Major Arterial	36,000	4D	5,800	0.161	A	2,443	0.068	A	2,995	0.083	A	0.18	No
H. Valley Boulevard *between* Weir Street and Beach Street	Major Arterial	15,000	2U	**12,339**	**0.827**	**D**	**44,113**	**2.941**	**F**	**46,321**	**3.088**	**F**	**0.173**	**Yes**

Notes:

- VPD = Vehicles per Day
- V/C = Volume to Capacity Ratio
- LOS = Level of Service, please refer to *Table 3-3* for the LOS definitions.
- **Bold LOS values** indicate adverse service levels based on City of Tehachapi and Kern County LOS standards.
- V/C Inc. = V/C Increase
- Significant Impact if V/C Increase is greater than 0.02 or more and LOS is "D," "E" or "F"

TABLE 11-2 (CONTINUED)

GENERAL PLAN BUILDOUT WITH PROJECT ROADWAY LINK DAILY LEVELS OF SERVICE SUMMARY

Key Roadway Segment	Type of Arterial	(1) LOS E Capacity (VPD)	(2) Lanes	(3) Existing Traffic Conditions			(4) General Plan Buildout Without Project Traffic Conditions			(5) General Plan Buildout With Project Traffic Conditions			(6) Significant Impact	
				Daily Volume	V/C Ratio	LOS	Daily Volume	V/C Ratio	LOS	Daily Volume	V/C Ratio	LOS	V/C Inc.	Yes/ No
J. Tehachapi Boulevard *between* Tucker Rd and Mountain View Ave	Major Arterial	18,000	2D	12,008	0.667	B	**29,905**	**1.661**	**F**	**32,745**	**1.819**	**F**	**0.166**	**Yes**
L. Curry Street *between* Valley Boulevard and Highland Road	Major Arterial	18,000	2D	6,158	0.342	A	14,115	0.784	C	**15,441**	**0.858**	**D**	**0.086**	**Yes**

Notes:

- VPD = Vehicles per Day
- V/C = Volume to Capacity Ratio
- LOS = Level of Service, please refer to *Table 3-3* for the LOS definitions.
- **Bold LOS values** indicate adverse service levels based on City of Tehachapi and Kern County LOS standards.
- V/C Inc. = V/C Increase
- Significant Impact if V/C Increase is greater than 0.02 or more and LOS is "D," "E" or "F"

TABLE 11-3

GENERAL PLAN BUILDOUT WITH PROJECT PEAK HOUR ROADWAY LINK LEVEL OF SERVICE SUMMARY

Key Roadway Segment	(1) Type of Arterial	(2) Time Period	(3) Approach	(4) LOS Capacity (VPHPL)	(5) Lanes	(6) Total Link Capacity (VPH)	(7) General Plan Buildout With Project Traffic Conditions		
							Peak Hour Volume	V/C Ratio	LOS
D. Tucker Road *between* SR-58 EB Ramps and Red Apple Ave/Teha. Blvd	Major Arterial	AM	NB	1,600	1	1,600	853	0.533	A
			SB	1,600	1	1,600	404	0.253	A
		PM	NB	1,600	1	1,600	566	0.354	A
			SB	1,600	1	1,600	983	0.614	B
H. Valley Blvd *between* Weir St and Beach St	Major Arterial	AM	EB	1,600	1	1,600	614	0.384	A
			WB	1,600	1	1,600	752	0.470	A
		PM	EB	1,600	1	1,600	1,183	0.739	C
			WB	1,600	1	1,600	711	0.444	A
J. Tehachapi Blvd *between* Tucker Rd and Mountain View Ave	Major Arterial	AM	EB	1,600	1	1,600	680	0.425	A
			WB	1,600	1	1,600	492	0.308	A
		PM	EB	1,600	1	1,600	762	0.476	A
			WB	1,600	1	1,600	834	0.521	A
L. Curry Street *between* Valley Blvd and Highland Rd	Major Arterial	AM	NB	1,600	1	1,600	185	0.116	A
			SB	1,600	1	1,600	94	0.059	A
		PM	NB	1,600	1	1,600	142	0.089	A
			SB	1,600	1	1,600	200	0.125	A

Notes:

- VPHPL = Vehicles Per Hour Per Lane, VPH = Vehicles Per Hour
- V/C = Volume to Capacity Ratio
- LOS = Level of Service, please refer to *Table 3-3* for the LOS definitions.

12.0 GENERAL PLAN BUILDOUT AREA-WIDE IMPROVEMENTS

For those intersections and roadway links where projected traffic volumes are expected to result in unacceptable operating conditions, this report recommends traffic improvements that change the intersection and/or roadway links geometry to increase capacity. These capacity improvements involve roadway widening and/or re-striping to reconfigure (add lanes) roadways to specific approaches of a key intersection and /or roadway links. The identified improvements are expected to:

- Address the impact of existing traffic, Project traffic and future non-project (ambient traffic growth and cumulative projects) traffic, and
- Improve Levels of Service to an acceptable range and/or to pre-project conditions.
- Identify mitigation measures that are included in the Tehachapi Region Transportation Impact Fee Program Facilities List.

12.1 Intersections

The results of the General Plan Buildout with Project traffic conditions level of service analysis indicate that the proposed Project will significantly impact three (3) of the of the six (6) key study intersections. The improvements listed below have been identified to address the traffic impacts at the intersections significantly impacted by the General Plan Buildout with Project traffic:

- Tucker Road at SR-58 Eastbound Ramps: Widen and/or restripe the SR-58 Eastbound Ramp to provide a free right-turn and re-stripe the eastbound through/left-turn lane to a left-turn lane only. ***It should be noted that the receiving lane on Tucker Road is included in the Tehachapi Region Transportation Impact Fee Program Facilities List, which is contained in Appendix L.***

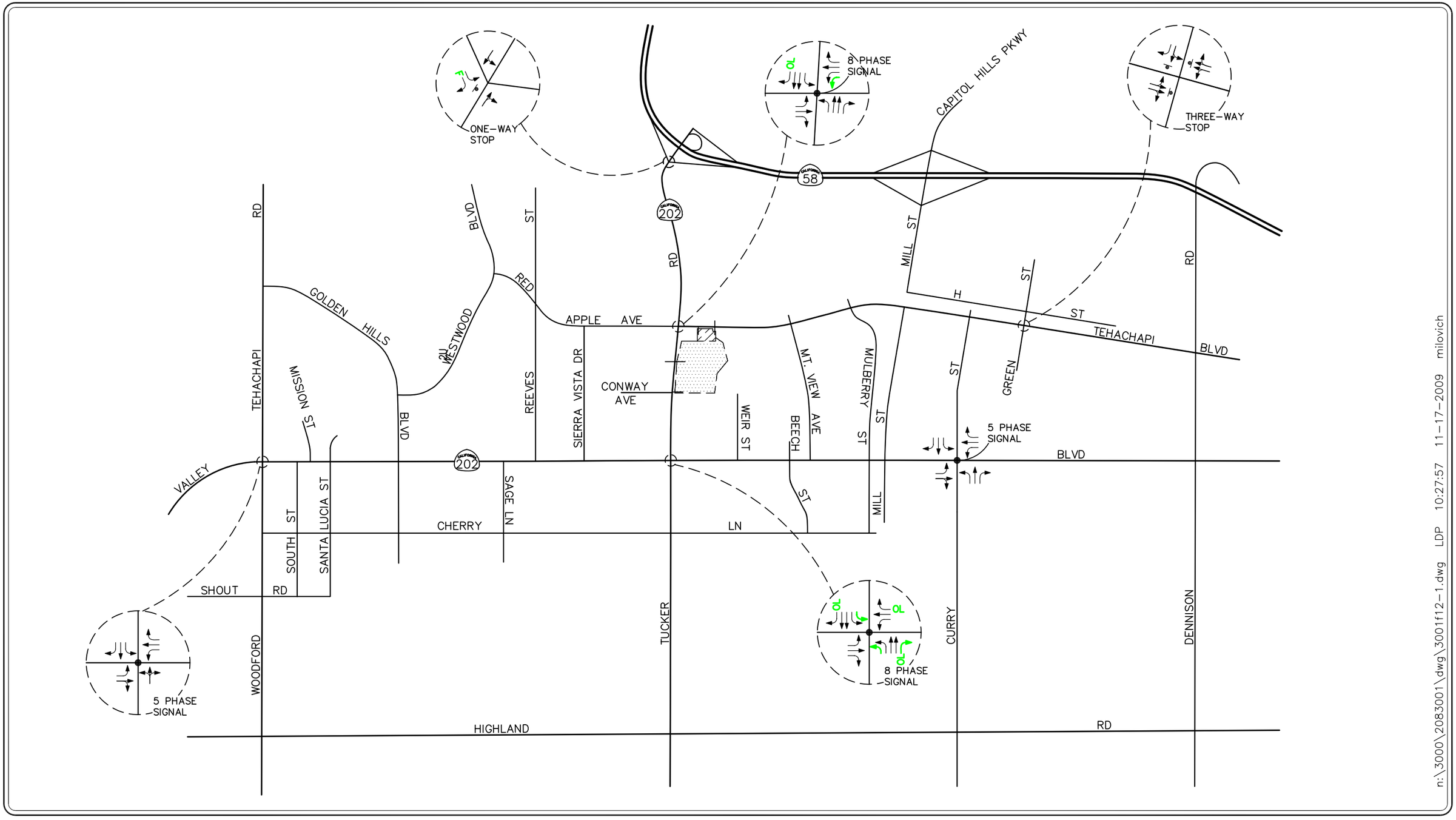
- Tucker Road at Red Apple Avenue/Tehachapi Boulevard: Widen and/or restripe Tehachapi Boulevard to provide a 2nd westbound left-turn lane. Install a southbound right-turn overlap phase on Tucker Road. Modify existing traffic signal. ***It should be noted that the traffic signal modification is included in the Tehachapi Region Transportation Impact Fee Program Facilities List, which is contained in Appendix L.***

- Tucker Road at Valley Boulevard (SR-202): Widen and/or restripe Tucker Road to add a 2nd northbound left-turn lane, an exclusive northbound right-turn lane. Re-stripe Tucker Road to convert the de-facto southbound shared through-right-turn lane to an exclusive southbound right-turn lane. Widen and/or restripe Tucker Road to add a 2nd southbound left-turn lane. Install a northbound and southbound right-turn overlap phase on Tucker Road. Install a westbound right-turn overlap phase on Valley Boulevard (SR-202). Modify existing traffic signal.

Figure 12-1 presents the recommended traffic improvements and intersection controls for the three (3) impacted key study intersections for the General Plan Buildout with Project traffic conditions capacity analyses detailed above.

12.2 Roadway Links

The results of the roadway link analyses summarized in ***Tables 11-2*** and ***11-3*** indicate that the proposed Project is not forecast to have a significant impact at any of the seven (7) key roadway links. As there are no significant impacts, no traffic mitigation measures are required or recommended for the roadway links.



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LINSCOTT LAW & GREENSPAN engineers

N NO SCALE

KEY

- = APPROACH LANE ASSIGNMENT
- = RECOMMENDED IMPROVEMENTS
- = TRAFFIC SIGNAL
- = RECOMMENDED TRAFFIC SIGNAL
- = STOP SIGN
- OL = OVERLAP PHASE
- F = FREE RIGHT-TURN
- = WALMART SITE
- = RETAIL SITE

FIGURE 12-1

GENERAL PLAN BUILDOUT WITH PROJECT CONDITIONS RECOMMENDED IMPROVEMENTS

WALMART, TEHACHAPI

13.0 GENERAL PLAN BUILDOUT PROJECT FAIR SHARE ANALYSIS

The transportation impacts associated with the development of the Project were determined based on the General Plan Buildout analysis. As summarized in ***Table 11-1***, the development of the Project is anticipated to create three (3) significant impacts in the General Plan Buildout condition. As such, the Project may be expected to construct improvements and/or pay a proportional "fair-share" of the improvement costs of the impacted intersections to mitigate the Project's traffic impacts. It should be noted that recommended mitigation improvements identified above in Section 12.1 that are included in the Tehachapi Region Transportation Impact Fee Program Facilities List will not require a fair share contribution.

As presented in this ***Table 13-1***, the first column (1) presents a total of all intersection peak hour movements for existing conditions. The second column (2) presents General Plan Buildout without Project traffic conditions. The third column (3) presents General Plan Buildout traffic conditions with Project traffic. The fourth column (4) represents the Project's fair share based on the following formula:

- Project Fair Share (4) = [Column (3) – Column (2)] / Column (3) *100

13.1 Intersections

The Project fair share percentages (based on greatest peak hour impact) for the three (3) impacted intersections for the General Plan Buildout with Project traffic conditions are shown below. Additionally, the Project fair share percentages shown below the intersection correspond directly to the two project development parcels (165,000 SF Walmart vs. 11,800 SF Commercial Outparcel) based on the Project's trip generation forecast.

- **Tucker Rd at SR-58 EB Ramps** **4.65 %**
  - Commercial Outparcel 0.72 %
  - Walmart 3.26 %
- **Tucker Rd at Red Apple Ave/Tehachapi Blvd** **8.66 %**
  - Commercial Outparcel 1.57 %
  - Walmart 7.09 %
- **Tucker Rd at Valley Blvd (SR-202)** **9.26 %**
  - Commercial Outparcel 1.67 %
  - Walmart 7.59 %

13.2 Roadway Links

The results of the roadway link analyses summarized in ***Tables 11-2*** and ***11-3*** indicates that the proposed Project is <u>not</u> forecast to have a significant impact at any of the seven (7) key roadway links. As there are no significant impacts, no Project Fair Share calculation is needed.

TABLE 13-1

GENERAL PLAN BUILDOUT PROJECT FAIR SHARE CONTRIBUTION

Key Intersections		Impacted Time Period	(1) Existing Traffic	(2) General Plan Buildout Without Project Traffic	(3) General Plan Buildout With Project Traffic	(4) Net Project Percent Increase
7.	Tucker Road at	--	--	--	--	--
	SR-58 Eastbound Ramps	PM	1,083	1,641	1,709	**3.98%**
8.	Tucker Road at	--	--	--	--	--
	Red Apple Ave/Tehachapi Blvd	PM	2,099	3,016	3,302	**8.66%**
10.	Tucker Road at	--	--	--	--	--
	Valley Boulevard (SR-202)	PM	2,374	2,958	3,260	**9.26%**

Notes:

- Net Project Percent Increase (4) = [Column (3) – Column (2)] / Column (3)
- **Bold Net Project Percent Increase** is based on worse case.

14.0 TRAFFIC SIGNAL WARRANT ANALYSIS

The level of service analysis at the key unsignalized study intersections is supplemented with an assessment of the need for signalization of the intersections. This assessment is made on the basis of signal warrant criteria adopted by Caltrans. For this study, the need for signalization is assessed on the basis of the peak-hour traffic signal warrant, Warrant #3 described in the *California Manual on Uniform Traffic Control Devices (MUTCD).* Warrant #3 has two parts: 1) Part A evaluates peak hour vehicle delay for traffic on the minor street approach with the highest delay and 2) Part B evaluates peak-hour traffic volumes on the major and minor streets. This method provides an indication of whether peak-hour traffic conditions or peak-hour traffic volume levels are, or would be, sufficient to justify installation of a traffic signal. Other traffic signal warrants are available, however, they cannot be checked under future conditions (Cumulative/Build-out without and with Project) because they rely on data for which forecasts are not available (such as accidents, pedestrian volume, and four- or eight-hour vehicle volumes).

The decision to install a traffic signal should not be based purely on the warrants alone. Instead, the installation of a signal should be considered and further analysis performed when one or more of the warrants are satisfied. Additionally, engineering judgment is exercised on a case-by-case basis to evaluate the effect a traffic signal will have on certain types of accidents and traffic conditions at the subject intersection as well as at adjacent intersections.

14.1 Year 2011 Cumulative Plus Project Traffic Conditions

The results of the peak-hour traffic signal warrant analysis for Year 2011 Cumulative plus Project traffic conditions are summarized in ***Table 14-1***. The results indicate that the following nine (9) out of the fourteen (14) key unsignalized intersections have future traffic conditions that would exceed the volume thresholds of Warrant #3, Part A and/or Part B for AM and/or PM peak hour:

- 2. South Street at Valley Boulevard (SR-202)
- 3. Santa Lucia Street at Valley Boulevard (SR-202)
- 5. Westwood Boulevard at Red Apple Avenue
- 7. Tucker Road at SR-58 Eastbound Ramps
- 9. Tucker Road at Conway Avenue
- 12. Mountain View Avenue at Valley Boulevard
- 13. Mountain View Avenue at Tehachapi Boulevard
- 16. Curry Street at Tehachapi Boulevard
- 19. Green Street at Tehachapi Boulevard

The analysis and the recommended mitigation measures show that four (4) intersections in the Year 2011 Cumulative plus Project traffic conditions are recommended to be signalized. With signalization of these four (4) intersections, which are warranted, these intersections are forecast to operate at acceptable service levels during the AM and PM peak hours. Thus, it is concluded from ***Table 14-1*** that traffic signals are warranted at the following locations:

- 3. Santa Lucia Street at Valley Boulevard (SR-202)

- 5. Westwood Boulevard at Red Apple Avenue
- 12. Mountain View Avenue at Valley Boulevard
- 19. Green Street at Tehachapi Boulevard

It should be noted that the intersection of Mountain View Avenue at Valley Boulevard is planned to be signalized by the City of Tehachapi in Year 2010.

Furthermore, the analysis shows that two (2) intersections in the Year 2011 Cumulative plus Project with Mitigation traffic conditions are forecast to operate at acceptable levels of service based on the recommended mitigation measures other than signalization, even though the signal warrants are satisfied. Without signalization of these two (2) intersections, which are warranted, these intersections are forecast to operate at acceptable service levels during the AM and PM peak hours with the implementation of the recommended improvements (other than signalization) stated earlier in this report in *Section 8.1*. Thus, it is concluded from ***Table 14-1*** that traffic signals are not required at the following intersections even though they are warranted:

- 7. Tucker Road at SR-58 Eastbound Ramps
- 9. Tucker Road at Conway Avenue

In addition, the results of the peak-hour traffic signal warrant analysis for Year 2011 Cumulative plus Project traffic indicate that the three (3) key unsignalized intersections have future traffic conditions that would exceed the volume thresholds of Warrant #3, Part A and/or Part B for AM and/or PM peak hour. However, even though the traffic signal warrants are satisfied at these three (3) locations, it is not necessary to signalize these intersections as they operate at acceptable levels of service during the AM and PM peak hours, as shown in ***Table 7-1***. The three (3) intersections are:

- 2. South Street at Valley Boulevard (SR-202)
- 13. Mountain View Avenue at Tehachapi Boulevard
- 16. Curry Street at Tehachapi Boulevard

The Year 2011 Cumulative plus Project peak-hour Traffic Signal Warrant Analysis worksheets are contained in ***Appendix G***.

14.2 General Plan Buildout With Project Traffic Conditions

The results of the peak-hour traffic signal warrant analysis for General Plan Buildout with Project traffic conditions are summarized in ***Table 14-1***. The results indicate that the following two (2) key unsignalized intersections that were analyzed under the General Plan Buildout with Project traffic conditions would exceed the volume thresholds of Warrant #3, Part A and/or Part B for AM and/or PM peak hour:

- 7. Tucker Road at SR-58 Eastbound Ramps
- 19. Green Street at Tehachapi Boulevard

The analysis shows that one (1) of the intersections in the General Plan Buildout with Project with Mitigation traffic conditions is forecast to operate at acceptable levels of service based on the

the recommended improvements (other than signalization). Thus, it is concluded from ***Table 14-1*** that a traffic signal is not required at the following intersection even though it is warranted:

- 7. Tucker Road at SR-58 Eastbound Ramps

In addition, the results of the peak-hour traffic signal warrant analysis for General Plan Buildout with Project traffic conditions indicate that one (1) key unsignalized intersection has future traffic conditions that would exceed the volume thresholds of Warrant #3, Part A and/or Part B for AM and/or PM peak hour. However, even though the traffic signal warrant is satisfied at this location, it is not necessary to signalize this intersection as it operates at acceptable levels of service during the AM and PM peak hours, as shown in ***Table 11-1***. The intersection is:

- 19. Green Street at Tehachapi Boulevard

The General Plan Buildout with Project peak-hour Traffic Signal Warrant Analysis worksheets are contained in ***Appendix G***.

TABLE 14-1

INTERSECTION TRAFFIC SIGNAL WARRANT ANALYSIS SUMMARY[19]

Key Intersection		Time Period	(1) Year 2011 Cumulative Plus Project Traffic Conditions		(2) General Plan Buildout With Project Traffic Conditions	
			Part A of Warrant 3 Satisfied?	**Part B of Warrant 3 Satisfied?**	**Part A of Warrant 3 Satisfied?**	**Part B of Warrant 3 Satisfied?**
2.	South Street at	AM	No	No	N/A	N/A
	Valley Boulevard (SR-202)	PM	No	**Yes**	N/A	N/A
3.	Santa Lucia Street at	AM	No	No	N/A	N/A
	Valley Boulevard (SR-202)	PM	No	**Yes**	N/A	N/A
5.	Westwood Boulevard at	AM	--	**Yes**	N/A	N/A
	Red Apple Avenue	PM	--	**Yes**	N/A	N/A
6.	Sierra Vista Drive at	AM	No	No	N/A	N/A
	Valley Boulevard (SR-202)	PM	No	No	N/A	N/A
7.	Tucker Road at	AM	No	**Yes**	No	**Yes**
	SR-58 Eastbound Ramps	PM	**Yes**	**Yes**	**Yes**	**Yes**
9.	Tucker Road at	AM	No	**Yes**	N/A	N/A
	Conway Avenue/ Walmart Project Dwy 3	PM	No	**Yes**	N/A	N/A
11.	Tucker Road at	AM	--	No	N/A	N/A
	Highline Road	PM	--	No	N/A	N/A
12.	Mountain View Avenue at	AM	No	No	N/A	N/A
	Valley Boulevard	PM	No	**Yes**	N/A	N/A
13.	Mountain View Avenue at	AM	No	No	N/A	N/A
	Tehachapi Boulevard	PM	No	**Yes**	N/A	N/A
14.	Mulberry Street at	AM	No	No	N/A	N/A
	Tehachapi Boulevard	PM	No	No	N/A	N/A

Notes:

- Signal warrant checks based on Warrant 3, Part A - Peak-Hour Delay Warrant and Part B - Peak-Hour Volume Warrant contained in the *California MUTCD*.
- N/A = Not Applicable

[19] *Appendix G* contains the Traffic Signal Warrant Analysis worksheets for the key unsignalized study intersections.

TABLE 14-1 (CONTINUED)

INTERSECTION TRAFFIC SIGNAL WARRANT ANALYSIS SUMMARY[20]

Key Intersection		Time Period	(1) Year 2010 Background Plus Project Traffic Conditions		(2) Year 2030 Background with Project Traffic Conditions	
			Part A of Warrant 3 Satisfied?	Part B of Warrant 3 Satisfied?	Part A of Warrant 3 Satisfied?	Part B of Warrant 3 Satisfied?
15.	Mill Street at	AM	No	No	N/A	N/A
	Tehachapi Boulevard	PM	No	No	N/A	N/A
16.	Curry Street at	AM	--	**Yes**	N/A	N/A
	Tehachapi Boulevard	PM	--	**Yes**	N/A	N/A
18.	Curry Street/Summit Road at	AM	No	No	N/A	N/A
	Highline Road	PM	No	No	N/A	N/A
19.	Green Street at	AM	--	**Yes**	--	No
	Tehachapi Boulevard	PM	--	**Yes**	--	**Yes**

Notes:

- Signal warrant checks based on Warrant 3, Part A - Peak-Hour Delay Warrant and Part B - Peak-Hour Volume Warrant contained in the California MUTCD.
- N/A = Not Applicable

[20] *Appendix G* contains the Traffic Signal Warrant Analysis worksheets for the key unsignalized study intersections.

15.0 INTERSECTION QUEUING ANALYSIS

Table 15-1 summarizes the results of the queuing analysis for turning movements at the intersections along Tucker Road and Red Apple Avenue/Tehachapi Boulevard for Year 2011 Cumulative plus Project traffic conditions. Furthermore, ***Table 15-2*** summarizes the results of the queuing analysis for turning movements at the intersections along Tucker Road and Red Apple Avenue/Tehachapi Boulevard for Year 2011 Cumulative plus Project with Mitigation traffic conditions. The queuing analysis is based on the *Synchro 7.0 Percentile Delay Methodology* and was conducted to ensure that adequate turn pocket storage lengths are provided for all intersections and driveways.

15.1 Intersections

15.1.1 *Year 2011 Cumulative Plus Project Traffic Conditions*

Review of ***Table 15-1*** indicates that adequate storage is provided for all movements, under Year 2011 Cumulative Plus Project Traffic Conditions except for the intersections of Tucker Road at Red Apple Avenue/Tehachapi Boulevard and Tucker Road at Valley Boulevard.

The Year 2011 Cumulative plus Project traffic conditions Intersection Queuing Analysis worksheets are contained in ***Appendix H***.

15.1.2 *Year 2011 Cumulative Plus Project with Mitigation Traffic Conditions*

Review of ***Table 15-2*** indicates that adequate storage is provided for all movements, under Year 2011 Cumulative plus Project with Mitigation traffic conditions, offsetting any stacking/queuing issues. Also, the internal throating at the Project driveways are adequate to accommodate the proposed vehicle queuing.

The Year 2011 Cumulative plus Project with Mitigation traffic conditions Intersection Queuing Analysis worksheets are contained in ***Appendix H***.

TABLE 15-1

YEAR 2011 CUMULATIVE PLUS PROJECT PEAK HOUR INTERSECTION QUEUING ANALYSIS[21, 22]

Key Intersections	AM Peak Hour			PM Peak Hour		
	Max. Queue (ft.)	**Storage Provided (ft.)**	**Adequate Storage – Yes / No**	**Max. Queue (ft.)**	**Storage Provided (ft.)**	**Adequate Storage – Yes / No**
Intersection #7, Tucker Road at SR-58 Eastbound Ramps						
• Eastbound Right-Turn	18	300	Yes	249	300	Yes
Intersection #8, Tucker Road at Red Apple Avenue/Tehachapi Boulevard						
• Northbound Left-Turn	52	250	Yes	259	250	**No**
• Northbound Right-Turn	12	50	Yes	50	50	Yes
• Southbound Left-Turn	92	150	Yes	119	150	Yes
• Southbound Right-Turn	28	50	Yes	125	50	**No**
• Eastbound Left-Turn	158	150	**No**	131	150	Yes
• Eastbound Right-Turn	53	80	Yes	83	80	**No**
• Westbound Left-Turn	139	200	Yes	305	200	**No**
• Westbound Right-Turn	22	500	Yes	32	500	Yes
Intersection #9, Tucker Road at Conway Avenue/Walmart Project Driveway 2						
• Northbound Left-Turn	2	100	Yes	3	100	Yes
• Southbound Left-Turn	1	100	Yes	1	100	Yes
Intersection #10, Tucker Road at Valley Boulevard						
• Northbound Left-Turn	245	220	**No**	250	220	**No**
• Southbound Left-Turn	248	160	**No**	351	160	**No**
• Eastbound Left-Turn	377	200	**No**	469	200	**No**
• Eastbound Right-Turn	37	200	Yes	37	200	Yes
• Westbound Left-Turn	138	160	Yes	138	160	Yes
• Westbound Right-Turn	55	400	Yes	63	400	Yes

[21] Source: *Synchro 7.0*, Percentile Delay Methodology.

[22] *Appendix H* contains the Intersection Queuing Analysis worksheets for the key study intersections.

TABLE 15-2

YEAR 2011 CUMULATIVE PLUS PROJECT WITH MITIGATION PEAK HOUR INTERSECTION QUEUING ANALYSIS[23, 24]

Key Intersections	AM Peak Hour			PM Peak Hour		
	Max. Queue (ft.)	**Storage Provided (ft.)**	**Adequate Storage – Yes / No**	**Max. Queue (ft.)**	**Storage Provided (ft.)**	**Adequate Storage – Yes / No**
Intersection #7, Tucker Road at SR-58 Eastbound Ramps						
• Eastbound Right-Turn	12	300	Yes	41	300	Yes
Intersection #8, Tucker Road at Red Apple Avenue/Tehachapi Boulevard						
• Northbound Left-Turn	47	250	Yes	198	250	Yes
• Northbound Right-Turn	2	50	Yes	35	50	Yes
• Southbound Left-Turn	76	150	Yes	109	150	Yes
• Southbound Right-Turn	15	50	Yes	41	50	Yes
• Eastbound Left-Turn	129	150	Yes	104	150	Yes
• Eastbound Right-Turn	28	80	Yes	41	80	Yes
• Westbound Left-Turn	55	200	Yes	108	200	Yes
• Westbound Right-Turn	32	500	Yes	9	500	Yes
Intersection #9, Tucker Road at Conway Avenue/Walmart Project Driveway 2						
• Northbound Left-Turn	3	100	Yes	3	100	Yes
• Southbound Left-Turn	1	100	Yes	1	100	Yes
Intersection #10, Tucker Road at Valley Boulevard						
• Northbound Left-Turn	166	220	Yes	172	220	Yes
• Southbound Left-Turn	81	160	Yes	108	160	Yes
• Eastbound Left-Turn	131	200	Yes	150	200	Yes
• Eastbound Right-Turn	32	200	Yes	32	200	Yes
• Westbound Left-Turn	129	160	Yes	129	160	Yes
• Westbound Right-Turn	36	400	Yes	49	400	Yes

[23] Source: *Synchro 7.0*, Percentile Delay Methodology.

[24] *Appendix H* contains the Intersection Queuing Analysis worksheets for the key study intersections.

15.2 Project Driveways

15.2.1 *Year 2011 Cumulative Plus Project Traffic Conditions*

Review of ***Table 15-3*** indicates that adequate storage is provided for all movements of the Driveways, under Year 2011 Cumulative Plus Project Traffic Conditions.

The Year 2011 Cumulative plus Project traffic conditions Driveway Queuing Analysis worksheets are contained in ***Appendix H***.

15.2.2 *Year 2011 Cumulative Plus Project with Mitigation Traffic Conditions*

Review of ***Table 15-4*** indicates that adequate storage is provided for all movements of the Driveways, under Year 2011 Cumulative plus Project with Mitigation traffic conditions, offsetting any stacking/queuing issues. Also, the internal throating at the Project driveways are adequate to accommodate the proposed vehicle queuing.

The Year 2011 Cumulative plus Project with Mitigation traffic conditions Driveway Queuing Analysis worksheets are contained in ***Appendix H***.

TABLE 15-3

YEAR 2011 CUMULATIVE PLUS PROJECT PEAK HOUR DRIVEWAY QUEUING ANALYSIS[25, 26]

Key Intersections	AM Peak Hour			PM Peak Hour		
	Max. Queue (ft.)	**Storage Provided (ft.)**	**Adequate Storage – Yes / No**	**Max. Queue (ft.)**	**Storage Provided (ft.)**	**Adequate Storage – Yes / No**
Intersection #102, Tucker Road at Walmart Project Driveway 1/Marketplace Project Driveway						
• Northbound Left-Turn	23	150	Yes	86	150	Yes
• Northbound Right-Turn	8	250	Yes	1	250	Yes
• Southbound Left-Turn	35	180	Yes	100	180	Yes
• Eastbound Left-Turn	10	75	Yes	59	75	Yes
• Westbound Left-Turn	25	160	Yes	76	160	Yes
Intersection #104, Walmart Project Driveway 3 at Tehachapi Boulevard						
• Northbound Right-Turn	6	150	Yes	9	150	Yes
• Westbound Left-Turn	4	110	Yes	4	110	Yes
Intersection #105, Walmart Project Driveway 4 at Tehachapi Boulevard						
• Northbound Right-Turn	27	300	Yes	34	300	Yes
• Eastbound Right-Turn[27]	N/A	N/A	N/A	N/A	N/A	N/A
• Westbound Left-Turn	58	160	Yes	89	160	Yes
Intersection #203, Tucker Road at Marketplace Project Driveway						
• Northbound Left-Turn	1	60	Yes	3	60	Yes
• Southbound Right-Turn[27]	N/A	N/A	N/A	N/A	N/A	N/A
• Eastbound Right-Turn	1	150	Yes	3	150	Yes

Notes:

- N/A = Not Applicable

[25] Source: *Synchro 7.0*, Percentile Delay Methodology.
[26] *Appendix H* contains the Driveway Queuing Analysis worksheets for the Driveways.
[27] Movement is a shared through-right turn. Queue length is not provided.

TABLE 15-4

YEAR 2011 CUMULATIVE PLUS PROJECT WITH MITIGATION PEAK HOUR DRIVEWAY QUEUING ANALYSIS[28, 29]

Key Intersections	AM Peak Hour			PM Peak Hour		
	Max. Queue (ft.)	**Storage Provided (ft.)**	**Adequate Storage – Yes / No**	**Max. Queue (ft.)**	**Storage Provided (ft.)**	**Adequate Storage – Yes / No**
Intersection #102, Tucker Road at Walmart Project Driveway 1/Marketplace Project Driveway						
• Northbound Left-Turn	29	150	Yes	64	150	Yes
• Northbound Right-Turn	3	250	Yes	4	250	Yes
• Southbound Left-Turn	46	180	Yes	54	180	Yes
• Eastbound Left-Turn	12	75	Yes	54	75	Yes
• Westbound Left-Turn	26	160	Yes	64	160	Yes
Intersection #104, Walmart Project Driveway 3 at Tehachapi Boulevard						
• Northbound Right-Turn	6	150	Yes	9	150	Yes
• Westbound Left-Turn	4	110	Yes	4	110	Yes
Intersection #105, Walmart Project Driveway 4 at Tehachapi Boulevard						
• Northbound Right-Turn	22	300	Yes	28	300	Yes
• Eastbound Right-Turn[30]	N/A	N/A	N/A	N/A	N/A	N/A
• Westbound Left-Turn	42	160	Yes	76	160	Yes
Intersection #203, Tucker Road at Marketplace Project Driveway						
• Northbound Left-Turn	1	60	Yes	3	60	Yes
• Southbound Right-Turn[27]	N/A	N/A	N/A	N/A	N/A	N/A
• Eastbound Right-Turn	1	150	Yes	3	150	Yes

Notes:

- N/A = Not Applicable

[28] Source: *Synchro 7.0*, Percentile Delay Methodology.
[29] *Appendix H* contains the Driveway Queuing Analysis worksheets for the Driveways.
[30] Movement is a shared through-right turn. Queue length is not provided.

16.0 CONCEPT MEDIAN PLAN FOR TUCKER ROAD AND TEHACHAPI BOULEVARD

As indicated by the City of Tehachapi in the Request for Proposal for this Project, a concept median plan has been developed for Tucker Road from Valley Boulevard to Tehachapi Boulevard and Tehachapi Boulevard from Tucker Road to approximately 500 feet east of Old Tehachapi Road. In addition, a separate plan has been developed for Valley Boulevard at Tucker Road in order to show the recommended mitigation measures on Tucker Road and Valley Boulevard. The three plan sheets are contained in ***Appendix I.*** As shown on the three plan sheets, the design reflects Project Buildout traffic conditions based on the Synchro queuing analysis in ***Section 15.0*** and reflects the recommended mitigation measures along these reaches of Tucker Road and Tehachapi Boulevard presented in ***Section 8.0***. As requested by City staff, the concept design of Tehachapi Boulevard, from Old Tehachapi Road to approximately 500 feet east, reflects the ultimate roadway width and geometry based on City standards for information purposes and is not based on the capacity analyses results for this location. In addition, the curb lane on Tucker Road has been designed with a minimum width of 20 feet to provide for a standard 8-foot shoulder, which can also accommodate a bike lane. However, in order to minimize extra roadway striping, the striping for a Type II bike lane is not shown on the Tucker Road plans, but can be provided if requested by Caltrans.

16.1 Traffic Signal Analysis for the Intersection of Tucker Road and Jiffy Lube/Orchid Plaza Driveway

To supplement the concept median plan for Tucker Road, a traffic signal analysis was conducted for the intersection of Tucker Road and Jiffy Lube/Orchid Plaza Driveway. The analysis includes Level of Service Calculations, Signal Warrant Analyses and Project Fair-Share Calculations for the Year 2011 Cumulative plus Project traffic conditions. The preceding sections discuss the findings of these analyses in detail.

16.1.1 *Year 2011 Cumulative Plus Project Traffic Conditions Intersection Capacity Analysis*

The Year 2011 Cumulative plus Project traffic conditions intersection capacity analysis indicates that the intersection of Tucker Road and Jiffy Lube/Orchid Plaza Driveway is forecast to operate at unacceptable LOS F during the PM peak hour as shown below:

	AM Peak Hour		**PM Peak Hour**	
Key Intersection	**Delay (s/v)**	**LOS**	**Delay (s/v)**	**LOS**
▪ Tucker Road and Jiffy Lube/Orchid Plaza Driveway	22.2	C	64.8	F

Appendix I contains the existing count data and the Year 2011 Cumulative plus Project traffic conditions Highway Capacity Manual (HCM) level of service calculation worksheets.

16.1.2 *Year 2011 Cumulative Plus Project Traffic Conditions Traffic Signal Warrant Analysis*

This analysis is made on the basis of the signal warrant criteria adopted by Caltrans for rural intersections. For this study, which is an analysis of future forecast traffic conditions, the signal warrant analysis is based on the peak-hour traffic signal warrant, Warrant #3 described in the *California Manual on Uniform Traffic Control Devices (MUTCD).*

The results of the peak-hour traffic signal warrant analysis for Year 2011 Cumulative plus Project traffic conditions are shown below. The results indicate that the intersection of Tucker Road and Jiffy Lube/Orchid Plaza Driveway does not have Year 2011 forecast traffic conditions that would exceed the volume thresholds of Warrant #3, Part A and/or Part B for AM and/or PM peak hours.

	AM Peak Hour		**PM Peak Hour**	
Key Intersection	**Part A of Warrant 3 Satisfied?**	**Part B of Warrant 3 Satisfied?**	**Part A of Warrant 3 Satisfied?**	**Part B of Warrant 3 Satisfied?**
▪ Tucker Road and Jiffy Lube/Orchid Plaza Driveway	No	No	No	No

It should be noted that even though the Traffic Signal Warrant for the intersection of Tucker Road and Jiffy Lube/Orchid Plaza Driveway is not satisfied, the installation of a traffic signal is justified at this intersection based on the intersection capacity analysis results, since this intersection operates at LOS F during the PM peak hour and no reasonable alternative is feasible.

The Year 2011 Cumulative plus Project peak-hour Traffic Signal Warrant Analysis worksheets are contained in *Appendix I*.

16.1.3 *Year 2011 Cumulative Plus Project Traffic Conditions Project Fair-Share Contribution Analysis*

The Project may be expected to contribute a proportional "fair-share" of the improvement costs of the signalization of the intersection of Tucker Road and Jiffy Lube/Orchid Plaza Driveway.

As presented below, the first column (1) presents a total of all intersection peak hour movements for existing conditions for the intersection of Tucker Road and Jiffy Lube/Orchid Plaza Driveway. The second column (2) presents Year 2011 Cumulative traffic conditions. The third column (3) presents Year 2011 Cumulative traffic conditions with Project traffic. The fourth column (4) represents the Project's fair share based on the following formula:

- Project Fair Share (4) = [Column (3) – Column (2)] / Column (3) *100

The Project fair share percentage (based on greatest peak hour impact) for the intersection of Tucker Road and Jiffy Lube/Orchid Plaza Driveway for the Year 2011 Cumulative plus Project traffic conditions is shown below:

- Tucker Road and Jiffy Lube/Orchid Plaza Driveway 13.52 %

Key Intersection	**Impacted Time Period**	**(1) Existing Traffic**	**(2) Year 2011 Cumulative Traffic**	**(3) Year 2011 Cumulative Plus Project Traffic**	**(4) Net Project Percent Increase**
▪ Tucker Road and Jiffy Lube/Orchid Plaza Driveway	--	--	--	--	--
	PM	1,368	1,925	2,226	**13.52%**

17.0 SITE ACCESS AND INTERNAL CIRCULATION EVALUATION

17.1 Site Access Evaluation

As shown in ***Figure 17-1***, access to the Project site will be provided along Tucker Road via two (2) driveways and Tehachapi Boulevard via two (2) driveways. Describing the driveways from north to south along Tucker Road; Driveway 1 is signalized and will provide full access to the Project site, Driveway 2 is unsignalized and is proposed to provide full-access to the Project site, but based on the results of the analysis, it is recommended that Driveway 2 only provide right-in, right-out and left-in access to the Project site and restrict the eastbound and westbound through and left turn movements; Driveway 3 is unsignalized and will provide left-in, right-in and right-out only access to the Project site and Driveway 4 will be signalized and will provide full access to the Project site. ***Figure 17-1*** presents the lane configurations for the four (4) Project driveways.

Table 17-1 summarizes the intersection operations at the four (4) Project driveways for Year 2011 Cumulative plus Project traffic conditions at completion and full occupancy of the proposed Project. The operations analysis for the Project driveways is based on the *Highway Capacity Manual 2000* (HCM 2000) methodology for unsignalized intersections. ***Appendix J*** presents the Year 2011 Cumulative plus Project level of service calculation worksheets for the four (4) Project driveways.

17.1.1 *Year 2011 Cumulative Plus Project Traffic Conditions*

Review of ***Table 17-1***, shows that the all the Project driveways are forecast to operate at an acceptable service level of LOS C or better during the AM and PM peak hours for Year 2011 Cumulative Plus Project, except for Driveway 2, which is forecast to operate at LOS F during the AM and PM peak hours. However, as presented in ***Table 7-1***¸ with the implementation of the recommended improvements, Driveway 2 is forecast to operate at LOS C or better during the AM and PM peak hours. As such, Project access will be adequate. Motorists entering and exiting the Project site will be able to do so comfortably, safely, and without undue congestion.

TABLE 17-1

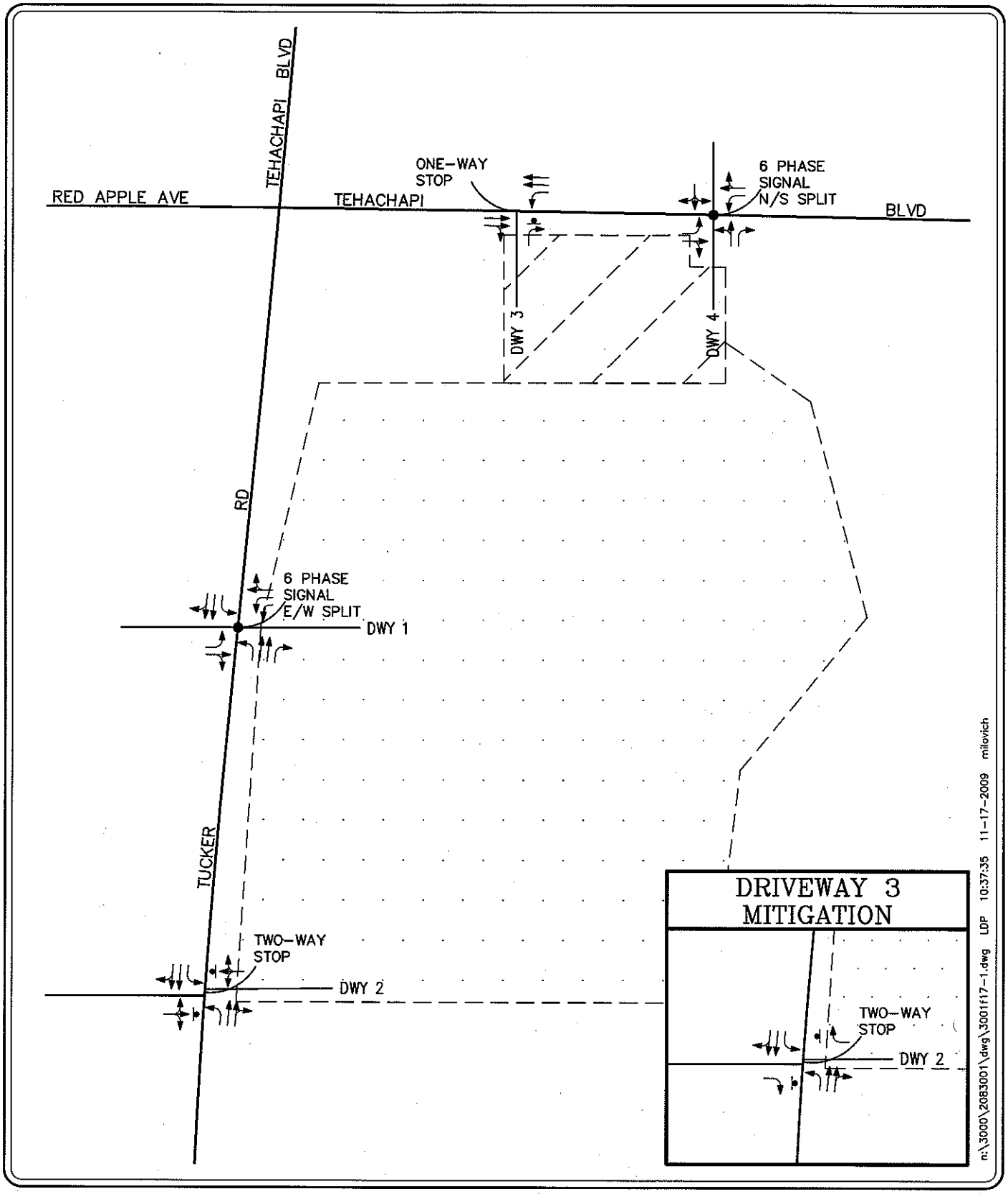
YEAR 2011 CUMULATIVE PLUS PROJECT DRIVEWAY PEAK HOUR LEVELS OF SERVICE SUMMARY[31]

Driveway		Time Period	Year 2011 Cumulative Plus Project	
			Delay (s/v)	LOS
1.	Tucker Road at	AM	16.1	B
	Project Driveway 1	PM	26.2	C
2.	Tucker Road at	AM	**216.8**	**F**
	Conway Avenue/Project Driveway 2	PM	**724.0**	**F**
3.	Project Driveway 3 at	AM	10.8	B
	Tehachapi Boulevard	PM	11.3	B
4.	Project Driveway 4 at	AM	12.0	B
	Tehachapi Boulevard	PM	14.2	B

Notes:

- s/v = seconds per vehicle (delay).
- LOS = Level of Service, please refer to *Tables 3-1 and 3-2* for the LOS definitions.
- **Bold LOS values** indicate adverse service levels based on City of Tehachapi and Kern County LOS standards.

[31] *Appendix J* contains Delay/LOS calculation worksheets for all Project Driveways.



LINSCOTT LAW & GREENSPAN engineers

NO SCALE

KEY
= APPROACH LANE ASSIGNMENT
= TRAFFIC SIGNAL = STOP SIGN
= WALMART SITE = RETAIL SITE

FIGURE 17-1

PROJECT DRIVEWAY LANE CONFIGURATIONS

WALMART, TEHACHAPI

17.2 Driveway Traffic Signal Warrant Analysis

The level of service analysis at the unsignalized Project Driveways is supplemented with an assessment of the need for signalization of the Driveways. This assessment is made on the basis of signal warrant criteria adopted by Caltrans. For this study, the need for signalization is assessed on the basis of the peak-hour traffic signal warrant, Warrant #3 described in the *California Manual on Uniform Traffic Control Devices (MUTCD).* Warrant #3 has two parts: 1) Part A evaluates peak hour vehicle delay for traffic on the minor street approach with the highest delay and 2) Part B evaluates peak-hour traffic volumes on the major and minor streets. This method provides an indication of whether peak-hour traffic conditions or peak-hour traffic volume levels are, or would be, sufficient to justify installation of a traffic signal. Other traffic signal warrants are available, however, they cannot be checked under future conditions (Cumulative/Build-out without and with Project) because they rely on data for which forecasts are not available (such as accidents, pedestrian volume, and four- or eight-hour vehicle volumes).

The decision to install a traffic signal should not be based purely on the warrants alone. Instead, the installation of a signal should be considered and further analysis performed when one or more of the warrants are satisfied. Additionally, engineering judgment is exercised on a case-by-case basis to evaluate the effect a traffic signal will have on certain types of accidents and traffic conditions at the subject intersection as well as at adjacent intersections.

17.2.1 *Year 2011 Cumulative Plus Project Traffic Conditions*

The results of the peak-hour traffic signal warrant analysis for Year 2011 Cumulative plus Project traffic conditions are summarized in ***Table 17-2*** for the four (4) Project Driveways. Please note that Driveways 1 and 4 were assumed unsignalized for the purpose of conducting a traffic signal warrant analysis. The results indicate that the following three (3) unsignalized Project Driveways have future traffic conditions that would exceed the volume thresholds of Warrant #3, Part A and/or Part B for AM and/or PM peak hour:

- 2. Tucker Road at Walmart Project Driveway 1
- 3. Tucker Road at Conway Avenue/Walmart Project Driveway 2
- 5. Walmart Project Driveway 4 at Tehachapi Boulevard

The analysis shows that the Project Driveways 1 and 4, in the Year 2011 Cumulative plus Project traffic conditions are forecast to operate at acceptable levels of service based on signalization. In addition, the analysis shows that the Project Driveway 2 in the Year 2011 Cumulative plus Project with Mitigation traffic conditions is forecast to operate at acceptable levels of service based on the recommended mitigation measures other than signalization, even though the signal warrant is satisfied. Without signalization of Project Driveway 2, which is warranted, this Project Driveway is forecast to operate at acceptable service levels during the AM and PM peak hours with the implementation of the recommended improvements (other than signalization) stated earlier in this report in *Section 8.1* and shown in *Table 7-1*. Thus, it is concluded from ***Table 17-2*** that a traffic signal is not required at the Project Driveway 2 even though it is warranted.

The Year 2011 Cumulative plus Project peak-hour Traffic Signal Warrant Analysis worksheets are contained in ***Appendix K***.

TABLE 17-2

DRIVEWAY TRAFFIC SIGNAL WARRANT ANALYSIS SUMMARY[32]

Driveway		Time Period	Year 2011 Cumulative Plus Project	
			Part A of Warrant 3 Satisfied?	**Part B of Warrant 3 Satisfied?**
1.	Tucker Road at	AM	No	**Yes**
	Walmart Project Driveway 1	PM	**Yes**	**Yes**
2.	Tucker Road at	AM	No	**Yes**
	Conway Avenue/Project Driveway 2	PM	No	**Yes**
3.	Walmart Project Driveway 3 at	AM	No	No
	Tehachapi Boulevard	PM	No	No
4.	Walmart Project Driveway 4	AM	No	No
	Tehachapi Boulevard	PM	**Yes**	**Yes**

Notes:

- Signal warrant checks based on Warrant 3, Part A - Peak-Hour Delay Warrant and Part B - Peak-Hour Volume Warrant contained in the California MUTCD.

[32] *Appendix K* contains the Traffic Signal Warrant Analysis worksheets for the unsignalized Project Driveways.

17.3 Driveway Stacking/Storage and Queuing Analysis

A stacking/storage analysis was performed at all four (4) Project driveways. The queuing evaluation was conducted based on projected Year 2011 Cumulative Plus Project peak hour driveway traffic volumes with mitigation, if necessary, and the *Highway Capacity Manual 2000* (HCM) signalized and unsignalized methodology. Based on the analysis, adequate vehicle storage is provided at all of the driveways.

17.4 Internal Circulation Evaluation

The on-site circulation was evaluated in terms of vehicle-pedestrian conflicts. Based on our review of the preliminary site plan, the overall layout does not create any unsafe vehicle-pedestrian conflict points and the driveway throating is sufficient such that access to parking spaces is not impacted by internal vehicle queuing/stacking. Curb return radii have been confirmed and are adequate for service/delivery trucks and trash trucks. Adequate ingress and egress for the drive-thru lanes at the fast-food restaurants should be confirmed prior to finalizing the proposed site plan for the Project.

Project traffic is not anticipated to cause significant queuing/stacking on the Project driveways after the recommended improvements. The on-site circulation is very good based on our review of the proposed site plan, whereas the alignment, spacing, and throating of the Project driveways is adequate. The circulation around the buildings is adequate with sufficient sight distance along the drive aisles.

APPENDIX A

TRAFFIC STUDY SCOPE OF WORK

LINSCOTT
LAW &
GREENSPAN
engineers

Engineers & Planners
Traffic
Transportation
Parking

Linscott, Law &
Greenspan, Engineers
1580 Corporate Drive
Suite 122
Costa Mesa, CA 92626
714.641.1587 T
714.641.0139 F
www.llgengineers.com

Pasadena
Costa Mesa
San Diego
Las Vegas

To:	Mr. David James City of Tehachapi	Date:	February 4, 2009
From:	Keil D. Maberry, P.E., Principal Zawwar Saiyed, P.E., Transportation Engineer III Linscott, Law & Greenspan, Engineers	LLG Ref:	2.08.3001.1
Subject:	Traffic Impact Study Scope of Work for the Wal-Mart Development Project - Tehachapi, California		

Linscott, Law & Greenspan, Engineers (LLG) is pleased to submit the following Traffic Study Scope of Work for the proposed Wal-Mart development in the City of Tehachapi for your review and approval.

Traffic Study Scope of Work

The Traffic Impact Analysis for the proposed Wal-Mart will satisfy the traffic impact requirements of the City of Tehachapi and be consistent with the requirements and procedures outlined in the *California Department of Transportation (Caltrans) Guidelines,* where appropriate.

A. **Project Address:** The proposed Wal-Mart Project is located on the southeast quadrant of Tehachapi Boulevard and Tucker Road in the City of Tehachapi, California – *See attached Vicinity Map – **Figure 1.***

B. **Project Description:** The proposed Wal-Mart development will consists of a 205,000 square-feet (SF) store, with 5,200 SF of retail and 6,600 SF fast-food restaurant with drive through on a separate parcel, totaling 216,800 SF. The proposed Project is anticipated to be completed in one phase by Year 2011 – *See attached Proposed Site Plan – **Figure 2.***

C. **Project Traffic Generation:** The trip generation potential of the proposed Project was estimated using the *Trip Generation, 8th Edition, Institute of Transportation Engineers (ITE), Washington, D.C. (2008) - See attached **Table 1.*** Review of *Table 1* shows that the proposed Project is forecast to generate 12,957 net daily trips (one half arriving and one half departing), with 481 net trips (262 inbound, 219 outbound) produced in the AM peak hour and 801 net trips (395 inbound, 406 outbound) produced in the PM peak hour on a "typical" weekday.

D. **Project Trip Distribution Patterns:** *See attached Project Trip Distribution Patterns – **Figures 3** and **4.***

Philip M. Linscott, PE (1924-2000)
Jack M. Greenspan, PE (Ret.)
William A. Law, PE (Ret.)
Paul W. Wilkinson, PE
John P. Keating, PE
David S. Shender, PE
John A. Boarman, PE
Clare M. Look-Jaeger, PE
Richard E. Barretto, PE
Keil D. Maberry, PE

An LGZWB Company Founded 1966

E. Near-Term Background Traffic (Year 2011):

- Completion Year: 2011
- Ambient Growth Rate: 2% per year.
- Related Projects (pending or approved but not yet constructed) within a 2-mile radius, which generate 50 or more peak hour trips. Related projects list provided by the City will be verified in the field and confirmed with the City before proceeding with the analyses.

F. General Plan Buildout Traffic (Year 2030): General Plan Buildout traffic volumes will be forecast utilizing the City of Tehachapi traffic model.

G. Traffic Study Intersections: The study intersections listed below are locations that could potentially be impacted by the proposed Project. Nineteen (19) key existing study intersections listed below were selected based on the location of the Project and input from the City staff:

1) Woodford Tehachapi Road at West Valley Boulevard
2) South Street at West Valley Boulevard/Cummings Valley Road
3) Santa Lucia Street at West Valley Boulevard/Cummings Valley Road
4) Golden Hills Boulevard at West Valley Boulevard/Cummings Valley Road
5) Westwood Boulevard at Red Apple Avenue
6) Sierra Vista Drive at West Valley Boulevard
7) Tehachapi Boulevard at SR-58 Eastbound Ramps
8) Tehachapi Boulevard/Tucker Road at Red Apple Avenue/Tehachapi Boulevard
9) Tucker Road at Conway Avenue
10) Tucker Road at Valley Boulevard
11) Tucker Road at Highline Road
12) Mountain View Avenue at West Valley Boulevard
13) Mountain View Avenue at Tehachapi Boulevard
14) Mulberry Street at Tehachapi Boulevard
15) South Mill Street at West Tehachapi Boulevard
16) South Curry Street at West Tehachapi Boulevard
17) South Curry Street at West Valley Boulevard
18) South Curry Street/Summit Road at Highline Road
19) Green Street at Tehachapi Boulevard

H. Traffic Study Arterial Segments: The study arterial segments listed below are locations that could potentially be impacted by the proposed Project. The twelve (12) arterial segments listed below were selected based on the arterial network within the study area and input from City staff:

A) West Valley Boulevard/Cummings Valley Road between Golden Hills Boulevard and Sage Lane

B) Valley Boulevard *between* Sierra Vista Drive and Friesen Street

C) Red Apple Avenue *between* Reeves Street and Winesap Street

D) Tehachapi Boulevard *between* SR-58 Eastbound Ramps and Red Apple Avenue/Tehachapi Boulevard

E) Tucker Road *between* Red Apple Avenue/Tehachapi Boulevard and Conway Avenue

F) Tucker Road *between* Conway Avenue and Valley Boulevard

G) Tucker Road *between* Valley Boulevard and Cherry Lane

H) Valley Boulevard *between* Sundowner Lane and Griffin Street

I) West Valley Boulevard/Cummings Valley Road between South Mill Street and South Curry Street

J) Tehachapi Boulevard *between* Tehachapi Boulevard/Tucker Road and Mountain View Avenue

K) Tehachapi Boulevard *between* Mulberry Street and Mill Street

L) South Curry Street between West Valley Boulevard/Cummings Valley Road and Brentwood Drive

I. Analysis Scenarios: AM and PM peak hour intersection capacity analysis for the nineteen (19) key existing study intersections and the V/C roadway segment analysis for the twelve (12) roadway segments would be conducted for the following scenarios:

1. Existing Traffic Conditions,
2. Year 2011 Cumulative Traffic Conditions (Existing plus Ambient Growth plus Related Projects),
3. Year 2011 Cumulative Plus Project Traffic Conditions (Existing plus Ambient Growth plus Related Projects plus Project),
4. Scenario 3 Plus Recommended Improvements, if any,
5. General Plan Buildout Traffic Conditions,
6. General Plan Buildout Plus Project Traffic Conditions,
7. Scenario 6 Plus Recommended Improvements, if any.

The LOS calculations will be based on the Highway Capacity Manual (HCM) methodology for signalized and unsignalized intersections and will be consistent

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with the City of Tehachapi and Caltrans capacity analysis methodology. The Project's potential impact will be based on the significant impact criteria based on the City of Tehachapi LOS criteria.

J. Other Issues:

- Caltrans coordination on the Tucker Road Median Plan.
- Evaluate Site Access and Internal Circulation.
- Project Fair-Share Calculation Analysis.

We appreciate the opportunity to provide this scope of work. Should you have any questions, please call us at (714) 641-1587. Thank You.

Recommended by:

02.04.09

Consultant's Representative — Date

Approved by:

City of Tehachapi — Date

cc: File

Attachments

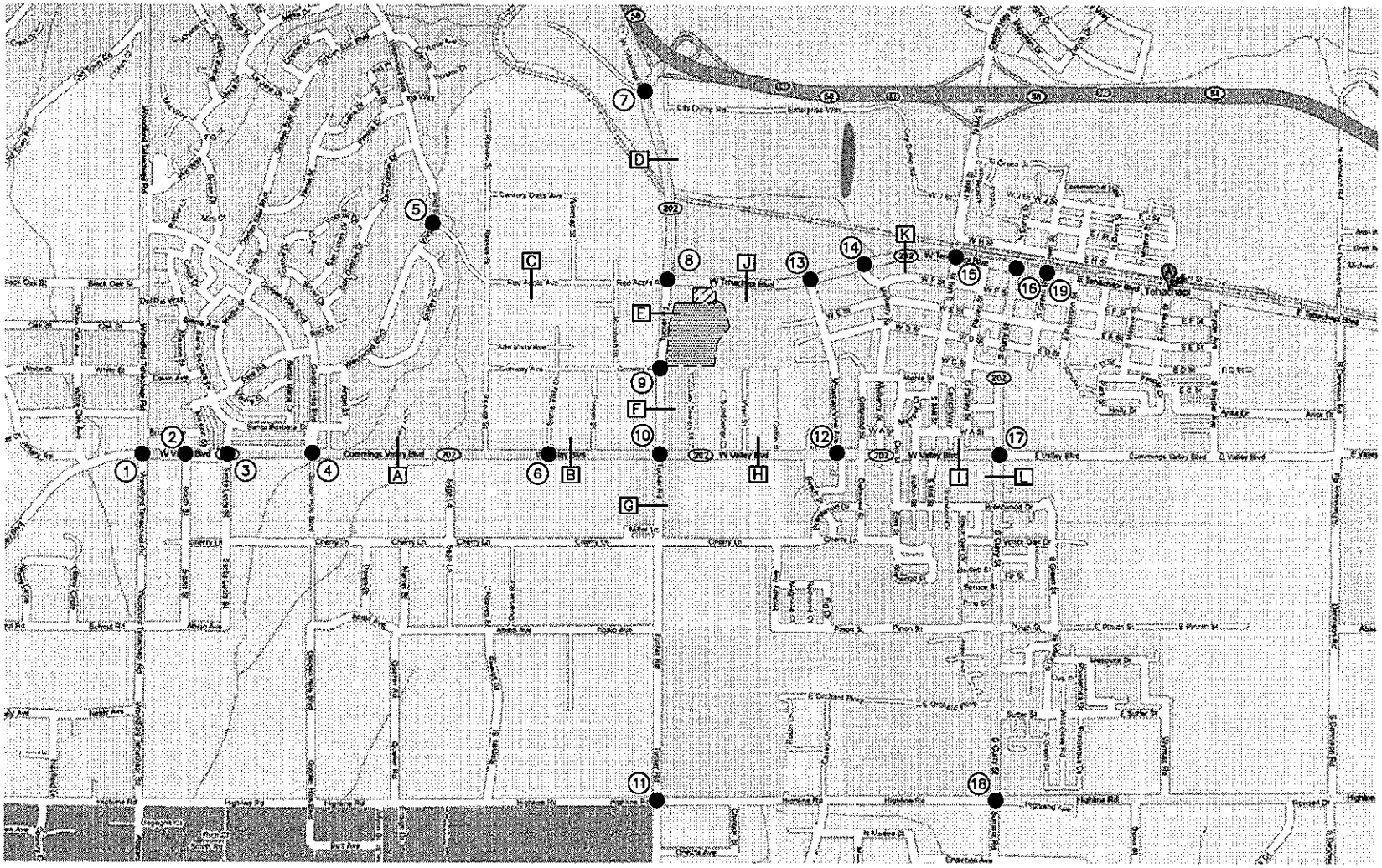
LINSCOTT LAW & GREENSPAN engineers

TABLE 1
PROJECT TRAFFIC GENERATION RATES AND FORECAST
WALMART, TEHACHAPI

Project Description	Daily 2-Way	AM Peak Hour Enter	AM Peak Hour Exit	AM Peak Hour Total	PM Peak Hour Enter	PM Peak Hour Exit	PM Peak Hour Total
Trip Generation Factors [1]:							
▪ 820: Shopping Center (TE/TSF)	42.94	0.61	0.39	1.00	1.83	1.90	3.73
▪ 814: Specialty Retail Center (TE/TSF)	44.32	0.00	0.00	0.00	1.19	1.52	2.71
▪ 934: Fast-Food Restaurant with Drive-Thru (TE/TSF)	496.12	25.17	24.18	49.35	17.60	16.24	33.84
▪ 813: Free-Standing Discount Superstore (TE/TSF)	53.13	0.94	0.73	1.67	2.26	2.35	4.61
Proposed Project Trip Generation Forecast:							
▪ Retail - (5,200 SF) [2]	230	3	2	5	6	8	14
Pass-By Reduction (ADT: 10%, AM:10%, PM: 25%) [3]	-23	0	0	0	-2	-2	-4
Subtotal	*207*	*3*	*2*	*5*	*4*	*6*	*10*
▪ Fast-Food Restaurant with Drive through - (3,500 SF & 3,100 SF)	3,274	166	160	326	116	107	223
Pass-By Reduction (ADT: 10%, AM:49%, PM: 50%) [4]	-327	-81	-78	-159	-58	-54	-112
Subtotal	*2,947*	*85*	*82*	*167*	*58*	*53*	*111*
▪ Free-Standing Discount Superstore - (205,000 SF)	10,892	193	150	343	463	482	945
Pass-By Reduction (ADT: 10%, AM:10%, PM: 28%) [5]	-1,089	-19	-15	-34	-130	-135	-265
Subtotal	*9,803*	*174*	*135*	*309*	*333*	*347*	*680*
Total Project Traffic Generation Forecast	***12,957***	***262***	***219***	***481***	***395***	***406***	***801***

Notes:
[1] Source: *Trip Generation, 8th Edition, Institute of Transportation Engineers (ITE), Washington, D.C. (2008)*. Average rates used.
[2] AM forecast based on 820: Shopping Center AM rates. ADT and PM forecast based on 814: Speciality Retail Center ADT and PM rates.
[3] Pass-by trips are trips made as intermediate stops on the way from an origin to a primary trip destination. Pass-by trips are attracted from traffic passing the site on adjacent streets, which contain direct access to the generator. Average pass-by reduction factors of 10%, 10% and 25% were assumed for the ADT, AM and PM peak hours, respectively.
[4] Average pass-by reduction factors of 49% and 50% were used for the AM and PM peak hours, respectively. (Source: Trip Generation Handbook, 2nd Edition, June 2004). Pass-by reduction factor of 10% was assumed for Daily 2-Way Traffic.
[5] A average pass-by reduction factor of 28% was used for the PM peak hour. (Source: Trip Generation Handbook, 2nd Edition, June 2004). Pass-by reduction factors of 10% were assumed for Daily 2-Way Traffic and AM peak hour

TE/TSF = Trip ends per 1,000 square feet of development



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N NO SCALE

SOURCE: GOOGLE MAPS

KEY

(#) = STUDY INTERSECTION

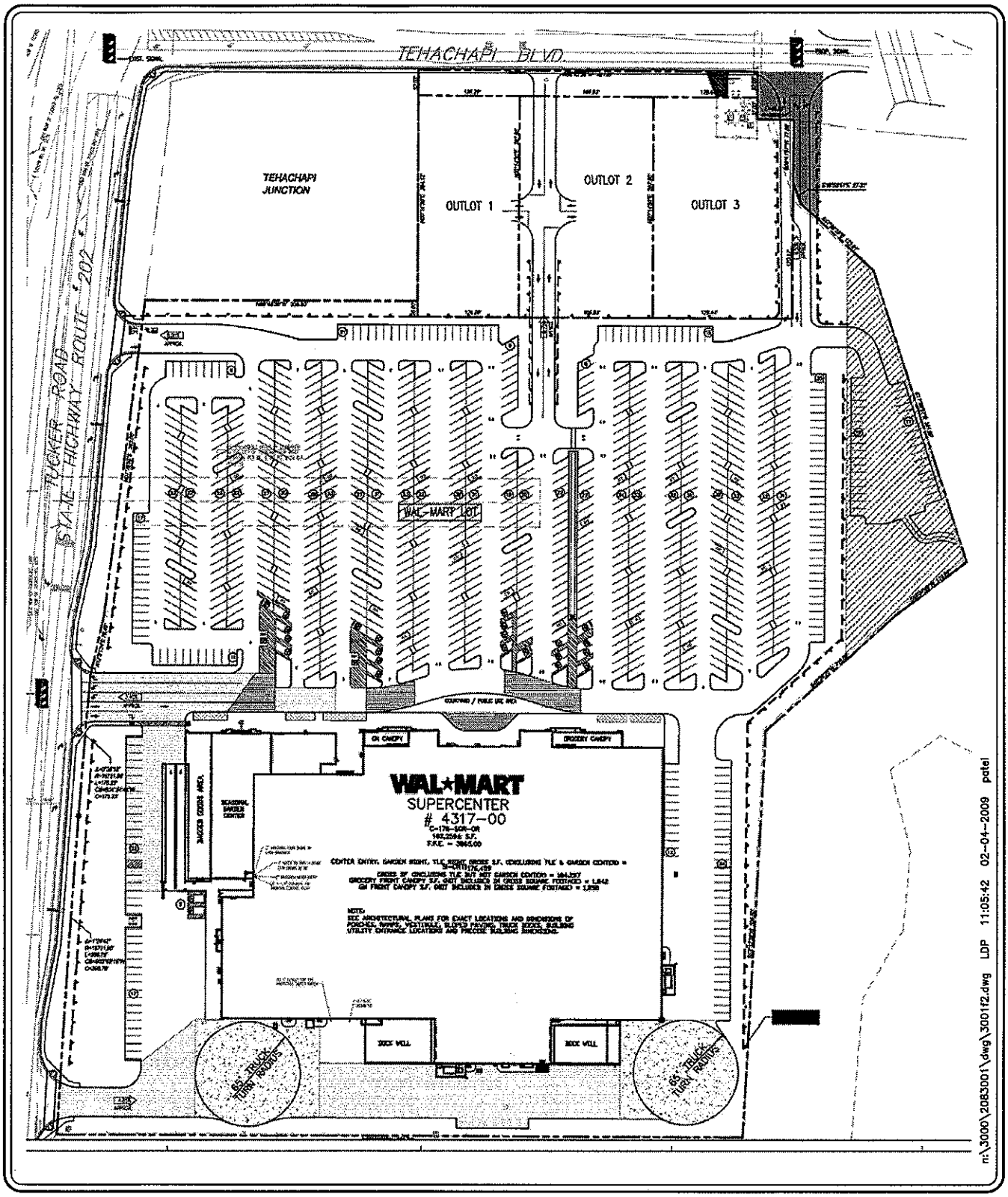
[X] = STUDY ROADWAY SEGEMENT

= WALMART SITE = RETAIL SITE

FIGURE 1

VICINITY MAP

WALMART, TEHACHAPI



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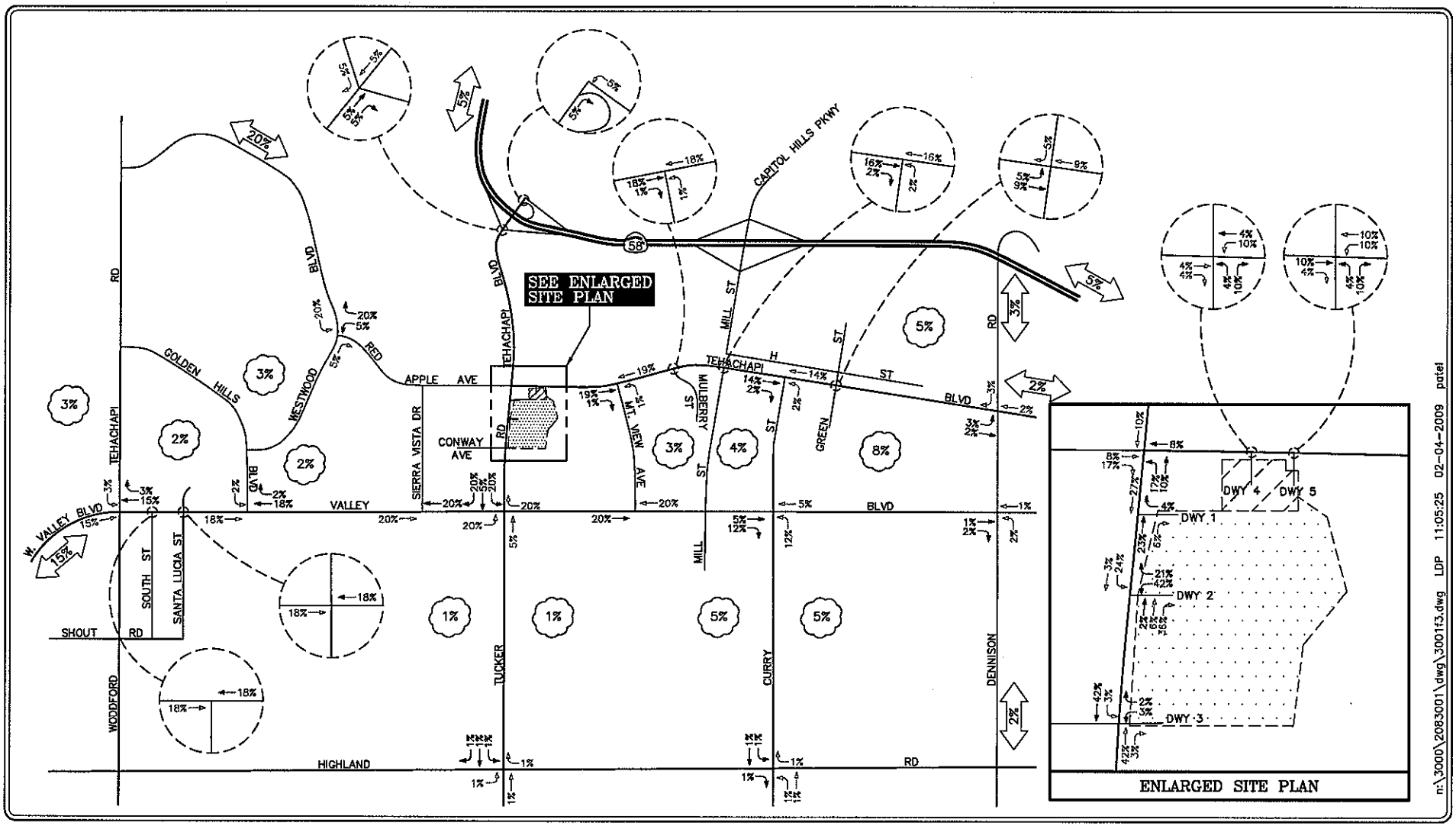
SOURCE: GREENBERG FARROW

N NO SCALE

FIGURE 2

SITE PLAN
WALMART, TEHACHAPI



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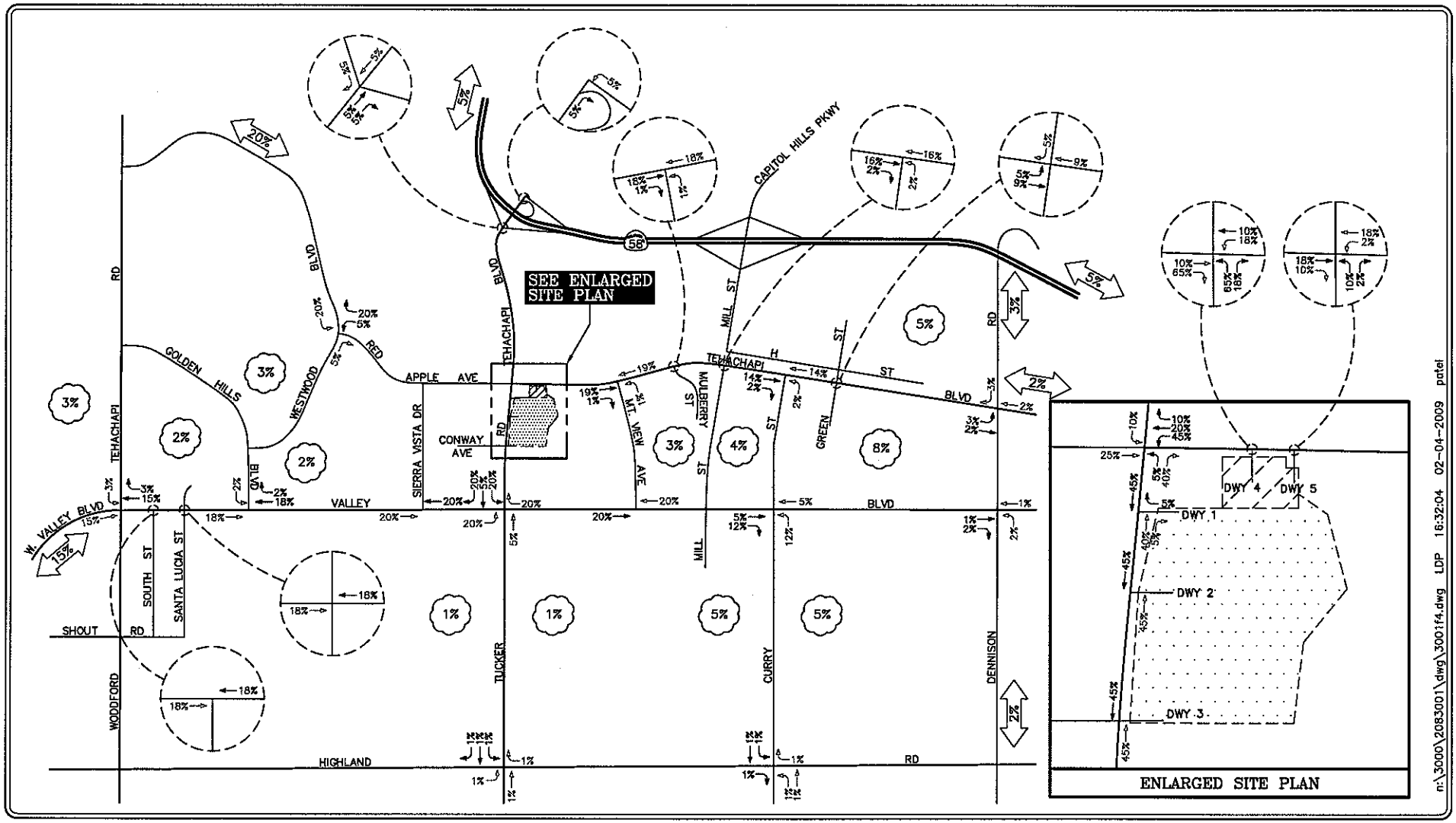
NO SCALE

KEY
= INBOUND PERCENTAGE
= OUTBOUND PERCENTAGE
= WALMART PROJECT SITE
= RETAIL PROJECT SITE

FIGURE 3

WALMART TRIP DISTRIBUTION PATTERN
WALMART, TEHACHAPI



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NO SCALE

KEY
- = INBOUND PERCENTAGE
- = OUTBOUND PERCENTAGE
- = WAL-MART PROJECT SITE
- = RETAIL PROJECT SITE

FIGURE 4

RETAIL TRIP DISTRIBUTION PATTERN
WALMART, TEHACHAPI

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APPENDIX B

EXISTING TRAFFIC COUNT DATA

APPENDIX B-I

INTERSECTION COUNTS

1

City Traffic Counters
626.256.4171

File Name : WoodTehVah
Site Code : 00000000
Start Date : 2/5/2009
Page No : 1

Groups Printed- 1 - Unshifted

	Woodford Tehachapi Rd Southbound			West Valley Blvd Westbound			Woodford Tehachapi Rd Northbound			West Valley Blvd Eastbound			
Start Time	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Int. Total
Factor	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	
07:00 AM	17	1	24	2	90	6	0	3	2	8	124	0	277
07:15 AM	18	1	21	1	88	10	2	2	2	3	73	2	223
07:30 AM	18	5	11	3	53	7	0	2	7	4	74	2	186
07:45 AM	14	7	10	5	43	8	0	5	2	9	93	2	198
Total	67	14	66	11	274	31	2	12	13	24	364	6	884
08:00 AM	24	7	5	3	32	8	1	2	4	11	59	3	159
08:15 AM	21	6	13	2	30	13	0	7	7	12	82	3	196
08:30 AM	23	5	9	9	50	15	0	7	5	4	81	2	210
08:45 AM	26	6	14	4	50	7	2	1	8	11	119	3	251
Total	94	24	41	18	162	43	3	17	24	38	341	11	816
04:00 PM	20	7	22	14	95	12	6	7	4	28	115	2	332
04:15 PM	18	5	10	5	106	18	3	11	6	21	92	2	297
04:30 PM	20	3	17	4	105	26	1	7	8	18	98	1	308
04:45 PM	31	9	15	6	100	15	3	4	13	23	82	1	302
Total	89	24	64	29	406	71	13	29	31	90	387	6	1239
05:00 PM	28	5	16	9	128	24	5	6	7	21	70	0	319
05:15 PM	26	7	19	11	121	27	5	9	11	12	48	2	298
05:30 PM	20	4	16	8	115	19	1	15	6	9	35	2	250
05:45 PM	19	3	15	6	103	16	4	6	10	3	48	0	233
Total	93	19	66	34	467	86	15	36	34	45	201	4	1100
Grand Total	343	81	237	92	1309	231	33	94	102	197	1293	27	4039
Apprch %	51.9	12.3	35.9	5.6	80.2	14.2	14.4	41.0	44.5	13.0	85.2	1.8	
Total %	8.5	2.0	5.9	2.3	32.4	5.7	0.8	2.3	2.5	4.9	32.0	0.7	

City Traffic Counters
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File Name : WoodTehVah
Site Code : 00000000
Start Date : 2/5/2009
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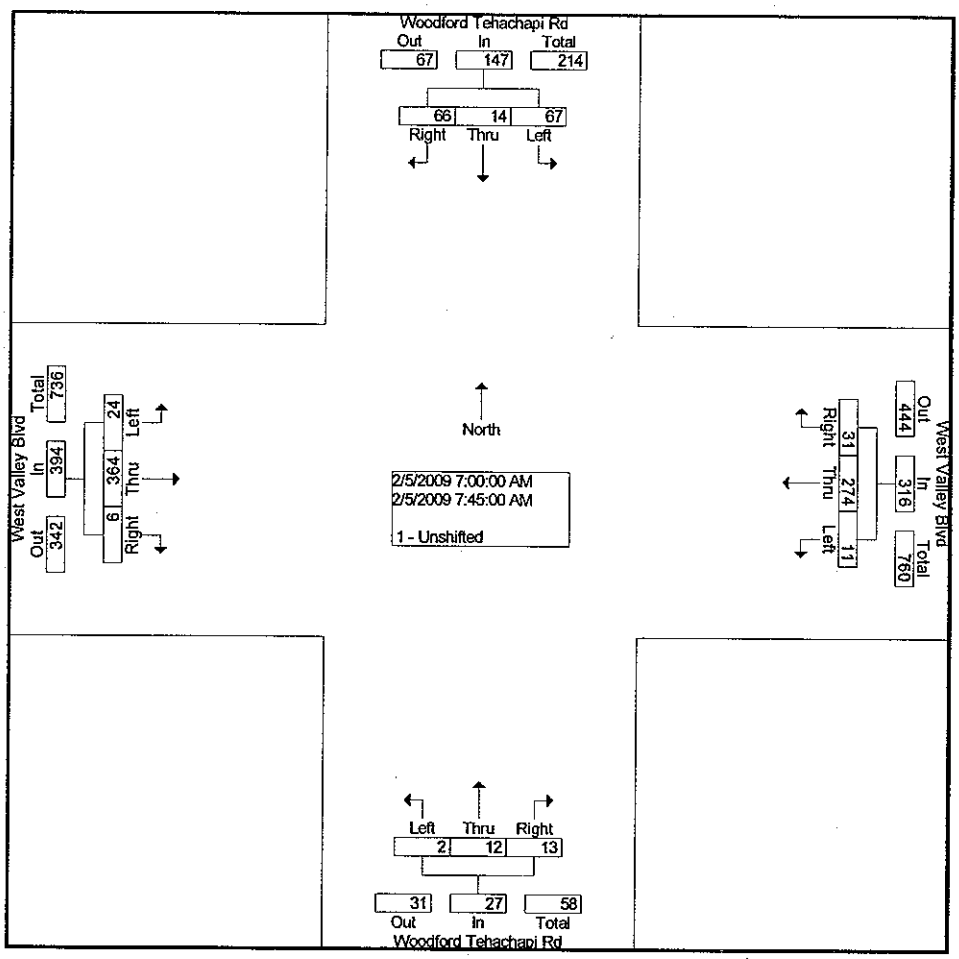
	Woodford Tehachapi Rd Southbound				West Valley Blvd Westbound				Woodford Tehachapi Rd Northbound				West Valley Blvd Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour From 07:00 AM to 11:45 AM - Peak 1 of 1																	
Intersection	07:00 AM																
Volume	67	14	66	147	11	274	31	316	2	12	13	27	24	364	6	394	884
Percent	45.6	9.5	44.9		3.5	86.7	9.8		7.4	44.4	48.1		6.1	92.4	1.5		
07:00 Volume	17	1	24	42	2	90	6	98	0	3	2	5	8	124	0	132	277
Peak Factor																	0.798
High Int.	07:00 AM				07:15 AM				07:30 AM				07:00 AM				
Volume	17	1	24	42	1	88	10	99	0	2	7	9	8	124	0	132	
Peak Factor				0.875				0.798				0.750				0.746	



City Traffic Counters
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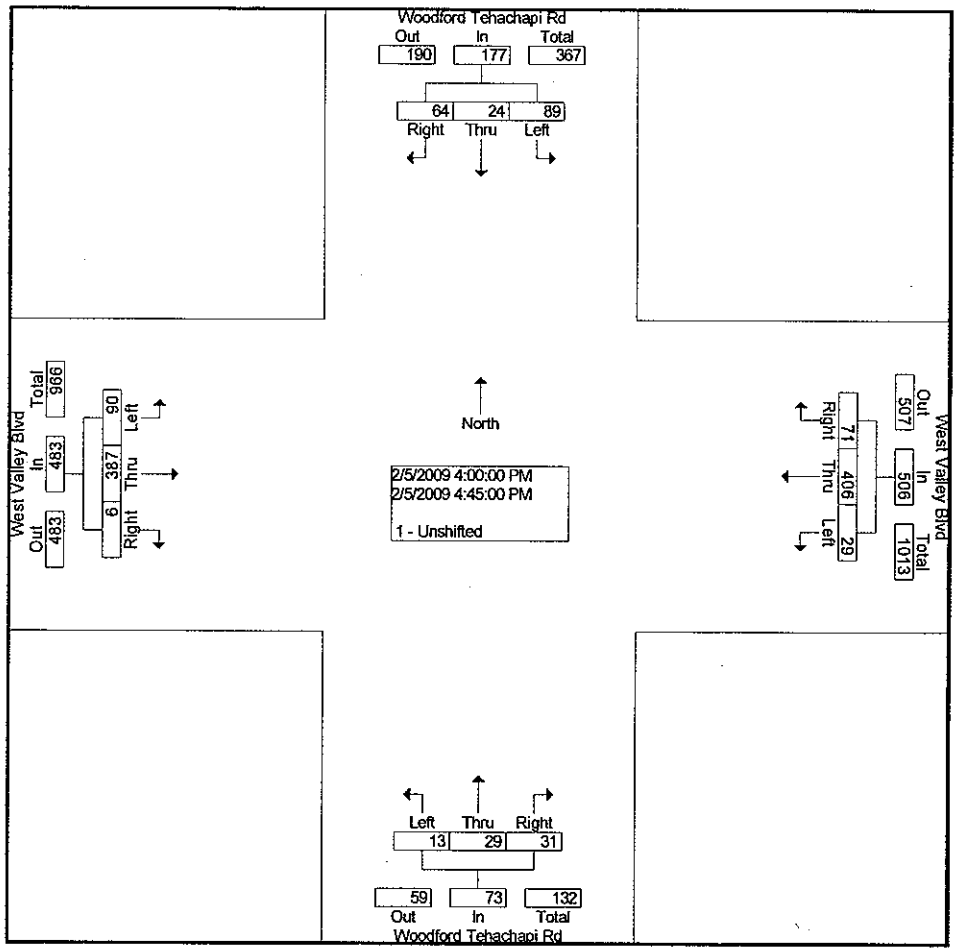
File Name : WoodTehVah
Site Code : 00000000
Start Date : 2/5/2009
Page No : 3

	Woodford Tehachapi Rd Southbound				West Valley Blvd Westbound				Woodford Tehachapi Rd Northbound				West Valley Blvd Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour From 12:00 PM to 05:45 PM - Peak 1 of 1																	
Intersection	04:00 PM																
Volume	89	24	64	177	29	406	71	506	13	29	31	73	90	387	6	483	1239
Percent	50.3	13.6	36.2		5.7	80.2	14.0		17.8	39.7	42.5		18.6	80.1	1.2		
04:00 Volume	20	7	22	49	14	95	12	121	6	7	4	17	28	115	2	145	332
Peak Factor																	0.933
High Int.	04:45 PM				04:30 PM				04:15 PM				04:00 PM				
Volume	31	9	15	55	4	105	26	135	3	11	6	20	28	115	2	145	
Peak Factor				0.805				0.937				0.913				0.833	



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City Traffic Counters
626.256.4171

File Name : SouthValCumVal
Site Code : 00000000
Start Date : 2/5/2009
Page No : 1

Groups Printed- 1 - Unshifted

	South St Southbound			Valley/Cummings Valley Blvd Westbound			South St Northbound			Valley/Cummings Valley Blvd Eastbound			
Start Time	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Int. Total
Factor	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	
07:00 AM	0	0	0	4	86	0	7	0	3	0	143	4	247
07:15 AM	0	0	0	5	102	0	1	0	6	0	99	4	217
07:30 AM	0	0	0	13	64	0	1	0	11	0	85	13	187
07:45 AM	0	0	0	10	58	0	3	0	5	0	102	8	186
Total	0	0	0	32	310	0	12	0	25	0	429	29	837
08:00 AM	0	0	0	16	41	0	3	0	12	0	78	11	161
08:15 AM	0	0	0	14	43	0	7	0	7	0	97	10	178
08:30 AM	0	0	0	17	68	0	7	0	11	0	96	12	211
08:45 AM	0	0	0	27	60	0	6	0	17	0	135	21	266
Total	0	0	0	74	212	0	23	0	47	0	406	54	816
05:00 PM	0	0	0	35	115	0	12	0	27	0	122	18	329
05:15 PM	0	0	0	23	128	0	13	0	29	0	108	15	316
05:30 PM	0	0	0	20	120	0	18	0	13	0	112	15	298
05:45 PM	0	0	0	22	117	0	13	0	17	0	106	21	296
Total	0	0	0	100	480	0	56	0	86	0	448	69	1239
06:00 PM	0	0	0	29	144	0	19	0	27	0	90	20	329
06:15 PM	0	0	0	29	157	0	13	0	30	0	71	13	313
06:30 PM	0	0	0	28	132	3	16	0	25	0	52	9	265
06:45 PM	0	0	0	18	122	0	8	0	24	0	70	14	256
Total	0	0	0	104	555	3	56	0	106	0	283	56	1163
Grand Total	0	0	0	310	1557	3	147	0	264	0	1566	208	4055
Apprch %	0.0	0.0	0.0	16.6	83.3	0.2	35.8	0.0	64.2	0.0	88.3	11.7	
Total %	0.0	0.0	0.0	7.6	38.4	0.1	3.6	0.0	6.5	0.0	38.6	5.1	

City Traffic Counters
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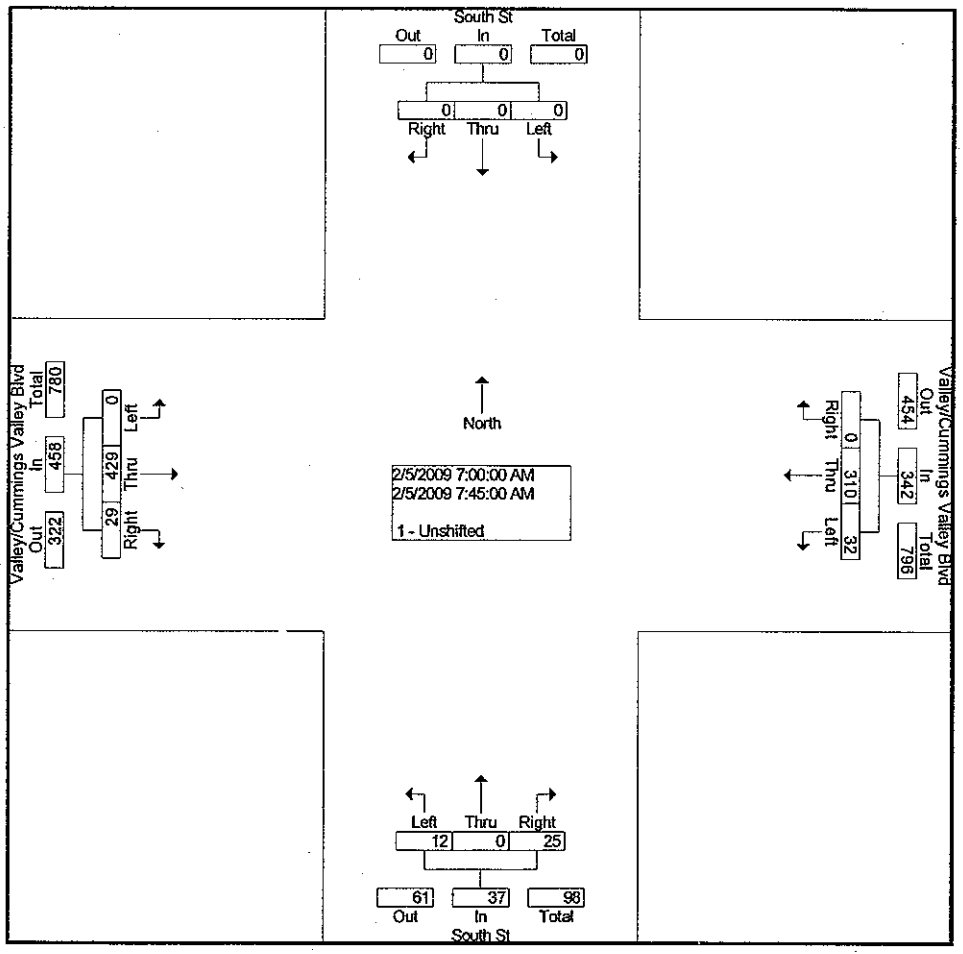
File Name : SouthValCumVal
Site Code : 00000000
Start Date : 2/5/2009
Page No : 2

	South St Southbound				Valley/Cummings Valley Blvd Westbound				South St Northbound				Valley/Cummings Valley Blvd Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour From 07:00 AM to 11:45 AM - Peak 1 of 1																	
Intersection	07:00 AM																
Volume	0	0	0	0	32	310	0	342	12	0	25	37	0	429	29	458	837
Percent	0.0	0.0	0.0		9.4	90.6	0.0		32.4	0.0	67.6		0.0	93.7	6.3		
07:00 Volume	0	0	0	0	4	86	0	90	7	0	3	10	0	143	4	147	247
Peak Factor																	0.847
High Int.	6:45:00 AM				07:15 AM				07:30 AM				07:00 AM				
Volume	0	0	0	0	5	102	0	107	1	0	11	12	0	143	4	147	
Peak Factor								0.799				0.771				0.779	



City Traffic Counters
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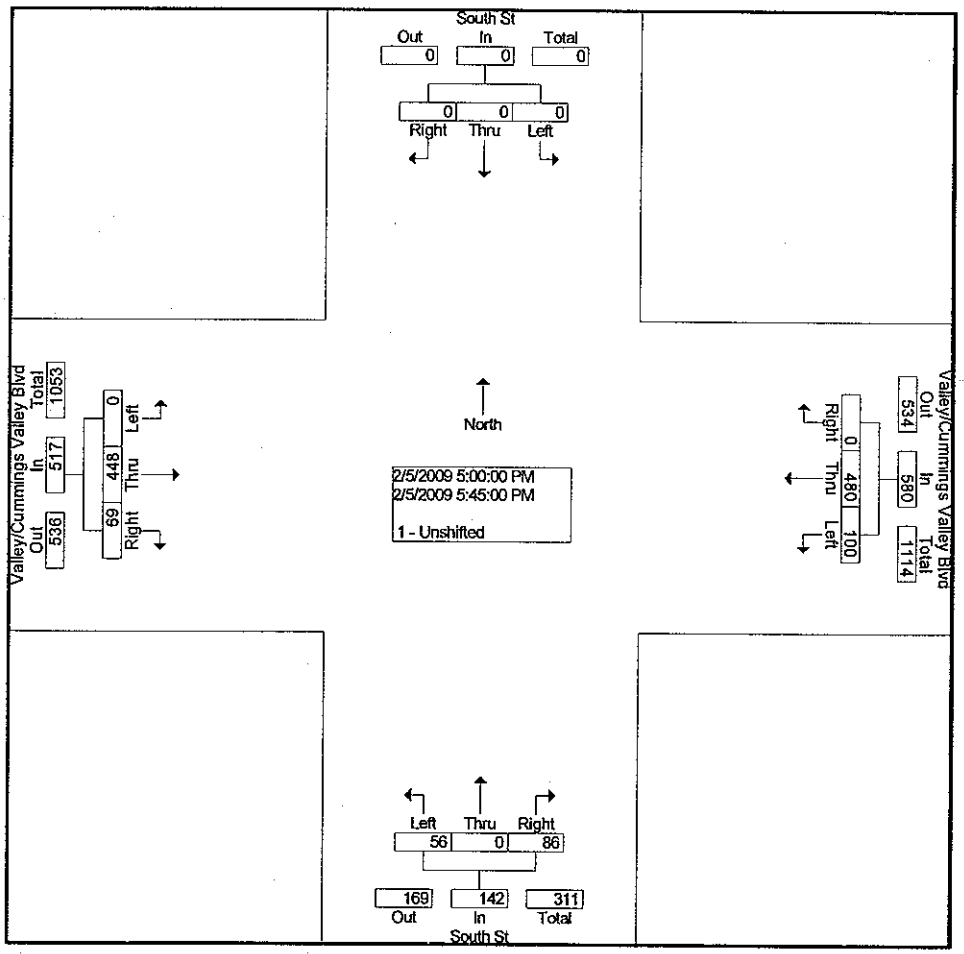
File Name : SouthValCumVal
Site Code : 00000000
Start Date : 2/5/2009
Page No : 3

	South St Southbound				Valley/Cummings Valley Blvd Westbound				South St Northbound				Valley/Cummings Valley Blvd Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour From 12:00 PM to 06:45 PM - Peak 1 of 1																	
Intersection	05:00 PM																
Volume	0	0	0	0	100	480	0	580	56	0	86	142	0	448	69	517	1239
Percent	0.0	0.0	0.0		17.2	82.8	0.0		39.4	0.0	60.6		0.0	86.7	13.3		
05:00 Volume	0	0	0	0	35	115	0	150	12	0	27	39	0	122	18	140	329
Peak Factor																	0.941
High Int.					05:15 PM				05:15 PM				05:00 PM				
Volume	0	0	0	0	23	128	0	151	13	0	29	42	0	122	18	140	
Peak Factor								0.960				0.845				0.923	



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City Traffic Counters
626.256.4171

File Name : SLvalCumVal
Site Code : 00000000
Start Date : 2/5/2009
Page No : 1

Groups Printed- 1 - Unshifted

	Santa Lucia St Southbound			Valley/Cummings Valley Blvd Westbound			Santa Lucia St Northbound			Valley/Cummings Valley Blvd Eastbound			
Start Time	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Int. Total
Factor	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	
07:00 AM	4	0	5	1	77	3	0	0	1	4	144	1	240
07:15 AM	4	0	3	2	102	5	0	1	1	6	86	2	212
07:30 AM	5	0	3	10	68	5	0	2	3	16	89	0	201
07:45 AM	2	5	3	5	50	12	1	2	6	13	88	4	191
Total	15	5	14	18	297	25	1	5	11	39	407	7	844
08:00 AM	1	5	9	7	45	11	1	2	3	25	64	2	175
08:15 AM	8	2	6	8	44	21	1	1	5	20	73	3	192
08:30 AM	17	2	7	5	68	8	0	2	2	23	86	1	221
08:45 AM	14	7	12	10	60	5	0	6	5	33	100	2	254
Total	40	16	34	30	217	45	2	11	15	101	323	8	842
04:00 PM	7	6	8	8	136	24	0	2	9	14	131	1	346
04:15 PM	13	6	21	12	122	9	1	7	7	22	123	0	343
04:30 PM	11	3	14	12	105	20	1	8	7	20	113	0	314
04:45 PM	8	2	18	6	108	23	1	6	8	17	101	0	298
Total	39	17	61	38	471	76	3	23	31	73	468	1	1301
05:00 PM	18	4	16	10	127	11	3	6	14	15	98	0	322
05:15 PM	7	2	19	3	146	10	3	4	12	18	69	0	293
05:30 PM	9	1	12	3	169	3	0	2	6	11	67	2	285
05:45 PM	12	6	11	3	115	7	2	10	13	9	75	1	264
Total	46	13	58	19	557	31	8	22	45	53	309	3	1164
Grand Total	140	51	167	105	1542	177	14	61	102	266	1507	19	4151
Apprch %	39.1	14.2	46.6	5.8	84.5	9.7	7.9	34.5	57.6	14.8	84.1	1.1	
Total %	3.4	1.2	4.0	2.5	37.1	4.3	0.3	1.5	2.5	6.4	36.3	0.5	

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File Name : SLvalCumVal
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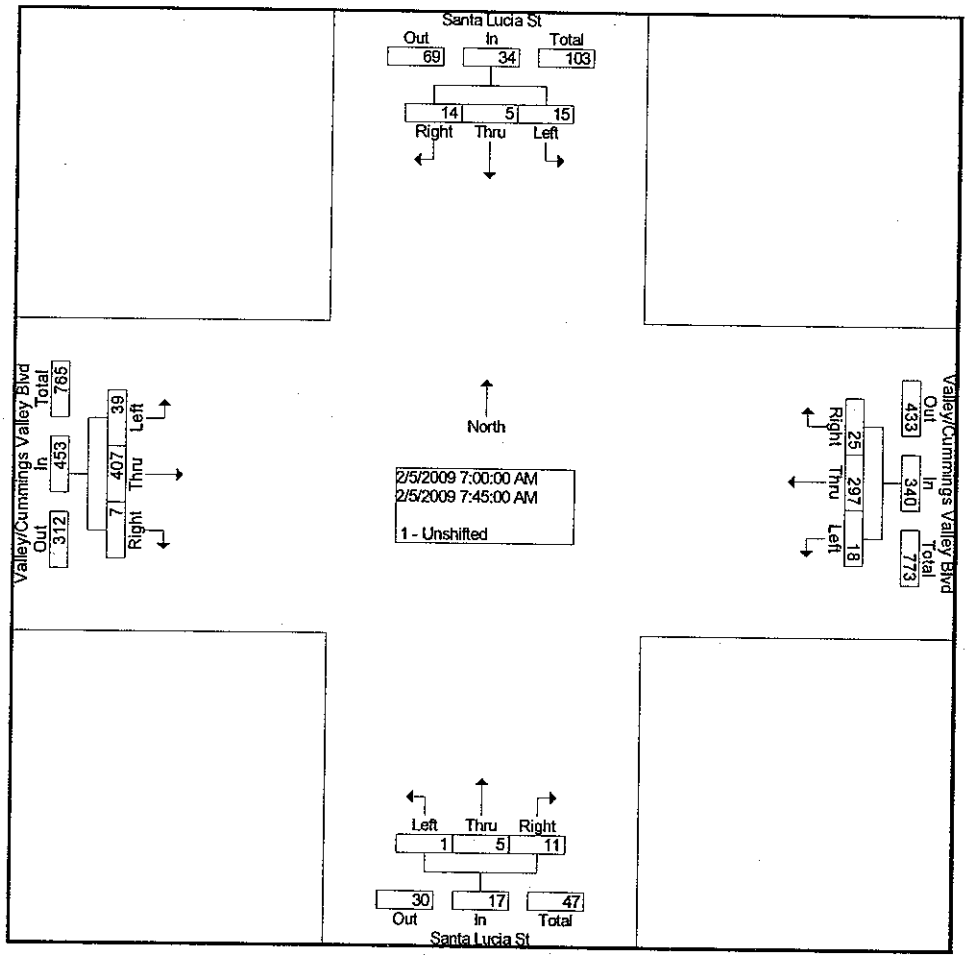
	Santa Lucia St Southbound				Valley/Cummings Valley Blvd Westbound				Santa Lucia St Northbound				Valley/Cummings Valley Blvd Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour From 07:00 AM to 11:45 AM - Peak 1 of 1																	
Intersection	07:00 AM																
Volume	15	5	14	34	18	297	25	340	1	5	11	17	39	407	7	453	844
Percent	44.1	14.7	41.2		5.3	87.4	7.4		5.9	29.4	64.7		8.6	89.8	1.5		
07:00 Volume	4	0	5	9	1	77	3	81	0	0	1	1	4	144	1	149	240
Peak Factor																	0.879
High Int.	07:45 AM				07:15 AM				07:45 AM				07:00 AM				
Volume	2	5	3	10	2	102	5	109	1	2	6	9	4	144	1	149	
Peak Factor				0.850				0.780				0.472				0.760	



City Traffic Counters
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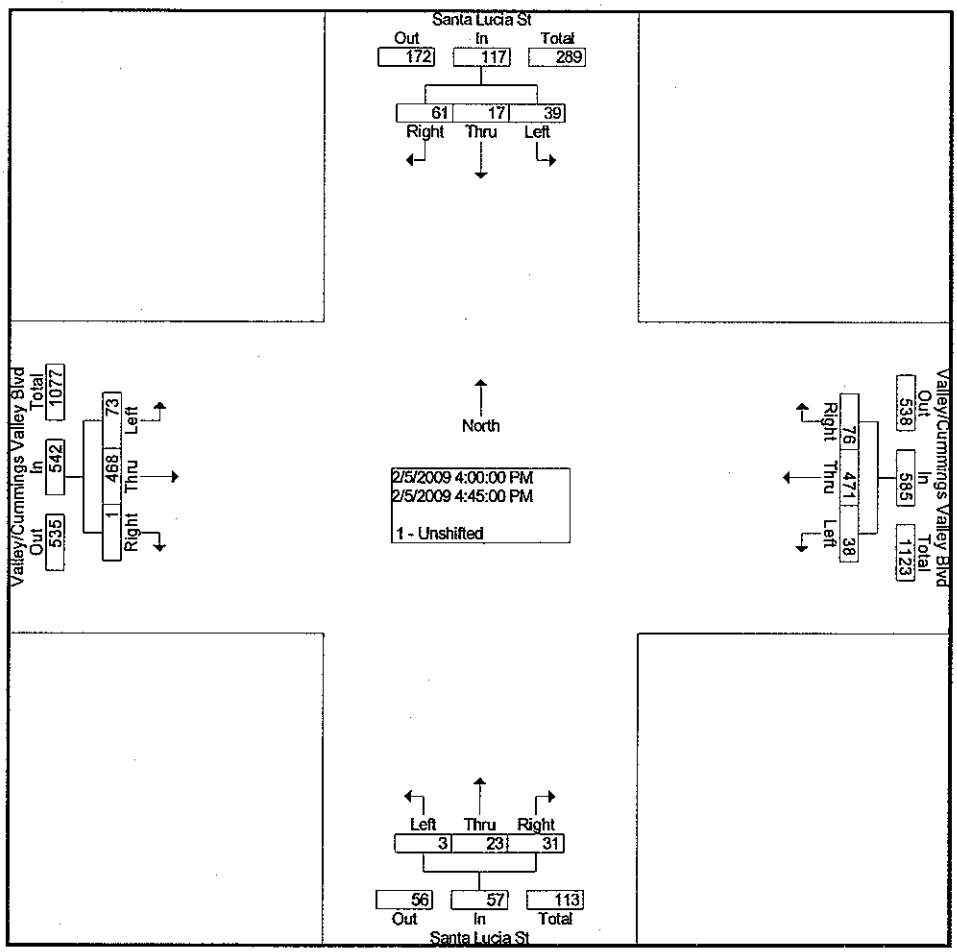
File Name : SLvalCumVal
Site Code : 00000000
Start Date : 2/5/2009
Page No : 3

	Santa Lucia St Southbound				Valley/Cummings Valley Blvd Westbound				Santa Lucia St Northbound				Valley/Cummings Valley Blvd Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour From 12:00 PM to 05:45 PM - Peak 1 of 1																	
Intersection	04:00 PM																
Volume	39	17	61	117	38	471	76	585	3	23	31	57	73	468	1	542	1301
Percent	33.3	14.5	52.1		6.5	80.5	13.0		5.3	40.4	54.4		13.5	86.3	0.2		
04:00 Volume	7	6	8	21	8	136	24	168	0	2	9	11	14	131	1	146	346
Peak Factor																	0.940
High Int.	04:15 PM				04:00 PM				04:30 PM				04:00 PM				
Volume	13	6	21	40	8	136	24	168	1	8	7	16	14	131	1	146	
Peak Factor				0.731				0.871				0.891				0.928	



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City Traffic Counters
626.256.4171

File Name : GHVallCum
Site Code : 00000000
Start Date : 2/5/2009
Page No : 1

Groups Printed- 1 - Unshifted

	Golden Hills Blvd Southbound			Valley/Cummings Valley Blvd Westbound			Golden Hills Blvd Northbound			Valley/Cummings Valley Blvd Eastbound			
Start Time	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Int. Total
Factor	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	
07:00 AM	75	0	7	0	88	17	0	0	0	9	139	0	335
07:15 AM	37	0	14	0	94	14	0	0	0	5	95	0	259
07:30 AM	19	0	10	0	80	28	0	0	0	4	84	0	225
07:45 AM	30	0	10	0	65	16	0	0	0	7	85	0	213
Total	161	0	41	0	327	75	0	0	0	25	403	0	1032
08:00 AM	31	0	9	0	69	15	0	0	0	2	69	0	195
08:15 AM	25	0	10	0	58	30	0	0	0	5	97	0	225
08:30 AM	35	0	9	0	77	33	0	0	0	8	106	0	268
08:45 AM	56	0	19	0	77	32	0	0	0	8	120	0	312
Total	147	0	47	0	281	110	0	0	0	23	392	0	1000
04:00 PM	38	0	13	0	139	46	0	0	0	16	137	0	389
04:15 PM	39	0	15	0	149	47	0	0	0	16	103	0	369
04:30 PM	31	0	21	0	130	42	0	0	0	14	111	0	349
04:45 PM	55	0	14	0	150	47	0	0	0	14	123	0	403
Total	163	0	63	0	568	182	0	0	0	60	474	0	1510
05:00 PM	37	0	18	0	172	65	0	0	0	11	101	0	404
05:15 PM	49	0	16	0	150	70	0	0	0	7	82	0	374
05:30 PM	34	0	21	0	130	48	0	0	0	7	89	0	329
05:45 PM	41	0	18	0	116	58	0	0	0	14	71	0	318
Total	161	0	73	0	568	241	0	0	0	39	343	0	1425
Grand Total	632	0	224	0	1744	608	0	0	0	147	1612	0	4967
Apprch %	73.8	0.0	26.2	0.0	74.1	25.9	0.0	0.0	0.0	8.4	91.6	0.0	
Total %	12.7	0.0	4.5	0.0	35.1	12.2	0.0	0.0	0.0	3.0	32.5	0.0	

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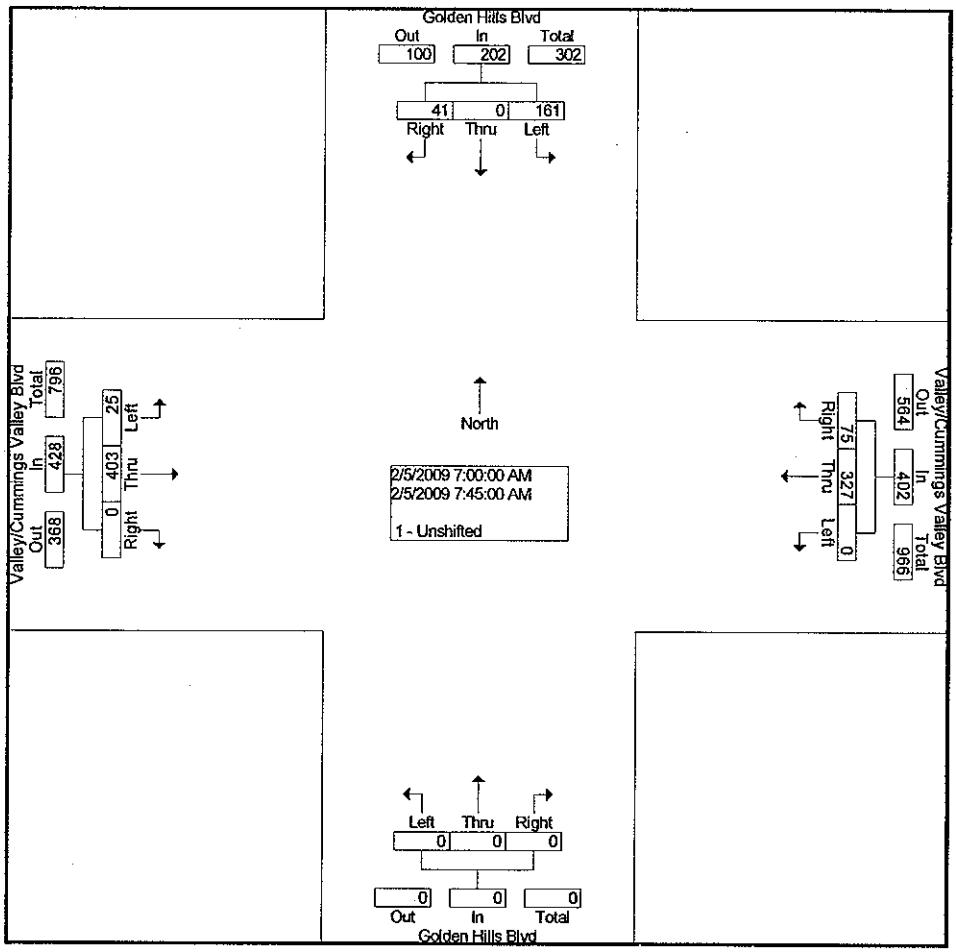
File Name : GHVallCum
Site Code : 00000000
Start Date : 2/5/2009
Page No : 2

	Golden Hills Blvd Southbound				Valley/Cummings Valley Blvd Westbound				Golden Hills Blvd Northbound				Valley/Cummings Valley Blvd Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour From 07:00 AM to 11:45 AM - Peak 1 of 1																	
Intersection	07:00 AM																
Volume	161	0	41	202	0	327	75	402	0	0	0	0	25	403	0	428	1032
Percent	79.7	0.0	20.3		0.0	81.3	18.7		0.0	0.0	0.0		5.8	94.2	0.0		
07:00 Volume	75	0	7	82	0	88	17	105	0	0	0	0	9	139	0	148	335
Peak Factor																	0.770
High Int.	07:00 AM				07:15 AM				6:45:00 AM				07:00 AM				
Volume	75	0	7	82	0	94	14	108	0	0	0	0	9	139	0	148	
Peak Factor				0.616				0.931								0.723	



City Traffic Counters
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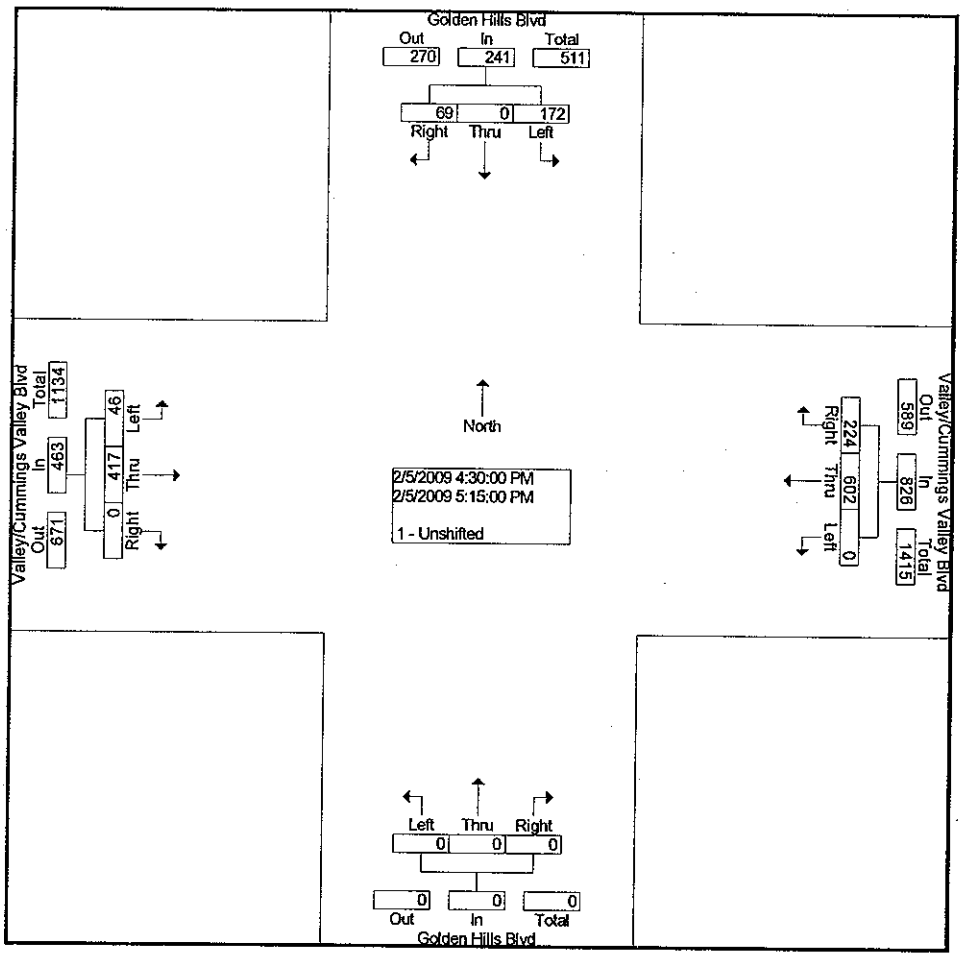
File Name : GHVallCum
Site Code : 00000000
Start Date : 2/5/2009
Page No : 3

	Golden Hills Blvd Southbound				Valley/Cummings Valley Blvd Westbound				Golden Hills Blvd Northbound				Valley/Cummings Valley Blvd Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour From 12:00 PM to 05:45 PM - Peak 1 of 1																	
Intersection	04:30 PM																
Volume	172	0	69	241	0	602	224	826	0	0	0	0	46	417	0	463	1530
Percent	71.4	0.0	28.6		0.0	72.9	27.1		0.0	0.0	0.0		9.9	90.1	0.0		
05:00 Volume	37	0	18	55	0	172	65	237	0	0	0	0	11	101	0	112	404
Peak Factor																	0.947
High Int.	04:45 PM				05:00 PM								04:45 PM				
Volume	55	0	14	69	0	172	65	237	0	0	0	0	14	123	0	137	
Peak Factor				0.873				0.871								0.845	



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City Traffic Counters
626.256.4171

File Name : WestRedA
Site Code : 00000000
Start Date : 5/29/2008
Page No : 1

Groups Printed- 1 - Unshifted

	Westwood Blvd Southbound			Red Apple Ave Westbound			Westwood Blvd Northbound			Red Apple Ave Eastbound			
Start Time	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Int. Total
Factor	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	
07:00 AM	109	4	0	10	0	20	0	1	38	0	0	0	182
07:15 AM	121	4	0	10	0	23	0	2	44	0	0	0	204
07:30 AM	71	2	0	13	0	54	0	1	33	0	0	0	174
07:45 AM	80	5	0	15	0	42	0	1	28	0	0	0	171
Total	381	15	0	48	0	139	0	5	143	0	0	0	731
08:00 AM	81	6	0	17	0	25	0	5	30	0	0	0	164
08:15 AM	62	5	0	16	0	40	0	3	21	0	0	0	147
08:30 AM	74	5	0	18	0	32	0	6	38	0	0	0	173
08:45 AM	70	15	0	26	0	29	0	3	39	0	0	0	182
Total	287	31	0	77	0	126	0	17	128	0	0	0	666
04:00 PM	84	9	0	38	0	99	0	14	36	0	0	0	280
04:15 PM	77	3	0	56	0	106	0	10	20	0	0	0	272
04:30 PM	61	8	0	40	0	93	0	14	27	0	0	0	243
04:45 PM	84	7	0	49	0	126	0	11	32	0	0	0	309
Total	306	27	0	183	0	424	0	49	115	0	0	0	1104
05:00 PM	80	5	0	38	0	134	0	15	35	0	0	0	307
05:15 PM	84	7	0	54	0	152	0	9	28	0	0	0	334
05:30 PM	82	12	0	37	0	118	0	9	24	0	0	0	282
05:45 PM	76	3	0	37	0	112	0	6	28	0	0	0	262
Total	322	27	0	166	0	516	0	39	115	0	0	0	1185
Grand Total	1296	100	0	474	0	1205	0	110	501	0	0	0	3686
Apprch %	92.8	7.2	0.0	28.2	0.0	71.8	0.0	18.0	82.0	0.0	0.0	0.0	
Total %	35.2	2.7	0.0	12.9	0.0	32.7	0.0	3.0	13.6	0.0	0.0	0.0	

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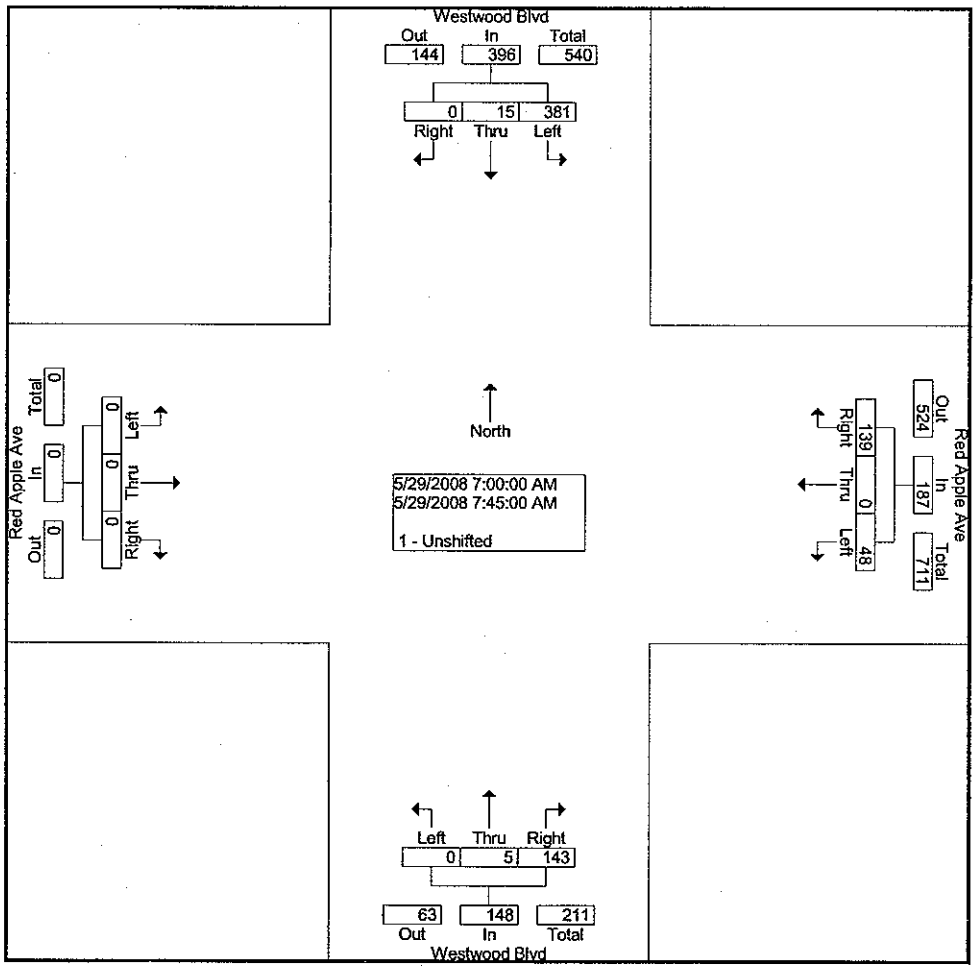
File Name : WestRedA
Site Code : 00000000
Start Date : 5/29/2008
Page No : 2

	Westwood Blvd Southbound				Red Apple Ave Westbound				Westwood Blvd Northbound				Red Apple Ave Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour From 07:00 AM to 11:45 AM - Peak 1 of 1																	
Intersection	07:00 AM																
Volume	381	15	0	396	48	0	139	187	0	5	143	148	0	0	0	0	731
Percent	96.2	3.8	0.0		25.7	0.0	74.3		0.0	3.4	96.6		0.0	0.0	0.0		
07:15 Volume	121	4	0	125	10	0	23	33	0	2	44	46	0	0	0	0	204
Peak Factor																	0.896
High Int.	07:15 AM				07:30 AM				07:15 AM				6:45:00 AM				
Volume	121	4	0	125	13	0	54	67	0	2	44	46					
Peak Factor				0.792				0.698				0.804					



City Traffic Counters
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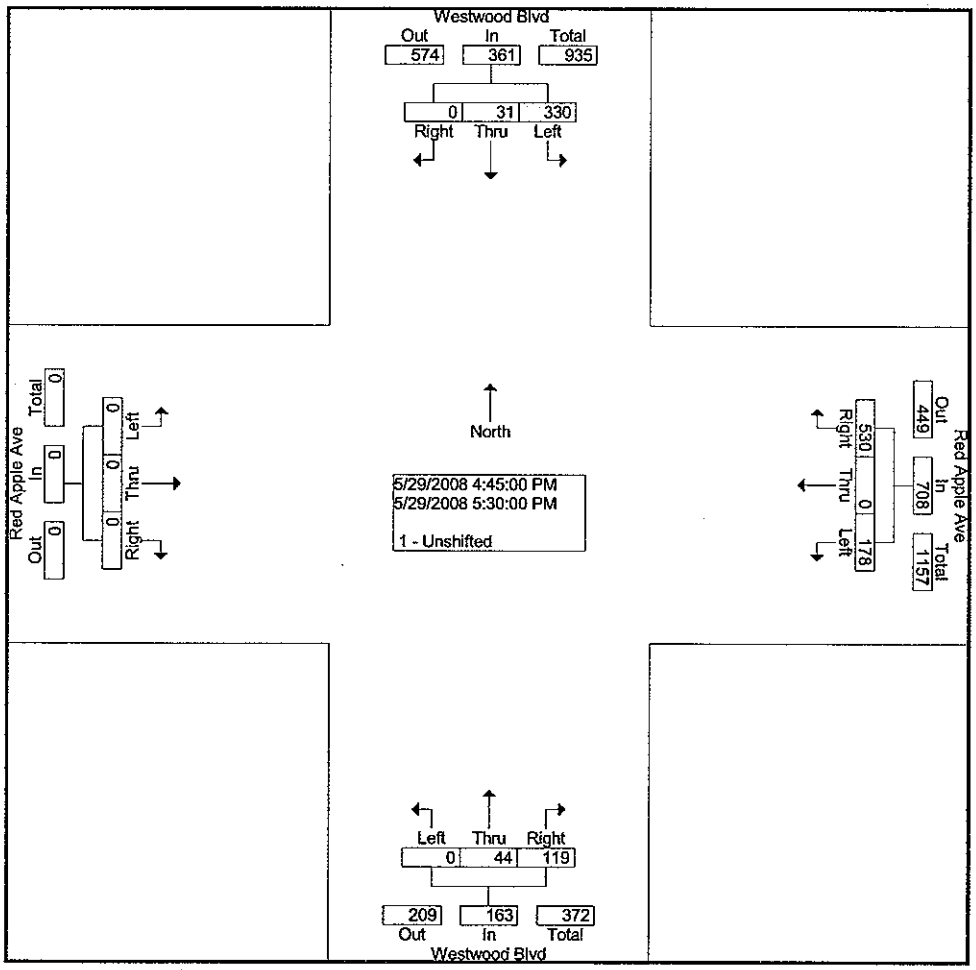
File Name : WestRedA
Site Code : 00000000
Start Date : 5/29/2008
Page No : 3

	Westwood Blvd Southbound				Red Apple Ave Westbound				Westwood Blvd Northbound				Red Apple Ave Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour From 12:00 PM to 05:45 PM - Peak 1 of 1																	
Intersection	04:45 PM																
Volume	330	31	0	361	178	0	530	708	0	44	119	163	0	0	0	0	1232
Percent	91.4	8.6	0.0		25.1	0.0	74.9		0.0	27.0	73.0		0.0	0.0	0.0		
05:15 Volume	84	7	0	91	54	0	152	206	0	9	28	37	0	0	0	0	334
Peak Factor																	0.922
High Int.	05:30 PM				05:15 PM				05:00 PM								
Volume	82	12	0	94	54	0	152	206	0	15	35	50					
Peak Factor				0.960				0.859				0.815					



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City Traffic Counters
626.256.4171

File Name : SVValCum
Site Code : 00000000
Start Date : 2/5/2009
Page No : 1

Groups Printed- 1 - Unshifted

	Sierra Vista Dr Southbound			Valley/Cummings Valley Blvd Westbound			Sierra Vista Dr Northbound			Valley/Cummings Valley Blvd Eastbound			
Start Time	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Int. Total
Factor	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	
07:00 AM	1	0	1	0	104	1	0	0	0	1	203	0	311
07:15 AM	2	0	1	0	89	1	0	0	0	1	123	0	217
07:30 AM	0	0	0	0	109	0	0	0	0	0	101	0	210
07:45 AM	0	0	1	0	88	1	0	0	0	1	114	0	205
Total	3	0	3	0	390	3	0	0	0	3	541	0	943
08:00 AM	0	0	1	0	92	1	0	0	0	0	107	0	201
08:15 AM	0	0	2	0	84	2	0	0	0	0	121	0	209
08:30 AM	0	0	1	0	109	0	0	0	0	0	141	0	251
08:45 AM	0	0	1	0	121	0	0	0	0	0	171	0	293
Total	0	0	5	0	406	3	0	0	0	0	540	0	954
04:00 PM	1	0	1	0	203	1	0	0	0	1	166	0	373
04:15 PM	1	0	2	0	191	1	0	0	0	1	147	0	343
04:30 PM	2	0	0	0	181	1	0	0	0	0	144	0	328
04:45 PM	3	0	1	0	197	1	0	0	0	0	185	0	387
Total	7	0	4	0	772	4	0	0	0	2	642	0	1431
05:00 PM	0	0	1	0	235	2	0	0	0	1	137	0	376
05:15 PM	0	0	2	0	225	3	0	0	0	3	129	0	362
05:30 PM	2	0	1	0	175	5	0	0	0	0	132	0	315
05:45 PM	0	0	1	0	178	1	0	0	0	0	111	0	291
Total	2	0	5	0	813	11	0	0	0	4	509	0	1344
Grand Total	12	0	17	0	2381	21	0	0	0	9	2232	0	4672
Apprch %	41.4	0.0	58.6	0.0	99.1	0.9	0.0	0.0	0.0	0.4	99.6	0.0	
Total %	0.3	0.0	0.4	0.0	51.0	0.4	0.0	0.0	0.0	0.2	47.8	0.0	

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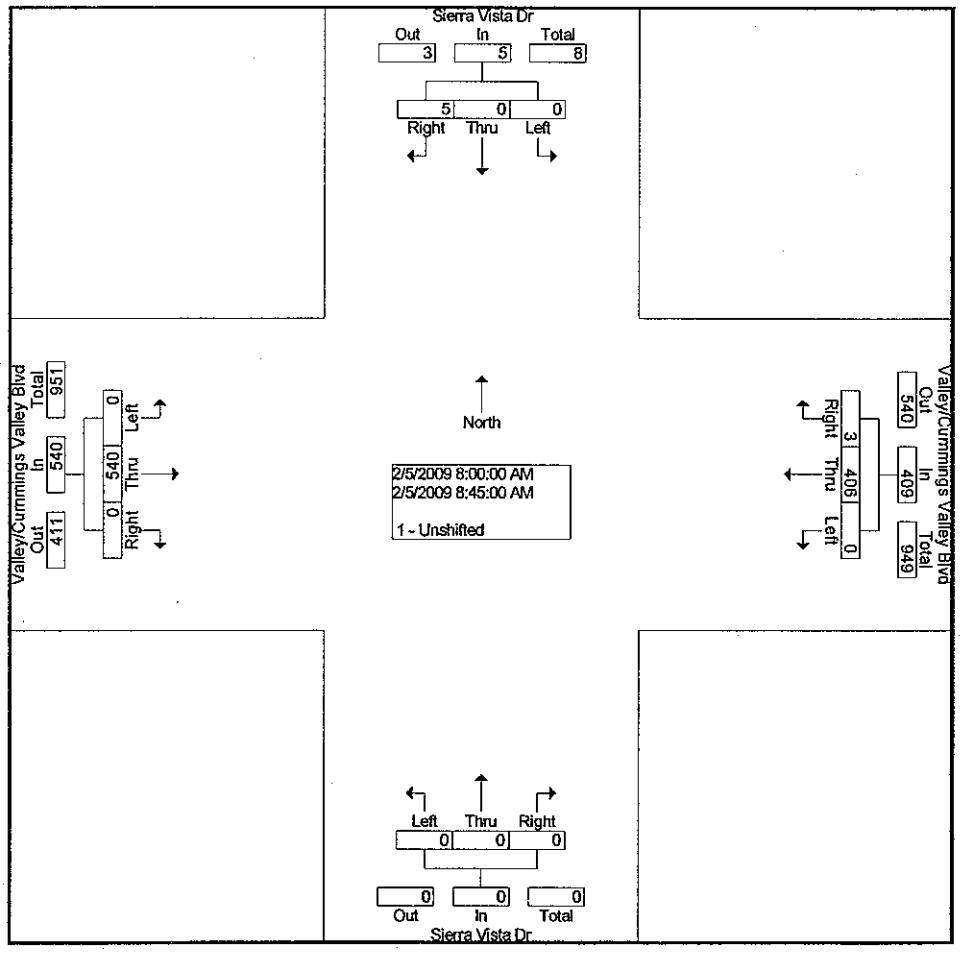
File Name : SVValCum
Site Code : 00000000
Start Date : 2/5/2009
Page No : 2

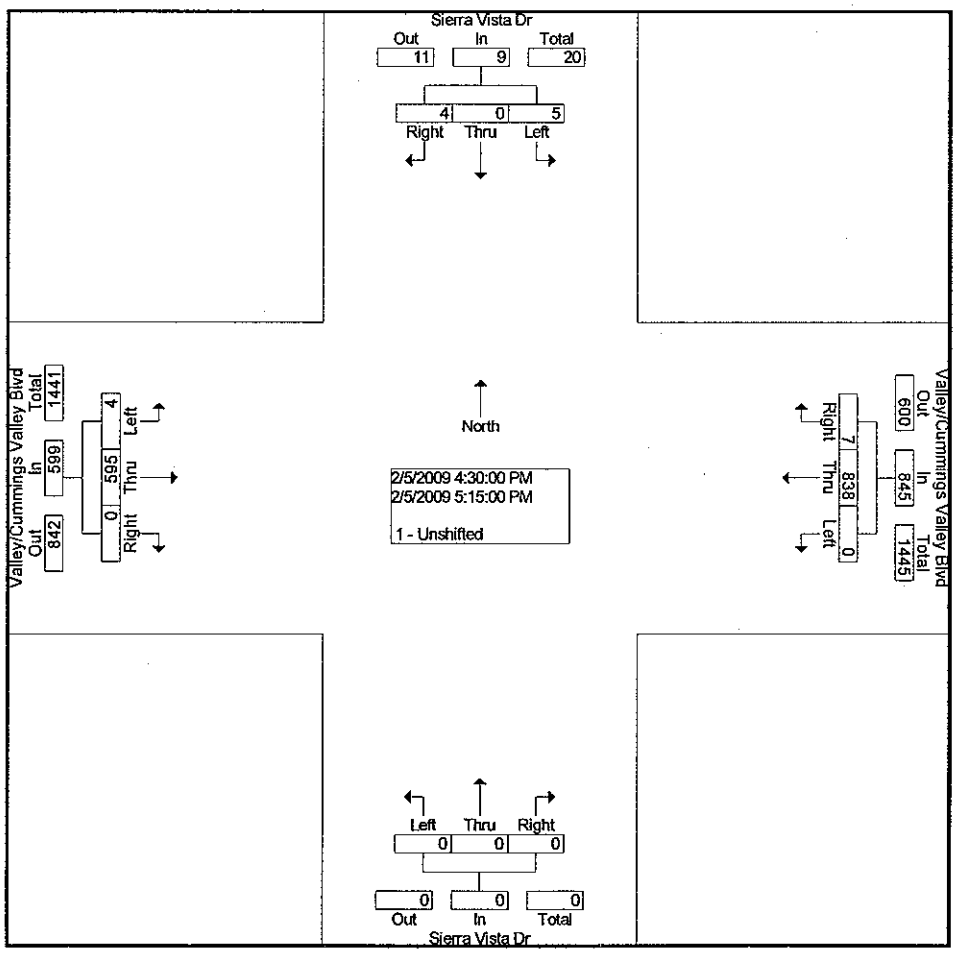
	Sierra Vista Dr Southbound				Valley/Cummings Valley Blvd Westbound				Sierra Vista Dr Northbound				Valley/Cummings Valley Blvd Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour From 07:00 AM to 11:45 AM - Peak 1 of 1																	
Intersection	08:00 AM																
Volume	0	0	5	5	0	406	3	409	0	0	0	0	0	540	0	540	954
Percent	0.0	0.0	100.0		0.0	99.3	0.7		0.0	0.0	0.0		0.0	100.0	0.0		
08:45 Volume	0	0	1	1	0	121	0	121	0	0	0	0	0	171	0	171	293
Peak Factor																	0.814
High Int.	08:15 AM				08:45 AM				6:45:00 AM				08:45 AM				
Volume	0	0	2	2	0	121	0	121	0	0	0	0	0	171	0	171	
Peak Factor				0.625				0.845								0.789	



City Traffic Counters
626.256.4171

File Name : SVValCum
Site Code : 00000000
Start Date : 2/5/2009
Page No : 3

	Sierra Vista Dr Southbound				Valley/Cummings Valley Blvd Westbound				Sierra Vista Dr Northbound				Valley/Cummings Valley Blvd Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour From 12:00 PM to 05:45 PM - Peak 1 of 1																	
Intersection	04:30 PM																
Volume	5	0	4	9	0	838	7	845	0	0	0	0	4	595	0	599	1453
Percent	55.6	0.0	44.4		0.0	99.2	0.8		0.0	0.0	0.0		0.7	99.3	0.0		
04:45 Volume	3	0	1	4	0	197	1	198	0	0	0	0	0	185	0	185	387
Peak Factor																	0.939
High Int.	04:45 PM				05:00 PM								04:45 PM				
Volume	3	0	1	4	0	235	2	237	0	0	0	0	0	185	0	185	
Peak Factor				0.563				0.891								0.809	



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City Traffic Counters
626.256.4171

File Name : Teh58EB
Site Code : 00000000
Start Date : 5/29/2008
Page No : 1

Groups Printed- 1 - Unshifted

	Tehachapi Blvd Southbound			58 EB Ramps Westbound			Tehachapi Blvd Northbound			58 EB Ramps Eastbound			
Start Time	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Int. Total
Factor	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	
07:00 AM	0	50	0	0	0	0	0	103	65	0	0	12	230
07:15 AM	0	42	0	0	0	0	0	105	62	0	0	18	227
07:30 AM	0	29	0	0	0	0	0	92	44	0	1	21	187
07:45 AM	0	24	0	0	0	0	0	64	53	0	0	31	172
Total	0	145	0	0	0	0	0	364	224	0	1	82	816
08:00 AM	0	33	0	0	0	0	0	68	48	0	0	37	186
08:15 AM	0	31	0	0	0	0	0	62	40	0	1	31	165
08:30 AM	0	39	0	0	0	0	0	40	38	0	2	30	149
08:45 AM	0	43	0	0	0	0	0	56	53	1	3	39	195
Total	0	146	0	0	0	0	0	226	179	1	6	137	695
04:00 PM	0	92	0	0	0	0	0	67	50	0	1	75	285
04:15 PM	0	108	0	0	0	0	0	55	38	0	1	78	280
04:30 PM	1	99	0	0	0	0	0	41	38	0	0	81	260
04:45 PM	0	93	0	0	0	0	0	48	39	0	0	78	258
Total	1	392	0	0	0	0	0	211	165	0	2	312	1083
05:00 PM	0	88	0	0	0	0	0	54	45	0	0	98	285
05:15 PM	0	93	0	0	0	0	0	32	49	0	0	84	258
05:30 PM	0	77	0	0	0	0	0	34	29	0	0	63	203
05:45 PM	0	79	0	0	0	0	0	28	39	0	0	106	252
Total	0	337	0	0	0	0	0	148	162	0	0	351	998
Grand Total	1	1020	0	0	0	0	0	949	730	1	9	882	3592
Apprch %	0.1	99.9	0.0	0.0	0.0	0.0	0.0	56.5	43.5	0.1	1.0	98.9	
Total %	0.0	28.4	0.0	0.0	0.0	0.0	0.0	26.4	20.3	0.0	0.3	24.6	

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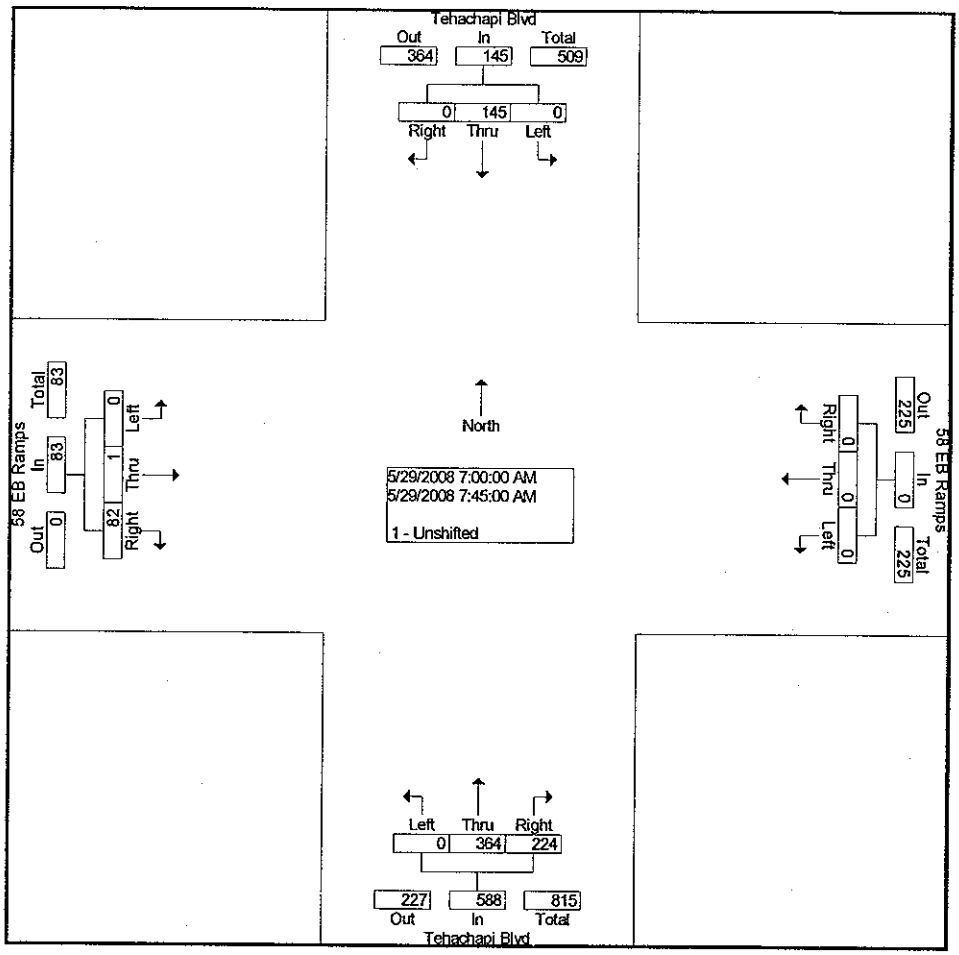
File Name : Teh58EB
Site Code : 00000000
Start Date : 5/29/2008
Page No : 2

	Tehachapi Blvd Southbound				58 EB Ramps Westbound				Tehachapi Blvd Northbound				58 EB Ramps Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour From 07:00 AM to 11:45 AM - Peak 1 of 1																	
Intersection	07:00 AM																
Volume	0	145	0	145	0	0	0	0	0	364	224	588	0	1	82	83	816
Percent	0.0	100.0	0.0		0.0	0.0	0.0		0.0	61.9	38.1		0.0	1.2	98.8		
07:00 Volume	0	50	0	50	0	0	0	0	0	103	65	168	0	0	12	12	230
Peak Factor																	0.887
High Int.	07:00 AM				6:45:00 AM				07:00 AM				07:45 AM				
Volume	0	50	0	50	0	0	0	0	0	103	65	168	0	0	31	31	
Peak Factor				0.725								0.875				0.669	



City Traffic Counters
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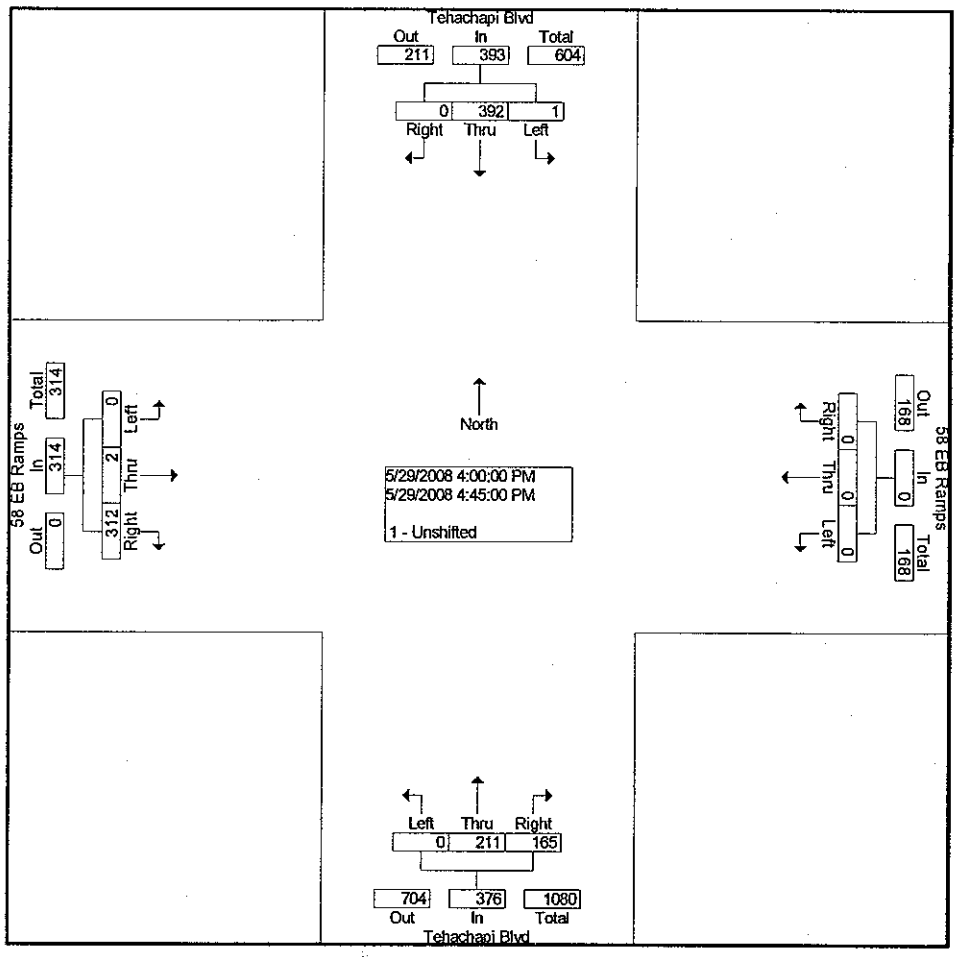
File Name : Teh58EB
Site Code : 00000000
Start Date : 5/29/2008
Page No : 3

	Tehachapi Blvd Southbound				58 EB Ramps Westbound				Tehachapi Blvd Northbound				58 EB Ramps Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour From 12:00 PM to 05:45 PM - Peak 1 of 1																	
Intersection	04:00 PM																
Volume	1	392	0	393	0	0	0	0	0	211	165	376	0	2	312	314	1083
Percent	0.3	99.7	0.0		0.0	0.0	0.0		0.0	56.1	43.9		0.0	0.6	99.4		
04:00 Volume	0	92	0	92	0	0	0	0	0	67	50	117	0	1	75	76	285
Peak Factor																	0.950
High Int.	04:15 PM								04:00 PM				04:30 PM				
Volume	0	108	0	108	0	0	0	0	0	67	50	117	0	0	81	81	
Peak Factor				0.910								0.803				0.969	



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City Traffic Counters
626.256.4171

File Name : TehTucRA
Site Code : 00000000
Start Date : 6/3/2008
Page No : 1

Groups Printed- 1 - Unshifted

	Tehachapi Blvd Southbound			Tehachapi Blvd Westbound			Tucker Rd Northbound			Red Apple Ave Eastbound			
Start Time	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Int. Total
Factor	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	
07:00 AM	6	45	5	15	9	22	13	107	24	57	96	40	439
07:15 AM	10	29	4	18	35	20	15	79	19	36	87	23	375
07:30 AM	11	46	9	32	47	16	12	64	22	35	50	16	360
07:45 AM	12	34	10	11	22	18	10	80	27	35	60	13	332
Total	39	154	28	76	113	76	50	330	92	163	293	92	1506
08:00 AM	13	33	10	31	33	20	7	49	23	40	54	16	329
08:15 AM	14	39	7	37	35	14	3	49	29	39	42	19	327
08:30 AM	11	44	14	17	20	9	10	73	25	27	37	13	300
08:45 AM	9	37	5	38	23	12	10	64	27	31	56	28	340
Total	47	153	36	123	111	55	30	235	104	137	189	76	1296
04:00 PM	25	89	46	63	72	14	40	59	42	13	46	32	541
04:15 PM	25	84	56	62	68	20	49	44	44	23	59	26	560
04:30 PM	25	80	48	68	60	12	49	39	29	16	62	26	514
04:45 PM	18	88	55	50	40	11	37	40	44	20	53	28	484
Total	93	341	205	243	240	57	175	182	159	72	220	112	2099
05:00 PM	21	97	41	66	43	7	38	38	34	11	56	23	475
05:15 PM	19	86	51	49	54	8	44	34	41	19	45	27	477
05:30 PM	22	64	43	41	44	16	47	23	46	16	45	36	443
05:45 PM	15	79	40	48	37	8	40	31	36	16	41	31	422
Total	77	326	175	204	178	39	169	126	157	62	187	117	1817
Grand Total	256	974	444	646	642	227	424	873	512	434	889	397	6718
Apprch %	15.3	58.2	26.5	42.6	42.4	15.0	23.4	48.3	28.3	25.2	51.7	23.1	
Total %	3.8	14.5	6.6	9.6	9.6	3.4	6.3	13.0	7.6	6.5	13.2	5.9	

City Traffic Counters
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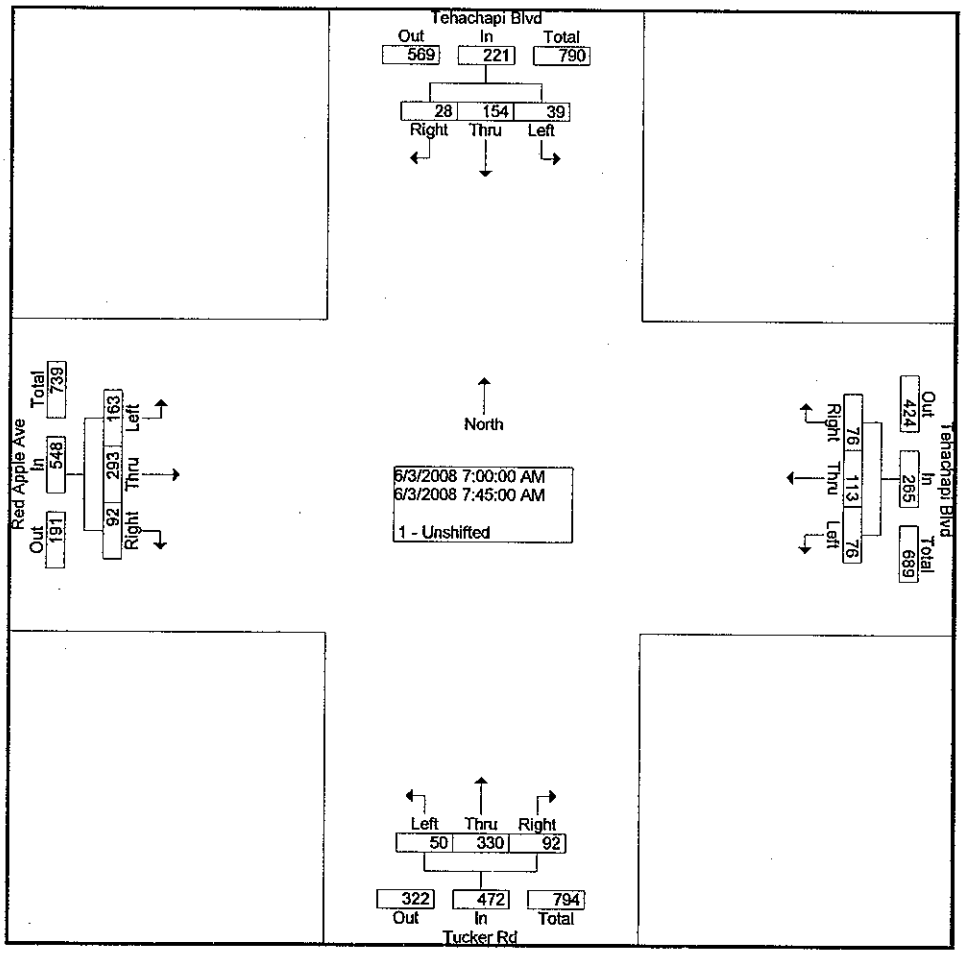
File Name : TehTucRA
Site Code : 00000000
Start Date : 6/3/2008
Page No : 2

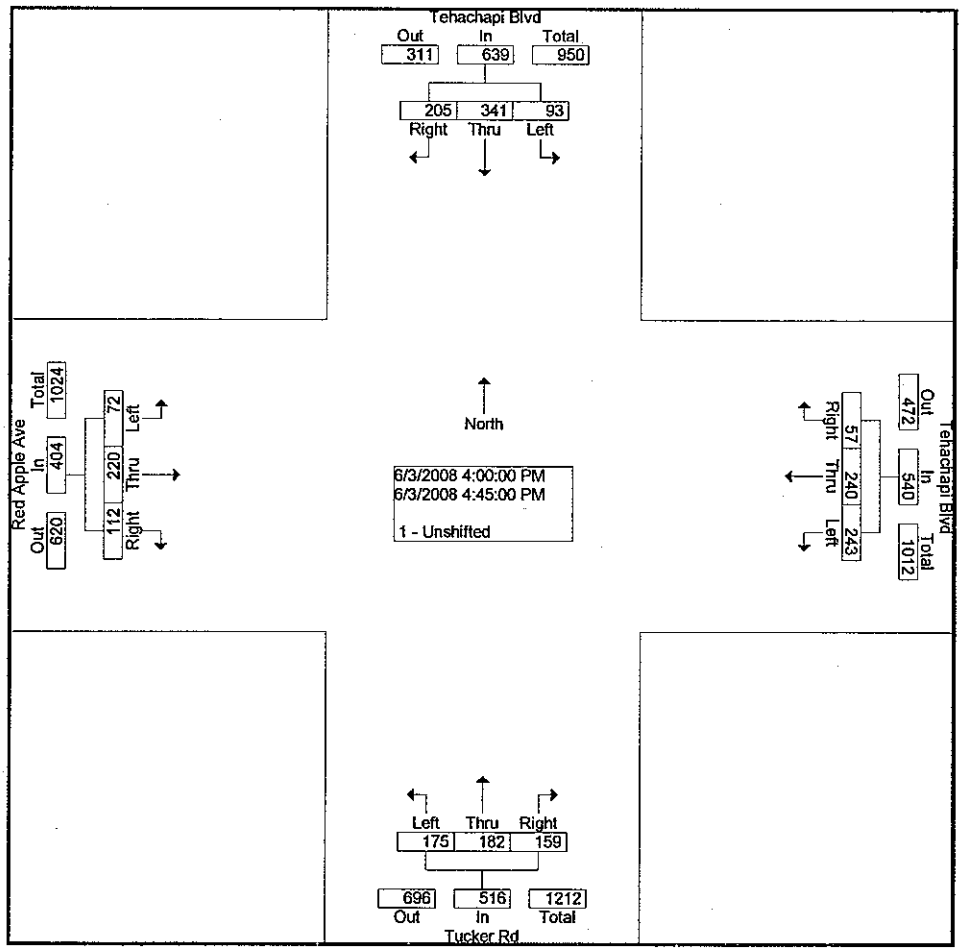
	Tehachapi Blvd Southbound				Tehachapi Blvd Westbound				Tucker Rd Northbound				Red Apple Ave Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour From 07:00 AM to 12:30 PM - Peak 1 of 1																	
Intersection	07:00 AM																
Volume	39	154	28	221	76	113	76	265	50	330	92	472	163	293	92	548	1506
Percent	17.6	69.7	12.7		28.7	42.6	28.7		10.6	69.9	19.5		29.7	53.5	16.8		
07:00 Volume	6	45	5	56	15	9	22	46	13	107	24	144	57	96	40	193	439
Peak Factor																	0.858
High Int.	07:30 AM				07:30 AM				07:00 AM				07:00 AM				
Volume	11	46	9	66	32	47	16	95	13	107	24	144	57	96	40	193	
Peak Factor				0.837				0.697				0.819				0.710	



City Traffic Counters
626.256.4171

File Name : TehTucRA
Site Code : 00000000
Start Date : 6/3/2008
Page No : 3

	Tehachapi Blvd Southbound				Tehachapi Blvd Westbound				Tucker Rd Northbound				Red Apple Ave Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour From 12:45 PM to 05:45 PM - Peak 1 of 1																	
Intersection	04:00 PM																
Volume	93	341	205	639	243	240	57	540	175	182	159	516	72	220	112	404	2099
Percent	14.6	53.4	32.1		45.0	44.4	10.6		33.9	35.3	30.8		17.8	54.5	27.7		
04:15 Volume	25	84	56	165	62	68	20	150	49	44	44	137	23	59	26	108	560
Peak Factor																	0.937
High Int.	04:15 PM				04:15 PM				04:00 PM				04:15 PM				
Volume	25	84	56	165	62	68	20	150	40	59	42	141	23	59	26	108	
Peak Factor				0.968				0.900				0.915				0.935	



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City Traffic Counters
626.256.4171

File Name : TuckerCon
Site Code : 00000000
Start Date : 5/29/2008
Page No : 1

Groups Printed- 1 - Unshifted

	Tucker Southbound			Conway Westbound			Tucker Northbound			Conway Eastbound			
Start Time	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Int. Total
Factor	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	
07:00 AM	0	142	0	0	0	0	1	118	0	0	0	1	262
07:15 AM	0	147	2	0	1	0	2	121	0	6	4	3	286
07:30 AM	0	160	6	0	5	0	2	129	0	6	1	7	316
07:45 AM	1	179	10	0	1	0	3	133	0	8	0	11	346
Total	1	628	18	0	7	0	8	501	0	20	5	22	1210
08:00 AM	2	155	13	0	0	0	7	131	0	11	0	4	323
08:15 AM	1	209	12	0	0	0	3	142	0	14	0	5	386
08:30 AM	0	182	7	0	0	0	5	137	0	11	0	10	352
08:45 AM	0	218	11	0	0	0	7	160	0	16	0	12	424
Total	3	764	43	0	0	0	22	570	0	52	0	31	1485
04:00 PM	1	188	5	0	0	0	0	171	0	12	0	8	385
04:15 PM	0	214	5	0	0	0	1	145	0	10	0	7	382
04:30 PM	0	193	6	0	0	0	5	164	0	13	0	16	397
04:45 PM	0	219	10	0	0	0	7	134	0	13	2	12	397
Total	1	814	26	0	0	0	13	614	0	48	2	43	1561
05:00 PM	0	232	7	0	0	0	8	160	0	13	1	7	428
05:15 PM	0	192	28	0	0	0	5	151	0	15	0	7	398
05:30 PM	0	220	7	0	0	0	4	176	0	6	0	7	420
05:45 PM	0	225	10	0	0	0	5	172	0	10	0	8	430
Total	0	869	52	0	0	0	22	659	0	44	1	29	1676
Grand Total	5	3075	139	0	7	0	65	2344	0	164	8	125	5932
Apprch %	0.2	95.5	4.3	0.0	100.0	0.0	2.7	97.3	0.0	55.2	2.7	42.1	
Total %	0.1	51.8	2.3	0.0	0.1	0.0	1.1	39.5	0.0	2.8	0.1	2.1	

City Traffic Counters
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File Name : TuckerCon
Site Code : 00000000
Start Date : 5/29/2008
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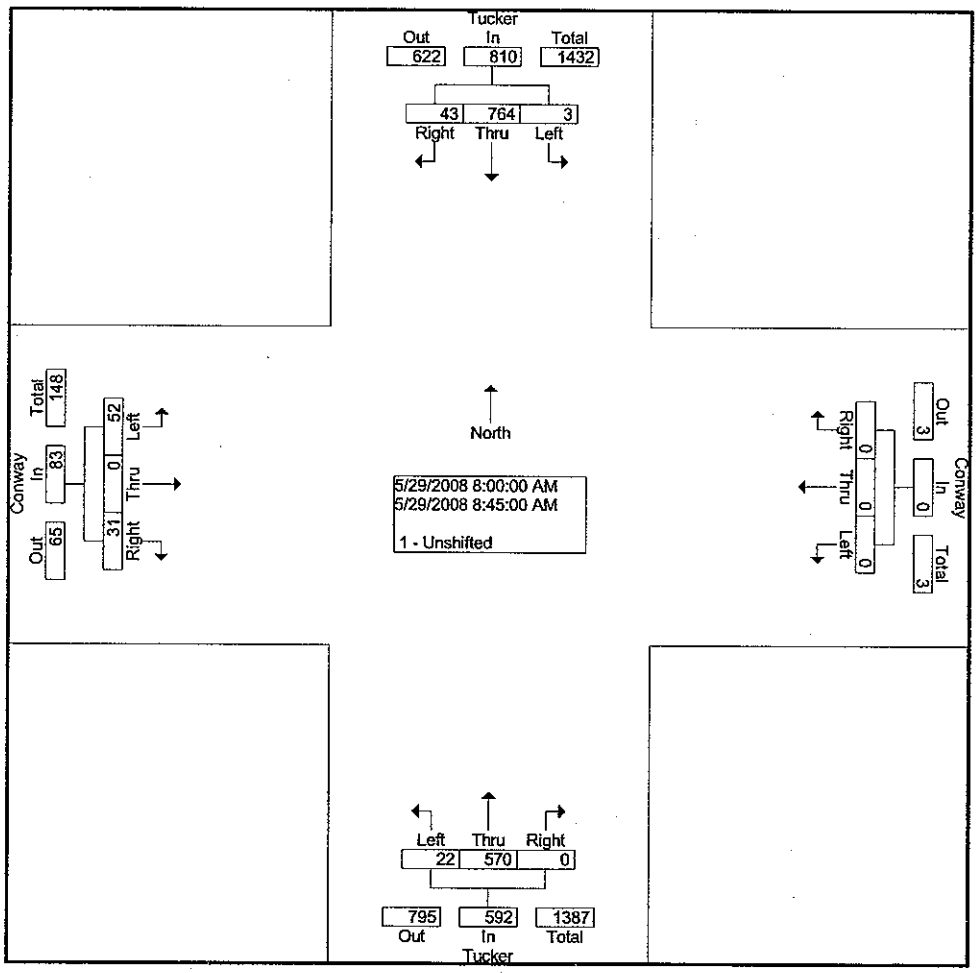
	Tucker Southbound				Conway Westbound				Tucker Northbound				Conway Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour From 07:00 AM to 12:30 PM - Peak 1 of 1																	
Intersection	08:00 AM																
Volume	3	764	43	810	0	0	0	0	22	570	0	592	52	0	31	83	1485
Percent	0.4	94.3	5.3		0.0	0.0	0.0		3.7	96.3	0.0		62.7	0.0	37.3		
08:45 Volume	0	218	11	229	0	0	0	0	7	160	0	167	16	0	12	28	424
Peak Factor																	0.876
High Int.	08:45 AM				6:45:00 AM				08:45 AM				08:45 AM				
Volume	0	218	11	229	0	0	0	0	7	160	0	167	16	0	12	28	
Peak Factor				0.884								0.886				0.741	



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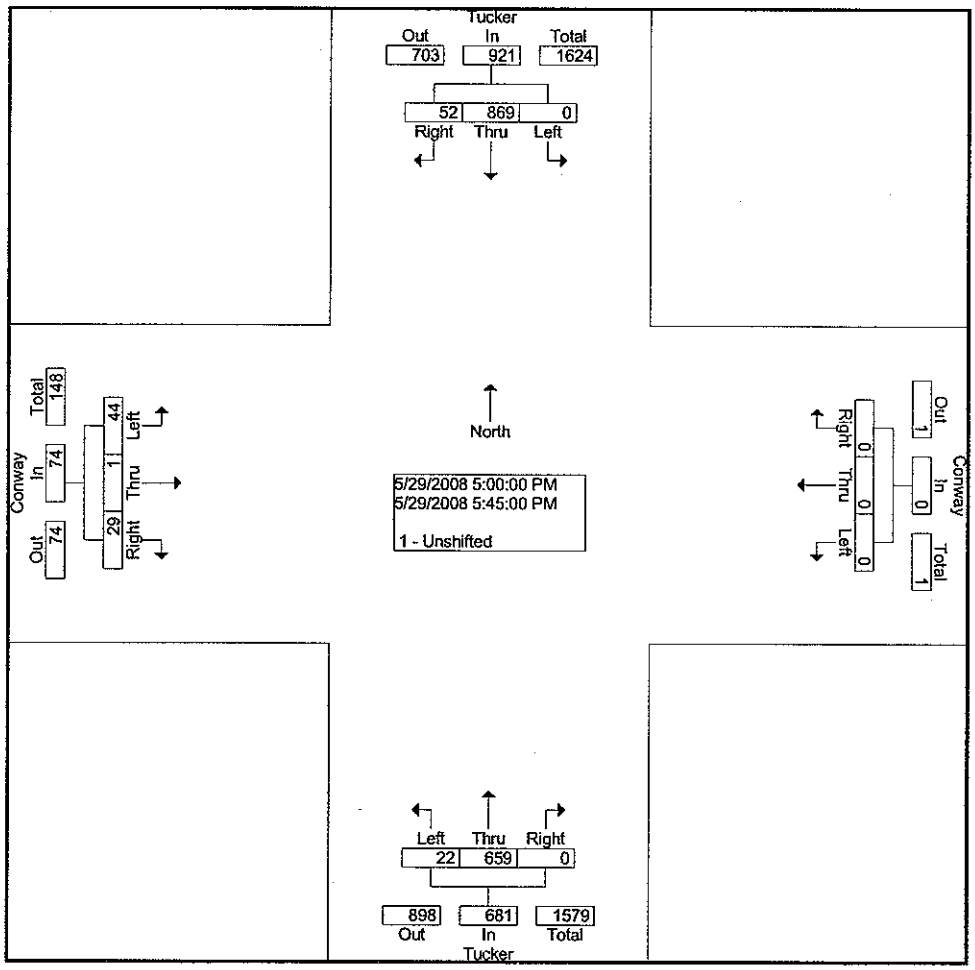
File Name : TuckerCon
Site Code : 00000000
Start Date : 5/29/2008
Page No : 3

	Tucker Southbound				Conway Westbound				Tucker Northbound				Conway Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour From 12:45 PM to 05:45 PM - Peak 1 of 1																	
Intersection	05:00 PM																
Volume	0	869	52	921	0	0	0	0	22	659	0	681	44	1	29	74	1676
Percent	0.0	94.4	5.6		0.0	0.0	0.0		3.2	96.8	0.0		59.5	1.4	39.2		
05:45 Volume	0	225	10	235	0	0	0	0	5	172	0	177	10	0	8	18	430
Peak Factor																	0.974
High Int.	05:00 PM								05:30 PM				05:15 PM				
Volume	0	232	7	239	0	0	0	0	4	176	0	180	15	0	7	22	
Peak Factor				0.963								0.946				0.841	



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City Traffic Counters
626.256.4171

File Name : TuckVall
Site Code : 00000000
Start Date : 5/29/2008
Page No : 1

Groups Printed- 1 - Unshifted

	Tucker Rd Southbound			Valley Blvd Westbound			Tucker Rd Northbound			Valley Blvd Eastbound			
Start Time	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Int. Total
Factor	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	
07:00 AM	18	40	35	18	33	15	27	27	21	50	43	8	335
07:15 AM	21	49	33	14	41	18	30	40	18	59	54	9	386
07:30 AM	34	50	45	29	52	32	40	54	20	57	60	21	494
07:45 AM	32	43	37	23	66	20	37	56	33	56	59	22	484
Total	105	182	150	84	192	85	134	177	92	222	216	60	1699
08:00 AM	33	55	64	26	64	32	32	49	28	67	47	27	524
08:15 AM	47	48	64	29	64	24	49	44	27	51	70	19	536
08:30 AM	42	67	55	41	58	29	46	54	38	80	65	29	604
08:45 AM	31	69	53	42	62	34	50	64	40	64	73	32	614
Total	153	239	236	138	248	119	177	211	133	262	255	107	2278
04:00 PM	40	64	42	25	36	23	41	50	21	55	49	12	458
04:15 PM	32	52	47	44	70	26	43	43	23	52	38	24	494
04:30 PM	46	48	73	41	62	25	50	59	50	89	68	23	634
04:45 PM	55	68	69	34	63	39	50	53	28	60	55	23	597
Total	173	232	231	144	231	113	184	205	122	256	210	82	2183
05:00 PM	33	69	69	29	59	40	40	53	37	65	49	18	561
05:15 PM	46	49	71	26	57	32	44	49	32	79	76	21	582
05:30 PM	42	43	64	23	51	29	46	52	33	85	79	19	566
05:45 PM	45	54	69	39	62	32	31	46	28	87	77	18	588
Total	166	215	273	117	229	133	161	200	130	316	281	76	2297
Grand Total	597	868	890	483	900	450	656	793	477	1056	962	325	8457
Apprch %	25.4	36.9	37.8	26.4	49.1	24.5	34.1	41.2	24.8	45.1	41.1	13.9	
Total %	7.1	10.3	10.5	5.7	10.6	5.3	7.8	9.4	5.6	12.5	11.4	3.8	

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File Name : TuckVall
Site Code : 00000000
Start Date : 5/29/2008
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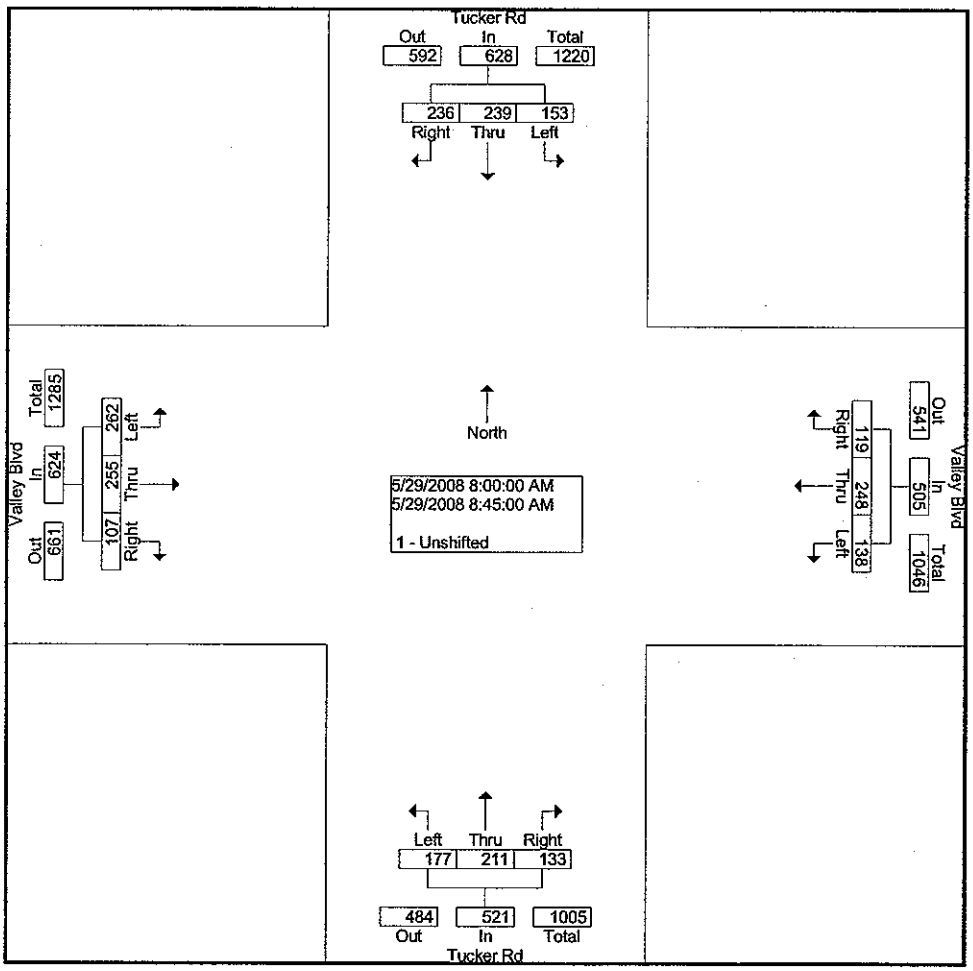
	Tucker Rd Southbound				Valley Blvd Westbound				Tucker Rd Northbound				Valley Blvd Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour From 07:00 AM to 11:45 AM - Peak 1 of 1																	
Intersection	08:00 AM																
Volume	153	239	236	628	138	248	119	505	177	211	133	521	262	255	107	624	2278
Percent	24.4	38.1	37.6		27.3	49.1	23.6		34.0	40.5	25.5		42.0	40.9	17.1		
08:45 Volume	31	69	53	153	42	62	34	138	50	64	40	154	64	73	32	169	614
Peak Factor																	0.928
High Int.	08:30 AM				08:45 AM				08:45 AM				08:30 AM				
Volume	42	67	55	164	42	62	34	138	50	64	40	154	80	65	29	174	
Peak Factor				0.957				0.915				0.846				0.897	



City Traffic Counters
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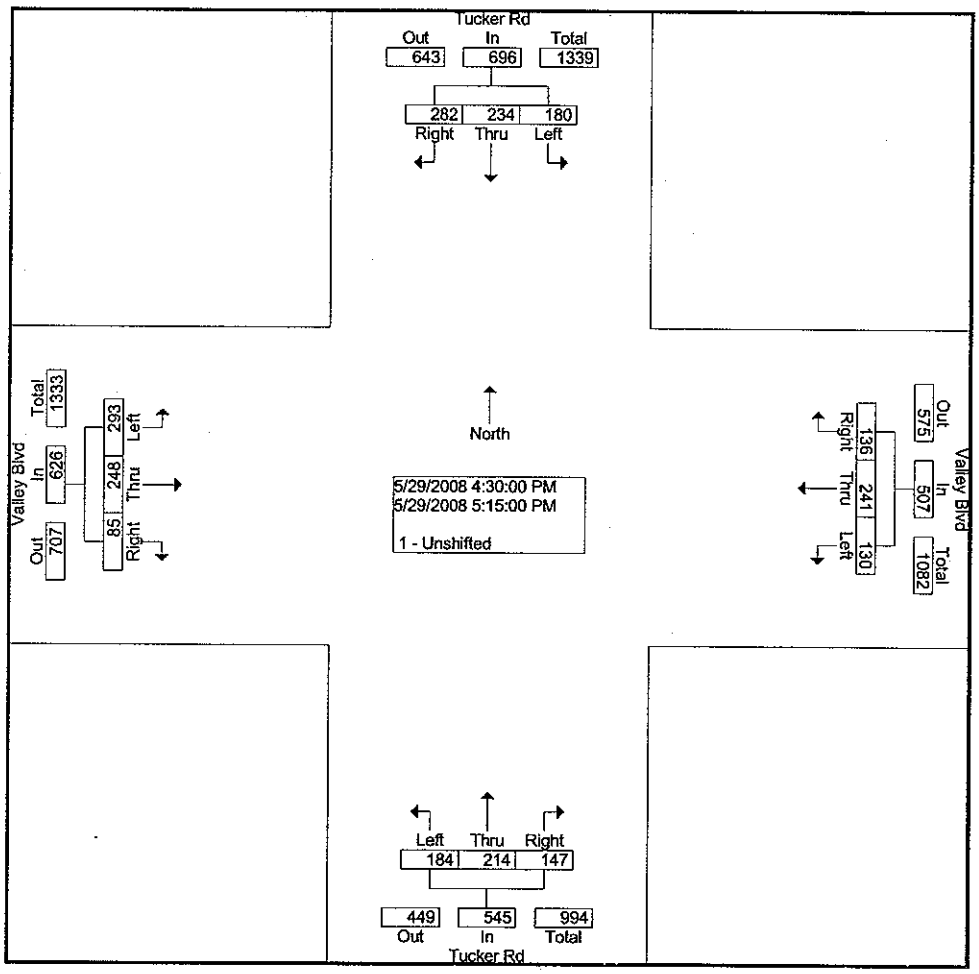
File Name : TuckVall
Site Code : 00000000
Start Date : 5/29/2008
Page No : 3

	Tucker Rd Southbound				Valley Blvd Westbound				Tucker Rd Northbound				Valley Blvd Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour From 12:00 PM to 05:45 PM - Peak 1 of 1																	
Intersection	04:30 PM																
Volume	180	234	282	696	130	241	136	507	184	214	147	545	293	248	85	626	2374
Percent	25.9	33.6	40.5		25.6	47.5	26.8		33.8	39.3	27.0		46.8	39.6	13.6		
04:30 Volume	46	48	73	167	41	62	25	128	50	59	50	159	89	68	23	180	634
Peak Factor																	0.936
High Int.	04:45 PM				04:45 PM				04:30 PM				04:30 PM				
Volume	55	68	69	192	34	63	39	136	50	59	50	159	89	68	23	180	
Peak Factor				0.906				0.932				0.857				0.869	



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City Traffic Counters
626.256.4171

File Name : TuckHigh
Site Code : 00000000
Start Date : 2/5/2009
Page No : 1

Groups Printed- 1 - Unshifted

	Tucker Rd Southbound			Highline Rd Westbound			Tucker Rd Northbound			Highline Rd Eastbound			
Start Time	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Int. Total
Factor	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	
07:00 AM	20	0	3	0	22	7	2	1	1	21	125	0	202
07:15 AM	8	1	5	1	21	10	0	0	2	16	52	0	116
07:30 AM	8	0	7	1	15	9	0	3	0	32	36	0	111
07:45 AM	8	2	6	0	11	6	0	0	2	20	36	0	91
Total	44	3	21	2	69	32	2	4	5	89	249	0	520
08:00 AM	5	2	5	0	15	4	0	2	0	16	24	1	74
08:15 AM	6	2	4	1	10	4	1	2	1	17	20	1	69
08:30 AM	14	6	9	3	16	9	1	7	0	31	26	2	124
08:45 AM	11	4	9	2	9	4	0	6	3	26	14	0	88
Total	36	14	27	6	50	21	2	17	4	90	84	4	355
04:00 PM	6	2	20	3	23	14	2	2	0	19	11	0	102
04:15 PM	7	1	20	2	26	21	1	3	1	15	15	0	112
04:30 PM	9	2	29	2	33	9	2	1	3	12	18	2	122
04:45 PM	13	4	29	3	29	13	2	5	1	20	15	0	134
Total	35	9	98	10	111	57	7	11	5	66	59	2	470
05:00 PM	5	3	34	0	36	13	2	3	1	15	8	0	120
05:15 PM	11	2	36	1	41	13	1	0	1	11	9	1	127
05:30 PM	6	2	31	0	40	10	0	3	0	9	10	1	112
05:45 PM	5	3	22	2	30	11	1	2	1	9	11	1	98
Total	27	10	123	3	147	47	4	8	3	44	38	3	457
Grand Total	142	36	269	21	377	157	15	40	17	289	430	9	1802
Apprch %	31.8	8.1	60.2	3.8	67.9	28.3	20.8	55.6	23.6	39.7	59.1	1.2	
Total %	7.9	2.0	14.9	1.2	20.9	8.7	0.8	2.2	0.9	16.0	23.9	0.5	

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File Name : TuckHigh
Site Code : 00000000
Start Date : 2/5/2009
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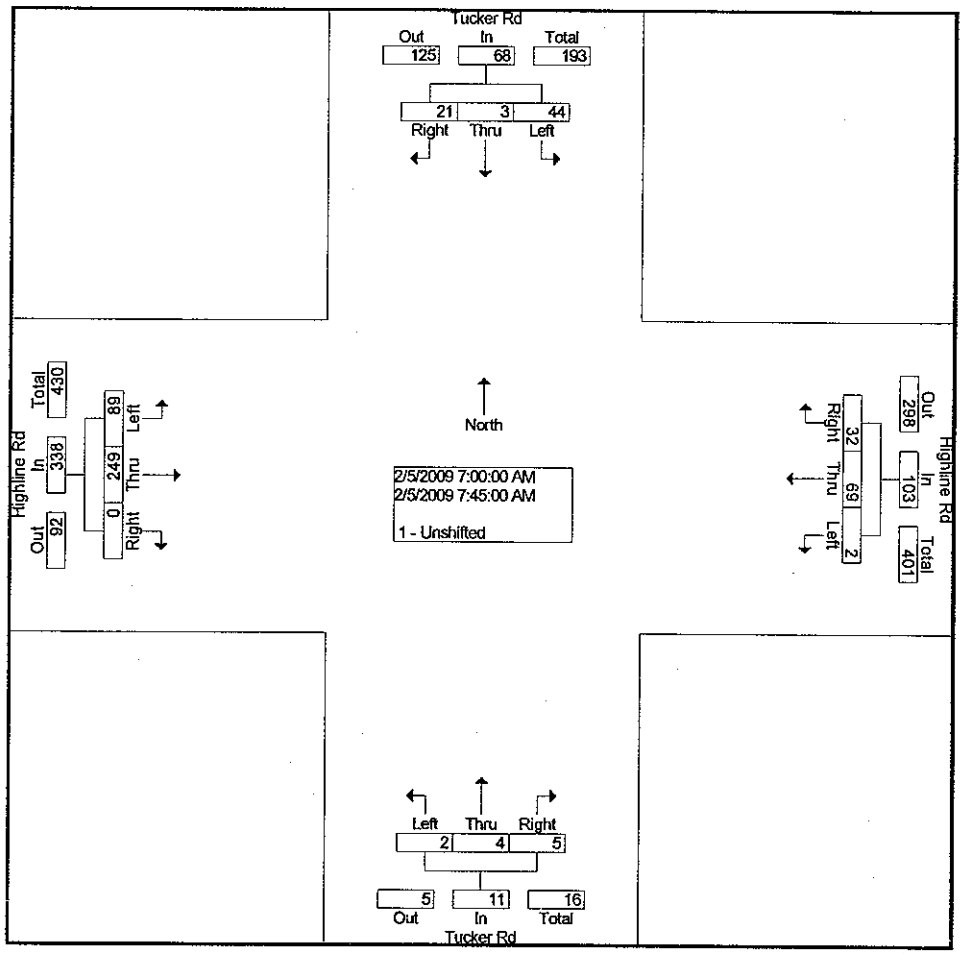
	Tucker Rd Southbound				Highline Rd Westbound				Tucker Rd Northbound				Highline Rd Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour From 07:00 AM to 11:45 AM - Peak 1 of 1																	
Intersection	07:00 AM																
Volume	44	3	21	68	2	69	32	103	2	4	5	11	89	249	0	338	520
Percent	64.7	4.4	30.9		1.9	67.0	31.1		18.2	36.4	45.5		26.3	73.7	0.0		
07:00 Volume	20	0	3	23	0	22	7	29	2	1	1	4	21	125	0	146	202
Peak Factor																	0.644
High Int.	07:00 AM				07:15 AM				07:00 AM				07:00 AM				
Volume	20	0	3	23	1	21	10	32	2	1	1	4	21	125	0	146	
Peak Factor				0.739				0.805				0.688				0.579	



City Traffic Counters
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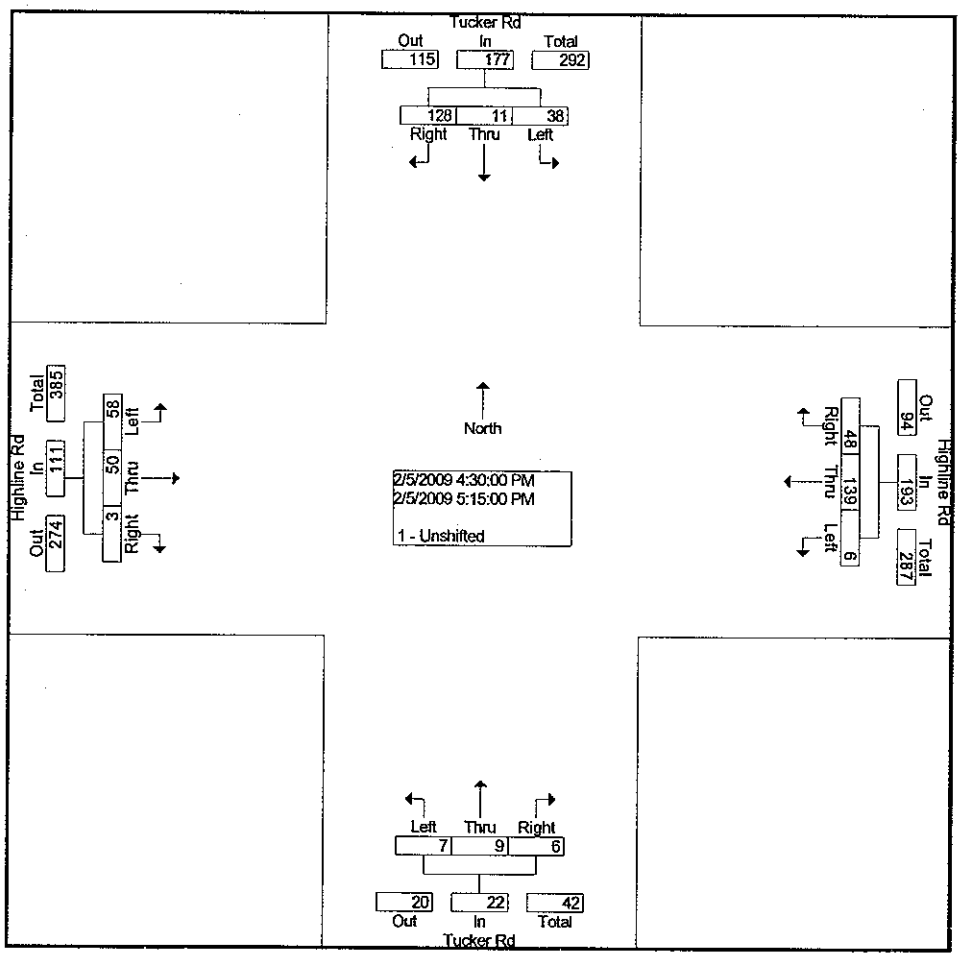
File Name : TuckHigh
Site Code : 00000000
Start Date : 2/5/2009
Page No : 3

	Tucker Rd Southbound				Highline Rd Westbound				Tucker Rd Northbound				Highline Rd Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour From 12:00 PM to 05:45 PM - Peak 1 of 1																	
Intersection	04:30 PM																
Volume	38	11	128	177	6	139	48	193	7	9	6	22	58	50	3	111	503
Percent	21.5	6.2	72.3		3.1	72.0	24.9		31.8	40.9	27.3		52.3	45.0	2.7		
04:45 Volume	13	4	29	46	3	29	13	45	2	5	1	8	20	15	0	35	134
Peak Factor																	0.938
High Int.	05:15 PM				05:15 PM				04:45 PM				04:45 PM				
Volume	11	2	36	49	1	41	13	55	2	5	1	8	20	15	0	35	
Peak Factor				0.903				0.877				0.688				0.793	



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City Traffic Counters
626.256.4171

File Name : MVvall
Site Code : 00000000
Start Date : 2/5/2009
Page No : 1

Groups Printed- 1 - Unshifted

	Mountain View Ave Southbound			West Valley Blvd Westbound			Mountain View Ave Northbound			West Valley Blvd Eastbound			
Start Time	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Int. Total
Factor	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	
07:00 AM	1	0	7	0	61	1	0	0	0	8	169	0	247
07:15 AM	2	0	3	0	92	5	0	0	0	4	85	0	191
07:30 AM	0	0	10	0	78	3	0	0	0	9	48	0	148
07:45 AM	3	0	5	0	54	4	0	0	0	11	53	0	130
Total	6	0	25	0	285	13	0	0	0	32	355	0	716
08:00 AM	5	0	5	0	83	1	0	0	0	7	61	0	162
08:15 AM	2	0	9	0	69	5	0	0	0	9	59	0	153
08:30 AM	1	0	6	0	71	5	0	0	0	12	73	0	168
08:45 AM	0	0	10	0	91	8	0	0	0	24	69	0	202
Total	8	0	30	0	314	19	0	0	0	52	262	0	685
04:00 PM	3	0	21	0	90	3	0	0	0	16	96	0	229
04:15 PM	2	0	23	0	98	3	0	0	0	19	113	0	258
04:30 PM	4	0	22	0	84	2	0	0	0	14	105	0	231
04:45 PM	3	0	28	0	99	7	0	0	0	20	117	0	274
Total	12	0	94	0	371	15	0	0	0	69	431	0	992
05:00 PM	8	0	30	0	117	5	0	0	0	15	99	0	274
05:15 PM	2	0	25	0	97	4	0	0	0	12	82	0	222
05:30 PM	2	0	14	0	86	3	0	0	0	10	78	0	193
05:45 PM	3	0	24	0	76	5	0	0	0	15	84	0	207
Total	15	0	93	0	376	17	0	0	0	52	343	0	896
Grand Total	41	0	242	0	1346	64	0	0	0	205	1391	0	3289
Apprch %	14.5	0.0	85.5	0.0	95.5	4.5	0.0	0.0	0.0	12.8	87.2	0.0	
Total %	1.2	0.0	7.4	0.0	40.9	1.9	0.0	0.0	0.0	6.2	42.3	0.0	

City Traffic Counters
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File Name : MVvall
Site Code : 00000000
Start Date : 2/5/2009
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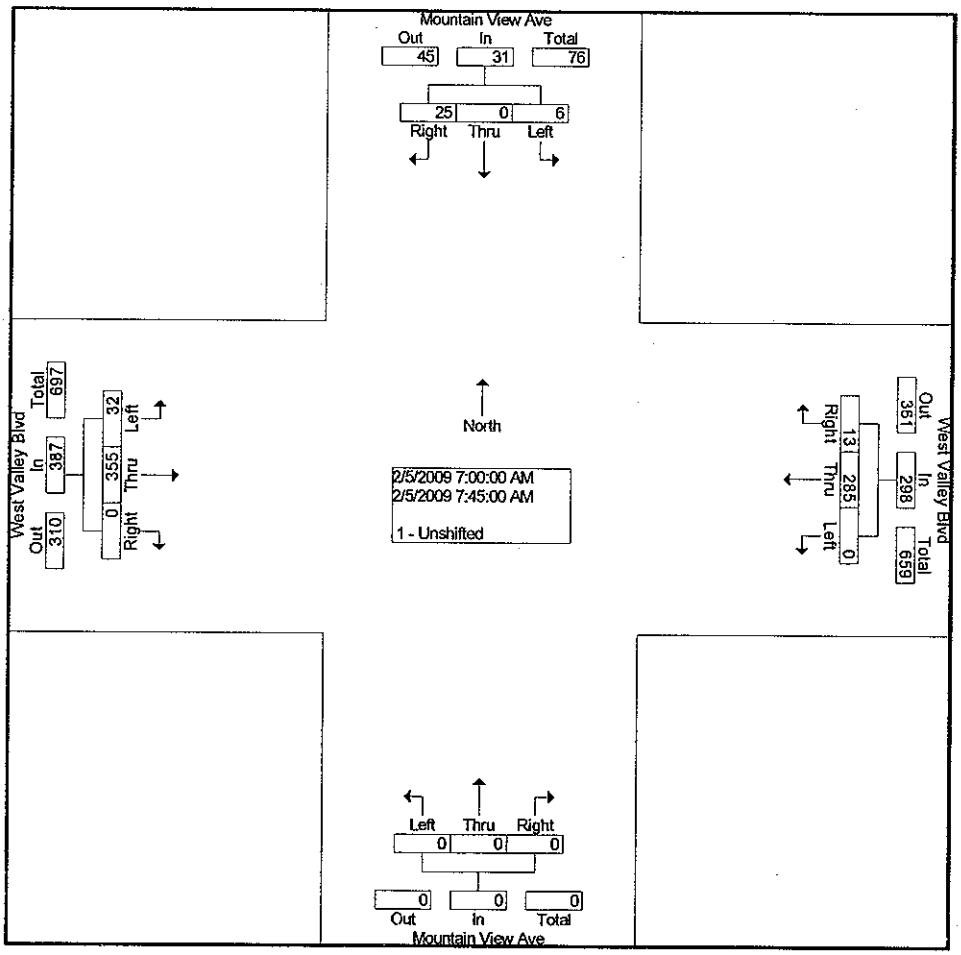
	Mountain View Ave Southbound				West Valley Blvd Westbound				Mountain View Ave Northbound				West Valley Blvd Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour From 07:00 AM to 11:45 AM - Peak 1 of 1																	
Intersection	07:00 AM																
Volume	6	0	25	31	0	285	13	298	0	0	0	0	32	355	0	387	716
Percent	19.4	0.0	80.6		0.0	95.6	4.4		0.0	0.0	0.0		8.3	91.7	0.0		
07:00 Volume	1	0	7	8	0	61	1	62	0	0	0	0	8	169	0	177	247
Peak Factor																	0.725
High Int.	07:30 AM				07:15 AM				6:45:00 AM				07:00 AM				
Volume	0	0	10	10	0	92	5	97	0	0	0	0	8	169	0	177	
Peak Factor				0.775				0.768								0.547	



City Traffic Counters
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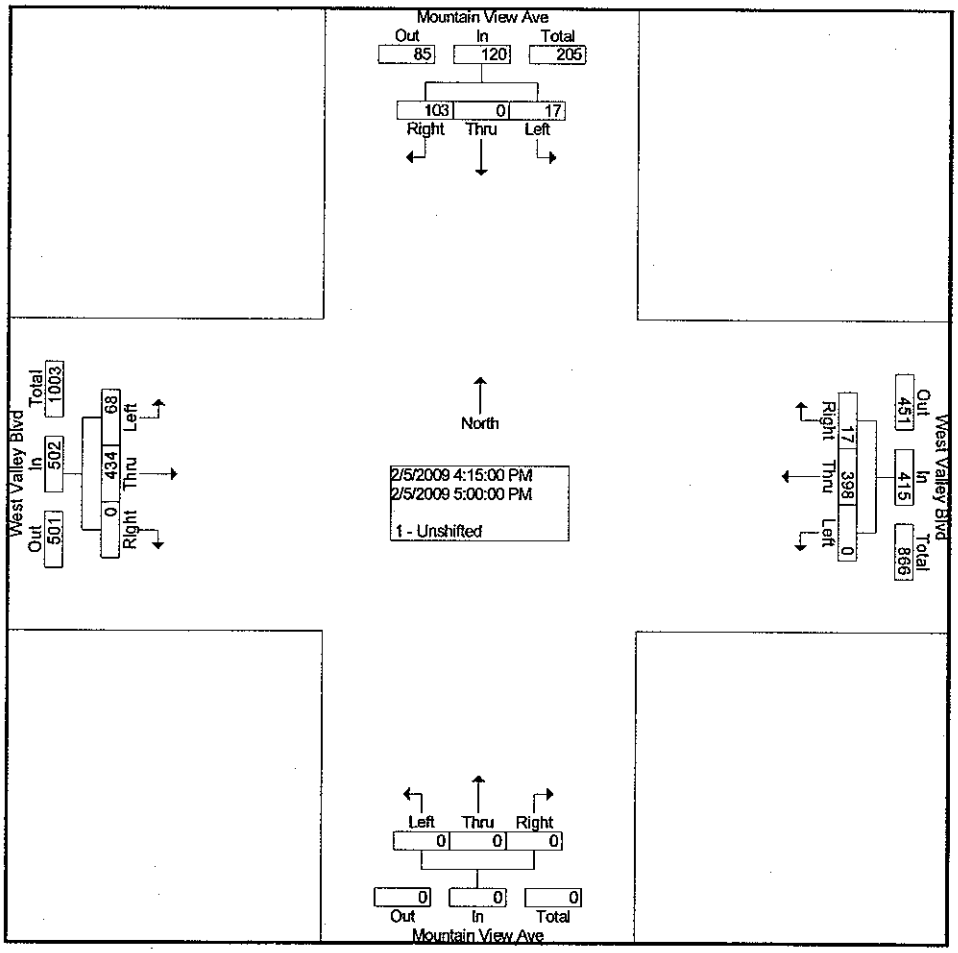
File Name : MVvall
Site Code : 00000000
Start Date : 2/5/2009
Page No : 3

	Mountain View Ave Southbound				West Valley Blvd Westbound				Mountain View Ave Northbound				West Valley Blvd Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour From 12:00 PM to 05:45 PM - Peak 1 of 1																	
Intersection	04:15 PM																
Volume	17	0	103	120	0	398	17	415	0	0	0	0	68	434	0	502	1037
Percent	14.2	0.0	85.8		0.0	95.9	4.1		0.0	0.0	0.0		13.5	86.5	0.0		
05:00 Volume	8	0	30	38	0	117	5	122	0	0	0	0	15	99	0	114	274
Peak Factor																	0.946
High Int.	05:00 PM				05:00 PM								04:45 PM				
Volume	8	0	30	38	0	117	5	122	0	0	0	0	20	117	0	137	
Peak Factor				0.789				0.850								0.916	



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City Traffic Counters
626.256.4171

File Name : MtTehach
Site Code : 00000000
Start Date : 5/29/2008
Page No : 1

Groups Printed- 1 - Unshifted

	Mt. View Ave Southbound			Tehachapi Blvd Westbound			Mt. View Ave Northbound			Tehachapi Blvd Eastbound			
Start Time	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Int. Total
Factor	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	
07:00 AM	0	0	0	1	38	1	5	0	1	0	99	15	160
07:15 AM	0	0	1	3	54	1	2	0	7	0	64	13	145
07:30 AM	2	0	0	2	63	0	19	0	3	1	72	10	172
07:45 AM	3	0	0	1	46	0	3	0	1	1	79	5	139
Total	5	0	1	7	201	2	29	0	12	2	314	43	616
08:00 AM	2	0	0	2	67	3	2	0	2	0	71	5	154
08:15 AM	1	0	0	4	70	0	1	0	4	0	70	7	157
08:30 AM	0	0	0	2	58	0	4	0	2	2	77	5	150
08:45 AM	0	0	0	1	65	1	8	0	3	3	91	11	183
Total	3	0	0	9	260	4	15	0	11	5	309	28	644
04:00 PM	1	1	5	1	111	1	11	0	14	2	95	6	248
04:15 PM	5	1	6	6	109	2	11	1	7	1	119	8	276
04:30 PM	5	1	4	5	115	4	18	0	8	4	124	7	295
04:45 PM	1	3	6	2	124	2	11	1	7	4	113	12	286
Total	12	6	21	14	459	9	51	2	36	11	451	33	1105
05:00 PM	2	0	4	6	129	1	9	0	9	4	120	8	292
05:15 PM	3	0	1	7	129	0	14	0	10	3	104	14	285
05:30 PM	3	0	1	6	108	0	6	0	6	2	123	9	264
05:45 PM	0	0	3	10	100	0	5	0	6	2	128	11	265
Total	8	0	9	29	466	1	34	0	31	11	475	42	1106
Grand Total	28	6	31	59	1386	16	129	2	90	29	1549	146	3471
Apprch %	43.1	9.2	47.7	4.0	94.9	1.1	58.4	0.9	40.7	1.7	89.8	8.5	
Total %	0.8	0.2	0.9	1.7	39.9	0.5	3.7	0.1	2.6	0.8	44.6	4.2	

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File Name : MtTehach
Site Code : 00000000
Start Date : 5/29/2008
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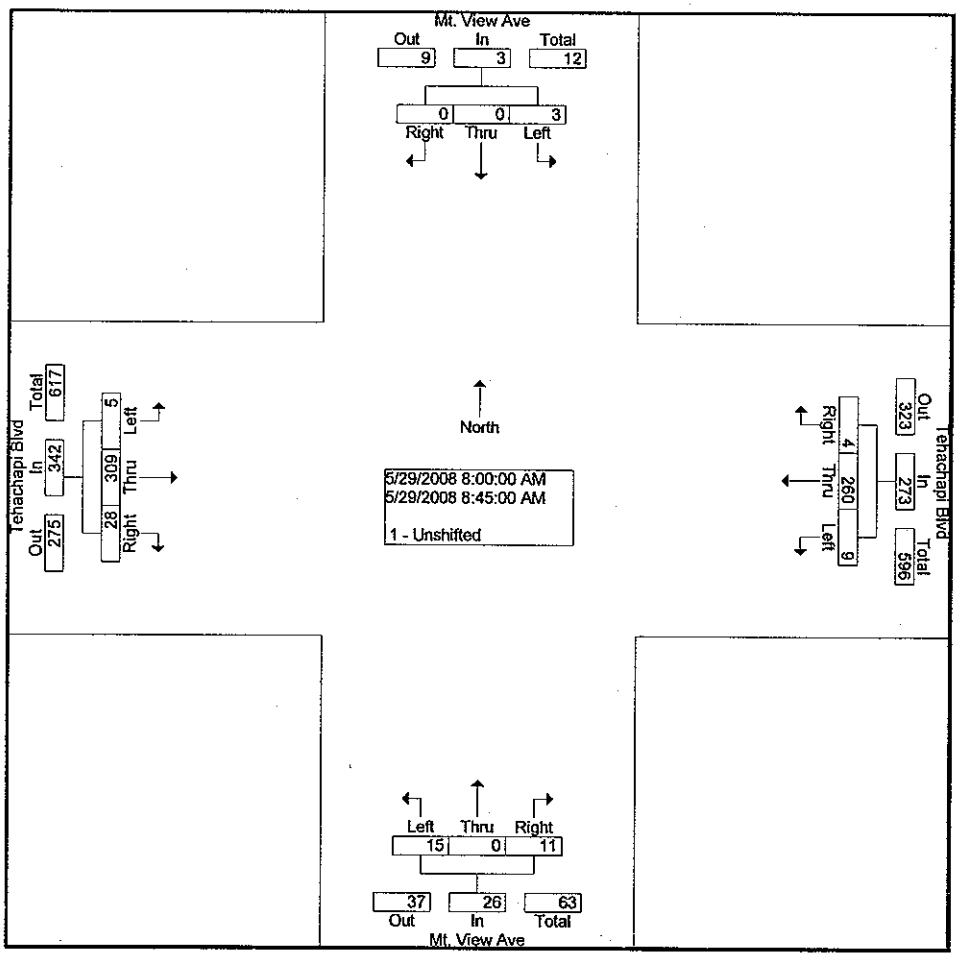
	Mt. View Ave Southbound				Tehachapi Blvd Westbound				Mt. View Ave Northbound				Tehachapi Blvd Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour From 07:00 AM to 12:30 PM - Peak 1 of 1																	
Intersection	08:00 AM																
Volume	3	0	0	3	9	260	4	273	15	0	11	26	5	309	28	342	644
Percent	100.0	0.0	0.0		3.3	95.2	1.5		57.7	0.0	42.3		1.5	90.4	8.2		
08:45 Volume	0	0	0	0	1	65	1	67	8	0	3	11	3	91	11	105	183
Peak Factor																	0.880
High Int.	08:00 AM				08:15 AM				08:45 AM				08:45 AM				
Volume	2	0	0	2	4	70	0	74	8	0	3	11	3	91	11	105	
Peak Factor				0.375				0.922				0.591				0.814	



City Traffic Counters
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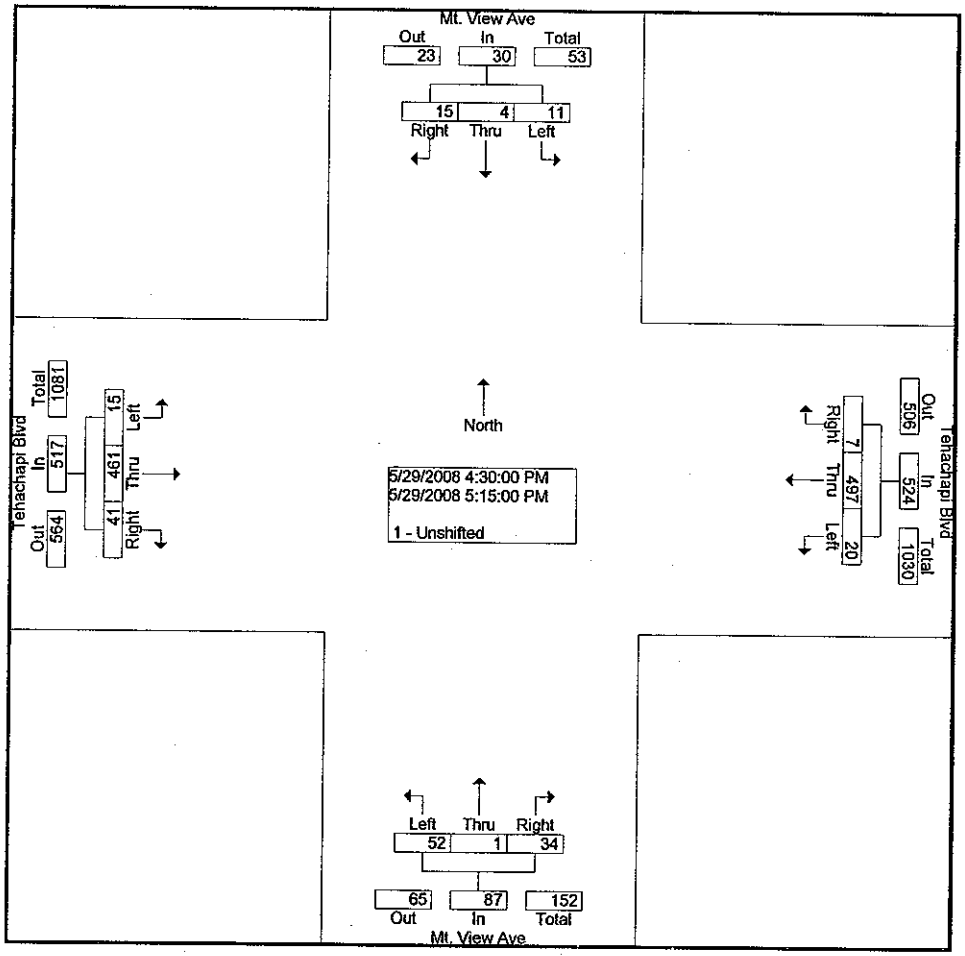
File Name : MtTehach
Site Code : 00000000
Start Date : 5/29/2008
Page No : 3

	Mt. View Ave Southbound				Tehachapi Blvd Westbound				Mt. View Ave Northbound				Tehachapi Blvd Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour From 12:45 PM to 05:45 PM - Peak 1 of 1																	
Intersection	04:30 PM																
Volume	11	4	15	30	20	497	7	524	52	1	34	87	15	461	41	517	1158
Percent	36.7	13.3	50.0		3.8	94.8	1.3		59.8	1.1	39.1		2.9	89.2	7.9		
04:30 Volume	5	1	4	10	5	115	4	124	18	0	8	26	4	124	7	135	295
Peak Factor																	0.981
High Int.	04:30 PM				05:00 PM				04:30 PM				04:30 PM				
Volume	5	1	4	10	6	129	1	136	18	0	8	26	4	124	7	135	
Peak Factor				0.750				0.963				0.837				0.957	



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City Traffic Counters
626.256.4171

File Name : MulTeh
Site Code : 00000000
Start Date : 5/29/2008
Page No : 1

Groups Printed- 1 - Unshifted

	Mulberry St Southbound			Tehachapi Blvd Westbound			Mulberry St Northbound			Tehachapi Blvd Eastbound			
Start Time	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Int. Total
Factor	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	
07:00 AM	0	0	0	1	30	0	0	0	3	0	81	6	121
07:15 AM	0	0	0	3	50	0	3	0	3	0	116	1	176
07:30 AM	0	0	0	5	62	0	8	0	6	0	71	5	157
07:45 AM	0	0	0	7	47	1	3	0	4	0	70	9	141
Total	0	0	0	16	189	1	14	0	16	0	338	21	595
08:00 AM	0	0	0	3	51	0	7	0	3	0	79	1	144
08:15 AM	0	0	0	3	71	0	3	0	0	0	52	5	134
08:30 AM	0	0	0	4	52	1	5	0	6	2	70	6	146
08:45 AM	0	0	0	3	61	2	3	0	2	0	86	8	165
Total	0	0	0	13	235	3	18	0	11	2	287	20	589
04:00 PM	3	0	8	0	124	3	0	0	0	1	101	0	240
04:15 PM	3	0	7	0	127	0	0	0	0	0	125	0	262
04:30 PM	3	0	5	0	133	5	0	0	0	5	132	1	284
04:45 PM	4	0	5	0	127	10	0	0	0	7	117	0	270
Total	13	0	25	0	511	18	0	0	0	13	475	1	1056
05:00 PM	4	0	9	0	145	12	0	0	0	6	138	0	314
05:15 PM	3	0	7	1	134	11	0	0	0	4	125	0	285
05:30 PM	1	0	2	0	114	2	0	0	0	0	136	0	255
05:45 PM	1	0	2	0	100	4	0	0	0	3	139	0	249
Total	9	0	20	1	493	29	0	0	0	13	538	0	1103
Grand Total	22	0	45	30	1428	51	32	0	27	28	1638	42	3343
Apprch %	32.8	0.0	67.2	2.0	94.6	3.4	54.2	0.0	45.8	1.6	95.9	2.5	
Total %	0.7	0.0	1.3	0.9	42.7	1.5	1.0	0.0	0.8	0.8	49.0	1.3	

City Traffic Counters
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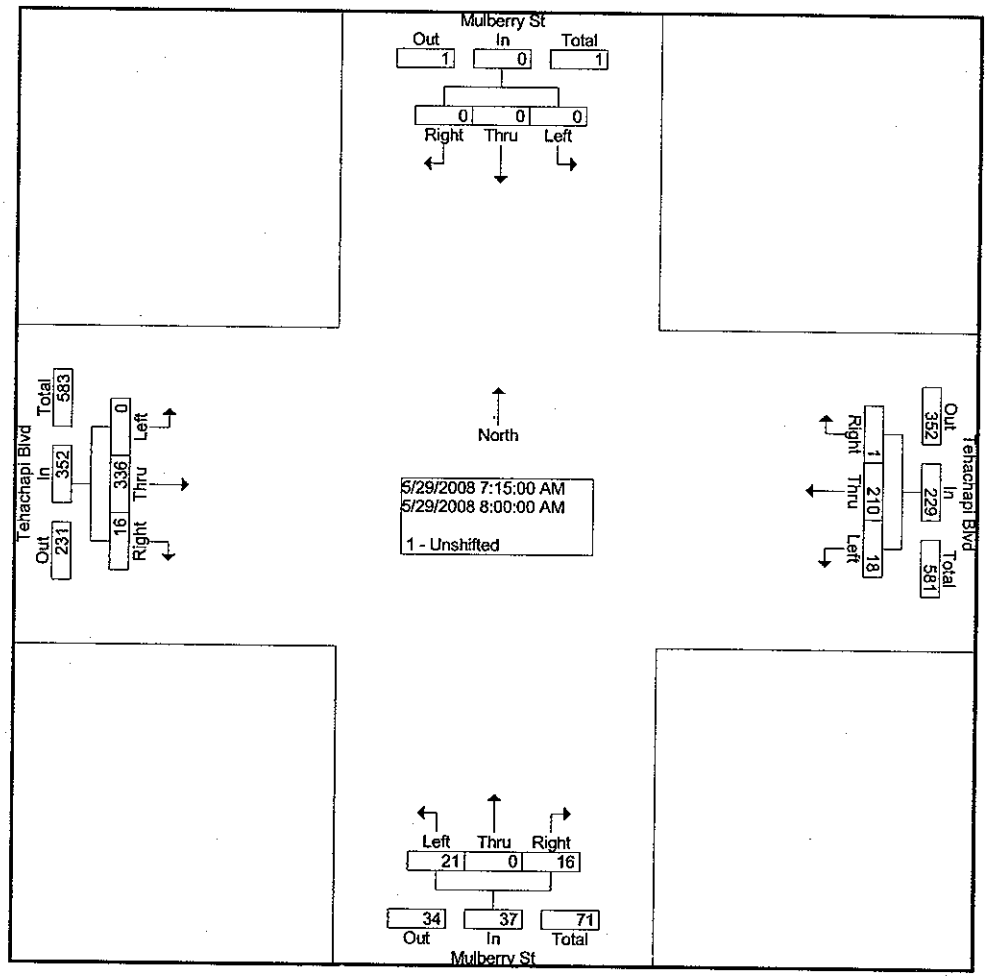
File Name : MulTeh
Site Code : 00000000
Start Date : 5/29/2008
Page No : 2

	Mulberry St Southbound				Tehachapi Blvd Westbound				Mulberry St Northbound				Tehachapi Blvd Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour From 07:00 AM to 11:45 AM - Peak 1 of 1																	
Intersection	07:15 AM																
Volume	0	0	0	0	18	210	1	229	21	0	16	37	0	336	16	352	618
Percent	0.0	0.0	0.0		7.9	91.7	0.4		56.8	0.0	43.2		0.0	95.5	4.5		
07:15 Volume	0	0	0	0	3	50	0	53	3	0	3	6	0	116	1	117	176
Peak Factor																	0.878
High Int.	6:45:00 AM				07:30 AM				07:30 AM				07:15 AM				
Volume	0	0	0	0	5	62	0	67	8	0	6	14	0	116	1	117	
Peak Factor								0.854				0.661				0.752	



City Traffic Counters
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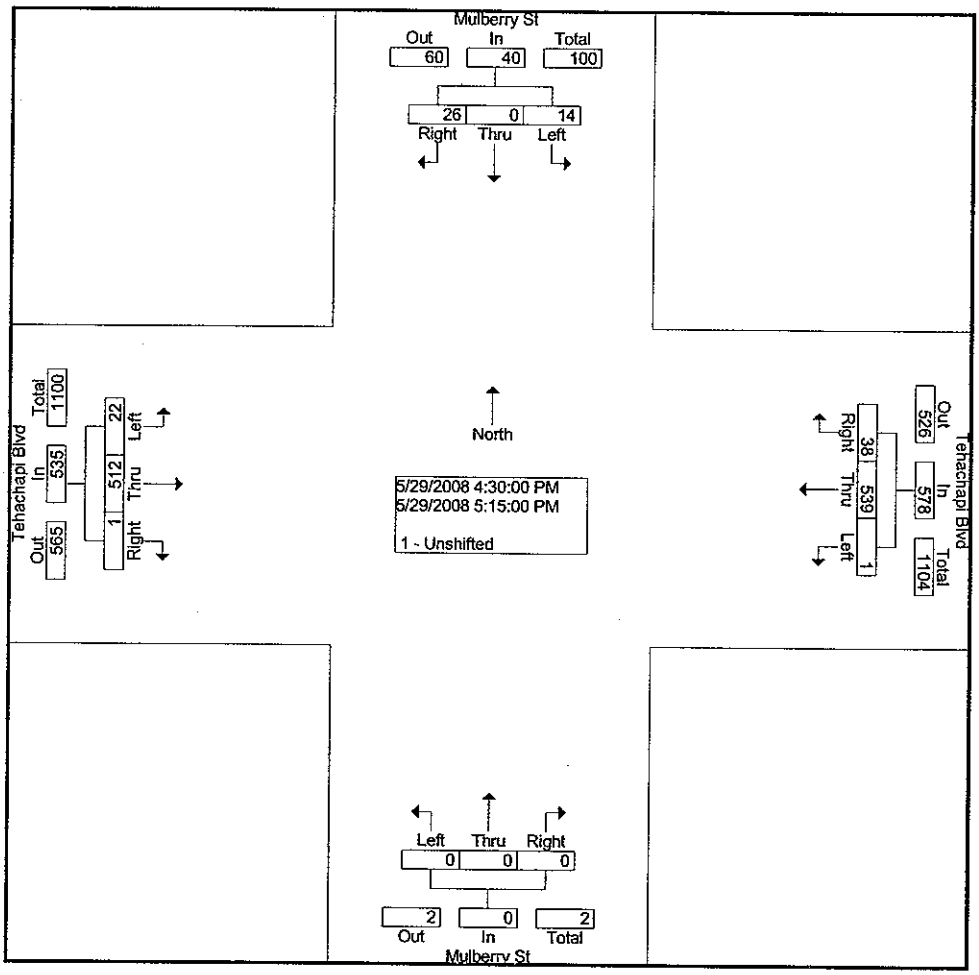
File Name : MulTeh
Site Code : 00000000
Start Date : 5/29/2008
Page No : 3

	Mulberry St Southbound				Tehachapi Blvd Westbound				Mulberry St Northbound				Tehachapi Blvd Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour From 12:00 PM to 05:45 PM - Peak 1 of 1																	
Intersection	04:30 PM																
Volume	14	0	26	40	1	539	38	578	0	0	0	0	22	512	1	535	1153
Percent	35.0	0.0	65.0		0.2	93.3	6.6		0.0	0.0	0.0		4.1	95.7	0.2		
05:00 Volume	4	0	9	13	0	145	12	157	0	0	0	0	6	138	0	144	314
Peak Factor																	0.918
High Int.	05:00 PM				05:00 PM								05:00 PM				
Volume	4	0	9	13	0	145	12	157	0	0	0	0	6	138	0	144	
Peak Factor				0.769				0.920								0.929	



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City Traffic Counters
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File Name : MillTeh
Site Code : 00000000
Start Date : 2/5/2009
Page No : 1

Groups Printed- 1 - Unshifted

	South Mill St Southbound			West Tehachapi Blvd Westbound			South Mill St Northbound			West Tehachapi Blvd Eastbound			
Start Time	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Int. Total
Factor	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	
07:00 AM	0	0	0	4	29	0	4	0	6	0	115	1	159
07:15 AM	0	0	0	8	81	0	5	0	12	0	115	3	224
07:30 AM	0	0	0	13	67	0	5	0	5	0	71	3	164
07:45 AM	0	0	0	7	43	0	4	0	6	0	66	8	134
Total	0	0	0	32	220	0	18	0	29	0	367	15	681
08:00 AM	0	0	0	3	61	0	3	0	7	0	86	7	167
08:15 AM	0	0	0	6	40	0	3	0	6	0	52	5	112
08:30 AM	0	0	0	3	46	0	1	0	5	0	53	11	119
08:45 AM	0	0	0	6	55	0	4	0	12	0	85	4	166
Total	0	0	0	18	202	0	11	0	30	0	276	27	564
04:00 PM	0	0	0	8	95	0	4	0	16	0	66	7	196
04:15 PM	0	0	0	13	103	0	3	0	6	0	58	11	194
04:30 PM	0	0	0	9	120	0	8	0	10	0	73	4	224
04:45 PM	0	0	0	7	85	0	11	0	7	0	80	8	198
Total	0	0	0	37	403	0	26	0	39	0	277	30	812
05:00 PM	0	0	0	6	88	0	12	0	11	0	71	11	199
05:15 PM	0	0	0	2	91	0	9	0	5	0	87	7	201
05:30 PM	0	0	0	4	79	0	6	0	11	0	72	3	175
05:45 PM	0	0	0	5	52	0	5	0	8	0	51	4	125
Total	0	0	0	17	310	0	32	0	35	0	281	25	700
Grand Total	0	0	0	104	1135	0	87	0	133	0	1201	97	2757
Apprch %	0.0	0.0	0.0	8.4	91.6	0.0	39.5	0.0	60.5	0.0	92.5	7.5	
Total %	0.0	0.0	0.0	3.8	41.2	0.0	3.2	0.0	4.8	0.0	43.6	3.5	

City Traffic Counters
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File Name : MillTeh
Site Code : 00000000
Start Date : 2/5/2009
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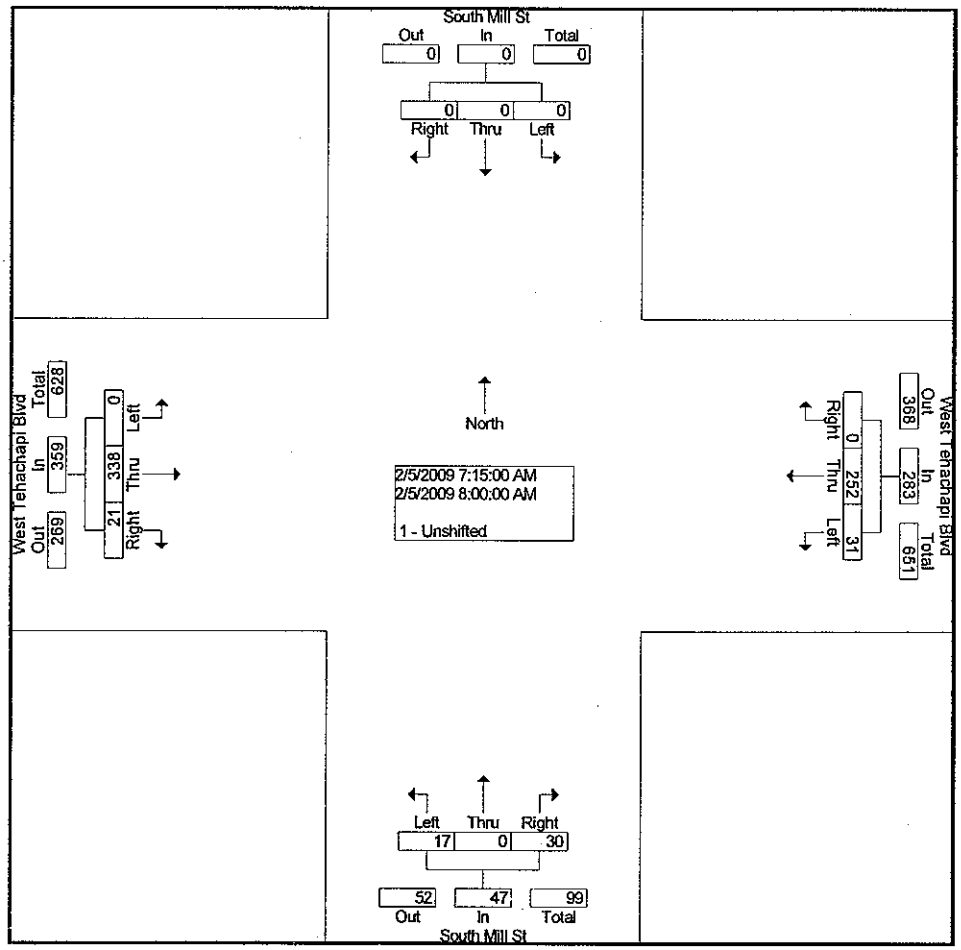
	South Mill St Southbound				West Tehachapi Blvd Westbound				South Mill St Northbound				West Tehachapi Blvd Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour From 07:00 AM to 11:45 AM - Peak 1 of 1																	
Intersection	07:15 AM																
Volume	0	0	0	0	31	252	0	283	17	0	30	47	0	338	21	359	689
Percent	0.0	0.0	0.0		11.0	89.0	0.0		36.2	0.0	63.8		0.0	94.2	5.8		
07:15 Volume	0	0	0	0	8	81	0	89	5	0	12	17	0	115	3	118	224
Peak Factor																	0.769
High Int.	6:45:00 AM				07:15 AM				07:15 AM				07:15 AM				
Volume	0	0	0	0	8	81	0	89	5	0	12	17	0	115	3	118	
Peak Factor								0.795				0.691				0.761	



City Traffic Counters
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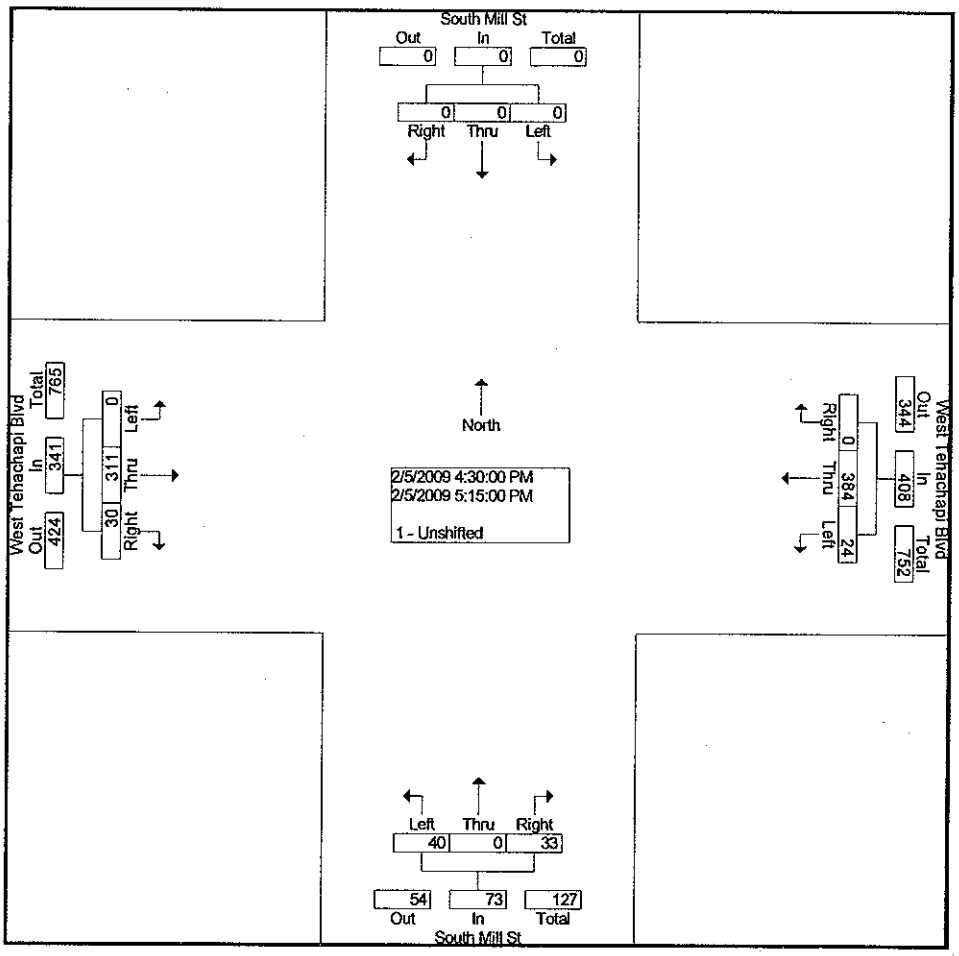
File Name : MillTeh
Site Code : 00000000
Start Date : 2/5/2009
Page No : 3

	South Mill St Southbound				West Tehachapi Blvd Westbound				South Mill St Northbound				West Tehachapi Blvd Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour From 12:00 PM to 05:45 PM - Peak 1 of 1																	
Intersection	04:30 PM																
Volume	0	0	0	0	24	384	0	408	40	0	33	73	0	311	30	341	822
Percent	0.0	0.0	0.0		5.9	94.1	0.0		54.8	0.0	45.2		0.0	91.2	8.8		
04:30 Volume	0	0	0	0	9	120	0	129	8	0	10	18	0	73	4	77	224
Peak Factor																	0.917
High Int.					04:30 PM				05:00 PM				05:15 PM				
Volume	0	0	0	0	9	120	0	129	12	0	11	23	0	87	7	94	
Peak Factor								0.791				0.793				0.907	



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City Traffic Counters
626.256.4171

File Name : CurrTeh
Site Code : 00000000
Start Date : 2/5/2009
Page No : 1

Groups Printed- 1 - Unshifted

	South Curry St Southbound			West Tehachapi Blvd Westbound			South Curry St Northbound			West Tehachapi Blvd Eastbound			
Start Time	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Int. Total
Factor	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	
07:00 AM	1	1	0	2	26	0	8	0	20	2	98	12	170
07:15 AM	0	0	0	8	90	1	7	0	11	0	107	19	243
07:30 AM	0	0	0	15	80	0	5	1	17	0	76	9	203
07:45 AM	0	2	0	6	39	0	7	1	26	0	58	10	149
Total	1	3	0	31	235	1	27	2	74	2	339	50	765
08:00 AM	0	1	0	9	52	0	11	0	18	2	80	10	183
08:15 AM	0	0	0	12	45	0	5	1	20	0	51	8	142
08:30 AM	0	0	0	18	41	2	6	1	21	1	47	14	151
08:45 AM	0	0	0	17	51	0	11	2	36	0	85	10	212
Total	0	1	0	56	189	2	33	4	95	3	263	42	688
04:00 PM	0	0	0	23	89	1	11	0	18	2	71	14	229
04:15 PM	1	0	1	23	107	0	18	2	26	0	59	10	247
04:30 PM	2	0	0	22	95	0	24	1	23	4	53	22	246
04:45 PM	1	0	1	22	66	1	31	0	23	0	67	15	227
Total	4	0	2	90	357	2	84	3	90	6	250	61	949
05:00 PM	0	0	1	31	86	1	10	0	27	1	64	22	243
05:15 PM	1	0	0	25	63	0	20	0	20	2	65	19	215
05:30 PM	1	0	0	17	67	0	14	1	17	2	60	14	193
05:45 PM	0	0	0	13	55	0	9	0	16	0	55	10	158
Total	2	0	1	86	271	1	53	1	80	5	244	65	809
Grand Total	7	4	3	263	1052	6	197	10	339	16	1096	218	3211
Apprch %	50.0	28.6	21.4	19.9	79.6	0.5	36.1	1.8	62.1	1.2	82.4	16.4	
Total %	0.2	0.1	0.1	8.2	32.8	0.2	6.1	0.3	10.6	0.5	34.1	6.8	

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File Name : CurrTeh
Site Code : 00000000
Start Date : 2/5/2009
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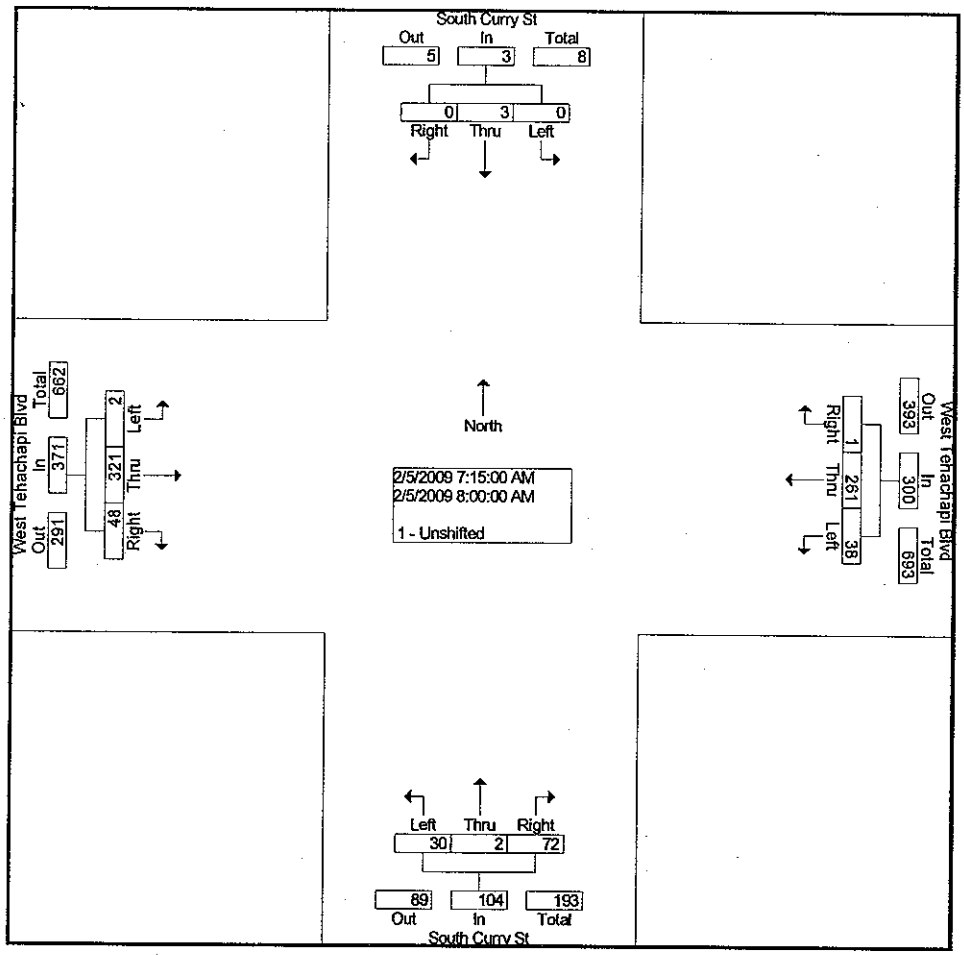
	South Curry St Southbound				West Tehachapi Blvd Westbound				South Curry St Northbound				West Tehachapi Blvd Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour From 07:00 AM to 11:45 AM - Peak 1 of 1																	
Intersection	07:15 AM																
Volume	0	3	0	3	38	261	1	300	30	2	72	104	2	321	48	371	778
Percent	0.0	100.0	0.0		12.7	87.0	0.3		28.8	1.9	69.2		0.5	86.5	12.9		
07:15 Volume	0	0	0	0	8	90	1	99	7	0	11	18	0	107	19	126	243
Peak Factor																	0.800
High Int.	07:45 AM				07:15 AM				07:45 AM				07:15 AM				
Volume	0	2	0	2	8	90	1	99	7	1	26	34	0	107	19	126	
Peak Factor				0.375				0.758				0.765				0.736	



City Traffic Counters
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File Name : CurrTeh
Site Code : 00000000
Start Date : 2/5/2009
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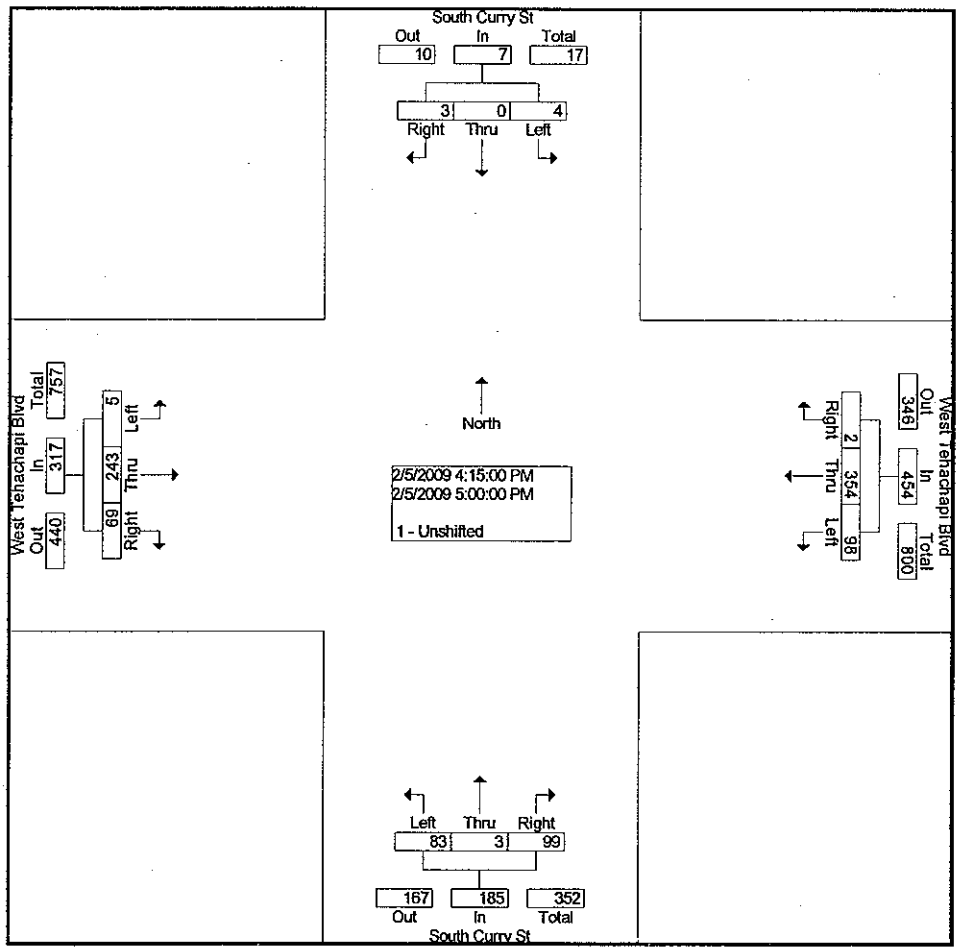
	South Curry St Southbound				West Tehachapi Blvd Westbound				South Curry St Northbound				West Tehachapi Blvd Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour From 12:00 PM to 05:45 PM - Peak 1 of 1																	
Intersection	04:15 PM																
Volume	4	0	3	7	98	354	2	454	83	3	99	185	5	243	69	317	963
Percent	57.1	0.0	42.9		21.6	78.0	0.4		44.9	1.6	53.5		1.6	76.7	21.8		
04:15 Volume	1	0	1	2	23	107	0	130	18	2	26	46	0	59	10	69	247
Peak Factor																	0.975
High Int.	04:15 PM				04:15 PM				04:45 PM				05:00 PM				
Volume	1	0	1	2	23	107	0	130	31	0	23	54	1	64	22	87	
Peak Factor				0.875				0.873				0.856				0.911	



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City Traffic Counters
626.256.4171

File Name : CurrVall
Site Code : 00000000
Start Date : 2/5/2009
Page No : 1

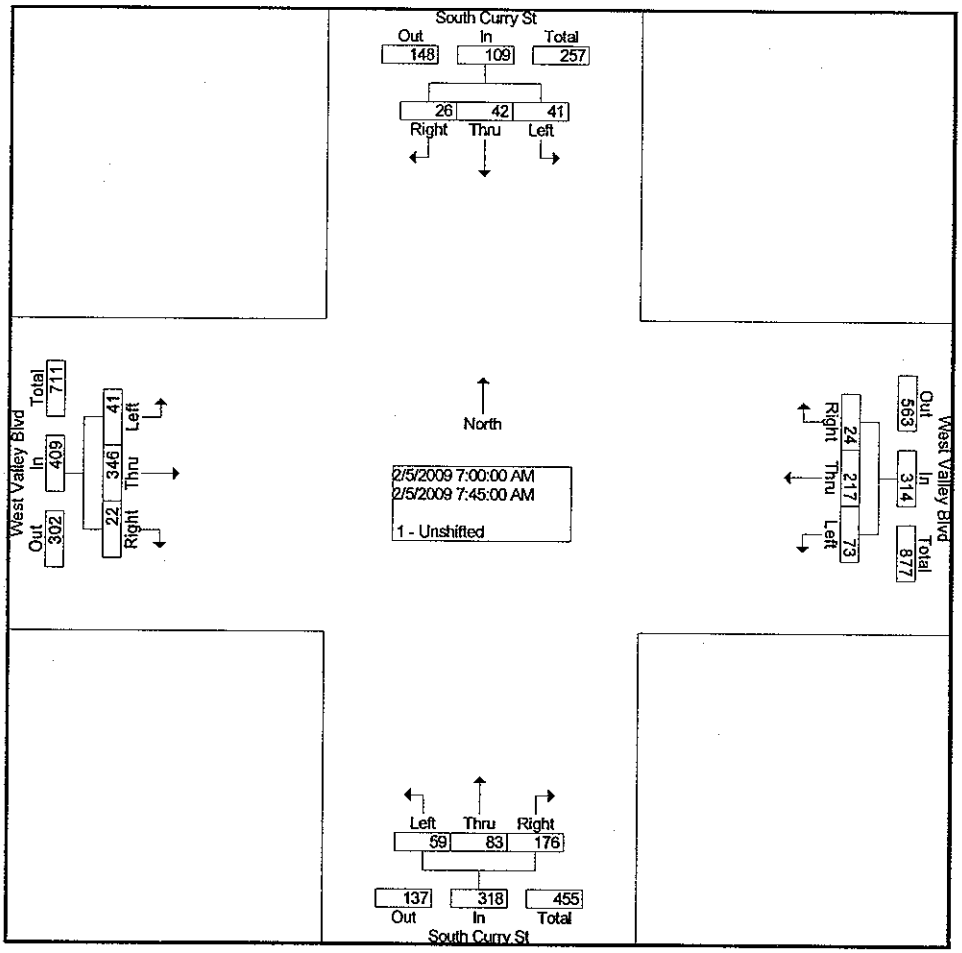
Groups Printed- 1 - Unshifted

	South Curry St Southbound			West Valley Blvd Westbound			South Curry St Northbound			West Valley Blvd Eastbound			
Start Time	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Int. Total
Factor	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	
07:00 AM	7	6	6	3	16	2	18	33	21	15	71	6	204
07:15 AM	22	10	4	16	59	6	18	18	106	6	145	4	414
07:30 AM	10	14	5	40	97	10	9	12	43	10	96	4	350
07:45 AM	2	12	11	14	45	6	14	20	6	10	34	8	182
Total	41	42	26	73	217	24	59	83	176	41	346	22	1150
08:00 AM	4	12	12	4	27	2	16	35	13	17	26	15	183
08:15 AM	7	14	13	26	40	3	26	25	20	13	32	18	237
08:30 AM	5	21	14	8	18	3	21	17	7	18	21	21	174
08:45 AM	6	22	9	16	23	3	29	38	14	30	16	33	239
Total	22	69	48	54	108	11	92	115	54	78	95	87	833
04:00 PM	0	35	27	9	32	7	16	27	8	24	31	19	235
04:15 PM	7	21	20	9	30	6	33	37	6	20	35	15	239
04:30 PM	5	31	30	13	37	4	23	31	6	26	26	32	264
04:45 PM	10	24	21	5	22	5	19	16	7	23	38	22	212
Total	22	111	98	36	121	22	91	111	27	93	130	88	950
05:00 PM	7	36	26	13	43	3	17	20	10	29	45	20	269
05:15 PM	7	37	30	17	37	10	21	20	6	18	31	24	258
05:30 PM	4	39	28	21	37	9	24	29	9	12	31	26	269
05:45 PM	3	36	18	23	31	2	26	25	2	12	30	24	232
Total	21	148	102	74	148	24	88	94	27	71	137	94	1028
Grand Total	106	370	274	237	594	81	330	403	284	283	708	291	3961
Apprch %	14.1	49.3	36.5	26.0	65.1	8.9	32.4	39.6	27.9	22.1	55.2	22.7	
Total %	2.7	9.3	6.9	6.0	15.0	2.0	8.3	10.2	7.2	7.1	17.9	7.3	

City Traffic Counters
626.256.4171

File Name : CurrVall
Site Code : 00000000
Start Date : 2/5/2009
Page No : 2

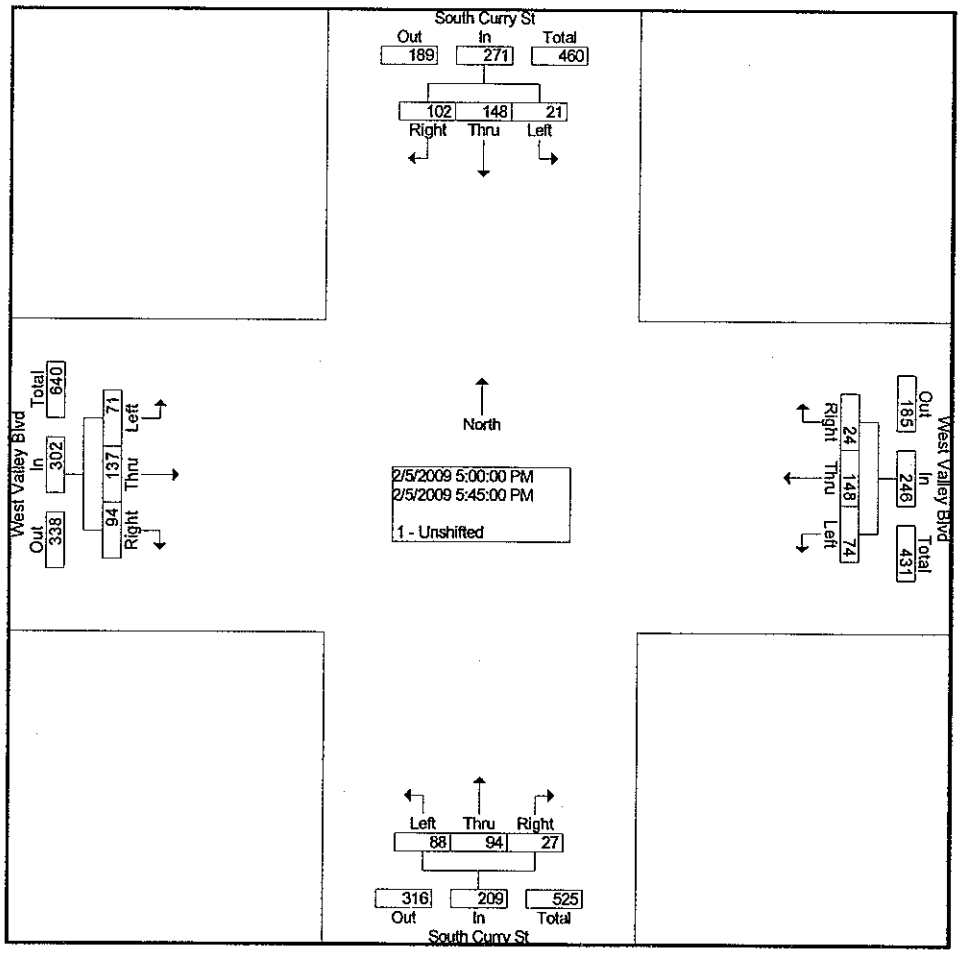
	South Curry St Southbound				West Valley Blvd Westbound				South Curry St Northbound				West Valley Blvd Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour From 07:00 AM to 11:45 AM - Peak 1 of 1																	
Intersection	07:00 AM																
Volume	41	42	26	109	73	217	24	314	59	83	176	318	41	346	22	409	1150
Percent	37.6	38.5	23.9		23.2	69.1	7.6		18.6	26.1	55.3		10.0	84.6	5.4		
07:15 Volume	22	10	4	36	16	59	6	81	18	18	106	142	6	145	4	155	414
Peak Factor																	0.694
High Int.	07:15 AM				07:30 AM				07:15 AM				07:15 AM				
Volume	22	10	4	36	40	97	10	147	18	18	106	142	6	145	4	155	
Peak Factor				0.757				0.534				0.560				0.660	



City Traffic Counters
626.256.4171

File Name : CurrVall
Site Code : 00000000
Start Date : 2/5/2009
Page No : 3

	South Curry St Southbound				West Valley Blvd Westbound				South Curry St Northbound				West Valley Blvd Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour From 12:00 PM to 05:45 PM - Peak 1 of 1																	
Intersection	05:00 PM																
Volume	21	148	102	271	74	148	24	246	88	94	27	209	71	137	94	302	1028
Percent	7.7	54.6	37.6		30.1	60.2	9.8		42.1	45.0	12.9		23.5	45.4	31.1		
05:30 Volume	4	39	28	71	21	37	9	67	24	29	9	62	12	31	26	69	269
Peak Factor																	0.955
High Int.	05:15 PM				05:30 PM				05:30 PM				05:00 PM				
Volume	7	37	30	74	21	37	9	67	24	29	9	62	29	45	20	94	
Peak Factor				0.916				0.918				0.843				0.803	



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City Traffic Counters
626.256.4171

File Name : CurSumHigh
Site Code : 00000000
Start Date : 2/5/2009
Page No : 1

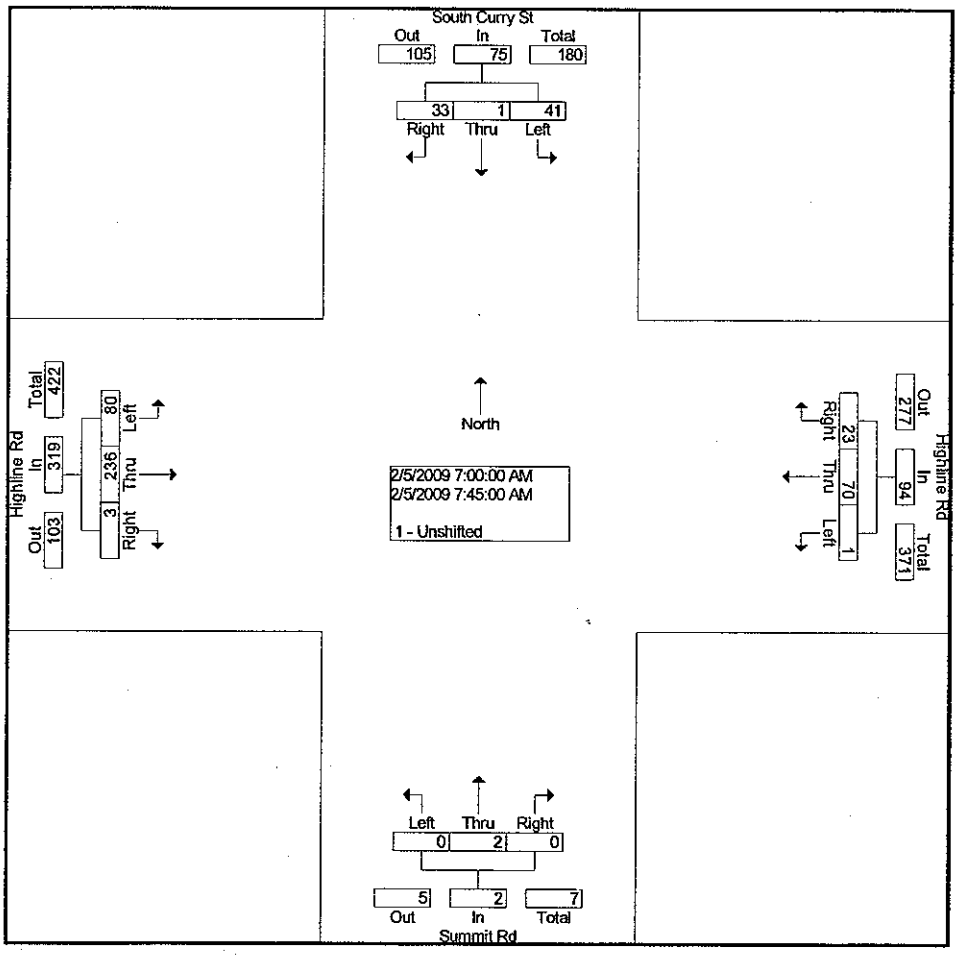
Groups Printed- 1 - Unshifted

	South Curry St Southbound			Highline Rd Westbound			Summit Rd Northbound			Highline Rd Eastbound			
Start Time	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Int. Total
Factor	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	
07:00 AM	14	0	8	0	25	6	0	0	0	36	117	0	206
07:15 AM	10	0	9	0	22	8	0	2	0	15	53	0	119
07:30 AM	9	1	11	1	12	5	0	0	0	12	34	3	88
07:45 AM	8	0	5	0	11	4	0	0	0	17	32	0	77
Total	41	1	33	1	70	23	0	2	0	80	236	3	490
08:00 AM	7	0	6	0	14	3	0	0	0	9	20	0	59
08:15 AM	8	0	7	0	12	7	0	3	0	9	24	0	70
08:30 AM	8	0	7	1	14	14	0	2	0	22	21	0	89
08:45 AM	2	2	4	1	7	5	1	0	0	10	12	0	44
Total	25	2	24	2	47	29	1	5	0	50	77	0	262
04:00 PM	5	1	9	0	43	16	0	0	0	10	16	2	102
04:15 PM	5	0	11	0	34	8	1	2	0	9	13	1	84
04:30 PM	1	0	9	0	36	11	0	0	0	9	11	0	77
04:45 PM	2	0	16	0	30	6	0	0	0	9	18	0	81
Total	13	1	45	0	143	41	1	2	0	37	58	3	344
05:00 PM	2	1	7	0	37	17	0	0	1	11	21	0	97
05:15 PM	2	0	14	0	35	10	1	0	1	4	7	2	76
05:30 PM	3	2	15	1	37	5	0	0	0	8	10	1	82
05:45 PM	2	1	11	0	30	7	1	0	0	7	9	1	69
Total	9	4	47	1	139	39	2	0	2	30	47	4	324
Grand Total	88	8	149	4	399	132	4	9	2	197	418	10	1420
Apprch %	35.9	3.3	60.8	0.7	74.6	24.7	26.7	60.0	13.3	31.5	66.9	1.6	
Total %	6.2	0.6	10.5	0.3	28.1	9.3	0.3	0.6	0.1	13.9	29.4	0.7	

City Traffic Counters
626.256.4171

File Name : CurSumHigh
Site Code : 00000000
Start Date : 2/5/2009
Page No : 2

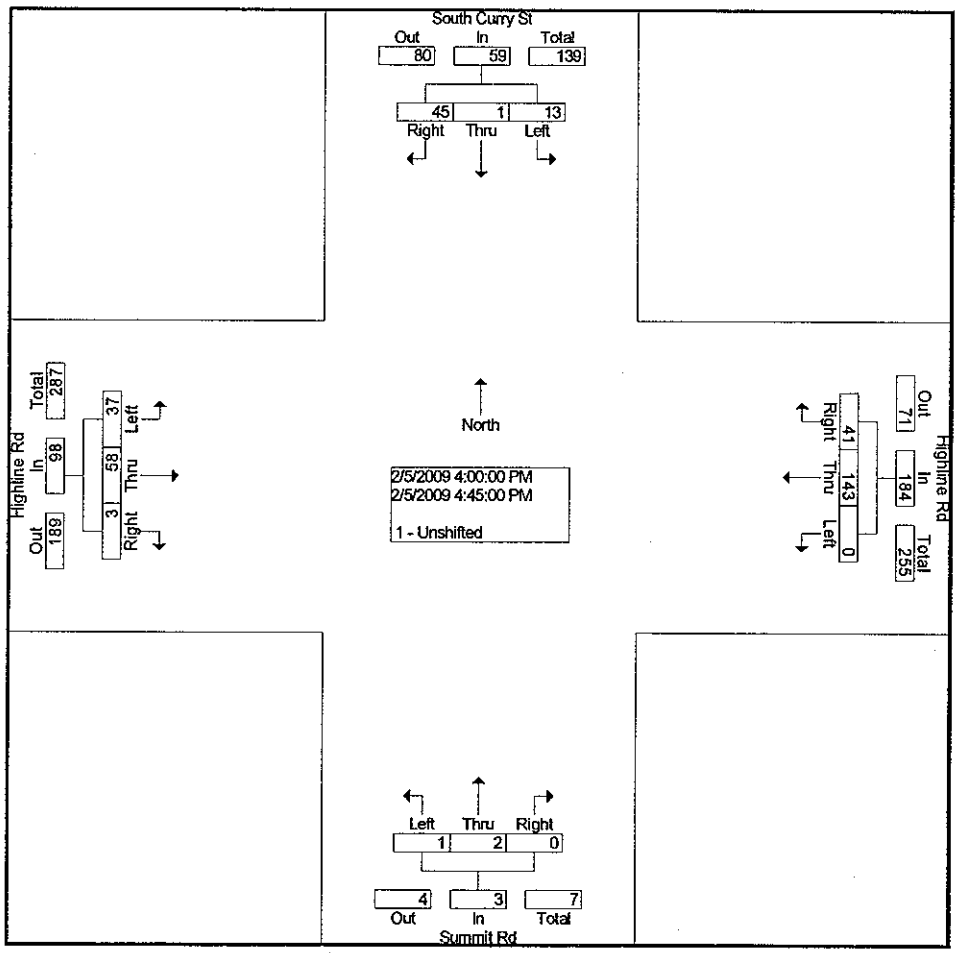
	South Curry St Southbound				Highline Rd Westbound				Summit Rd Northbound				Highline Rd Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour From 07:00 AM to 11:45 AM - Peak 1 of 1																	
Intersection 07:00 AM																	
Volume	41	1	33	75	1	70	23	94	0	2	0	2	80	236	3	319	490
Percent	54.7	1.3	44.0		1.1	74.5	24.5		0.0	100.0	0.0		25.1	74.0	0.9		
07:00 Volume	14	0	8	22	0	25	6	31	0	0	0	0	36	117	0	153	206
Peak Factor																	0.595
High Int.	07:00 AM				07:00 AM				07:15 AM				07:00 AM				
Volume	14	0	8	22	0	25	6	31	0	2	0	2	36	117	0	153	
Peak Factor				0.852				0.758				0.250				0.521	



City Traffic Counters
626.256.4171

File Name : CurSumHigh
Site Code : 00000000
Start Date : 2/5/2009
Page No : 3

	South Curry St Southbound				Highline Rd Westbound				Summit Rd Northbound				Highline Rd Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour From 12:00 PM to 05:45 PM - Peak 1 of 1																	
Intersection	04:00 PM																
Volume	13	1	45	59	0	143	41	184	1	2	0	3	37	58	3	98	344
Percent	22.0	1.7	76.3		0.0	77.7	22.3		33.3	66.7	0.0		37.8	59.2	3.1		
04:00 Volume	5	1	9	15	0	43	16	59	0	0	0	0	10	16	2	28	102
Peak Factor																	0.843
High Int.	04:45 PM				04:00 PM				04:15 PM				04:00 PM				
Volume	2	0	16	18	0	43	16	59	1	2	0	3	10	16	2	28	
Peak Factor				0.819				0.780				0.250				0.875	



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City Traffic Counters
626.256.4171

File Name : GrnTeh
Site Code : 00000000
Start Date : 5/29/2008
Page No : 1

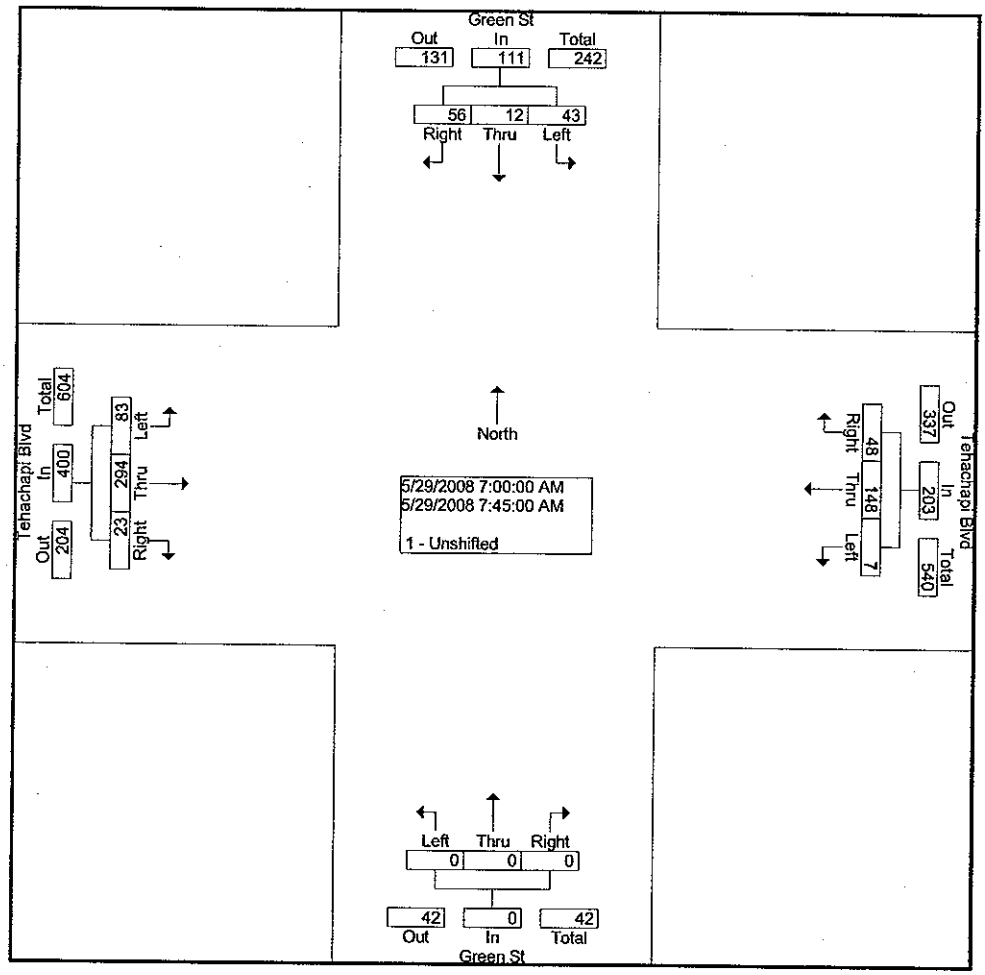
Groups Printed- 1 - Unshifted

	Green St Southbound			Tehachapi Blvd Westbound			Green St Northbound			Tehachapi Blvd Eastbound			
Start Time	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Int. Total
Factor	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	
07:00 AM	16	1	6	0	17	10	0	0	0	17	96	5	168
07:15 AM	8	1	16	2	54	11	0	0	0	21	87	5	205
07:30 AM	9	5	22	2	49	14	0	0	0	24	63	4	192
07:45 AM	10	5	12	3	28	13	0	0	0	21	48	9	149
Total	43	12	56	7	148	48	0	0	0	83	294	23	714
08:00 AM	9	0	24	2	39	7	0	0	0	24	54	7	166
08:15 AM	8	4	22	1	47	7	0	0	0	21	43	9	162
08:30 AM	6	2	30	2	28	10	0	0	0	31	48	11	168
08:45 AM	4	5	36	5	32	10	0	0	0	40	34	14	180
Total	27	11	112	10	146	34	0	0	0	116	179	41	676
04:00 PM	15	10	39	10	49	9	0	0	0	32	76	12	252
04:15 PM	12	11	43	10	56	15	0	0	0	46	73	20	286
04:30 PM	13	11	67	12	58	3	0	0	0	46	79	13	302
04:45 PM	11	11	46	12	59	4	0	0	0	33	84	19	279
Total	51	43	195	44	222	31	0	0	0	157	312	64	1119
05:00 PM	15	8	69	8	51	15	0	0	0	33	71	22	292
05:15 PM	14	7	33	5	58	14	0	0	0	28	63	12	234
05:30 PM	24	8	54	9	45	15	0	0	0	25	53	22	255
05:45 PM	10	10	33	2	49	6	0	0	0	22	59	19	210
Total	63	33	189	24	203	50	0	0	0	108	246	75	991
Grand Total	184	99	552	85	719	163	0	0	0	464	1031	203	3500
Apprch %	22.0	11.9	66.1	8.8	74.4	16.9	0.0	0.0	0.0	27.3	60.7	12.0	
Total %	5.3	2.8	15.8	2.4	20.5	4.7	0.0	0.0	0.0	13.3	29.5	5.8	

City Traffic Counters
626.256.4171

File Name : GrnTeh
Site Code : 00000000
Start Date : 5/29/2008
Page No : 2

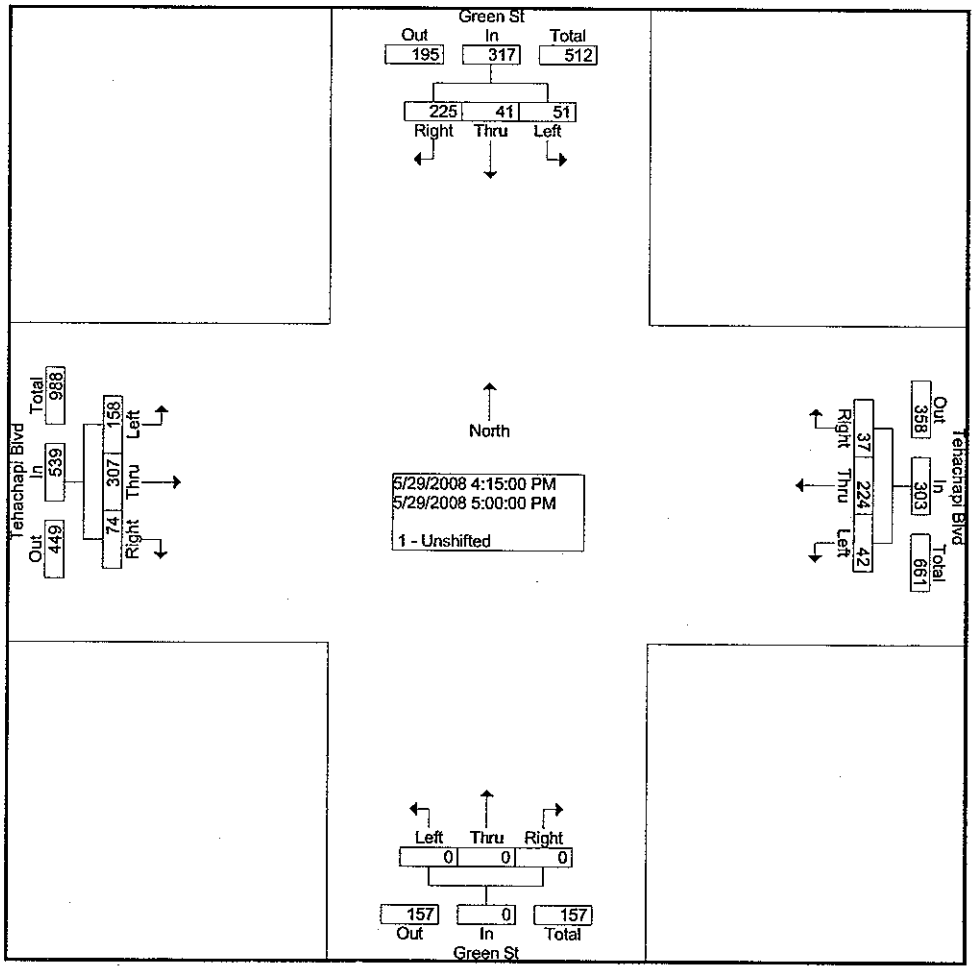
	Green St Southbound				Tehachapi Blvd Westbound				Green St Northbound				Tehachapi Blvd Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour From 07:00 AM to 11:45 AM - Peak 1 of 1																	
Intersection 07:00 AM																	
Volume	43	12	56	111	7	148	48	203	0	0	0	0	83	294	23	400	714
Percent	38.7	10.8	50.5		3.4	72.9	23.6		0.0	0.0	0.0		20.8	73.5	5.8		
07:15 Volume	8	1	16	25	2	54	11	67	0	0	0	0	21	87	5	113	205
Peak Factor																	0.871
High Int.	07:30 AM				07:15 AM				6:45:00 AM				07:00 AM				
Volume	9	5	22	36	2	54	11	67	0	0	0	0	17	96	5	118	
Peak Factor				0.771				0.757								0.847	



City Traffic Counters
626.256.4171

File Name : GrnTeh
Site Code : 00000000
Start Date : 5/29/2008
Page No : 3

	Green St Southbound				Tehachapi Blvd Westbound				Green St Northbound				Tehachapi Blvd Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour From 12:00 PM to 05:45 PM - Peak 1 of 1																	
Intersection	04:15 PM																
Volume	51	41	225	317	42	224	37	303	0	0	0	0	158	307	74	539	1159
Percent	16.1	12.9	71.0		13.9	73.9	12.2		0.0	0.0	0.0		29.3	57.0	13.7		
04:30 Volume	13	11	67	91	12	58	3	73	0	0	0	0	46	79	13	138	302
Peak Factor																	0.959
High Int.	05:00 PM				04:15 PM								04:15 PM				
Volume	15	8	69	92	10	56	15	81	0	0	0	0	46	73	20	139	
Peak Factor				0.861				0.935								0.969	



APPENDIX B-II

ROADWAY SEGMENT COUNTS

A

City Traffic Counters, LLC.
626.256.4171

Site Code: 000000000000
Station ID:
Cummings Valley Blvd
Bt Golden Hills & Sage
Latitude: 0' 0.000 Undefined

Start	05-Feb-09	East		Hour Totals		West		Hour Totals		Combined Totals	
Time	Thu	Morning	Afternoon	Morning	Afternoon	Morning	Afternoon	Morning	Afternoon	Morning	Afternoon
12:00		2	183			11	146				
12:15		1	148			8	142				
12:30		3	133			8	154				
12:45		6	164	12	628	4	150	31	592	43	1220
01:00		3	178			1	184				
01:15		4	152			6	158				
01:30		3	153			3	156				
01:45		3	175	13	658	1	121	11	619	24	1277
02:00		2	182			1	158				
02:15		2	164			2	167				
02:30		4	150			4	201				
02:45		6	163	14	659	4	235	11	761	25	1420
03:00		6	179			7	217				
03:15		4	194			3	162				
03:30		9	204			7	170				
03:45		11	198	30	775	10	204	27	753	57	1528
04:00		9	164			6	186				
04:15		7	156			3	184				
04:30		22	148			8	183				
04:45		46	168	84	636	10	198	27	751	111	1387
05:00		41	151			20	234				
05:15		40	123			46	208				
05:30		58	126			93	205				
05:45		89	142	228	542	38	202	197	849	425	1391
06:00		123	144			47	188				
06:15		92	96			73	148				
06:30		103	112			101	156				
06:45		154	84	472	436	120	139	341	631	813	1067
07:00		206	77			110	115				
07:15		100	66			101	90				
07:30		116	49			108	94				
07:45		122	64	544	256	84	107	403	406	947	662
08:00		113	56			97	82				
08:15		124	31			90	94				
08:30		152	37			115	88				
08:45		158	36	547	160	121	54	423	318	970	478
09:00		157	36			95	60				
09:15		124	30			106	66				
09:30		120	27			96	54				
09:45		159	32	560	125	119	41	416	221	976	346
10:00		145	62			96	28				
10:15		154	21			114	36				
10:30		120	10			97	24				
10:45		145	10	564	103	120	28	427	116	991	219
11:00		152	14			138	26				
11:15		152	18			111	13				
11:30		164	25			152	5				
11:45		171	12	639	69	156	12	557	56	1196	125
Total		3707	5047			2871	6073			6578	11120
Percent		42.3%	57.7%			32.1%	67.9%			37.2%	62.8%
Grand Total		3707	5047			2871	6073			6578	11120
Percent		42.3%	57.7%			32.1%	67.9%			37.2%	62.8%

ADT ADT 17,698 AADT 17,698

B

City Traffic Counters
626.256.4171

Site Code : 000000000000
Start Date: 05/28/2008
File I.D. : E:\ALL FOLDER
Page : 2

Street name :Valley Blvd Cross street:Bt. Sierra Vista & Friesen Direction 1

Begin Time	<------ East A.M.		P.M.		------><------ West A.M.		P.M.		------><------Combined A.M.		P.M.		------> Thursday
12:00 05/29	3		167		14		120		17		287		
12:15	5		170		8		122		13		292		
12:30	6		154		12		122		18		276		
12:45	3	17	166	657	13	47	118	482	16	64	284	1139	
01:00	5		139		6		141		11		280		
01:15	1		156		6		151		7		307		
01:30	3		137		6		179		9		316		
01:45	4	13	146	578	5	23	154	625	9	36	300	1203	
02:00	6		159		8		131		14		290		
02:15	7		200		5		129		12		329		
02:30	6		174		6		131		12		305		
02:45	3	22	126	659	3	22	202	593	6	44	328	1252	
03:00	4		163		7		215		11		378		
03:15	9		176		3		188		12		364		
03:30	11		168		3		183		14		351		
03:45	13	37	221	728	7	20	156	742	20	57	377	1470	
04:00	14		215		7		171		21		386		
04:15	11		203		4		176		15		379		
04:30	8		166		1		158		9		324		
04:45	19	52	170	754	5	17	183	688	24	69	353	1442	
05:00	33		186		9		200		42		386		
05:15	36		181		14		187		50		368		
05:30	34		146		43		189		77		335		
05:45	62	165	154	667	94	160	198	774	156	325	352	1441	
06:00	70		148		39		182		109		330		
06:15	118		149		45		182		163		331		
06:30	98		120		50		157		148		277		
06:45	90	376	107	524	99	233	147	668	189	609	254	1192	
07:00	142		76		114		173		256		249		
07:15	197		71		95		152		292		223		
07:30	147		66		87		128		234		194		
07:45	115	601	70	283	114	410	96	549	229	1011	166	832	
08:00	111		51		83		100		194		151		
08:15	134		71		92		82		226		153		
08:30	130		49		105		90		235		139		
08:45	121	496	50	221	84	364	75	347	205	860	125	568	
09:00	166		59		140		96		306		155		
09:15	183		48		94		98		277		146		
09:30	120		29		93		97		213		126		
09:45	146	615	27	163	86	413	71	362	232	1028	98	525	
10:00	153		47		110		44		263		91		
10:15	134		69		110		52		244		121		
10:30	138		28		90		49		228		77		
10:45	134	559	13	157	94	404	40	185	228	963	53	342	
11:00	150		17		113		48		263		65		
11:15	133		10		100		22		233		32		
11:30	140		8		114		19		254		27		
11:45	136	559	28	63	136	463	23	112	272	1022	51	175	
Totals	3512		5454		2576		6127		6088		11581		
Day Totals		8966				8703				17669			
Split %	57.6%		47.0%		42.3%		52.9%						
Peak Hour	09:00		03:30		11:00		02:45		09:00		03:30		
Volume	615		807		463		788		1028		1493		
P.H.F.	.84		.91		.85		.91		.83		.96		

C

City Traffic Counters
626.256.4171

Site Code : 000000000000
Start Date: 06/05/2008
File I.D. : E:\ALL FOLDER
Page : 1

Street name :Red Apple Ave Cross street:Bt. Reeves & Winesap Direction 1

Begin Time	<------ East A.M.		P.M.		------><------ West A.M.		P.M.		------><------Combined A.M.		P.M.		------> Thursday
12:00 06/05	7		103		9		144		16		247		
12:15	6		112		12		141		18		253		
12:30	2		89		12		148		14		237		
12:45	1	16	124	428	7	40	121	554	8	56	245	982	
01:00	3		114		11		108		14		222		
01:15	4		108		9		112		13		220		
01:30	1		116		9		104		10		220		
01:45	4	12	125	463	4	33	102	426	8	45	227	889	
02:00	0		112		3		101		3		213		
02:15	2		88		2		97		4		185		
02:30	2		75		3		115		5		190		
02:45	6	10	100	375	3	11	114	427	9	21	214	802	
03:00	4		85		2		119		6		204		
03:15	10		73		0		116		10		189		
03:30	12		103		0		111		12		214		
03:45	9	35	136	397	3	5	110	456	12	40	246	853	
04:00	16		100		2		153		18		253		
04:15	15		117		2		150		17		267		
04:30	18		101		2		167		20		268		
04:45	35	84	114	432	5	11	139	609	40	95	253	1041	
05:00	41		91		1		168		42		259		
05:15	41		108		1		159		42		267		
05:30	58		90		3		152		61		242		
05:45	79	219	87	376	5	10	145	624	84	229	232	1000	
06:00	75		104		18		174		93		278		
06:15	82		71		10		147		92		218		
06:30	94		74		22		117		116		191		
06:45	131	382	67	316	27	77	126	564	158	459	193	880	
07:00	172		69		31		114		203		183		
07:15	166		58		53		102		219		160		
07:30	115		64		55		90		170		154		
07:45	115	568	66	257	51	190	87	393	166	758	153	650	
08:00	108		51		52		97		160		148		
08:15	100		39		57		103		157		142		
08:30	75		40		75		79		150		119		
08:45	121	404	48	178	43	227	76	355	164	631	124	533	
09:00	119		48		67		79		186		127		
09:15	93		36		59		71		152		107		
09:30	110		28		74		68		184		96		
09:45	109	431	18	130	101	301	45	263	210	732	63	393	
10:00	99		21		81		40		180		61		
10:15	101		11		94		46		195		57		
10:30	102		24		94		45		196		69		
10:45	95	397	12	68	81	350	31	162	176	747	43	230	
11:00	92		8		105		16		197		24		
11:15	112		10		69		18		181		28		
11:30	116		5		91		10		207		15		
11:45	143	463	7	30	87	352	16	60	230	815	23	90	
Totals	3021		3450		1607		4893		4628		8343		
Day Totals		6471				6500				12971			
Split %	65.2%		41.3%		34.7%		58.6%						

Peak Hour	06:45	01:00	10:15	04:30	11:00	04:15
Volume	584	463	374	633	815	1047
P.H.F.	.84	.92	.89	.94	.88	.97

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City Traffic Counters
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Site Code : 000000000000
Start Date: 05/28/2008
File I.D. : E:\ALL FOLDER
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Street name :Tehachapi Blvd Cross street:Bt 58 EB ramps & Red Apple/Tehachapi Direction 1

Begin Time	North A.M.		North P.M.		South A.M.		South P.M.		Combined A.M.		Combined P.M.		Thursday
12:00 05/29	1		88		11		79		12		167		
12:15	0		102		12		73		12		175		
12:30	4		113		11		86		15		199		
12:45	1	6	103	406	8	42	86	324	9	48	189	730	
01:00	2		95		8		84		10		179		
01:15	1		105		7		107		8		212		
01:30	4		113		11		89		15		202		
01:45	3	10	98	411	9	35	87	367	12	45	185	778	
02:00	5		128		4		84		9		212		
02:15	1		116		6		87		7		203		
02:30	3		77		6		109		9		186		
02:45	4	13	94	415	7	23	124	404	11	36	218	819	
03:00	7		121		3		114		10		235		
03:15	9		107		3		110		12		217		
03:30	18		109		4		131		22		240		
03:45	19	53	149	486	8	18	120	475	27	71	269	961	
04:00	22		114		4		161		26		275		
04:15	31		106		6		175		37		281		
04:30	31		82		7		159		38		241		
04:45	54	138	104	406	11	28	170	665	65	166	274	1071	
05:00	53		102		12		183		65		285		
05:15	69		85		39		174		108		259		
05:30	83		69		59		142		142		211		
05:45	99	304	63	319	29	139	168	667	128	443	231	986	
06:00	158		61		21		165		179		226		
06:15	125		57		41		134		166		191		
06:30	143		56		75		96		218		152		
06:45	163	589	41	215	73	210	104	499	236	799	145	714	
07:00	173		41		62		77		235		118		
07:15	167		42		41		67		208		109		
07:30	126		38		49		75		175		113		
07:45	121	587	37	158	51	203	59	278	172	790	96	436	
08:00	121		36		63		58		184		94		
08:15	107		31		64		66		171		97		
08:30	84		24		59		55		143		79		
08:45	108	420	39	130	104	290	61	240	212	710	100	370	
09:00	125		30		55		55		180		85		
09:15	100		23		66		62		166		85		
09:30	109		15		66		71		175		86		
09:45	94	428	23	91	65	252	40	228	159	680	63	319	
10:00	84		45		68		53		152		98		
10:15	110		27		64		38		174		65		
10:30	118		12		61		44		179		56		
10:45	88	400	13	97	74	267	35	170	162	667	48	267	
11:00	92		10		73		35		165		45		
11:15	97		5		85		29		182		34		
11:30	104		21		70		27		174		48		
11:45	106	399	3	39	89	317	21	112	195	716	24	151	
Totals	3347		3173		1824		4429		5171		7602		
Day Totals		6520				6253				12773			
Split %	64.7%		41.7%		35.2%		58.2%						
Peak Hour	06:30		03:00		11:00		04:15		06:30		04:15		
Volume	646		486		317		687		897		1081		
P.H.F.	.93		.81		.89		.93		.95		.94		

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City Traffic Counters
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Site Code : 000000000000
Start Date: 05/28/2008
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Street name :Tucker Rd Cross street:Bt. Red Apple/Teh & Conway ,

Begin Time	<------ South A.M.		P.M.		------><------ North A.M.		P.M.		------><------Combined A.M.		P.M.		------> Thursday
12:00 05/29	9		138		8		130		17		268		
12:15	9		128		5		129		14		257		
12:30	4		140		2		129		6		269		
12:45	9	31	132	538	5	20	160	548	14	51	292	1086	
01:00	7		126		3		149		10		275		
01:15	6		154		2		145		8		299		
01:30	7		133		5		151		12		284		
01:45	10	30	123	536	4	14	135	580	14	44	258	1116	
02:00	4		142		2		150		6		292		
02:15	2		118		7		151		9		269		
02:30	4		156		1		167		5		323		
02:45	10	20	159	575	2	12	136	604	12	32	295	1179	
03:00	4		152		4		179		8		331		
03:15	6		134		5		154		11		288		
03:30	7		160		9		133		16		293		
03:45	12	29	154	600	10	28	136	602	22	57	290	1202	
04:00	4		177		16		168		20		345		
04:15	5		170		8		178		13		348		
04:30	5		171		12		163		17		334		
04:45	19	33	168	686	17	53	136	645	36	86	304	1331	
05:00	21		193		35		154		56		347		
05:15	40		178		35		156		75		334		
05:30	77		158		35		144		112		302		
05:45	44	182	173	702	44	149	117	571	88	331	290	1273	
06:00	35		163		65		118		100		281		
06:15	63		140		100		102		163		242		
06:30	88		127		90		87		178		214		
06:45	99	285	129	559	94	349	123	430	193	634	252	989	
07:00	97		123		119		74		216		197		
07:15	67		105		112		87		179		192		
07:30	63		96		120		85		183		181		
07:45	65	292	76	400	99	450	74	320	164	742	150	720	
08:00	70		79		109		77		179		156		
08:15	95		82		104		75		199		157		
08:30	87		67		99		71		186		138		
08:45	117	369	72	300	88	400	60	283	205	769	132	583	
09:00	86		70		113		63		199		133		
09:15	96		76		132		63		228		139		
09:30	107		59		122		48		229		107		
09:45	105	394	54	259	126	493	36	210	231	887	90	469	
10:00	90		46		118		37		208		83		
10:15	101		36		139		53		240		89		
10:30	100		34		126		33		226		67		
10:45	117	408	40	156	154	537	17	140	271	945	57	296	
11:00	112		29		118		19		230		48		
11:15	127		16		135		21		262		37		
11:30	117		23		121		8		238		31		
11:45	137	493	12	80	123	497	22	70	260	990	34	150	
Totals	2566		5391		3002		5003		5568		10394		
Day Totals		7957				8005				15962			
Split %	46.0%		51.8%		53.9%		48.1%						
Peak Hour	11:00		04:30		10:00		03:45		10:45		04:15		
Volume	493		710		537		645		1001		1333		
P.H.F.	.89		.91		.87		.90		.92		.95		

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City Traffic Counters
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Site Code : 000000000000
Start Date: 06/05/2008
File I.D. : E:\ALL FOLDER
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Street name :Tucker Rd Cross street:Bt. Conway & Valley Direction 1

Begin Time	<------ South A.M.		P.M.		------><------ North A.M.		P.M.		------><------Combined A.M.		P.M.		------> Thursday
12:00 06/05	14		174		8		170		22		344		
12:15	10		172		13		206		23		378		
12:30	11		170		6		187		17		357		
12:45	8	43	161	677	1	28	176	739	9	71	337	1416	
01:00	8		189		10		178		18		367		
01:15	7		184		2		170		9		354		
01:30	5		191		6		166		11		357		
01:45	8	28	188	752	11	29	160	674	19	57	348	1426	
02:00	3		172		5		163		8		335		
02:15	2		159		1		161		3		320		
02:30	3		147		0		152		3		299		
02:45	9	17	140	618	6	12	140	616	15	29	280	1234	
03:00	9		137		6		161		15		298		
03:15	9		138		3		163		12		301		
03:30	6		150		14		139		20		289		
03:45	7	31	156	581	10	33	198	661	17	64	354	1242	
04:00	4		151		11		165		15		316		
04:15	9		174		12		175		21		349		
04:30	8		158		15		162		23		320		
04:45	15	36	175	658	18	56	142	644	33	92	317	1302	
05:00	23		172		32		135		55		307		
05:15	48		169		29		157		77		326		
05:30	71		164		46		152		117		316		
05:45	37	179	184	689	55	162	164	608	92	341	348	1297	
06:00	36		151		85		141		121		292		
06:15	43		126		93		110		136		236		
06:30	80		135		96		117		176		252		
06:45	92	251	132	544	105	379	82	450	197	630	214	994	
07:00	109		101		118		90		227		191		
07:15	117		95		122		80		239		175		
07:30	137		99		128		89		265		188		
07:45	125	488	88	383	131	499	68	327	256	987	156	710	
08:00	148		93		144		76		292		169		
08:15	163		69		127		71		290		140		
08:30	169		59		154		55		323		114		
08:45	174	654	72	293	158	583	56	258	332	1237	128	551	
09:00	134		78		140		49		274		127		
09:15	135		60		123		48		258		108		
09:30	141		68		155		32		296		100		
09:45	146	556	40	246	156	574	35	164	302	1130	75	410	
10:00	148		40		166		17		314		57		
10:15	141		31		170		30		311		61		
10:30	120		38		150		25		270		63		
10:45	149	558	39	148	164	650	15	87	313	1208	54	235	
11:00	138		25		178		12		316		37		
11:15	142		22		139		14		281		36		
11:30	153		13		167		19		320		32		
11:45	157	590	29	89	152	636	18	63	309	1226	47	152	
Totals	3431		5678		3641		5291		7072		10969		
Day Totals		9109				8932				18041			
Split %	48.5%		51.7%		51.4%		48.2%						
Peak Hour	08:00		01:00		10:15		12:15		08:00		12:15		
Volume	654		752		662		747		1237		1439		
P.H.F.	.93		.98		.92		.90		.93		.95		

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City Traffic Counters
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Site Code : 000000000000
Start Date: 05/28/2008
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Street name :Tucker Rd Cross street:Bt. Valley & Cherry Direction 1

Begin Time	<------ South A.M.		P.M.		------><------ North A.M.		P.M.		------><------Combined A.M.		P.M.		------> Thursday
12:00 05/29	5		42		5		54		10		96	
12:15	6		54		3		45		9		99	
12:30	7		52		3		42		10		94	
12:45	0	18	39	187	1	12	42	183	1	30	81	370
01:00	2		50		0		51		2		101	
01:15	0		44		1		46		1		90	
01:30	2		57		2		49		4		106	
01:45	2	6	48	199	2	5	44	190	4	11	92	389
02:00	2		33		2		34		4		67	
02:15	4		46		2		45		6		91	
02:30	1		37		1		51		2		88	
02:45	2	9	42	158	1	6	53	183	3	15	95	341
03:00	1		44		0		58		1		102	
03:15	0		67		0		61		0		128	
03:30	3		60		1		60		4		120	
03:45	4	8	70	241	0	1	65	244	4	9	135	485
04:00	3		59		4		78		7		137	
04:15	4		65		1		66		5		131	
04:30	3		51		2		48		5		99	
04:45	2	12	64	239	2	9	48	240	4	21	112	479
05:00	6		60		8		61		14		121	
05:15	7		87		8		58		15		145	
05:30	10		62		17		51		27		113	
05:45	6	29	54	263	25	58	51	221	31	87	105	484
06:00	9		60		19		49		28		109	
06:15	23		64		22		40		45		104	
06:30	24		58		25		36		49		94	
06:45	21	77	52	234	46	112	31	156	67	189	83	390
07:00	18		68		55		49		73		117	
07:15	20		60		53		42		73		102	
07:30	23		61		53		43		76		104	
07:45	21	82	47	236	36	197	24	158	57	279	71	394
08:00	23		29		48		30		71		59	
08:15	27		41		57		28		84		69	
08:30	33		38		44		27		77		65	
08:45	34	117	25	133	40	189	26	111	74	306	51	244
09:00	35		30		55		18		90		48	
09:15	26		27		49		15		75		42	
09:30	28		32		47		18		75		50	
09:45	35	124	23	112	31	182	13	64	66	306	36	176
10:00	35		19		43		12		78		31	
10:15	18		24		43		13		61		37	
10:30	43		21		41		12		84		33	
10:45	33	129	11	75	49	176	9	46	82	305	20	121
11:00	35		15		33		9		68		24	
11:15	39		11		39		7		78		18	
11:30	32		6		38		4		70		10	
11:45	45	151	7	39	41	151	8	28	86	302	15	67
Totals	762		2116		1098		1824		1860		3940	
Day Totals		2878				2922				5800		
Split %	40.9%		53.7%		59.0%		46.2%					
Peak Hour	11:00		04:45		06:45		03:30		08:15		03:30	
Volume	151		273		207		269		325		523	
P.H.F.	.83		.78		.94		.86		.90		.95	

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Site Code : 000000000000
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Street name :Valley Blvd Cross street:Bt. Sundowner & Griffin Direction 1

Begin Time	<------ East A.M.		------><------ West P.M.		A.M.		P.M.		------><------Combined A.M.		P.M.		------> Thursday
12:00 05/29	4		123		10		104		14		227		
12:15	4		104		1		99		5		203		
12:30	9		96		9		97		18		193		
12:45	0	17	104	427	3	23	102	402	3	40	206	829	
01:00	2		120		3		158		5		278		
01:15	5		134		2		117		7		251		
01:30	4		114		5		100		9		214		
01:45	2	13	92	460	1	11	106	481	3	24	198	941	
02:00	7		95		4		100		11		195		
02:15	3		135		2		76		5		211		
02:30	3		146		3		89		6		235		
02:45	2	15	105	481	2	11	179	444	4	26	284	925	
03:00	2		107		1		180		3		287		
03:15	0		123		0		126		0		249		
03:30	5		102		0		130		5		232		
03:45	1	8	158	490	3	4	103	539	4	12	261	1029	
04:00	0		138		4		95		4		233		
04:15	1		124		1		113		2		237		
04:30	0		127		2		116		2		243		
04:45	3	4	112	501	9	16	122	446	12	20	234	947	
05:00	3		126		9		117		12		243		
05:15	2		134		10		143		12		277		
05:30	8		123		16		133		24		256		
05:45	17	30	139	522	27	62	121	514	44	92	260	1036	
06:00	24		154		24		103		48		257		
06:15	25		145		25		117		50		262		
06:30	33		117		33		99		66		216		
06:45	29	111	88	504	48	130	134	453	77	241	222	957	
07:00	69		88		60		124		129		212		
07:15	173		72		68		121		241		193		
07:30	127		82		99		80		226		162		
07:45	60	429	67	309	103	330	82	407	163	759	149	716	
08:00	50		63		76		56		126		119		
08:15	91		59		71		58		162		117		
08:30	78		67		87		37		165		104		
08:45	77	296	50	239	77	311	61	212	154	607	111	451	
09:00	97		61		99		95		196		156		
09:15	85		54		72		70		157		124		
09:30	75		46		70		71		145		117		
09:45	65	322	35	196	69	310	19	255	134	632	54	451	
10:00	81		25		81		29		162		54		
10:15	77		33		91		26		168		59		
10:30	89		24		56		18		145		42		
10:45	75	322	15	97	74	302	24	97	149	624	39	194	
11:00	88		17		87		21		175		38		
11:15	82		10		76		16		158		26		
11:30	83		9		81		8		164		17		
11:45	97	350	13	49	90	334	8	53	187	684	21	102	
Totals	1917		4275		1844		4303		3761		8578		
Day Totals		6192				6147				12339			
Split %	50.9%		49.8%		49.0%		50.1%						
Peak Hour	07:00		05:30		07:30		02:45		07:00		02:30		
Volume	429		561		349		615		759		1055		
P.H.F.	.61		.91		.84		.85		.78		.91		

City Traffic Counters, LLC.
626.256.4171

Site Code:
Station ID:
W. Valley Blvd
Bt Mill & Curry
Latitude: 0' 0.000 Undefined

Start Time	05-Feb-09 Thu	East Morning	East Afternoon	Hour Totals Morning	Hour Totals Afternoon	West Morning	West Afternoon	Hour Totals Morning	Hour Totals Afternoon	Combined Totals Morning	Combined Totals Afternoon
12:00		5	78			3	77				
12:15		4	72			3	82				
12:30		3	74			1	74				
12:45		0	88	12	312	2	63	9	296	21	608
01:00		2	69			3	148				
01:15		3	93			2	67				
01:30		4	107			2	79				
01:45		0	71	9	340	1	50	8	344	17	684
02:00		1	76			0	54				
02:15		2	132			0	56				
02:30		2	129			2	148				
02:45		1	89	6	426	0	188	2	446	8	872
03:00		1	78			0	85				
03:15		0	82			1	88				
03:30		1	86			2	107				
03:45		1	65	3	311	2	88	5	368	8	679
04:00		2	77			4	79				
04:15		3	69			0	80				
04:30		3	80			2	80				
04:45		6	88	14	314	6	66	12	305	26	619
05:00		6	89			4	88				
05:15		4	77			8	88				
05:30		13	66			17	82				
05:45		15	65	38	297	16	76	45	334	83	631
06:00		23	75			15	75				
06:15		29	91			16	66				
06:30		26	77			23	56				
06:45		47	56	125	299	28	78	82	275	207	574
07:00		100	57			41	39				
07:15		166	40			88	36				
07:30		70	34			114	80				
07:45		56	31	392	162	64	44	307	199	699	361
08:00		56	35			54	38				
08:15		68	43			79	28				
08:30		58	25			56	42				
08:45		74	23	256	126	66	34	255	142	511	268
09:00		48	20			75	29				
09:15		44	28			42	15				
09:30		42	21			42	18				
09:45		63	14	197	83	43	13	202	75	399	158
10:00		65	16			50	11				
10:15		55	18			49	8				
10:30		52	14			45	14				
10:45		56	8	228	56	58	14	202	47	430	103
11:00		58	9			61	5				
11:15		70	11			59	4				
11:30		72	8			60	4				
11:45		62	5	262	33	83	0	263	13	525	46
Total		1542	2759			1392	2844			2934	5603
Percent		35.9%	64.1%			32.9%	67.1%			34.4%	65.6%
Grand Total		1542	2759			1392	2844			2934	5603
Percent		35.9%	64.1%			32.9%	67.1%			34.4%	65.6%
ADT		ADT 8,537		AADT 8,537							

J

City Traffic Counters
626.256.4171

Site Code : 000000000000
Start Date: 05/28/2008
File I.D. : E:\ALL FOLDER
Page : 2

Street name :Tehachapi Blvd Cross street:Bt Tehachapi/Tucker & Mt View Direction 1

Begin Time	<------ East A.M.		P.M.	------>	<------ West A.M.		P.M.	------>	<------Combined A.M.		P.M.	------>	Thursday
12:00 05/29	4		93		5		114		9		207		
12:15	3		89		2		110		5		199		
12:30	2		108		1		123		3		231		
12:45	1	10	127	417	1	9	127	474	2	19	254	891	
01:00	0		107		1		113		1		220		
01:15	4		116		0		91		4		207		
01:30	3		106		1		126		4		232		
01:45	2	9	125	454	4	6	97	427	6	15	222	881	
02:00	5		135		1		121		6		256		
02:15	0		139		1		112		1		251		
02:30	1		99		4		182		5		281		
02:45	0	6	134	507	3	9	147	562	3	15	281	1069	
03:00	3		116		1		116		4		232		
03:15	2		92		1		127		3		219		
03:30	5		97		2		135		7		232		
03:45	4	14	134	439	2	6	123	501	6	20	257	940	
04:00	4		125		3		124		7		249		
04:15	5		130		2		120		7		250		
04:30	7		129		2		131		9		260		
04:45	7	23	124	508	3	10	126	501	10	33	250	1009	
05:00	12		128		8		157		20		285		
05:15	13		113		7		126		20		239		
05:30	30		110		7		115		37		225		
05:45	32	87	137	488	15	37	105	503	47	124	242	991	
06:00	36		133		21		102		57		235		
06:15	48		90		21		93		69		183		
06:30	48		84		38		101		86		185		
06:45	83	215	79	386	31	111	97	393	114	326	176	779	
07:00	118		67		35		118		153		185		
07:15	110		69		61		103		171		172		
07:30	61		52		73		98		134		150		
07:45	89	378	48	236	45	214	58	377	134	592	106	613	
08:00	70		44		60		70		130		114		
08:15	76		45		64		66		140		111		
08:30	88		26		60		41		148		67		
08:45	106	340	45	160	64	248	48	225	170	588	93	385	
09:00	112		44		62		52		174		96		
09:15	91		40		74		56		165		96		
09:30	97		33		77		31		174		64		
09:45	109	409	23	140	102	315	36	175	211	724	59	315	
10:00	84		20		64		25		148		45		
10:15	88		10		84		17		172		27		
10:30	90		21		85		15		175		36		
10:45	84	346	12	63	94	327	9	66	178	673	21	129	
11:00	119		14		99		7		218		21		
11:15	92		11		102		8		194		19		
11:30	89		6		92		4		181		10		
11:45	93	393	9	40	130	423	2	21	223	816	11	61	
Totals	2230		3838		1715		4225		3945		8063		
Day Totals		6068				5940				12008			
Split %	56.5%		47.6%		43.4%		52.4%						

Peak Hour	09:00	03:45	11:00	02:30	11:00	02:00
Volume	409	518	423	572	816	1069
P.H.F.	.91	.96	.81	.78	.91	.95

K

City Traffic Counters
626.256.4171

Site Code : 000000000000
Start Date: 05/28/2008
File I.D. : E:\ALL FOLDER
Page : 2

Street name :Tehachapi Blvd Cross street:Bt Mulberry & Mill Direction 1

Begin Time	<------ East A.M.		P.M.		------><------ West A.M.		P.M.		------><------Combined A.M.		P.M.		------> Thursday
12:00 05/29	5		92		5		119		10		211		
12:15	3		94		9		102		12		196		
12:30	0		92		1		121		1		213		
12:45	1	9	131	409	1	16	120	462	2	25	251	871	
01:00	1		99		0		113		1		212		
01:15	3		109		0		94		3		203		
01:30	2		97		2		83		4		180		
01:45	1	7	115	420	4	6	82	372	5	13	197	792	
02:00	3		118		1		113		4		231		
02:15	0		132		2		111		2		243		
02:30	2		107		2		171		4		278		
02:45	1	6	132	489	4	9	119	514	5	15	251	1003	
03:00	3		114		1		104		4		218		
03:15	2		91		2		106		4		197		
03:30	3		94		1		121		4		215		
03:45	5	13	101	400	3	7	100	431	8	20	201	831	
04:00	3		105		0		105		3		210		
04:15	5		116		0		109		5		225		
04:30	7		104		1		112		8		216		
04:45	7	22	120	445	5	6	112	438	12	28	232	883	
05:00	15		109		5		129		20		238		
05:15	11		104		11		110		22		214		
05:30	25		104		6		94		31		198		
05:45	36	87	102	419	12	34	90	423	48	121	192	842	
06:00	41		125		25		99		66		224		
06:15	42		78		18		62		60		140		
06:30	45		50		31		86		76		136		
06:45	74	202	60	313	25	99	93	340	99	301	153	653	
07:00	99		50		27		96		126		146		
07:15	114		48		58		92		172		140		
07:30	74		33		68		60		142		93		
07:45	88	375	37	168	41	194	49	297	129	569	86	465	
08:00	76		29		59		58		135		87		
08:15	59		36		68		51		127		87		
08:30	77		27		52		39		129		66		
08:45	86	298	33	125	69	248	43	191	155	546	76	316	
09:00	103		40		55		43		158		83		
09:15	83		33		78		44		161		77		
09:30	84		33		71		17		155		50		
09:45	93	363	23	129	91	295	29	133	184	658	52	262	
10:00	75		11		55		18		130		29		
10:15	71		11		71		15		142		26		
10:30	89		19		86		13		175		32		
10:45	80	315	13	54	77	289	9	55	157	604	22	109	
11:00	112		9		91		7		203		16		
11:15	89		9		90		7		179		16		
11:30	84		5		80		3		164		8		
11:45	93	378	7	30	120	381	3	20	213	759	10	50	
Totals	2075		3401		1584		3676		3659		7077		
Day Totals		5476				5260				10736			
Split %	56.7%		48.0%		43.2%		51.9%						
Peak Hour	11:00		02:00		11:00		02:00		11:00		02:00		
Volume	378		489		381		514		759		1003		
P.H.F.	.84		.92		.79		.75		.89		.90		

L

City Traffic Counters
626.256.4171

Site Code : 000000000000
Start Date: 02/05/2009
File I.D. : E:\ALL FOLDER
Page : 1

Street name :Curry St Cross street:Bt. Valley/Cummings Valley & Brentwood Direction 1

Begin Time	<------ North A.M.		P.M.		------><------ South A.M.		P.M.		------><------Combined A.M.		P.M.		------> Thursday
12:00 02/05	3		54		3		49		6		103		
12:15	3		61		5		42		8		103		
12:30	1		42		2		44		3		86		
12:45	2	9	44	201	1	11	45	180	3	20	89	381	
01:00	1		47		2		39		3		86		
01:15	2		58		2		45		4		103		
01:30	2		37		1		48		3		85		
01:45	0	5	43	185	0	5	35	167	0	10	78	352	
02:00	1		44		2		34		3		78		
02:15	0		69		0		40		0		109		
02:30	0		60		2		72		2		132		
02:45	0	1	55	228	3	7	80	226	3	8	135	454	
03:00	0		44		0		85		0		129		
03:15	1		67		0		89		1		156		
03:30	2		112		1		66		3		178		
03:45	3	6	58	281	0	1	56	296	3	7	114	577	
04:00	2		63		2		54		4		117		
04:15	4		65		1		54		5		119		
04:30	4		50		0		64		4		114		
04:45	7	17	44	222	2	5	48	220	9	22	92	442	
05:00	6		51		3		75		9		126		
05:15	7		46		4		83		11		129		
05:30	19		61		7		91		26		152		
05:45	27	59	63	221	2	16	86	335	29	75	149	556	
06:00	28		58		9		85		37		143		
06:15	29		55		4		66		33		121		
06:30	32		45		12		54		44		99		
06:45	50	139	53	211	12	37	40	245	62	176	93	456	
07:00	86		26		12		41		98		67		
07:15	143		22		29		35		172		57		
07:30	67		26		57		42		124		68		
07:45	45	341	32	106	25	123	40	158	70	464	72	264	
08:00	67		17		34		43		101		60		
08:15	62		19		55		37		117		56		
08:30	50		14		43		23		93		37		
08:45	103	282	21	71	79	211	21	124	182	493	42	195	
09:00	106		22		46		21		152		43		
09:15	37		9		29		17		66		26		
09:30	34		5		21		19		55		24		
09:45	39	216	9	45	31	127	16	73	70	343	25	118	
10:00	49		4		21		11		70		15		
10:15	35		1		35		15		70		16		
10:30	46		3		26		9		72		12		
10:45	53	183	8	16	26	108	6	41	79	291	14	57	
11:00	31		9		32		7		63		16		
11:15	32		4		45		4		77		8		
11:30	53		4		51		7		104		11		
11:45	59	175	3	20	48	176	8	26	107	351	11	46	
Totals	1433		1807		827		2091		2260		3898		
Day Totals		3240				2918				6158			
Split %	63.4%		46.3%		36.5%		53.6%						
Peak Hour	06:45		03:15		08:15		05:15		08:15		02:45		
Volume	346		300		223		345		544		598		
P.H.F.	.60		.66		.70		.94		.74		.83		

APPENDIX C

EXISTING TRAFFIC CONDITIONS INTERSECTION LEVEL OF SERVICE CALCULATION WORKSHEETS

APPENDIX C-I

EXISTING TRAFFIC CONDITIONS

AM Existing (2009)
Walmart, Tehachapi
Linscott, Law and Greenspan, Engineers

Level Of Service Computation Report
2000 HCM Operations Method (Future Volume Alternative)

****

Intersection #1 Woodford Tehachapi Road at Valley Boulevard (SR-202)

****

Cycle (sec):	90	Critical Vol./Cap.(X):	0.319
Loss Time (sec):	12 (Y+R=4.0 sec)	Average Delay (sec/veh):	15.7
Optimal Cycle:	90	Level Of Service:	B

****

Street Name:	Woodford Tehachapi Road						Valley Boulevard (SR-202)					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L - T - R			L - T - R			L - T - R			L - T - R		
Control:	Permitted			Permitted			Protected			Protected		
Rights:	Include			Include			Include			Include		
Min. Green:	6	6	6	6	6	6	6	6	6	6	6	6
Lanes:	0 0	1! 0 0		1 0	1 0	1	1 0	0 1	0	1 0	1 0	1
Volume Module:												
Base Vol:	2	12	13	67	14	66	24	364	6	11	274	31
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	2	12	13	67	14	66	24	364	6	11	274	31
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	2	12	13	67	14	66	24	364	6	11	274	31
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
PHF Volume:	2	13	14	74	16	73	27	404	7	12	304	34
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	2	13	14	74	16	73	27	404	7	12	304	34
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	2	13	14	74	16	73	27	404	7	12	304	34
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.92	0.92	0.92	0.74	1.00	0.85	0.95	1.00	1.00	0.95	1.00	0.85
Lanes:	0.07	0.44	0.49	1.00	1.00	1.00	1.00	0.98	0.02	1.00	1.00	1.00
Final Sat.:	130	780	845	1412	1900	1615	1805	1865	31	1805	1900	1615
Capacity Analysis Module:												
Vol/Sat:	0.02	0.02	0.02	0.05	0.01	0.05	0.01	0.22	0.22	0.01	0.16	0.02
Crit Moves:				****				****		****		
Green Time:	14.1	14.1	14.1	14.1	14.1	14.1	18.8	57.9	57.9	6.0	45.1	45.1
Volume/Cap:	0.11	0.11	0.11	0.34	0.05	0.29	0.07	0.34	0.34	0.10	0.32	0.04
Delay/Veh:	32.7	32.7	32.7	34.7	32.4	34.2	28.7	7.5	7.5	39.8	13.5	11.4
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	32.7	32.7	32.7	34.7	32.4	34.2	28.7	7.5	7.5	39.8	13.5	11.4
LOS by Move:	C	C	C	C	C	C	C	A	A	D	B	B
HCM2k95thQ:	2	2	2	4	1	4	1	10	10	1	10	1

****

Note: Queue reported is the number of cars per lane.

Traffix 7.9.0215 (c) 2008 Dowling Assoc. Licensed to LLG Costa Mesa, CA

AM Existing (2009)
Walmart, Tehachapi
Linscott, Law and Greenspan, Engineers

Level Of Service Computation Report
2000 HCM Unsignalized Method (Future Volume Alternative)

Intersection #2 South Street at Valley Boulevard (SR-202)

Average Delay (sec/veh): 0.8 Worst Case Level Of Service: B[11.7]

Street Name:	South Street						Valley Boulevard (SR-202)					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Stop Sign			Stop Sign			Uncontrolled			Uncontrolled		
Rights:	Include			Include			Include			Include		
Lanes:	1 0 0 0 1			0 0 0 0 0			0 0 1 0 1			1 0 1 0 0		
Volume Module:												
Base Vol:	12	0	25	0	0	0	0	429	29	32	310	0
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	12	0	25	0	0	0	0	429	29	32	310	0
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	12	0	25	0	0	0	0	429	29	32	310	0
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
PHF Volume:	13	0	28	0	0	0	0	477	32	36	344	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
FinalVolume:	13	0	28	0	0	0	0	477	32	36	344	0
Critical Gap Module:												
Critical Gp:	6.4	xxxx	6.2	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	4.1	xxxx	xxxxx
FollowUpTim:	3.5	xxxx	3.3	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	2.2	xxxx	xxxxx
Capacity Module:												
Cnflict Vol:	892	xxxx	477	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	509	xxxx	xxxxx
Potent Cap.:	315	xxxx	593	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	1066	xxxx	xxxxx
Move Cap.:	307	xxxx	593	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	1066	xxxx	xxxxx
Total Cap:	501	446	xxxxx	411	422	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
Volume/Cap:	0.03	xxxx	0.05	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	0.03	xxxx	xxxx
Level Of Service Module:												
2Way95thQ:	0.1	xxxx	0.1	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	0.1	xxxx	xxxxx
Control Del:	12.4	xxxx	11.4	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	8.5	xxxx	xxxxx
LOS by Move:	B	*	B	*	*	*	*	*	*	A	*	*
Movement:	LT	LTR	RT	LT	LTR	RT	LT	LTR	RT	LT	LTR	RT
Shared Cap.:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
SharedQueue:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Shrd ConDel:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Shared LOS:	*	*	*	*	*	*	*	*	*	*	*	*
ApproachDel:		11.7			xxxxxx			xxxxxx			xxxxxx	
ApproachLOS:		B			*			*			*	

Note: Queue reported is the number of cars per lane.

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AM Existing (2009)
Walmart, Tehachapi
Linscott, Law and Greenspan, Engineers

Level Of Service Computation Report
2000 HCM Unsignalized Method (Future Volume Alternative)

Intersection #3 Santa Lucia Street at Valley Boulevard (SR-202)

Average Delay (sec/veh): 1.3 Worst Case Level Of Service: B[12.9]

Street Name:	Santa Lucia Street						Valley Boulevard (SR-202)					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Control:	Stop Sign			Stop Sign			Uncontrolled			Uncontrolled		
Rights:	Include			Include			Include			Include		
Lanes:	0 0 1! 0 0			0 0 1! 0 0			1 0 0 1 0			1 0 0 1 0		
Volume Module:												
Base Vol:	1	5	11	15	5	14	39	407	7	18	297	25
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	1	5	11	15	5	14	39	407	7	18	297	25
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	1	5	11	15	5	14	39	407	7	18	297	25
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
PHF Volume:	1	6	12	17	6	16	43	452	8	20	330	28
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
FinalVolume:	1	6	12	17	6	16	43	452	8	20	330	28
Critical Gap Module:												
Critical Gp:	7.1	6.5	6.2	7.1	6.5	6.2	4.1	xxxx	xxxxx	4.1	xxxx	xxxxx
FollowUpTim:	3.5	4.0	3.3	3.5	4.0	3.3	2.2	xxxx	xxxxx	2.2	xxxx	xxxxx
Capacity Module:												
Cnflict Vol:	937	941	456	936	931	344	358	xxxx	xxxxx	460	xxxx	xxxxx
Potent Cap.:	247	265	609	247	269	703	1212	xxxx	xxxxx	1112	xxxx	xxxxx
Move Cap.:	228	251	609	229	255	703	1212	xxxx	xxxxx	1112	xxxx	xxxxx
Total Cap:	409	412	xxxxx	403	414	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
Volume/Cap:	0.00	0.01	0.02	0.04	0.01	0.02	0.04	xxxx	xxxx	0.02	xxxx	xxxx
Level Of Service Module:												
2Way95thQ:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	0.1	xxxx	xxxxx	0.1	xxxx	xxxxx
Control Del:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	8.1	xxxx	xxxxx	8.3	xxxx	xxxxx
LOS by Move:	*	*	*	*	*	*	A	*	*	A	*	*
Movement:	LT -	LTR -	RT	LT -	LTR -	RT	LT -	LTR -	RT	LT -	LTR -	RT
Shared Cap.:	xxxx	521	xxxxx	xxxx	491	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
SharedQueue:	xxxxx	0.1	xxxxx	xxxxx	0.2	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Shrd ConDel:	xxxxx	12.2	xxxxx	xxxxx	12.9	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Shared LOS:	*	B	*	*	B	*	*	*	*	*	*	*
ApproachDel:		12.2			12.9		xxxxxx			xxxxxx		
ApproachLOS:		B			B		*			*		

Note: Queue reported is the number of cars per lane.

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AM Existing (2009)
Walmart, Tehachapi
Linscott, Law and Greenspan, Engineers

Level Of Service Computation Report
2000 HCM Operations Method (Future Volume Alternative)

****

Intersection #4 Golden Hills Boulevard at Valley Boulevard (SR-202)

****

Cycle (sec):	90	Critical Vol./Cap.(X):	0.353
Loss Time (sec):	12 (Y+R=4.0 sec)	Average Delay (sec/veh):	14.8
Optimal Cycle:	90	Level Of Service:	B

****

Street Name:	Golden Hills Boulevard						Valley Boulevard (SR-202)					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Split Phase			Split Phase			Protected			Permitted		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	6	6	0	6	6	6	6	0	6	6
Lanes:	0 0	0 0	1	1 0	0 0	1	1 0	0 1	0	0 0	1 0	1
Volume Module:												
Base Vol:	0	0	0	161	0	41	25	403	0	0	327	75
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	0	0	0	161	0	41	25	403	0	0	327	75
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	0	0	0	161	0	41	25	403	0	0	327	75
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
PHF Volume:	0	0	0	179	0	46	28	448	0	0	363	83
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	0	0	0	179	0	46	28	448	0	0	363	83
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	0	0	0	179	0	46	28	448	0	0	363	83
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	1.00	1.00	1.00	0.95	1.00	0.85	0.95	1.00	1.00	1.00	1.00	0.85
Lanes:	0.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	0.00	0.00	1.00	1.00
Final Sat.:	0	0	1900	1805	0	1615	1805	1900	0	0	1900	1615
Capacity Analysis Module:												
Vol/Sat:	0.00	0.00	0.00	0.10	0.00	0.03	0.02	0.24	0.00	0.00	0.19	0.05
Crit Moves:				****			****				****	
Green Time:	0.0	0.0	0.0	24.6	0.0	24.6	6.0	53.4	0.0	0.0	47.4	47.4
Volume/Cap:	0.00	0.00	0.00	0.36	0.00	0.10	0.23	0.40	0.00	0.00	0.36	0.10
Delay/Veh:	0.0	0.0	0.0	26.8	0.0	24.6	40.8	10.0	0.0	0.0	12.7	10.7
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	0.0	0.0	0.0	26.8	0.0	24.6	40.8	10.0	0.0	0.0	12.7	10.7
LOS by Move:	A	A	A	C	A	C	D	A	A	A	B	B
HCM2k95thQ:	0	0	0	8	0	2	2	13	0	0	11	2

****

Note: Queue reported is the number of cars per lane.

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AM Existing (2009)
Walmart, Tehachapi
Linscott, Law and Greenspan, Engineers

Level Of Service Computation Report
2000 HCM 4-Way Stop Method (Future Volume Alternative)

****

Intersection #5 Westwood Boulevard at Red Apple Avenue

****

Cycle (sec):	100	Critical Vol./Cap.(X):	0.680
Loss Time (sec):	0 (Y+R=4.0 sec)	Average Delay (sec/veh):	14.5
Optimal Cycle:	0	Level Of Service:	B

****

Street Name:	Westwood Boulevard						Red Apple Avenue					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Control:	Stop Sign			Stop Sign			Stop Sign			Stop Sign		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	0 0	1 0	1	1 0	1 0	0	0 0	0 0	0	1 0	0 0	1
Volume Module:												
Base Vol:	0	5	143	381	15	0	0	0	0	48	0	139
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	0	5	143	381	15	0	0	0	0	48	0	139
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	0	5	143	381	15	0	0	0	0	48	0	139
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
PHF Volume:	0	6	159	423	17	0	0	0	0	53	0	154
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	0	6	159	423	17	0	0	0	0	53	0	154
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	0	6	159	423	17	0	0	0	0	53	0	154
Saturation Flow Module:												
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	0.00	1.00	1.00	1.00	1.00	0.00	0.00	0.00	0.00	1.00	0.00	1.00
Final Sat.:	0	626	718	623	672	0	0	0	0	521	0	631
Capacity Analysis Module:												
Vol/Sat:	xxxx	0.01	0.22	0.68	0.02	xxxx	xxxx	xxxx	xxxx	0.10	xxxx	0.24
Crit Moves:			****	****								****
Delay/Veh:	0.0	8.3	8.8	19.4	8.1	0.0	0.0	0.0	0.0	9.9	0.0	9.6
Delay Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	0.0	8.3	8.8	19.4	8.1	0.0	0.0	0.0	0.0	9.9	0.0	9.6
LOS by Move:	*	A	A	C	A	*	*	*	*	A	*	A
ApproachDel:		8.8			19.0			xxxxxx			9.7	
Delay Adj:		1.00			1.00			xxxxx			1.00	
ApprAdjDel:		8.8			19.0			xxxxxx			9.7	
LOS by Appr:		A			C			*			A	
AllWayAvgQ:	0.0	0.0	0.3	1.9	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.3

****

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AM Existing (2009)
Walmart, Tehachapi
Linscott, Law and Greenspan, Engineers

Level Of Service Computation Report
2000 HCM Unsignalized Method (Future Volume Alternative)

****

Intersection #6 Sierra Vista Drive at Valley Boulevard (SR-202)

****

Average Delay (sec/veh): 0.1 Worst Case Level Of Service: B[10.9]

****

Street Name:	Sierra Vista Drive									Valley Boulevard (SR-202)								
Approach:	North Bound					South Bound				East Bound					West Bound			
Movement:	L	-	T	-	R	L	-	T	-	R	L	-	T	-	R	L	-	T	-	R
Control:	Stop Sign					Stop Sign					Uncontrolled					Uncontrolled				
Rights:	Include					Include					Include					Include				
Lanes:	0	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	1	0
Volume Module:																				
Base Vol:	0		0		0	0		0		5	0		540		0	0		406		3
Growth Adj:	1.00		1.00		1.00	1.00		1.00		1.00	1.00		1.00		1.00	1.00		1.00		1.00
Initial Bse:	0		0		0	0		0		5	0		540		0	0		406		3
Added Vol:	0		0		0	0		0		0	0		0		0	0		0		0
PasserByVol:	0		0		0	0		0		0	0		0		0	0		0		0
Initial Fut:	0		0		0	0		0		5	0		540		0	0		406		3
User Adj:	1.00		1.00		1.00	1.00		1.00		1.00	1.00		1.00		1.00	1.00		1.00		1.00
PHF Adj:	0.90		0.90		0.90	0.90		0.90		0.90	0.90		0.90		0.90	0.90		0.90		0.90
PHF Volume:	0		0		0	0		0		6	0		600		0	0		451		3
Reduct Vol:	0		0		0	0		0		0	0		0		0	0		0		0
FinalVolume:	0		0		0	0		0		6	0		600		0	0		451		3
Critical Gap Module:																				
Critical Gp:	xxxxx		xxxx		xxxxx	xxxxx		xxxx		6.2	xxxxx		xxxx		xxxxx	xxxxx		xxxx		xxxxx
FollowUpTim:	xxxxx		xxxx		xxxxx	xxxxx		xxxx		3.3	xxxxx		xxxx		xxxxx	xxxxx		xxxx		xxxxx
Capacity Module:																				
Cnflict Vol:	xxxx		xxxx		xxxxx	xxxx		xxxx		453	xxxx		xxxx		xxxxx	xxxx		xxxx		xxxxx
Potent Cap.:	xxxx		xxxx		xxxxx	xxxx		xxxx		611	xxxx		xxxx		xxxxx	xxxx		xxxx		xxxxx
Move Cap.:	xxxx		xxxx		xxxxx	xxxx		xxxx		611	xxxx		xxxx		xxxxx	xxxx		xxxx		xxxxx
Volume/Cap:	xxxx		xxxx		xxxx	xxxx		xxxx		0.01	xxxx		xxxx		xxxx	xxxx		xxxx		xxxx
Level Of Service Module:																				
2Way95thQ:	xxxx		xxxx		xxxxx	xxxx		xxxx		0.0	xxxx		xxxx		xxxxx	xxxx		xxxx		xxxxx
Control Del:	xxxxx		xxxx		xxxxx	xxxxx		xxxx		10.9	xxxxx		xxxx		xxxxx	xxxxx		xxxx		xxxxx
LOS by Move:	*		*		*	*		*		B	*		*		*	*		*		*
Movement:	LT	-	LTR	-	RT	LT	-	LTR	-	RT	LT	-	LTR	-	RT	LT	-	LTR	-	RT
Shared Cap.:	xxxx		xxxx		xxxxx	xxxx		xxxx		xxxxx	xxxx		xxxx		xxxxx	xxxx		xxxx		xxxxx
SharedQueue:	xxxxx		xxxx		xxxxx	xxxxx		xxxx		xxxxx	xxxxx		xxxx		xxxxx	xxxxx		xxxx		xxxxx
Shrd ConDel:	xxxxx		xxxx		xxxxx	xxxxx		xxxx		xxxxx	xxxxx		xxxx		xxxxx	xxxxx		xxxx		xxxxx
Shared LOS:	*		*		*	*		*		*	*		*		*	*		*		*
ApproachDel:	xxxxxx					10.9					xxxxxx					xxxxxx				
ApproachLOS:	*					B					*					*				

****

Note: Queue reported is the number of cars per lane.

****

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AM Existing (2009)
Walmart, Tehachapi
Linscott, Law and Greenspan, Engineers

Level Of Service Computation Report
2000 HCM Unsignalized Method (Future Volume Alternative)

****

Intersection #7 Tehachapi Boulevard at SR-58 Eastbound Ramps

****

Average Delay (sec/veh): 1.0 Worst Case Level Of Service: A[9.6]

****

Street Name:	Tehachapi Boulevard						SR-58 Eastbound Ramps					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L - T - R			L - T - R			L - T - R			L - T - R		
Control:	Uncontrolled			Uncontrolled			Stop Sign			Stop Sign		
Rights:	Include			Include			Include			Include		
Lanes:	0 0 0 1 0			0 0 1 0 0			0 1 0 0 1			0 0 0 0 0		
Volume Module:												
Base Vol:	0	364	224	0	145	0	0	1	82	0	0	0
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	0	364	224	0	145	0	0	1	82	0	0	0
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	0	364	224	0	145	0	0	1	82	0	0	0
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
PHF Volume:	0	404	249	0	161	0	0	1	91	0	0	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
FinalVolume:	0	404	249	0	161	0	0	1	91	0	0	0
Critical Gap Module:												
Critical Gp:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	6.4	6.5	6.2	xxxxx	xxxx	xxxxx
FollowUpTim:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	3.5	4.0	3.3	xxxxx	xxxx	xxxxx
Capacity Module:												
Cnflict Vol:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	690	814	161	xxxx	xxxx	xxxxx
Potent Cap.:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	414	314	889	xxxx	xxxx	xxxxx
Move Cap.:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	414	314	889	xxxx	xxxx	xxxxx
Volume/Cap:	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	0.00	0.00	0.10	xxxx	xxxx	xxxx
Level Of Service Module:												
2Way95thQ:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	0.3	xxxx	xxxx	xxxxx
Control Del:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	9.5	xxxxx	xxxx	xxxxx
LOS by Move:	*	*	*	*	*	*	*	*	A	*	*	*
Movement:	LT - LTR - RT			LT - LTR - RT			LT - LTR - RT			LT - LTR - RT		
Shared Cap.:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	314	xxxx	xxxxx	xxxx	xxxx	xxxxx
SharedQueue:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	0.0	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Shrd ConDel:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	16.5	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Shared LOS:	*	*	*	*	*	*	C	*	*	*	*	*
ApproachDel:	xxxxxx			xxxxxx			9.6			xxxxxx		
ApproachLOS:	*			*			A			*		

****

Note: Queue reported is the number of cars per lane.

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AM Existing (2009)
Walmart, Tehachapi
Linscott, Law and Greenspan, Engineers

Level Of Service Computation Report
2000 HCM Operations Method (Future Volume Alternative)

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Intersection #8 Tehachapi Boulevard/Tucker Road at Red Apple Avenue/Tehachapi Bo

****

Cycle (sec):	90	Critical Vol./Cap.(X):	0.418
Loss Time (sec):	16 (Y+R=4.0 sec)	Average Delay (sec/veh):	27.7
Optimal Cycle:	90	Level Of Service:	C

****

Street Name: Tehachapi Boulevard/Tucker Road Red Apple Avenue/Tehachapi Boulev

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Control:	Protected			Protected			Protected			Protected		
Rights:	Include			Include			Include			Include		
Min. Green:	6	6	6	6	6	6	6	6	6	6	6	6
Lanes:	1 0	2 0	1	1 0	2 0	1	1 0	1 0	1	1 0	1 0	1
Volume Module:												
Base Vol:	50	330	92	39	154	28	163	293	92	76	113	76
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	50	330	92	39	154	28	163	293	92	76	113	76
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	50	330	92	39	154	28	163	293	92	76	113	76
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
PHF Volume:	56	367	102	43	171	31	181	326	102	84	126	84
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	56	367	102	43	171	31	181	326	102	84	126	84
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	56	367	102	43	171	31	181	326	102	84	126	84
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.95	0.95	0.85	0.95	0.95	0.85	0.95	1.00	0.85	0.95	1.00	0.85
Lanes:	1.00	2.00	1.00	1.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Sat.:	1805	3610	1615	1805	3610	1615	1805	1900	1615	1805	1900	1615
Capacity Analysis Module:												
Vol/Sat:	0.03	0.10	0.06	0.02	0.05	0.02	0.10	0.17	0.06	0.05	0.07	0.05
Crit Moves:		****		****				****		****		
Green Time:	13.8	21.6	21.6	6.0	13.8	13.8	27.9	36.4	36.4	10.0	18.5	18.5
Volume/Cap:	0.20	0.42	0.26	0.36	0.31	0.13	0.32	0.42	0.16	0.42	0.32	0.25
Delay/Veh:	33.6	29.3	28.1	42.0	34.2	33.1	24.2	19.6	17.1	38.8	30.9	30.4
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	33.6	29.3	28.1	42.0	34.2	33.1	24.2	19.6	17.1	38.8	30.9	30.4
LOS by Move:	C	C	C	D	C	C	C	B	B	D	C	C
HCM2k95thQ:	3	9	5	3	5	2	8	13	4	5	6	4

****

Note: Queue reported is the number of cars per lane.

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AM Existing (2009)
Walmart, Tehachapi
Linscott, Law and Greenspan, Engineers

Level Of Service Computation Report
2000 HCM Unsignalized Method (Future Volume Alternative)

****
Intersection #9 Tucker Road at Conway Avenue/Walmart Project Driveway 2
****
Average Delay (sec/veh): 2.0 Worst Case Level Of Service: D[32.0]
****

Street Name:	Tucker Road						Conway Avenue/Walmart Project Dri					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Control:	Uncontrolled			Uncontrolled			Stop Sign			Stop Sign		
Rights:	Include			Include			Include			Include		
Lanes:	1 0	1 1	0	1 0	1 1	0	0 0	1! 0	0	0 0	1! 0	0
Volume Module:												
Base Vol:	22	570	0	3	764	43	52	0	31	0	0	0
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	22	570	0	3	764	43	52	0	31	0	0	0
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	22	570	0	3	764	43	52	0	31	0	0	0
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
PHF Volume:	24	633	0	3	849	48	58	0	34	0	0	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
FinalVolume:	24	633	0	3	849	48	58	0	34	0	0	0
Critical Gap Module:												
Critical Gp:	4.1	xxxx	xxxxx	4.1	xxxx	xxxxx	6.8	6.5	6.9	7.5	6.5	6.9
FollowUpTim:	2.2	xxxx	xxxxx	2.2	xxxx	xxxxx	3.5	4.0	3.3	3.5	4.0	3.3
Capacity Module:												
Cnflict Vol:	897	xxxx	xxxxx	633	xxxx	xxxxx	1245	1562	448	1113	1586	317
Potent Cap.:	766	xxxx	xxxxx	959	xxxx	xxxxx	169	113	563	166	109	685
Move Cap.:	766	xxxx	xxxxx	959	xxxx	xxxxx	164	109	563	151	105	685
Volume/Cap:	0.03	xxxx	xxxx	0.00	xxxx	xxxx	0.35	0.00	0.06	0.00	0.00	0.00
Level Of Service Module:												
2Way95thQ:	0.1	xxxx	xxxxx	0.0	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
Control Del:	9.9	xxxx	xxxxx	8.8	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
LOS by Move:	A	*	*	A	*	*	*	*	*	*	*	*
Movement:	LT -	LTR -	RT	LT -	LTR -	RT	LT -	LTR -	RT	LT -	LTR -	RT
Shared Cap.:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	223	xxxxx	xxxx	0	xxxxx
SharedQueue:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	1.9	xxxxx	xxxxx	xxxx	xxxxx
Shrd ConDel:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	32.0	xxxxx	xxxxx	xxxx	xxxxx
Shared LOS:	*	*	*	*	*	*	*	D	*	*	*	*
ApproachDel:	xxxxxx			xxxxxx			32.0			xxxxxx		
ApproachLOS:	*			*			D			*		

****
Note: Queue reported is the number of cars per lane.
****

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AM Existing (2009)
Walmart, Tehachapi
Linscott, Law and Greenspan, Engineers

Level Of Service Computation Report
2000 HCM Operations Method (Future Volume Alternative)

****

Intersection #10 Tucker Road at Valley Boulevard (SR-202)

****

Cycle (sec):	90	Critical Vol./Cap.(X):	0.703
Loss Time (sec):	16	Average Delay (sec/veh):	34.4
Optimal Cycle:	90	Level Of Service:	C

****

Street Name:	Tucker Road						Valley Boulevard (SR-202)					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L - T - R			L - T - R			L - T - R			L - T - R		
Control:	Protected			Protected			Protected			Protected		
Rights:	Include			Include			Include			Include		
Min. Green:	6	6	6	6	6	6	6	6	6	6	6	6
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	1 0	1 1	0	1 0	2 0	1	1 0	1 0	1	1 0	1 0	1
Volume Module:												
Base Vol:	177	211	133	153	239	236	262	255	107	138	248	119
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	177	211	133	153	239	236	262	255	107	138	248	119
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	177	211	133	153	239	236	262	255	107	138	248	119
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
PHF Volume:	197	234	148	170	266	262	291	283	119	153	276	132
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	197	234	148	170	266	262	291	283	119	153	276	132
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	197	234	148	170	266	262	291	283	119	153	276	132
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.95	0.89	0.89	0.95	0.95	0.85	0.95	1.00	0.85	0.95	1.00	0.85
Lanes:	1.00	1.23	0.77	1.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Sat.:	1805	2086	1315	1805	3610	1615	1805	1900	1615	1805	1900	1615
Capacity Analysis Module:												
Vol/Sat:	0.11	0.11	0.11	0.09	0.07	0.16	0.16	0.15	0.07	0.08	0.15	0.08
Crit Moves:	****					****	****				****	
Green Time:	14.0	18.9	18.9	15.8	20.8	20.8	20.7	25.0	25.0	14.2	18.6	18.6
Volume/Cap:	0.70	0.53	0.53	0.53	0.32	0.70	0.70	0.54	0.27	0.54	0.70	0.40
Delay/Veh:	43.9	32.4	32.4	35.5	28.9	37.7	37.2	28.7	25.7	36.9	38.8	31.6
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	43.9	32.4	32.4	35.5	28.9	37.7	37.2	28.7	25.7	36.9	38.8	31.6
LOS by Move:	D	C	C	D	C	D	D	C	C	D	D	C
HCM2k95thQ:	13	11	11	10	7	15	16	14	5	9	16	7

****

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AM Existing (2009)
Walmart, Tehachapi
Linscott, Law and Greenspan, Engineers

Level Of Service Computation Report
2000 HCM 4-Way Stop Method (Future Volume Alternative)

****

Intersection #11 Tucker Road at Highline Road

****

Cycle (sec):	100	Critical Vol./Cap.(X):	0.520
Loss Time (sec):	0 (Y+R=4.0 sec)	Average Delay (sec/veh):	11.2
Optimal Cycle:	0	Level Of Service:	B

****

Street Name:	Tucker Road						Highline Road					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Control:	Stop Sign			Stop Sign			Stop Sign			Stop Sign		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	0 0	1! 0	0	0 0	1! 0	0	0 1	0 0	1	0 0	1! 0	0
Volume Module:												
Base Vol:	2	4	5	44	3	21	89	249	0	2	69	32
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	2	4	5	44	3	21	89	249	0	2	69	32
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	2	4	5	44	3	21	89	249	0	2	69	32
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
PHF Volume:	2	4	6	49	3	23	99	277	0	2	77	36
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	2	4	6	49	3	23	99	277	0	2	77	36
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	2	4	6	49	3	23	99	277	0	2	77	36
Saturation Flow Module:												
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	0.18	0.36	0.46	0.65	0.04	0.31	0.26	0.74	1.00	0.02	0.67	0.31
Final Sat.:	120	241	301	428	29	204	190	532	867	15	526	244
Capacity Analysis Module:												
Vol/Sat:	0.02	0.02	0.02	0.11	0.11	0.11	0.52	0.52	0.00	0.15	0.15	0.15
Crit Moves:		****		****				****			****	
Delay/Veh:	8.0	8.0	8.0	8.6	8.6	8.6	12.8	12.8	0.0	8.2	8.2	8.2
Delay Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	8.0	8.0	8.0	8.6	8.6	8.6	12.8	12.8	0.0	8.2	8.2	8.2
LOS by Move:	A	A	A	A	A	A	B	B	*	A	A	A
ApproachDel:		8.0			8.6			12.8			8.2	
Delay Adj:		1.00			1.00			1.00			1.00	
ApprAdjDel:		8.0			8.6			12.8			8.2	
LOS by Appr:		A			A			B			A	
AllWayAvgQ:	0.0	0.0	0.0	0.1	0.1	0.1	1.0	1.0	0.0	0.2	0.2	0.2

****

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AM Existing (2009)
Walmart, Tehachapi
Linscott, Law and Greenspan, Engineers

Level Of Service Computation Report
2000 HCM Unsignalized Method (Future Volume Alternative)

****

Intersection #12 Mountain View Avenue at Valley Boulevard (SR-202)

****

Average Delay (sec/veh): 0.8 Worst Case Level Of Service: B[11.3]

****

Street Name:	Mountain View Avenue									Valley Boulevard (SR-202)								
Approach:	North Bound					South Bound				East Bound					West Bound			
Movement:	L	-	T	-	R	L	-	T	-	R	L	-	T	-	R	L	-	T	-	R
Control:	Stop Sign					Stop Sign					Uncontrolled					Uncontrolled				
Rights:	Include					Include					Include					Include				
Lanes:	0	0	0	0	0	0	0	1!	0	0	1	0	1	0	0	0	0	1	0	1
Volume Module:																				
Base Vol:	0		0		0	6		0		25	32		355		0	0		285		13
Growth Adj:	1.00		1.00		1.00	1.00		1.00		1.00	1.00		1.00		1.00	1.00		1.00		1.00
Initial Bse:	0		0		0	6		0		25	32		355		0	0		285		13
Added Vol:	0		0		0	0		0		0	0		0		0	0		0		0
PasserByVol:	0		0		0	0		0		0	0		0		0	0		0		0
Initial Fut:	0		0		0	6		0		25	32		355		0	0		285		13
User Adj:	1.00		1.00		1.00	1.00		1.00		1.00	1.00		1.00		1.00	1.00		1.00		1.00
PHF Adj:	0.90		0.90		0.90	0.90		0.90		0.90	0.90		0.90		0.90	0.90		0.90		0.90
PHF Volume:	0		0		0	7		0		28	36		394		0	0		317		14
Reduct Vol:	0		0		0	0		0		0	0		0		0	0		0		0
FinalVolume:	0		0		0	7		0		28	36		394		0	0		317		14
Critical Gap Module:																				
Critical Gp:	xxxxx		xxxx		xxxxx	6.4		6.5		6.2	4.1		xxxx		xxxxx	xxxxx		xxxx		xxxxx
FollowUpTim:	xxxxx		xxxx		xxxxx	3.5		4.0		3.3	2.2		xxxx		xxxxx	xxxxx		xxxx		xxxxx
Capacity Module:																				
Cnflict Vol:	xxxx		xxxx		xxxxx	782		782		317	331		xxxx		xxxxx	xxxx		xxxx		xxxxx
Potent Cap.:	xxxx		xxxx		xxxxx	366		328		729	1240		xxxx		xxxxx	xxxx		xxxx		xxxxx
Move Cap.:	xxxx		xxxx		xxxxx	358		319		729	1240		xxxx		xxxxx	xxxx		xxxx		xxxxx
Volume/Cap:	xxxx		xxxx		xxxx	0.02		0.00		0.04	0.03		xxxx		xxxx	xxxx		xxxx		xxxx
Level Of Service Module:																				
2Way95thQ:	xxxx		xxxx		xxxxx	xxxx		xxxx		xxxxx	0.1		xxxx		xxxxx	xxxx		xxxx		xxxxx
Control Del:	xxxxx		xxxx		xxxxx	xxxxx		xxxx		xxxxx	8.0		xxxx		xxxxx	xxxxx		xxxx		xxxxx
LOS by Move:	*		*		*	*		*		*	A		*		*	*		*		*
Movement:	LT	-	LTR	-	RT	LT	-	LTR	-	RT	LT	-	LTR	-	RT	LT	-	LTR	-	RT
Shared Cap.:	xxxx		xxxx		xxxxx	xxxx		607		xxxxx	xxxx		xxxx		xxxxx	xxxx		xxxx		xxxxx
SharedQueue:	xxxxx		xxxx		xxxxx	xxxxx		0.2		xxxxx	xxxxx		xxxx		xxxxx	xxxxx		xxxx		xxxxx
Shrd ConDel:	xxxxx		xxxx		xxxxx	xxxxx		11.3		xxxxx	xxxxx		xxxx		xxxxx	xxxxx		xxxx		xxxxx
Shared LOS:	*		*		*	*		B		*	*		*		*	*		*		*
ApproachDel:	xxxxxx					11.3					xxxxxx					xxxxxx				
ApproachLOS:	*					B					*					*				

****

Note: Queue reported is the number of cars per lane.

****

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AM Existing (2009)
Walmart, Tehachapi
Linscott, Law and Greenspan, Engineers

Level Of Service Computation Report
2000 HCM Unsignalized Method (Future Volume Alternative)

Intersection #13 Mountain View Avenue at Tehachapi Boulevard

Average Delay (sec/veh): 0.7 Worst Case Level Of Service: B[11.9]

Street Name:	Mountain View Avenue									Tehachapi Boulevard								
Approach:	North Bound					South Bound				East Bound					West Bound			
Movement:	L	-	T	-	R	L	-	T	-	R	L	-	T	-	R	L	-	T	-	R
Control:	Stop Sign					Stop Sign					Uncontrolled					Uncontrolled				
Rights:	Include					Include					Include					Include				
Lanes:	0	1	0	0	1	1	0	0	0	0	1	0	1	0	1	1	0	1	0	1
Volume Module:																				
Base Vol:	15		0		11	3		0		0	5		309		28	9		260		4
Growth Adj:	1.00	1.00		1.00		1.00	1.00		1.00		1.00	1.00		1.00		1.00	1.00		1.00	
Initial Bse:	15		0		11	3		0		0	5		309		28	9		260		4
Added Vol:	0		0		0	0		0		0	0		0		0	0		0		0
PasserByVol:	0		0		0	0		0		0	0		0		0	0		0		0
Initial Fut:	15		0		11	3		0		0	5		309		28	9		260		4
User Adj:	1.00	1.00		1.00		1.00	1.00		1.00		1.00	1.00		1.00		1.00	1.00		1.00	
PHF Adj:	0.90	0.90		0.90		0.90	0.90		0.90		0.90	0.90		0.90		0.90	0.90		0.90	
PHF Volume:	17		0		12	3		0		0	6		343		31	10		289		4
Reduct Vol:	0		0		0	0		0		0	0		0		0	0		0		0
FinalVolume:	17		0		12	3		0		0	6		343		31	10		289		4
Critical Gap Module:																				
Critical Gp:	7.1	6.5		6.2		7.1	xxxx		xxxxx		4.1	xxxx		xxxxx		4.1	xxxx		xxxxx	
FollowUpTim:	3.5	4.0		3.3		3.5	xxxx		xxxxx		2.2	xxxx		xxxxx		2.2	xxxx		xxxxx	
Capacity Module:																				
Cnflict Vol:	666	668		343		685	xxxx		xxxxx		293	xxxx		xxxxx		374	xxxx		xxxxx	
Potent Cap.:	376	382		704		365	xxxx		xxxxx		1280	xxxx		xxxxx		1195	xxxx		xxxxx	
Move Cap.:	372	377		704		355	xxxx		xxxxx		1280	xxxx		xxxxx		1195	xxxx		xxxxx	
Total Cap:	546	524		xxxxx		528	511		xxxxx		xxxx	xxxx		xxxxx		xxxx	xxxx		xxxxx	
Volume/Cap:	0.03	0.00		0.02		0.01	xxxx		xxxx		0.00	xxxx		xxxx		0.01	xxxx		xxxx	
Level Of Service Module:																				
2Way95thQ:	xxxx	xxxx		0.1		0.0	xxxx		xxxxx		0.0	xxxx		xxxxx		0.0	xxxx		xxxxx	
Control Del:	xxxxx	xxxx		10.2		11.9	xxxx		xxxxx		7.8	xxxx		xxxxx		8.0	xxxx		xxxxx	
LOS by Move:	*	*		B		B	*		*		A	*		*		A	*		*	
Movement:	LT	-	LTR	-	RT	LT	-	LTR	-	RT	LT	-	LTR	-	RT	LT	-	LTR	-	RT
Shared Cap.:	546	xxxx		xxxxx		xxxx	xxxx		xxxxx		xxxx	xxxx		xxxxx		xxxx	xxxx		xxxxx	
SharedQueue:	0.1	xxxx		xxxxx		xxxxx	xxxx		xxxxx		xxxxx	xxxx		xxxxx		xxxxx	xxxx		xxxxx	
Shrd ConDel:	11.8	xxxx		xxxxx		xxxxx	xxxx		xxxxx		xxxxx	xxxx		xxxxx		xxxxx	xxxx		xxxxx	
Shared LOS:	B	*		*		*	*		*		*	*		*		*	*		*	
ApproachDel:		11.1					11.9					xxxxxx					xxxxxx			
ApproachLOS:		B					B					*					*			

Note: Queue reported is the number of cars per lane.

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AM Existing (2009)
Walmart, Tehachapi
Linscott, Law and Greenspan, Engineers

Level Of Service Computation Report
2000 HCM Unsignalized Method (Future Volume Alternative)

Intersection #14 Mulberry Street at Tehachapi Boulevard

Average Delay (sec/veh): 0.9 Worst Case Level Of Service: B[11.1]

Street Name:	Mulberry Street						Tehachapi Boulevard					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	- T	- R	L	- T	- R	L	- T	- R	L	- T	- R
Control:	Stop Sign			Stop Sign			Uncontrolled			Uncontrolled		
Rights:	Include			Include			Include			Include		
Lanes:	0 0 1! 0 0			0 0 1! 0 0			1 0 1 0 1			1 0 1 0 1		
Volume Module:												
Base Vol:	21	0	16	0	0	0	0	336	16	18	210	1
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	21	0	16	0	0	0	0	336	16	18	210	1
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	21	0	16	0	0	0	0	336	16	18	210	1
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
PHF Volume:	23	0	18	0	0	0	0	373	18	20	233	1
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
FinalVolume:	23	0	18	0	0	0	0	373	18	20	233	1
Critical Gap Module:												
Critical Gp:	6.4	6.5	6.2	7.1	6.5	6.2	xxxxx	xxxx	xxxxx	4.1	xxxx	xxxxx
FollowUpTim:	3.5	4.0	3.3	3.5	4.0	3.3	xxxxx	xxxx	xxxxx	2.2	xxxx	xxxxx
Capacity Module:												
Cnflict Vol:	647	648	373	664	664	233	xxxx	xxxx	xxxxx	391	xxxx	xxxxx
Potent Cap.:	439	392	677	377	383	811	xxxx	xxxx	xxxxx	1178	xxxx	xxxxx
Move Cap.:	433	385	677	362	377	811	xxxx	xxxx	xxxxx	1178	xxxx	xxxxx
Total Cap:	597	530	xxxxx	523	514	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
Volume/Cap:	0.04	0.00	0.03	0.00	0.00	0.00	xxxx	xxxx	xxxx	0.02	xxxx	xxxx
Level Of Service Module:												
2Way95thQ:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	0.1	xxxx	xxxxx
Control Del:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	8.1	xxxx	xxxxx
LOS by Move:	*	*	*	*	*	*	*	*	*	A	*	*
Movement:	LT -	LTR -	RT	LT -	LTR -	RT	LT -	LTR -	RT	LT -	LTR -	RT
Shared Cap.:	xxxx	629	xxxxx	xxxx	0	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
SharedQueue:	xxxxx	0.2	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Shrd ConDel:	xxxxx	11.1	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Shared LOS:	*	B	*	*	*	*	*	*	*	*	*	*
ApproachDel:		11.1		xxxxxx			xxxxxx			xxxxxx		
ApproachLOS:		B		*			*			*		

Note: Queue reported is the number of cars per lane.

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AM Existing (2009)
Walmart, Tehachapi
Linscott, Law and Greenspan, Engineers

Level Of Service Computation Report
2000 HCM Unsignalized Method (Future Volume Alternative)

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Intersection #15 Mill Street at Tehachapi Boulevard

****

Average Delay (sec/veh): 1.1 Worst Case Level Of Service: B[11.1]

****

Street Name:	Mill Street						Tehachapi Boulevard					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L - T - R			L - T - R			L - T - R			L - T - R		
Control:	Stop Sign			Stop Sign			Uncontrolled			Uncontrolled		
Rights:	Include			Include			Include			Include		
Lanes:	1 0 0 0 1			0 0 0 0 0			0 0 1 1 0			0 1 1 0 0		
Volume Module:												
Base Vol:	17	0	30	0	0	0	0	338	21	31	252	0
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	17	0	30	0	0	0	0	338	21	31	252	0
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	17	0	30	0	0	0	0	338	21	31	252	0
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
PHF Volume:	19	0	33	0	0	0	0	376	23	34	280	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
FinalVolume:	19	0	33	0	0	0	0	376	23	34	280	0
Critical Gap Module:												
Critical Gp:	6.8	xxxx	6.9	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	4.1	xxxx	xxxxx
FollowUpTim:	3.5	xxxx	3.3	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	2.2	xxxx	xxxxx
Capacity Module:												
Cnflict Vol:	596	xxxx	199	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	399	xxxx	xxxxx
Potent Cap.:	440	xxxx	814	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	1171	xxxx	xxxxx
Move Cap.:	429	xxxx	814	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	1171	xxxx	xxxxx
Volume/Cap:	0.04	xxxx	0.04	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	0.03	xxxx	xxxx
Level Of Service Module:												
2Way95thQ:	0.1	xxxx	0.1	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	0.1	xxxx	xxxxx
Control Del:	13.8	xxxx	9.6	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	8.2	xxxx	xxxxx
LOS by Move:	B	*	A	*	*	*	*	*	*	A	*	*
Movement:	LT - LTR - RT			LT - LTR - RT			LT - LTR - RT			LT - LTR - RT		
Shared Cap.:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
SharedQueue:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	0.1	xxxx	xxxxx
Shrd ConDel:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	8.2	xxxx	xxxxx
Shared LOS:	*	*	*	*	*	*	*	*	*	A	*	*
ApproachDel:		11.1			xxxxxx			xxxxxx			xxxxxx	
ApproachLOS:		B			*			*			*	

****

Note: Queue reported is the number of cars per lane.

****

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AM Existing (2009)
Walmart, Tehachapi
Linscott, Law and Greenspan, Engineers

Level Of Service Computation Report
2000 HCM 4-Way Stop Method (Future Volume Alternative)

Intersection #16 Curry Street at Tehachapi Boulevard

Cycle (sec):	100	Critical Vol./Cap.(X):	0.301
Loss Time (sec):	0 (Y+R=4.0 sec)	Average Delay (sec/veh):	9.7
Optimal Cycle:	0	Level Of Service:	A

Street Name:	Curry Street						Tehachapi Boulevard					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Control:	Stop Sign			Stop Sign			Stop Sign			Stop Sign		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	0 1	0 1	0	0 0	1 0	0	0 1	0 1	0	0 1	0 1	0
Volume Module:												
Base Vol:	30	2	72	0	3	0	2	321	48	38	261	1
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	30	2	72	0	3	0	2	321	48	38	261	1
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	30	2	72	0	3	0	2	321	48	38	261	1
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
PHF Volume:	33	2	80	0	3	0	2	357	53	42	290	1
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	33	2	80	0	3	0	2	357	53	42	290	1
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	33	2	80	0	3	0	2	357	53	42	290	1
Saturation Flow Module:												
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	0.58	0.42	1.00	0.00	1.00	0.00	0.01	1.73	0.26	0.25	1.74	0.01
Final Sat.:	302	222	613	0	527	0	7	1203	183	167	1163	5
Capacity Analysis Module:												
Vol/Sat:	0.11	0.01	0.13	xxxx	0.01	xxxx	0.30	0.30	0.29	0.25	0.25	0.25
Crit Moves:			****		****		****			****		
Delay/Veh:	9.6	9.6	8.9	0.0	9.3	0.0	10.0	9.9	9.7	9.8	9.7	9.6
Delay Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	9.6	9.6	8.9	0.0	9.3	0.0	10.0	9.9	9.7	9.8	9.7	9.6
LOS by Move:	A	A	A	*	A	*	B	A	A	A	A	A
ApproachDel:		9.1			9.3			9.8			9.7	
Delay Adj:		1.00			1.00			1.00			1.00	
ApprAdjDel:		9.1			9.3			9.8			9.7	
LOS by Appr:		A			A			A			A	
AllWayAvgQ:	0.1	0.1	0.1	0.0	0.0	0.0	0.4	0.4	0.4	0.3	0.3	0.3

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AM Existing (2009)
Walmart, Tehachapi
Linscott, Law and Greenspan, Engineers

Level Of Service Computation Report
2000 HCM Operations Method (Future Volume Alternative)

Intersection #17 Curry Street at Valley Boulevard (SR-202)

Cycle (sec):	90	Critical Vol./Cap.(X):	0.442
Loss Time (sec):	12 (Y+R=4.0 sec)	Average Delay (sec/veh):	22.1
Optimal Cycle:	90	Level Of Service:	C

Street Name:	Curry Street						Valley Boulevard (SR-202)					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L - T - R			L - T - R			L - T - R			L - T - R		
Control:	Permitted			Permitted			Protected			Protected		
Rights:	Include			Include			Include			Include		
Min. Green:	6	6	6	6	6	6	6	6	6	6	6	6
Lanes:	1 0	1 0	1	1 0	1 0	1	1 0	0 1	0	1 0	1 0	1
Volume Module:												
Base Vol:	59	83	176	41	42	26	41	346	22	73	217	24
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	59	83	176	41	42	26	41	346	22	73	217	24
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	59	83	176	41	42	26	41	346	22	73	217	24
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
PHF Volume:	66	92	196	46	47	29	46	384	24	81	241	27
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	66	92	196	46	47	29	46	384	24	81	241	27
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	66	92	196	46	47	29	46	384	24	81	241	27
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.73	1.00	0.85	0.69	1.00	0.85	0.95	0.99	0.99	0.95	1.00	0.85
Lanes:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.94	0.06	1.00	1.00	1.00
Final Sat.:	1387	1900	1615	1321	1900	1615	1805	1770	113	1805	1900	1615
Capacity Analysis Module:												
Vol/Sat:	0.05	0.05	0.12	0.03	0.02	0.02	0.03	0.22	0.22	0.04	0.13	0.02
Crit Moves:			****					****		****		
Green Time:	24.6	24.6	24.6	24.6	24.6	24.6	18.4	44.2	44.2	9.1	35.0	35.0
Volume/Cap:	0.17	0.18	0.44	0.13	0.09	0.07	0.12	0.44	0.44	0.44	0.33	0.04
Delay/Veh:	25.1	25.1	27.7	24.7	24.4	24.2	29.4	15.2	15.2	39.7	19.5	17.1
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	25.1	25.1	27.7	24.7	24.4	24.2	29.4	15.2	15.2	39.7	19.5	17.1
LOS by Move:	C	C	C	C	C	C	C	B	B	D	B	B
HCM2k95thQ:	3	4	9	2	2	1	2	14	14	5	9	1

Note: Queue reported is the number of cars per lane.

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AM Existing (2009)
Walmart, Tehachapi
Linscott, Law and Greenspan, Engineers

Level Of Service Computation Report
2000 HCM Unsignalized Method (Future Volume Alternative)

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Intersection #18 Curry Street/Summit Road at Highline Road

****

Average Delay (sec/veh): 3.1 Worst Case Level Of Service: B[13.6]

****

Street Name:	Curry Street/Summit Road									Highline Road								
Approach:	North Bound					South Bound				East Bound					West Bound			
Movement:	L	-	T	-	R	L	-	T	-	R	L	-	T	-	R	L	-	T	-	R
Control:	Stop Sign					Stop Sign					Uncontrolled					Uncontrolled				
Rights:	Include					Include					Include					Include				
Lanes:	0	0	1	0	0	0	1	0	0	1	0	0	1!	0	0	0	0	1!	0	0
Volume Module:																				
Base Vol:	0		2		0	41		1		33	80		236		3	1		70		23
Growth Adj:	1.00	1.00		1.00		1.00	1.00		1.00		1.00	1.00		1.00		1.00	1.00		1.00	
Initial Bse:	0		2		0	41		1		33	80		236		3	1		70		23
Added Vol:	0		0		0	0		0		0	0		0		0	0		0		0
PasserByVol:	0		0		0	0		0		0	0		0		0	0		0		0
Initial Fut:	0		2		0	41		1		33	80		236		3	1		70		23
User Adj:	1.00	1.00		1.00		1.00	1.00		1.00		1.00	1.00		1.00		1.00	1.00		1.00	
PHF Adj:	0.90	0.90		0.90		0.90	0.90		0.90		0.90	0.90		0.90		0.90	0.90		0.90	
PHF Volume:	0		2		0	46		1		37	89		262		3	1		78		26
Reduct Vol:	0		0		0	0		0		0	0		0		0	0		0		0
FinalVolume:	0		2		0	46		1		37	89		262		3	1		78		26
Critical Gap Module:																				
Critical Gp:	xxxxx		6.5	xxxxx		7.1	6.5		6.2		4.1	xxxx	xxxxx			4.1	xxxx	xxxxx		
FollowUpTim:	xxxxx		4.0	xxxxx		3.5	4.0		3.3		2.2	xxxx	xxxxx			2.2	xxxx	xxxxx		
Capacity Module:																				
Cnflict Vol:	xxxx		547	xxxxx		536	536		91		103	xxxx	xxxxx			266	xxxx	xxxxx		
Potent Cap.:	xxxx		447	xxxxx		459	454		973		1501	xxxx	xxxxx			1310	xxxx	xxxxx		
Move Cap.:	xxxx		419	xxxxx		435	425		973		1501	xxxx	xxxxx			1310	xxxx	xxxxx		
Volume/Cap:	xxxx		0.01	xxxx		0.10	0.00		0.04		0.06	xxxx	xxxx			0.00	xxxx	xxxx		
Level Of Service Module:																				
2Way95thQ:	xxxx		0.0	xxxxx		xxxx	xxxx		0.1		0.2	xxxx	xxxxx			0.0	xxxx	xxxxx		
Control Del:	xxxxx		13.6	xxxxx		xxxxx	xxxx		8.8		7.5	xxxx	xxxxx			7.8	xxxx	xxxxx		
LOS by Move:	*		B	*		*	*		A		A	*	*			A	*	*		
Movement:	LT	-	LTR	-	RT	LT	-	LTR	-	RT	LT	-	LTR	-	RT	LT	-	LTR	-	RT
Shared Cap.:	xxxx		xxxx	xxxxx		435	xxxx		xxxxx		xxxx	xxxx	xxxxx			xxxx	xxxx	xxxxx		
SharedQueue:	xxxxx		xxxx	xxxxx		0.4	xxxx		xxxxx		xxxxx	xxxx	xxxxx			xxxxx	xxxx	xxxxx		
Shrd ConDel:	xxxxx		xxxx	xxxxx		14.3	xxxx		xxxxx		xxxxx	xxxx	xxxxx			xxxxx	xxxx	xxxxx		
Shared LOS:	*		*	*		B	*		*		*	*	*			*	*	*		
ApproachDel:			13.6				11.9				xxxxxx					xxxxxx				
ApproachLOS:			B				B				*					*				

****

Note: Queue reported is the number of cars per lane.

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AM Existing (2009)
Walmart, Tehachapi
Linscott, Law and Greenspan, Engineers

Level Of Service Computation Report
2000 HCM 4-Way Stop Method (Future Volume Alternative)

Intersection #19 Green Street at Tehachapi Boulevard

Cycle (sec):	100	Critical Vol./Cap.(X):	0.330
Loss Time (sec):	0 (Y+R=4.0 sec)	Average Delay (sec/veh):	9.6
Optimal Cycle:	0	Level Of Service:	A

Street Name:	Green Street						Tehachapi Boulevard					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Control:	Stop Sign			Stop Sign			Stop Sign			Stop Sign		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	0 0	0 0	0	0 1	0 0	1	0 1	0 1	0	0 1	0 1	0
Volume Module:												
Base Vol:	0	0	0	43	12	56	83	294	23	7	148	48
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	0	0	0	43	12	56	83	294	23	7	148	48
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	0	0	0	43	12	56	83	294	23	7	148	48
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
PHF Volume:	0	0	0	48	13	62	92	327	26	8	164	53
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	0	0	0	48	13	62	92	327	26	8	164	53
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	0	0	0	48	13	62	92	327	26	8	164	53
Saturation Flow Module:												
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	0.00	0.00	0.00	0.78	0.22	1.00	0.41	1.47	0.12	0.07	1.46	0.47
Final Sat.:	0	0	0	418	117	638	279	1023	82	46	991	335
Capacity Analysis Module:												
Vol/Sat:	xxxx	xxxx	xxxx	0.11	0.11	0.10	0.33	0.32	0.31	0.17	0.17	0.16
Crit Moves:					****		****			****		
Delay/Veh:	0.0	0.0	0.0	9.8	9.8	8.5	10.5	10.1	9.9	9.1	8.9	8.5
Delay Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	0.0	0.0	0.0	9.8	9.8	8.5	10.5	10.1	9.9	9.1	8.9	8.5
LOS by Move:	*	*	*	A	A	A	B	B	A	A	A	A
ApproachDel:	xxxxxx				9.1			10.2			8.8	
Delay Adj:	xxxxx				1.00			1.00			1.00	
ApprAdjDel:	xxxxxx				9.1			10.2			8.8	
LOS by Appr:	*				A			B			A	
AllWayAvgQ:	0.0	0.0	0.0	0.1	0.1	0.1	0.5	0.4	0.4	0.2	0.2	0.2

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PM Existing (2009)
Walmart, Tehachapi
Linscott, Law and Greenspan, Engineers

Level Of Service Computation Report
2000 HCM Operations Method (Future Volume Alternative)

****

Intersection #1 Woodford Tehachapi Road at Valley Boulevard (SR-202)

****

Cycle (sec):	90	Critical Vol./Cap.(X):	0.416
Loss Time (sec):	12 (Y+R=4.0 sec)	Average Delay (sec/veh):	18.4
Optimal Cycle:	90	Level Of Service:	B

****

Street Name:	Woodford Tehachapi Road						Valley Boulevard (SR-202)					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L - T - R			L - T - R			L - T - R			L - T - R		
Control:	Permitted			Permitted			Protected			Protected		
Rights:	Include			Include			Include			Include		
Min. Green:	6	6	6	6	6	6	6	6	6	6	6	6
Lanes:	0 0	1! 0	0	1 0	1 0	1	1 0	0 1	0	1 0	1 0	1
Volume Module:												
Base Vol:	13	29	31	89	24	64	90	387	6	29	406	71
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	13	29	31	89	24	64	90	387	6	29	406	71
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	13	29	31	89	24	64	90	387	6	29	406	71
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
PHF Volume:	14	32	34	99	27	71	100	430	7	32	451	79
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	14	32	34	99	27	71	100	430	7	32	451	79
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	14	32	34	99	27	71	100	430	7	32	451	79
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.90	0.90	0.90	0.76	1.00	0.85	0.95	1.00	1.00	0.95	1.00	0.85
Lanes:	0.18	0.40	0.42	1.00	1.00	1.00	1.00	0.98	0.02	1.00	1.00	1.00
Final Sat.:	304	678	725	1452	1900	1615	1805	1867	29	1805	1900	1615
Capacity Analysis Module:												
Vol/Sat:	0.05	0.05	0.05	0.07	0.01	0.04	0.06	0.23	0.23	0.02	0.24	0.05
Crit Moves:				****			****				****	
Green Time:	14.7	14.7	14.7	14.7	14.7	14.7	12.0	49.1	49.1	14.2	51.3	51.3
Volume/Cap:	0.29	0.29	0.29	0.42	0.09	0.27	0.42	0.42	0.42	0.11	0.42	0.09
Delay/Veh:	33.6	33.6	33.6	35.0	32.1	33.5	37.0	12.4	12.4	32.7	11.2	8.8
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	33.6	33.6	33.6	35.0	32.1	33.5	37.0	12.4	12.4	32.7	11.2	8.8
LOS by Move:	C	C	C	C	C	C	D	B	B	C	B	A
HCM2k95thQ:	4	4	4	6	1	4	6	14	14	2	13	2

****

Note: Queue reported is the number of cars per lane.

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PM Existing (2009)
Walmart, Tehachapi
Linscott, Law and Greenspan, Engineers

Level Of Service Computation Report
2000 HCM Unsignalized Method (Future Volume Alternative)

****

Intersection #2 South Street at Valley Boulevard (SR-202)

****

Average Delay (sec/veh): 2.4 Worst Case Level Of Service: B[14.3]

****

Street Name:	South Street						Valley Boulevard (SR-202)					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Control:	Stop Sign			Stop Sign			Uncontrolled			Uncontrolled		
Rights:	Include			Include			Include			Include		
Lanes:	1 0 0 0 1			0 0 0 0 0			0 0 1 0 1			1 0 1 0 0		
Volume Module:												
Base Vol:	56	0	86	0	0	0	0	448	69	100	480	0
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	56	0	86	0	0	0	0	448	69	100	480	0
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	56	0	86	0	0	0	0	448	69	100	480	0
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
PHF Volume:	62	0	96	0	0	0	0	498	77	111	533	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
FinalVolume:	62	0	96	0	0	0	0	498	77	111	533	0
Critical Gap Module:												
Critical Gp:	6.4	xxxx	6.2	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	4.1	xxxx	xxxxx
FollowUpTim:	3.5	xxxx	3.3	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	2.2	xxxx	xxxxx
Capacity Module:												
Cnflict Vol:	1253	xxxx	498	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	574	xxxx	xxxxx
Potent Cap.:	192	xxxx	576	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	1009	xxxx	xxxxx
Move Cap.:	176	xxxx	576	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	1009	xxxx	xxxxx
Total Cap:	358	320	xxxxx	240	287	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
Volume/Cap:	0.17	xxxx	0.17	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	0.11	xxxx	xxxx
Level Of Service Module:												
2Way95thQ:	0.6	xxxx	0.6	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	0.4	xxxx	xxxxx
Control Del:	17.2	xxxx	12.5	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	9.0	xxxx	xxxxx
LOS by Move:	C	*	B	*	*	*	*	*	*	A	*	*
Movement:	LT -	LTR -	RT	LT -	LTR -	RT	LT -	LTR -	RT	LT -	LTR -	RT
Shared Cap.:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
SharedQueue:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Shrd ConDel:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Shared LOS:	*	*	*	*	*	*	*	*	*	*	*	*
ApproachDel:		14.3			xxxxxx			xxxxxx			xxxxxx	
ApproachLOS:		B			*			*			*	

****

Note: Queue reported is the number of cars per lane.

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PM Existing (2009)
Walmart, Tehachapi
Linscott, Law and Greenspan, Engineers

Level Of Service Computation Report
2000 HCM Unsignalized Method (Future Volume Alternative)

****

Intersection #3 Santa Lucia Street at Valley Boulevard (SR-202)

****

Average Delay (sec/veh): 3.3 Worst Case Level Of Service: C[20.8]

****

Street Name:	Santa Lucia Street						Valley Boulevard (SR-202)					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Control:	Stop Sign			Stop Sign			Uncontrolled			Uncontrolled		
Rights:	Include			Include			Include			Include		
Lanes:	0 0	1! 0	0	0 0	1! 0	0	1 0	0 1	0	1 0	0 1	0
Volume Module:												
Base Vol:	3	23	31	39	17	61	73	468	1	38	471	76
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	3	23	31	39	17	61	73	468	1	38	471	76
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	3	23	31	39	17	61	73	468	1	38	471	76
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
PHF Volume:	3	26	34	43	19	68	81	520	1	42	523	84
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
FinalVolume:	3	26	34	43	19	68	81	520	1	42	523	84
Critical Gap Module:												
Critical Gp:	7.1	6.5	6.2	7.1	6.5	6.2	4.1	xxxx	xxxxx	4.1	xxxx	xxxxx
FollowUpTim:	3.5	4.0	3.3	3.5	4.0	3.3	2.2	xxxx	xxxxx	2.2	xxxx	xxxxx
Capacity Module:												
Cnflict Vol:	1376	1375	521	1363	1333	566	608	xxxx	xxxxx	521	xxxx	xxxxx
Potent Cap.:	124	147	560	126	155	528	980	xxxx	xxxxx	1055	xxxx	xxxxx
Move Cap.:	88	129	560	92	137	528	980	xxxx	xxxxx	1055	xxxx	xxxxx
Total Cap:	226	279	xxxxx	250	299	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
Volume/Cap:	0.01	0.09	0.06	0.17	0.06	0.13	0.08	xxxx	xxxx	0.04	xxxx	xxxx
Level Of Service Module:												
2Way95thQ:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	0.3	xxxx	xxxxx	0.1	xxxx	xxxxx
Control Del:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	9.0	xxxx	xxxxx	8.6	xxxx	xxxxx
LOS by Move:	*	*	*	*	*	*	A	*	*	A	*	*
Movement:	LT -	LTR -	RT	LT -	LTR -	RT	LT -	LTR -	RT	LT -	LTR -	RT
Shared Cap.:	xxxx	377	xxxxx	xxxx	356	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
SharedQueue:	xxxxx	0.6	xxxxx	xxxxx	1.6	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Shrd ConDel:	xxxxx	16.5	xxxxx	xxxxx	20.8	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Shared LOS:	*	C	*	*	C	*	*	*	*	*	*	*
ApproachDel:		16.5			20.8		xxxxxx			xxxxxx		
ApproachLOS:		C			C			*			*	

****

Note: Queue reported is the number of cars per lane.

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PM Existing (2009)
Walmart, Tehachapi
Linscott, Law and Greenspan, Engineers

Level Of Service Computation Report
2000 HCM Operations Method (Future Volume Alternative)

****

Intersection #4 Golden Hills Boulevard at Valley Boulevard (SR-202)

****

Cycle (sec):	90	Critical Vol./Cap.(X):	0.561
Loss Time (sec):	12 (Y+R=4.0 sec)	Average Delay (sec/veh):	13.9
Optimal Cycle:	90	Level Of Service:	B

****

Street Name:	Golden Hills Boulevard						Valley Boulevard (SR-202)					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Split Phase			Split Phase			Protected			Permitted		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	6	6	0	6	6	6	6	0	6	6
Lanes:	0 0	0 0	1	1 0	0 0	1	1 0	0 1	0	0 0	1 0	1
Volume Module:												
Base Vol:	0	0	0	172	0	69	46	417	0	0	602	224
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	0	0	0	172	0	69	46	417	0	0	602	224
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	0	0	0	172	0	69	46	417	0	0	602	224
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
PHF Volume:	0	0	0	191	0	77	51	463	0	0	669	249
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	0	0	0	191	0	77	51	463	0	0	669	249
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	0	0	0	191	0	77	51	463	0	0	669	249
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	1.00	1.00	1.00	0.95	1.00	0.85	0.95	1.00	1.00	1.00	1.00	0.85
Lanes:	0.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	0.00	0.00	1.00	1.00
Final Sat.:	0	0	1900	1805	0	1615	1805	1900	0	0	1900	1615
Capacity Analysis Module:												
Vol/Sat:	0.00	0.00	0.00	0.11	0.00	0.05	0.03	0.24	0.00	0.00	0.35	0.15
Crit Moves:				****			****				****	
Green Time:	0.0	0.0	0.0	16.6	0.0	16.6	6.0	61.4	0.0	0.0	55.4	55.4
Volume/Cap:	0.00	0.00	0.00	0.57	0.00	0.26	0.42	0.36	0.00	0.00	0.57	0.25
Delay/Veh:	0.0	0.0	0.0	35.8	0.0	31.8	42.7	6.2	0.0	0.0	11.0	8.0
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	0.0	0.0	0.0	35.8	0.0	31.8	42.7	6.2	0.0	0.0	11.0	8.0
LOS by Move:	A	A	A	D	A	C	D	A	A	A	B	A
HCM2k95thQ:	0	0	0	11	0	4	4	11	0	0	20	6

****

Note: Queue reported is the number of cars per lane.

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PM Existing (2009)
Walmart, Tehachapi
Linscott, Law and Greenspan, Engineers

Level Of Service Computation Report
2000 HCM 4-Way Stop Method (Future Volume Alternative)

****

Intersection #5 Westwood Boulevard at Red Apple Avenue

****

Cycle (sec):	100	Critical Vol./Cap.(X):	0.919
Loss Time (sec):	0 (Y+R=4.0 sec)	Average Delay (sec/veh):	28.7
Optimal Cycle:	0	Level Of Service:	D

****

Street Name:	Westwood Boulevard						Red Apple Avenue					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L - T - R			L - T - R			L - T - R			L - T - R		
Control:	Stop Sign			Stop Sign			Stop Sign			Stop Sign		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	0 0 1	0	1	1 0 1	0	0	0 0 0	0	0	1 0 0	0	1
Volume Module:												
Base Vol:	0	44	119	330	31	0	0	0	0	178	0	530
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	0	44	119	330	31	0	0	0	0	178	0	530
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	0	44	119	330	31	0	0	0	0	178	0	530
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
PHF Volume:	0	49	132	367	34	0	0	0	0	198	0	589
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	0	49	132	367	34	0	0	0	0	198	0	589
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	0	49	132	367	34	0	0	0	0	198	0	589
Saturation Flow Module:												
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	0.00	1.00	1.00	1.00	1.00	0.00	0.00	0.00	0.00	1.00	0.00	1.00
Final Sat.:	0	484	535	485	515	0	0	0	0	524	0	641
Capacity Analysis Module:												
Vol/Sat:	xxxx	0.10	0.25	0.76	0.07	xxxx	xxxx	xxxx	xxxx	0.38	xxxx	0.92
Crit Moves:			****	****								****
Delay/Veh:	0.0	10.7	11.2	28.2	10.0	0.0	0.0	0.0	0.0	13.4	0.0	40.6
Delay Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	0.0	10.7	11.2	28.2	10.0	0.0	0.0	0.0	0.0	13.4	0.0	40.6
LOS by Move:	*	B	B	D	A	*	*	*	*	B	*	E
ApproachDel:	11.1			26.7			xxxxxx			33.8		
Delay Adj:	1.00			1.00			xxxxx			1.00		
ApprAdjDel:	11.1			26.7			xxxxxx			33.8		
LOS by Appr:	B			D			*			D		
AllWayAvgQ:	0.0	0.1	0.3	2.5	0.1	0.0	0.0	0.0	0.0	0.6	0.0	5.8

****

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PM Existing (2009)
Walmart, Tehachapi
Linscott, Law and Greenspan, Engineers

Level Of Service Computation Report
2000 HCM Unsignalized Method (Future Volume Alternative)

****

Intersection #6 Sierra Vista Drive at Valley Boulevard (SR-202)

****

Average Delay (sec/veh): 0.2 Worst Case Level Of Service: D[28.5]

****

Street Name:	Sierra Vista Drive									Valley Boulevard (SR-202)								
Approach:	North Bound					South Bound				East Bound					West Bound			
Movement:	L	-	T	-	R	L	-	T	-	R	L	-	T	-	R	L	-	T	-	R
Control:	Stop Sign					Stop Sign					Uncontrolled					Uncontrolled				
Rights:	Include					Include					Include					Include				
Lanes:	0	0	0	0	0	0	0	1!	0	0	0	1	0	0	0	0	0	0	1	0
Volume Module:																				
Base Vol:	0		0		0	5		0		4	4		595		0	0		838		7
Growth Adj:	1.00		1.00		1.00	1.00		1.00		1.00	1.00		1.00		1.00	1.00		1.00		1.00
Initial Bse:	0		0		0	5		0		4	4		595		0	0		838		7
Added Vol:	0		0		0	0		0		0	0		0		0	0		0		0
PasserByVol:	0		0		0	0		0		0	0		0		0	0		0		0
Initial Fut:	0		0		0	5		0		4	4		595		0	0		838		7
User Adj:	1.00		1.00		1.00	1.00		1.00		1.00	1.00		1.00		1.00	1.00		1.00		1.00
PHF Adj:	0.90		0.90		0.90	0.90		0.90		0.90	0.90		0.90		0.90	0.90		0.90		0.90
PHF Volume:	0		0		0	6		0		4	4		661		0	0		931		8
Reduct Vol:	0		0		0	0		0		0	0		0		0	0		0		0
FinalVolume:	0		0		0	6		0		4	4		661		0	0		931		8
Critical Gap Module:																				
Critical Gp:	xxxxx		xxxx		xxxxx	6.4		6.5		6.2	4.1		xxxx		xxxxx	xxxxx		xxxx		xxxxx
FollowUpTim:	xxxxx		xxxx		xxxxx	3.5		4.0		3.3	2.2		xxxx		xxxxx	xxxxx		xxxx		xxxxx
Capacity Module:																				
Cnflict Vol:	xxxx		xxxx		xxxxx	1605		1605		935	939		xxxx		xxxxx	xxxx		xxxx		xxxxx
Potent Cap.:	xxxx		xxxx		xxxxx	117		106		325	738		xxxx		xxxxx	xxxx		xxxx		xxxxx
Move Cap.:	xxxx		xxxx		xxxxx	117		106		325	738		xxxx		xxxxx	xxxx		xxxx		xxxxx
Volume/Cap:	xxxx		xxxx		xxxx	0.05		0.00		0.01	0.01		xxxx		xxxx	xxxx		xxxx		xxxx
Level Of Service Module:																				
2Way95thQ:	xxxx		xxxx		xxxxx	xxxx		xxxx		xxxxx	0.0		xxxx		xxxxx	xxxx		xxxx		xxxxx
Control Del:	xxxxx		xxxx		xxxxx	xxxxx		xxxx		xxxxx	9.9		xxxx		xxxxx	xxxxx		xxxx		xxxxx
LOS by Move:	*		*		*	*		*		*	A		*		*	*		*		*
Movement:	LT	-	LTR	-	RT	LT	-	LTR	-	RT	LT	-	LTR	-	RT	LT	-	LTR	-	RT
Shared Cap.:	xxxx		xxxx		xxxxx	xxxx		163		xxxxx	xxxx		xxxx		xxxxx	xxxx		xxxx		xxxxx
SharedQueue:	xxxxx		xxxx		xxxxx	xxxxx		0.2		xxxxx	0.0		xxxx		xxxxx	xxxxx		xxxx		xxxxx
Shrd ConDel:	xxxxx		xxxx		xxxxx	xxxxx		28.5		xxxxx	9.9		xxxx		xxxxx	xxxxx		xxxx		xxxxx
Shared LOS:	*		*		*	*		D		*	A		*		*	*		*		*
ApproachDel:	xxxxxx					28.5					xxxxxx					xxxxxx				
ApproachLOS:	*					D					*					*				

****

Note: Queue reported is the number of cars per lane.

****

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PM Existing (2009)
Walmart, Tehachapi
Linscott, Law and Greenspan, Engineers

Level Of Service Computation Report
2000 HCM Unsignalized Method (Future Volume Alternative)

****

Intersection #7 Tehachapi Boulevard at SR-58 Eastbound Ramps

****

Average Delay (sec/veh): 5.1 Worst Case Level Of Service: C[17.7]

****

Street Name:	Tehachapi Boulevard						SR-58 Eastbound Ramps					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L - T - R			L - T - R			L - T - R			L - T - R		
Control:	Uncontrolled			Uncontrolled			Stop Sign			Stop Sign		
Rights:	Include			Include			Include			Include		
Lanes:	0 0 0 1 0			0 1 0 0 0			0 1 0 0 1			0 0 0 0 0		
Volume Module:												
Base Vol:	0	211	165	1	392	0	0	2	312	0	0	0
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	0	211	165	1	392	0	0	2	312	0	0	0
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	0	211	165	1	392	0	0	2	312	0	0	0
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
PHF Volume:	0	234	183	1	436	0	0	2	347	0	0	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
FinalVolume:	0	234	183	1	436	0	0	2	347	0	0	0
Critical Gap Module:												
Critical Gp:	xxxxx	xxxx	xxxxx	4.1	xxxx	xxxxx	6.4	6.5	6.2	xxxxx	xxxx	xxxxx
FollowUpTim:	xxxxx	xxxx	xxxxx	2.2	xxxx	xxxxx	3.5	4.0	3.3	xxxxx	xxxx	xxxxx
Capacity Module:												
Cnflict Vol:	xxxx	xxxx	xxxxx	418	xxxx	xxxxx	764	856	436	xxxx	xxxx	xxxxx
Potent Cap.:	xxxx	xxxx	xxxxx	1152	xxxx	xxxxx	375	298	625	xxxx	xxxx	xxxxx
Move Cap.:	xxxx	xxxx	xxxxx	1152	xxxx	xxxxx	375	297	625	xxxx	xxxx	xxxxx
Volume/Cap:	xxxx	xxxx	xxxx	0.00	xxxx	xxxx	0.00	0.01	0.55	xxxx	xxxx	xxxx
Level Of Service Module:												
2Way95thQ:	xxxx	xxxx	xxxxx	0.0	xxxx	xxxxx	xxxx	xxxx	3.4	xxxx	xxxx	xxxxx
Control Del:	xxxxx	xxxx	xxxxx	8.1	xxxx	xxxxx	xxxxx	xxxx	17.7	xxxxx	xxxx	xxxxx
LOS by Move:	*	*	*	A	*	*	*	*	C	*	*	*
Movement:	LT - LTR - RT			LT - LTR - RT			LT - LTR - RT			LT - LTR - RT		
Shared Cap.:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	297	xxxx	xxxxx	xxxx	xxxx	xxxxx
SharedQueue:	xxxxx	xxxx	xxxxx	0.0	xxxx	xxxxx	0.0	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Shrd ConDel:	xxxxx	xxxx	xxxxx	8.1	xxxx	xxxxx	17.2	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Shared LOS:	*	*	*	A	*	*	C	*	*	*	*	*
ApproachDel:	xxxxxx			xxxxxx			17.7			xxxxxx		
ApproachLOS:	*			*			C			*		

****

Note: Queue reported is the number of cars per lane.

****

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PM Existing (2009)
Walmart, Tehachapi
Linscott, Law and Greenspan, Engineers

Level Of Service Computation Report
2000 HCM Operations Method (Future Volume Alternative)

Intersection #8 Tehachapi Boulevard/Tucker Road at Red Apple Avenue/Tehachapi Bo

Cycle (sec):	90	Critical Vol./Cap.(X):	0.641
Loss Time (sec):	16 (Y+R=4.0 sec)	Average Delay (sec/veh):	32.5
Optimal Cycle:	90	Level Of Service:	C

Street Name: Tehachapi Boulevard/Tucker Road Red Apple Avenue/Tehachapi Boulev

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L - T - R			L - T - R			L - T - R			L - T - R		
Control:	Protected			Protected			Protected			Protected		
Rights:	Include			Include			Include			Include		
Min. Green:	6	6	6	6	6	6	6	6	6	6	6	6
Lanes:	1 0 2	0 1		1 0 2	0 1		1 0 1	0 1		1 0 1	0 1	
Volume Module:												
Base Vol:	175	182	159	93	341	205	72	220	112	243	240	57
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	175	182	159	93	341	205	72	220	112	243	240	57
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	175	182	159	93	341	205	72	220	112	243	240	57
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
PHF Volume:	194	202	177	103	379	228	80	244	124	270	267	63
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	194	202	177	103	379	228	80	244	124	270	267	63
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	194	202	177	103	379	228	80	244	124	270	267	63
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.95	0.95	0.85	0.95	0.95	0.85	0.95	1.00	0.85	0.95	1.00	0.85
Lanes:	1.00	2.00	1.00	1.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Sat.:	1805	3610	1615	1805	3610	1615	1805	1900	1615	1805	1900	1615
Capacity Analysis Module:												
Vol/Sat:	0.11	0.06	0.11	0.06	0.10	0.14	0.04	0.13	0.08	0.15	0.14	0.04
Crit Moves:	****					****		****		****		
Green Time:	15.1	21.7	21.7	13.2	19.8	19.8	12.6	18.1	18.1	21.0	26.5	26.5
Volume/Cap:	0.64	0.23	0.45	0.39	0.48	0.64	0.32	0.64	0.38	0.64	0.48	0.13
Delay/Veh:	39.5	27.6	29.9	35.7	31.0	35.8	35.6	36.7	31.9	34.4	26.7	23.5
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	39.5	27.6	29.9	35.7	31.0	35.8	35.6	36.7	31.9	34.4	26.7	23.5
LOS by Move:	D	C	C	D	C	D	D	D	C	C	C	C
HCM2k95thQ:	12	5	9	6	10	13	5	14	7	15	12	3

Note: Queue reported is the number of cars per lane.

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PM Existing (2009)
Walmart, Tehachapi
Linscott, Law and Greenspan, Engineers

Level Of Service Computation Report
2000 HCM Unsignalized Method (Future Volume Alternative)

****
Intersection #9 Tucker Road at Conway Avenue/Walmart Project Driveway 2
****
Average Delay (sec/veh): 1.9 Worst Case Level Of Service: E[40.9]
****

Street Name:	Tucker Road						Conway Avenue/Walmart Project Dri					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L - T - R			L - T - R			L - T - R			L - T - R		
Control:	Uncontrolled			Uncontrolled			Stop Sign			Stop Sign		
Rights:	Include			Include			Include			Include		
Lanes:	1 0 1 1 0			1 0 1 1 0			0 0 1! 0 0			0 0 1! 0 0		
Volume Module:												
Base Vol:	22	659	0	0	869	52	44	1	29	0	0	0
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	22	659	0	0	869	52	44	1	29	0	0	0
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	22	659	0	0	869	52	44	1	29	0	0	0
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
PHF Volume:	24	732	0	0	966	58	49	1	32	0	0	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
FinalVolume:	24	732	0	0	966	58	49	1	32	0	0	0
Critical Gap Module:												
Critical Gp:	4.1	xxxx	xxxxx	xxxxx	xxxx	xxxxx	6.8	6.5	6.9	7.5	6.5	6.9
FollowUpTim:	2.2	xxxx	xxxxx	xxxxx	xxxx	xxxxx	3.5	4.0	3.3	3.5	4.0	3.3
Capacity Module:												
Cnflict Vol:	1023	xxxx	xxxxx	xxxx	xxxx	xxxxx	1409	1776	512	1264	1804	366
Potent Cap.:	686	xxxx	xxxxx	xxxx	xxxx	xxxxx	132	84	513	128	80	637
Move Cap.:	686	xxxx	xxxxx	xxxx	xxxx	xxxxx	128	81	513	116	77	637
Volume/Cap:	0.04	xxxx	xxxx	xxxx	xxxx	xxxx	0.38	0.01	0.06	0.00	0.00	0.00
Level Of Service Module:												
2Way95thQ:	0.1	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
Control Del:	10.4	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
LOS by Move:	B	*	*	*	*	*	*	*	*	*	*	*
Movement:	LT - LTR - RT			LT - LTR - RT			LT - LTR - RT			LT - LTR - RT		
Shared Cap.:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	180	xxxxx	xxxx	0	xxxxx
SharedQueue:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	2.2	xxxxx	xxxxx	xxxx	xxxxx
Shrd ConDel:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	40.9	xxxxx	xxxxx	xxxx	xxxxx
Shared LOS:	*	*	*	*	*	*	*	E	*	*	*	*
ApproachDel:	xxxxxx			xxxxxx			40.9			xxxxxx		
ApproachLOS:	*			*			E			*		

****
Note: Queue reported is the number of cars per lane.
****

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PM Existing (2009)
Walmart, Tehachapi
Linscott, Law and Greenspan, Engineers

Level Of Service Computation Report
2000 HCM Operations Method (Future Volume Alternative)

****

Intersection #10 Tucker Road at Valley Boulevard (SR-202)

****

Cycle (sec):	90	Critical Vol./Cap.(X):	0.764
Loss Time (sec):	16	Average Delay (sec/veh):	36.3
Optimal Cycle:	90	Level Of Service:	D

****

Street Name:	Tucker Road						Valley Boulevard (SR-202)					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L - T - R			L - T - R			L - T - R			L - T - R		
Control:	Protected			Protected			Protected			Protected		
Rights:	Include			Include			Include			Include		
Min. Green:	6	6	6	6	6	6	6	6	6	6	6	6
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	1 0	1 1	0	1 0	2 0	1	1 0	1 0	1	1 0	1 0	1
Volume Module:												
Base Vol:	184	214	147	180	234	282	293	248	85	130	241	136
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	184	214	147	180	234	282	293	248	85	130	241	136
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	184	214	147	180	234	282	293	248	85	130	241	136
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
PHF Volume:	204	238	163	200	260	313	326	276	94	144	268	151
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	204	238	163	200	260	313	326	276	94	144	268	151
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	204	238	163	200	260	313	326	276	94	144	268	151
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.95	0.89	0.89	0.95	0.95	0.85	0.95	1.00	0.85	0.95	1.00	0.85
Lanes:	1.00	1.19	0.81	1.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Sat.:	1805	2009	1380	1805	3610	1615	1805	1900	1615	1805	1900	1615
Capacity Analysis Module:												
Vol/Sat:	0.11	0.12	0.12	0.11	0.07	0.19	0.18	0.15	0.06	0.08	0.14	0.09
Crit Moves:	****					****	****				****	
Green Time:	13.3	18.7	18.7	17.5	22.8	22.8	21.2	24.4	24.4	13.4	16.6	16.6
Volume/Cap:	0.76	0.57	0.57	0.57	0.28	0.76	0.76	0.54	0.22	0.54	0.76	0.51
Delay/Veh:	49.2	33.2	33.2	35.1	27.2	39.4	40.1	29.1	25.7	37.5	44.5	34.5
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	49.2	33.2	33.2	35.1	27.2	39.4	40.1	29.1	25.7	37.5	44.5	34.5
LOS by Move:	D	C	C	D	C	D	D	C	C	D	D	C
HCM2k95thQ:	14	12	12	11	6	18	19	13	4	9	17	9

****

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PM Existing (2009)
Walmart, Tehachapi
Linscott, Law and Greenspan, Engineers

Level Of Service Computation Report
2000 HCM 4-Way Stop Method (Future Volume Alternative)

Intersection #11 Tucker Road at Highline Road

Cycle (sec):	100	Critical Vol./Cap.(X):	0.279
Loss Time (sec):	0 (Y+R=4.0 sec)	Average Delay (sec/veh):	9.0
Optimal Cycle:	0	Level Of Service:	A

Street Name:	Tucker Road						Highline Road					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Stop Sign			Stop Sign			Stop Sign			Stop Sign		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	0 0	1! 0	0	0 0	1! 0	0	0 1	0 0	1	0 0	1! 0	0
Volume Module:												
Base Vol:	7	9	6	38	11	128	58	50	3	6	139	48
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	7	9	6	38	11	128	58	50	3	6	139	48
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	7	9	6	38	11	128	58	50	3	6	139	48
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
PHF Volume:	8	10	7	42	12	142	64	56	3	7	154	53
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	8	10	7	42	12	142	64	56	3	7	154	53
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	8	10	7	42	12	142	64	56	3	7	154	53
Saturation Flow Module:												
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	0.32	0.41	0.27	0.21	0.06	0.73	0.54	0.46	1.00	0.03	0.72	0.25
Final Sat.:	219	281	187	168	49	567	342	295	768	24	553	191
Capacity Analysis Module:												
Vol/Sat:	0.04	0.04	0.04	0.25	0.25	0.25	0.19	0.19	0.00	0.28	0.28	0.28
Crit Moves:		****			****			****				****
Delay/Veh:	8.0	8.0	8.0	8.7	8.7	8.7	9.3	9.3	7.2	9.2	9.2	9.2
Delay Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	8.0	8.0	8.0	8.7	8.7	8.7	9.3	9.3	7.2	9.2	9.2	9.2
LOS by Move:	A	A	A	A	A	A	A	A	A	A	A	A
ApproachDel:		8.0			8.7			9.3			9.2	
Delay Adj:		1.00			1.00			1.00			1.00	
ApprAdjDel:		8.0			8.7			9.3			9.2	
LOS by Appr:		A			A			A			A	
AllWayAvgQ:	0.0	0.0	0.0	0.3	0.3	0.3	0.2	0.2	0.0	0.4	0.4	0.4

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PM Existing (2009)
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Linscott, Law and Greenspan, Engineers

Level Of Service Computation Report
2000 HCM Unsignalized Method (Future Volume Alternative)

****

Intersection #12 Mountain View Avenue at Valley Boulevard (SR-202)

****

Average Delay (sec/veh): 2.3 Worst Case Level Of Service: B[14.8]

****

Street Name:	Mountain View Avenue									Valley Boulevard (SR-202)								
Approach:	North Bound					South Bound				East Bound					West Bound			
Movement:	L	-	T	-	R	L	-	T	-	R	L	-	T	-	R	L	-	T	-	R
Control:	Stop Sign					Stop Sign					Uncontrolled					Uncontrolled				
Rights:	Include					Include					Include					Include				
Lanes:	0	0	0	0	0	0	0	1!	0	0	1	0	1	0	0	0	0	1	0	1
Volume Module:																				
Base Vol:	0		0		0	17		0		103	68		434		0	0		398		17
Growth Adj:	1.00		1.00		1.00	1.00		1.00		1.00	1.00		1.00		1.00	1.00		1.00		1.00
Initial Bse:	0		0		0	17		0		103	68		434		0	0		398		17
Added Vol:	0		0		0	0		0		0	0		0		0	0		0		0
PasserByVol:	0		0		0	0		0		0	0		0		0	0		0		0
Initial Fut:	0		0		0	17		0		103	68		434		0	0		398		17
User Adj:	1.00		1.00		1.00	1.00		1.00		1.00	1.00		1.00		1.00	1.00		1.00		1.00
PHF Adj:	0.90		0.90		0.90	0.90		0.90		0.90	0.90		0.90		0.90	0.90		0.90		0.90
PHF Volume:	0		0		0	19		0		114	76		482		0	0		442		19
Reduct Vol:	0		0		0	0		0		0	0		0		0	0		0		0
FinalVolume:	0		0		0	19		0		114	76		482		0	0		442		19
Critical Gap Module:																				
Critical Gp:	xxxxx		xxxx		xxxxx	6.4		6.5		6.2	4.1		xxxx		xxxxx	xxxxx		xxxx		xxxxx
FollowUpTim:	xxxxx		xxxx		xxxxx	3.5		4.0		3.3	2.2		xxxx		xxxxx	xxxxx		xxxx		xxxxx
Capacity Module:																				
Cnflict Vol:	xxxx		xxxx		xxxxx	1076		1076		442	461		xxxx		xxxxx	xxxx		xxxx		xxxxx
Potent Cap.:	xxxx		xxxx		xxxxx	245		221		620	1111		xxxx		xxxxx	xxxx		xxxx		xxxxx
Move Cap.:	xxxx		xxxx		xxxxx	232		206		620	1111		xxxx		xxxxx	xxxx		xxxx		xxxxx
Volume/Cap:	xxxx		xxxx		xxxx	0.08		0.00		0.18	0.07		xxxx		xxxx	xxxx		xxxx		xxxx
Level Of Service Module:																				
2Way95thQ:	xxxx		xxxx		xxxxx	xxxx		xxxx		xxxxx	0.2		xxxx		xxxxx	xxxx		xxxx		xxxxx
Control Del:	xxxxx		xxxx		xxxxx	xxxxx		xxxx		xxxxx	8.5		xxxx		xxxxx	xxxxx		xxxx		xxxxx
LOS by Move:	*		*		*	*		*		*	A		*		*	*		*		*
Movement:	LT	-	LTR	-	RT	LT	-	LTR	-	RT	LT	-	LTR	-	RT	LT	-	LTR	-	RT
Shared Cap.:	xxxx		xxxx		xxxxx	xxxx		501		xxxxx	xxxx		xxxx		xxxxx	xxxx		xxxx		xxxxx
SharedQueue:	xxxxx		xxxx		xxxxx	xxxxx		1.1		xxxxx	xxxxx		xxxx		xxxxx	xxxxx		xxxx		xxxxx
Shrd ConDel:	xxxxx		xxxx		xxxxx	xxxxx		14.8		xxxxx	xxxxx		xxxx		xxxxx	xxxxx		xxxx		xxxxx
Shared LOS:	*		*		*	*		B		*	*		*		*	*		*		*
ApproachDel:	xxxxxx							14.8			xxxxxx					xxxxxx				
ApproachLOS:			*					B					*					*		

****

Note: Queue reported is the number of cars per lane.

****

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PM Existing (2009)
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Linscott, Law and Greenspan, Engineers

Level Of Service Computation Report
2000 HCM Unsignalized Method (Future Volume Alternative)

****

Intersection #13 Mountain View Avenue at Tehachapi Boulevard

****

Average Delay (sec/veh): 1.8 Worst Case Level Of Service: C[15.2]

****

Street Name:	Mountain View Avenue						Tehachapi Boulevard					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Stop Sign			Stop Sign			Uncontrolled			Uncontrolled		
Rights:	Include			Include			Include			Include		
Lanes:	0 1 0	0 1		0 0 1!	0 0		1 0 1	0 1		1 0 1	0 1	
Volume Module:												
Base Vol:	52	1	34	11	4	15	15	461	41	20	497	7
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	52	1	34	11	4	15	15	461	41	20	497	7
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	52	1	34	11	4	15	15	461	41	20	497	7
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
PHF Volume:	58	1	38	12	4	17	17	512	46	22	552	8
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
FinalVolume:	58	1	38	12	4	17	17	512	46	22	552	8
Critical Gap Module:												
Critical Gp:	7.1	6.5	6.2	7.1	6.5	6.2	4.1	xxxx	xxxxx	4.1	xxxx	xxxxx
FollowUpTim:	3.5	4.0	3.3	3.5	4.0	3.3	2.2	xxxx	xxxxx	2.2	xxxx	xxxxx
Capacity Module:												
Cnflict Vol:	1157	1150	512	1184	1188	552	560	xxxx	xxxxx	558	xxxx	xxxxx
Potent Cap.:	175	200	566	168	190	537	1021	xxxx	xxxxx	1023	xxxx	xxxxx
Move Cap.:	162	192	566	151	183	537	1021	xxxx	xxxxx	1023	xxxx	xxxxx
Total Cap:	349	368	xxxxx	336	359	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
Volume/Cap:	0.17	0.00	0.07	0.04	0.01	0.03	0.02	xxxx	xxxx	0.02	xxxx	xxxx
Level Of Service Module:												
2Way95thQ:	xxxx	xxxx	0.2	xxxx	xxxx	xxxxx	0.0	xxxx	xxxxx	0.1	xxxx	xxxxx
Control Del:	xxxxx	xxxx	11.8	xxxxx	xxxx	xxxxx	8.6	xxxx	xxxxx	8.6	xxxx	xxxxx
LOS by Move:	*	*	B	*	*	*	A	*	*	A	*	*
Movement:	LT -	LTR -	RT	LT -	LTR -	RT	LT -	LTR -	RT	LT -	LTR -	RT
Shared Cap.:	350	xxxx	xxxxx	xxxx	418	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
SharedQueue:	0.6	xxxx	xxxxx	xxxxx	0.3	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Shrd ConDel:	17.4	xxxx	xxxxx	xxxxx	14.4	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Shared LOS:	C	*	*	*	B	*	*	*	*	*	*	*
ApproachDel:		15.2			14.4			xxxxxx			xxxxxx	
ApproachLOS:		C			B			*			*	

****

Note: Queue reported is the number of cars per lane.

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Level Of Service Computation Report
2000 HCM Unsignalized Method (Future Volume Alternative)

Intersection #14 Mulberry Street at Tehachapi Boulevard

Average Delay (sec/veh): 0.6 Worst Case Level Of Service: B[13.6]

Street Name:	Mulberry Street						Tehachapi Boulevard					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Stop Sign			Stop Sign			Uncontrolled			Uncontrolled		
Rights:	Include			Include			Include			Include		
Lanes:	0 0 1! 0 0			0 0 1! 0 0			1 0 1 0 1			1 0 1 0 1		
Volume Module:												
Base Vol:	0	0	0	14	0	26	22	512	1	1	539	38
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	0	0	0	14	0	26	22	512	1	1	539	38
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	0	0	0	14	0	26	22	512	1	1	539	38
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
PHF Volume:	0	0	0	16	0	29	24	569	1	1	599	42
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
FinalVolume:	0	0	0	16	0	29	24	569	1	1	599	42
Critical Gap Module:												
Critical Gp:	7.1	6.5	6.2	6.4	6.5	6.2	4.1	xxxx	xxxxx	4.1	xxxx	xxxxx
FollowUpTim:	3.5	4.0	3.3	3.5	4.0	3.3	2.2	xxxx	xxxxx	2.2	xxxx	xxxxx
Capacity Module:												
Cnflict Vol:	1254	1261	569	1219	1220	599	641	xxxx	xxxxx	570	xxxx	xxxxx
Potent Cap.:	150	172	526	201	182	505	953	xxxx	xxxxx	1013	xxxx	xxxxx
Move Cap.:	139	167	526	197	177	505	953	xxxx	xxxxx	1013	xxxx	xxxxx
Total Cap:	322	343	xxxxx	403	360	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
Volume/Cap:	0.00	0.00	0.00	0.04	0.00	0.06	0.03	xxxx	xxxx	0.00	xxxx	xxxx
Level Of Service Module:												
2Way95thQ:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	0.1	xxxx	xxxxx	0.0	xxxx	xxxxx
Control Del:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	8.9	xxxx	xxxxx	8.6	xxxx	xxxxx
LOS by Move:	*	*	*	*	*	*	A	*	*	A	*	*
Movement:	LT	LTR	RT	LT	LTR	RT	LT	LTR	RT	LT	LTR	RT
Shared Cap.:	xxxx	0	xxxxx	xxxx	464	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
SharedQueue:	xxxxx	xxxx	xxxxx	xxxxx	0.3	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Shrd ConDel:	xxxxx	xxxx	xxxxx	xxxxx	13.6	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Shared LOS:	*	*	*	*	B	*	*	*	*	*	*	*
ApproachDel:	xxxxxx			13.6			xxxxxx			xxxxxx		
ApproachLOS:	*			B			*			*		

Note: Queue reported is the number of cars per lane.

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Level Of Service Computation Report
2000 HCM Unsignalized Method (Future Volume Alternative)

Intersection #15 Mill Street at Tehachapi Boulevard

Average Delay (sec/veh): 1.3 Worst Case Level Of Service: B[12.4]

Street Name:	Mill Street						Tehachapi Boulevard					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Stop Sign			Stop Sign			Uncontrolled			Uncontrolled		
Rights:	Include			Include			Include			Include		
Lanes:	1 0 0 0 1			0 0 0 0 0			0 0 1 1 0			0 1 1 0 0		
Volume Module:												
Base Vol:	40	0	33	0	0	0	0	311	30	24	384	0
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	40	0	33	0	0	0	0	311	30	24	384	0
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	40	0	33	0	0	0	0	311	30	24	384	0
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
PHF Volume:	44	0	37	0	0	0	0	346	33	27	427	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
FinalVolume:	44	0	37	0	0	0	0	346	33	27	427	0
Critical Gap Module:												
Critical Gp:	6.8	xxxx	6.9	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	4.1	xxxx	xxxxx
FollowUpTim:	3.5	xxxx	3.3	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	2.2	xxxx	xxxxx
Capacity Module:												
Cnflict Vol:	629	xxxx	189	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	379	xxxx	xxxxx
Potent Cap.:	419	xxxx	827	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	1191	xxxx	xxxxx
Move Cap.:	412	xxxx	827	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	1191	xxxx	xxxxx
Volume/Cap:	0.11	xxxx	0.04	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	0.02	xxxx	xxxx
Level Of Service Module:												
2Way95thQ:	0.4	xxxx	0.1	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	0.1	xxxx	xxxxx
Control Del:	14.8	xxxx	9.6	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	8.1	xxxx	xxxxx
LOS by Move:	B	*	A	*	*	*	*	*	*	A	*	*
Movement:	LT	LTR	RT	LT	LTR	RT	LT	LTR	RT	LT	LTR	RT
Shared Cap.:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
SharedQueue:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	0.1	xxxx	xxxxx
Shrd ConDel:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	8.1	xxxx	xxxxx
Shared LOS:	*	*	*	*	*	*	*	*	*	A	*	*
ApproachDel:		12.4		xxxxxx			xxxxxx			xxxxxx		
ApproachLOS:		B			*			*			*	

Note: Queue reported is the number of cars per lane.

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PM Existing (2009)
Walmart, Tehachapi
Linscott, Law and Greenspan, Engineers

Level Of Service Computation Report
2000 HCM 4-Way Stop Method (Future Volume Alternative)

Intersection #16 Curry Street at Tehachapi Boulevard

Cycle (sec):	100	Critical Vol./Cap.(X):	0.411
Loss Time (sec):	0 (Y+R=4.0 sec)	Average Delay (sec/veh):	11.1
Optimal Cycle:	0	Level Of Service:	B

Street Name:	Curry Street						Tehachapi Boulevard					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L - T - R			L - T - R			L - T - R			L - T - R		
Control:	Stop Sign			Stop Sign			Stop Sign			Stop Sign		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	0 1	0 1	0	0 0	1! 0	0	0 1	0 1	0	0 1	0 1	0
Volume Module:												
Base Vol:	83	3	99	4	0	3	5	243	69	98	354	2
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	83	3	99	4	0	3	5	243	69	98	354	2
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	83	3	99	4	0	3	5	243	69	98	354	2
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
PHF Volume:	92	3	110	4	0	3	6	270	77	109	393	2
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	92	3	110	4	0	3	6	270	77	109	393	2
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	92	3	110	4	0	3	6	270	77	109	393	2
Saturation Flow Module:												
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	0.90	0.10	1.00	0.57	0.00	0.43	0.03	1.53	0.44	0.43	1.56	0.01
Final Sat.:	443	51	586	283	0	213	19	956	281	265	980	6
Capacity Analysis Module:												
Vol/Sat:	0.21	0.07	0.19	0.02	xxxx	0.02	0.29	0.28	0.27	0.41	0.40	0.40
Crit Moves:	****			****			****			****		
Delay/Veh:	11.1	11.1	9.7	9.7	0.0	9.7	10.7	10.4	10.1	12.3	11.9	11.7
Delay Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	11.1	11.1	9.7	9.7	0.0	9.7	10.7	10.4	10.1	12.3	11.9	11.7
LOS by Move:	B	B	A	A	*	A	B	B	B	B	B	B
ApproachDel:	10.4			9.7			10.4			12.0		
Delay Adj:	1.00			1.00			1.00			1.00		
ApprAdjDel:	10.4			9.7			10.4			12.0		
LOS by Appr:	B			A			B			B		
AllWayAvgQ:	0.2	0.2	0.2	0.0	0.0	0.0	0.4	0.3	0.3	0.7	0.6	0.6

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PM Existing (2009)
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Level Of Service Computation Report
2000 HCM Operations Method (Future Volume Alternative)

Intersection #17 Curry Street at Valley Boulevard (SR-202)

Cycle (sec):	90	Critical Vol./Cap.(X):	0.321
Loss Time (sec):	12 (Y+R=4.0 sec)	Average Delay (sec/veh):	23.7
Optimal Cycle:	90	Level Of Service:	C

Street Name:	Curry Street						Valley Boulevard (SR-202)					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L - T - R			L - T - R			L - T - R			L - T - R		
Control:	Permitted			Permitted			Protected			Protected		
Rights:	Include			Include			Include			Include		
Min. Green:	6	6	6	6	6	6	6	6	6	6	6	6
Lanes:	1 0	1 0	1	1 0	1 0	1	1 0	0 1	0	1 0	1 0	1
Volume Module:												
Base Vol:	88	94	27	21	148	102	71	137	94	74	148	24
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	88	94	27	21	148	102	71	137	94	74	148	24
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	88	94	27	21	148	102	71	137	94	74	148	24
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
PHF Volume:	98	104	30	23	164	113	79	152	104	82	164	27
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	98	104	30	23	164	113	79	152	104	82	164	27
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	98	104	30	23	164	113	79	152	104	82	164	27
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.58	1.00	0.85	0.69	1.00	0.85	0.95	0.94	0.94	0.95	1.00	0.85
Lanes:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.59	0.41	1.00	1.00	1.00
Final Sat.:	1104	1900	1615	1305	1900	1615	1805	1058	726	1805	1900	1615
Capacity Analysis Module:												
Vol/Sat:	0.09	0.05	0.02	0.02	0.09	0.07	0.04	0.14	0.14	0.05	0.09	0.02
Crit Moves:	****							****		****		
Green Time:	24.9	24.9	24.9	24.9	24.9	24.9	23.1	40.4	40.4	12.8	30.0	30.0
Volume/Cap:	0.32	0.20	0.07	0.06	0.31	0.25	0.17	0.32	0.32	0.32	0.26	0.05
Delay/Veh:	26.5	25.1	24.1	24.1	26.2	25.7	26.2	16.2	16.2	35.4	22.1	20.4
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	26.5	25.1	24.1	24.1	26.2	25.7	26.2	16.2	16.2	35.4	22.1	20.4
LOS by Move:	C	C	C	C	C	C	C	B	B	D	C	C
HCM2k95thQ:	5	5	1	1	7	5	4	9	9	5	7	1

Note: Queue reported is the number of cars per lane.

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PM Existing (2009)
Walmart, Tehachapi
Linscott, Law and Greenspan, Engineers

Level Of Service Computation Report
2000 HCM Unsignalized Method (Future Volume Alternative)

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Intersection #18 Curry Street/Summit Road at Highline Road

****

Average Delay (sec/veh): 2.6 Worst Case Level Of Service: B[11.5]

****

Street Name:	Curry Street/Summit Road						Highline Road					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Control:	Stop Sign			Stop Sign			Uncontrolled			Uncontrolled		
Rights:	Include			Include			Include			Include		
Lanes:	0 1	0 0	0	0 1	0 0	1	0 0	1! 0	0	0 0	0 1	0
Volume Module:												
Base Vol:	1	2	0	13	1	45	37	58	3	0	143	41
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	1	2	0	13	1	45	37	58	3	0	143	41
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	1	2	0	13	1	45	37	58	3	0	143	41
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
PHF Volume:	1	2	0	14	1	50	41	64	3	0	159	46
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
FinalVolume:	1	2	0	14	1	50	41	64	3	0	159	46
Critical Gap Module:												
Critical Gp:	7.1	6.5	xxxxx	7.1	6.5	6.2	4.1	xxxx	xxxxx	xxxxx	xxxx	xxxxx
FollowUpTim:	3.5	4.0	xxxxx	3.5	4.0	3.3	2.2	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Capacity Module:												
Cnflict Vol:	356	353	xxxxx	331	332	182	204	xxxx	xxxxx	xxxx	xxxx	xxxxx
Potent Cap.:	603	575	xxxxx	626	591	866	1379	xxxx	xxxxx	xxxx	xxxx	xxxxx
Move Cap.:	555	558	xxxxx	610	573	866	1379	xxxx	xxxxx	xxxx	xxxx	xxxxx
Volume/Cap:	0.00	0.00	xxxx	0.02	0.00	0.06	0.03	xxxx	xxxx	xxxx	xxxx	xxxx
Level Of Service Module:												
2Way95thQ:	xxxx	xxxx	xxxxx	xxxx	xxxx	0.2	0.1	xxxx	xxxxx	xxxx	xxxx	xxxxx
Control Del:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	9.4	7.7	xxxx	xxxxx	xxxxx	xxxx	xxxxx
LOS by Move:	*	*	*	*	*	A	A	*	*	*	*	*
Movement:	LT -	LTR -	RT	LT -	LTR -	RT	LT -	LTR -	RT	LT -	LTR -	RT
Shared Cap.:	557	xxxx	xxxxx	607	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
SharedQueue:	0.0	xxxx	xxxxx	0.1	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Shrd ConDel:	11.5	xxxx	xxxxx	11.1	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Shared LOS:	B	*	*	B	*	*	*	*	*	*	*	*
ApproachDel:		11.5			9.8			xxxxxx			xxxxxx	
ApproachLOS:		B			A			*			*	

****

Note: Queue reported is the number of cars per lane.

****

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PM Existing (2009)
Walmart, Tehachapi
Linscott, Law and Greenspan, Engineers

Level Of Service Computation Report
2000 HCM 4-Way Stop Method (Future Volume Alternative)

Intersection #19 Green Street at Tehachapi Boulevard

Cycle (sec):	100	Critical Vol./Cap.(X):	0.532
Loss Time (sec):	0 (Y+R=4.0 sec)	Average Delay (sec/veh):	13.2
Optimal Cycle:	0	Level Of Service:	B

Street Name:	Green Street						Tehachapi Boulevard					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L - T - R			L - T - R			L - T - R			L - T - R		
Control:	Stop Sign			Stop Sign			Stop Sign			Stop Sign		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	0 0 0 0 0			0 1 0 0 1			0 1 0 1 0			0 1 0 1 0		
Volume Module:												
Base Vol:	0	0	0	51	41	225	158	307	74	42	224	37
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	0	0	0	51	41	225	158	307	74	42	224	37
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	0	0	0	51	41	225	158	307	74	42	224	37
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
PHF Volume:	0	0	0	57	46	250	176	341	82	47	249	41
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	0	0	0	57	46	250	176	341	82	47	249	41
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	0	0	0	57	46	250	176	341	82	47	249	41
Saturation Flow Module:												
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	0.00	0.00	0.00	0.55	0.45	1.00	0.59	1.14	0.27	0.28	1.48	0.24
Final Sat.:	0	0	0	276	222	579	330	675	167	150	822	139
Capacity Analysis Module:												
Vol/Sat:	xxxx	xxxx	xxxx	0.20	0.20	0.43	0.53	0.51	0.49	0.31	0.30	0.30
Crit Moves:						****	****			****		
Delay/Veh:	0.0	0.0	0.0	11.3	11.3	12.8	15.6	14.4	13.8	11.9	11.6	11.3
Delay Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	0.0	0.0	0.0	11.3	11.3	12.8	15.6	14.4	13.8	11.9	11.6	11.3
LOS by Move:	*	*	*	B	B	B	C	B	B	B	B	B
ApproachDel:	xxxxxx			12.3			14.7			11.6		
Delay Adj:	xxxxx			1.00			1.00			1.00		
ApprAdjDel:	xxxxxx			12.3			14.7			11.6		
LOS by Appr:	*			B			B			B		
AllWayAvgQ:	0.0	0.0	0.0	0.2	0.2	0.7	1.0	0.9	0.9	0.4	0.4	0.4

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APPENDIX D

YEAR 2011 TRAFFIC CONDITIONS INTERSECTION LEVEL OF SERVICE CALCULATION WORKSHEETS

APPENDIX D-I

YEAR 2011 CUMULATIVE TRAFFIC CONDITIONS

AM Cumulative (2011)
Walmart, Tehachapi
Linscott, Law and Greenspan, Engineers

Level Of Service Computation Report
2000 HCM Operations Method (Future Volume Alternative)

Intersection #1 Woodford Tehachapi Road at Valley Boulevard (SR-202)

Cycle (sec):	90	Critical Vol./Cap.(X):	0.382
Loss Time (sec):	12 (Y+R=4.0 sec)	Average Delay (sec/veh):	15.4
Optimal Cycle:	90	Level Of Service:	B

Street Name:	Woodford Tehachapi Road						Valley Boulevard (SR-202)					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L - T - R			L - T - R			L - T - R			L - T - R		
Control:	Permitted			Permitted			Protected			Protected		
Rights:	Include			Include			Include			Include		
Min. Green:	6	6	6	6	6	6	6	6	6	6	6	6
Lanes:	0 0	1! 0	0	1 0	1 0	1	1 0	0 1	0	1 0	1 0	1
Volume Module:												
Base Vol:	2	12	13	67	14	66	24	364	6	11	274	31
Growth Adj:	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04
Initial Bse:	2	12	14	70	15	69	25	379	6	11	285	32
Added Vol:	0	0	0	13	0	0	0	56	0	1	58	12
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	2	12	14	83	15	69	25	435	6	12	343	44
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
PHF Volume:	2	14	15	92	16	76	28	483	7	14	381	49
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	2	14	15	92	16	76	28	483	7	14	381	49
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	2	14	15	92	16	76	28	483	7	14	381	49
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.92	0.92	0.92	0.74	1.00	0.85	0.95	1.00	1.00	0.95	1.00	0.85
Lanes:	0.07	0.44	0.49	1.00	1.00	1.00	1.00	0.99	0.01	1.00	1.00	1.00
Final Sat.:	130	780	845	1412	1900	1615	1805	1869	27	1805	1900	1615
Capacity Analysis Module:												
Vol/Sat:	0.02	0.02	0.02	0.07	0.01	0.05	0.02	0.26	0.26	0.01	0.20	0.03
Crit Moves:				****				****		****		
Green Time:	14.5	14.5	14.5	14.5	14.5	14.5	15.8	57.5	57.5	6.0	47.7	47.7
Volume/Cap:	0.11	0.11	0.11	0.40	0.05	0.29	0.09	0.40	0.40	0.11	0.38	0.06
Delay/Veh:	32.4	32.4	32.4	35.1	32.0	33.9	31.1	8.1	8.1	39.9	12.7	10.3
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	32.4	32.4	32.4	35.1	32.0	33.9	31.1	8.1	8.1	39.9	12.7	10.3
LOS by Move:	C	C	C	D	C	C	C	A	A	D	B	B
HCM2k95thQ:	2	2	2	5	1	4	1	13	13	1	12	1

Note: Queue reported is the number of cars per lane.

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AM Cumulative (2011)
Walmart, Tehachapi
Linscott, Law and Greenspan, Engineers

Level Of Service Computation Report
2000 HCM Unsignalized Method (Future Volume Alternative)

Intersection #2 South Street at Valley Boulevard (SR-202)

Average Delay (sec/veh): 0.8 Worst Case Level Of Service: B[12.7]

Street Name:	South Street						Valley Boulevard (SR-202)					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Stop Sign			Stop Sign			Uncontrolled			Uncontrolled		
Rights:	Include			Include			Include			Include		
Lanes:	1 0 0 0 1			0 0 0 0 0			0 0 1 0 1			1 0 1 0 0		
Volume Module:												
Base Vol:	12	0	25	0	0	0	0	429	29	32	310	0
Growth Adj:	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04
Initial Bse:	12	0	26	0	0	0	0	446	30	33	322	0
Added Vol:	0	0	0	0	0	0	0	70	0	0	71	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	12	0	26	0	0	0	0	516	30	33	393	0
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
PHF Volume:	14	0	29	0	0	0	0	574	34	37	437	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
FinalVolume:	14	0	29	0	0	0	0	574	34	37	437	0
Critical Gap Module:												
Critical Gp:	6.4	xxxx	6.2	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	4.1	xxxx	xxxxx
FollowUpTim:	3.5	xxxx	3.3	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	2.2	xxxx	xxxxx
Capacity Module:												
Cnflict Vol:	1085	xxxx	574	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	607	xxxx	xxxxx
Potent Cap.:	242	xxxx	522	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	981	xxxx	xxxxx
Move Cap.:	235	xxxx	522	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	981	xxxx	xxxxx
Total Cap:	438	391	xxxxx	348	368	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
Volume/Cap:	0.03	xxxx	0.06	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	0.04	xxxx	xxxx
Level Of Service Module:												
2Way95thQ:	0.1	xxxx	0.2	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	0.1	xxxx	xxxxx
Control Del:	13.5	xxxx	12.3	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	8.8	xxxx	xxxxx
LOS by Move:	B	*	B	*	*	*	*	*	*	A	*	*
Movement:	LT	LTR	RT	LT	LTR	RT	LT	LTR	RT	LT	LTR	RT
Shared Cap.:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
SharedQueue:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Shrd ConDel:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Shared LOS:	*	*	*	*	*	*	*	*	*	*	*	*
ApproachDel:		12.7			xxxxxx			xxxxxx			xxxxxx	
ApproachLOS:		B			*			*			*	

Note: Queue reported is the number of cars per lane.

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AM Cumulative (2011)
Walmart, Tehachapi
Linscott, Law and Greenspan, Engineers

Level Of Service Computation Report
2000 HCM Unsignalized Method (Future Volume Alternative)

Intersection #3 Santa Lucia Street at Valley Boulevard (SR-202)

Average Delay (sec/veh): 1.3 Worst Case Level Of Service: B[15.0]

Street Name:	Santa Lucia Street						Valley Boulevard (SR-202)					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Control:	Stop Sign			Stop Sign			Uncontrolled			Uncontrolled		
Rights:	Include			Include			Include			Include		
Lanes:	0 0	1! 0	0	0 0	1! 0	0	1 0	0 1	0	1 0	0 1	0
Volume Module:												
Base Vol:	1	5	11	15	5	14	39	407	7	18	297	25
Growth Adj:	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04
Initial Bse:	1	5	11	16	5	15	41	423	7	19	309	26
Added Vol:	0	0	0	7	0	0	0	70	0	0	71	7
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	1	5	11	23	5	15	41	493	7	19	380	33
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
PHF Volume:	1	6	13	25	6	16	45	548	8	21	422	37
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
FinalVolume:	1	6	13	25	6	16	45	548	8	21	422	37
Critical Gap Module:												
Critical Gp:	7.1	6.5	6.2	7.1	6.5	6.2	4.1	xxxx	xxxxx	4.1	xxxx	xxxxx
FollowUpTim:	3.5	4.0	3.3	3.5	4.0	3.3	2.2	xxxx	xxxxx	2.2	xxxx	xxxxx
Capacity Module:												
Cnflict Vol:	1135	1143	552	1134	1128	440	459	xxxx	xxxxx	556	xxxx	xxxxx
Potent Cap.:	181	202	537	182	206	621	1113	xxxx	xxxxx	1024	xxxx	xxxxx
Move Cap.:	164	190	537	165	194	621	1113	xxxx	xxxxx	1024	xxxx	xxxxx
Total Cap:	346	357	xxxxx	342	360	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
Volume/Cap:	0.00	0.02	0.02	0.07	0.02	0.03	0.04	xxxx	xxxx	0.02	xxxx	xxxx
Level Of Service Module:												
2Way95thQ:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	0.1	xxxx	xxxxx	0.1	xxxx	xxxxx
Control Del:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	8.4	xxxx	xxxxx	8.6	xxxx	xxxxx
LOS by Move:	*	*	*	*	*	*	A	*	*	A	*	*
Movement:	LT -	LTR -	RT	LT -	LTR -	RT	LT -	LTR -	RT	LT -	LTR -	RT
Shared Cap.:	xxxx	455	xxxxx	xxxx	407	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
SharedQueue:	xxxxx	0.1	xxxxx	xxxxx	0.4	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Shrd ConDel:	xxxxx	13.3	xxxxx	xxxxx	15.0	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Shared LOS:	*	B	*	*	B	*	*	*	*	*	*	*
ApproachDel:		13.3			15.0		xxxxxx			xxxxxx		
ApproachLOS:		B			B			*			*	

Note: Queue reported is the number of cars per lane.

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AM Cumulative (2011)
Walmart, Tehachapi
Linscott, Law and Greenspan, Engineers

Level Of Service Computation Report
2000 HCM Operations Method (Future Volume Alternative)

Intersection #4 Golden Hills Boulevard at Valley Boulevard (SR-202)

Cycle (sec):	90	Critical Vol./Cap.(X):	0.487
Loss Time (sec):	12 (Y+R=4.0 sec)	Average Delay (sec/veh):	14.7
Optimal Cycle:	90	Level Of Service:	B

Street Name:	Golden Hills Boulevard						Valley Boulevard (SR-202)					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Split Phase			Split Phase			Protected			Permitted		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	6	6	0	6	6	6	6	0	6	6
Lanes:	0 0	0 0	1	1 0	0 0	1	1 0	0 1	0	0 0	1 0	1
Volume Module:												
Base Vol:	0	0	0	161	0	41	25	403	0	0	327	75
Growth Adj:	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04
Initial Bse:	0	0	0	167	0	43	26	419	0	0	340	78
Added Vol:	0	0	0	3	0	35	28	148	0	0	145	2
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	0	0	0	170	0	78	54	567	0	0	485	80
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
PHF Volume:	0	0	0	189	0	86	60	630	0	0	539	89
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	0	0	0	189	0	86	60	630	0	0	539	89
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	0	0	0	189	0	86	60	630	0	0	539	89
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	1.00	1.00	1.00	0.95	1.00	0.85	0.95	1.00	1.00	1.00	1.00	0.85
Lanes:	0.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	0.00	0.00	1.00	1.00
Final Sat.:	0	0	1900	1805	0	1615	1805	1900	0	0	1900	1615
Capacity Analysis Module:												
Vol/Sat:	0.00	0.00	0.00	0.10	0.00	0.05	0.03	0.33	0.00	0.00	0.28	0.06
Crit Moves:				****			****				****	
Green Time:	0.0	0.0	0.0	19.4	0.0	19.4	6.1	58.6	0.0	0.0	52.5	52.5
Volume/Cap:	0.00	0.00	0.00	0.49	0.00	0.25	0.49	0.51	0.00	0.00	0.49	0.09
Delay/Veh:	0.0	0.0	0.0	31.9	0.0	29.6	43.4	8.6	0.0	0.0	11.3	8.3
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	0.0	0.0	0.0	31.9	0.0	29.6	43.4	8.6	0.0	0.0	11.3	8.3
LOS by Move:	A	A	A	C	A	C	D	A	A	A	B	A
HCM2k95thQ:	0	0	0	10	0	4	5	17	0	0	16	2

Note: Queue reported is the number of cars per lane.

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AM Cumulative (2011)
Walmart, Tehachapi
Linscott, Law and Greenspan, Engineers

Level Of Service Computation Report
2000 HCM 4-Way Stop Method (Future Volume Alternative)

Intersection #5 Westwood Boulevard at Red Apple Avenue

Cycle (sec):	100	Critical Vol./Cap.(X):	0.864
Loss Time (sec):	0 (Y+R=4.0 sec)	Average Delay (sec/veh):	22.5
Optimal Cycle:	0	Level Of Service:	C

Street Name:	Westwood Boulevard						Red Apple Avenue					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Stop Sign			Stop Sign			Stop Sign			Stop Sign		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	0 0 1	0	1	1 0 1	0	0	0 0 0	0	0	1 0 0	0	1
Volume Module:												
Base Vol:	0	5	143	381	15	0	0	0	0	48	0	139
Growth Adj:	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04
Initial Bse:	0	5	149	396	16	0	0	0	0	50	0	145
Added Vol:	0	0	34	55	0	0	0	0	0	40	0	54
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	0	5	183	451	16	0	0	0	0	90	0	199
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
PHF Volume:	0	6	203	501	17	0	0	0	0	100	0	221
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	0	6	203	501	17	0	0	0	0	100	0	221
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	0	6	203	501	17	0	0	0	0	100	0	221
Saturation Flow Module:												
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	0.00	1.00	1.00	1.00	1.00	0.00	0.00	0.00	0.00	1.00	0.00	1.00
Final Sat.:	0	568	643	581	619	0	0	0	0	499	0	598
Capacity Analysis Module:												
Vol/Sat:	xxxx	0.01	0.32	0.86	0.03	xxxx	xxxx	xxxx	xxxx	0.20	xxxx	0.37
Crit Moves:			****	****								****
Delay/Veh:	0.0	8.8	10.4	35.2	8.5	0.0	0.0	0.0	0.0	11.2	0.0	11.5
Delay Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	0.0	8.8	10.4	35.2	8.5	0.0	0.0	0.0	0.0	11.2	0.0	11.5
LOS by Move:	*	A	B	E	A	*	*	*	*	B	*	B
ApproachDel:		10.4			34.3			xxxxxx			11.4	
Delay Adj:		1.00			1.00			xxxxx			1.00	
ApprAdjDel:		10.4			34.3			xxxxxx			11.4	
LOS by Appr:		B			D			*			B	
AllWayAvgQ:	0.0	0.0	0.4	4.2	0.0	0.0	0.0	0.0	0.0	0.2	0.0	0.5

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AM Cumulative (2011)
Walmart, Tehachapi
Linscott, Law and Greenspan, Engineers

Level Of Service Computation Report
2000 HCM Unsignalized Method (Future Volume Alternative)

Intersection #6 Sierra Vista Drive at Valley Boulevard (SR-202)

Average Delay (sec/veh): 0.1 Worst Case Level Of Service: B[12.7]

Street Name:	Sierra Vista Drive						Valley Boulevard (SR-202)					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Control:	Stop Sign			Stop Sign			Uncontrolled			Uncontrolled		
Rights:	Include			Include			Include			Include		
Lanes:	0 0	0 0	0	0 0	0 0	1	0 0	1 0	0	0 0	0 1	0
Volume Module:												
Base Vol:	0	0	0	0	0	5	0	540	0	0	406	3
Growth Adj:	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04
Initial Bse:	0	0	0	0	0	5	0	562	0	0	422	3
Added Vol:	0	0	0	0	0	0	0	156	0	0	157	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	0	0	0	0	0	5	0	718	0	0	579	3
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
PHF Volume:	0	0	0	0	0	6	0	797	0	0	644	3
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
FinalVolume:	0	0	0	0	0	6	0	797	0	0	644	3
Critical Gap Module:												
Critical Gp:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	6.2	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
FollowUpTim:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	3.3	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Capacity Module:												
Cnflict Vol:	xxxx	xxxx	xxxxx	xxxx	xxxx	645	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
Potent Cap.:	xxxx	xxxx	xxxxx	xxxx	xxxx	476	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
Move Cap.:	xxxx	xxxx	xxxxx	xxxx	xxxx	476	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
Volume/Cap:	xxxx	xxxx	xxxx	xxxx	xxxx	0.01	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx
Level Of Service Module:												
2Way95thQ:	xxxx	xxxx	xxxxx	xxxx	xxxx	0.0	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
Control Del:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	12.7	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
LOS by Move:	*	*	*	*	*	B	*	*	*	*	*	*
Movement:	LT -	LTR -	RT	LT -	LTR -	RT	LT -	LTR -	RT	LT -	LTR -	RT
Shared Cap.:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
SharedQueue:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Shrd ConDel:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Shared LOS:	*	*	*	*	*	*	*	*	*	*	*	*
ApproachDel:	xxxxxx			12.7			xxxxxx			xxxxxx		
ApproachLOS:	*			B			*			*		

Note: Queue reported is the number of cars per lane.

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AM Cumulative (2011)
Walmart, Tehachapi
Linscott, Law and Greenspan, Engineers

Level Of Service Computation Report
2000 HCM Unsignalized Method (Future Volume Alternative)

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Intersection #7 Tehachapi Boulevard at SR-58 Eastbound Ramps

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Average Delay (sec/veh): 1.4 Worst Case Level Of Service: B[10.6]

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Street Name:	Tehachapi Boulevard						SR-58 Eastbound Ramps					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Uncontrolled			Uncontrolled			Stop Sign			Stop Sign		
Rights:	Include			Include			Include			Include		
Lanes:	0 0 0 1 0			0 0 1 0 0			0 1 0 0 1			0 0 0 0 0		
Volume Module:												
Base Vol:	0	364	224	0	145	0	0	1	82	0	0	0
Growth Adj:	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04
Initial Bse:	0	379	233	0	151	0	0	1	85	0	0	0
Added Vol:	0	88	58	0	52	0	0	0	63	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	0	467	291	0	203	0	0	1	148	0	0	0
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
PHF Volume:	0	518	323	0	225	0	0	1	165	0	0	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
FinalVolume:	0	518	323	0	225	0	0	1	165	0	0	0
Critical Gap Module:												
Critical Gp:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	6.4	6.5	6.2	xxxxx	xxxx	xxxxx
FollowUpTim:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	3.5	4.0	3.3	xxxxx	xxxx	xxxxx
Capacity Module:												
Cnflict Vol:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	905	1067	225	xxxx	xxxx	xxxxx
Potent Cap.:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	309	224	819	xxxx	xxxx	xxxxx
Move Cap.:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	309	224	819	xxxx	xxxx	xxxxx
Volume/Cap:	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	0.00	0.01	0.20	xxxx	xxxx	xxxx
Level Of Service Module:												
2Way95thQ:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	0.7	xxxx	xxxx	xxxxx
Control Del:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	10.5	xxxxx	xxxx	xxxxx
LOS by Move:	*	*	*	*	*	*	*	*	B	*	*	*
Movement:	LT - LTR - RT			LT - LTR - RT			LT - LTR - RT			LT - LTR - RT		
Shared Cap.:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	224	xxxx	xxxxx	xxxx	xxxx	xxxxx
SharedQueue:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	0.0	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Shrd ConDel:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	21.2	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Shared LOS:	*	*	*	*	*	*	C	*	*	*	*	*
ApproachDel:	xxxxxx			xxxxxx			10.6			xxxxxx		
ApproachLOS:	*			*			B			*		

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Note: Queue reported is the number of cars per lane.

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AM Cumulative (2011)
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Linscott, Law and Greenspan, Engineers

Level Of Service Computation Report
2000 HCM Operations Method (Future Volume Alternative)

Intersection #8 Tehachapi Boulevard/Tucker Road at Red Apple Avenue/Tehachapi Bo

Cycle (sec):	90	Critical Vol./Cap.(X):	0.559
Loss Time (sec):	16 (Y+R=4.0 sec)	Average Delay (sec/veh):	29.7
Optimal Cycle:	90	Level Of Service:	C

Street Name: Tehachapi Boulevard/Tucker Road Red Apple Avenue/Tehachapi Boulev

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Control:	Protected			Protected			Protected			Protected		
Rights:	Include			Include			Include			Include		
Min. Green:	6	6	6	6	6	6	6	6	6	6	6	6
Lanes:	1 0	2 0	1	1 0	2 0	1	1 0	1 0	1	1 0	1 0	1
Volume Module:												
Base Vol:	50	330	92	39	154	28	163	293	92	76	113	76
Growth Adj:	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04
Initial Bse:	52	343	96	41	160	29	170	305	96	79	118	79
Added Vol:	15	113	10	28	64	22	16	51	5	33	58	17
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	67	456	106	69	224	51	186	356	101	112	176	96
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
PHF Volume:	74	507	117	76	249	57	206	395	112	124	195	107
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	74	507	117	76	249	57	206	395	112	124	195	107
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	74	507	117	76	249	57	206	395	112	124	195	107
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.95	0.95	0.85	0.95	0.95	0.85	0.95	1.00	0.85	0.95	1.00	0.85
Lanes:	1.00	2.00	1.00	1.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Sat.:	1805	3610	1615	1805	3610	1615	1805	1900	1615	1805	1900	1615
Capacity Analysis Module:												
Vol/Sat:	0.04	0.14	0.07	0.04	0.07	0.04	0.11	0.21	0.07	0.07	0.10	0.07
Crit Moves:		****		****				****		****		
Green Time:	14.4	22.6	22.6	6.8	15.0	15.0	23.5	33.5	33.5	11.1	21.1	21.1
Volume/Cap:	0.26	0.56	0.29	0.56	0.42	0.21	0.44	0.56	0.19	0.56	0.44	0.28
Delay/Veh:	33.5	30.1	27.6	45.3	34.1	32.8	28.4	23.4	19.2	40.3	30.1	28.6
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	33.5	30.1	27.6	45.3	34.1	32.8	28.4	23.4	19.2	40.3	30.1	28.6
LOS by Move:	C	C	C	D	C	C	C	C	B	D	C	C
HCM2k95thQ:	4	13	6	6	7	3	10	17	4	8	10	5

Note: Queue reported is the number of cars per lane.

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AM Cumulative (2011)
Walmart, Tehachapi
Linscott, Law and Greenspan, Engineers

Level Of Service Computation Report
2000 HCM Unsignalized Method (Future Volume Alternative)

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Intersection #9 Tucker Road at Conway Avenue/Walmart Project Driveway 2

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Average Delay (sec/veh): 3.2 Worst Case Level Of Service: F[66.0]

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Street Name:	Tucker Road						Conway Avenue/Walmart Project Dri					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	- T	- R	L	- T	- R	L	- T	- R	L	- T	- R
Control:	Uncontrolled			Uncontrolled			Stop Sign			Stop Sign		
Rights:	Include			Include			Include			Include		
Lanes:	1 0	1 1	0	1 0	1 1	0	0 0	1! 0	0	0 0	1! 0	0
Volume Module:												
Base Vol:	22	570	0	3	764	43	52	0	31	0	0	0
Growth Adj:	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04
Initial Bse:	23	593	0	3	795	45	54	0	32	0	0	0
Added Vol:	0	195	0	0	126	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	23	788	0	3	921	45	54	0	32	0	0	0
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
PHF Volume:	25	875	0	3	1023	50	60	0	36	0	0	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
FinalVolume:	25	875	0	3	1023	50	60	0	36	0	0	0
Critical Gap Module:												
Critical Gp:	4.1	xxxx	xxxxx	4.1	xxxx	xxxxx	6.8	6.5	6.9	7.5	6.5	6.9
FollowUpTim:	2.2	xxxx	xxxxx	2.2	xxxx	xxxxx	3.5	4.0	3.3	3.5	4.0	3.3
Capacity Module:												
Cnflict Vol:	1073	xxxx	xxxxx	875	xxxx	xxxxx	1543	1981	536	1445	2006	438
Potent Cap.:	658	xxxx	xxxxx	780	xxxx	xxxxx	108	62	494	94	60	572
Move Cap.:	658	xxxx	xxxxx	780	xxxx	xxxxx	104	60	494	85	58	572
Volume/Cap:	0.04	xxxx	xxxx	0.00	xxxx	xxxx	0.58	0.00	0.07	0.00	0.00	0.00
Level Of Service Module:												
2Way95thQ:	0.1	xxxx	xxxxx	0.0	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
Control Del:	10.7	xxxx	xxxxx	9.6	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
LOS by Move:	B	*	*	A	*	*	*	*	*	*	*	*
Movement:	LT	- LTR	- RT	LT	- LTR	- RT	LT	- LTR	- RT	LT	- LTR	- RT
Shared Cap.:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	148	xxxxx	xxxx	0	xxxxx
SharedQueue:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	3.6	xxxxx	xxxxx	xxxx	xxxxx
Shrd ConDel:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	66.0	xxxxx	xxxxx	xxxx	xxxxx
Shared LOS:	*	*	*	*	*	*	*	F	*	*	*	*
ApproachDel:	xxxxxx			xxxxxx			66.0			xxxxxx		
ApproachLOS:		*			*			F			*	

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Note: Queue reported is the number of cars per lane.

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AM Cumulative (2011)
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Level Of Service Computation Report
2000 HCM Operations Method (Future Volume Alternative)

Intersection #10 Tucker Road at Valley Boulevard (SR-202)

Cycle (sec):	90	Critical Vol./Cap.(X):	0.927
Loss Time (sec):	16	Average Delay (sec/veh):	46.7
Optimal Cycle:	120	Level Of Service:	D

Street Name:	Tucker Road						Valley Boulevard (SR-202)					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L - T - R			L - T - R			L - T - R			L - T - R		
Control:	Protected			Protected			Protected			Protected		
Rights:	Include			Include			Include			Include		
Min. Green:	6	6	6	6	6	6	6	6	6	6	6	6
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	1 0	1 1	0	1 0	2 0	1	1 0	1 0	1	1 0	1 0	1
Volume Module:												
Base Vol:	177	211	133	153	239	236	262	255	107	138	248	119
Growth Adj:	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04
Initial Bse:	184	219	138	159	249	245	272	265	111	144	258	124
Added Vol:	39	53	22	34	21	77	96	37	22	12	44	66
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	223	272	160	193	270	322	368	302	133	156	302	190
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
PHF Volume:	248	303	178	215	300	358	409	336	148	173	335	211
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	248	303	178	215	300	358	409	336	148	173	335	211
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	248	303	178	215	300	358	409	336	148	173	335	211
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.95	0.90	0.90	0.95	0.95	0.85	0.95	1.00	0.85	0.95	1.00	0.85
Lanes:	1.00	1.26	0.74	1.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Sat.:	1805	2148	1264	1805	3610	1615	1805	1900	1615	1805	1900	1615
Capacity Analysis Module:												
Vol/Sat:	0.14	0.14	0.14	0.12	0.08	0.22	0.23	0.18	0.09	0.10	0.18	0.13
Crit Moves:	****					****	****				****	
Green Time:	13.3	18.9	18.9	15.9	21.5	21.5	22.0	25.4	25.4	13.8	17.1	17.1
Volume/Cap:	0.93	0.67	0.67	0.67	0.35	0.93	0.93	0.63	0.33	0.63	0.93	0.69
Delay/Veh:	74.0	35.2	35.2	40.0	28.6	61.7	59.0	30.5	25.9	40.2	65.3	40.3
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	74.0	35.2	35.2	40.0	28.6	61.7	59.0	30.5	25.9	40.2	65.3	40.3
LOS by Move:	E	D	D	D	C	E	E	C	C	D	E	D
HCM2k95thQ:	19	14	14	13	8	25	27	17	7	11	24	13

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AM Cumulative (2011)
Walmart, Tehachapi
Linscott, Law and Greenspan, Engineers

Level Of Service Computation Report
2000 HCM 4-Way Stop Method (Future Volume Alternative)

Intersection #11 Tucker Road at Highline Road

Cycle (sec):	100	Critical Vol./Cap.(X):	0.592
Loss Time (sec):	0 (Y+R=4.0 sec)	Average Delay (sec/veh):	12.3
Optimal Cycle:	0	Level Of Service:	B

Street Name:	Tucker Road						Highline Road					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Stop Sign			Stop Sign			Stop Sign			Stop Sign		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	0 0	1! 0	0	0 0	1! 0	0	0 1	0 0	1	0 0	1! 0	0
Volume Module:												
Base Vol:	2	4	5	44	3	21	89	249	0	2	69	32
Growth Adj:	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04
Initial Bse:	2	4	5	46	3	22	93	259	0	2	72	33
Added Vol:	0	6	4	25	6	3	2	11	0	7	16	71
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	2	10	9	71	9	25	95	270	0	9	88	104
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
PHF Volume:	2	11	10	79	10	28	105	300	0	10	98	116
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	2	11	10	79	10	28	105	300	0	10	98	116
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	2	11	10	79	10	28	105	300	0	10	98	116
Saturation Flow Module:												
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	0.10	0.47	0.43	0.67	0.09	0.24	0.26	0.74	1.00	0.04	0.44	0.52
Final Sat.:	58	281	255	411	53	144	178	507	812	34	332	395
Capacity Analysis Module:												
Vol/Sat:	0.04	0.04	0.04	0.19	0.19	0.19	0.59	0.59	0.00	0.29	0.29	0.29
Crit Moves:		****			****		****				****	
Delay/Veh:	8.6	8.6	8.6	9.6	9.6	9.6	14.9	14.9	0.0	9.4	9.4	9.4
Delay Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	8.6	8.6	8.6	9.6	9.6	9.6	14.9	14.9	0.0	9.4	9.4	9.4
LOS by Move:	A	A	A	A	A	A	B	B	*	A	A	A
ApproachDel:		8.6			9.6			14.9			9.4	
Delay Adj:		1.00			1.00			1.00			1.00	
ApprAdjDel:		8.6			9.6			14.9			9.4	
LOS by Appr:		A			A			B			A	
AllWayAvgQ:	0.0	0.0	0.0	0.2	0.2	0.2	1.3	1.3	0.0	0.4	0.4	0.4

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AM Cumulative (2011)
Walmart, Tehachapi
Linscott, Law and Greenspan, Engineers

Level Of Service Computation Report
2000 HCM Unsignalized Method (Future Volume Alternative)

Intersection #12 Mountain View Avenue at Valley Boulevard (SR-202)

Average Delay (sec/veh): 0.8 Worst Case Level Of Service: B[13.8]

Street Name:	Mountain View Avenue									Valley Boulevard (SR-202)								
Approach:	North Bound					South Bound				East Bound					West Bound			
Movement:	L	-	T	-	R	L	-	T	- R	L	-	T	-	R	L	-	T	- R
Control:	Stop Sign					Stop Sign				Uncontrolled					Uncontrolled			
Rights:	Include					Include				Include					Include			
Lanes:	0	0	0	0	0	0	0	1!	0 0	1	0	1	0	0	0	0	1	0 1
Volume Module:																		
Base Vol:	0	0	0			6	0		25	32	355		0		0	285		13
Growth Adj:	1.04	1.04	1.04			1.04	1.04		1.04	1.04	1.04		1.04		1.04	1.04		1.04
Initial Bse:	0	0	0			6	0		26	33	369		0		0	296		14
Added Vol:	0	0	0			2	0		1	2	92		0		0	123		5
PasserByVol:	0	0	0			0	0		0	0	0		0		0	0		0
Initial Fut:	0	0	0			8	0		27	35	461		0		0	419		19
User Adj:	1.00	1.00	1.00			1.00	1.00		1.00	1.00	1.00		1.00		1.00	1.00		1.00
PHF Adj:	0.90	0.90	0.90			0.90	0.90		0.90	0.90	0.90		0.90		0.90	0.90		0.90
PHF Volume:	0	0	0			9	0		30	39	512		0		0	466		21
Reduct Vol:	0	0	0			0	0		0	0	0		0		0	0		0
FinalVolume:	0	0	0			9	0		30	39	512		0		0	466		21
Critical Gap Module:																		
Critical Gp:	xxxxx	xxxx	xxxxx			6.4	6.5		6.2	4.1	xxxx		xxxxx		xxxxx	xxxx		xxxxx
FollowUpTim:	xxxxx	xxxx	xxxxx			3.5	4.0		3.3	2.2	xxxx		xxxxx		xxxxx	xxxx		xxxxx
Capacity Module:																		
Cnflict Vol:	xxxx	xxxx	xxxxx			1057	1057		466	487	xxxx		xxxxx		xxxx	xxxx		xxxxx
Potent Cap.:	xxxx	xxxx	xxxxx			251	227		601	1087	xxxx		xxxxx		xxxx	xxxx		xxxxx
Move Cap.:	xxxx	xxxx	xxxxx			245	219		601	1087	xxxx		xxxxx		xxxx	xxxx		xxxxx
Volume/Cap:	xxxx	xxxx	xxxx			0.04	0.00		0.05	0.04	xxxx		xxxx		xxxx	xxxx		xxxx
Level Of Service Module:																		
2Way95thQ:	xxxx	xxxx	xxxxx			xxxx	xxxx		xxxxx	0.1	xxxx		xxxxx		xxxx	xxxx		xxxxx
Control Del:	xxxxx	xxxx	xxxxx			xxxxx	xxxx		xxxxx	8.4	xxxx		xxxxx		xxxxx	xxxx		xxxxx
LOS by Move:	*	*	*			*	*		*	A	*		*		*	*		*
Movement:	LT	-	LTR	-	RT	LT	-	LTR	- RT	LT	-	LTR	-	RT	LT	-	LTR	- RT
Shared Cap.:	xxxx	xxxx	xxxxx			xxxx	448		xxxxx	xxxx	xxxx		xxxxx		xxxx	xxxx		xxxxx
SharedQueue:	xxxxx	xxxx	xxxxx			xxxxx	0.3		xxxxx	xxxxx	xxxx		xxxxx		xxxxx	xxxx		xxxxx
Shrd ConDel:	xxxxx	xxxx	xxxxx			xxxxx	13.8		xxxxx	xxxxx	xxxx		xxxxx		xxxxx	xxxx		xxxxx
Shared LOS:	*	*	*			*	B		*	*	*		*		*	*		*
ApproachDel:	xxxxxx						13.8			xxxxxx					xxxxxx			
ApproachLOS:	*						B			*					*			

Note: Queue reported is the number of cars per lane.

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AM Cumulative (2011)
Walmart, Tehachapi
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Level Of Service Computation Report
2000 HCM Unsignalized Method (Future Volume Alternative)

Intersection #13 Mountain View Avenue at Tehachapi Boulevard

Average Delay (sec/veh): 1.1 Worst Case Level Of Service: B[13.9]

Street Name:	Mountain View Avenue						Tehachapi Boulevard					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Control:	Stop Sign			Stop Sign			Uncontrolled			Uncontrolled		
Rights:	Include			Include			Include			Include		
Lanes:	0 1	0 0	1	1 0	0 0	0	1 0	1 0	1	1 0	1 0	1
Volume Module:												
Base Vol:	15	0	11	3	0	0	5	309	28	9	260	4
Growth Adj:	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04
Initial Bse:	16	0	11	3	0	0	5	321	29	9	270	4
Added Vol:	6	0	23	0	0	0	0	81	3	11	93	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	22	0	34	3	0	0	5	402	32	20	363	4
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
PHF Volume:	24	0	38	3	0	0	6	447	36	23	404	5
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
FinalVolume:	24	0	38	3	0	0	6	447	36	23	404	5
Critical Gap Module:												
Critical Gp:	7.1	6.5	6.2	7.1	xxxx	xxxxx	4.1	xxxx	xxxxx	4.1	xxxx	xxxxx
FollowUpTim:	3.5	4.0	3.3	3.5	xxxx	xxxxx	2.2	xxxx	xxxxx	2.2	xxxx	xxxxx
Capacity Module:												
Cnflict Vol:	910	912	447	945	xxxx	xxxxx	408	xxxx	xxxxx	483	xxxx	xxxxx
Potent Cap.:	258	276	616	244	xxxx	xxxxx	1161	xxxx	xxxxx	1090	xxxx	xxxxx
Move Cap.:	253	269	616	224	xxxx	xxxxx	1161	xxxx	xxxxx	1090	xxxx	xxxxx
Total Cap:	446	440	xxxxx	408	425	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
Volume/Cap:	0.05	0.00	0.06	0.01	xxxx	xxxx	0.00	xxxx	xxxx	0.02	xxxx	xxxx
Level Of Service Module:												
2Way95thQ:	xxxx	xxxx	0.2	0.0	xxxx	xxxxx	0.0	xxxx	xxxxx	0.1	xxxx	xxxxx
Control Del:	xxxxx	xxxx	11.2	13.9	xxxx	xxxxx	8.1	xxxx	xxxxx	8.4	xxxx	xxxxx
LOS by Move:	*	*	B	B	*	*	A	*	*	A	*	*
Movement:	LT -	LTR -	RT	LT -	LTR -	RT	LT -	LTR -	RT	LT -	LTR -	RT
Shared Cap.:	446	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
SharedQueue:	0.2	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Shrd ConDel:	13.5	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Shared LOS:	B	*	*	*	*	*	*	*	*	*	*	*
ApproachDel:		12.1			13.9			xxxxxx			xxxxxx	
ApproachLOS:		B			B			*			*	

Note: Queue reported is the number of cars per lane.

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AM Cumulative (2011)
Walmart, Tehachapi
Linscott, Law and Greenspan, Engineers

Level Of Service Computation Report
2000 HCM Unsignalized Method (Future Volume Alternative)

Intersection #14 Mulberry Street at Tehachapi Boulevard

Average Delay (sec/veh): 0.8 Worst Case Level Of Service: B[12.5]

Street Name:	Mulberry Street						Tehachapi Boulevard					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Control:	Stop Sign			Stop Sign			Uncontrolled			Uncontrolled		
Rights:	Include			Include			Include			Include		
Lanes:	0 0	1! 0	0	0 0	1! 0	0	1 0	1 0	1	1 0	1 0	1
Volume Module:												
Base Vol:	21	0	16	0	0	0	0	336	16	18	210	1
Growth Adj:	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04
Initial Bse:	22	0	17	0	0	0	0	349	17	19	218	1
Added Vol:	3	0	1	0	0	0	0	101	2	2	106	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	25	0	18	0	0	0	0	450	19	21	324	1
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
PHF Volume:	28	0	20	0	0	0	0	500	21	23	360	1
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
FinalVolume:	28	0	20	0	0	0	0	500	21	23	360	1
Critical Gap Module:												
Critical Gp:	6.4	6.5	6.2	7.1	6.5	6.2	xxxxx	xxxx	xxxxx	4.1	xxxx	xxxxx
FollowUpTim:	3.5	4.0	3.3	3.5	4.0	3.3	xxxxx	xxxx	xxxxx	2.2	xxxx	xxxxx
Capacity Module:												
Cnflict Vol:	908	908	500	927	928	360	xxxx	xxxx	xxxxx	521	xxxx	xxxxx
Potent Cap.:	308	277	574	251	270	689	xxxx	xxxx	xxxxx	1055	xxxx	xxxxx
Move Cap.:	303	271	574	238	264	689	xxxx	xxxx	xxxxx	1055	xxxx	xxxxx
Total Cap:	498	443	xxxxx	419	427	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
Volume/Cap:	0.06	0.00	0.03	0.00	0.00	0.00	xxxx	xxxx	xxxx	0.02	xxxx	xxxx
Level Of Service Module:												
2Way95thQ:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	0.1	xxxx	xxxxx
Control Del:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	8.5	xxxx	xxxxx
LOS by Move:	*	*	*	*	*	*	*	*	*	A	*	*
Movement:	LT -	LTR -	RT	LT -	LTR -	RT	LT -	LTR -	RT	LT -	LTR -	RT
Shared Cap.:	xxxx	527	xxxxx	xxxx	0	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
SharedQueue:	xxxxx	0.3	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Shrd ConDel:	xxxxx	12.5	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Shared LOS:	*	B	*	*	*	*	*	*	*	*	*	*
ApproachDel:		12.5			xxxxxx			xxxxxx			xxxxxx	
ApproachLOS:		B			*			*			*	

Note: Queue reported is the number of cars per lane.

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AM Cumulative (2011)
Walmart, Tehachapi
Linscott, Law and Greenspan, Engineers

Level Of Service Computation Report
2000 HCM Unsignalized Method (Future Volume Alternative)

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Intersection #15 Mill Street at Tehachapi Boulevard

****

Average Delay (sec/veh): 1.1 Worst Case Level Of Service: B[12.4]

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Street Name:	Mill Street						Tehachapi Boulevard					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L - T - R			L - T - R			L - T - R			L - T - R		
Control:	Stop Sign			Stop Sign			Uncontrolled			Uncontrolled		
Rights:	Include			Include			Include			Include		
Lanes:	1 0 0 0 1			0 0 0 0 0			0 0 1 1 0			0 1 1 0 0		
Volume Module:												
Base Vol:	17	0	30	0	0	0	0	338	21	31	252	0
Growth Adj:	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04
Initial Bse:	18	0	31	0	0	0	0	352	22	32	262	0
Added Vol:	3	0	7	0	0	0	0	81	2	4	95	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	21	0	38	0	0	0	0	433	24	36	357	0
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
PHF Volume:	23	0	42	0	0	0	0	481	26	40	397	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
FinalVolume:	23	0	42	0	0	0	0	481	26	40	397	0
Critical Gap Module:												
Critical Gp:	6.8	xxxx	6.9	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	4.1	xxxx	xxxxx
FollowUpTim:	3.5	xxxx	3.3	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	2.2	xxxx	xxxxx
Capacity Module:												
Cnflict Vol:	773	xxxx	254	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	507	xxxx	xxxxx
Potent Cap.:	340	xxxx	752	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	1068	xxxx	xxxxx
Move Cap.:	330	xxxx	752	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	1068	xxxx	xxxxx
Volume/Cap:	0.07	xxxx	0.06	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	0.04	xxxx	xxxx
Level Of Service Module:												
2Way95thQ:	0.2	xxxx	0.2	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	0.1	xxxx	xxxxx
Control Del:	16.7	xxxx	10.1	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	8.5	xxxx	xxxxx
LOS by Move:	C	*	B	*	*	*	*	*	*	A	*	*
Movement:	LT - LTR - RT			LT - LTR - RT			LT - LTR - RT			LT - LTR - RT		
Shared Cap.:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
SharedQueue:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	0.1	xxxx	xxxxx
Shrd ConDel:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	8.5	xxxx	xxxxx
Shared LOS:	*	*	*	*	*	*	*	*	*	A	*	*
ApproachDel:	12.4			xxxxxx			xxxxxx			xxxxxx		
ApproachLOS:	B			*			*			*		

****

Note: Queue reported is the number of cars per lane.

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AM Cumulative (2011)
Walmart, Tehachapi
Linscott, Law and Greenspan, Engineers

Level Of Service Computation Report
2000 HCM 4-Way Stop Method (Future Volume Alternative)

Intersection #16 Curry Street at Tehachapi Boulevard

Cycle (sec):	100	Critical Vol./Cap.(X):	0.440
Loss Time (sec):	0 (Y+R=4.0 sec)	Average Delay (sec/veh):	12.5
Optimal Cycle:	0	Level Of Service:	B

Street Name:	Curry Street						Tehachapi Boulevard					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Control:	Stop Sign			Stop Sign			Stop Sign			Stop Sign		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	0 1	0 1	0	0 0	1 0	0	0 1	0 1	0	0 1	0 1	0
Volume Module:												
Base Vol:	30	2	72	0	3	0	2	321	48	38	261	1
Growth Adj:	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04
Initial Bse:	31	2	75	0	3	0	2	334	50	40	271	1
Added Vol:	22	0	86	0	0	0	0	80	9	58	80	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	53	2	161	0	3	0	2	414	59	98	351	1
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
PHF Volume:	59	2	179	0	3	0	2	460	65	108	390	1
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	59	2	179	0	3	0	2	460	65	108	390	1
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	59	2	179	0	3	0	2	460	65	108	390	1
Saturation Flow Module:												
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	0.49	0.51	1.00	0.00	1.00	0.00	0.01	1.74	0.25	0.43	1.56	0.01
Final Sat.:	238	245	556	0	452	0	5	1059	153	250	923	3
Capacity Analysis Module:												
Vol/Sat:	0.25	0.01	0.32	xxxx	0.01	xxxx	0.44	0.43	0.43	0.43	0.42	0.42
Crit Moves:			****		****		****			****		
Delay/Veh:	10.7	10.7	11.4	0.0	10.3	0.0	12.9	12.7	12.4	13.2	12.8	12.6
Delay Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	10.7	10.7	11.4	0.0	10.3	0.0	12.9	12.7	12.4	13.2	12.8	12.6
LOS by Move:	B	B	B	*	B	*	B	B	B	B	B	B
ApproachDel:		11.2			10.3			12.7			12.9	
Delay Adj:		1.00			1.00			1.00			1.00	
ApprAdjDel:		11.2			10.3			12.7			12.9	
LOS by Appr:		B			B			B			B	
AllWayAvgQ:	0.1	0.4	0.4	0.0	0.0	0.0	0.7	0.7	0.7	0.7	0.7	0.7

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AM Cumulative (2011)
Walmart, Tehachapi
Linscott, Law and Greenspan, Engineers

Level Of Service Computation Report
2000 HCM Operations Method (Future Volume Alternative)

Intersection #17 Curry Street at Valley Boulevard (SR-202)

Cycle (sec):	90	Critical Vol./Cap.(X):	0.511
Loss Time (sec):	12 (Y+R=4.0 sec)	Average Delay (sec/veh):	23.0
Optimal Cycle:	90	Level Of Service:	C

Street Name:	Curry Street						Valley Boulevard (SR-202)					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L - T - R			L - T - R			L - T - R			L - T - R		
Control:	Permitted			Permitted			Protected			Protected		
Rights:	Include			Include			Include			Include		
Min. Green:	6	6	6	6	6	6	6	6	6	6	6	6
Lanes:	1 0	1 0	1	1 0	1 0	1	1 0	0 1	0	1 0	1 0	1
Volume Module:												
Base Vol:	59	83	176	41	42	26	41	346	22	73	217	24
Growth Adj:	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04
Initial Bse:	61	86	183	43	44	27	43	360	23	76	226	25
Added Vol:	50	83	2	1	38	28	34	34	33	1	56	3
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	111	169	185	44	82	55	77	394	56	77	282	28
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
PHF Volume:	124	188	206	48	91	61	85	438	62	85	313	31
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	124	188	206	48	91	61	85	438	62	85	313	31
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	124	188	206	48	91	61	85	438	62	85	313	31
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.70	1.00	0.85	0.52	1.00	0.85	0.95	0.98	0.98	0.95	1.00	0.85
Lanes:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.88	0.12	1.00	1.00	1.00
Final Sat.:	1322	1900	1615	994	1900	1615	1805	1632	232	1805	1900	1615
Capacity Analysis Module:												
Vol/Sat:	0.09	0.10	0.13	0.05	0.05	0.04	0.05	0.27	0.27	0.05	0.16	0.02
Crit Moves:			****					****		****		
Green Time:	22.4	22.4	22.4	22.4	22.4	22.4	16.0	47.2	47.2	8.3	39.6	39.6
Volume/Cap:	0.38	0.40	0.51	0.20	0.19	0.15	0.27	0.51	0.51	0.51	0.37	0.04
Delay/Veh:	28.7	28.7	30.2	27.1	26.8	26.5	32.4	14.3	14.3	41.5	17.2	14.4
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	28.7	28.7	30.2	27.1	26.8	26.5	32.4	14.3	14.3	41.5	17.2	14.4
LOS by Move:	C	C	C	C	C	C	C	B	B	D	B	B
HCM2k95thQ:	6	9	11	2	4	3	4	17	17	6	11	1

Note: Queue reported is the number of cars per lane.

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AM Cumulative (2011)
Walmart, Tehachapi
Linscott, Law and Greenspan, Engineers

Level Of Service Computation Report
2000 HCM Unsignalized Method (Future Volume Alternative)

Intersection #18 Curry Street/Summit Road at Highline Road

Average Delay (sec/veh): 7.2 Worst Case Level Of Service: C[18.6]

Street Name:	Curry Street/Summit Road						Highline Road					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Control:	Stop Sign			Stop Sign			Uncontrolled			Uncontrolled		
Rights:	Include			Include			Include			Include		
Lanes:	0 0	1! 0	0	0 1	0 0	1	0 0	1! 0	0	0 0	1! 0	0
Volume Module:												
Base Vol:	0	2	0	41	1	33	80	236	3	1	70	23
Growth Adj:	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04
Initial Bse:	0	2	0	43	1	34	83	245	3	1	73	24
Added Vol:	2	13	1	78	15	68	28	10	2	2	25	29
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	2	15	1	121	16	102	111	255	5	3	98	53
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
PHF Volume:	2	17	1	134	18	114	124	284	6	3	109	59
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
FinalVolume:	2	17	1	134	18	114	124	284	6	3	109	59
Critical Gap Module:												
Critical Gp:	7.1	6.5	6.2	7.1	6.5	6.2	4.1	xxxx	xxxxx	4.1	xxxx	xxxxx
FollowUpTim:	3.5	4.0	3.3	3.5	4.0	3.3	2.2	xxxx	xxxxx	2.2	xxxx	xxxxx
Capacity Module:												
Cnflict Vol:	744	708	287	688	681	138	167	xxxx	xxxxx	290	xxxx	xxxxx
Potent Cap.:	333	362	757	363	375	916	1423	xxxx	xxxxx	1284	xxxx	xxxxx
Move Cap.:	260	328	757	324	339	916	1423	xxxx	xxxxx	1284	xxxx	xxxxx
Volume/Cap:	0.01	0.05	0.00	0.41	0.05	0.12	0.09	xxxx	xxxx	0.00	xxxx	xxxx
Level Of Service Module:												
2Way95thQ:	xxxx	xxxx	xxxxx	xxxx	xxxx	0.4	0.3	xxxx	xxxxx	0.0	xxxx	xxxxx
Control Del:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	9.5	7.8	xxxx	xxxxx	7.8	xxxx	xxxxx
LOS by Move:	*	*	*	*	*	A	A	*	*	A	*	*
Movement:	LT -	LTR -	RT	LT -	LTR -	RT	LT -	LTR -	RT	LT -	LTR -	RT
Shared Cap.:	xxxx	328	xxxxx	325	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
SharedQueue:	xxxxx	0.2	xxxxx	2.4	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Shrd ConDel:	xxxxx	16.7	xxxxx	25.4	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Shared LOS:	*	C	*	D	*	*	*	*	*	*	*	*
ApproachDel:		16.7			18.6			xxxxxx			xxxxxx	
ApproachLOS:		C			C			*			*	

Note: Queue reported is the number of cars per lane.

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AM Cumulative (2011)
Walmart, Tehachapi
Linscott, Law and Greenspan, Engineers

Level Of Service Computation Report
2000 HCM 4-Way Stop Method (Future Volume Alternative)

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Intersection #19 Green Street at Tehachapi Boulevard

****

Cycle (sec):	100	Critical Vol./Cap.(X):	0.566
Loss Time (sec):	0 (Y+R=4.0 sec)	Average Delay (sec/veh):	13.3
Optimal Cycle:	0	Level Of Service:	B

****

Street Name:	Green Street						Tehachapi Boulevard					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L - T - R			L - T - R			L - T - R			L - T - R		
Control:	Stop Sign			Stop Sign			Stop Sign			Stop Sign		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	0 0 0 0 0			0 1 0 0 1			0 1 0 1 0			0 1 0 1 0		
Volume Module:												
Base Vol:	0	0	0	43	12	56	83	294	23	7	148	48
Growth Adj:	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04
Initial Bse:	0	0	0	45	12	58	86	306	24	7	154	50
Added Vol:	0	0	0	30	10	114	145	19	0	0	22	74
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	0	0	0	75	22	172	231	325	24	7	176	124
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
PHF Volume:	0	0	0	83	25	191	257	361	27	8	195	138
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	0	0	0	83	25	191	257	361	27	8	195	138
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	0	0	0	83	25	191	257	361	27	8	195	138
Saturation Flow Module:												
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	0.00	0.00	0.00	0.77	0.23	1.00	0.80	1.12	0.08	0.05	1.14	0.81
Final Sat.:	0	0	0	374	113	571	454	679	51	27	652	497
Capacity Analysis Module:												
Vol/Sat:	xxxx	xxxx	xxxx	0.22	0.22	0.34	0.57	0.53	0.52	0.30	0.30	0.28
Crit Moves:						****	****			****		
Delay/Veh:	0.0	0.0	0.0	11.6	11.6	11.5	16.5	14.8	14.4	11.5	11.3	10.4
Delay Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	0.0	0.0	0.0	11.6	11.6	11.5	16.5	14.8	14.4	11.5	11.3	10.4
LOS by Move:	*	*	*	B	B	B	C	B	B	B	B	B
ApproachDel:	xxxxxx			11.5			15.4			11.0		
Delay Adj:	xxxxx			1.00			1.00			1.00		
ApprAdjDel:	xxxxxx			11.5			15.4			11.0		
LOS by Appr:	*			B			C			B		
AllWayAvgQ:	0.0	0.0	0.0	0.3	0.3	0.4	1.2	1.0	1.0	0.4	0.4	0.4

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PM Cumulative (2011)
Walmart, Tehachapi
Linscott, Law and Greenspan, Engineers

Level Of Service Computation Report
2000 HCM Operations Method (Future Volume Alternative)

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Intersection #1 Woodford Tehachapi Road at Valley Boulevard (SR-202)

****

Cycle (sec):	90	Critical Vol./Cap.(X):	0.507
Loss Time (sec):	12 (Y+R=4.0 sec)	Average Delay (sec/veh):	17.9
Optimal Cycle:	90	Level Of Service:	B

****

Street Name:	Woodford Tehachapi Road						Valley Boulevard (SR-202)					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L - T - R			L - T - R			L - T - R			L - T - R		
Control:	Permitted			Permitted			Protected			Protected		
Rights:	Include			Include			Include			Include		
Min. Green:	6	6	6	6	6	6	6	6	6	6	6	6
Lanes:	0 0	1! 0	0	1 0	1 0	1	1 0	0 1	0	1 0	1 0	1
Volume Module:												
Base Vol:	13	29	31	89	24	64	90	387	6	29	406	71
Growth Adj:	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04
Initial Bse:	14	30	32	93	25	67	94	402	6	30	422	74
Added Vol:	0	0	1	17	0	0	0	86	0	1	88	19
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	14	30	33	110	25	67	94	488	6	31	510	93
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
PHF Volume:	15	34	37	122	28	74	104	543	7	35	567	103
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	15	34	37	122	28	74	104	543	7	35	567	103
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	15	34	37	122	28	74	104	543	7	35	567	103
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.90	0.90	0.90	0.77	1.00	0.85	0.95	1.00	1.00	0.95	1.00	0.85
Lanes:	0.18	0.39	0.43	1.00	1.00	1.00	1.00	0.99	0.01	1.00	1.00	1.00
Final Sat.:	300	669	737	1455	1900	1615	1805	1872	24	1805	1900	1615
Capacity Analysis Module:												
Vol/Sat:	0.05	0.05	0.05	0.08	0.01	0.05	0.06	0.29	0.29	0.02	0.30	0.06
Crit Moves:				****			****				****	
Green Time:	14.8	14.8	14.8	14.8	14.8	14.8	10.2	51.4	51.4	11.8	52.9	52.9
Volume/Cap:	0.30	0.30	0.30	0.51	0.09	0.28	0.51	0.51	0.51	0.15	0.51	0.11
Delay/Veh:	33.7	33.7	33.7	36.0	32.0	33.5	39.6	12.1	12.1	34.9	11.3	8.2
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	33.7	33.7	33.7	36.0	32.0	33.5	39.6	12.1	12.1	34.9	11.3	8.2
LOS by Move:	C	C	C	D	C	C	D	B	B	C	B	A
HCM2k95thQ:	5	5	5	7	1	4	7	17	17	2	17	3

****

Note: Queue reported is the number of cars per lane.

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PM Cumulative (2011)
Walmart, Tehachapi
Linscott, Law and Greenspan, Engineers

Level Of Service Computation Report
2000 HCM Unsignalized Method (Future Volume Alternative)

Intersection #2 South Street at Valley Boulevard (SR-202)

Average Delay (sec/veh): 2.3 Worst Case Level Of Service: C[16.9]

Street Name:	South Street						Valley Boulevard (SR-202)					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Stop Sign			Stop Sign			Uncontrolled			Uncontrolled		
Rights:	Include			Include			Include			Include		
Lanes:	1 0 0 0 1			0 0 0 0 0			0 0 1 0 1			1 0 1 0 0		
Volume Module:												
Base Vol:	56	0	86	0	0	0	0	448	69	100	480	0
Growth Adj:	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04
Initial Bse:	58	0	89	0	0	0	0	466	72	104	499	0
Added Vol:	0	0	0	0	0	0	0	105	0	0	107	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	58	0	89	0	0	0	0	571	72	104	606	0
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
PHF Volume:	65	0	99	0	0	0	0	634	80	116	674	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
FinalVolume:	65	0	99	0	0	0	0	634	80	116	674	0
Critical Gap Module:												
Critical Gp:	6.4	xxxx	6.2	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	4.1	xxxx	xxxxx
FollowUpTim:	3.5	xxxx	3.3	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	2.2	xxxx	xxxxx
Capacity Module:												
Cnflict Vol:	1539	xxxx	634	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	714	xxxx	xxxxx
Potent Cap.:	129	xxxx	482	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	895	xxxx	xxxxx
Move Cap.:	116	xxxx	482	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	895	xxxx	xxxxx
Total Cap:	293	263	xxxxx	174	229	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
Volume/Cap:	0.22	xxxx	0.21	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	0.13	xxxx	xxxx
Level Of Service Module:												
2Way95thQ:	0.8	xxxx	0.8	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	0.4	xxxx	xxxxx
Control Del:	20.7	xxxx	14.4	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	9.6	xxxx	xxxxx
LOS by Move:	C	*	B	*	*	*	*	*	*	A	*	*
Movement:	LT -	LTR -	RT	LT -	LTR -	RT	LT -	LTR -	RT	LT -	LTR -	RT
Shared Cap.:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
SharedQueue:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Shrd ConDel:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Shared LOS:	*	*	*	*	*	*	*	*	*	*	*	*
ApproachDel:		16.9			xxxxxx			xxxxxx			xxxxxx	
ApproachLOS:		C			*			*			*	

Note: Queue reported is the number of cars per lane.

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PM Cumulative (2011)
Walmart, Tehachapi
Linscott, Law and Greenspan, Engineers

Level Of Service Computation Report
2000 HCM Unsignalized Method (Future Volume Alternative)

Intersection #3 Santa Lucia Street at Valley Boulevard (SR-202)

Average Delay (sec/veh): 4.1 Worst Case Level Of Service: D[32.3]

Street Name:	Santa Lucia Street						Valley Boulevard (SR-202)					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Control:	Stop Sign			Stop Sign			Uncontrolled			Uncontrolled		
Rights:	Include			Include			Include			Include		
Lanes:	0 0	1! 0	0	0 0	1! 0	0	1 0	0 1	0	1 0	0 1	0
Volume Module:												
Base Vol:	3	23	31	39	17	61	73	468	1	38	471	76
Growth Adj:	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04
Initial Bse:	3	24	32	41	18	63	76	487	1	40	490	79
Added Vol:	0	0	0	8	0	0	0	105	0	0	107	8
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	3	24	32	49	18	63	76	592	1	40	597	87
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
PHF Volume:	3	27	36	54	20	70	84	657	1	44	663	97
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
FinalVolume:	3	27	36	54	20	70	84	657	1	44	663	97
Critical Gap Module:												
Critical Gp:	7.1	6.5	6.2	7.1	6.5	6.2	4.1	xxxx	xxxxx	4.1	xxxx	xxxxx
FollowUpTim:	3.5	4.0	3.3	3.5	4.0	3.3	2.2	xxxx	xxxxx	2.2	xxxx	xxxxx
Capacity Module:												
Cnflict Vol:	1671	1674	658	1657	1627	712	760	xxxx	xxxxx	659	xxxx	xxxxx
Potent Cap.:	77	96	468	79	103	436	861	xxxx	xxxxx	939	xxxx	xxxxx
Move Cap.:	48	83	468	49	89	436	861	xxxx	xxxxx	939	xxxx	xxxxx
Total Cap:	161	221	xxxxx	188	241	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
Volume/Cap:	0.02	0.12	0.08	0.29	0.08	0.16	0.10	xxxx	xxxx	0.05	xxxx	xxxx
Level Of Service Module:												
2Way95thQ:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	0.3	xxxx	xxxxx	0.1	xxxx	xxxxx
Control Del:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	9.6	xxxx	xxxxx	9.0	xxxx	xxxxx
LOS by Move:	*	*	*	*	*	*	A	*	*	A	*	*
Movement:	LT -	LTR -	RT	LT -	LTR -	RT	LT -	LTR -	RT	LT -	LTR -	RT
Shared Cap.:	xxxx	301	xxxxx	xxxx	272	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
SharedQueue:	xxxxx	0.8	xxxxx	xxxxx	2.9	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Shrd ConDel:	xxxxx	20.3	xxxxx	xxxxx	32.3	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Shared LOS:	*	C	*	*	D	*	*	*	*	*	*	*
ApproachDel:		20.3			32.3		xxxxxx			xxxxxx		
ApproachLOS:		C			D		*			*		

Note: Queue reported is the number of cars per lane.

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PM Cumulative (2011)
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Linscott, Law and Greenspan, Engineers

Level Of Service Computation Report
2000 HCM Operations Method (Future Volume Alternative)

Intersection #4 Golden Hills Boulevard at Valley Boulevard (SR-202)

Cycle (sec):	90	Critical Vol./Cap.(X):	0.729
Loss Time (sec):	12 (Y+R=4.0 sec)	Average Delay (sec/veh):	16.3
Optimal Cycle:	90	Level Of Service:	B

Street Name:	Golden Hills Boulevard						Valley Boulevard (SR-202)					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L - T - R			L - T - R			L - T - R			L - T - R		
Control:	Split Phase			Split Phase			Protected			Permitted		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	6	6	0	6	6	6	6	0	6	6
Lanes:	0 0 0 0 1			1 0 0 0 1			1 0 0 1 0			0 0 1 0 1		
Volume Module:												
Base Vol:	0	0	0	172	0	69	46	417	0	0	602	224
Growth Adj:	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04
Initial Bse:	0	0	0	179	0	72	48	434	0	0	626	233
Added Vol:	0	0	0	6	0	34	33	204	0	0	174	6
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	0	0	0	185	0	106	81	638	0	0	800	239
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
PHF Volume:	0	0	0	205	0	118	90	709	0	0	889	266
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	0	0	0	205	0	118	90	709	0	0	889	266
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	0	0	0	205	0	118	90	709	0	0	889	266
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	1.00	1.00	1.00	0.95	1.00	0.85	0.95	1.00	1.00	1.00	1.00	0.85
Lanes:	0.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	0.00	0.00	1.00	1.00
Final Sat.:	0	0	1900	1805	0	1615	1805	1900	0	0	1900	1615
Capacity Analysis Module:												
Vol/Sat:	0.00	0.00	0.00	0.11	0.00	0.07	0.05	0.37	0.00	0.00	0.47	0.16
Crit Moves:				****			****				****	
Green Time:	0.0	0.0	0.0	14.1	0.0	14.1	6.1	63.9	0.0	0.0	57.8	57.8
Volume/Cap:	0.00	0.00	0.00	0.73	0.00	0.47	0.73	0.52	0.00	0.00	0.73	0.26
Delay/Veh:	0.0	0.0	0.0	45.4	0.0	35.9	60.7	6.4	0.0	0.0	13.1	7.0
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	0.0	0.0	0.0	45.4	0.0	35.9	60.7	6.4	0.0	0.0	13.1	7.0
LOS by Move:	A	A	A	D	A	D	E	A	A	A	B	A
HCM2k95thQ:	0	0	0	13	0	7	8	17	0	0	30	6

Note: Queue reported is the number of cars per lane.

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PM Cumulative (2011)
Walmart, Tehachapi
Linscott, Law and Greenspan, Engineers

Level Of Service Computation Report
2000 HCM 4-Way Stop Method (Future Volume Alternative)

Intersection #5 Westwood Boulevard at Red Apple Avenue

Cycle (sec):	100	Critical Vol./Cap.(X):	1.198
Loss Time (sec):	0 (Y+R=4.0 sec)	Average Delay (sec/veh):	76.8
Optimal Cycle:	0	Level Of Service:	F

Street Name:	Westwood Boulevard						Red Apple Avenue					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Stop Sign			Stop Sign			Stop Sign			Stop Sign		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	0 0	1 0	1	1 0	1 0	0	0 0	0 0	0	1 0	0 0	1
Volume Module:												
Base Vol:	0	44	119	330	31	0	0	0	0	178	0	530
Growth Adj:	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04
Initial Bse:	0	46	124	343	32	0	0	0	0	185	0	551
Added Vol:	0	0	44	88	0	0	0	0	0	46	0	86
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	0	46	168	431	32	0	0	0	0	231	0	637
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
PHF Volume:	0	51	186	479	36	0	0	0	0	257	0	708
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	0	51	186	479	36	0	0	0	0	257	0	708
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	0	51	186	479	36	0	0	0	0	257	0	708
Saturation Flow Module:												
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	0.00	1.00	1.00	1.00	1.00	0.00	0.00	0.00	0.00	1.00	0.00	1.00
Final Sat.:	0	473	521	472	501	0	0	0	0	494	0	591
Capacity Analysis Module:												
Vol/Sat:	xxxx	0.11	0.36	1.01	0.07	xxxx	xxxx	xxxx	xxxx	0.52	xxxx	1.20
Crit Moves:			****	****								****
Delay/Veh:	0.0	11.2	13.4	72.6	10.4	0.0	0.0	0.0	0.0	17.6	0.0	126.0
Delay Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	0.0	11.2	13.4	72.6	10.4	0.0	0.0	0.0	0.0	17.6	0.0	126.0
LOS by Move:	*	B	B	F	B	*	*	*	*	C	*	F
ApproachDel:	12.9			68.2			xxxxxx			97.1		
Delay Adj:	1.00			1.00			xxxxx			1.00		
ApprAdjDel:	12.9			68.2			xxxxxx			97.1		
LOS by Appr:	B			F			*			F		
AllWayAvgQ:	0.0	0.1	0.5	8.2	0.1	0.0	0.0	0.0	0.0	1.0	0.0	19.2

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PM Cumulative (2011)
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Level Of Service Computation Report
2000 HCM Unsignalized Method (Future Volume Alternative)

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Intersection #6 Sierra Vista Drive at Valley Boulevard (SR-202)

****

Average Delay (sec/veh): 0.3 Worst Case Level Of Service: F[53.8]

****

Street Name:	Sierra Vista Drive						Valley Boulevard (SR-202)					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Control:	Stop Sign			Stop Sign			Uncontrolled			Uncontrolled		
Rights:	Include			Include			Include			Include		
Lanes:	0 0	0 0	0	0 0	1! 0	0	0 1	0 0	0	0 0	0 1	0
Volume Module:												
Base Vol:	0	0	0	5	0	4	4	595	0	0	838	7
Growth Adj:	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04
Initial Bse:	0	0	0	5	0	4	4	619	0	0	872	7
Added Vol:	0	0	0	0	0	0	0	221	0	0	187	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	0	0	0	5	0	4	4	840	0	0	1059	7
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
PHF Volume:	0	0	0	6	0	5	5	933	0	0	1176	8
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
FinalVolume:	0	0	0	6	0	5	5	933	0	0	1176	8
Critical Gap Module:												
Critical Gp:	xxxxx	xxxx	xxxxx	6.4	6.5	6.2	4.1	xxxx	xxxxx	xxxxx	xxxx	xxxxx
FollowUpTim:	xxxxx	xxxx	xxxxx	3.5	4.0	3.3	2.2	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Capacity Module:												
Cnflict Vol:	xxxx	xxxx	xxxxx	2123	2123	1180	1184	xxxx	xxxxx	xxxx	xxxx	xxxxx
Potent Cap.:	xxxx	xxxx	xxxxx	56	51	234	597	xxxx	xxxxx	xxxx	xxxx	xxxxx
Move Cap.:	xxxx	xxxx	xxxxx	56	50	234	597	xxxx	xxxxx	xxxx	xxxx	xxxxx
Volume/Cap:	xxxx	xxxx	xxxx	0.10	0.00	0.02	0.01	xxxx	xxxx	xxxx	xxxx	xxxx
Level Of Service Module:												
2Way95thQ:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	0.0	xxxx	xxxxx	xxxx	xxxx	xxxxx
Control Del:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	11.1	xxxx	xxxxx	xxxxx	xxxx	xxxxx
LOS by Move:	*	*	*	*	*	*	B	*	*	*	*	*
Movement:	LT -	LTR -	RT	LT -	LTR -	RT	LT -	LTR -	RT	LT -	LTR -	RT
Shared Cap.:	xxxx	xxxx	xxxxx	xxxx	84	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
SharedQueue:	xxxxx	xxxx	xxxxx	xxxxx	0.4	xxxxx	0.0	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Shrd ConDel:	xxxxx	xxxx	xxxxx	xxxxx	53.8	xxxxx	11.1	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Shared LOS:	*	*	*	*	F	*	B	*	*	*	*	*
ApproachDel:	xxxxxx				53.8		xxxxxx			xxxxxx		
ApproachLOS:		*			F			*			*	

****

Note: Queue reported is the number of cars per lane.

****

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PM Cumulative (2011)
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Linscott, Law and Greenspan, Engineers

Level Of Service Computation Report
2000 HCM Unsignalized Method (Future Volume Alternative)

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Intersection #7 Tehachapi Boulevard at SR-58 Eastbound Ramps

****

Average Delay (sec/veh): 11.8 Worst Case Level Of Service: E[39.9]

****

Street Name:	Tehachapi Boulevard						SR-58 Eastbound Ramps					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Uncontrolled			Uncontrolled			Stop Sign			Stop Sign		
Rights:	Include			Include			Include			Include		
Lanes:	0 0 0 1 0			0 1 0 0 0			0 1 0 0 1			0 0 0 0 0		
Volume Module:												
Base Vol:	0	211	165	1	392	0	0	2	312	0	0	0
Growth Adj:	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04
Initial Bse:	0	219	172	1	408	0	0	2	324	0	0	0
Added Vol:	0	89	67	0	72	0	0	0	104	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	0	308	239	1	480	0	0	2	428	0	0	0
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
PHF Volume:	0	343	265	1	533	0	0	2	476	0	0	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
FinalVolume:	0	343	265	1	533	0	0	2	476	0	0	0
Critical Gap Module:												
Critical Gp:	xxxxx	xxxx	xxxxx	4.1	xxxx	xxxxx	6.4	6.5	6.2	xxxxx	xxxx	xxxxx
FollowUpTim:	xxxxx	xxxx	xxxxx	2.2	xxxx	xxxxx	3.5	4.0	3.3	xxxxx	xxxx	xxxxx
Capacity Module:												
Cnflict Vol:	xxxx	xxxx	xxxxx	608	xxxx	xxxxx	1011	1143	533	xxxx	xxxx	xxxxx
Potent Cap.:	xxxx	xxxx	xxxxx	980	xxxx	xxxxx	268	202	551	xxxx	xxxx	xxxxx
Move Cap.:	xxxx	xxxx	xxxxx	980	xxxx	xxxxx	268	202	551	xxxx	xxxx	xxxxx
Volume/Cap:	xxxx	xxxx	xxxx	0.00	xxxx	xxxx	0.00	0.01	0.86	xxxx	xxxx	xxxx
Level Of Service Module:												
2Way95thQ:	xxxx	xxxx	xxxxx	0.0	xxxx	xxxxx	xxxx	xxxx	9.5	xxxx	xxxx	xxxxx
Control Del:	xxxxx	xxxx	xxxxx	8.7	xxxx	xxxxx	xxxxx	xxxx	40.0	xxxxx	xxxx	xxxxx
LOS by Move:	*	*	*	A	*	*	*	*	E	*	*	*
Movement:	LT	LTR	RT	LT	LTR	RT	LT	LTR	RT	LT	LTR	RT
Shared Cap.:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	202	xxxx	xxxxx	xxxx	xxxx	xxxxx
SharedQueue:	xxxxx	xxxx	xxxxx	0.0	xxxx	xxxxx	0.0	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Shrd ConDel:	xxxxx	xxxx	xxxxx	8.7	xxxx	xxxxx	23.1	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Shared LOS:	*	*	*	A	*	*	C	*	*	*	*	*
ApproachDel:	xxxxxx			xxxxxx			39.9			xxxxxx		
ApproachLOS:	*			*			E			*		

****

Note: Queue reported is the number of cars per lane.

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PM Cumulative (2011)
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Level Of Service Computation Report
2000 HCM Operations Method (Future Volume Alternative)

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Intersection #8 Tehachapi Boulevard/Tucker Road at Red Apple Avenue/Tehachapi Bo

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Cycle (sec):	90	Critical Vol./Cap.(X):	0.777
Loss Time (sec):	16 (Y+R=4.0 sec)	Average Delay (sec/veh):	35.8
Optimal Cycle:	90	Level Of Service:	D

****

Street Name:	Tehachapi Boulevard/Tucker Road						Red Apple Avenue/Tehachapi Boulev					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L - T - R			L - T - R			L - T - R			L - T - R		
Control:	Protected			Protected			Protected			Protected		
Rights:	Include			Include			Include			Include		
Min. Green:	6	6	6	6	6	6	6	6	6	6	6	6
Lanes:	1 0 2 0 1			1 0 2 0 1			1 0 1 0 1			1 0 1 0 1		
Volume Module:												
Base Vol:	175	182	159	93	341	205	72	220	112	243	240	57
Growth Adj:	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04
Initial Bse:	182	189	165	97	355	213	75	229	116	253	250	59
Added Vol:	10	105	22	23	117	36	28	79	17	22	74	23
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	192	294	187	120	472	249	103	308	133	275	324	82
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
PHF Volume:	213	327	208	133	524	277	114	342	148	305	360	91
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	213	327	208	133	524	277	114	342	148	305	360	91
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	213	327	208	133	524	277	114	342	148	305	360	91
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.95	0.95	0.85	0.95	0.95	0.85	0.95	1.00	0.85	0.95	1.00	0.85
Lanes:	1.00	2.00	1.00	1.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Sat.:	1805	3610	1615	1805	3610	1615	1805	1900	1615	1805	1900	1615
Capacity Analysis Module:												
Vol/Sat:	0.12	0.09	0.13	0.07	0.15	0.17	0.06	0.18	0.09	0.17	0.19	0.06
Crit Moves:	****					****		****		****		
Green Time:	13.7	21.3	21.3	12.2	19.9	19.9	10.5	20.9	20.9	19.6	29.9	29.9
Volume/Cap:	0.78	0.38	0.54	0.54	0.66	0.78	0.54	0.78	0.40	0.78	0.57	0.17
Delay/Veh:	49.8	29.1	31.7	38.8	34.0	43.3	40.3	40.9	29.9	42.6	26.0	21.4
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	49.8	29.1	31.7	38.8	34.0	43.3	40.3	40.9	29.9	42.6	26.0	21.4
LOS by Move:	D	C	C	D	C	D	D	D	C	D	C	C
HCM2k95thQ:	15	8	11	8	15	17	8	20	8	18	16	4

****

Note: Queue reported is the number of cars per lane.

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PM Cumulative (2011)
Walmart, Tehachapi
Linscott, Law and Greenspan, Engineers

Level Of Service Computation Report
2000 HCM Unsignalized Method (Future Volume Alternative)

****
Intersection #9 Tucker Road at Conway Avenue/Walmart Project Driveway 2
****
Average Delay (sec/veh): 5.9 Worst Case Level Of Service: F[167.6]
****

Street Name:	Tucker Road						Conway Avenue/Walmart Project Dri					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Control:	Uncontrolled			Uncontrolled			Stop Sign			Stop Sign		
Rights:	Include			Include			Include			Include		
Lanes:	1 0	1 1	0	1 0	1 1	0	0 0	1! 0	0	0 0	1! 0	0
Volume Module:												
Base Vol:	22	659	0	0	869	52	44	1	29	0	0	0
Growth Adj:	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04
Initial Bse:	23	685	0	0	904	54	46	1	30	0	0	0
Added Vol:	0	242	0	0	262	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	23	927	0	0	1166	54	46	1	30	0	0	0
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
PHF Volume:	25	1030	0	0	1295	60	51	1	34	0	0	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
FinalVolume:	25	1030	0	0	1295	60	51	1	34	0	0	0
Critical Gap Module:												
Critical Gp:	4.1	xxxx	xxxxx	xxxxx	xxxx	xxxxx	6.8	6.5	6.9	7.5	6.5	6.9
FollowUpTim:	2.2	xxxx	xxxxx	xxxxx	xxxx	xxxxx	3.5	4.0	3.3	3.5	4.0	3.3
Capacity Module:												
Cnflict Vol:	1355	xxxx	xxxxx	xxxx	xxxx	xxxxx	1891	2407	678	1729	2437	515
Potent Cap.:	514	xxxx	xxxxx	xxxx	xxxx	xxxxx	63	34	400	58	32	510
Move Cap.:	514	xxxx	xxxxx	xxxx	xxxx	xxxxx	61	32	400	50	30	510
Volume/Cap:	0.05	xxxx	xxxx	xxxx	xxxx	xxxx	0.84	0.04	0.08	0.00	0.00	0.00
Level Of Service Module:												
2Way95thQ:	0.2	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
Control Del:	12.4	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
LOS by Move:	B	*	*	*	*	*	*	*	*	*	*	*
Movement:	LT -	LTR -	RT	LT -	LTR -	RT	LT -	LTR -	RT	LT -	LTR -	RT
Shared Cap.:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	89	xxxxx	xxxx	0	xxxxx
SharedQueue:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	5.4	xxxxx	xxxxx	xxxx	xxxxx
Shrd ConDel:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	168	xxxxx	xxxxx	xxxx	xxxxx
Shared LOS:	*	*	*	*	*	*	*	F	*	*	*	*
ApproachDel:	xxxxxx			xxxxxx			167.6			xxxxxx		
ApproachLOS:		*			*			F			*	

****
Note: Queue reported is the number of cars per lane.
****

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PM Cumulative (2011)
Walmart, Tehachapi
Linscott, Law and Greenspan, Engineers

Level Of Service Computation Report
2000 HCM Operations Method (Future Volume Alternative)

Intersection #10 Tucker Road at Valley Boulevard (SR-202)

Cycle (sec):	120	Critical Vol./Cap.(X):	0.984
Loss Time (sec):	16	Average Delay (sec/veh):	64.6
Optimal Cycle:	120	Level Of Service:	E

Street Name:	Tucker Road						Valley Boulevard (SR-202)					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L - T - R			L - T - R			L - T - R			L - T - R		
Control:	Protected			Protected			Protected			Protected		
Rights:	Include			Include			Include			Include		
Min. Green:	6	6	6	6	6	6	6	6	6	6	6	6
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	1 0	1 1	0	1 0	2 0	1	1 0	1 0	1	1 0	1 0	1
Volume Module:												
Base Vol:	184	214	147	180	234	282	293	248	85	130	241	136
Growth Adj:	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04
Initial Bse:	191	223	153	187	243	293	305	258	88	135	251	141
Added Vol:	29	44	14	99	66	118	129	46	45	21	36	80
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	220	267	167	286	309	411	434	304	133	156	287	221
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
PHF Volume:	245	296	185	318	344	457	482	338	148	174	318	246
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	245	296	185	318	344	457	482	338	148	174	318	246
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	245	296	185	318	344	457	482	338	148	174	318	246
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.95	0.89	0.89	0.95	0.95	0.85	0.95	1.00	0.85	0.95	1.00	0.85
Lanes:	1.00	1.23	0.77	1.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Sat.:	1805	2091	1309	1805	3610	1615	1805	1900	1615	1805	1900	1615
Capacity Analysis Module:												
Vol/Sat:	0.14	0.14	0.14	0.18	0.10	0.28	0.27	0.18	0.09	0.10	0.17	0.15
Crit Moves:	****					****	****				****	
Green Time:	16.5	22.7	22.7	28.3	34.5	34.5	32.5	34.4	34.4	18.6	20.4	20.4
Volume/Cap:	0.98	0.75	0.75	0.75	0.33	0.98	0.98	0.62	0.32	0.62	0.98	0.89
Delay/Veh:	104.1	50.7	50.7	49.7	33.9	80.1	80.0	39.4	34.0	51.6	95.3	77.5
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	104.1	50.7	50.7	49.7	33.9	80.1	80.0	39.4	34.0	51.6	95.3	77.5
LOS by Move:	F	D	D	D	C	F	E	D	C	D	F	E
HCM2k95thQ:	24	19	19	22	10	37	39	21	9	13	29	22

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PM Cumulative (2011)
Walmart, Tehachapi
Linscott, Law and Greenspan, Engineers

Level Of Service Computation Report
2000 HCM 4-Way Stop Method (Future Volume Alternative)

Intersection #11 Tucker Road at Highline Road

Cycle (sec):	100	Critical Vol./Cap.(X):	0.445
Loss Time (sec):	0 (Y+R=4.0 sec)	Average Delay (sec/veh):	11.1
Optimal Cycle:	0	Level Of Service:	B

Street Name:	Tucker Road						Highline Road					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L - T - R			L - T - R			L - T - R			L - T - R		
Control:	Stop Sign			Stop Sign			Stop Sign			Stop Sign		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	0 0	1! 0	0	0 0	1! 0	0	0 1	0 0	1	0 0	1! 0	0
Volume Module:												
Base Vol:	7	9	6	38	11	128	58	50	3	6	139	48
Growth Adj:	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04
Initial Bse:	7	9	6	40	11	133	60	52	3	6	145	50
Added Vol:	0	7	8	82	8	4	5	19	0	6	17	49
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	7	16	14	122	19	137	65	71	3	12	162	99
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
PHF Volume:	8	18	16	135	22	152	73	79	3	14	180	110
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	8	18	16	135	22	152	73	79	3	14	180	110
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	8	18	16	135	22	152	73	79	3	14	180	110
Saturation Flow Module:												
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	0.19	0.43	0.38	0.44	0.07	0.49	0.48	0.52	1.00	0.04	0.60	0.36
Final Sat.:	116	261	227	304	49	343	275	299	674	31	415	254
Capacity Analysis Module:												
Vol/Sat:	0.07	0.07	0.07	0.44	0.44	0.44	0.26	0.26	0.01	0.43	0.43	0.43
Crit Moves:		****		****			****				****	
Delay/Veh:	8.7	8.7	8.7	11.4	11.4	11.4	10.6	10.6	7.7	11.3	11.3	11.3
Delay Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	8.7	8.7	8.7	11.4	11.4	11.4	10.6	10.6	7.7	11.3	11.3	11.3
LOS by Move:	A	A	A	B	B	B	B	B	A	B	B	B
ApproachDel:		8.7			11.4			10.5			11.3	
Delay Adj:		1.00			1.00			1.00			1.00	
ApprAdjDel:		8.7			11.4			10.5			11.3	
LOS by Appr:		A			B			B			B	
AllWayAvgQ:	0.1	0.1	0.1	0.7	0.7	0.7	0.3	0.3	0.0	0.7	0.7	0.7

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PM Cumulative (2011)
Walmart, Tehachapi
Linscott, Law and Greenspan, Engineers

Level Of Service Computation Report
2000 HCM Unsignalized Method (Future Volume Alternative)

****

Intersection #12 Mountain View Avenue at Valley Boulevard (SR-202)

****

Average Delay (sec/veh): 2.7 Worst Case Level Of Service: C[23.8]

****

Street Name:	Mountain View Avenue						Valley Boulevard (SR-202)					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L - T - R			L - T - R			L - T - R			L - T - R		
Control:	Stop Sign			Stop Sign			Uncontrolled			Uncontrolled		
Rights:	Include			Include			Include			Include		
Lanes:	0 0 0 0 0			0 0 1! 0 0			1 0 1 0 0			0 0 1 0 1		
Volume Module:												
Base Vol:	0	0	0	17	0	103	68	434	0	0	398	17
Growth Adj:	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04
Initial Bse:	0	0	0	18	0	107	71	451	0	0	414	18
Added Vol:	0	0	0	6	0	2	1	159	0	0	139	3
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	0	0	0	24	0	109	72	610	0	0	553	21
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
PHF Volume:	0	0	0	26	0	121	80	678	0	0	614	23
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
FinalVolume:	0	0	0	26	0	121	80	678	0	0	614	23
Critical Gap Module:												
Critical Gp:	xxxxx	xxxx	xxxxx	6.4	6.5	6.2	4.1	xxxx	xxxxx	xxxxx	xxxx	xxxxx
FollowUpTim:	xxxxx	xxxx	xxxxx	3.5	4.0	3.3	2.2	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Capacity Module:												
Cnflict Vol:	xxxx	xxxx	xxxxx	1452	1452	614	637	xxxx	xxxxx	xxxx	xxxx	xxxxx
Potent Cap.:	xxxx	xxxx	xxxxx	145	132	495	956	xxxx	xxxxx	xxxx	xxxx	xxxxx
Move Cap.:	xxxx	xxxx	xxxxx	136	121	495	956	xxxx	xxxxx	xxxx	xxxx	xxxxx
Volume/Cap:	xxxx	xxxx	xxxx	0.19	0.00	0.24	0.08	xxxx	xxxx	xxxx	xxxx	xxxx
Level Of Service Module:												
2Way95thQ:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	0.3	xxxx	xxxxx	xxxx	xxxx	xxxxx
Control Del:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	9.1	xxxx	xxxxx	xxxxx	xxxx	xxxxx
LOS by Move:	*	*	*	*	*	*	A	*	*	*	*	*
Movement:	LT - LTR - RT			LT - LTR - RT			LT - LTR - RT			LT - LTR - RT		
Shared Cap.:	xxxx	xxxx	xxxxx	xxxx	337	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
SharedQueue:	xxxxx	xxxx	xxxxx	xxxxx	2.1	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Shrd ConDel:	xxxxx	xxxx	xxxxx	xxxxx	23.8	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Shared LOS:	*	*	*	*	C	*	*	*	*	*	*	*
ApproachDel:	xxxxxx				23.8		xxxxxx			xxxxxx		
ApproachLOS:		*			C			*			*	

****

Note: Queue reported is the number of cars per lane.

****

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PM Cumulative (2011)
Walmart, Tehachapi
Linscott, Law and Greenspan, Engineers

Level Of Service Computation Report
2000 HCM Unsignalized Method (Future Volume Alternative)

Intersection #13 Mountain View Avenue at Tehachapi Boulevard

Average Delay (sec/veh): 2.3 Worst Case Level Of Service: C[19.7]

Street Name:	Mountain View Avenue						Tehachapi Boulevard					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Control:	Stop Sign			Stop Sign			Uncontrolled			Uncontrolled		
Rights:	Include			Include			Include			Include		
Lanes:	0 1	0 0	1	0 0	1! 0	0	1 0	1 0	1	1 0	1 0	1
Volume Module:												
Base Vol:	52	1	34	11	4	15	15	461	41	20	497	7
Growth Adj:	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04
Initial Bse:	54	1	35	11	4	16	16	479	43	21	517	7
Added Vol:	6	0	15	0	0	0	0	121	8	28	112	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	60	1	50	11	4	16	16	600	51	49	629	7
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
PHF Volume:	67	1	56	13	5	17	17	667	56	54	699	8
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
FinalVolume:	67	1	56	13	5	17	17	667	56	54	699	8
Critical Gap Module:												
Critical Gp:	7.1	6.5	6.2	7.1	6.5	6.2	4.1	xxxx	xxxxx	4.1	xxxx	xxxxx
FollowUpTim:	3.5	4.0	3.3	3.5	4.0	3.3	2.2	xxxx	xxxxx	2.2	xxxx	xxxxx
Capacity Module:												
Cnflict Vol:	1524	1517	667	1566	1565	699	707	xxxx	xxxxx	723	xxxx	xxxxx
Potent Cap.:	98	120	462	91	112	443	901	xxxx	xxxxx	888	xxxx	xxxxx
Move Cap.:	85	111	462	75	104	443	901	xxxx	xxxxx	888	xxxx	xxxxx
Total Cap:	251	279	xxxxx	225	263	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
Volume/Cap:	0.27	0.00	0.12	0.06	0.02	0.04	0.02	xxxx	xxxx	0.06	xxxx	xxxx
Level Of Service Module:												
2Way95thQ:	xxxx	xxxx	0.4	xxxx	xxxx	xxxxx	0.1	xxxx	xxxxx	0.2	xxxx	xxxxx
Control Del:	xxxxx	xxxx	13.9	xxxxx	xxxx	xxxxx	9.1	xxxx	xxxxx	9.3	xxxx	xxxxx
LOS by Move:	*	*	B	*	*	*	A	*	*	A	*	*
Movement:	LT -	LTR -	RT	LT -	LTR -	RT	LT -	LTR -	RT	LT -	LTR -	RT
Shared Cap.:	252	xxxx	xxxxx	xxxx	306	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
SharedQueue:	1.1	xxxx	xxxxx	xxxxx	0.4	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Shrd ConDel:	24.5	xxxx	xxxxx	xxxxx	18.3	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Shared LOS:	C	*	*	*	C	*	*	*	*	*	*	*
ApproachDel:		19.7			18.3			xxxxxx			xxxxxx	
ApproachLOS:		C			C			*			*	

Note: Queue reported is the number of cars per lane.

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PM Cumulative (2011)
Walmart, Tehachapi
Linscott, Law and Greenspan, Engineers

Level Of Service Computation Report
2000 HCM Unsignalized Method (Future Volume Alternative)

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Intersection #14 Mulberry Street at Tehachapi Boulevard

****

Average Delay (sec/veh): 0.7 Worst Case Level Of Service: C[18.1]

****

Street Name:	Mulberry Street						Tehachapi Boulevard					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Control:	Stop Sign			Stop Sign			Uncontrolled			Uncontrolled		
Rights:	Include			Include			Include			Include		
Lanes:	0 0	1! 0	0	0 0	1! 0	0	1 0	1 0	1	1 0	1 0	1
Volume Module:												
Base Vol:	0	0	0	14	0	26	22	512	1	1	539	38
Growth Adj:	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04
Initial Bse:	0	0	0	15	0	27	23	532	1	1	561	40
Added Vol:	4	0	2	0	0	0	0	134	5	1	135	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	4	0	2	15	0	27	23	666	6	2	696	40
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
PHF Volume:	4	0	2	16	0	30	25	741	7	2	773	44
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
FinalVolume:	4	0	2	16	0	30	25	741	7	2	773	44
Critical Gap Module:												
Critical Gp:	7.1	6.5	6.2	7.1	6.5	6.2	4.1	xxxx	xxxxx	4.1	xxxx	xxxxx
FollowUpTim:	3.5	4.0	3.3	3.5	4.0	3.3	2.2	xxxx	xxxxx	2.2	xxxx	xxxxx
Capacity Module:												
Cnflict Vol:	1606	1613	741	1573	1575	773	817	xxxx	xxxxx	747	xxxx	xxxxx
Potent Cap.:	86	105	420	90	111	402	820	xxxx	xxxxx	870	xxxx	xxxxx
Move Cap.:	77	102	420	87	107	402	820	xxxx	xxxxx	870	xxxx	xxxxx
Total Cap:	242	271	xxxxx	267	285	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
Volume/Cap:	0.02	0.00	0.01	0.06	0.00	0.07	0.03	xxxx	xxxx	0.00	xxxx	xxxx
Level Of Service Module:												
2Way95thQ:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	0.1	xxxx	xxxxx	0.0	xxxx	xxxxx
Control Del:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	9.5	xxxx	xxxxx	9.1	xxxx	xxxxx
LOS by Move:	*	*	*	*	*	*	A	*	*	A	*	*
Movement:	LT -	LTR -	RT	LT -	LTR -	RT	LT -	LTR -	RT	LT -	LTR -	RT
Shared Cap.:	xxxx	282	xxxxx	xxxx	342	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
SharedQueue:	xxxxx	0.1	xxxxx	xxxxx	0.5	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Shrd ConDel:	xxxxx	18.1	xxxxx	xxxxx	17.2	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Shared LOS:	*	C	*	*	C	*	*	*	*	*	*	*
ApproachDel:		18.1			17.2			xxxxxx			xxxxxx	
ApproachLOS:		C			C			*			*	

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Note: Queue reported is the number of cars per lane.

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PM Cumulative (2011)
Walmart, Tehachapi
Linscott, Law and Greenspan, Engineers

Level Of Service Computation Report
2000 HCM Unsignalized Method (Future Volume Alternative)

Intersection #15 Mill Street at Tehachapi Boulevard

Average Delay (sec/veh): 1.5 Worst Case Level Of Service: C[15.8]

Street Name:	Mill Street									Tehachapi Boulevard								
Approach:	North Bound					South Bound				East Bound					West Bound			
Movement:	L	-	T	-	R	L	-	T	-	R	L	-	T	-	R	L	-	T	-	R
Control:	Stop Sign					Stop Sign					Uncontrolled					Uncontrolled				
Rights:	Include					Include					Include					Include				
Lanes:	1	0	0	0	1	0	0	0	0	0	0	0	1	1	0	0	1	1	0	0
Volume Module:																				
Base Vol:	40		0		33	0		0		0	0		311		30	24		384		0
Growth Adj:	1.04	1.04		1.04		1.04	1.04		1.04		1.04	1.04		1.04		1.04	1.04		1.04	
Initial Bse:	42		0		34	0		0		0	0		323		31	25		399		0
Added Vol:	6		0		6	0		0		0	0		117		6	10		115		0
PasserByVol:	0		0		0	0		0		0	0		0		0	0		0		0
Initial Fut:	48		0		40	0		0		0	0		440		37	35		514		0
User Adj:	1.00	1.00		1.00		1.00	1.00		1.00		1.00	1.00		1.00		1.00	1.00		1.00	
PHF Adj:	0.90	0.90		0.90		0.90	0.90		0.90		0.90	0.90		0.90		0.90	0.90		0.90	
PHF Volume:	53		0		45	0		0		0	0		489		41	39		572		0
Reduct Vol:	0		0		0	0		0		0	0		0		0	0		0		0
FinalVolume:	53		0		45	0		0		0	0		489		41	39		572		0
Critical Gap Module:																				
Critical Gp:	6.8	xxxx			6.9	xxxxx	xxxx		xxxxx		xxxxx	xxxx		xxxxx		4.1	xxxx		xxxxx	
FollowUpTim:	3.5	xxxx			3.3	xxxxx	xxxx		xxxxx		xxxxx	xxxx		xxxxx		2.2	xxxx		xxxxx	
Capacity Module:																				
Cnflict Vol:	873	xxxx			265	xxxx	xxxx		xxxxx		xxxx	xxxx		xxxxx		531	xxxx		xxxxx	
Potent Cap.:	293	xxxx			739	xxxx	xxxx		xxxxx		xxxx	xxxx		xxxxx		1047	xxxx		xxxxx	
Move Cap.:	285	xxxx			739	xxxx	xxxx		xxxxx		xxxx	xxxx		xxxxx		1047	xxxx		xxxxx	
Volume/Cap:	0.19	xxxx			0.06	xxxx	xxxx		xxxx		xxxx	xxxx		xxxx		0.04	xxxx		xxxx	
Level Of Service Module:																				
2Way95thQ:	0.7	xxxx			0.2	xxxx	xxxx		xxxxx		xxxx	xxxx		xxxxx		0.1	xxxx		xxxxx	
Control Del:	20.5	xxxx			10.2	xxxxx	xxxx		xxxxx		xxxxx	xxxx		xxxxx		8.6	xxxx		xxxxx	
LOS by Move:	C		*		B	*		*		*	*		*		*	A		*		*
Movement:	LT	-	LTR	-	RT	LT	-	LTR	-	RT	LT	-	LTR	-	RT	LT	-	LTR	-	RT
Shared Cap.:	xxxx	xxxx		xxxxx		xxxx	xxxx		xxxxx		xxxx	xxxx		xxxxx		xxxx	xxxx		xxxxx	
SharedQueue:	xxxxx	xxxx		xxxxx		xxxxx	xxxx		xxxxx		xxxxx	xxxx		xxxxx		0.1	xxxx		xxxxx	
Shrd ConDel:	xxxxx	xxxx		xxxxx		xxxxx	xxxx		xxxxx		xxxxx	xxxx		xxxxx		8.6	xxxx		xxxxx	
Shared LOS:	*		*		*	*		*		*	*		*		*	A		*		*
ApproachDel:			15.8					xxxxxx					xxxxxx					xxxxxx		
ApproachLOS:			C					*					*					*		

Note: Queue reported is the number of cars per lane.

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PM Cumulative (2011)
Walmart, Tehachapi
Linscott, Law and Greenspan, Engineers

Level Of Service Computation Report
2000 HCM 4-Way Stop Method (Future Volume Alternative)

Intersection #16 Curry Street at Tehachapi Boulevard

Cycle (sec):	100	Critical Vol./Cap.(X):	0.665
Loss Time (sec):	0 (Y+R=4.0 sec)	Average Delay (sec/veh):	16.4
Optimal Cycle:	0	Level Of Service:	C

Street Name:	Curry Street						Tehachapi Boulevard					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L - T - R			L - T - R			L - T - R			L - T - R		
Control:	Stop Sign			Stop Sign			Stop Sign			Stop Sign		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	0 1 0 1 0			0 0 1! 0 0			0 1 0 1 0			0 1 0 1 0		
Volume Module:												
Base Vol:	83	3	99	4	0	3	5	243	69	98	354	2
Growth Adj:	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04
Initial Bse:	86	3	103	4	0	3	5	253	72	102	368	2
Added Vol:	18	0	55	0	0	0	0	98	27	80	109	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	104	3	158	4	0	3	5	351	99	182	477	2
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
PHF Volume:	116	3	176	5	0	3	6	390	110	202	530	2
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	116	3	176	5	0	3	6	390	110	202	530	2
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	116	3	176	5	0	3	6	390	110	202	530	2
Saturation Flow Module:												
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	0.79	0.21	1.00	0.57	0.00	0.43	0.02	1.55	0.43	0.55	1.44	0.01
Final Sat.:	354	96	522	247	0	186	12	852	247	304	821	4
Capacity Analysis Module:												
Vol/Sat:	0.33	0.04	0.34	0.02	xxxx	0.02	0.47	0.46	0.44	0.67	0.65	0.64
Crit Moves:			****	****			****			****		
Delay/Veh:	12.9	12.9	12.3	10.8	0.0	10.8	14.5	14.1	13.5	20.7	19.3	18.7
Delay Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	12.9	12.9	12.3	10.8	0.0	10.8	14.5	14.1	13.5	20.7	19.3	18.7
LOS by Move:	B	B	B	B	*	B	B	B	B	C	C	C
ApproachDel:	12.5			10.8			14.0			19.7		
Delay Adj:	1.00			1.00			1.00			1.00		
ApprAdjDel:	12.5			10.8			14.0			19.7		
LOS by Appr:	B			B			B			C		
AllWayAvgQ:	0.3	0.4	0.4	0.0	0.0	0.0	0.8	0.7	0.7	1.8	1.6	1.6

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PM Cumulative (2011)
Walmart, Tehachapi
Linscott, Law and Greenspan, Engineers

Level Of Service Computation Report
2000 HCM Operations Method (Future Volume Alternative)

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Intersection #17 Curry Street at Valley Boulevard (SR-202)

****

Cycle (sec):	90	Critical Vol./Cap.(X):	0.553
Loss Time (sec):	12 (Y+R=4.0 sec)	Average Delay (sec/veh):	23.7
Optimal Cycle:	90	Level Of Service:	C

****

Street Name:	Curry Street						Valley Boulevard (SR-202)					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L - T - R			L - T - R			L - T - R			L - T - R		
Control:	Permitted			Permitted			Protected			Protected		
Rights:	Include			Include			Include			Include		
Min. Green:	6	6	6	6	6	6	6	6	6	6	6	6
Lanes:	1 0	1 0	1	1 0	1 0	1	1 0	0 1	0	1 0	1 0	1
Volume Module:												
Base Vol:	88	94	27	21	148	102	71	137	94	74	148	24
Growth Adj:	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04
Initial Bse:	92	98	28	22	154	106	74	142	98	77	154	25
Added Vol:	59	51	1	4	87	28	23	74	72	2	58	2
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	151	149	29	26	241	134	97	216	170	79	212	27
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
PHF Volume:	167	165	32	29	268	149	108	241	189	88	235	30
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	167	165	32	29	268	149	108	241	189	88	235	30
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	167	165	32	29	268	149	108	241	189	88	235	30
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.47	1.00	0.85	0.61	1.00	0.85	0.95	0.93	0.93	0.95	1.00	0.85
Lanes:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.56	0.44	1.00	1.00	1.00
Final Sat.:	885	1900	1615	1150	1900	1615	1805	995	780	1805	1900	1615
Capacity Analysis Module:												
Vol/Sat:	0.19	0.09	0.02	0.02	0.14	0.09	0.06	0.24	0.24	0.05	0.12	0.02
Crit Moves:	****							****		****		
Green Time:	30.7	30.7	30.7	30.7	30.7	30.7	16.5	39.4	39.4	7.9	30.7	30.7
Volume/Cap:	0.55	0.25	0.06	0.07	0.41	0.27	0.32	0.55	0.55	0.55	0.36	0.05
Delay/Veh:	26.3	21.6	20.0	20.1	23.1	21.8	32.5	19.7	19.7	43.5	22.6	19.9
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	26.3	21.6	20.0	20.1	23.1	21.8	32.5	19.7	19.7	43.5	22.6	19.9
LOS by Move:	C	C	B	C	C	C	C	B	B	D	C	B
HCM2k95thQ:	9	7	1	1	11	6	6	17	17	6	10	1

****

Note: Queue reported is the number of cars per lane.

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PM Cumulative (2011)
Walmart, Tehachapi
Linscott, Law and Greenspan, Engineers

Level Of Service Computation Report
2000 HCM Unsignalized Method (Future Volume Alternative)

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Intersection #18 Curry Street/Summit Road at Highline Road

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Average Delay (sec/veh): 5.6 Worst Case Level Of Service: C[16.7]

****

Street Name:	Curry Street/Summit Road						Highline Road					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Control:	Stop Sign			Stop Sign			Uncontrolled			Uncontrolled		
Rights:	Include			Include			Include			Include		
Lanes:	0 0	1! 0	0	0 1	0 0	1	0 0	1! 0	0	0 0	1! 0	0
Volume Module:												
Base Vol:	1	2	0	13	1	45	37	58	3	0	143	41
Growth Adj:	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04
Initial Bse:	1	2	0	14	1	47	38	60	3	0	149	43
Added Vol:	4	17	3	54	17	50	77	29	4	2	18	90
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	5	19	3	68	18	97	115	89	7	2	167	133
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
PHF Volume:	6	21	3	75	20	108	128	99	8	2	185	147
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
FinalVolume:	6	21	3	75	20	108	128	99	8	2	185	147
Critical Gap Module:												
Critical Gp:	7.1	6.5	6.2	7.1	6.5	6.2	4.1	xxxx	xxxxx	4.1	xxxx	xxxxx
FollowUpTim:	3.5	4.0	3.3	3.5	4.0	3.3	2.2	xxxx	xxxxx	2.2	xxxx	xxxxx
Capacity Module:												
Cnflict Vol:	687	697	103	635	627	259	333	xxxx	xxxxx	107	xxxx	xxxxx
Potent Cap.:	364	367	957	394	403	785	1238	xxxx	xxxxx	1496	xxxx	xxxxx
Move Cap.:	275	326	957	341	357	785	1238	xxxx	xxxxx	1496	xxxx	xxxxx
Volume/Cap:	0.02	0.07	0.00	0.22	0.06	0.14	0.10	xxxx	xxxx	0.00	xxxx	xxxx
Level Of Service Module:												
2Way95thQ:	xxxx	xxxx	xxxxx	xxxx	xxxx	0.5	0.3	xxxx	xxxxx	0.0	xxxx	xxxxx
Control Del:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	10.3	8.2	xxxx	xxxxx	7.4	xxxx	xxxxx
LOS by Move:	*	*	*	*	*	B	A	*	*	A	*	*
Movement:	LT -	LTR -	RT	LT -	LTR -	RT	LT -	LTR -	RT	LT -	LTR -	RT
Shared Cap.:	xxxx	339	xxxxx	344	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
SharedQueue:	xxxxx	0.3	xxxxx	1.1	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Shrd ConDel:	xxxxx	16.7	xxxxx	19.4	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Shared LOS:	*	C	*	C	*	*	*	*	*	*	*	*
ApproachDel:		16.7			14.6			xxxxxx			xxxxxx	
ApproachLOS:		C			B			*			*	

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Note: Queue reported is the number of cars per lane.

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PM Cumulative (2011)
Walmart, Tehachapi
Linscott, Law and Greenspan, Engineers

Level Of Service Computation Report
2000 HCM 4-Way Stop Method (Future Volume Alternative)

Intersection #19 Green Street at Tehachapi Boulevard

Cycle (sec):	100	Critical Vol./Cap.(X):	0.831
Loss Time (sec):	0 (Y+R=4.0 sec)	Average Delay (sec/veh):	26.7
Optimal Cycle:	0	Level Of Service:	D

Street Name:	Green Street						Tehachapi Boulevard					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L - T - R			L - T - R			L - T - R			L - T - R		
Control:	Stop Sign			Stop Sign			Stop Sign			Stop Sign		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	0 0	0 0	0	0 1	0 0	1	0 1	0 1	0	0 1	0 1	0
Volume Module:												
Base Vol:	0	0	0	51	41	225	158	307	74	42	224	37
Growth Adj:	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04
Initial Bse:	0	0	0	53	43	234	164	319	77	44	233	38
Added Vol:	0	0	0	62	25	151	115	37	0	0	35	46
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	0	0	0	115	68	385	279	356	77	44	268	84
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
PHF Volume:	0	0	0	128	75	428	310	396	86	49	298	94
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	0	0	0	128	75	428	310	396	86	49	298	94
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	0	0	0	128	75	428	310	396	86	49	298	94
Saturation Flow Module:												
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	0.00	0.00	0.00	0.63	0.37	1.00	0.78	1.00	0.22	0.22	1.35	0.43
Final Sat.:	0	0	0	288	170	530	373	504	110	100	630	205
Capacity Analysis Module:												
Vol/Sat:	xxxx	xxxx	xxxx	0.44	0.44	0.81	0.83	0.79	0.77	0.48	0.47	0.46
Crit Moves:						****	****			****		
Delay/Veh:	0.0	0.0	0.0	16.2	16.2	30.7	36.9	30.7	29.0	17.1	16.6	15.8
Delay Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	0.0	0.0	0.0	16.2	16.2	30.7	36.9	30.7	29.0	17.1	16.6	15.8
LOS by Move:	*	*	*	C	C	D	E	D	D	C	C	C
ApproachDel:	xxxxxx			26.0			33.0			16.5		
Delay Adj:	xxxxx			1.00			1.00			1.00		
ApprAdjDel:	xxxxxx			26.0			33.0			16.5		
LOS by Appr:	*			D			D			C		
AllWayAvgQ:	0.0	0.0	0.0	0.7	0.7	3.1	3.5	2.8	2.8	0.8	0.8	0.8

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APPENDIX D-II

YEAR 2011 CUMULATIVE PLUS PROJECT TRAFFIC CONDITIONS

AM Cumulative Plus Project (2011)
Walmart, Tehachapi
Linscott, Law and Greenspan, Engineers

Level Of Service Computation Report
2000 HCM Operations Method (Future Volume Alternative)

Intersection #1 Woodford Tehachapi Road at Valley Boulevard (SR-202)

Cycle (sec):	90	Critical Vol./Cap.(X):	0.411
Loss Time (sec):	12	Average Delay (sec/veh):	15.2
Optimal Cycle:	90	Level Of Service:	B

Street Name:	Woodford Tehachapi Road						Valley Boulevard (SR-202)					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Permitted			Permitted			Protected			Protected		
Rights:	Include			Include			Include			Include		
Min. Green:	6	6	6	6	6	6	6	6	6	6	6	6
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	0 0	1! 0	0	1 0	1 0	1	1 0	0 1	0	1 0	1 0	1
Volume Module:												
Base Vol:	2	12	13	67	14	66	24	364	6	11	274	31
Growth Adj:	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04
Initial Bse:	2	12	14	70	15	69	25	379	6	11	285	32
Added Vol:	0	0	0	20	0	0	0	90	0	1	87	18
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	2	12	14	90	15	69	25	469	6	12	372	50
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
PHF Volume:	2	14	15	100	16	76	28	521	7	14	413	56
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	2	14	15	100	16	76	28	521	7	14	413	56
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	2	14	15	100	16	76	28	521	7	14	413	56
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.92	0.92	0.92	0.74	1.00	0.85	0.95	1.00	1.00	0.95	1.00	0.85
Lanes:	0.07	0.44	0.49	1.00	1.00	1.00	1.00	0.99	0.01	1.00	1.00	1.00
Final Sat.:	130	780	845	1412	1900	1615	1805	1871	25	1805	1900	1615
Capacity Analysis Module:												
Vol/Sat:	0.02	0.02	0.02	0.07	0.01	0.05	0.02	0.28	0.28	0.01	0.22	0.03
Crit Moves:				****				****		****		
Green Time:	14.6	14.6	14.6	14.6	14.6	14.6	14.9	57.4	57.4	6.0	48.6	48.6
Volume/Cap:	0.11	0.11	0.11	0.44	0.05	0.29	0.09	0.44	0.44	0.11	0.40	0.06
Delay/Veh:	32.4	32.4	32.4	35.3	32.0	33.8	32.0	8.4	8.4	39.9	12.5	9.9
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	32.4	32.4	32.4	35.3	32.0	33.8	32.0	8.4	8.4	39.9	12.5	9.9
LOS by Move:	C	C	C	D	C	C	C	A	A	D	B	A
HCM2k95thQ:	2	2	2	6	1	4	1	14	14	1	13	2

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AM Cumulative Plus Project (2011)
Walmart, Tehachapi
Linscott, Law and Greenspan, Engineers

Level Of Service Computation Report
2000 HCM Unsignalized Method (Future Volume Alternative)

****

Intersection #2 South Street at Valley Boulevard (SR-202)

****

Average Delay (sec/veh): 0.7 Worst Case Level Of Service: B[13.2]

****

Street Name:	South Street						Valley Boulevard (SR-202)					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Control:	Stop Sign			Stop Sign			Uncontrolled			Uncontrolled		
Rights:	Include			Include			Include			Include		
Lanes:	1 0	0 0	1	0 0	0 0	0	0 0	1 0	1	1 0	1 0	0
Volume Module:												
Base Vol:	12	0	25	0	0	0	0	429	29	32	310	0
Growth Adj:	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04
Initial Bse:	12	0	26	0	0	0	0	446	30	33	322	0
Added Vol:	0	0	0	0	0	0	0	111	0	0	106	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	12	0	26	0	0	0	0	557	30	33	428	0
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
PHF Volume:	14	0	29	0	0	0	0	619	34	37	476	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
FinalVolume:	14	0	29	0	0	0	0	619	34	37	476	0
Critical Gap Module:												
Critical Gp:	6.4	xxxx	6.2	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	4.1	xxxx	xxxxx
FollowUpTim:	3.5	xxxx	3.3	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	2.2	xxxx	xxxxx
Capacity Module:												
Cnflict Vol:	1169	xxxx	619	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	653	xxxx	xxxxx
Potent Cap.:	215	xxxx	492	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	944	xxxx	xxxxx
Move Cap.:	209	xxxx	492	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	944	xxxx	xxxxx
Total Cap:	414	370	xxxxx	324	347	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
Volume/Cap:	0.03	xxxx	0.06	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	0.04	xxxx	xxxx
Level Of Service Module:												
2Way95thQ:	0.1	xxxx	0.2	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	0.1	xxxx	xxxxx
Control Del:	14.0	xxxx	12.8	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	9.0	xxxx	xxxxx
LOS by Move:	B	*	B	*	*	*	*	*	*	A	*	*
Movement:	LT -	LTR -	RT	LT -	LTR -	RT	LT -	LTR -	RT	LT -	LTR -	RT
Shared Cap.:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
SharedQueue:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Shrd ConDel:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Shared LOS:	*	*	*	*	*	*	*	*	*	*	*	*
ApproachDel:		13.2		xxxxxx			xxxxxx			xxxxxx		
ApproachLOS:		B		*			*			*		

****

Note: Queue reported is the number of cars per lane.

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AM Cumulative Plus Project (2011)
Walmart, Tehachapi
Linscott, Law and Greenspan, Engineers

Level Of Service Computation Report
2000 HCM Unsignalized Method (Future Volume Alternative)

Intersection #3 Santa Lucia Street at Valley Boulevard (SR-202)

Average Delay (sec/veh): 1.3 Worst Case Level Of Service: C[15.7]

Street Name:	Santa Lucia Street						Valley Boulevard (SR-202)					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Control:	Stop Sign			Stop Sign			Uncontrolled			Uncontrolled		
Rights:	Include			Include			Include			Include		
Lanes:	0 0	1! 0	0	0 0	1! 0	0	1 0	0 1	0	1 0	0 1	0
Volume Module:												
Base Vol:	1	5	11	15	5	14	39	407	7	18	297	25
Growth Adj:	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04
Initial Bse:	1	5	11	16	5	15	41	423	7	19	309	26
Added Vol:	0	0	0	7	0	0	0	111	0	0	106	7
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	1	5	11	23	5	15	41	534	7	19	415	33
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
PHF Volume:	1	6	13	25	6	16	45	594	8	21	461	37
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
FinalVolume:	1	6	13	25	6	16	45	594	8	21	461	37
Critical Gap Module:												
Critical Gp:	7.1	6.5	6.2	7.1	6.5	6.2	4.1	xxxx	xxxxx	4.1	xxxx	xxxxx
FollowUpTim:	3.5	4.0	3.3	3.5	4.0	3.3	2.2	xxxx	xxxxx	2.2	xxxx	xxxxx
Capacity Module:												
Cnflict Vol:	1220	1227	598	1218	1213	479	498	xxxx	xxxxx	602	xxxx	xxxxx
Potent Cap.:	158	180	506	159	183	590	1077	xxxx	xxxxx	986	xxxx	xxxxx
Move Cap.:	143	169	506	144	172	590	1077	xxxx	xxxxx	986	xxxx	xxxxx
Total Cap:	323	337	xxxxx	318	340	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
Volume/Cap:	0.00	0.02	0.03	0.08	0.02	0.03	0.04	xxxx	xxxx	0.02	xxxx	xxxx
Level Of Service Module:												
2Way95thQ:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	0.1	xxxx	xxxxx	0.1	xxxx	xxxxx
Control Del:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	8.5	xxxx	xxxxx	8.7	xxxx	xxxxx
LOS by Move:	*	*	*	*	*	*	A	*	*	A	*	*
Movement:	LT -	LTR -	RT	LT -	LTR -	RT	LT -	LTR -	RT	LT -	LTR -	RT
Shared Cap.:	xxxx	429	xxxxx	xxxx	382	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
SharedQueue:	xxxxx	0.1	xxxxx	xxxxx	0.4	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Shrd ConDel:	xxxxx	13.8	xxxxx	xxxxx	15.7	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Shared LOS:	*	B	*	*	C	*	*	*	*	*	*	*
ApproachDel:		13.8			15.7		xxxxxx			xxxxxx		
ApproachLOS:		B			C			*			*	

Note: Queue reported is the number of cars per lane.

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AM Cumulative Plus Project (2011)
Walmart, Tehachapi
Linscott, Law and Greenspan, Engineers

Level Of Service Computation Report
2000 HCM Operations Method (Future Volume Alternative)

Intersection #4 Golden Hills Boulevard at Valley Boulevard (SR-202)

Cycle (sec):	90	Critical Vol./Cap.(X):	0.513
Loss Time (sec):	12	Average Delay (sec/veh):	14.7
Optimal Cycle:	90	Level Of Service:	B

Street Name:	Golden Hills Boulevard						Valley Boulevard (SR-202)					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Split Phase			Split Phase			Protected			Permitted		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	6	6	0	6	6	6	6	0	6	6
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	0 0	0	0 1	1 0	0	0 1	1 0	0	1 0	0 0	1	0 1
Volume Module:												
Base Vol:	0	0	0	161	0	41	25	403	0	0	327	75
Growth Adj:	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04
Initial Bse:	0	0	0	167	0	43	26	419	0	0	340	78
Added Vol:	0	0	0	8	0	35	28	189	0	0	179	6
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	0	0	0	175	0	78	54	608	0	0	519	84
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
PHF Volume:	0	0	0	195	0	86	60	676	0	0	577	93
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	0	0	0	195	0	86	60	676	0	0	577	93
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	0	0	0	195	0	86	60	676	0	0	577	93
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	1.00	1.00	1.00	0.95	1.00	0.85	0.95	1.00	1.00	1.00	1.00	0.85
Lanes:	0.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	0.00	0.00	1.00	1.00
Final Sat.:	0	0	1900	1805	0	1615	1805	1900	0	0	1900	1615
Capacity Analysis Module:												
Vol/Sat:	0.00	0.00	0.00	0.11	0.00	0.05	0.03	0.36	0.00	0.00	0.30	0.06
Crit Moves:				****			****				****	
Green Time:	0.0	0.0	0.0	18.9	0.0	18.9	6.0	59.1	0.0	0.0	53.1	53.1
Volume/Cap:	0.00	0.00	0.00	0.51	0.00	0.25	0.50	0.54	0.00	0.00	0.51	0.10
Delay/Veh:	0.0	0.0	0.0	32.7	0.0	30.1	43.8	8.7	0.0	0.0	11.3	8.1
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	0.0	0.0	0.0	32.7	0.0	30.1	43.8	8.7	0.0	0.0	11.3	8.1
LOS by Move:	A	A	A	C	A	C	D	A	A	A	B	A
HCM2k95thQ:	0	0	0	10	0	4	5	19	0	0	18	2

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AM Cumulative Plus Project (2011)
Walmart, Tehachapi
Linscott, Law and Greenspan, Engineers

Level Of Service Computation Report
2000 HCM 4-Way Stop Method (Future Volume Alternative)

Intersection #5 Westwood Boulevard at Red Apple Avenue

Cycle (sec):	100	Critical Vol./Cap.(X):	0.979
Loss Time (sec):	0	Average Delay (sec/veh):	33.5
Optimal Cycle:	0	Level Of Service:	D

Street Name:	Westwood Boulevard						Red Apple Avenue					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Stop Sign			Stop Sign			Stop Sign			Stop Sign		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	0 0	1 0	1	1 0	1 0	0	0 0	0 0	0	1 0	0 0	1
Volume Module:												
Base Vol:	0	5	143	381	15	0	0	0	0	48	0	139
Growth Adj:	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04
Initial Bse:	0	5	149	396	16	0	0	0	0	50	0	145
Added Vol:	0	0	46	101	0	0	0	0	0	49	0	92
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	0	5	195	497	16	0	0	0	0	99	0	237
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
PHF Volume:	0	6	216	552	17	0	0	0	0	110	0	263
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	0	6	216	552	17	0	0	0	0	110	0	263
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	0	6	216	552	17	0	0	0	0	110	0	263
Saturation Flow Module:												
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	0.00	1.00	1.00	1.00	1.00	0.00	0.00	0.00	0.00	1.00	0.00	1.00
Final Sat.:	0	550	618	564	598	0	0	0	0	497	0	595
Capacity Analysis Module:												
Vol/Sat:	xxxx	0.01	0.35	0.98	0.03	xxxx	xxxx	xxxx	xxxx	0.22	xxxx	0.44
Crit Moves:			****	****								****
Delay/Veh:	0.0	9.1	11.3	57.3	8.7	0.0	0.0	0.0	0.0	11.8	0.0	13.1
Delay Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	0.0	9.1	11.3	57.3	8.7	0.0	0.0	0.0	0.0	11.8	0.0	13.1
LOS by Move:	*	A	B	F	A	*	*	*	*	B	*	B
ApproachDel:		11.2			55.9			xxxxxx			12.7	
Delay Adj:		1.00			1.00			xxxxx			1.00	
ApprAdjDel:		11.2			55.9			xxxxxx			12.7	
LOS by Appr:		B			F			*			B	
AllWayAvgQ:	0.0	0.0	0.5	7.6	0.0	0.0	0.0	0.0	0.0	0.3	0.0	0.7

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AM Cumulative Plus Project (2011)
Walmart, Tehachapi
Linscott, Law and Greenspan, Engineers

Level Of Service Computation Report
2000 HCM Unsignalized Method (Future Volume Alternative)

Intersection #6 Sierra Vista Drive at Valley Boulevard (SR-202)

Average Delay (sec/veh): 0.0 Worst Case Level Of Service: B[13.1]

Street Name:	Sierra Vista Drive									Valley Boulevard (SR-202)								
Approach:	North Bound					South Bound				East Bound					West Bound			
Movement:	L	-	T	-	R	L	-	T	-	R	L	-	T	-	R	L	-	T	-	R
Control:	Stop Sign					Stop Sign					Uncontrolled					Uncontrolled				
Rights:	Include					Include					Include					Include				
Lanes:	0	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	1	0
Volume Module:																				
Base Vol:	0		0		0	0		0		5	0		540		0	0		406		3
Growth Adj:	1.04		1.04		1.04	1.04		1.04		1.04	1.04		1.04		1.04	1.04		1.04		1.04
Initial Bse:	0		0		0	0		0		5	0		562		0	0		422		3
Added Vol:	0		0		0	0		0		0	0		201		0	0		196		0
PasserByVol:	0		0		0	0		0		0	0		0		0	0		0		0
Initial Fut:	0		0		0	0		0		5	0		763		0	0		618		3
User Adj:	1.00		1.00		1.00	1.00		1.00		1.00	1.00		1.00		1.00	1.00		1.00		1.00
PHF Adj:	0.90		0.90		0.90	0.90		0.90		0.90	0.90		0.90		0.90	0.90		0.90		0.90
PHF Volume:	0		0		0	0		0		6	0		847		0	0		687		3
Reduct Vol:	0		0		0	0		0		0	0		0		0	0		0		0
FinalVolume:	0		0		0	0		0		6	0		847		0	0		687		3
Critical Gap Module:																				
Critical Gp:	xxxxx		xxxx		xxxxx	xxxxx		xxxx		6.2	xxxxx		xxxx		xxxxx	xxxxx		xxxx		xxxxx
FollowUpTim:	xxxxx		xxxx		xxxxx	xxxxx		xxxx		3.3	xxxxx		xxxx		xxxxx	xxxxx		xxxx		xxxxx
Capacity Module:																				
Cnflict Vol:	xxxx		xxxx		xxxxx	xxxx		xxxx		689	xxxx		xxxx		xxxxx	xxxx		xxxx		xxxxx
Potent Cap.:	xxxx		xxxx		xxxxx	xxxx		xxxx		449	xxxx		xxxx		xxxxx	xxxx		xxxx		xxxxx
Move Cap.:	xxxx		xxxx		xxxxx	xxxx		xxxx		449	xxxx		xxxx		xxxxx	xxxx		xxxx		xxxxx
Volume/Cap:	xxxx		xxxx		xxxx	xxxx		xxxx		0.01	xxxx		xxxx		xxxx	xxxx		xxxx		xxxx
Level Of Service Module:																				
2Way95thQ:	xxxx		xxxx		xxxxx	xxxx		xxxx		0.0	xxxx		xxxx		xxxxx	xxxx		xxxx		xxxxx
Control Del:	xxxxx		xxxx		xxxxx	xxxxx		xxxx		13.1	xxxxx		xxxx		xxxxx	xxxxx		xxxx		xxxxx
LOS by Move:	*		*		*	*		*		B	*		*		*	*		*		*
Movement:	LT	-	LTR	-	RT	LT	-	LTR	-	RT	LT	-	LTR	-	RT	LT	-	LTR	-	RT
Shared Cap.:	xxxx		xxxx		xxxxx	xxxx		xxxx		xxxxx	xxxx		xxxx		xxxxx	xxxx		xxxx		xxxxx
SharedQueue:	xxxxx		xxxx		xxxxx	xxxxx		xxxx		xxxxx	xxxxx		xxxx		xxxxx	xxxxx		xxxx		xxxxx
Shrd ConDel:	xxxxx		xxxx		xxxxx	xxxxx		xxxx		xxxxx	xxxxx		xxxx		xxxxx	xxxxx		xxxx		xxxxx
Shared LOS:	*		*		*	*		*		*	*		*		*	*		*		*
ApproachDel:	xxxxxx					13.1					xxxxxx					xxxxxx				
ApproachLOS:	*					B					*					*				

Note: Queue reported is the number of cars per lane.

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Level Of Service Computation Report
2000 HCM Unsignalized Method (Future Volume Alternative)

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Intersection #7 Tehachapi Boulevard at SR-58 Eastbound Ramps

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Average Delay (sec/veh): 1.5 Worst Case Level Of Service: B[10.8]

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Street Name:	Tehachapi Boulevard						SR-58 Eastbound Ramps					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Uncontrolled			Uncontrolled			Stop Sign			Stop Sign		
Rights:	Include			Include			Include			Include		
Lanes:	0 0 0 1 0			0 0 1 0 0			0 1 0 0 1			0 0 0 0 0		
Volume Module:												
Base Vol:	0	364	224	0	145	0	0	1	82	0	0	0
Growth Adj:	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04
Initial Bse:	0	379	233	0	151	0	0	1	85	0	0	0
Added Vol:	0	98	68	0	63	0	0	0	74	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	0	477	301	0	214	0	0	1	159	0	0	0
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
PHF Volume:	0	530	334	0	238	0	0	1	177	0	0	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
FinalVolume:	0	530	334	0	238	0	0	1	177	0	0	0
Critical Gap Module:												
Critical Gp:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	6.4	6.5	6.2	xxxxx	xxxx	xxxxx
FollowUpTim:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	3.5	4.0	3.3	xxxxx	xxxx	xxxxx
Capacity Module:												
Cnflict Vol:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	934	1101	238	xxxx	xxxx	xxxxx
Potent Cap.:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	297	214	806	xxxx	xxxx	xxxxx
Move Cap.:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	297	214	806	xxxx	xxxx	xxxxx
Volume/Cap:	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	0.00	0.01	0.22	xxxx	xxxx	xxxx
Level Of Service Module:												
2Way95thQ:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	0.8	xxxx	xxxx	xxxxx
Control Del:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	10.7	xxxxx	xxxx	xxxxx
LOS by Move:	*	*	*	*	*	*	*	*	B	*	*	*
Movement:	LT	LTR	RT	LT	LTR	RT	LT	LTR	RT	LT	LTR	RT
Shared Cap.:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	214	xxxx	xxxxx	xxxx	xxxx	xxxxx
SharedQueue:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	0.0	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Shrd ConDel:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	21.9	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Shared LOS:	*	*	*	*	*	*	C	*	*	*	*	*
ApproachDel:	xxxxxx			xxxxxx			10.8			xxxxxx		
ApproachLOS:	*			*			B			*		

****

Note: Queue reported is the number of cars per lane.

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Level Of Service Computation Report
2000 HCM Operations Method (Future Volume Alternative)

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Intersection #8 Tehachapi Boulevard/Tucker Road at Red Apple Avenue/Tehachapi Bo

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Cycle (sec):	90	Critical Vol./Cap.(X):	0.625
Loss Time (sec):	16	Average Delay (sec/veh):	31.0
Optimal Cycle:	90	Level Of Service:	C

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Street Name: Tehachapi Boulevard/Tucker Road Red Apple Avenue/Tehachapi Boulev

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Protected			Protected			Protected			Protected		
Rights:	Include			Include			Include			Include		
Min. Green:	6	6	6	6	6	6	6	6	6	6	6	6
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	1 0	2 0	1	1 0	2 0	1	1 0	1 0	1	1 0	1 0	1
Volume Module:												
Base Vol:	50	330	92	39	154	28	163	293	92	76	113	76
Growth Adj:	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04
Initial Bse:	52	343	96	41	160	29	170	305	96	79	118	79
Added Vol:	38	132	46	37	78	22	16	84	29	71	83	17
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	90	475	142	78	238	51	186	389	125	150	201	96
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
PHF Volume:	100	528	157	86	265	57	206	432	139	167	223	107
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	100	528	157	86	265	57	206	432	139	167	223	107
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	100	528	157	86	265	57	206	432	139	167	223	107
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.95	0.95	0.85	0.95	0.95	0.85	0.95	1.00	0.85	0.95	1.00	0.85
Lanes:	1.00	2.00	1.00	1.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Sat.:	1805	3610	1615	1805	3610	1615	1805	1900	1615	1805	1900	1615
Capacity Analysis Module:												
Vol/Sat:	0.06	0.15	0.10	0.05	0.07	0.04	0.11	0.23	0.09	0.09	0.12	0.07
Crit Moves:		****		****				****		****		
Green Time:	13.3	21.1	21.1	6.9	14.6	14.6	22.7	32.7	32.7	13.3	23.3	23.3
Volume/Cap:	0.37	0.62	0.42	0.62	0.45	0.22	0.45	0.62	0.24	0.62	0.45	0.25
Delay/Veh:	35.5	32.4	30.0	49.0	34.6	33.1	29.1	25.4	20.1	40.6	28.6	26.8
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	35.5	32.4	30.0	49.0	34.6	33.1	29.1	25.4	20.1	40.6	28.6	26.8
LOS by Move:	D	C	C	D	C	C	C	C	C	D	C	C
HCM2k95thQ:	6	15	8	7	8	3	10	19	5	11	11	5

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Level Of Service Computation Report
2000 HCM Unsignalized Method (Future Volume Alternative)

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Intersection #9 Tucker Road at Conway Avenue/Walmart Project Driveway 2

****

Average Delay (sec/veh): 9.4 Worst Case Level Of Service: F[216.8]

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Street Name:	Tucker Road						Conway Avenue/Walmart Project Dri					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Control:	Uncontrolled			Uncontrolled			Stop Sign			Stop Sign		
Rights:	Include			Include			Include			Include		
Lanes:	1 0	1 1	0	1 0	1 1	0	0 0	1! 0	0	0 0	1! 0	0
Volume Module:												
Base Vol:	22	570	0	3	764	43	52	0	31	0	0	0
Growth Adj:	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04
Initial Bse:	23	593	0	3	795	45	54	0	32	0	0	0
Added Vol:	0	293	4	4	209	0	0	0	0	3	0	2
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	23	886	4	7	1004	45	54	0	32	3	0	2
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
PHF Volume:	25	984	4	8	1115	50	60	0	36	3	0	2
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
FinalVolume:	25	984	4	8	1115	50	60	0	36	3	0	2
Critical Gap Module:												
Critical Gp:	4.1	xxxx	xxxxx	4.1	xxxx	xxxxx	7.5	6.5	6.9	7.5	6.5	6.9
FollowUpTim:	2.2	xxxx	xxxxx	2.2	xxxx	xxxxx	3.5	4.0	3.3	3.5	4.0	3.3
Capacity Module:												
Cnflict Vol:	1165	xxxx	xxxxx	989	xxxx	xxxxx	1699	2195	582	1611	2218	494
Potent Cap.:	607	xxxx	xxxxx	707	xxxx	xxxxx	61	46	461	71	44	526
Move Cap.:	607	xxxx	xxxxx	707	xxxx	xxxxx	58	43	461	63	42	526
Volume/Cap:	0.04	xxxx	xxxx	0.01	xxxx	xxxx	1.03	0.00	0.08	0.05	0.00	0.00
Level Of Service Module:												
2Way95thQ:	0.1	xxxx	xxxxx	0.0	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
Control Del:	11.2	xxxx	xxxxx	10.1	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
LOS by Move:	B	*	*	B	*	*	*	*	*	*	*	*
Movement:	LT -	LTR -	RT	LT -	LTR -	RT	LT -	LTR -	RT	LT -	LTR -	RT
Shared Cap.:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	87	xxxxx	xxxx	97	xxxxx
SharedQueue:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	6.6	xxxxx	xxxxx	0.2	xxxxx
Shrd ConDel:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	217	xxxxx	xxxxx	44.3	xxxxx
Shared LOS:	*	*	*	*	*	*	*	F	*	*	E	*
ApproachDel:	xxxxxx			xxxxxx			216.8			44.3		
ApproachLOS:	*			*			F			E		

****

Note: Queue reported is the number of cars per lane.

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2000 HCM Operations Method (Future Volume Alternative)

Intersection #10 Tucker Road at Valley Boulevard (SR-202)

Cycle (sec):	90	Critical Vol./Cap.(X):	0.993
Loss Time (sec):	16	Average Delay (sec/veh):	56.3
Optimal Cycle:	120	Level Of Service:	E

Street Name:	Tucker Road						Valley Boulevard (SR-202)					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Control:	Protected			Protected			Protected			Protected		
Rights:	Include			Include			Include			Include		
Min. Green:	6	6	6	6	6	6	6	6	6	6	6	6
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	1 0	1 1	0	1 0	2 0	1	1 0	1 0	1	1 0	1 0	1
Volume Module:												
Base Vol:	177	211	133	153	239	236	262	255	107	138	248	119
Growth Adj:	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04
Initial Bse:	184	219	138	159	249	245	272	265	111	144	258	124
Added Vol:	39	64	22	72	30	115	141	37	22	12	44	111
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	223	283	160	231	279	360	413	302	133	156	302	235
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
PHF Volume:	248	315	178	257	310	400	459	336	148	173	335	261
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	248	315	178	257	310	400	459	336	148	173	335	261
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	248	315	178	257	310	400	459	336	148	173	335	261
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.95	0.90	0.90	0.95	0.95	0.85	0.95	1.00	0.85	0.95	1.00	0.85
Lanes:	1.00	1.28	0.72	1.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Sat.:	1805	2181	1234	1805	3610	1615	1805	1900	1615	1805	1900	1615
Capacity Analysis Module:												
Vol/Sat:	0.14	0.14	0.14	0.14	0.09	0.25	0.25	0.18	0.09	0.10	0.18	0.16
Crit Moves:	****					****	****				****	
Green Time:	12.4	17.6	17.6	17.3	22.5	22.5	23.1	25.3	25.3	13.7	16.0	16.0
Volume/Cap:	0.99	0.74	0.74	0.74	0.34	0.99	0.99	0.63	0.33	0.63	0.99	0.91
Delay/Veh:	93.6	38.4	38.4	42.3	27.9	76.5	73.3	30.6	26.0	40.3	83.9	66.7
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	93.6	38.4	38.4	42.3	27.9	76.5	73.3	30.6	26.0	40.3	83.9	66.7
LOS by Move:	F	D	D	D	C	E	E	C	C	D	F	E
HCM2k95thQ:	21	16	16	16	8	29	32	17	7	11	26	20

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Level Of Service Computation Report
2000 HCM 4-Way Stop Method (Future Volume Alternative)

Intersection #11 Tucker Road at Highline Road

Cycle (sec):	100	Critical Vol./Cap.(X):	0.600
Loss Time (sec):	0	Average Delay (sec/veh):	12.5
Optimal Cycle:	0	Level Of Service:	B

Street Name:	Tucker Road						Highline Road					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Control:	Stop Sign			Stop Sign			Stop Sign			Stop Sign		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	0 0	1! 0	0	0 0	1! 0	0	0 1	0 0	1	0 0	1! 0	0
Volume Module:												
Base Vol:	2	4	5	44	3	21	89	249	0	2	69	32
Growth Adj:	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04
Initial Bse:	2	4	5	46	3	22	93	259	0	2	72	33
Added Vol:	0	8	4	27	8	5	4	11	0	7	16	74
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	2	12	9	73	11	27	97	270	0	9	88	107
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
PHF Volume:	2	14	10	81	12	30	107	300	0	10	98	119
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	2	14	10	81	12	30	107	300	0	10	98	119
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	2	14	10	81	12	30	107	300	0	10	98	119
Saturation Flow Module:												
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	0.09	0.52	0.39	0.66	0.10	0.24	0.26	0.74	1.00	0.04	0.43	0.53
Final Sat.:	52	304	230	399	61	147	179	500	805	34	325	397
Capacity Analysis Module:												
Vol/Sat:	0.04	0.04	0.04	0.20	0.20	0.20	0.60	0.60	0.00	0.30	0.30	0.30
Crit Moves:	****				****			****		****		
Delay/Veh:	8.6	8.6	8.6	9.7	9.7	9.7	15.2	15.2	0.0	9.5	9.5	9.5
Delay Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	8.6	8.6	8.6	9.7	9.7	9.7	15.2	15.2	0.0	9.5	9.5	9.5
LOS by Move:	A	A	A	A	A	A	C	C	*	A	A	A
ApproachDel:		8.6			9.7			15.2			9.5	
Delay Adj:		1.00			1.00			1.00			1.00	
ApprAdjDel:		8.6			9.7			15.2			9.5	
LOS by Appr:		A			A			C			A	
AllWayAvgQ:	0.0	0.0	0.0	0.2	0.2	0.2	1.4	1.4	0.0	0.4	0.4	0.4

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Level Of Service Computation Report
2000 HCM Unsignalized Method (Future Volume Alternative)

Intersection #12 Mountain View Avenue at Valley Boulevard (SR-202)

Average Delay (sec/veh): 0.8 Worst Case Level Of Service: B[14.7]

Street Name:	Mountain View Avenue						Valley Boulevard (SR-202)					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Control:	Stop Sign			Stop Sign			Uncontrolled			Uncontrolled		
Rights:	Include			Include			Include			Include		
Lanes:	0 0	0 0	0	0 0	1! 0	0	1 0	1 0	0	0 0	1 0	1
Volume Module:												
Base Vol:	0	0	0	6	0	25	32	355	0	0	285	13
Growth Adj:	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04
Initial Bse:	0	0	0	6	0	26	33	369	0	0	296	14
Added Vol:	0	0	0	2	0	1	2	130	0	0	168	5
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	0	0	0	8	0	27	35	499	0	0	464	19
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
PHF Volume:	0	0	0	9	0	30	39	555	0	0	516	21
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
FinalVolume:	0	0	0	9	0	30	39	555	0	0	516	21
Critical Gap Module:												
Critical Gp:	xxxxx	xxxx	xxxxx	6.4	6.5	6.2	4.1	xxxx	xxxxx	xxxxx	xxxx	xxxxx
FollowUpTim:	xxxxx	xxxx	xxxxx	3.5	4.0	3.3	2.2	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Capacity Module:												
Cnflict Vol:	xxxx	xxxx	xxxxx	1149	1149	516	537	xxxx	xxxxx	xxxx	xxxx	xxxxx
Potent Cap.:	xxxx	xxxx	xxxxx	221	200	563	1042	xxxx	xxxxx	xxxx	xxxx	xxxxx
Move Cap.:	xxxx	xxxx	xxxxx	215	193	563	1042	xxxx	xxxxx	xxxx	xxxx	xxxxx
Volume/Cap:	xxxx	xxxx	xxxx	0.04	0.00	0.05	0.04	xxxx	xxxx	xxxx	xxxx	xxxx
Level Of Service Module:												
2Way95thQ:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	0.1	xxxx	xxxxx	xxxx	xxxx	xxxxx
Control Del:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	8.6	xxxx	xxxxx	xxxxx	xxxx	xxxxx
LOS by Move:	*	*	*	*	*	*	A	*	*	*	*	*
Movement:	LT -	LTR -	RT	LT -	LTR -	RT	LT -	LTR -	RT	LT -	LTR -	RT
Shared Cap.:	xxxx	xxxx	xxxxx	xxxx	409	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
SharedQueue:	xxxxx	xxxx	xxxxx	xxxxx	0.3	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Shrd ConDel:	xxxxx	xxxx	xxxxx	xxxxx	14.7	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Shared LOS:	*	*	*	*	B	*	*	*	*	*	*	*
ApproachDel:	xxxxxx				14.7		xxxxxx			xxxxxx		
ApproachLOS:	*				B			*			*	

Note: Queue reported is the number of cars per lane.

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Level Of Service Computation Report
2000 HCM Unsignalized Method (Future Volume Alternative)

Intersection #13 Mountain View Avenue at Tehachapi Boulevard

Average Delay (sec/veh): 1.0 Worst Case Level Of Service: B[14.6]

Street Name:	Mountain View Avenue						Tehachapi Boulevard					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Control:	Stop Sign			Stop Sign			Uncontrolled			Uncontrolled		
Rights:	Include			Include			Include			Include		
Lanes:	0 1	0 0	1	1 0	0 0	0	1 0	1 0	1	1 0	1 0	1
Volume Module:												
Base Vol:	15	0	11	3	0	0	5	309	28	9	260	4
Growth Adj:	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04
Initial Bse:	16	0	11	3	0	0	5	321	29	9	270	4
Added Vol:	8	0	23	0	0	0	0	118	5	11	136	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	24	0	34	3	0	0	5	439	34	20	406	4
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
PHF Volume:	26	0	38	3	0	0	6	488	38	23	452	5
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
FinalVolume:	26	0	38	3	0	0	6	488	38	23	452	5
Critical Gap Module:												
Critical Gp:	7.1	6.5	6.2	7.1	xxxx	xxxxx	4.1	xxxx	xxxxx	4.1	xxxx	xxxxx
FollowUpTim:	3.5	4.0	3.3	3.5	xxxx	xxxxx	2.2	xxxx	xxxxx	2.2	xxxx	xxxxx
Capacity Module:												
Cnflict Vol:	999	1001	488	1035	xxxx	xxxxx	456	xxxx	xxxxx	526	xxxx	xxxxx
Potent Cap.:	224	245	584	212	xxxx	xxxxx	1115	xxxx	xxxxx	1051	xxxx	xxxxx
Move Cap.:	220	238	584	194	xxxx	xxxxx	1115	xxxx	xxxxx	1051	xxxx	xxxxx
Total Cap:	415	414	xxxxx	380	399	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
Volume/Cap:	0.06	0.00	0.07	0.01	xxxx	xxxx	0.01	xxxx	xxxx	0.02	xxxx	xxxx
Level Of Service Module:												
2Way95thQ:	xxxx	xxxx	0.2	0.0	xxxx	xxxxx	0.0	xxxx	xxxxx	0.1	xxxx	xxxxx
Control Del:	xxxxx	xxxx	11.6	14.6	xxxx	xxxxx	8.2	xxxx	xxxxx	8.5	xxxx	xxxxx
LOS by Move:	*	*	B	B	*	*	A	*	*	A	*	*
Movement:	LT -	LTR -	RT	LT -	LTR -	RT	LT -	LTR -	RT	LT -	LTR -	RT
Shared Cap.:	415	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
SharedQueue:	0.2	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Shrd ConDel:	14.3	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Shared LOS:	B	*	*	*	*	*	*	*	*	*	*	*
ApproachDel:	12.7			14.6			xxxxxx			xxxxxx		
ApproachLOS:	B			B			*			*		

Note: Queue reported is the number of cars per lane.

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Level Of Service Computation Report
2000 HCM Unsignalized Method (Future Volume Alternative)

Intersection #14 Mulberry Street at Tehachapi Boulevard

Average Delay (sec/veh): 0.8 Worst Case Level Of Service: B[13.0]

Street Name:	Mulberry Street						Tehachapi Boulevard					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Control:	Stop Sign			Stop Sign			Uncontrolled			Uncontrolled		
Rights:	Include			Include			Include			Include		
Lanes:	0 0	1! 0	0	0 0	1! 0	0	1 0	1 0	1	1 0	1 0	1
Volume Module:												
Base Vol:	21	0	16	0	0	0	0	336	16	18	210	1
Growth Adj:	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04
Initial Bse:	22	0	17	0	0	0	0	349	17	19	218	1
Added Vol:	5	0	1	0	0	0	0	135	4	2	146	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	27	0	18	0	0	0	0	484	21	21	364	1
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
PHF Volume:	30	0	20	0	0	0	0	538	23	23	405	1
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
FinalVolume:	30	0	20	0	0	0	0	538	23	23	405	1
Critical Gap Module:												
Critical Gp:	6.4	6.5	6.2	7.1	6.5	6.2	xxxxx	xxxx	xxxxx	4.1	xxxx	xxxxx
FollowUpTim:	3.5	4.0	3.3	3.5	4.0	3.3	xxxxx	xxxx	xxxxx	2.2	xxxx	xxxxx
Capacity Module:												
Cnflict Vol:	990	990	538	1010	1012	405	xxxx	xxxx	xxxxx	561	xxxx	xxxxx
Potent Cap.:	276	248	547	220	241	650	xxxx	xxxx	xxxxx	1020	xxxx	xxxxx
Move Cap.:	271	243	547	209	236	650	xxxx	xxxx	xxxxx	1020	xxxx	xxxxx
Total Cap:	471	420	xxxxx	392	404	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
Volume/Cap:	0.06	0.00	0.04	0.00	0.00	0.00	xxxx	xxxx	xxxx	0.02	xxxx	xxxx
Level Of Service Module:												
2Way95thQ:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	0.1	xxxx	xxxxx
Control Del:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	8.6	xxxx	xxxxx
LOS by Move:	*	*	*	*	*	*	*	*	*	A	*	*
Movement:	LT -	LTR -	RT	LT -	LTR -	RT	LT -	LTR -	RT	LT -	LTR -	RT
Shared Cap.:	xxxx	498	xxxxx	xxxx	0	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
SharedQueue:	xxxxx	0.3	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Shrd ConDel:	xxxxx	13.0	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Shared LOS:	*	B	*	*	*	*	*	*	*	*	*	*
ApproachDel:		13.0		xxxxxx			xxxxxx			xxxxxx		
ApproachLOS:		B		*			*			*		

Note: Queue reported is the number of cars per lane.

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Level Of Service Computation Report
2000 HCM Unsignalized Method (Future Volume Alternative)

Intersection #15 Mill Street at Tehachapi Boulevard

Average Delay (sec/veh): 1.2 Worst Case Level Of Service: B[13.4]

Street Name:	Mill Street						Tehachapi Boulevard					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Stop Sign			Stop Sign			Uncontrolled			Uncontrolled		
Rights:	Include			Include			Include			Include		
Lanes:	1 0 0 0 1			0 0 0 0 0			0 0 1 1 0			0 1 1 0 0		
Volume Module:												
Base Vol:	17	0	30	0	0	0	0	338	21	31	252	0
Growth Adj:	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04
Initial Bse:	18	0	31	0	0	0	0	352	22	32	262	0
Added Vol:	8	0	7	0	0	0	0	111	6	4	132	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	26	0	38	0	0	0	0	463	28	36	394	0
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
PHF Volume:	29	0	42	0	0	0	0	514	31	40	438	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
FinalVolume:	29	0	42	0	0	0	0	514	31	40	438	0
Critical Gap Module:												
Critical Gp:	6.8	xxxx	6.9	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	4.1	xxxx	xxxxx
FollowUpTim:	3.5	xxxx	3.3	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	2.2	xxxx	xxxxx
Capacity Module:												
Cnflict Vol:	829	xxxx	272	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	545	xxxx	xxxxx
Potent Cap.:	313	xxxx	731	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	1034	xxxx	xxxxx
Move Cap.:	304	xxxx	731	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	1034	xxxx	xxxxx
Volume/Cap:	0.09	xxxx	0.06	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	0.04	xxxx	xxxx
Level Of Service Module:												
2Way95thQ:	0.3	xxxx	0.2	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	0.1	xxxx	xxxxx
Control Del:	18.1	xxxx	10.2	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	8.6	xxxx	xxxxx
LOS by Move:	C	*	B	*	*	*	*	*	*	A	*	*
Movement:	LT	LTR	RT	LT	LTR	RT	LT	LTR	RT	LT	LTR	RT
Shared Cap.:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
SharedQueue:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	0.1	xxxx	xxxxx
Shrd ConDel:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	8.6	xxxx	xxxxx
Shared LOS:	*	*	*	*	*	*	*	*	*	A	*	*
ApproachDel:	13.4			xxxxxx			xxxxxx			xxxxxx		
ApproachLOS:	B			*			*			*		

Note: Queue reported is the number of cars per lane.

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Level Of Service Computation Report
2000 HCM 4-Way Stop Method (Future Volume Alternative)

Intersection #16 Curry Street at Tehachapi Boulevard

Cycle (sec):	100	Critical Vol./Cap.(X):	0.475
Loss Time (sec):	0	Average Delay (sec/veh):	13.2
Optimal Cycle:	0	Level Of Service:	B

Street Name:	Curry Street						Tehachapi Boulevard					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Control:	Stop Sign			Stop Sign			Stop Sign			Stop Sign		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	0 1	0 1	0	0 0	1 0	0	0 1	0 1	0	0 1	0 1	0
Volume Module:												
Base Vol:	30	2	72	0	3	0	2	321	48	38	261	1
Growth Adj:	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04
Initial Bse:	31	2	75	0	3	0	2	334	50	40	271	1
Added Vol:	27	0	86	0	0	0	0	107	13	58	112	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	58	2	161	0	3	0	2	441	63	98	383	1
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
PHF Volume:	65	2	179	0	3	0	2	490	70	108	426	1
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	65	2	179	0	3	0	2	490	70	108	426	1
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	65	2	179	0	3	0	2	490	70	108	426	1
Saturation Flow Module:												
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	0.53	0.47	1.00	0.00	1.00	0.00	0.01	1.74	0.25	0.40	1.59	0.01
Final Sat.:	249	224	546	0	444	0	5	1045	152	231	928	3
Capacity Analysis Module:												
Vol/Sat:	0.26	0.01	0.33	xxxx	0.01	xxxx	0.47	0.47	0.46	0.47	0.46	0.45
Crit Moves:			****		****		****			****		
Delay/Veh:	11.0	11.0	11.7	0.0	10.4	0.0	13.7	13.5	13.1	14.0	13.6	13.3
Delay Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	11.0	11.0	11.7	0.0	10.4	0.0	13.7	13.5	13.1	14.0	13.6	13.3
LOS by Move:	B	B	B	*	B	*	B	B	B	B	B	B
ApproachDel:	11.5			10.4			13.4			13.7		
Delay Adj:	1.00			1.00			1.00			1.00		
ApprAdjDel:	11.5			10.4			13.4			13.7		
LOS by Appr:	B			B			B			B		
AllWayAvgQ:	0.1	0.4	0.4	0.0	0.0	0.0	0.8	0.8	0.8	0.8	0.8	0.8

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Level Of Service Computation Report
2000 HCM Operations Method (Future Volume Alternative)

Intersection #17 Curry Street at Valley Boulevard (SR-202)

Cycle (sec):	90	Critical Vol./Cap.(X):	0.535
Loss Time (sec):	12	Average Delay (sec/veh):	23.2
Optimal Cycle:	90	Level Of Service:	C

Street Name:	Curry Street						Valley Boulevard (SR-202)					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Control:	Permitted			Permitted			Protected			Protected		
Rights:	Include			Include			Include			Include		
Min. Green:	6	6	6	6	6	6	6	6	6	6	6	6
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	1 0	1 0	1	1 0	1 0	1	1 0	0 1	0	1 0	1 0	1
Volume Module:												
Base Vol:	59	83	176	41	42	26	41	346	22	73	217	24
Growth Adj:	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04
Initial Bse:	61	86	183	43	44	27	43	360	23	76	226	25
Added Vol:	77	83	2	1	38	28	34	43	56	1	67	3
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	138	169	185	44	82	55	77	403	79	77	293	28
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
PHF Volume:	154	188	206	48	91	61	85	448	88	85	325	31
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	154	188	206	48	91	61	85	448	88	85	325	31
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	154	188	206	48	91	61	85	448	88	85	325	31
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.70	1.00	0.85	0.51	1.00	0.85	0.95	0.98	0.98	0.95	1.00	0.85
Lanes:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.84	0.16	1.00	1.00	1.00
Final Sat.:	1322	1900	1615	977	1900	1615	1805	1549	303	1805	1900	1615
Capacity Analysis Module:												
Vol/Sat:	0.12	0.10	0.13	0.05	0.05	0.04	0.05	0.29	0.29	0.05	0.17	0.02
Crit Moves:			****					****		****		
Green Time:	21.4	21.4	21.4	21.4	21.4	21.4	15.9	48.6	48.6	8.0	40.7	40.7
Volume/Cap:	0.49	0.42	0.53	0.21	0.20	0.16	0.27	0.53	0.53	0.53	0.38	0.04
Delay/Veh:	30.8	29.6	31.4	27.9	27.7	27.4	32.5	14.0	14.0	42.8	16.6	13.8
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	30.8	29.6	31.4	27.9	27.7	27.4	32.5	14.0	14.0	42.8	16.6	13.8
LOS by Move:	C	C	C	C	C	C	C	B	B	D	B	B
HCM2k95thQ:	8	9	11	3	4	3	4	18	18	6	12	1

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Level Of Service Computation Report
2000 HCM Unsignalized Method (Future Volume Alternative)

Intersection #18 Curry Street/Summit Road at Highline Road

Average Delay (sec/veh): 7.5 Worst Case Level Of Service: C[19.2]

Street Name:	Curry Street/Summit Road						Highline Road					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Control:	Stop Sign			Stop Sign			Uncontrolled			Uncontrolled		
Rights:	Include			Include			Include			Include		
Lanes:	0 0	1! 0	0	0 1	0 0	1	0 0	1! 0	0	0 0	1! 0	0
Volume Module:												
Base Vol:	0	2	0	41	1	33	80	236	3	1	70	23
Growth Adj:	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04
Initial Bse:	0	2	0	43	1	34	83	245	3	1	73	24
Added Vol:	4	15	1	80	17	68	28	10	4	2	25	31
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	4	17	1	123	18	102	111	255	7	3	98	55
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
PHF Volume:	4	19	1	136	20	114	124	284	8	3	109	61
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
FinalVolume:	4	19	1	136	20	114	124	284	8	3	109	61
Critical Gap Module:												
Critical Gp:	7.1	6.5	6.2	7.1	6.5	6.2	4.1	xxxx	xxxxx	4.1	xxxx	xxxxx
FollowUpTim:	3.5	4.0	3.3	3.5	4.0	3.3	2.2	xxxx	xxxxx	2.2	xxxx	xxxxx
Capacity Module:												
Cnflict Vol:	748	711	288	691	685	139	170	xxxx	xxxxx	292	xxxx	xxxxx
Potent Cap.:	331	360	756	362	373	914	1420	xxxx	xxxxx	1282	xxxx	xxxxx
Move Cap.:	257	326	756	320	338	914	1420	xxxx	xxxxx	1282	xxxx	xxxxx
Volume/Cap:	0.02	0.06	0.00	0.43	0.06	0.12	0.09	xxxx	xxxx	0.00	xxxx	xxxx
Level Of Service Module:												
2Way95thQ:	xxxx	xxxx	xxxxx	xxxx	xxxx	0.4	0.3	xxxx	xxxxx	0.0	xxxx	xxxxx
Control Del:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	9.5	7.8	xxxx	xxxxx	7.8	xxxx	xxxxx
LOS by Move:	*	*	*	*	*	A	A	*	*	A	*	*
Movement:	LT -	LTR -	RT	LT -	LTR -	RT	LT -	LTR -	RT	LT -	LTR -	RT
Shared Cap.:	xxxx	319	xxxxx	322	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
SharedQueue:	xxxxx	0.2	xxxxx	2.5	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Shrd ConDel:	xxxxx	17.2	xxxxx	26.3	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Shared LOS:	*	C	*	D	*	*	*	*	*	*	*	*
ApproachDel:		17.2			19.2			xxxxxx			xxxxxx	
ApproachLOS:		C			C			*			*	

Note: Queue reported is the number of cars per lane.

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AM Cumulative Plus Project (2011)
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Level Of Service Computation Report
2000 HCM 4-Way Stop Method (Future Volume Alternative)

****

Intersection #19 Green Street at Tehachapi Boulevard

****

Cycle (sec):	100	Critical Vol./Cap.(X):	0.600
Loss Time (sec):	0	Average Delay (sec/veh):	14.1
Optimal Cycle:	0	Level Of Service:	B

****

Street Name:	Green Street						Tehachapi Boulevard					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L - T - R			L - T - R			L - T - R			L - T - R		
Control:	Stop Sign			Stop Sign			Stop Sign			Stop Sign		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	0 0	0 0	0	0 1	0 0	1	0 1	0 1	0	0 1	0 1	0
Volume Module:												
Base Vol:	0	0	0	43	12	56	83	294	23	7	148	48
Growth Adj:	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04
Initial Bse:	0	0	0	45	12	58	86	306	24	7	154	50
Added Vol:	0	0	0	30	10	126	155	36	0	0	43	74
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	0	0	0	75	22	184	241	342	24	7	197	124
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
PHF Volume:	0	0	0	83	25	205	268	380	27	8	219	138
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	0	0	0	83	25	205	268	380	27	8	219	138
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	0	0	0	83	25	205	268	380	27	8	219	138
Saturation Flow Module:												
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	0.00	0.00	0.00	0.77	0.23	1.00	0.79	1.13	0.08	0.04	1.20	0.76
Final Sat.:	0	0	0	369	111	562	447	672	48	24	675	455
Capacity Analysis Module:												
Vol/Sat:	xxxx	xxxx	xxxx	0.22	0.22	0.36	0.60	0.57	0.56	0.33	0.32	0.30
Crit Moves:						****	****			****		
Delay/Veh:	0.0	0.0	0.0	11.8	11.8	12.0	17.7	15.9	15.5	12.0	11.8	10.9
Delay Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	0.0	0.0	0.0	11.8	11.8	12.0	17.7	15.9	15.5	12.0	11.8	10.9
LOS by Move:	*	*	*	B	B	B	C	C	C	B	B	B
ApproachDel:	xxxxxx			11.9			16.6			11.4		
Delay Adj:	xxxxx			1.00			1.00			1.00		
ApprAdjDel:	xxxxxx			11.9			16.6			11.4		
LOS by Appr:	*			B			C			B		
AllWayAvgQ:	0.0	0.0	0.0	0.3	0.3	0.5	1.4	1.2	1.2	0.5	0.4	0.4

****

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PM Cumulative Plus Project (2011)
Walmart, Tehachapi
Linscott, Law and Greenspan, Engineers

Level Of Service Computation Report
2000 HCM Operations Method (Future Volume Alternative)

****

Intersection #1 Woodford Tehachapi Road at Valley Boulevard (SR-202)

****

Cycle (sec):	90	Critical Vol./Cap.(X):	0.550
Loss Time (sec):	12	Average Delay (sec/veh):	17.9
Optimal Cycle:	90	Level Of Service:	B

****

Street Name:	Woodford Tehachapi Road						Valley Boulevard (SR-202)					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L - T - R			L - T - R			L - T - R			L - T - R		
Control:	Permitted			Permitted			Protected			Protected		
Rights:	Include			Include			Include			Include		
Min. Green:	6	6	6	6	6	6	6	6	6	6	6	6
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	0 0	1! 0	0	1 0	1 0	1	1 0	0 1	0	1 0	1 0	1
Volume Module:												
Base Vol:	13	29	31	89	24	64	90	387	6	29	406	71
Growth Adj:	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04
Initial Bse:	14	30	32	93	25	67	94	402	6	30	422	74
Added Vol:	0	0	1	27	0	0	0	136	0	1	138	29
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	14	30	33	120	25	67	94	538	6	31	560	103
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
PHF Volume:	15	34	37	133	28	74	104	598	7	35	622	114
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	15	34	37	133	28	74	104	598	7	35	622	114
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	15	34	37	133	28	74	104	598	7	35	622	114
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.90	0.90	0.90	0.77	1.00	0.85	0.95	1.00	1.00	0.95	1.00	0.85
Lanes:	0.18	0.39	0.43	1.00	1.00	1.00	1.00	0.99	0.01	1.00	1.00	1.00
Final Sat.:	300	669	737	1454	1900	1615	1805	1874	22	1805	1900	1615
Capacity Analysis Module:												
Vol/Sat:	0.05	0.05	0.05	0.09	0.01	0.05	0.06	0.32	0.32	0.02	0.33	0.07
Crit Moves:				****			****				****	
Green Time:	15.0	15.0	15.0	15.0	15.0	15.0	9.4	52.2	52.2	10.9	53.6	53.6
Volume/Cap:	0.30	0.30	0.30	0.55	0.09	0.28	0.55	0.55	0.55	0.16	0.55	0.12
Delay/Veh:	33.5	33.5	33.5	37.1	31.9	33.3	41.7	12.3	12.3	35.8	11.5	8.0
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	33.5	33.5	33.5	37.1	31.9	33.3	41.7	12.3	12.3	35.8	11.5	8.0
LOS by Move:	C	C	C	D	C	C	D	B	B	D	B	A
HCM2k95thQ:	5	5	5	8	1	4	7	19	19	2	19	3

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Level Of Service Computation Report
2000 HCM Unsignalized Method (Future Volume Alternative)

****

Intersection #2 South Street at Valley Boulevard (SR-202)

****

Average Delay (sec/veh): 2.3 Worst Case Level Of Service: C[18.3]

****

Street Name:	South Street						Valley Boulevard (SR-202)					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	- T	- R	L	- T	- R	L	- T	- R	L	- T	- R
Control:	Stop Sign			Stop Sign			Uncontrolled			Uncontrolled		
Rights:	Include			Include			Include			Include		
Lanes:	1 0 0 0 1			0 0 0 0 0			0 0 1 0 1			1 0 1 0 0		
Volume Module:												
Base Vol:	56	0	86	0	0	0	0	448	69	100	480	0
Growth Adj:	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04
Initial Bse:	58	0	89	0	0	0	0	466	72	104	499	0
Added Vol:	0	0	0	0	0	0	0	164	0	0	168	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	58	0	89	0	0	0	0	630	72	104	667	0
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
PHF Volume:	65	0	99	0	0	0	0	700	80	116	741	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
FinalVolume:	65	0	99	0	0	0	0	700	80	116	741	0
Critical Gap Module:												
Critical Gp:	6.4	xxxx	6.2	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	4.1	xxxx	xxxxx
FollowUpTim:	3.5	xxxx	3.3	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	2.2	xxxx	xxxxx
Capacity Module:												
Cnflict Vol:	1672	xxxx	700	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	780	xxxx	xxxxx
Potent Cap.:	106	xxxx	443	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	846	xxxx	xxxxx
Move Cap.:	95	xxxx	443	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	846	xxxx	xxxxx
Total Cap:	268	240	xxxxx	149	207	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
Volume/Cap:	0.24	xxxx	0.22	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	0.14	xxxx	xxxx
Level Of Service Module:												
2Way95thQ:	0.9	xxxx	0.9	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	0.5	xxxx	xxxxx
Control Del:	22.7	xxxx	15.5	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	9.9	xxxx	xxxxx
LOS by Move:	C	*	C	*	*	*	*	*	*	A	*	*
Movement:	LT -	LTR -	RT	LT -	LTR -	RT	LT -	LTR -	RT	LT -	LTR -	RT
Shared Cap.:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
SharedQueue:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Shrd ConDel:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Shared LOS:	*	*	*	*	*	*	*	*	*	*	*	*
ApproachDel:		18.3		xxxxxx			xxxxxx			xxxxxx		
ApproachLOS:		C			*			*			*	

****

Note: Queue reported is the number of cars per lane.

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Level Of Service Computation Report
2000 HCM Unsignalized Method (Future Volume Alternative)

****

Intersection #3 Santa Lucia Street at Valley Boulevard (SR-202)

****

Average Delay (sec/veh): 4.4 Worst Case Level Of Service: E[39.2]

****

Street Name:	Santa Lucia Street						Valley Boulevard (SR-202)					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Control:	Stop Sign			Stop Sign			Uncontrolled			Uncontrolled		
Rights:	Include			Include			Include			Include		
Lanes:	0 0	1! 0	0	0 0	1! 0	0	1 0	0 1	0	1 0	0 1	0
Volume Module:												
Base Vol:	3	23	31	39	17	61	73	468	1	38	471	76
Growth Adj:	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04
Initial Bse:	3	24	32	41	18	63	76	487	1	40	490	79
Added Vol:	0	0	0	8	0	0	0	164	0	0	168	8
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	3	24	32	49	18	63	76	651	1	40	658	87
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
PHF Volume:	3	27	36	54	20	70	84	723	1	44	731	97
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
FinalVolume:	3	27	36	54	20	70	84	723	1	44	731	97
Critical Gap Module:												
Critical Gp:	7.1	6.5	6.2	7.1	6.5	6.2	4.1	xxxx	xxxxx	4.1	xxxx	xxxxx
FollowUpTim:	3.5	4.0	3.3	3.5	4.0	3.3	2.2	xxxx	xxxxx	2.2	xxxx	xxxxx
Capacity Module:												
Cnflict Vol:	1804	1808	724	1791	1760	779	828	xxxx	xxxxx	724	xxxx	xxxxx
Potent Cap.:	62	80	429	64	85	399	812	xxxx	xxxxx	888	xxxx	xxxxx
Move Cap.:	36	68	429	36	73	399	812	xxxx	xxxxx	888	xxxx	xxxxx
Total Cap:	137	199	xxxxx	165	219	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
Volume/Cap:	0.03	0.13	0.08	0.33	0.09	0.18	0.10	xxxx	xxxx	0.05	xxxx	xxxx
Level Of Service Module:												
2Way95thQ:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	0.3	xxxx	xxxxx	0.2	xxxx	xxxxx
Control Del:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	9.9	xxxx	xxxxx	9.3	xxxx	xxxxx
LOS by Move:	*	*	*	*	*	*	A	*	*	A	*	*
Movement:	LT -	LTR -	RT	LT -	LTR -	RT	LT -	LTR -	RT	LT -	LTR -	RT
Shared Cap.:	xxxx	272	xxxxx	xxxx	243	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
SharedQueue:	xxxxx	0.9	xxxxx	xxxxx	3.4	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Shrd ConDel:	xxxxx	22.4	xxxxx	xxxxx	39.2	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Shared LOS:	*	C	*	*	E	*	*	*	*	*	*	*
ApproachDel:		22.4			39.2		xxxxxx			xxxxxx		
ApproachLOS:		C			E			*			*	

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Note: Queue reported is the number of cars per lane.

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Level Of Service Computation Report
2000 HCM Operations Method (Future Volume Alternative)

****

Intersection #4 Golden Hills Boulevard at Valley Boulevard (SR-202)

****

Cycle (sec):	90	Critical Vol./Cap.(X):	0.774
Loss Time (sec):	12	Average Delay (sec/veh):	17.1
Optimal Cycle:	90	Level Of Service:	B

****

Street Name:	Golden Hills Boulevard						Valley Boulevard (SR-202)					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Split Phase			Split Phase			Protected			Permitted		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	6	6	0	6	6	6	6	0	6	6
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	0 0	0	0 1	1 0	0	0 1	1 0	0	1 0	0 0	1 0	1
Volume Module:												
Base Vol:	0	0	0	172	0	69	46	417	0	0	602	224
Growth Adj:	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04
Initial Bse:	0	0	0	179	0	72	48	434	0	0	626	233
Added Vol:	0	0	0	12	0	34	33	264	0	0	235	13
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	0	0	0	191	0	106	81	698	0	0	861	246
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
PHF Volume:	0	0	0	212	0	118	90	775	0	0	957	273
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	0	0	0	212	0	118	90	775	0	0	957	273
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	0	0	0	212	0	118	90	775	0	0	957	273
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	1.00	1.00	1.00	0.95	1.00	0.85	0.95	1.00	1.00	1.00	1.00	0.85
Lanes:	0.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	0.00	0.00	1.00	1.00
Final Sat.:	0	0	1900	1805	0	1615	1805	1900	0	0	1900	1615
Capacity Analysis Module:												
Vol/Sat:	0.00	0.00	0.00	0.12	0.00	0.07	0.05	0.41	0.00	0.00	0.50	0.17
Crit Moves:				****			****				****	
Green Time:	0.0	0.0	0.0	13.6	0.0	13.6	6.0	64.4	0.0	0.0	58.4	58.4
Volume/Cap:	0.00	0.00	0.00	0.78	0.00	0.48	0.75	0.57	0.00	0.00	0.78	0.26
Delay/Veh:	0.0	0.0	0.0	49.8	0.0	36.4	63.5	6.7	0.0	0.0	14.4	6.8
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	0.0	0.0	0.0	49.8	0.0	36.4	63.5	6.7	0.0	0.0	14.4	6.8
LOS by Move:	A	A	A	D	A	D	E	A	A	A	B	A
HCM2k95thQ:	0	0	0	15	0	7	8	19	0	0	34	6

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Level Of Service Computation Report
2000 HCM 4-Way Stop Method (Future Volume Alternative)

Intersection #5 Westwood Boulevard at Red Apple Avenue

Cycle (sec):	100	Critical Vol./Cap.(X):	1.333
Loss Time (sec):	0	Average Delay (sec/veh):	115.4
Optimal Cycle:	0	Level Of Service:	F

Street Name:	Westwood Boulevard						Red Apple Avenue					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L - T - R			L - T - R			L - T - R			L - T - R		
Control:	Stop Sign			Stop Sign			Stop Sign			Stop Sign		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	0 0 1	0	1	1 0 1	0	0	0 0 0	0	0	1 0 0	0	1
Volume Module:												
Base Vol:	0	44	119	330	31	0	0	0	0	178	0	530
Growth Adj:	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04
Initial Bse:	0	46	124	343	32	0	0	0	0	185	0	551
Added Vol:	0	0	61	154	0	0	0	0	0	63	0	154
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	0	46	185	497	32	0	0	0	0	248	0	705
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
PHF Volume:	0	51	205	552	36	0	0	0	0	276	0	784
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	0	51	205	552	36	0	0	0	0	276	0	784
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	0	51	205	552	36	0	0	0	0	276	0	784
Saturation Flow Module:												
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	0.00	1.00	1.00	1.00	1.00	0.00	0.00	0.00	0.00	1.00	0.00	1.00
Final Sat.:	0	472	520	469	497	0	0	0	0	492	0	588
Capacity Analysis Module:												
Vol/Sat:	xxxx	0.11	0.39	1.18	0.07	xxxx	xxxx	xxxx	xxxx	0.56	xxxx	1.33
Crit Moves:			****	****								****
Delay/Veh:	0.0	11.2	14.0	125.5	10.4	0.0	0.0	0.0	0.0	18.9	0.0	180.3
Delay Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	0.0	11.2	14.0	125.5	10.4	0.0	0.0	0.0	0.0	18.9	0.0	180.3
LOS by Move:	*	B	B	F	B	*	*	*	*	C	*	F
ApproachDel:	13.5			118.5		xxxxxx				138.3		
Delay Adj:	1.00			1.00		xxxxx				1.00		
ApprAdjDel:	13.5			118.5		xxxxxx				138.3		
LOS by Appr:	B			F		*				F		
AllWayAvgQ:	0.0	0.1	0.6	15.0	0.1	0.0	0.0	0.0	0.0	1.2	0.0	28.0

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PM Cumulative Plus Project (2011)
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Level Of Service Computation Report
2000 HCM Unsignalized Method (Future Volume Alternative)

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Intersection #6 Sierra Vista Drive at Valley Boulevard (SR-202)

****

Average Delay (sec/veh): 0.3 Worst Case Level Of Service: F[66.3]

****

Street Name:	Sierra Vista Drive						Valley Boulevard (SR-202)					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	- T	- R	L	- T	- R	L	- T	- R	L	- T	- R
Control:	Stop Sign			Stop Sign			Uncontrolled			Uncontrolled		
Rights:	Include			Include			Include			Include		
Lanes:	0 0	0 0	0	0 0	1! 0	0	0 1	0 0	0	0 0	0 1	0
Volume Module:												
Base Vol:	0	0	0	5	0	4	4	595	0	0	838	7
Growth Adj:	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04
Initial Bse:	0	0	0	5	0	4	4	619	0	0	872	7
Added Vol:	0	0	0	0	0	0	0	287	0	0	254	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	0	0	0	5	0	4	4	906	0	0	1126	7
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
PHF Volume:	0	0	0	6	0	5	5	1006	0	0	1251	8
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
FinalVolume:	0	0	0	6	0	5	5	1006	0	0	1251	8
Critical Gap Module:												
Critical Gp:	xxxxx	xxxx	xxxxx	6.4	6.5	6.2	4.1	xxxx	xxxxx	xxxxx	xxxx	xxxxx
FollowUpTim:	xxxxx	xxxx	xxxxx	3.5	4.0	3.3	2.2	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Capacity Module:												
Cnflict Vol:	xxxx	xxxx	xxxxx	2270	2270	1255	1259	xxxx	xxxxx	xxxx	xxxx	xxxxx
Potent Cap.:	xxxx	xxxx	xxxxx	45	41	212	559	xxxx	xxxxx	xxxx	xxxx	xxxxx
Move Cap.:	xxxx	xxxx	xxxxx	45	41	212	559	xxxx	xxxxx	xxxx	xxxx	xxxxx
Volume/Cap:	xxxx	xxxx	xxxx	0.13	0.00	0.02	0.01	xxxx	xxxx	xxxx	xxxx	xxxx
Level Of Service Module:												
2Way95thQ:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	0.0	xxxx	xxxxx	xxxx	xxxx	xxxxx
Control Del:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	11.5	xxxx	xxxxx	xxxxx	xxxx	xxxxx
LOS by Move:	*	*	*	*	*	*	B	*	*	*	*	*
Movement:	LT -	LTR -	RT	LT -	LTR -	RT	LT -	LTR -	RT	LT -	LTR -	RT
Shared Cap.:	xxxx	xxxx	xxxxx	xxxx	69	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
SharedQueue:	xxxxx	xxxx	xxxxx	xxxxx	0.5	xxxxx	0.0	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Shrd ConDel:	xxxxx	xxxx	xxxxx	xxxxx	66.3	xxxxx	11.5	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Shared LOS:	*	*	*	*	F	*	B	*	*	*	*	*
ApproachDel:	xxxxxx			66.3			xxxxxx			xxxxxx		
ApproachLOS:	*			F			*			*		

****

Note: Queue reported is the number of cars per lane.

****

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Level Of Service Computation Report
2000 HCM Unsignalized Method (Future Volume Alternative)

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Intersection #7 Tehachapi Boulevard at SR-58 Eastbound Ramps

****

Average Delay (sec/veh): 14.4 Worst Case Level Of Service: E[49.1]

****

Street Name:	Tehachapi Boulevard						SR-58 Eastbound Ramps					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Control:	Uncontrolled			Uncontrolled			Stop Sign			Stop Sign		
Rights:	Include			Include			Include			Include		
Lanes:	0 0	0 1	0	0 1	0 0	0	0 1	0 0	1	0 0	0 0	0
Volume Module:												
Base Vol:	0	211	165	1	392	0	0	2	312	0	0	0
Growth Adj:	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04
Initial Bse:	0	219	172	1	408	0	0	2	324	0	0	0
Added Vol:	0	106	84	0	89	0	0	0	120	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	0	325	256	1	497	0	0	2	444	0	0	0
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
PHF Volume:	0	362	284	1	552	0	0	2	494	0	0	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
FinalVolume:	0	362	284	1	552	0	0	2	494	0	0	0
Critical Gap Module:												
Critical Gp:	xxxxx	xxxx	xxxxx	4.1	xxxx	xxxxx	6.4	6.5	6.2	xxxxx	xxxx	xxxxx
FollowUpTim:	xxxxx	xxxx	xxxxx	2.2	xxxx	xxxxx	3.5	4.0	3.3	xxxxx	xxxx	xxxxx
Capacity Module:												
Cnflict Vol:	xxxx	xxxx	xxxxx	646	xxxx	xxxxx	1058	1200	552	xxxx	xxxx	xxxxx
Potent Cap.:	xxxx	xxxx	xxxxx	949	xxxx	xxxxx	251	187	537	xxxx	xxxx	xxxxx
Move Cap.:	xxxx	xxxx	xxxxx	949	xxxx	xxxxx	251	187	537	xxxx	xxxx	xxxxx
Volume/Cap:	xxxx	xxxx	xxxx	0.00	xxxx	xxxx	0.00	0.01	0.92	xxxx	xxxx	xxxx
Level Of Service Module:												
2Way95thQ:	xxxx	xxxx	xxxxx	0.0	xxxx	xxxxx	xxxx	xxxx	11.2	xxxx	xxxx	xxxxx
Control Del:	xxxxx	xxxx	xxxxx	8.8	xxxx	xxxxx	xxxxx	xxxx	49.2	xxxxx	xxxx	xxxxx
LOS by Move:	*	*	*	A	*	*	*	*	E	*	*	*
Movement:	LT -	LTR -	RT	LT -	LTR -	RT	LT -	LTR -	RT	LT -	LTR -	RT
Shared Cap.:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	187	xxxx	xxxxx	xxxx	xxxx	xxxxx
SharedQueue:	xxxxx	xxxx	xxxxx	0.0	xxxx	xxxxx	0.0	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Shrd ConDel:	xxxxx	xxxx	xxxxx	8.8	xxxx	xxxxx	24.5	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Shared LOS:	*	*	*	A	*	*	C	*	*	*	*	*
ApproachDel:	xxxxxx			xxxxxx			49.1			xxxxxx		
ApproachLOS:	*			*			E			*		

****

Note: Queue reported is the number of cars per lane.

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Level Of Service Computation Report
2000 HCM Operations Method (Future Volume Alternative)

Intersection #8 Tehachapi Boulevard/Tucker Road at Red Apple Avenue/Tehachapi Bo

Cycle (sec):	90	Critical Vol./Cap.(X):	0.861
Loss Time (sec):	16	Average Delay (sec/veh):	40.4
Optimal Cycle:	97	Level Of Service:	D

Street Name:	Tehachapi Boulevard/Tucker Road						Red Apple Avenue/Tehachapi Boulev					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Control:	Protected			Protected			Protected			Protected		
Rights:	Include			Include			Include			Include		
Min. Green:	6	6	6	6	6	6	6	6	6	6	6	6
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	1 0	2 0	1	1 0	2 0	1	1 0	1 0	1	1 0	1 0	1
Volume Module:												
Base Vol:	175	182	159	93	341	205	72	220	112	243	240	57
Growth Adj:	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04
Initial Bse:	182	189	165	97	355	213	75	229	116	253	250	59
Added Vol:	60	139	46	29	144	36	28	116	63	49	109	23
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	242	328	211	126	499	249	103	345	179	302	359	82
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
PHF Volume:	269	365	235	140	554	277	114	383	199	335	398	91
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	269	365	235	140	554	277	114	383	199	335	398	91
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	269	365	235	140	554	277	114	383	199	335	398	91
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.95	0.95	0.85	0.95	0.95	0.85	0.95	1.00	0.85	0.95	1.00	0.85
Lanes:	1.00	2.00	1.00	1.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Sat.:	1805	3610	1615	1805	3610	1615	1805	1900	1615	1805	1900	1615
Capacity Analysis Module:												
Vol/Sat:	0.15	0.10	0.15	0.08	0.15	0.17	0.06	0.20	0.12	0.19	0.21	0.06
Crit Moves:	****					****		****		****		
Green Time:	15.6	21.9	21.9	11.6	17.9	17.9	9.8	21.1	21.1	19.4	30.7	30.7
Volume/Cap:	0.86	0.42	0.60	0.60	0.77	0.86	0.58	0.86	0.53	0.86	0.61	0.17
Delay/Veh:	57.0	29.0	32.7	41.2	39.2	55.1	42.6	48.6	31.5	51.4	26.5	20.8
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	57.0	29.0	32.7	41.2	39.2	55.1	42.6	48.6	31.5	51.4	26.5	20.8
LOS by Move:	E	C	C	D	D	E	D	D	C	D	C	C
HCM2k95thQ:	19	9	13	9	18	19	8	24	11	22	18	4

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Level Of Service Computation Report
2000 HCM Unsignalized Method (Future Volume Alternative)

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Intersection #9 Tucker Road at Conway Avenue/Walmart Project Driveway 2

****

Average Delay (sec/veh): 22.5 Worst Case Level Of Service: F[724.0]

****

Street Name:	Tucker Road						Conway Avenue/Walmart Project Dri					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Control:	Uncontrolled			Uncontrolled			Stop Sign			Stop Sign		
Rights:	Include			Include			Include			Include		
Lanes:	1 0	1 1	0	1 0	1 1	0	0 0	1! 0	0	0 0	1! 0	0
Volume Module:												
Base Vol:	22	659	0	0	869	52	44	1	29	0	0	0
Growth Adj:	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04
Initial Bse:	23	685	0	0	904	54	46	1	30	0	0	0
Added Vol:	0	383	8	8	405	0	0	0	0	8	0	6
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	23	1068	8	8	1309	54	46	1	30	8	0	6
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
PHF Volume:	25	1187	9	9	1454	60	51	1	34	9	0	7
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
FinalVolume:	25	1187	9	9	1454	60	51	1	34	9	0	7
Critical Gap Module:												
Critical Gp:	4.1	xxxx	xxxxx	4.1	xxxx	xxxxx	7.5	6.5	6.9	7.5	6.5	6.9
FollowUpTim:	2.2	xxxx	xxxxx	2.2	xxxx	xxxxx	3.5	4.0	3.3	3.5	4.0	3.3
Capacity Module:												
Cnflict Vol:	1514	xxxx	xxxxx	1196	xxxx	xxxxx	2146	2749	757	1988	2774	598
Potent Cap.:	447	xxxx	xxxxx	591	xxxx	xxxxx	28	20	354	37	19	450
Move Cap.:	447	xxxx	xxxxx	591	xxxx	xxxxx	26	19	354	30	18	450
Volume/Cap:	0.06	xxxx	xxxx	0.02	xxxx	xxxx	1.95	0.06	0.09	0.29	0.00	0.01
Level Of Service Module:												
2Way95thQ:	0.2	xxxx	xxxxx	0.0	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
Control Del:	13.5	xxxx	xxxxx	11.2	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
LOS by Move:	B	*	*	B	*	*	*	*	*	*	*	*
Movement:	LT -	LTR -	RT	LT -	LTR -	RT	LT -	LTR -	RT	LT -	LTR -	RT
Shared Cap.:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	41	xxxxx	xxxx	50	xxxxx
SharedQueue:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	9.1	xxxxx	xxxxx	1.1	xxxxx
Shrd ConDel:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	724	xxxxx	xxxxx	106	xxxxx
Shared LOS:	*	*	*	*	*	*	*	F	*	*	F	*
ApproachDel:	xxxxxx			xxxxxx			724.0			105.9		
ApproachLOS:	*			*			F			F		

****

Note: Queue reported is the number of cars per lane.

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Level Of Service Computation Report
2000 HCM Operations Method (Future Volume Alternative)

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Intersection #10 Tucker Road at Valley Boulevard (SR-202)

****

Cycle (sec):	120	Critical Vol./Cap.(X):	1.121
Loss Time (sec):	16	Average Delay (sec/veh):	86.0
Optimal Cycle:	120	Level Of Service:	F

****

Street Name:	Tucker Road						Valley Boulevard (SR-202)					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Control:	Protected			Protected			Protected			Protected		
Rights:	Include			Include			Include			Include		
Min. Green:	6	6	6	6	6	6	6	6	6	6	6	6
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	1 0	1	1 0	1 0	2	0 1	1 0	1	0 1	1 0	1	0 1
Volume Module:												
Base Vol:	184	214	147	180	234	282	293	248	85	130	241	136
Growth Adj:	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04
Initial Bse:	191	223	153	187	243	293	305	258	88	135	251	141
Added Vol:	29	60	14	166	83	186	195	46	45	21	36	147
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	220	283	167	353	326	479	500	304	133	156	287	288
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
PHF Volume:	245	314	185	392	363	533	555	338	148	174	318	320
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	245	314	185	392	363	533	555	338	148	174	318	320
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	245	314	185	392	363	533	555	338	148	174	318	320
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.95	0.90	0.90	0.95	0.95	0.85	0.95	1.00	0.85	0.95	1.00	0.85
Lanes:	1.00	1.26	0.74	1.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Sat.:	1805	2142	1265	1805	3610	1615	1805	1900	1615	1805	1900	1615
Capacity Analysis Module:												
Vol/Sat:	0.14	0.15	0.15	0.22	0.10	0.33	0.31	0.18	0.09	0.10	0.17	0.20
Crit Moves:	****					****	****					****
Green Time:	14.5	20.1	20.1	29.8	35.3	35.3	32.9	35.2	35.2	19.0	21.2	21.2
Volume/Cap:	1.12	0.88	0.88	0.88	0.34	1.12	1.12	0.61	0.31	0.61	0.95	1.12
Delay/Veh:	149.9	63.1	63.1	60.8	33.4	121.0	121.5	38.4	33.4	50.7	84.1	139.2
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	149.9	63.1	63.1	60.8	33.4	121.0	121.5	38.4	33.4	50.7	84.1	139.2
LOS by Move:	F	E	E	E	C	F	F	D	C	D	F	F
HCM2k95thQ:	27	22	22	29	11	49	50	20	8	13	28	33

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Level Of Service Computation Report
2000 HCM 4-Way Stop Method (Future Volume Alternative)

Intersection #11 Tucker Road at Highline Road

Cycle (sec):	100	Critical Vol./Cap.(X):	0.464
Loss Time (sec):	0	Average Delay (sec/veh):	11.3
Optimal Cycle:	0	Level Of Service:	B

Street Name:	Tucker Road						Highline Road					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Stop Sign			Stop Sign			Stop Sign			Stop Sign		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	0 0	1! 0	0	0 0	1! 0	0	0 1	0 0	1	0 0	1! 0	0
Volume Module:												
Base Vol:	7	9	6	38	11	128	58	50	3	6	139	48
Growth Adj:	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04
Initial Bse:	7	9	6	40	11	133	60	52	3	6	145	50
Added Vol:	0	11	8	86	11	7	8	19	0	6	17	52
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	7	20	14	126	22	140	68	71	3	12	162	102
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
PHF Volume:	8	23	16	139	25	156	76	79	3	14	180	113
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	8	23	16	139	25	156	76	79	3	14	180	113
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	8	23	16	139	25	156	76	79	3	14	180	113
Saturation Flow Module:												
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	0.17	0.49	0.34	0.43	0.08	0.49	0.49	0.51	1.00	0.04	0.59	0.37
Final Sat.:	104	290	203	301	54	336	278	289	665	31	406	256
Capacity Analysis Module:												
Vol/Sat:	0.08	0.08	0.08	0.46	0.46	0.46	0.27	0.27	0.01	0.44	0.44	0.44
Crit Moves:			****		****		****				****	
Delay/Veh:	8.8	8.8	8.8	11.8	11.8	11.8	10.8	10.8	7.8	11.5	11.5	11.5
Delay Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	8.8	8.8	8.8	11.8	11.8	11.8	10.8	10.8	7.8	11.5	11.5	11.5
LOS by Move:	A	A	A	B	B	B	B	B	A	B	B	B
ApproachDel:	8.8			11.8			10.7			11.5		
Delay Adj:	1.00			1.00			1.00			1.00		
ApprAdjDel:	8.8			11.8			10.7			11.5		
LOS by Appr:	A			B			B			B		
AllWayAvgQ:	0.1	0.1	0.1	0.7	0.7	0.7	0.3	0.3	0.0	0.7	0.7	0.7

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Level Of Service Computation Report
2000 HCM Unsignalized Method (Future Volume Alternative)

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Intersection #12 Mountain View Avenue at Valley Boulevard (SR-202)

****

Average Delay (sec/veh): 3.0 Worst Case Level Of Service: D[29.6]

****

Street Name:	Mountain View Avenue						Valley Boulevard (SR-202)					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Control:	Stop Sign			Stop Sign			Uncontrolled			Uncontrolled		
Rights:	Include			Include			Include			Include		
Lanes:	0 0	0 0	0	0 0	1! 0	0	1 0	1 0	0	0 0	1 0	1
Volume Module:												
Base Vol:	0	0	0	17	0	103	68	434	0	0	398	17
Growth Adj:	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04
Initial Bse:	0	0	0	18	0	107	71	451	0	0	414	18
Added Vol:	0	0	0	6	0	2	1	227	0	0	205	3
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	0	0	0	24	0	109	72	678	0	0	619	21
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
PHF Volume:	0	0	0	26	0	121	80	754	0	0	688	23
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
FinalVolume:	0	0	0	26	0	121	80	754	0	0	688	23
Critical Gap Module:												
Critical Gp:	xxxxx	xxxx	xxxxx	6.4	6.5	6.2	4.1	xxxx	xxxxx	xxxxx	xxxx	xxxxx
FollowUpTim:	xxxxx	xxxx	xxxxx	3.5	4.0	3.3	2.2	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Capacity Module:												
Cnflict Vol:	xxxx	xxxx	xxxxx	1601	1601	688	711	xxxx	xxxxx	xxxx	xxxx	xxxxx
Potent Cap.:	xxxx	xxxx	xxxxx	118	107	450	898	xxxx	xxxxx	xxxx	xxxx	xxxxx
Move Cap.:	xxxx	xxxx	xxxxx	110	98	450	898	xxxx	xxxxx	xxxx	xxxx	xxxxx
Volume/Cap:	xxxx	xxxx	xxxx	0.24	0.00	0.27	0.09	xxxx	xxxx	xxxx	xxxx	xxxx
Level Of Service Module:												
2Way95thQ:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	0.3	xxxx	xxxxx	xxxx	xxxx	xxxxx
Control Del:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	9.4	xxxx	xxxxx	xxxxx	xxxx	xxxxx
LOS by Move:	*	*	*	*	*	*	A	*	*	*	*	*
Movement:	LT -	LTR -	RT	LT -	LTR -	RT	LT -	LTR -	RT	LT -	LTR -	RT
Shared Cap.:	xxxx	xxxx	xxxxx	xxxx	290	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
SharedQueue:	xxxxx	xxxx	xxxxx	xxxxx	2.7	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Shrd ConDel:	xxxxx	xxxx	xxxxx	xxxxx	29.6	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Shared LOS:	*	*	*	*	D	*	*	*	*	*	*	*
ApproachDel:	xxxxxx				29.6		xxxxxx			xxxxxx		
ApproachLOS:	*				D		*			*		

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Note: Queue reported is the number of cars per lane.

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Level Of Service Computation Report
2000 HCM Unsignalized Method (Future Volume Alternative)

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Intersection #13 Mountain View Avenue at Tehachapi Boulevard

****

Average Delay (sec/veh): 2.3 Worst Case Level Of Service: C[22.4]

****

Street Name:	Mountain View Avenue						Tehachapi Boulevard					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Stop Sign			Stop Sign			Uncontrolled			Uncontrolled		
Rights:	Include			Include			Include			Include		
Lanes:	0 1 0	0 1		0 0 1!	0 0		1 0 1	0 1		1 0 1	0 1	
Volume Module:												
Base Vol:	52	1	34	11	4	15	15	461	41	20	497	7
Growth Adj:	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04
Initial Bse:	54	1	35	11	4	16	16	479	43	21	517	7
Added Vol:	9	0	15	0	0	0	0	185	11	28	175	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	63	1	50	11	4	16	16	664	54	49	692	7
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
PHF Volume:	70	1	56	13	5	17	17	738	60	54	769	8
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
FinalVolume:	70	1	56	13	5	17	17	738	60	54	769	8
Critical Gap Module:												
Critical Gp:	7.1	6.5	6.2	7.1	6.5	6.2	4.1	xxxx	xxxxx	4.1	xxxx	xxxxx
FollowUpTim:	3.5	4.0	3.3	3.5	4.0	3.3	2.2	xxxx	xxxxx	2.2	xxxx	xxxxx
Capacity Module:												
Cnflict Vol:	1665	1658	738	1708	1710	769	777	xxxx	xxxxx	798	xxxx	xxxxx
Potent Cap.:	78	99	421	73	92	404	849	xxxx	xxxxx	833	xxxx	xxxxx
Move Cap.:	67	90	421	58	84	404	849	xxxx	xxxxx	833	xxxx	xxxxx
Total Cap:	224	254	xxxxx	198	238	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
Volume/Cap:	0.31	0.00	0.13	0.06	0.02	0.04	0.02	xxxx	xxxx	0.07	xxxx	xxxx
Level Of Service Module:												
2Way95thQ:	xxxx	xxxx	0.5	xxxx	xxxx	xxxxx	0.1	xxxx	xxxxx	0.2	xxxx	xxxxx
Control Del:	xxxxx	xxxx	14.9	xxxxx	xxxx	xxxxx	9.3	xxxx	xxxxx	9.6	xxxx	xxxxx
LOS by Move:	*	*	B	*	*	*	A	*	*	A	*	*
Movement:	LT - LTR - RT			LT - LTR - RT			LT - LTR - RT			LT - LTR - RT		
Shared Cap.:	225	xxxx	xxxxx	xxxx	274	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
SharedQueue:	1.3	xxxx	xxxxx	xxxxx	0.4	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Shrd ConDel:	28.3	xxxx	xxxxx	xxxxx	20.0	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Shared LOS:	D	*	*	*	C	*	*	*	*	*	*	*
ApproachDel:	22.4			20.0			xxxxxx			xxxxxx		
ApproachLOS:	C			C			*			*		

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Note: Queue reported is the number of cars per lane.

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Level Of Service Computation Report
2000 HCM Unsignalized Method (Future Volume Alternative)

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Intersection #14 Mulberry Street at Tehachapi Boulevard

****

Average Delay (sec/veh): 0.8 Worst Case Level Of Service: C[20.9]

****

Street Name:	Mulberry Street						Tehachapi Boulevard					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Control:	Stop Sign			Stop Sign			Uncontrolled			Uncontrolled		
Rights:	Include			Include			Include			Include		
Lanes:	0 0	1! 0	0	0 0	1! 0	0	1 0	1 0	1	1 0	1 0	1
Volume Module:												
Base Vol:	0	0	0	14	0	26	22	512	1	1	539	38
Growth Adj:	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04
Initial Bse:	0	0	0	15	0	27	23	532	1	1	561	40
Added Vol:	8	0	2	0	0	0	0	195	8	1	195	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	8	0	2	15	0	27	23	727	9	2	756	40
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
PHF Volume:	9	0	2	16	0	30	25	808	10	2	840	44
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
FinalVolume:	9	0	2	16	0	30	25	808	10	2	840	44
Critical Gap Module:												
Critical Gp:	7.1	6.5	6.2	7.1	6.5	6.2	4.1	xxxx	xxxxx	4.1	xxxx	xxxxx
FollowUpTim:	3.5	4.0	3.3	3.5	4.0	3.3	2.2	xxxx	xxxxx	2.2	xxxx	xxxxx
Capacity Module:												
Cnflict Vol:	1740	1747	808	1709	1713	840	883	xxxx	xxxxx	818	xxxx	xxxxx
Potent Cap.:	69	87	384	72	91	368	774	xxxx	xxxxx	819	xxxx	xxxxx
Move Cap.:	62	84	384	70	88	368	774	xxxx	xxxxx	819	xxxx	xxxxx
Total Cap:	217	248	xxxxx	242	261	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
Volume/Cap:	0.04	0.00	0.01	0.07	0.00	0.08	0.03	xxxx	xxxx	0.00	xxxx	xxxx
Level Of Service Module:												
2Way95thQ:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	0.1	xxxx	xxxxx	0.0	xxxx	xxxxx
Control Del:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	9.8	xxxx	xxxxx	9.4	xxxx	xxxxx
LOS by Move:	*	*	*	*	*	*	A	*	*	A	*	*
Movement:	LT -	LTR -	RT	LT -	LTR -	RT	LT -	LTR -	RT	LT -	LTR -	RT
Shared Cap.:	xxxx	238	xxxxx	xxxx	311	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
SharedQueue:	xxxxx	0.1	xxxxx	xxxxx	0.5	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Shrd ConDel:	xxxxx	20.9	xxxxx	xxxxx	18.6	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Shared LOS:	*	C	*	*	C	*	*	*	*	*	*	*
ApproachDel:		20.9			18.6		xxxxxx			xxxxxx		
ApproachLOS:		C			C		*			*		

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Note: Queue reported is the number of cars per lane.

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Level Of Service Computation Report
2000 HCM Unsignalized Method (Future Volume Alternative)

Intersection #15 Mill Street at Tehachapi Boulevard

Average Delay (sec/veh): 1.6 Worst Case Level Of Service: C[18.2]

Street Name:	Mill Street						Tehachapi Boulevard					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	- T	- R	L	- T	- R	L	- T	- R	L	- T	- R
Control:	Stop Sign			Stop Sign			Uncontrolled			Uncontrolled		
Rights:	Include			Include			Include			Include		
Lanes:	1 0 0	0 1		0 0 0	0 0		0 0 1	1 0		0 1 1	0 0	
Volume Module:												
Base Vol:	40	0	33	0	0	0	0	311	30	24	384	0
Growth Adj:	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04
Initial Bse:	42	0	34	0	0	0	0	323	31	25	399	0
Added Vol:	12	0	6	0	0	0	0	171	13	10	168	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	54	0	40	0	0	0	0	494	44	35	567	0
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
PHF Volume:	60	0	45	0	0	0	0	549	49	39	630	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
FinalVolume:	60	0	45	0	0	0	0	549	49	39	630	0
Critical Gap Module:												
Critical Gp:	6.8	xxxx	6.9	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	4.1	xxxx	xxxxx
FollowUpTim:	3.5	xxxx	3.3	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	2.2	xxxx	xxxxx
Capacity Module:												
Cnflict Vol:	967	xxxx	299	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	598	xxxx	xxxxx
Potent Cap.:	255	xxxx	703	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	988	xxxx	xxxxx
Move Cap.:	248	xxxx	703	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	988	xxxx	xxxxx
Volume/Cap:	0.24	xxxx	0.06	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	0.04	xxxx	xxxx
Level Of Service Module:												
2Way95thQ:	0.9	xxxx	0.2	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	0.1	xxxx	xxxxx
Control Del:	24.1	xxxx	10.5	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	8.8	xxxx	xxxxx
LOS by Move:	C	*	B	*	*	*	*	*	*	A	*	*
Movement:	LT -	LTR -	RT	LT -	LTR -	RT	LT -	LTR -	RT	LT -	LTR -	RT
Shared Cap.:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
SharedQueue:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	0.1	xxxx	xxxxx
Shrd ConDel:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	8.8	xxxx	xxxxx
Shared LOS:	*	*	*	*	*	*	*	*	*	A	*	*
ApproachDel:		18.2		xxxxxx			xxxxxx			xxxxxx		
ApproachLOS:		C			*			*			*	

Note: Queue reported is the number of cars per lane.

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Level Of Service Computation Report
2000 HCM 4-Way Stop Method (Future Volume Alternative)

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Intersection #16 Curry Street at Tehachapi Boulevard

****

Cycle (sec):	100	Critical Vol./Cap.(X):	0.724
Loss Time (sec):	0	Average Delay (sec/veh):	18.7
Optimal Cycle:	0	Level Of Service:	C

****

Street Name:	Curry Street						Tehachapi Boulevard					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Control:	Stop Sign			Stop Sign			Stop Sign			Stop Sign		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	0 1	0 1	0	0 0	1! 0	0	0 1	0 1	0	0 1	0 1	0
Volume Module:												
Base Vol:	83	3	99	4	0	3	5	243	69	98	354	2
Growth Adj:	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04
Initial Bse:	86	3	103	4	0	3	5	253	72	102	368	2
Added Vol:	25	0	55	0	0	0	0	145	34	80	155	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	111	3	158	4	0	3	5	398	106	182	523	2
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
PHF Volume:	124	3	176	5	0	3	6	442	118	202	581	2
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	124	3	176	5	0	3	6	442	118	202	581	2
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	124	3	176	5	0	3	6	442	118	202	581	2
Saturation Flow Module:												
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	0.82	0.18	1.00	0.57	0.00	0.43	0.02	1.56	0.42	0.51	1.48	0.01
Final Sat.:	358	80	507	242	0	182	11	847	231	279	824	3
Capacity Analysis Module:												
Vol/Sat:	0.35	0.04	0.35	0.02	xxxx	0.02	0.53	0.52	0.51	0.72	0.71	0.70
Crit Moves:			****	****			****			****		
Delay/Veh:	13.5	13.5	12.7	11.1	0.0	11.1	16.3	15.9	15.1	24.3	22.7	21.9
Delay Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	13.5	13.5	12.7	11.1	0.0	11.1	16.3	15.9	15.1	24.3	22.7	21.9
LOS by Move:	B	B	B	B	*	B	C	C	C	C	C	C
ApproachDel:	13.1			11.1			15.7			23.1		
Delay Adj:	1.00			1.00			1.00			1.00		
ApprAdjDel:	13.1			11.1			15.7			23.1		
LOS by Appr:	B			B			C			C		
AllWayAvgQ:	0.4	0.5	0.5	0.0	0.0	0.0	1.0	0.9	0.9	2.3	2.0	2.0

****

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PM Cumulative Plus Project (2011)
Walmart, Tehachapi
Linscott, Law and Greenspan, Engineers

Level Of Service Computation Report
2000 HCM Operations Method (Future Volume Alternative)

****

Intersection #17 Curry Street at Valley Boulevard (SR-202)

****

Cycle (sec):	90	Critical Vol./Cap.(X):	0.648
Loss Time (sec):	12	Average Delay (sec/veh):	24.6
Optimal Cycle:	90	Level Of Service:	C

****

Street Name:	Curry Street						Valley Boulevard (SR-202)					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L - T - R			L - T - R			L - T - R			L - T - R		
Control:	Permitted			Permitted			Protected			Protected		
Rights:	Include			Include			Include			Include		
Min. Green:	6	6	6	6	6	6	6	6	6	6	6	6
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	1 0	1 0	1	1 0	1 0	1	1 0	0 1	0	1 0	1 0	1
Volume Module:												
Base Vol:	88	94	27	21	148	102	71	137	94	74	148	24
Growth Adj:	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04
Initial Bse:	92	98	28	22	154	106	74	142	98	77	154	25
Added Vol:	99	51	1	4	87	28	23	91	113	2	75	2
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	191	149	29	26	241	134	97	233	211	79	229	27
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
PHF Volume:	212	165	32	29	268	149	108	259	234	88	254	30
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	212	165	32	29	268	149	108	259	234	88	254	30
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	212	165	32	29	268	149	108	259	234	88	254	30
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.48	1.00	0.85	0.61	1.00	0.85	0.95	0.93	0.93	0.95	1.00	0.85
Lanes:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.53	0.47	1.00	1.00	1.00
Final Sat.:	908	1900	1615	1159	1900	1615	1805	928	837	1805	1900	1615
Capacity Analysis Module:												
Vol/Sat:	0.23	0.09	0.02	0.02	0.14	0.09	0.06	0.28	0.28	0.05	0.13	0.02
Crit Moves:	****							****		****		
Green Time:	32.4	32.4	32.4	32.4	32.4	32.4	15.2	38.9	38.9	6.8	30.4	30.4
Volume/Cap:	0.65	0.24	0.06	0.07	0.39	0.26	0.35	0.65	0.65	0.65	0.40	0.05
Delay/Veh:	28.5	20.4	18.9	19.0	21.8	20.5	33.8	22.1	22.1	50.9	23.2	20.1
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	28.5	20.4	18.9	19.0	21.8	20.5	33.8	22.1	22.1	50.9	23.2	20.1
LOS by Move:	C	C	B	B	C	C	C	C	C	D	C	C
HCM2k95thQ:	12	6	1	1	11	6	6	21	21	7	11	1

****

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PM Cumulative Plus Project (2011)
Walmart, Tehachapi
Linscott, Law and Greenspan, Engineers

Level Of Service Computation Report
2000 HCM Unsignalized Method (Future Volume Alternative)

****

Intersection #18 Curry Street/Summit Road at Highline Road

****

Average Delay (sec/veh): 5.9 Worst Case Level Of Service: C[17.4]

****

Street Name:	Curry Street/Summit Road						Highline Road					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Control:	Stop Sign			Stop Sign			Uncontrolled			Uncontrolled		
Rights:	Include			Include			Include			Include		
Lanes:	0 0	1! 0	0	0 1	0 0	1	0 0	1! 0	0	0 0	1! 0	0
Volume Module:												
Base Vol:	1	2	0	13	1	45	37	58	3	0	143	41
Growth Adj:	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04
Initial Bse:	1	2	0	14	1	47	38	60	3	0	149	43
Added Vol:	7	20	3	58	20	50	77	29	7	2	18	94
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	8	22	3	72	21	97	115	89	10	2	167	137
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
PHF Volume:	9	25	3	79	23	108	128	99	11	2	185	152
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
FinalVolume:	9	25	3	79	23	108	128	99	11	2	185	152
Critical Gap Module:												
Critical Gp:	7.1	6.5	6.2	7.1	6.5	6.2	4.1	xxxx	xxxxx	4.1	xxxx	xxxxx
FollowUpTim:	3.5	4.0	3.3	3.5	4.0	3.3	2.2	xxxx	xxxxx	2.2	xxxx	xxxxx
Capacity Module:												
Cnflict Vol:	693	703	105	641	633	261	337	xxxx	xxxxx	110	xxxx	xxxxx
Potent Cap.:	361	364	955	390	400	782	1233	xxxx	xxxxx	1492	xxxx	xxxxx
Move Cap.:	270	323	955	335	355	782	1233	xxxx	xxxxx	1492	xxxx	xxxxx
Volume/Cap:	0.03	0.08	0.00	0.24	0.07	0.14	0.10	xxxx	xxxx	0.00	xxxx	xxxx
Level Of Service Module:												
2Way95thQ:	xxxx	xxxx	xxxxx	xxxx	xxxx	0.5	0.3	xxxx	xxxxx	0.0	xxxx	xxxxx
Control Del:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	10.3	8.3	xxxx	xxxxx	7.4	xxxx	xxxxx
LOS by Move:	*	*	*	*	*	B	A	*	*	A	*	*
Movement:	LT -	LTR -	RT	LT -	LTR -	RT	LT -	LTR -	RT	LT -	LTR -	RT
Shared Cap.:	xxxx	327	xxxxx	339	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
SharedQueue:	xxxxx	0.4	xxxxx	1.3	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Shrd ConDel:	xxxxx	17.4	xxxxx	20.2	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Shared LOS:	*	C	*	C	*	*	*	*	*	*	*	*
ApproachDel:		17.4			15.1			xxxxxx			xxxxxx	
ApproachLOS:		C			C			*			*	

****

Note: Queue reported is the number of cars per lane.

****

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PM Cumulative Plus Project (2011)
Walmart, Tehachapi
Linscott, Law and Greenspan, Engineers

Level Of Service Computation Report
2000 HCM 4-Way Stop Method (Future Volume Alternative)

Intersection #19 Green Street at Tehachapi Boulevard

Cycle (sec):	100	Critical Vol./Cap.(X):	0.901
Loss Time (sec):	0	Average Delay (sec/veh):	32.7
Optimal Cycle:	0	Level Of Service:	D

Street Name:	Green Street						Tehachapi Boulevard					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Stop Sign			Stop Sign			Stop Sign			Stop Sign		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	0 0	0 0	0	0 1	0 0	1	0 1	0 1	0	0 1	0 1	0
Volume Module:												
Base Vol:	0	0	0	51	41	225	158	307	74	42	224	37
Growth Adj:	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04
Initial Bse:	0	0	0	53	43	234	164	319	77	44	233	38
Added Vol:	0	0	0	62	25	168	131	67	0	0	65	46
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	0	0	0	115	68	402	295	386	77	44	298	84
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
PHF Volume:	0	0	0	128	75	447	328	429	86	49	331	94
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	0	0	0	128	75	447	328	429	86	49	331	94
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	0	0	0	128	75	447	328	429	86	49	331	94
Saturation Flow Module:												
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	0.00	0.00	0.00	0.63	0.37	1.00	0.78	1.02	0.20	0.20	1.40	0.40
Final Sat.:	0	0	0	282	166	519	364	503	102	91	636	185
Capacity Analysis Module:												
Vol/Sat:	xxxx	xxxx	xxxx	0.45	0.45	0.86	0.90	0.85	0.84	0.53	0.52	0.51
Crit Moves:						****	****			****		
Delay/Veh:	0.0	0.0	0.0	16.7	16.7	37.6	47.7	39.0	36.6	18.8	18.2	17.3
Delay Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	0.0	0.0	0.0	16.7	16.7	37.6	47.7	39.0	36.6	18.8	18.2	17.3
LOS by Move:	*	*	*	C	C	E	E	E	E	C	C	C
ApproachDel:	xxxxxx			31.1			42.1			18.1		
Delay Adj:	xxxxx			1.00			1.00			1.00		
ApprAdjDel:	xxxxxx			31.1			42.1			18.1		
LOS by Appr:	*			D			E			C		
AllWayAvgQ:	0.0	0.0	0.0	0.8	0.8	4.0	4.8	3.7	3.7	1.0	0.9	0.9

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APPENDIX D-III

YEAR 2011 CUMULATIVE PLUS PROJECT WITH MITIGATION TRAFFIC CONDITIONS

AM Cumulative Plus Project (2011) - Mitigation
Walmart, Tehachapi
Linscott, Law and Greenspan, Engineers

Level Of Service Computation Report
2000 HCM Operations Method (Future Volume Alternative)

****

Intersection #3 Santa Lucia Street at Valley Boulevard (SR-202)

****

Cycle (sec):	90	Critical Vol./Cap.(X):	0.416
Loss Time (sec):	12	Average Delay (sec/veh):	10.1
Optimal Cycle:	90	Level Of Service:	B

****

Street Name:	Santa Lucia Street						Valley Boulevard (SR-202)					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Control:	Permitted			Permitted			Protected			Protected		
Rights:	Include			Include			Include			Include		
Min. Green:	6	6	6	6	6	6	6	6	6	6	6	6
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	0 0	1! 0	0	0 0	1! 0	0	1 0	0 1	0	1 0	0 1	0
Volume Module:												
Base Vol:	1	5	11	15	5	14	39	407	7	18	297	25
Growth Adj:	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04
Initial Bse:	1	5	11	16	5	15	41	423	7	19	309	26
Added Vol:	0	0	0	7	0	0	0	111	0	0	106	7
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	1	5	11	23	5	15	41	534	7	19	415	33
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
PHF Volume:	1	6	13	25	6	16	45	594	8	21	461	37
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	1	6	13	25	6	16	45	594	8	21	461	37
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	1	6	13	25	6	16	45	594	8	21	461	37
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.90	0.90	0.90	0.78	0.78	0.78	0.95	1.00	1.00	0.95	0.99	0.99
Lanes:	0.06	0.29	0.65	0.54	0.12	0.34	1.00	0.99	0.01	1.00	0.93	0.07
Final Sat.:	100	501	1101	786	181	507	1805	1871	25	1805	1741	138
Capacity Analysis Module:												
Vol/Sat:	0.01	0.01	0.01	0.03	0.03	0.03	0.02	0.32	0.32	0.01	0.26	0.26
Crit Moves:					****			****		****		
Green Time:	6.6	6.6	6.6	6.6	6.6	6.6	14.4	65.4	65.4	6.0	57.1	57.1
Volume/Cap:	0.16	0.16	0.16	0.44	0.44	0.44	0.16	0.44	0.44	0.17	0.42	0.42
Delay/Veh:	39.7	39.7	39.7	42.7	42.7	42.7	32.9	5.1	5.1	40.3	8.4	8.4
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	39.7	39.7	39.7	42.7	42.7	42.7	32.9	5.1	5.1	40.3	8.4	8.4
LOS by Move:	D	D	D	D	D	D	C	A	A	D	A	A
HCM2k95thQ:	1	1	1	4	4	4	2	13	13	1	13	13

****

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AM Cumulative Plus Project (2011) - Mitigation
Walmart, Tehachapi
Linscott, Law and Greenspan, Engineers

Level Of Service Computation Report
2000 HCM Operations Method (Future Volume Alternative)

****

Intersection #5 Westwood Boulevard at Red Apple Avenue

****

Cycle (sec):	90	Critical Vol./Cap.(X):	0.544
Loss Time (sec):	12	Average Delay (sec/veh):	14.9
Optimal Cycle:	90	Level Of Service:	B

****

Street Name:	Westwood Boulevard						Red Apple Avenue					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Permitted			Protected			Split Phase			Split Phase		
Rights:		Ovl			Include			Include			Ovl	
Min. Green:	0	6	6	6	6	0	0	0	0	6	0	6
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	0 0	1 0	1	1 0	1 0	0	0 0	0 0	0 0	1 0	0 0	1
Volume Module:												
Base Vol:	0	5	143	381	15	0	0	0	0	48	0	139
Growth Adj:	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04
Initial Bse:	0	5	149	396	16	0	0	0	0	50	0	145
Added Vol:	0	0	46	101	0	0	0	0	0	49	0	92
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	0	5	195	497	16	0	0	0	0	99	0	237
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
PHF Volume:	0	6	216	552	17	0	0	0	0	110	0	263
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	0	6	216	552	17	0	0	0	0	110	0	263
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	0	6	216	552	17	0	0	0	0	110	0	263
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	1.00	1.00	0.85	0.95	1.00	1.00	1.00	1.00	1.00	0.95	1.00	0.85
Lanes:	0.00	1.00	1.00	1.00	1.00	0.00	0.00	0.00	0.00	1.00	0.00	1.00
Final Sat.:	0	1900	1615	1805	1900	0	0	0	0	1805	0	1615
Capacity Analysis Module:												
Vol/Sat:	0.00	0.00	0.13	0.31	0.01	0.00	0.00	0.00	0.00	0.06	0.00	0.16
Crit Moves:		****		****								****
Green Time:	0.0	6.0	31.0	47.0	53.0	0.0	0.0	0.0	0.0	25.0	0.0	72.0
Volume/Cap:	0.00	0.05	0.39	0.59	0.02	0.00	0.00	0.00	0.00	0.22	0.00	0.20
Delay/Veh:	0.0	39.5	22.8	15.8	7.7	0.0	0.0	0.0	0.0	25.2	0.0	2.2
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	0.0	39.5	22.8	15.8	7.7	0.0	0.0	0.0	0.0	25.2	0.0	2.2
LOS by Move:	A	D	C	B	A	A	A	A	A	C	A	A
HCM2k95thQ:	0	0	9	20	0	0	0	0	0	5	0	4

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Level Of Service Computation Report
2000 HCM Unsignalized Method (Future Volume Alternative)

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Intersection #6 Sierra Vista Drive at Valley Boulevard (SR-202)

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Average Delay (sec/veh): 0.0 Worst Case Level Of Service: B[13.1]

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Street Name:	Sierra Vista Drive						Valley Boulevard (SR-202)					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Control:	Stop Sign			Stop Sign			Uncontrolled			Uncontrolled		
Rights:	Include			Include			Include			Include		
Lanes:	0 0	0 0	0	0 0	0 0	1	0 0	1 0	0	0 0	0 1	0
Volume Module:												
Base Vol:	0	0	0	0	0	5	0	540	0	0	406	3
Growth Adj:	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04
Initial Bse:	0	0	0	0	0	5	0	562	0	0	422	3
Added Vol:	0	0	0	0	0	0	0	201	0	0	196	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	0	0	0	0	0	5	0	763	0	0	618	3
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
PHF Volume:	0	0	0	0	0	6	0	847	0	0	687	3
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
FinalVolume:	0	0	0	0	0	6	0	847	0	0	687	3
Critical Gap Module:												
Critical Gp:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	6.2	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
FollowUpTim:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	3.3	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Capacity Module:												
Cnflict Vol:	xxxx	xxxx	xxxxx	xxxx	xxxx	689	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
Potent Cap.:	xxxx	xxxx	xxxxx	xxxx	xxxx	449	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
Move Cap.:	xxxx	xxxx	xxxxx	xxxx	xxxx	449	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
Total Cap:	276	296	xxxxx	330	296	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
Volume/Cap:	xxxx	xxxx	xxxx	xxxx	xxxx	0.01	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx
Level Of Service Module:												
2Way95thQ:	xxxx	xxxx	xxxxx	xxxx	xxxx	0.0	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
Control Del:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	13.1	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
LOS by Move:	*	*	*	*	*	B	*	*	*	*	*	*
Movement:	LT -	LTR -	RT	LT -	LTR -	RT	LT -	LTR -	RT	LT -	LTR -	RT
Shared Cap.:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
SharedQueue:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Shrd ConDel:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Shared LOS:	*	*	*	*	*	*	*	*	*	*	*	*
ApproachDel:	xxxxxx			13.1			xxxxxx			xxxxxx		
ApproachLOS:	*			B			*			*		

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Note: Queue reported is the number of cars per lane.

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2000 HCM Unsignalized Method (Future Volume Alternative)

Intersection #7 Tehachapi Boulevard at SR-58 Eastbound Ramps

Average Delay (sec/veh): 0.0 Worst Case Level Of Service: A[0.0]

Street Name:	Tehachapi Boulevard						SR-58 Eastbound Ramps					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Uncontrolled			Uncontrolled			Stop Sign			Stop Sign		
Rights:	Include			Include			Ignore			Include		
Lanes:	0 0 0 1 0			0 0 1 0 0			1 0 0 0 1			0 0 0 0 0		
Volume Module:												
Base Vol:	0	364	224	0	145	0	0	0	82	0	0	0
Growth Adj:	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04
Initial Bse:	0	379	233	0	151	0	0	0	85	0	0	0
Added Vol:	0	98	68	0	63	0	0	0	74	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	0	477	301	0	214	0	0	0	159	0	0	0
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
PHF Adj:	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.00	0.90	0.90	0.90
PHF Volume:	0	530	334	0	238	0	0	0	0	0	0	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
FinalVolume:	0	530	334	0	238	0	0	0	0	0	0	0
Critical Gap Module:												
Critical Gp:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	6.4	xxxx	6.2	xxxxx	xxxx	xxxxx
FollowUpTim:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	3.5	xxxx	3.3	xxxxx	xxxx	xxxxx
Capacity Module:												
Cnflict Vol:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	934	xxxx	238	xxxx	xxxx	xxxxx
Potent Cap.:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	297	xxxx	806	xxxx	xxxx	xxxxx
Move Cap.:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	297	xxxx	806	xxxx	xxxx	xxxxx
Volume/Cap:	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	0.00	xxxx	0.00	xxxx	xxxx	xxxx
Level Of Service Module:												
2Way95thQ:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
Control Del:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
LOS by Move:	*	*	*	*	*	*	*	*	*	*	*	*
Movement:	LT	LTR	RT	LT	LTR	RT	LT	LTR	RT	LT	LTR	RT
Shared Cap.:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
SharedQueue:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Shrd ConDel:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Shared LOS:	*	*	*	*	*	*	*	*	*	*	*	*
ApproachDel:	xxxxxx			xxxxxx			xxxxxx			xxxxxx		
ApproachLOS:	*			*			*			*		

Note: Queue reported is the number of cars per lane.

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2000 HCM Operations Method (Future Volume Alternative)

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Intersection #8 Tehachapi Boulevard/Tucker Road at Red Apple Avenue/Tehachapi Bo

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Cycle (sec):	90	Critical Vol./Cap.(X):	0.570
Loss Time (sec):	16	Average Delay (sec/veh):	29.3
Optimal Cycle:	90	Level Of Service:	C

****

Street Name:	Tehachapi Boulevard/Tucker Road						Red Apple Avenue/Tehachapi Boulev					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Protected			Protected			Protected			Protected		
Rights:	Include			Ovl			Include			Include		
Min. Green:	6	6	6	6	6	6	6	6	6	6	6	6
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	1 0	2 0	1	1 0	2 0	1	1 0	1 0	1	2 0	1 0	1
Volume Module:												
Base Vol:	50	330	92	39	154	28	163	293	92	76	113	76
Growth Adj:	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04
Initial Bse:	52	343	96	41	160	29	170	305	96	79	118	79
Added Vol:	38	132	46	37	78	22	16	84	29	71	83	17
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	90	475	142	78	238	51	186	389	125	150	201	96
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
PHF Volume:	100	528	157	86	265	57	206	432	139	167	223	107
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	100	528	157	86	265	57	206	432	139	167	223	107
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	100	528	157	86	265	57	206	432	139	167	223	107
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.95	0.95	0.85	0.95	0.95	0.85	0.95	1.00	0.85	0.92	1.00	0.85
Lanes:	1.00	2.00	1.00	1.00	2.00	1.00	1.00	1.00	1.00	2.00	1.00	1.00
Final Sat.:	1805	3610	1615	1805	3610	1615	1805	1900	1615	3502	1900	1615
Capacity Analysis Module:												
Vol/Sat:	0.06	0.15	0.10	0.05	0.07	0.04	0.11	0.23	0.09	0.05	0.12	0.07
Crit Moves:		****		****				****		****		
Green Time:	14.6	23.1	23.1	7.5	16.0	37.4	21.4	35.9	35.9	7.5	22.0	22.0
Volume/Cap:	0.34	0.57	0.38	0.57	0.41	0.08	0.48	0.57	0.22	0.57	0.48	0.27
Delay/Veh:	34.2	30.0	28.2	44.8	33.2	16.0	30.4	22.1	18.0	42.4	29.9	27.9
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	34.2	30.0	28.2	44.8	33.2	16.0	30.4	22.1	18.0	42.4	29.9	27.9
LOS by Move:	C	C	C	D	C	B	C	C	B	D	C	C
HCM2k95thQ:	5	14	8	6	7	2	10	18	5	6	11	5

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Level Of Service Computation Report
2000 HCM Unsignalized Method (Future Volume Alternative)

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Intersection #9 Tucker Road at Conway Avenue/Walmart Project Driveway 2

****

Average Delay (sec/veh): 0.8 Worst Case Level Of Service: B[14.9]

****

Street Name:	Tucker Road						Conway Avenue/Walmart Project Dri					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Control:	Uncontrolled			Uncontrolled			Stop Sign			Stop Sign		
Rights:	Include			Include			Include			Include		
Lanes:	1 0	1 1	0	1 0	1 1	0	0 0	1! 0	0	0 0	1! 0	0
Volume Module:												
Base Vol:	22	570	0	3	764	43	52	0	31	0	0	0
Growth Adj:	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04
Initial Bse:	23	593	0	3	795	45	54	0	32	0	0	0
Added Vol:	0	293	4	4	209	0	0	0	0	3	0	2
PasserByVol:	0	0	0	0	0	0	-54	0	54	-3	0	3
Initial Fut:	23	886	4	7	1004	45	0	0	86	0	0	5
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
PHF Volume:	25	984	4	8	1115	50	0	0	96	0	0	6
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
FinalVolume:	25	984	4	8	1115	50	0	0	96	0	0	6
Critical Gap Module:												
Critical Gp:	4.1	xxxx	xxxxx	4.1	xxxx	xxxxx	7.5	6.5	6.9	7.5	6.5	6.9
FollowUpTim:	2.2	xxxx	xxxxx	2.2	xxxx	xxxxx	3.5	4.0	3.3	3.5	4.0	3.3
Capacity Module:												
Cnflict Vol:	1165	xxxx	xxxxx	989	xxxx	xxxxx	1699	2195	582	1611	2218	494
Potent Cap.:	607	xxxx	xxxxx	707	xxxx	xxxxx	61	46	461	71	44	526
Move Cap.:	607	xxxx	xxxxx	707	xxxx	xxxxx	58	43	461	54	42	526
Volume/Cap:	0.04	xxxx	xxxx	0.01	xxxx	xxxx	0.00	0.00	0.21	0.00	0.00	0.01
Level Of Service Module:												
2Way95thQ:	0.1	xxxx	xxxxx	0.0	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
Control Del:	11.2	xxxx	xxxxx	10.1	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
LOS by Move:	B	*	*	B	*	*	*	*	*	*	*	*
Movement:	LT -	LTR -	RT	LT -	LTR -	RT	LT -	LTR -	RT	LT -	LTR -	RT
Shared Cap.:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	458	xxxxx	xxxx	526	xxxxx
SharedQueue:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	0.8	xxxxx	xxxxx	0.0	xxxxx
Shrd ConDel:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	14.9	xxxxx	xxxxx	11.9	xxxxx
Shared LOS:	*	*	*	*	*	*	*	B	*	*	B	*
ApproachDel:	xxxxxx			xxxxxx			14.9			11.9		
ApproachLOS:	*			*			B			B		

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Note: Queue reported is the number of cars per lane.

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2000 HCM Operations Method (Future Volume Alternative)

Intersection #10 Tucker Road at Valley Boulevard (SR-202)

Cycle (sec):	90	Critical Vol./Cap.(X):	0.640
Loss Time (sec):	16	Average Delay (sec/veh):	30.8
Optimal Cycle:	90	Level Of Service:	C

Street Name:	Tucker Road						Valley Boulevard (SR-202)					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L - T - R			L - T - R			L - T - R			L - T - R		
Control:	Protected			Protected			Protected			Protected		
Rights:	Include			Ovl			Include			Ovl		
Min. Green:	6	6	6	6	6	6	6	6	6	6	6	6
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	1 0	1 1	0	2 0	2 0	1	2 0	1 0	1	1 0	2 0	1
Volume Module:												
Base Vol:	177	211	133	153	239	236	262	255	107	138	248	119
Growth Adj:	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04
Initial Bse:	184	219	138	159	249	245	272	265	111	144	258	124
Added Vol:	39	64	22	72	30	115	141	37	22	12	44	111
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	223	283	160	231	279	360	413	302	133	156	302	235
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
PHF Volume:	248	315	178	257	310	400	459	336	148	173	335	261
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	248	315	178	257	310	400	459	336	148	173	335	261
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	248	315	178	257	310	400	459	336	148	173	335	261
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.95	0.90	0.90	0.92	0.95	0.85	0.92	1.00	0.85	0.95	0.95	0.85
Lanes:	1.00	1.28	0.72	2.00	2.00	1.00	2.00	1.00	1.00	1.00	2.00	1.00
Final Sat.:	1805	2181	1234	3502	3610	1615	3502	1900	1615	1805	3610	1615
Capacity Analysis Module:												
Vol/Sat:	0.14	0.14	0.14	0.07	0.09	0.25	0.13	0.18	0.09	0.10	0.09	0.16
Crit Moves:	****					****		****		****		
Green Time:	19.3	23.7	23.7	12.0	16.4	38.8	22.4	24.8	24.8	13.5	15.9	27.9
Volume/Cap:	0.64	0.55	0.55	0.55	0.47	0.57	0.53	0.64	0.33	0.64	0.53	0.52
Delay/Veh:	35.8	29.3	29.3	37.8	33.4	20.5	29.8	31.3	26.4	41.1	34.5	26.5
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	35.8	29.3	29.3	37.8	33.4	20.5	29.8	31.3	26.4	41.1	34.5	26.5
LOS by Move:	D	C	C	D	C	C	C	C	C	D	C	C
HCM2k95thQ:	14	13	13	8	9	17	12	17	7	11	10	12

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2000 HCM Unsignalized Method (Future Volume Alternative)

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Intersection #12 Mountain View Avenue at Valley Boulevard (SR-202)

****

Average Delay (sec/veh): 0.7 Worst Case Level Of Service: B[12.9]

****

Street Name:	Mountain View Avenue						Valley Boulevard (SR-202)					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Control:	Stop Sign			Stop Sign			Uncontrolled			Uncontrolled		
Rights:	Include			Include			Include			Include		
Lanes:	0 0	0 0	0	0 0	1! 0	0	1 0	1 0	0	0 0	1 0	1
Volume Module:												
Base Vol:	0	0	0	6	0	25	32	355	0	0	285	13
Growth Adj:	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04
Initial Bse:	0	0	0	6	0	26	33	369	0	0	296	14
Added Vol:	0	0	0	2	0	1	2	130	0	0	168	5
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	0	0	0	8	0	27	35	499	0	0	464	19
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
PHF Volume:	0	0	0	9	0	30	39	555	0	0	516	21
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
FinalVolume:	0	0	0	9	0	30	39	555	0	0	516	21
Critical Gap Module:												
Critical Gp:	xxxxx	xxxx	xxxxx	6.4	6.5	6.2	4.1	xxxx	xxxxx	xxxxx	xxxx	xxxxx
FollowUpTim:	xxxxx	xxxx	xxxxx	3.5	4.0	3.3	2.2	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Capacity Module:												
Cnflict Vol:	xxxx	xxxx	xxxxx	1149	1149	516	537	xxxx	xxxxx	xxxx	xxxx	xxxxx
Potent Cap.:	xxxx	xxxx	xxxxx	221	200	563	1042	xxxx	xxxxx	xxxx	xxxx	xxxxx
Move Cap.:	xxxx	xxxx	xxxxx	215	193	563	1042	xxxx	xxxxx	xxxx	xxxx	xxxxx
Total Cap:	280	301	xxxxx	350	313	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
Volume/Cap:	xxxx	xxxx	xxxx	0.03	0.00	0.05	0.04	xxxx	xxxx	xxxx	xxxx	xxxx
Level Of Service Module:												
2Way95thQ:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	0.1	xxxx	xxxxx	xxxx	xxxx	xxxxx
Control Del:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	8.6	xxxx	xxxxx	xxxxx	xxxx	xxxxx
LOS by Move:	*	*	*	*	*	*	A	*	*	*	*	*
Movement:	LT -	LTR -	RT	LT -	LTR -	RT	LT -	LTR -	RT	LT -	LTR -	RT
Shared Cap.:	xxxx	xxxx	xxxxx	xxxx	493	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
SharedQueue:	xxxxx	xxxx	xxxxx	xxxxx	0.3	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Shrd ConDel:	xxxxx	xxxx	xxxxx	xxxxx	12.9	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Shared LOS:	*	*	*	*	B	*	*	*	*	*	*	*
ApproachDel:	xxxxxx			12.9			xxxxxx			xxxxxx		
ApproachLOS:	*			B			*			*		

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Note: Queue reported is the number of cars per lane.

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2000 HCM Operations Method (Future Volume Alternative)

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Intersection #19 Green Street at Tehachapi Boulevard

****

Cycle (sec):	90	Critical Vol./Cap.(X):	0.441
Loss Time (sec):	8	Average Delay (sec/veh):	12.5
Optimal Cycle:	90	Level Of Service:	B

****

Street Name:	Green Street						Tehachapi Boulevard					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Split Phase			Split Phase			Permitted			Permitted		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	6	6	6	6	6	6	6	6	6
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	0 0	0 0	0	0 1	0 0	1	0 1	0 1	0	0 1	0 1	0
Volume Module:												
Base Vol:	0	0	0	43	12	56	83	294	23	7	148	48
Growth Adj:	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04
Initial Bse:	0	0	0	45	12	58	86	306	24	7	154	50
Added Vol:	0	0	0	30	10	126	155	36	0	0	43	74
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	0	0	0	75	22	184	241	342	24	7	197	124
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
PHF Volume:	0	0	0	83	25	205	268	380	27	8	219	138
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	0	0	0	83	25	205	268	380	27	8	219	138
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	0	0	0	83	25	205	268	380	27	8	219	138
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	1.00	1.00	1.00	0.96	0.96	0.85	0.65	0.65	0.65	0.84	0.84	0.84
Lanes:	0.00	0.00	0.00	0.77	0.23	1.00	0.79	1.13	0.08	0.04	1.20	0.76
Final Sat.:	0	0	0	1402	422	1615	976	1382	97	71	1925	1211
Capacity Analysis Module:												
Vol/Sat:	0.00	0.00	0.00	0.06	0.06	0.13	0.27	0.27	0.27	0.11	0.11	0.11
Crit Moves:						****		****				
Green Time:	0.0	0.0	0.0	25.9	25.9	25.9	56.1	56.1	56.1	56.1	56.1	56.1
Volume/Cap:	0.00	0.00	0.00	0.21	0.21	0.44	0.44	0.44	0.44	0.18	0.18	0.18
Delay/Veh:	0.0	0.0	0.0	24.5	24.5	26.8	9.0	9.0	9.0	7.2	7.2	7.2
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	0.0	0.0	0.0	24.5	24.5	26.8	9.0	9.0	9.0	7.2	7.2	7.2
LOS by Move:	A	A	A	C	C	C	A	A	A	A	A	A
HCM2k95thQ:	0	0	0	5	5	10	10	10	10	5	5	5

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2000 HCM Operations Method (Future Volume Alternative)

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Intersection #3 Santa Lucia Street at Valley Boulevard (SR-202)

****

Cycle (sec):	90	Critical Vol./Cap.(X):	0.673
Loss Time (sec):	12	Average Delay (sec/veh):	17.1
Optimal Cycle:	90	Level Of Service:	B

****

Street Name:	Santa Lucia Street						Valley Boulevard (SR-202)					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Control:	Permitted			Permitted			Protected			Protected		
Rights:	Include			Include			Include			Include		
Min. Green:	6	6	6	6	6	6	6	6	6	6	6	6
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	0 0	1! 0	0	0 0	1! 0	0	1 0	0 1	0	1 0	0 1	0
Volume Module:												
Base Vol:	3	23	31	39	17	61	73	468	1	38	471	76
Growth Adj:	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04
Initial Bse:	3	24	32	41	18	63	76	487	1	40	490	79
Added Vol:	0	0	0	8	0	0	0	164	0	0	168	8
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	3	24	32	49	18	63	76	651	1	40	658	87
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
PHF Volume:	3	27	36	54	20	70	84	723	1	44	731	97
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	3	27	36	54	20	70	84	723	1	44	731	97
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	3	27	36	54	20	70	84	723	1	44	731	97
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.91	0.91	0.91	0.81	0.81	0.81	0.95	1.00	1.00	0.95	0.98	0.98
Lanes:	0.05	0.40	0.55	0.37	0.14	0.49	1.00	0.99	0.01	1.00	0.88	0.12
Final Sat.:	91	701	945	578	210	755	1805	1897	3	1805	1648	218
Capacity Analysis Module:												
Vol/Sat:	0.04	0.04	0.04	0.09	0.09	0.09	0.05	0.38	0.38	0.02	0.44	0.44
Crit Moves:					****		****				****	
Green Time:	12.5	12.5	12.5	12.5	12.5	12.5	6.2	55.8	55.8	9.8	59.3	59.3
Volume/Cap:	0.27	0.27	0.27	0.67	0.67	0.67	0.67	0.62	0.62	0.22	0.67	0.67
Delay/Veh:	35.3	35.3	35.3	45.0	45.0	45.0	54.4	11.5	11.5	37.3	10.9	10.9
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	35.3	35.3	35.3	45.0	45.0	45.0	54.4	11.5	11.5	37.3	10.9	10.9
LOS by Move:	D	D	D	D	D	D	D	B	B	D	B	B
HCM2k95thQ:	4	4	4	10	10	10	7	23	23	3	26	26

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2000 HCM Operations Method (Future Volume Alternative)

Intersection #5 Westwood Boulevard at Red Apple Avenue

Cycle (sec):	90	Critical Vol./Cap.(X):	0.944
Loss Time (sec):	12	Average Delay (sec/veh):	25.5
Optimal Cycle:	120	Level Of Service:	C

Street Name:	Westwood Boulevard						Red Apple Avenue					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Permitted			Protected			Split Phase			Split Phase		
Rights:		Ovl			Include			Include			Ovl	
Min. Green:	0	6	6	6	6	0	0	0	0	6	0	6
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	0 0	1 0	1	1 0	1 0	0	0 0	0 0	0	1 0	0 0	1
Volume Module:												
Base Vol:	0	44	119	330	31	0	0	0	0	178	0	530
Growth Adj:	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04
Initial Bse:	0	46	124	343	32	0	0	0	0	185	0	551
Added Vol:	0	0	61	154	0	0	0	0	0	63	0	154
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	0	46	185	497	32	0	0	0	0	248	0	705
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
PHF Volume:	0	51	205	552	36	0	0	0	0	276	0	784
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	0	51	205	552	36	0	0	0	0	276	0	784
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	0	51	205	552	36	0	0	0	0	276	0	784
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	1.00	1.00	0.85	0.95	1.00	1.00	1.00	1.00	1.00	0.95	1.00	0.85
Lanes:	0.00	1.00	1.00	1.00	1.00	0.00	0.00	0.00	0.00	1.00	0.00	1.00
Final Sat.:	0	1900	1615	1805	1900	0	0	0	0	1805	0	1615
Capacity Analysis Module:												
Vol/Sat:	0.00	0.03	0.13	0.31	0.02	0.00	0.00	0.00	0.00	0.15	0.00	0.49
Crit Moves:		****		****								****
Green Time:	0.0	6.0	50.1	27.9	33.8	0.0	0.0	0.0	0.0	44.1	0.0	72.0
Volume/Cap:	0.00	0.40	0.23	0.99	0.05	0.00	0.00	0.00	0.00	0.31	0.00	0.61
Delay/Veh:	0.0	42.4	10.2	66.0	17.9	0.0	0.0	0.0	0.0	14.0	0.0	4.3
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	0.0	42.4	10.2	66.0	17.9	0.0	0.0	0.0	0.0	14.0	0.0	4.3
LOS by Move:	A	D	B	E	B	A	A	A	A	B	A	A
HCM2k95thQ:	0	4	6	36	1	0	0	0	0	9	0	17

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2000 HCM Unsignalized Method (Future Volume Alternative)

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Intersection #6 Sierra Vista Drive at Valley Boulevard (SR-202)

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Average Delay (sec/veh): 0.1 Worst Case Level Of Service: C[23.2]

****

Street Name:	Sierra Vista Drive						Valley Boulevard (SR-202)					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Control:	Stop Sign			Stop Sign			Uncontrolled			Uncontrolled		
Rights:	Include			Include			Include			Include		
Lanes:	0 0	0 0	0	0 0	1! 0	0	0 1	0 0	0	0 0	0 1	0
Volume Module:												
Base Vol:	0	0	0	5	0	4	4	595	0	0	838	7
Growth Adj:	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04
Initial Bse:	0	0	0	5	0	4	4	619	0	0	872	7
Added Vol:	0	0	0	0	0	0	0	287	0	0	254	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	0	0	0	5	0	4	4	906	0	0	1126	7
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
PHF Volume:	0	0	0	6	0	5	5	1006	0	0	1251	8
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
FinalVolume:	0	0	0	6	0	5	5	1006	0	0	1251	8
Critical Gap Module:												
Critical Gp:	xxxxx	xxxx	xxxxx	6.4	6.5	6.2	4.1	xxxx	xxxxx	xxxxx	xxxx	xxxxx
FollowUpTim:	xxxxx	xxxx	xxxxx	3.5	4.0	3.3	2.2	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Capacity Module:												
Cnflict Vol:	xxxx	xxxx	xxxxx	2270	2270	1255	1259	xxxx	xxxxx	xxxx	xxxx	xxxxx
Potent Cap.:	xxxx	xxxx	xxxxx	45	41	212	559	xxxx	xxxxx	xxxx	xxxx	xxxxx
Move Cap.:	xxxx	xxxx	xxxxx	45	41	212	559	xxxx	xxxxx	xxxx	xxxx	xxxxx
Total Cap:	157	183	xxxxx	206	186	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
Volume/Cap:	xxxx	xxxx	xxxx	0.03	0.00	0.02	0.01	xxxx	xxxx	xxxx	xxxx	xxxx
Level Of Service Module:												
2Way95thQ:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	0.0	xxxx	xxxxx	xxxx	xxxx	xxxxx
Control Del:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	11.5	xxxx	xxxxx	xxxxx	xxxx	xxxxx
LOS by Move:	*	*	*	*	*	*	B	*	*	*	*	*
Movement:	LT -	LTR -	RT	LT -	LTR -	RT	LT -	LTR -	RT	LT -	LTR -	RT
Shared Cap.:	xxxx	xxxx	xxxxx	xxxx	208	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
SharedQueue:	xxxxx	xxxx	xxxxx	xxxxx	0.2	xxxxx	0.0	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Shrd ConDel:	xxxxx	xxxx	xxxxx	xxxxx	23.2	xxxxx	11.5	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Shared LOS:	*	*	*	*	C	*	B	*	*	*	*	*
ApproachDel:	xxxxxx				23.2		xxxxxx			xxxxxx		
ApproachLOS:	*				C		*			*		

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Note: Queue reported is the number of cars per lane.

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2000 HCM Unsignalized Method (Future Volume Alternative)

Intersection #7 Tehachapi Boulevard at SR-58 Eastbound Ramps

Average Delay (sec/veh): 0.0 Worst Case Level Of Service: A[8.8]

Street Name:	Tehachapi Boulevard						SR-58 Eastbound Ramps					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Control:	Uncontrolled			Uncontrolled			Stop Sign Ignore			Stop Sign Include		
Rights:	Include			Include								
Lanes:	0 0	0 1	0	0 1	0 0	0	1 0	0 0	1	0 0	0 0	0
Volume Module:												
Base Vol:	0	211	165	1	392	0	0	0	312	0	0	0
Growth Adj:	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04
Initial Bse:	0	219	172	1	408	0	0	0	324	0	0	0
Added Vol:	0	106	84	0	89	0	0	0	120	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	0	325	256	1	497	0	0	0	444	0	0	0
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
PHF Adj:	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.00	0.90	0.90	0.90
PHF Volume:	0	362	284	1	552	0	0	0	0	0	0	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
FinalVolume:	0	362	284	1	552	0	0	0	0	0	0	0
Critical Gap Module:												
Critical Gp:	xxxxx	xxxx	xxxxx	4.1	xxxx	xxxxx	6.4	xxxx	6.2	xxxxx	xxxx	xxxxx
FollowUpTim:	xxxxx	xxxx	xxxxx	2.2	xxxx	xxxxx	3.5	xxxx	3.3	xxxxx	xxxx	xxxxx
Capacity Module:												
Cnflict Vol:	xxxx	xxxx	xxxxx	646	xxxx	xxxxx	1058	xxxx	552	xxxx	xxxx	xxxxx
Potent Cap.:	xxxx	xxxx	xxxxx	949	xxxx	xxxxx	251	xxxx	537	xxxx	xxxx	xxxxx
Move Cap.:	xxxx	xxxx	xxxxx	949	xxxx	xxxxx	251	xxxx	537	xxxx	xxxx	xxxxx
Volume/Cap:	xxxx	xxxx	xxxx	0.00	xxxx	xxxx	0.00	xxxx	0.00	xxxx	xxxx	xxxx
Level Of Service Module:												
2Way95thQ:	xxxx	xxxx	xxxxx	0.0	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
Control Del:	xxxxx	xxxx	xxxxx	8.8	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
LOS by Move:	*	*	*	A	*	*	*	*	*	*	*	*
Movement:	LT -	LTR -	RT	LT -	LTR -	RT	LT -	LTR -	RT	LT -	LTR -	RT
Shared Cap.:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
SharedQueue:	xxxxx	xxxx	xxxxx	0.0	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Shrd ConDel:	xxxxx	xxxx	xxxxx	8.8	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Shared LOS:	*	*	*	A	*	*	*	*	*	*	*	*
ApproachDel:	xxxxxx			xxxxxx			xxxxxx			xxxxxx		
ApproachLOS:	*			*			*			*		

Note: Queue reported is the number of cars per lane.

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2000 HCM Operations Method (Future Volume Alternative)

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Intersection #8 Tehachapi Boulevard/Tucker Road at Red Apple Avenue/Tehachapi Bo

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Cycle (sec):	90	Critical Vol./Cap.(X):	0.730
Loss Time (sec):	16	Average Delay (sec/veh):	33.9
Optimal Cycle:	90	Level Of Service:	C

****

Street Name:	Tehachapi Boulevard/Tucker Road						Red Apple Avenue/Tehachapi Boulev					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L - T - R			L - T - R			L - T - R			L - T - R		
Control:	Protected			Protected			Protected			Protected		
Rights:	Include			Ovl			Include			Include		
Min. Green:	6	6	6	6	6	6	6	6	6	6	6	6
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	1 0	2 0	1	1 0	2 0	1	1 0	1 0	1	2 0	1 0	1
Volume Module:												
Base Vol:	175	182	159	93	341	205	72	220	112	243	240	57
Growth Adj:	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04
Initial Bse:	182	189	165	97	355	213	75	229	116	253	250	59
Added Vol:	60	139	46	29	144	36	28	116	63	49	109	23
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	242	328	211	126	499	249	103	345	179	302	359	82
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
PHF Volume:	269	365	235	140	554	277	114	383	199	335	398	91
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	269	365	235	140	554	277	114	383	199	335	398	91
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	269	365	235	140	554	277	114	383	199	335	398	91
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.95	0.95	0.85	0.95	0.95	0.85	0.95	1.00	0.85	0.92	1.00	0.85
Lanes:	1.00	2.00	1.00	1.00	2.00	1.00	1.00	1.00	1.00	2.00	1.00	1.00
Final Sat.:	1805	3610	1615	1805	3610	1615	1805	1900	1615	3502	1900	1615
Capacity Analysis Module:												
Vol/Sat:	0.15	0.10	0.15	0.08	0.15	0.17	0.06	0.20	0.12	0.10	0.21	0.06
Crit Moves:	****				****			****		****		
Green Time:	18.4	24.4	24.4	13.0	18.9	27.8	8.8	24.9	24.9	11.8	27.8	27.8
Volume/Cap:	0.73	0.37	0.54	0.54	0.73	0.56	0.64	0.73	0.45	0.73	0.68	0.18
Delay/Veh:	40.7	26.9	29.3	38.0	36.8	27.3	46.9	34.7	27.6	43.4	30.3	22.9
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	40.7	26.9	29.3	38.0	36.8	27.3	46.9	34.7	27.6	43.4	30.3	22.9
LOS by Move:	D	C	C	D	D	C	D	C	C	D	C	C
HCM2k95thQ:	16	9	12	9	17	13	8	20	10	12	20	4

****

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Level Of Service Computation Report
2000 HCM Unsignalized Method (Future Volume Alternative)

****
Intersection #9 Tucker Road at Conway Avenue/Walmart Project Driveway 2
****
Average Delay (sec/veh): 0.8 Worst Case Level Of Service: C[18.5]
****

Street Name:	Tucker Road						Conway Avenue/Walmart Project Dri					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Control:	Uncontrolled			Uncontrolled			Stop Sign			Stop Sign		
Rights:	Include			Include			Include			Include		
Lanes:	1 0	1 1	0	1 0	1 1	0	0 0	1! 0	0	0 0	1! 0	0
Volume Module:												
Base Vol:	22	659	0	0	869	52	44	1	29	0	0	0
Growth Adj:	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04
Initial Bse:	23	685	0	0	904	54	46	1	30	0	0	0
Added Vol:	0	383	8	8	405	0	0	0	0	8	0	6
PasserByVol:	0	0	0	0	0	0	-46	-1	47	-8	0	8
Initial Fut:	23	1068	8	8	1309	54	0	0	77	0	0	14
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.90	0.90	0.90	0.90	0.90	0.90	0.00	0.90	0.90	0.90	0.90	0.90
PHF Volume:	25	1187	9	9	1454	60	0	0	86	0	0	16
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
FinalVolume:	25	1187	9	9	1454	60	0	0	86	0	0	16
Critical Gap Module:												
Critical Gp:	4.1	xxxx	xxxxx	4.1	xxxx	xxxxx	7.5	6.5	6.9	7.5	6.5	6.9
FollowUpTim:	2.2	xxxx	xxxxx	2.2	xxxx	xxxxx	3.5	4.0	3.3	3.5	4.0	3.3
Capacity Module:												
Cnflict Vol:	1514	xxxx	xxxxx	1196	xxxx	xxxxx	2146	2749	757	1987	2774	598
Potent Cap.:	447	xxxx	xxxxx	591	xxxx	xxxxx	28	20	354	37	19	450
Move Cap.:	447	xxxx	xxxxx	591	xxxx	xxxxx	26	19	354	26	18	450
Volume/Cap:	0.06	xxxx	xxxx	0.02	xxxx	xxxx	0.00	0.00	0.24	0.00	0.00	0.03
Level Of Service Module:												
2Way95thQ:	0.2	xxxx	xxxxx	0.0	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
Control Del:	13.5	xxxx	xxxxx	11.2	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
LOS by Move:	B	*	*	B	*	*	*	*	*	*	*	*
Movement:	LT -	LTR -	RT	LT -	LTR -	RT	LT -	LTR -	RT	LT -	LTR -	RT
Shared Cap.:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	351	xxxxx	xxxx	450	xxxxx
SharedQueue:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	0.9	xxxxx	xxxxx	0.1	xxxxx
Shrd ConDel:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	18.5	xxxxx	xxxxx	13.3	xxxxx
Shared LOS:	*	*	*	*	*	*	*	C	*	*	B	*
ApproachDel:	xxxxxx			xxxxxx			18.5			13.3		
ApproachLOS:	*			*			C			B		

****
Note: Queue reported is the number of cars per lane.
****

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Level Of Service Computation Report
2000 HCM Operations Method (Future Volume Alternative)

Intersection #10 Tucker Road at Valley Boulevard (SR-202)

Cycle (sec):	90	Critical Vol./Cap.(X):	0.706
Loss Time (sec):	16	Average Delay (sec/veh):	31.7
Optimal Cycle:	90	Level Of Service:	C

Street Name:	Tucker Road						Valley Boulevard (SR-202)					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L - T - R			L - T - R			L - T - R			L - T - R		
Control:	Protected			Protected			Protected			Protected		
Rights:	Include			Ovl			Include			Ovl		
Min. Green:	6	6	6	6	6	6	6	6	6	6	6	6
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	1 0 1	1 0		2 0 2	0 1		2 0 1	0 1		1 0 2	0 1	
Volume Module:												
Base Vol:	184	214	147	180	234	282	293	248	85	130	241	136
Growth Adj:	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04
Initial Bse:	191	223	153	187	243	293	305	258	88	135	251	141
Added Vol:	29	60	14	166	83	186	195	46	45	21	36	147
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	220	283	167	353	326	479	500	304	133	156	287	288
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
PHF Volume:	245	314	185	392	363	533	555	338	148	174	318	320
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	245	314	185	392	363	533	555	338	148	174	318	320
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	245	314	185	392	363	533	555	338	148	174	318	320
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.95	0.90	0.90	0.92	0.95	0.85	0.92	1.00	0.85	0.95	0.95	0.85
Lanes:	1.00	1.26	0.74	2.00	2.00	1.00	2.00	1.00	1.00	1.00	2.00	1.00
Final Sat.:	1805	2142	1265	3502	3610	1615	3502	1900	1615	1805	3610	1615
Capacity Analysis Module:												
Vol/Sat:	0.14	0.15	0.15	0.11	0.10	0.33	0.16	0.18	0.09	0.10	0.09	0.20
Crit Moves:	****					****		****		****		
Green Time:	17.3	22.2	22.2	16.9	21.8	44.2	22.4	22.6	22.6	12.3	12.5	29.4
Volume/Cap:	0.71	0.60	0.60	0.60	0.41	0.67	0.64	0.71	0.36	0.71	0.64	0.61
Delay/Veh:	40.5	31.1	31.1	34.9	29.0	19.6	31.7	35.4	28.3	46.2	39.3	27.5
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	40.5	31.1	31.1	34.9	29.0	19.6	31.7	35.4	28.3	46.2	39.3	27.5
LOS by Move:	D	C	C	C	C	B	C	D	C	D	D	C
HCM2k95thQ:	15	14	14	12	9	22	15	18	7	12	11	15

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Level Of Service Computation Report
2000 HCM Unsignalized Method (Future Volume Alternative)

****

Intersection #12 Mountain View Avenue at Valley Boulevard (SR-202)

****

Average Delay (sec/veh): 2.2 Worst Case Level Of Service: C[19.8]

****

Street Name:	Mountain View Avenue						Valley Boulevard (SR-202)					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Control:	Stop Sign			Stop Sign			Uncontrolled			Uncontrolled		
Rights:	Include			Include			Include			Include		
Lanes:	0 0	0 0	0	0 0	1! 0	0	1 0	1 0	0	0 0	1 0	1
Volume Module:												
Base Vol:	0	0	0	17	0	103	68	434	0	0	398	17
Growth Adj:	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04
Initial Bse:	0	0	0	18	0	107	71	451	0	0	414	18
Added Vol:	0	0	0	6	0	2	1	227	0	0	205	3
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	0	0	0	24	0	109	72	678	0	0	619	21
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
PHF Volume:	0	0	0	26	0	121	80	754	0	0	688	23
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
FinalVolume:	0	0	0	26	0	121	80	754	0	0	688	23
Critical Gap Module:												
Critical Gp:	xxxxx	xxxx	xxxxx	6.4	6.5	6.2	4.1	xxxx	xxxxx	xxxxx	xxxx	xxxxx
FollowUpTim:	xxxxx	xxxx	xxxxx	3.5	4.0	3.3	2.2	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Capacity Module:												
Cnflict Vol:	xxxx	xxxx	xxxxx	1601	1601	688	711	xxxx	xxxxx	xxxx	xxxx	xxxxx
Potent Cap.:	xxxx	xxxx	xxxxx	118	107	450	898	xxxx	xxxxx	xxxx	xxxx	xxxxx
Move Cap.:	xxxx	xxxx	xxxxx	110	98	450	898	xxxx	xxxxx	xxxx	xxxx	xxxxx
Total Cap:	137	198	xxxxx	240	215	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
Volume/Cap:	xxxx	xxxx	xxxx	0.11	0.00	0.27	0.09	xxxx	xxxx	xxxx	xxxx	xxxx
Level Of Service Module:												
2Way95thQ:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	0.3	xxxx	xxxxx	xxxx	xxxx	xxxxx
Control Del:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	9.4	xxxx	xxxxx	xxxxx	xxxx	xxxxx
LOS by Move:	*	*	*	*	*	*	A	*	*	*	*	*
Movement:	LT -	LTR -	RT	LT -	LTR -	RT	LT -	LTR -	RT	LT -	LTR -	RT
Shared Cap.:	xxxx	xxxx	xxxxx	xxxx	389	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
SharedQueue:	xxxxx	xxxx	xxxxx	xxxxx	1.7	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Shrd ConDel:	xxxxx	xxxx	xxxxx	xxxxx	19.8	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Shared LOS:	*	*	*	*	C	*	*	*	*	*	*	*
ApproachDel:	xxxxxx				19.8		xxxxxx			xxxxxx		
ApproachLOS:	*				C		*			*		

****

Note: Queue reported is the number of cars per lane.

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Level Of Service Computation Report
2000 HCM Operations Method (Future Volume Alternative)

Intersection #19 Green Street at Tehachapi Boulevard

Cycle (sec):	90	Critical Vol./Cap.(X):	0.709
Loss Time (sec):	8	Average Delay (sec/veh):	19.0
Optimal Cycle:	90	Level Of Service:	B

Street Name:	Green Street						Tehachapi Boulevard					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Split Phase			Split Phase			Permitted			Permitted		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	6	6	6	6	6	6	6	6	6
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	0 0	0	0 0	0 1	0	0 1	0 1	0	1 0	0 1	0	1 0
Volume Module:												
Base Vol:	0	0	0	51	41	225	158	307	74	42	224	37
Growth Adj:	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04
Initial Bse:	0	0	0	53	43	234	164	319	77	44	233	38
Added Vol:	0	0	0	62	25	168	131	67	0	0	65	46
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	0	0	0	115	68	402	295	386	77	44	298	84
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
PHF Volume:	0	0	0	128	75	447	328	429	86	49	331	94
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	0	0	0	128	75	447	328	429	86	49	331	94
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	0	0	0	128	75	447	328	429	86	49	331	94
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	1.00	1.00	1.00	0.97	0.97	0.85	0.60	0.60	0.60	0.75	0.75	0.75
Lanes:	0.00	0.00	0.00	0.63	0.37	1.00	0.78	1.02	0.20	0.20	1.40	0.40
Final Sat.:	0	0	0	1161	682	1615	887	1161	231	291	1986	563
Capacity Analysis Module:												
Vol/Sat:	0.00	0.00	0.00	0.11	0.11	0.28	0.37	0.37	0.37	0.17	0.17	0.17
Crit Moves:						****		****				
Green Time:	0.0	0.0	0.0	35.1	35.1	35.1	46.9	46.9	46.9	46.9	46.9	46.9
Volume/Cap:	0.00	0.00	0.00	0.28	0.28	0.71	0.71	0.71	0.71	0.32	0.32	0.32
Delay/Veh:	0.0	0.0	0.0	19.0	19.0	26.9	18.4	18.4	18.4	12.5	12.5	12.5
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	0.0	0.0	0.0	19.0	19.0	26.9	18.4	18.4	18.4	12.5	12.5	12.5
LOS by Move:	A	A	A	B	B	C	B	B	B	B	B	B
HCM2k95thQ:	0	0	0	8	8	21	20	20	20	8	8	8

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APPENDIX E

GENERAL PLAN BUILDOUT TRAFFIC COUNT DATA

APPENDIX E-I

INTERSECTION COUNTS

Level Of Service Computation Report
2000 HCM Operations Method (Future Volume Alternative)

****

Intersection #1 Woodford Tehahcapi/Valley Blvd

****

Cycle (sec):	100	Critical Vol./Cap.(X):	0.580
Loss Time (sec):	0 (Y+R=4.0 sec)	Average Delay (sec/veh):	23.0
Optimal Cycle:	54	Level Of Service:	C

****

Street Name:	Woodford Tehachapi						Valley Blvd					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L - T - R			L - T - R			L - T - R			L - T - R		
Control:	Protected			Protected			Protected			Protected		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	0 0	1! 0	0	1 0	0 1	0	1 0	0 1	0	1 0	1 0	1
Volume Module:												
Base Vol:	9	27	36	193	27	53	96	393	9	30	247	88
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	9	27	36	193	27	53	96	393	9	30	247	88
Added Vol:	134	0	13	0	0	0	0	339	42	40	1129	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	143	27	49	193	27	53	96	732	51	70	1376	88
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	0.45	0.45	0.45	0.45	0.45	0.45
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	143	27	49	193	27	53	43	329	23	32	619	40
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	143	27	49	193	27	53	43	329	23	32	619	40
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	143	27	49	193	27	53	43	329	23	32	619	40
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.94	0.94	0.94	0.95	0.90	0.90	0.95	0.99	0.99	0.95	1.00	0.85
Lanes:	0.66	0.12	0.22	1.00	0.34	0.66	1.00	0.93	0.07	1.00	1.00	1.00
Final Sat.:	1165	220	399	1805	578	1134	1805	1758	123	1805	1900	1615
Capacity Analysis Module:												
Vol/Sat:	0.12	0.12	0.12	0.11	0.05	0.05	0.02	0.19	0.19	0.02	0.33	0.02
Crit Moves:		****		****			****				****	
Green/Cycle:	0.29	0.21	0.21	0.18	0.11	0.11	0.04	0.55	0.55	0.05	0.56	0.56
Volume/Cap:	0.43	0.58	0.58	0.58	0.43	0.43	0.58	0.34	0.34	0.34	0.58	0.04
Uniform Del:	29.0	35.4	35.4	37.2	41.6	41.6	47.1	12.3	12.3	45.8	14.2	9.8
IncremntDel:	0.6	2.3	2.3	2.6	1.6	1.6	10.9	0.2	0.2	2.2	0.8	0.0
InitQueuDel:	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Delay Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Delay/Veh:	29.5	37.7	37.7	39.8	43.2	43.2	58.0	12.5	12.5	48.0	15.0	9.8
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	29.5	37.7	37.7	39.8	43.2	43.2	58.0	12.5	12.5	48.0	15.0	9.8
LOS by Move:	C	D	D	D	D	D	E	B	B	D	B	A
HCM2kAvgQ:	6	7	7	6	3	3	2	6	6	1	13	1

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Level Of Service Computation Report
2000 HCM Operations Method (Future Volume Alternative)

Intersection #3 Tucker Rd/Valley Blvd

Cycle (sec):	100	Critical Vol./Cap.(X):	0.592
Loss Time (sec):	0 (Y+R=4.0 sec)	Average Delay (sec/veh):	28.0
Optimal Cycle:	56	Level Of Service:	C

Street Name:	Tucker Rd						Valley Blvd					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L - T - R			L - T - R			L - T - R			L - T - R		
Control:	Protected			Protected			Protected			Protected		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	1 0	1 1	0	1 0	2 1	0	1 0	1 0	1	1 0	1 0	1
Volume Module:												
Base Vol:	76	109	29	31	66	213	392	421	35	44	250	46
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	76	109	29	31	66	213	392	421	35	44	250	46
Added Vol:	37	47	174	93	20	40	36	363	12	239	1030	63
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	113	156	203	124	86	253	428	784	47	283	1280	109
User Adj:	0.80	0.80	0.80	0.80	0.80	0.80	0.45	0.45	0.45	0.45	0.45	0.45
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	90	125	162	99	69	202	193	353	21	127	576	49
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	90	125	162	99	69	202	193	353	21	127	576	49
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	90	125	162	99	69	202	193	353	21	127	576	49
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.95	0.87	0.87	0.95	0.81	0.81	0.95	1.00	0.85	0.95	1.00	0.85
Lanes:	1.00	1.00	1.00	1.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Sat.:	1805	1652	1652	1805	3071	1535	1805	1900	1615	1805	1900	1615
Capacity Analysis Module:												
Vol/Sat:	0.05	0.08	0.10	0.05	0.02	0.13	0.11	0.19	0.01	0.07	0.30	0.03
Crit Moves:	****					****	****				****	
Green/Cycle:	0.08	0.20	0.20	0.11	0.22	0.22	0.18	0.50	0.50	0.19	0.51	0.51
Volume/Cap:	0.59	0.38	0.50	0.50	0.10	0.59	0.59	0.37	0.03	0.37	0.59	0.06
Uniform Del:	44.1	34.9	35.7	41.9	30.9	34.8	37.6	15.2	12.6	35.2	17.1	12.3
IncremntDel:	6.1	0.3	0.7	2.0	0.0	2.1	2.9	0.2	0.0	0.7	1.0	0.0
InitQueuDel:	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Delay Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Delay/Veh:	50.2	35.2	36.4	43.9	30.9	36.9	40.5	15.5	12.6	35.9	18.0	12.3
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	50.2	35.2	36.4	43.9	30.9	36.9	40.5	15.5	12.6	35.9	18.0	12.3
LOS by Move:	D	D	D	D	C	D	D	B	B	D	B	B
HCM2kAvgQ:	4	4	5	4	1	7	6	7	0	4	13	1

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Level Of Service Computation Report
2000 HCM 4-Way Stop Method (Future Volume Alternative)

Intersection #5 Green St/Tehachapi Blvd

Cycle (sec):	100	Critical Vol./Cap.(X):	0.329
Loss Time (sec):	0 (Y+R=4.0 sec)	Average Delay (sec/veh):	10.0
Optimal Cycle:	0	Level Of Service:	B

Street Name:	Green St						Tehachapi Blvd					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Control:	Stop Sign			Stop Sign			Stop Sign			Stop Sign		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	0 1	0 0	1	0 1	0 0	1	0 1	0 1	0	0 1	0 1	0
Volume Module:												
Base Vol:	0	0	0	42	9	57	90	287	24	4	185	65
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	0	0	0	42	9	57	90	287	24	4	185	65
Added Vol:	0	0	0	0	0	0	0	575	0	0	535	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	0	0	0	42	9	57	90	862	24	4	720	65
User Adj:	1.15	1.15	1.15	1.15	1.15	1.15	0.45	0.45	0.45	0.45	0.45	0.45
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	0	0	0	48	10	66	41	388	11	2	324	29
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	0	0	0	48	10	66	41	388	11	2	324	29
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	0	0	0	48	10	66	41	388	11	2	324	29
Saturation Flow Module:												
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	0.00	1.00	1.00	0.82	0.18	1.00	0.18	1.77	0.05	0.01	1.83	0.16
Final Sat.:	0	510	566	418	90	602	123	1192	34	7	1225	112
Capacity Analysis Module:												
Vol/Sat:	xxxx	0.00	0.00	0.12	0.12	0.11	0.33	0.33	0.32	0.27	0.26	0.26
Crit Moves:		****		****			****			****		
Delay/Veh:	0.0	0.0	0.0	10.1	10.1	8.9	10.5	10.4	10.3	9.9	9.8	9.7
Delay Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	0.0	0.0	0.0	10.1	10.1	8.9	10.5	10.4	10.3	9.9	9.8	9.7
LOS by Move:	*	*	*	B	B	A	B	B	B	A	A	A
ApproachDel:	xxxxxx			9.5			10.4			9.8		
Delay Adj:	xxxxx			1.00			1.00			1.00		
ApprAdjDel:	xxxxxx			9.5			10.4			9.8		
LOS by Appr:	*			A			B			A		
AllWayAvgQ:	0.0	0.0	0.0	0.1	0.1	0.1	0.5	0.4	0.4	0.3	0.3	0.3

Note: Queue reported is the number of cars per lane.

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Level Of Service Computation Report
2000 HCM Operations Method (Future Volume Alternative)

Intersection #6 Curry St/Valley Blvd

Cycle (sec):	100	Critical Vol./Cap.(X):	0.486
Loss Time (sec):	0 (Y+R=4.0 sec)	Average Delay (sec/veh):	21.4
Optimal Cycle:	44	Level Of Service:	C

Street Name:	Curry St						Valley Blvd					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Protected			Protected			Protected			Protected		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	1 0 1	0	1	1 0 1	0	1	1 0 1	1	0	1 0 1	0	1
Volume Module:												
Base Vol:	61	76	170	49	61	14	42	356	31	84	238	34
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	61	76	170	49	61	14	42	356	31	84	238	34
Added Vol:	0	103	0	39	32	424	289	557	0	0	885	130
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	61	179	170	88	93	438	331	913	31	84	1123	164
User Adj:	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	27	81	77	40	42	197	149	411	14	38	505	74
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	27	81	77	40	42	197	149	411	14	38	505	74
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	27	81	77	40	42	197	149	411	14	38	505	74
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.95	1.00	0.85	0.95	1.00	0.85	0.95	0.95	0.95	0.95	1.00	0.85
Lanes:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.93	0.07	1.00	1.00	1.00
Final Sat.:	1805	1900	1615	1805	1900	1615	1805	3474	118	1805	1900	1615
Capacity Analysis Module:												
Vol/Sat:	0.02	0.04	0.05	0.02	0.02	0.12	0.08	0.12	0.12	0.02	0.27	0.05
Crit Moves:	****					****	****				****	
Green/Cycle:	0.03	0.19	0.19	0.09	0.25	0.25	0.17	0.61	0.61	0.11	0.55	0.55
Volume/Cap:	0.49	0.22	0.25	0.25	0.09	0.49	0.49	0.19	0.19	0.19	0.49	0.08
Uniform Del:	47.6	34.0	34.2	42.4	28.7	31.9	37.6	8.6	8.6	40.6	13.9	10.7
IncremntDel:	6.4	0.3	0.4	0.8	0.1	0.9	1.2	0.0	0.0	0.5	0.4	0.0
InitQueuDel:	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Delay Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Delay/Veh:	54.1	34.3	34.6	43.2	28.7	32.8	38.8	8.7	8.7	41.1	14.3	10.8
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	54.1	34.3	34.6	43.2	28.7	32.8	38.8	8.7	8.7	41.1	14.3	10.8
LOS by Move:	D	C	C	D	C	C	D	A	A	D	B	B
HCM2kAvgQ:	2	2	2	1	1	6	5	3	3	1	10	1

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AM General Plan Buildout Plus Project
Walmart, Tehachapi
Linscott, Law and Greenspan, Engineers

Level Of Service Computation Report
2000 HCM Unsignalized Method (Future Volume Alternative)

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Intersection #7 Tehachapi Boulevard at SR-58 Eastbound Ramps

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Average Delay (sec/veh): 1.5 Worst Case Level Of Service: B[10.8]

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Street Name:	Tehachapi Boulevard									SR-58 Eastbound Ramps												
Approach:	North Bound					South Bound					East Bound					West Bound						
Movement:	L	-	T	-	R	L	-	T	-	R	L	-	T	-	R	L	-	T	-	R		
Control:	Uncontrolled					Uncontrolled					Stop Sign					Stop Sign						
Rights:	Include					Include					Include					Include						
Lanes:	0	0	0	1	0	0	0	1	0	0	0	1	0	0	1	0	0	0	0	0		
Volume Module:																						
Base Vol:	0	364		224		0	145		0		0	1		82		0	0		0			
Growth Adj:	1.21	1.21		1.21		1.21	1.21		1.21		1.21	1.21		1.21		1.21	1.21		1.21			
Initial Bse:	0	440		271		0	175		0		0	1		99		0	0		0			
Added Vol:	0	99		69		0	65		0		0	0		76		0	0		0			
PasserByVol:	0	0		0		0	0		0		0	0		0		0	0		0			
Initial Fut:	0	539		340		0	240		0		0	1		175		0	0		0			
User Adj:	1.00	1.00		1.00		1.00	1.00		1.00		1.00	1.00		1.00		1.00	1.00		1.00			
PHF Adj:	1.00	1.00		1.00		1.00	1.00		1.00		1.00	1.00		1.00		1.00	1.00		1.00			
PHF Volume:	0	539		340		0	240		0		0	1		175		0	0		0			
Reduct Vol:	0	0		0		0	0		0		0	0		0		0	0		0			
FinalVolume:	0	539		340		0	240		0		0	1		175		0	0		0			
Critical Gap Module:																						
Critical Gp:	xxxxx	xxxx		xxxxx		xxxxx	xxxx		xxxxx		6.4	6.5		6.2		xxxxx	xxxx		xxxxx			
FollowUpTim:	xxxxx	xxxx		xxxxx		xxxxx	xxxx		xxxxx		3.5	4.0		3.3		xxxxx	xxxx		xxxxx			
Capacity Module:																						
Cnflict Vol:	xxxx	xxxx		xxxxx		xxxx	xxxx		xxxxx		950	1120		240		xxxx	xxxx		xxxxx			
Potent Cap.:	xxxx	xxxx		xxxxx		xxxx	xxxx		xxxxx		291	208		803		xxxx	xxxx		xxxxx			
Move Cap.:	xxxx	xxxx		xxxxx		xxxx	xxxx		xxxxx		291	208		803		xxxx	xxxx		xxxxx			
Volume/Cap:	xxxx	xxxx		xxxx		xxxx	xxxx		xxxx		0.00	0.01		0.22		xxxx	xxxx		xxxx			
Level Of Service Module:																						
2Way95thQ:	xxxx	xxxx		xxxxx		xxxx	xxxx		xxxxx		xxxx	xxxx		0.8		xxxx	xxxx		xxxxx			
Control Del:	xxxxx	xxxx		xxxxx		xxxxx	xxxx		xxxxx		xxxxx	xxxx		10.7		xxxxx	xxxx		xxxxx			
LOS by Move:	*	*		*		*	*		*		*	*		B		*	*		*			
Movement:	LT	-	LTR	-	RT	LT	-	LTR	-	RT	LT	-	LTR	-	RT	LT	-	LTR	-	RT		
Shared Cap.:	xxxx	xxxx		xxxxx		xxxx	xxxx		xxxxx		208	xxxx		xxxxx		xxxx	xxxx		xxxxx			
SharedQueue:	xxxxx	xxxx		xxxxx		xxxxx	xxxx		xxxxx		0.0	xxxx		xxxxx		xxxxx	xxxx		xxxxx			
Shrd ConDel:	xxxxx	xxxx		xxxxx		xxxxx	xxxx		xxxxx		22.4	xxxx		xxxxx		xxxxx	xxxx		xxxxx			
Shared LOS:	*	*		*		*	*		*		C	*		*		*	*		*			
ApproachDel:	xxxxxx					xxxxxx						10.8					xxxxxx					
ApproachLOS:		*					*					B						*				

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Note: Queue reported is the number of cars per lane.

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AM General Plan Buildout Plus Project
Walmart, Tehachapi
Linscott, Law and Greenspan, Engineers

Level Of Service Computation Report
2000 HCM Operations Method (Future Volume Alternative)

Intersection #8 Tehachapi Boulevard/Tucker Road at Red Apple Avenue/Tehachapi Bo

Cycle (sec):	90	Critical Vol./Cap.(X):	0.629
Loss Time (sec):	16 (Y+R=4.0 sec)	Average Delay (sec/veh):	30.9
Optimal Cycle:	90	Level Of Service:	C

Street Name: Tehachapi Boulevard/Tucker Road Red Apple Avenue/Tehachapi Boulev

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Control:	Protected			Protected			Protected			Protected		
Rights:	Include			Include			Include			Include		
Min. Green:	6	6	6	6	6	6	6	6	6	6	6	6
Lanes:	1 0	2 0	1	1 0	2 0	1	1 0	1 0	1	1 0	1 0	1
Volume Module:												
Base Vol:	50	330	92	39	154	28	163	293	92	76	113	76
Growth Adj:	1.21	1.21	1.21	1.21	1.21	1.21	1.21	1.21	1.21	1.21	1.21	1.21
Initial Bse:	61	399	111	47	186	34	197	355	111	92	137	92
Added Vol:	43	135	46	37	82	22	16	87	34	71	86	17
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	104	534	157	84	268	56	213	442	145	163	223	109
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	104	534	157	84	268	56	213	442	145	163	223	109
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	104	534	157	84	268	56	213	442	145	163	223	109
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	104	534	157	84	268	56	213	442	145	163	223	109
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.95	0.95	0.85	0.95	0.95	0.85	0.95	1.00	0.85	0.95	1.00	0.85
Lanes:	1.00	2.00	1.00	1.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Sat.:	1805	3610	1615	1805	3610	1615	1805	1900	1615	1805	1900	1615
Capacity Analysis Module:												
Vol/Sat:	0.06	0.15	0.10	0.05	0.07	0.03	0.12	0.23	0.09	0.09	0.12	0.07
Crit Moves:		****		****				****		****		
Green Time:	13.2	21.2	21.2	6.7	14.7	14.7	23.2	33.2	33.2	12.9	23.0	23.0
Volume/Cap:	0.39	0.63	0.41	0.63	0.46	0.21	0.46	0.63	0.24	0.63	0.46	0.26
Delay/Veh:	35.8	32.4	29.9	49.7	34.6	33.1	28.9	25.2	19.9	41.2	28.9	27.1
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	35.8	32.4	29.9	49.7	34.6	33.1	28.9	25.2	19.9	41.2	28.9	27.1
LOS by Move:	D	C	C	D	C	C	C	C	B	D	C	C
HCM2k95thQ:	6	15	8	7	8	3	10	20	6	10	11	5

Note: Queue reported is the number of cars per lane.

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Level Of Service Computation Report
2000 HCM Operations Method (Future Volume Alternative)

Intersection #1 Woodford Tehahcapi/Valley Blvd

Cycle (sec):	100	Critical Vol./Cap.(X):	0.627
Loss Time (sec):	0 (Y+R=4.0 sec)	Average Delay (sec/veh):	18.9
Optimal Cycle:	61	Level Of Service:	B

Street Name:	Woodford Tehachapi						Valley Blvd					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L - T - R			L - T - R			L - T - R			L - T - R		
Control:	Protected			Protected			Protected			Protected		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	0 0	1! 0	0	1 0	0 1	0	1 0	0 1	0	1 0	1 0	1
Volume Module:												
Base Vol:	9	34	43	118	17	53	92	411	2	31	433	109
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	9	34	43	118	17	53	92	411	2	31	433	109
Added Vol:	85	0	45	0	0	0	0	1209	147	26	689	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	94	34	88	118	17	53	92	1620	149	57	1122	109
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	0.45	0.45	0.45	0.45	0.45	0.45
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	94	34	88	118	17	53	41	729	67	26	505	49
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	94	34	88	118	17	53	41	729	67	26	505	49
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	94	34	88	118	17	53	41	729	67	26	505	49
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.93	0.93	0.93	0.95	0.89	0.89	0.95	0.99	0.99	0.95	1.00	0.85
Lanes:	0.43	0.16	0.41	1.00	0.24	0.76	1.00	0.92	0.08	1.00	1.00	1.00
Final Sat.:	765	277	716	1805	409	1275	1805	1717	158	1805	1900	1615
Capacity Analysis Module:												
Vol/Sat:	0.12	0.12	0.12	0.07	0.04	0.04	0.02	0.42	0.42	0.01	0.27	0.03
Crit Moves:		****		****				****		****		
Green/Cycle:	0.22	0.20	0.20	0.10	0.08	0.08	0.06	0.68	0.68	0.02	0.64	0.64
Volume/Cap:	0.55	0.63	0.63	0.63	0.55	0.55	0.41	0.63	0.63	0.63	0.41	0.05
Uniform Del:	34.3	36.8	36.8	42.9	44.5	44.5	45.6	9.1	9.1	48.4	8.6	6.5
IncremntDel:	1.6	3.6	3.6	6.5	4.9	4.9	2.7	1.0	1.0	27.0	0.2	0.0
InitQueuDel:	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Delay Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Delay/Veh:	35.9	40.5	40.5	49.5	49.5	49.5	48.4	10.1	10.1	75.4	8.9	6.5
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	35.9	40.5	40.5	49.5	49.5	49.5	48.4	10.1	10.1	75.4	8.9	6.5
LOS by Move:	D	D	D	D	D	D	D	B	B	E	A	A
HCM2kAvgQ:	6	7	7	5	3	3	2	14	14	2	7	1

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Level Of Service Computation Report
2000 HCM Operations Method (Future Volume Alternative)

Intersection #3 Tucker Rd/Valley Blvd

Cycle (sec):	100	Critical Vol./Cap.(X):	0.843
Loss Time (sec):	0 (Y+R=4.0 sec)	Average Delay (sec/veh):	37.1
Optimal Cycle:	146	Level Of Service:	D

Street Name:	Tucker Rd						Valley Blvd					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Protected			Protected			Protected			Protected		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	1 0	1 1	0	1 0	2 1	0	1 0	1 0	1	1 0	1 0	1
Volume Module:												
Base Vol:	345	191	85	198	369	428	219	334	68	136	343	61
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	345	191	85	198	369	428	219	334	68	136	343	61
Added Vol:	23	35	287	91	54	50	51	1120	41	247	683	111
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	368	226	372	289	423	478	270	1454	109	383	1026	172
User Adj:	0.80	0.80	0.80	0.80	0.80	0.80	0.45	0.45	0.45	0.45	0.45	0.45
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	294	181	298	231	338	382	122	654	49	172	462	77
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	294	181	298	231	338	382	122	654	49	172	462	77
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	294	181	298	231	338	382	122	654	49	172	462	77
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.95	0.86	0.86	0.95	0.84	0.84	0.95	1.00	0.85	0.95	1.00	0.85
Lanes:	1.00	1.00	1.00	1.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Sat.:	1805	1637	1637	1805	3181	1591	1805	1900	1615	1805	1900	1615
Capacity Analysis Module:												
Vol/Sat:	0.16	0.11	0.18	0.13	0.11	0.24	0.07	0.34	0.03	0.10	0.24	0.05
Crit Moves:	****					****		****		****		
Green/Cycle:	0.19	0.28	0.28	0.20	0.29	0.29	0.11	0.41	0.41	0.11	0.41	0.41
Volume/Cap:	0.84	0.39	0.65	0.65	0.37	0.84	0.59	0.84	0.07	0.84	0.59	0.12
Uniform Del:	38.9	29.1	31.6	36.9	28.6	33.6	42.2	26.7	18.1	43.5	23.1	18.4
IncremntDel:	16.8	0.2	2.0	4.1	0.1	7.7	4.7	8.4	0.0	26.0	1.3	0.1
InitQueuDel:	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Delay Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Delay/Veh:	55.7	29.3	33.6	41.0	28.7	41.3	46.9	35.1	18.1	69.4	24.4	18.5
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	55.7	29.3	33.6	41.0	28.7	41.3	46.9	35.1	18.1	69.4	24.4	18.5
LOS by Move:	E	C	C	D	C	D	D	D	B	E	C	B
HCM2kAvgQ:	11	5	9	8	5	15	5	21	1	8	11	1

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Level Of Service Computation Report
2000 HCM 4-Way Stop Method (Future Volume Alternative)

Intersection #5 Green St/Tehachapi Blvd

Cycle (sec):	100	Critical Vol./Cap.(X):	0.464
Loss Time (sec):	0 (Y+R=4.0 sec)	Average Delay (sec/veh):	13.6
Optimal Cycle:	0	Level Of Service:	B

Street Name:	Green St						Tehachapi Blvd					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L - T - R			L - T - R			L - T - R			L - T - R		
Control:	Stop Sign			Stop Sign			Stop Sign			Stop Sign		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	0 1	0 0	1	0 1	0 0	1	0 1	0 1	0	0 1	0 1	0
Volume Module:												
Base Vol:	0	0	0	62	29	210	147	252	48	17	340	47
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	0	0	0	62	29	210	147	252	48	17	340	47
Added Vol:	0	0	0	0	0	0	0	695	0	0	730	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	0	0	0	62	29	210	147	947	48	17	1070	47
User Adj:	1.15	1.15	1.15	1.15	1.15	1.15	0.45	0.45	0.45	0.45	0.45	0.45
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	0	0	0	71	33	241	66	426	22	8	482	21
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	0	0	0	71	33	241	66	426	22	8	482	21
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	0	0	0	71	33	242	66	426	22	8	482	21
Saturation Flow Module:												
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	0.00	1.00	1.00	0.68	0.32	1.00	0.26	1.66	0.08	0.03	1.89	0.08
Final Sat.:	0	431	471	325	152	557	143	933	48	17	1067	47
Capacity Analysis Module:												
Vol/Sat:	xxxx	0.00	0.00	0.22	0.22	0.43	0.46	0.46	0.45	0.45	0.45	0.45
Crit Moves:		****				****	****			****		
Delay/Veh:	0.0	0.0	0.0	11.8	11.8	13.2	14.2	13.9	13.6	13.8	13.7	13.6
Delay Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	0.0	0.0	0.0	11.8	11.8	13.2	14.2	13.9	13.6	13.8	13.7	13.6
LOS by Move:	*	*	*	B	B	B	B	B	B	B	B	B
ApproachDel:	xxxxxx			12.8			13.9			13.7		
Delay Adj:	xxxxx			1.00			1.00			1.00		
ApprAdjDel:	xxxxxx			12.8			13.9			13.7		
LOS by Appr:	*			B			B			B		
AllWayAvgQ:	0.0	0.0	0.0	0.3	0.3	0.7	0.8	0.8	0.8	0.8	0.7	0.7

Note: Queue reported is the number of cars per lane.

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Level Of Service Computation Report
2000 HCM Operations Method (Future Volume Alternative)

Intersection #6 Curry St/Valley Blvd

Cycle (sec):	100	Critical Vol./Cap.(X):	0.564
Loss Time (sec):	0 (Y+R=4.0 sec)	Average Delay (sec/veh):	23.6
Optimal Cycle:	52	Level Of Service:	C

Street Name:	Curry St						Valley Blvd					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L - T - R			L - T - R			L - T - R			L - T - R		
Control:	Protected			Protected			Protected			Protected		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	1 0	1 0	1	1 0	1 0	1	1 0	1 1	0	1 0	1 0	1
Volume Module:												
Base Vol:	110	100	40	22	166	120	85	145	115	48	186	29
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	110	100	40	22	166	120	85	145	115	48	186	29
Added Vol:	0	65	0	139	113	418	504	1042	0	0	828	80
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	110	165	40	161	279	538	589	1187	115	48	1014	109
User Adj:	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	50	74	18	72	126	242	265	534	52	22	456	49
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	50	74	18	72	126	242	265	534	52	22	456	49
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	50	74	18	72	126	242	265	534	52	22	456	49
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.95	1.00	0.85	0.95	1.00	0.85	0.95	0.94	0.94	0.95	1.00	0.85
Lanes:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.82	0.18	1.00	1.00	1.00
Final Sat.:	1805	1900	1615	1805	1900	1615	1805	3248	315	1805	1900	1615
Capacity Analysis Module:												
Vol/Sat:	0.03	0.04	0.01	0.04	0.07	0.15	0.15	0.16	0.16	0.01	0.24	0.03
Crit Moves:	****					****	****				****	
Green/Cycle:	0.05	0.16	0.16	0.16	0.27	0.27	0.26	0.64	0.64	0.05	0.43	0.43
Volume/Cap:	0.56	0.25	0.07	0.25	0.25	0.56	0.56	0.26	0.26	0.26	0.56	0.07
Uniform Del:	46.5	37.2	36.1	36.8	28.9	31.7	32.1	7.8	7.8	46.0	21.7	17.0
IncremntDel:	8.2	0.5	0.1	0.5	0.3	1.7	1.6	0.1	0.1	1.6	0.9	0.0
InitQueuDel:	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Delay Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Delay/Veh:	54.8	37.6	36.2	37.3	29.1	33.5	33.7	7.8	7.8	47.6	22.6	17.1
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	54.8	37.6	36.2	37.3	29.1	33.5	33.7	7.8	7.8	47.6	22.6	17.1
LOS by Move:	D	D	D	D	C	C	C	A	A	D	C	B
HCM2kAvgQ:	2	2	1	2	3	7	8	4	4	1	11	1

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PM General Plan Buildout Plus Project
Walmart, Tehachapi
Linscott, Law and Greenspan, Engineers

Level Of Service Computation Report
2000 HCM Unsignalized Method (Future Volume Alternative)

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Intersection #7 Tehachapi Boulevard at SR-58 Eastbound Ramps

****

Average Delay (sec/veh): 16.2 Worst Case Level Of Service: F[55.4]

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Street Name:	Tehachapi Boulevard						SR-58 Eastbound Ramps					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L - T - R			L - T - R			L - T - R			L - T - R		
Control:	Uncontrolled			Uncontrolled			Stop Sign			Stop Sign		
Rights:	Include			Include			Include			Include		
Lanes:	0 0 0 1 0			0 1 0 0 0			0 1 0 0 1			0 0 0 0 0		
Volume Module:												
Base Vol:	0	211	165	1	392	0	0	2	312	0	0	0
Growth Adj:	1.21	1.21	1.21	1.21	1.21	1.21	1.21	1.21	1.21	1.21	1.21	1.21
Initial Bse:	0	255	200	1	474	0	0	2	378	0	0	0
Added Vol:	0	109	87	0	92	0	0	0	123	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	0	364	287	1	566	0	0	2	501	0	0	0
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	0	364	287	1	566	0	0	2	501	0	0	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
FinalVolume:	0	364	287	1	566	0	0	2	501	0	0	0
Critical Gap Module:												
Critical Gp:	xxxxx	xxxx	xxxxx	4.1	xxxx	xxxxx	6.4	6.5	6.2	xxxxx	xxxx	xxxxx
FollowUpTim:	xxxxx	xxxx	xxxxx	2.2	xxxx	xxxxx	3.5	4.0	3.3	xxxxx	xxxx	xxxxx
Capacity Module:												
Cnflict Vol:	xxxx	xxxx	xxxxx	651	xxxx	xxxxx	1076	1220	566	xxxx	xxxx	xxxxx
Potent Cap.:	xxxx	xxxx	xxxxx	945	xxxx	xxxxx	245	182	527	xxxx	xxxx	xxxxx
Move Cap.:	xxxx	xxxx	xxxxx	945	xxxx	xxxxx	245	181	527	xxxx	xxxx	xxxxx
Volume/Cap:	xxxx	xxxx	xxxx	0.00	xxxx	xxxx	0.00	0.01	0.95	xxxx	xxxx	xxxx
Level Of Service Module:												
2Way95thQ:	xxxx	xxxx	xxxxx	0.0	xxxx	xxxxx	xxxx	xxxx	12.1	xxxx	xxxx	xxxxx
Control Del:	xxxxx	xxxx	xxxxx	8.8	xxxx	xxxxx	xxxxx	xxxx	55.6	xxxxx	xxxx	xxxxx
LOS by Move:	*	*	*	A	*	*	*	*	F	*	*	*
Movement:	LT - LTR - RT			LT - LTR - RT			LT - LTR - RT			LT - LTR - RT		
Shared Cap.:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	181	xxxx	xxxxx	xxxx	xxxx	xxxxx
SharedQueue:	xxxxx	xxxx	xxxxx	0.0	xxxx	xxxxx	0.0	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Shrd ConDel:	xxxxx	xxxx	xxxxx	8.8	xxxx	xxxxx	25.1	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Shared LOS:	*	*	*	A	*	*	D	*	*	*	*	*
ApproachDel:	xxxxxx			xxxxxx			55.4			xxxxxx		
ApproachLOS:	*			*			F			*		

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Note: Queue reported is the number of cars per lane.

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PM General Plan Buildout Plus Project
Walmart, Tehachapi
Linscott, Law and Greenspan, Engineers

Level Of Service Computation Report
2000 HCM Operations Method (Future Volume Alternative)

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Intersection #8 Tehachapi Boulevard/Tucker Road at Red Apple Avenue/Tehachapi Bo

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Cycle (sec):	90	Critical Vol./Cap.(X):	0.884
Loss Time (sec):	16 (Y+R=4.0 sec)	Average Delay (sec/veh):	42.0
Optimal Cycle:	104	Level Of Service:	D

****

Street Name:	Tehachapi Boulevard/Tucker Road						Red Apple Avenue/Tehachapi Boulev					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L - T - R			L - T - R			L - T - R			L - T - R		
Control:	Protected			Protected			Protected			Protected		
Rights:	Include			Include			Include			Include		
Min. Green:	6	6	6	6	6	6	6	6	6	6	6	6
Lanes:	1 0	2 0	1	1 0	2 0	1	1 0	1 0	1	1 0	1 0	1
Volume Module:												
Base Vol:	175	182	159	93	341	205	72	220	112	243	240	57
Growth Adj:	1.21	1.21	1.21	1.21	1.21	1.21	1.21	1.21	1.21	1.21	1.21	1.21
Initial Bse:	212	220	192	113	413	248	87	266	136	294	290	69
Added Vol:	72	146	46	29	150	36	28	121	74	49	114	23
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	284	366	238	142	563	284	115	387	210	343	404	92
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	284	366	238	142	563	284	115	387	210	343	404	92
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	284	366	238	142	563	284	115	387	210	343	404	92
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	284	366	238	142	563	284	115	387	210	343	404	92
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.95	0.95	0.85	0.95	0.95	0.85	0.95	1.00	0.85	0.95	1.00	0.85
Lanes:	1.00	2.00	1.00	1.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Sat.:	1805	3610	1615	1805	3610	1615	1805	1900	1615	1805	1900	1615
Capacity Analysis Module:												
Vol/Sat:	0.16	0.10	0.15	0.08	0.16	0.18	0.06	0.20	0.13	0.19	0.21	0.06
Crit Moves:	****					****		****		****		
Green Time:	16.0	22.1	22.1	11.8	17.9	17.9	9.6	20.7	20.7	19.3	30.5	30.5
Volume/Cap:	0.88	0.41	0.60	0.60	0.78	0.88	0.60	0.88	0.56	0.88	0.63	0.17
Delay/Veh:	60.0	28.8	32.6	41.1	39.8	58.9	43.6	52.2	32.6	54.9	26.9	21.0
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	60.0	28.8	32.6	41.1	39.8	58.9	43.6	52.2	32.6	54.9	26.9	21.0
LOS by Move:	E	C	C	D	D	E	D	D	C	D	C	C
HCM2k95thQ:	20	9	13	9	18	20	8	25	11	23	19	4

****

Note: Queue reported is the number of cars per lane.

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APPENDIX E-II

ROADWAY SEGMENT COUNTS

Tehachapi General Plan
Existing and General Plan Buildout
Average Daily Trips

Roadway/Segment	Source: Figure X	Total Lanes	Median Width	Speed (mph)	Average Daily Trips (ADTs) Source: KH Spreadshts No Build	With Build	Report Figures Figure 4 Existing	Figure 10 GPBO Mod Growth
Tucker Road	Existing Principal Arterial							
No Segment Specified					2,995	2,396		
n/o Highline Rd		2	0	35-45			3,150	2,995
n/o W. Valley Blvd		2	0	35-45			9,300	15,800
n/o Tehachapi Blvd		2	0	35-45			15,000	16,250
n/o Cherry St & s/o Red Apple Drive		4	0	35-45			10,900	12,350
Mountain View	Proposed Secondary Street	2						
No Segment Specified						3,687		
Hickory Street	Proposed Collector Street	2						
No Segment Specified						2,316		
Curry Street	Existing Principal Arterial	2		35				
No Segment Specified					15,441	6,948		
n/o Highline Road		2	0				980 to 820	15,441
Green Street								
No Segment Specified						3,088		
n/o Tehachapi Blvd	Existing Principal Arterial	2	0				5,880	5,880
s/o D Street	Proposed secondary Arterial							
Snyder Street	Proposed Collector Street							
No Segment Specified		2				3,961		
Dennison Road	Existing Principal Arterial	2		35				
No Segment Specified					4,909	9,658		
n/o Highline Road		2	0				1,020	2,092
n/o Abajo		2	0				970	4,909
n/o Tehachapi Blvd		2	0				1,180 to 1,210	25,891
Turf Street	Proposed Secondary Street	2				7,466		
n/o Highline Road								
						7,466		
Steuber Road	Existing Principal Arterial							
No Segment Specified					24,887	8,710		
n/o Highline Road							600	24,887
Tehachapi/Willow Springs Road	Existing Principal Arterial							
n/o Highline Road							1,800	2,559
s/o Highline Road							3,600	3,867
Woodford/Tehachapi Rpad	Existing Principal Arterial							
s/o W. Valley Blvd							5,950	8,898
Capital Hills Parkway	Existing Principal Arterial							
n/o Tehachapi Blvd							1,540	12,460
H Street	Proposed Principal Arterial							
No Segment Specified		2				3,275		
Tehachapi Blvd	Existing Secondary Street			35				
No Segment Specified					32,745	14,735		
e/o Tucker Road		2	0				3,900	32,745
w/o Tehachapi/Willow Springs							4,350	23,737
e/o Tehachapi/Willow Springs		2	0				960	4,856
e/o Elm St & w/o Snyder St		4	0					
D Street	Secondary Street							
No Segment Specified		2				9,824		
Maple Street	Proposed Principal Arterial							
No Segment Specified						11,860		
e/o Tucker St & w/o Steuber St		2						
West Valley Boulevard	Existing Principal Arterial	2		40				
No Segment Specified					46,321	16,212		
e/o Tucker Road							15,000	46,321
Cherry Street	Proposed Secondary Street	2						
No Segment Specified						11,580		
Abajo	Proposed Principal Arterial	2						
No Segment Specified						14,443		
Sutter Street	Proposed Principal Arterial							
No Segment Specified						2,290		
Highline Road	Existing Principal Arterial							
No Segment Specified					11,450	5,153		
w/o Tucker Road		2	0	55			295	6,780
e/o Tucker Road		2	0	55			1,850 to 1,720	11,450
e/o Dennison Road		2	0	55			265	3,590
Rte 58	Regional Highway	4		65				
e/o Tucker Road							22,500	31,760
e/o Capitall Hills Pkwy							22,000	21,640
e/o Dennison Road							19,500	19,542

Prepared by Impact Sciences, Inc.
R. Mamaghani
Based on Data from Kimley Horn
October 6, 2008

JN 838-01

APPENDIX F

GENERAL PLAN BUILDOUT TRAFFIC CONDITIONS INTERSECTION LEVEL OF SERVICE CALCULATIONS

APPENDIX F-I

GENERAL PLAN BUILDOUT WITHOUT PROJECT TRAFFIC CONDITIONS

AM General Plan Buildout
Walmart, Tehachapi
Linscott, Law and Greenspan, Engineers

Level Of Service Computation Report
2000 HCM Operations Method (Future Volume Alternative)

****

Intersection #1 Woodford Tehachapi Road at Valley Boulevard (SR-202)

****

Cycle (sec):	90	Critical Vol./Cap.(X):	0.562
Loss Time (sec):	12	Average Delay (sec/veh):	21.2
Optimal Cycle:	90	Level Of Service:	C

****

Street Name:	Woodford Tehachapi Road						Valley Boulevard (SR-202)					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Permitted			Permitted			Protected			Protected		
Rights:	Include			Include			Include			Include		
Min. Green:	6	6	6	6	6	6	6	6	6	6	6	6
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	0 0	1! 0	0	1 0	1 0	1	1 0	0 1	0	1 0	1 0	1
Volume Module:												
Base Vol:	143	27	49	193	27	53	43	329	23	32	619	40
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	143	27	49	193	27	53	43	329	23	32	619	40
Added Vol:	0	0	0	-7	0	0	0	-34	0	0	-29	-6
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	143	27	49	186	27	53	43	295	23	32	590	34
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	143	27	49	186	27	53	43	295	23	32	590	34
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	143	27	49	186	27	53	43	295	23	32	590	34
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	143	27	49	186	27	53	43	295	23	32	590	34
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.75	0.75	0.75	0.76	1.00	0.85	0.95	0.99	0.99	0.95	1.00	0.85
Lanes:	0.66	0.12	0.22	1.00	1.00	1.00	1.00	0.93	0.07	1.00	1.00	1.00
Final Sat.:	935	177	320	1446	1900	1615	1805	1743	136	1805	1900	1615
Capacity Analysis Module:												
Vol/Sat:	0.15	0.15	0.15	0.13	0.01	0.03	0.02	0.17	0.17	0.02	0.31	0.02
Crit Moves:		****					****				****	
Green Time:	23.8	23.8	23.8	23.8	23.8	23.8	6.0	38.9	38.9	15.3	48.2	48.2
Volume/Cap:	0.58	0.58	0.58	0.49	0.05	0.12	0.36	0.39	0.39	0.10	0.58	0.04
Delay/Veh:	31.0	31.0	31.0	29.0	24.8	25.3	42.0	17.8	17.8	31.7	14.9	9.9
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	31.0	31.0	31.0	29.0	24.8	25.3	42.0	17.8	17.8	31.7	14.9	9.9
LOS by Move:	C	C	C	C	C	C	D	B	B	C	B	A
HCM2k95thQ:	12	12	12	9	1	2	3	12	12	2	21	1

****

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AM General Plan Buildout
Walmart, Tehachapi
Linscott, Law and Greenspan, Engineers

Level Of Service Computation Report
2000 HCM Unsignalized Method (Future Volume Alternative)

Intersection #7 Tehachapi Boulevard at SR-58 Eastbound Ramps

Average Delay (sec/veh): 1.4 Worst Case Level Of Service: B[10.6]

Street Name:	Tehachapi Boulevard						SR-58 Eastbound Ramps					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Control:	Uncontrolled			Uncontrolled			Stop Sign			Stop Sign		
Rights:	Include			Include			Include			Include		
Lanes:	0 0	0 1	0	0 0	1 0	0	0 1	0 0	1	0 0	0 0	0
Volume Module:												
Base Vol:	0	538	339	0	238	0	0	1	173	0	0	0
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	0	538	339	0	238	0	0	1	173	0	0	0
Added Vol:	0	-10	-10	0	-11	0	0	0	-11	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	0	528	329	0	227	0	0	1	162	0	0	0
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	0	528	329	0	227	0	0	1	162	0	0	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
FinalVolume:	0	528	329	0	227	0	0	1	162	0	0	0
Critical Gap Module:												
Critical Gp:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	6.4	6.5	6.2	xxxxx	xxxx	xxxxx
FollowUpTim:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	3.5	4.0	3.3	xxxxx	xxxx	xxxxx
Capacity Module:												
Cnflict Vol:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	920	1084	227	xxxx	xxxx	xxxxx
Potent Cap.:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	303	219	817	xxxx	xxxx	xxxxx
Move Cap.:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	303	219	817	xxxx	xxxx	xxxxx
Volume/Cap:	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	0.00	0.00	0.20	xxxx	xxxx	xxxx
Level Of Service Module:												
2Way95thQ:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	0.7	xxxx	xxxx	xxxxx
Control Del:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	10.5	xxxxx	xxxx	xxxxx
LOS by Move:	*	*	*	*	*	*	*	*	B	*	*	*
Movement:	LT -	LTR -	RT	LT -	LTR -	RT	LT -	LTR -	RT	LT -	LTR -	RT
Shared Cap.:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	219	xxxx	xxxxx	xxxx	xxxx	xxxxx
SharedQueue:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	0.0	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Shrd ConDel:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	21.5	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Shared LOS:	*	*	*	*	*	*	C	*	*	*	*	*
ApproachDel:	xxxxxx			xxxxxx			10.6			xxxxxx		
ApproachLOS:	*			*			B			*		

Note: Queue reported is the number of cars per lane.

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AM General Plan Buildout
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Level Of Service Computation Report
2000 HCM Operations Method (Future Volume Alternative)

Intersection #8 Tehachapi Boulevard/Tucker Road at Red Apple Avenue/Tehachapi Bo

Cycle (sec):	90	Critical Vol./Cap.(X):	0.567
Loss Time (sec):	16	Average Delay (sec/veh):	29.8
Optimal Cycle:	90	Level Of Service:	C

Street Name: Tehachapi Boulevard/Tucker Road Red Apple Avenue/Tehachapi Boulev

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Protected			Protected			Protected			Protected		
Rights:	Include			Include			Include			Include		
Min. Green:	6	6	6	6	6	6	6	6	6	6	6	6
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	1 0	2 0	1	1 0	2 0	1	1 0	1 0	1	1 0	1 0	1
Volume Module:												
Base Vol:	99	531	157	84	264	56	213	439	140	163	220	109
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	99	531	157	84	264	56	213	439	140	163	220	109
Added Vol:	-23	-19	-35	-9	-14	0	0	-33	-24	-38	-25	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	76	512	122	75	250	56	213	406	116	125	195	109
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	76	512	122	75	250	56	213	406	116	125	195	109
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	76	512	122	75	250	56	213	406	116	125	195	109
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	76	512	122	75	250	56	213	406	116	125	195	109
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.95	0.95	0.85	0.95	0.95	0.85	0.95	1.00	0.85	0.95	1.00	0.85
Lanes:	1.00	2.00	1.00	1.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Sat.:	1805	3610	1615	1805	3610	1615	1805	1900	1615	1805	1900	1615
Capacity Analysis Module:												
Vol/Sat:	0.04	0.14	0.08	0.04	0.07	0.03	0.12	0.21	0.07	0.07	0.10	0.07
Crit Moves:		****		****				****		****		
Green Time:	14.3	22.5	22.5	6.6	14.8	14.8	24.0	33.9	33.9	11.0	20.9	20.9
Volume/Cap:	0.27	0.57	0.30	0.57	0.42	0.21	0.44	0.57	0.19	0.57	0.44	0.29
Delay/Veh:	33.8	30.3	27.8	46.0	34.2	32.9	28.1	23.3	19.0	40.7	30.3	28.9
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	33.8	30.3	27.8	46.0	34.2	32.9	28.1	23.3	19.0	40.7	30.3	28.9
LOS by Move:	C	C	C	D	C	C	C	C	B	D	C	C
HCM2k95thQ:	4	14	6	6	7	3	10	17	4	8	10	5

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AM General Plan Buildout
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Level Of Service Computation Report
2000 HCM Operations Method (Future Volume Alternative)

****

Intersection #10 Tucker Road at Valley Boulevard (SR-202)

****

Cycle (sec):	90	Critical Vol./Cap.(X):	0.653
Loss Time (sec):	16	Average Delay (sec/veh):	30.1
Optimal Cycle:	90	Level Of Service:	C

****

Street Name:	Tucker Road						Valley Boulevard (SR-202)					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L - T - R			L - T - R			L - T - R			L - T - R		
Control:	Protected			Protected			Protected			Protected		
Rights:	Include			Include			Include			Include		
Min. Green:	6	6	6	6	6	6	6	6	6	6	6	6
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	1 0	1	1 0	1 0	2 0	1	1 0	1 0	1	1 0	1 0	1
Volume Module:												
Base Vol:	90	125	162	99	69	202	193	353	21	127	576	49
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	90	125	162	99	69	202	193	353	21	127	576	49
Added Vol:	0	-11	0	-38	-10	-38	-45	0	0	0	0	-45
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	90	114	162	61	59	164	148	353	21	127	576	4
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	90	114	162	61	59	164	148	353	21	127	576	4
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	90	114	162	61	59	164	148	353	21	127	576	4
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	90	114	162	61	59	164	148	353	21	127	576	4
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.95	0.87	0.87	0.95	0.95	0.85	0.95	1.00	0.85	0.95	1.00	0.85
Lanes:	1.00	1.00	1.00	1.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Sat.:	1805	1646	1646	1805	3610	1615	1805	1900	1615	1805	1900	1615
Capacity Analysis Module:												
Vol/Sat:	0.05	0.07	0.10	0.03	0.02	0.10	0.08	0.19	0.01	0.07	0.30	0.00
Crit Moves:	****					****	****				****	
Green Time:	6.9	12.4	12.4	8.4	14.0	14.0	11.3	38.5	38.5	14.6	41.8	41.8
Volume/Cap:	0.65	0.50	0.71	0.36	0.11	0.65	0.65	0.43	0.03	0.43	0.65	0.01
Delay/Veh:	51.1	36.6	43.1	39.6	32.7	41.7	44.1	18.5	14.9	35.0	20.3	12.9
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	51.1	36.6	43.1	39.6	32.7	41.7	44.1	18.5	14.9	35.0	20.3	12.9
LOS by Move:	D	D	D	D	C	D	D	B	B	D	C	B
HCM2k95thQ:	7	7	12	4	2	11	10	13	1	7	23	0

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Level Of Service Computation Report
2000 HCM Operations Method (Future Volume Alternative)

****

Intersection #17 Curry Street at Valley Boulevard (SR-202)

****

Cycle (sec):	90	Critical Vol./Cap.(X):	0.536
Loss Time (sec):	12	Average Delay (sec/veh):	22.1
Optimal Cycle:	90	Level Of Service:	C

****

Street Name:	Curry Street						Valley Boulevard (SR-202)					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L - T - R			L - T - R			L - T - R			L - T - R		
Control:	Permitted			Permitted			Protected			Protected		
Rights:	Include			Include			Include			Include		
Min. Green:	6	6	6	6	6	6	6	6	6	6	6	6
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	1 0	1 0	1	1 0	1 0	1	1 0	0 1	0	1 0	1 0	1
Volume Module:												
Base Vol:	27	81	77	40	42	197	149	411	14	38	505	74
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	27	81	77	40	42	197	149	411	14	38	505	74
Added Vol:	-27	0	0	0	0	0	0	-10	-23	0	-11	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	0	81	77	40	42	197	149	401	-9	38	494	74
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
PHF Volume:	0	81	77	40	42	197	149	401	0	38	494	74
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	0	81	77	40	42	197	149	401	0	38	494	74
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
FinalVolume:	0	81	77	40	42	197	149	401	0	38	494	74
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	1.00	1.00	0.85	0.70	1.00	0.85	0.95	1.00	1.00	0.95	1.00	0.85
Lanes:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
Final Sat.:	1900	1900	1615	1336	1900	1615	1805	1900	0	1805	1900	1615
Capacity Analysis Module:												
Vol/Sat:	0.00	0.04	0.05	0.03	0.02	0.12	0.08	0.21	0.00	0.02	0.26	0.05
Crit Moves:						****	****				****	
Green Time:	0.0	20.5	20.5	20.5	20.5	20.5	13.9	43.7	0.0	13.8	43.7	43.7
Volume/Cap:	0.00	0.19	0.21	0.13	0.10	0.54	0.54	0.43	0.00	0.14	0.54	0.09
Delay/Veh:	0.0	28.3	28.5	27.9	27.6	32.1	37.2	15.4	0.0	33.2	16.7	12.6
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	0.0	28.3	28.5	27.9	27.6	32.1	37.2	15.4	0.0	33.2	16.7	12.6
LOS by Move:	A	C	C	C	C	C	D	B	A	C	B	B
HCM2k95thQ:	0	4	4	2	2	11	9	14	0	2	18	2

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Level Of Service Computation Report
2000 HCM 4-Way Stop Method (Future Volume Alternative)

Intersection #19 Green Street at Tehachapi Boulevard

Cycle (sec):	100	Critical Vol./Cap.(X):	0.304
Loss Time (sec):	0	Average Delay (sec/veh):	9.7
Optimal Cycle:	0	Level Of Service:	A

Street Name:	Green Street						Tehachapi Boulevard					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Control:	Stop Sign			Stop Sign			Stop Sign			Stop Sign		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	0 0	0 0	0	0 1	0 0	1	0 1	0 1	0	0 1	0 1	0
Volume Module:												
Base Vol:	0	0	0	48	10	66	41	388	11	2	324	29
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	0	0	0	48	10	66	41	388	11	2	324	29
Added Vol:	0	0	0	0	0	-11	-10	-17	0	0	-20	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	0	0	0	48	10	55	31	371	11	2	304	29
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	0	0	0	48	10	55	31	371	11	2	304	29
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	0	0	0	48	10	55	31	371	11	2	304	29
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	0	0	0	48	10	55	31	371	11	2	304	29
Saturation Flow Module:												
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	0.00	0.00	0.00	0.83	0.17	1.00	0.15	1.80	0.05	0.01	1.82	0.17
Final Sat.:	0	0	0	431	90	619	102	1232	37	8	1237	120
Capacity Analysis Module:												
Vol/Sat:	xxxx	xxxx	xxxx	0.11	0.11	0.09	0.30	0.30	0.30	0.25	0.25	0.24
Crit Moves:					****		****			****		
Delay/Veh:	0.0	0.0	0.0	9.9	9.9	8.6	10.1	10.0	9.9	9.6	9.5	9.4
Delay Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	0.0	0.0	0.0	9.9	9.9	8.6	10.1	10.0	9.9	9.6	9.5	9.4
LOS by Move:	*	*	*	A	A	A	B	B	A	A	A	A
ApproachDel:	xxxxxx				9.3			10.0			9.5	
Delay Adj:	xxxxx				1.00			1.00			1.00	
ApprAdjDel:	xxxxxx				9.3			10.0			9.5	
LOS by Appr:	*				A			B			A	
AllWayAvgQ:	0.0	0.0	0.0	0.1	0.1	0.1	0.4	0.4	0.4	0.3	0.3	0.3

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PM General Plan Buildout
Walmart, Tehachapi
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Level Of Service Computation Report
2000 HCM Operations Method (Future Volume Alternative)

****

Intersection #1 Woodford Tehachapi Road at Valley Boulevard (SR-202)

****

Cycle (sec):	90	Critical Vol./Cap.(X):	0.640
Loss Time (sec):	12	Average Delay (sec/veh):	19.8
Optimal Cycle:	90	Level Of Service:	B

****

Street Name:	Woodford Tehachapi Road						Valley Boulevard (SR-202)					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Control:	Permitted			Permitted			Protected			Protected		
Rights:	Include			Include			Include			Include		
Min. Green:	6	6	6	6	6	6	6	6	6	6	6	6
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	0 0	1! 0	0	1 0	1 0	1	1 0	0 1	0	1 0	1 0	1
Volume Module:												
Base Vol:	94	34	88	118	17	53	41	729	67	26	505	49
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	94	34	88	118	17	53	41	729	67	26	505	49
Added Vol:	0	0	0	-10	0	0	0	-50	0	0	-51	-10
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	94	34	88	108	17	53	41	679	67	26	454	39
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	94	34	88	108	17	53	41	679	67	26	454	39
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	94	34	88	108	17	53	41	679	67	26	454	39
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	94	34	88	108	17	53	41	679	67	26	454	39
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.80	0.80	0.80	0.82	1.00	0.85	0.95	0.99	0.99	0.95	1.00	0.85
Lanes:	0.43	0.16	0.41	1.00	1.00	1.00	1.00	0.91	0.09	1.00	1.00	1.00
Final Sat.:	660	239	618	1550	1900	1615	1805	1707	168	1805	1900	1615
Capacity Analysis Module:												
Vol/Sat:	0.14	0.14	0.14	0.07	0.01	0.03	0.02	0.40	0.40	0.01	0.24	0.02
Crit Moves:		****						****		****		
Green Time:	19.0	19.0	19.0	19.0	19.0	19.0	12.9	53.0	53.0	6.0	46.1	46.1
Volume/Cap:	0.68	0.68	0.68	0.33	0.04	0.16	0.16	0.68	0.68	0.22	0.47	0.05
Delay/Veh:	38.3	38.3	38.3	30.7	28.3	29.2	34.1	14.3	14.3	40.7	14.4	11.0
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	38.3	38.3	38.3	30.7	28.3	29.2	34.1	14.3	14.3	40.7	14.4	11.0
LOS by Move:	D	D	D	C	C	C	C	B	B	D	B	B
HCM2k95thQ:	13	13	13	6	1	3	2	26	26	2	15	1

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PM General Plan Buildout
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Level Of Service Computation Report
2000 HCM Unsignalized Method (Future Volume Alternative)

****

Intersection #7 Tehachapi Boulevard at SR-58 Eastbound Ramps

****

Average Delay (sec/veh): 12.9 Worst Case Level Of Service: E[43.8]

****

Street Name:	Tehachapi Boulevard						SR-58 Eastbound Ramps					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Control:	Uncontrolled			Uncontrolled			Stop Sign			Stop Sign		
Rights:	Include			Include			Include			Include		
Lanes:	0 0	0 1	0	0 1	0 0	0	0 1	0 0	1	0 0	0 0	0
Volume Module:												
Base Vol:	0	361	284	1	563	0	0	2	498	0	0	0
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	0	361	284	1	563	0	0	2	498	0	0	0
Added Vol:	0	-17	-17	0	-17	0	0	0	-17	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	0	344	267	1	546	0	0	2	481	0	0	0
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	0	344	267	1	546	0	0	2	481	0	0	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
FinalVolume:	0	344	267	1	546	0	0	2	481	0	0	0
Critical Gap Module:												
Critical Gp:	xxxxx	xxxx	xxxxx	4.1	xxxx	xxxxx	6.4	6.5	6.2	xxxxx	xxxx	xxxxx
FollowUpTim:	xxxxx	xxxx	xxxxx	2.2	xxxx	xxxxx	3.5	4.0	3.3	xxxxx	xxxx	xxxxx
Capacity Module:												
Cnflict Vol:	xxxx	xxxx	xxxxx	611	xxxx	xxxxx	1026	1159	546	xxxx	xxxx	xxxxx
Potent Cap.:	xxxx	xxxx	xxxxx	978	xxxx	xxxxx	262	197	541	xxxx	xxxx	xxxxx
Move Cap.:	xxxx	xxxx	xxxxx	978	xxxx	xxxxx	262	197	541	xxxx	xxxx	xxxxx
Volume/Cap:	xxxx	xxxx	xxxx	0.00	xxxx	xxxx	0.00	0.01	0.89	xxxx	xxxx	xxxx
Level Of Service Module:												
2Way95thQ:	xxxx	xxxx	xxxxx	0.0	xxxx	xxxxx	xxxx	xxxx	10.2	xxxx	xxxx	xxxxx
Control Del:	xxxxx	xxxx	xxxxx	8.7	xxxx	xxxxx	xxxxx	xxxx	43.9	xxxxx	xxxx	xxxxx
LOS by Move:	*	*	*	A	*	*	*	*	E	*	*	*
Movement:	LT -	LTR -	RT	LT -	LTR -	RT	LT -	LTR -	RT	LT -	LTR -	RT
Shared Cap.:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	197	xxxx	xxxxx	xxxx	xxxx	xxxxx
SharedQueue:	xxxxx	xxxx	xxxxx	0.0	xxxx	xxxxx	0.0	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Shrd ConDel:	xxxxx	xxxx	xxxxx	8.7	xxxx	xxxxx	23.4	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Shared LOS:	*	*	*	A	*	*	C	*	*	*	*	*
ApproachDel:	xxxxxx			xxxxxx			43.8			xxxxxx		
ApproachLOS:	*			*			E			*		

****

Note: Queue reported is the number of cars per lane.

****

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Level Of Service Computation Report
2000 HCM Operations Method (Future Volume Alternative)

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Intersection #8 Tehachapi Boulevard/Tucker Road at Red Apple Avenue/Tehachapi Bo

****

Cycle (sec):	90	Critical Vol./Cap.(X):	0.797
Loss Time (sec):	16	Average Delay (sec/veh):	36.7
Optimal Cycle:	90	Level Of Service:	D

****

Street Name:	Tehachapi Boulevard/Tucker Road						Red Apple Avenue/Tehachapi Boulev					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L - T - R			L - T - R			L - T - R			L - T - R		
Control:	Protected			Protected			Protected			Protected		
Rights:	Include			Include			Include			Include		
Min. Green:	6	6	6	6	6	6	6	6	6	6	6	6
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	1 0	2 0	1	1 0	2 0	1	1 0	1 0	1	1 0	1 0	1
Volume Module:												
Base Vol:	272	359	238	142	557	284	115	382	119	343	399	92
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	272	359	238	142	557	284	115	382	119	343	399	92
Added Vol:	-50	-34	-25	-6	-27	0	0	-37	-46	-27	-34	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	222	325	213	136	530	284	115	345	73	316	365	92
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	222	325	213	136	530	284	115	345	73	316	365	92
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	222	325	213	136	530	284	115	345	73	316	365	92
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	222	325	213	136	530	284	115	345	73	316	365	92
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.95	0.95	0.85	0.95	0.95	0.85	0.95	1.00	0.85	0.95	1.00	0.85
Lanes:	1.00	2.00	1.00	1.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Sat.:	1805	3610	1615	1805	3610	1615	1805	1900	1615	1805	1900	1615
Capacity Analysis Module:												
Vol/Sat:	0.12	0.09	0.13	0.08	0.15	0.18	0.06	0.18	0.05	0.18	0.19	0.06
Crit Moves:	****					****		****		****		
Green Time:	13.9	21.5	21.5	12.3	19.9	19.9	10.4	20.5	20.5	19.8	29.9	29.9
Volume/Cap:	0.80	0.38	0.55	0.55	0.67	0.80	0.55	0.80	0.20	0.80	0.58	0.17
Delay/Veh:	51.5	28.9	31.8	39.0	34.2	45.1	40.8	42.8	28.4	44.0	26.2	21.4
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	51.5	28.9	31.8	39.0	34.2	45.1	40.8	42.8	28.4	44.0	26.2	21.4
LOS by Move:	D	C	C	D	C	D	D	D	C	D	C	C
HCM2k95thQ:	15	8	11	9	15	18	8	20	4	19	17	4

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Level Of Service Computation Report
2000 HCM Operations Method (Future Volume Alternative)

****

Intersection #10 Tucker Road at Valley Boulevard (SR-202)

****

Cycle (sec):	100	Critical Vol./Cap.(X):	0.949
Loss Time (sec):	16	Average Delay (sec/veh):	51.2
Optimal Cycle:	120	Level Of Service:	D

****

Street Name:	Tucker Road						Valley Boulevard (SR-202)					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Control:	Protected			Protected			Protected			Protected		
Rights:	Include			Include			Include			Include		
Min. Green:	6	6	6	6	6	6	6	6	6	6	6	6
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	1 0	1 1	0	1 0	2 0	1	1 0	1 0	1	1 0	1 0	1
Volume Module:												
Base Vol:	294	181	298	231	338	382	122	654	49	172	462	77
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	294	181	298	231	338	382	122	654	49	172	462	77
Added Vol:	0	-17	0	-68	-17	-68	-66	0	0	172	462	77
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	-66
Initial Fut:	294	164	298	163	321	314	56	654	49	0	0	0
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	172	462	11
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	294	164	298	163	321	314	56	654	49	1.00	1.00	1.00
Reduct Vol:	0	0	0	0	0	0	0	0	0	172	462	11
Reduced Vol:	294	164	298	163	321	314	56	654	49	0	0	0
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	172	462	11
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	294	164	298	163	321	314	56	654	49	1.00	1.00	1.00
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.95	0.86	0.86	0.95	0.95	0.85	0.95	1.00	0.85	0.95	1.00	0.85
Lanes:	1.00	1.00	1.00	1.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Sat.:	1805	1630	1630	1805	3610	1615	1805	1900	1615	1805	1900	1615
Capacity Analysis Module:												
Vol/Sat:	0.16	0.10	0.18	0.09	0.09	0.19	0.03	0.34	0.03	0.10	0.24	0.01
Crit Moves:	****					****		****		****		
Green Time:	17.2	25.2	25.2	12.5	20.5	20.5	9.2	36.3	36.3	10.0	37.2	37.2
Volume/Cap:	0.95	0.40	0.73	0.73	0.43	0.95	0.34	0.95	0.08	0.95	0.65	0.02
Delay/Veh:	78.5	31.3	38.4	53.3	35.1	75.2	43.8	53.4	21.0	96.6	28.3	19.9
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	78.5	31.3	38.4	53.3	35.1	75.2	43.8	53.4	21.0	96.6	28.3	19.9
LOS by Move:	E	C	D	D	D	E	D	D	C	F	C	B
HCM2k95thQ:	24	9	19	12	9	25	4	41	2	17	22	0

****

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PM General Plan Buildout
Walmart, Tehachapi
Linscott, Law and Greenspan, Engineers

Level Of Service Computation Report
2000 HCM Operations Method (Future Volume Alternative)

Intersection #17 Curry Street at Valley Boulevard (SR-202)

Cycle (sec):	90	Critical Vol./Cap.(X):	0.609
Loss Time (sec):	12	Average Delay (sec/veh):	24.7
Optimal Cycle:	90	Level Of Service:	C

Street Name:	Curry Street						Valley Boulevard (SR-202)					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Control:	Permitted			Permitted			Protected			Protected		
Rights:	Include			Include			Include			Include		
Min. Green:	6	6	6	6	6	6	6	6	6	6	6	6
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	1 0	1 0	1	1 0	1 0	1	1 0	0 1	0	1 0	1 0	1
Volume Module:												
Base Vol:	50	74	18	72	126	242	265	534	52	22	456	49
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	50	74	18	72	126	242	265	534	52	22	456	49
Added Vol:	-40	0	0	0	0	0	0	-17	-41	0	-17	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	10	74	18	72	126	242	265	517	11	22	439	49
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	10	74	18	72	126	242	265	517	11	22	439	49
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	10	74	18	72	126	242	265	517	11	22	439	49
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	10	74	18	72	126	242	265	517	11	22	439	49
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.64	1.00	0.85	0.71	1.00	0.85	0.95	1.00	1.00	0.95	1.00	0.85
Lanes:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.98	0.02	1.00	1.00	1.00
Final Sat.:	1212	1900	1615	1347	1900	1615	1805	1855	39	1805	1900	1615
Capacity Analysis Module:												
Vol/Sat:	0.01	0.04	0.01	0.05	0.07	0.15	0.15	0.28	0.28	0.01	0.23	0.03
Crit Moves:						****	****				****	
Green Time:	22.1	22.1	22.1	22.1	22.1	22.1	21.7	45.1	45.1	10.8	34.2	34.2
Volume/Cap:	0.03	0.16	0.05	0.22	0.27	0.61	0.61	0.56	0.56	0.10	0.61	0.08
Delay/Veh:	25.8	26.8	25.9	27.4	27.7	32.8	32.9	16.3	16.3	35.5	24.1	17.9
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	25.8	26.8	25.9	27.4	27.7	32.8	32.9	16.3	16.3	35.5	24.1	17.9
LOS by Move:	C	C	C	C	C	C	C	B	B	D	C	B
HCM2k95thQ:	0	3	1	3	6	13	14	19	19	1	19	2

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PM General Plan Buildout
Walmart, Tehachapi
Linscott, Law and Greenspan, Engineers

Level Of Service Computation Report
2000 HCM 4-Way Stop Method (Future Volume Alternative)

Intersection #19 Green Street at Tehachapi Boulevard

Cycle (sec):	100	Critical Vol./Cap.(X):	0.417
Loss Time (sec):	0	Average Delay (sec/veh):	12.6
Optimal Cycle:	0	Level Of Service:	B

Street Name:	Green Street						Tehachapi Boulevard					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Control:	Stop Sign			Stop Sign			Stop Sign			Stop Sign		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	0 0	0 0	0	0 1	0 0	1	0 1	0 1	0	0 1	0 1	0
Volume Module:												
Base Vol:	0	0	0	71	33	242	66	426	22	8	482	21
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	0	0	0	71	33	242	66	426	22	8	482	21
Added Vol:	0	0	0	0	0	-17	-17	-30	0	0	-30	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	0	0	0	71	33	225	49	396	22	8	452	21
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	0	0	0	71	33	225	49	396	22	8	452	21
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	0	0	0	71	33	225	49	396	22	8	452	21
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	0	0	0	71	33	225	49	396	22	8	452	21
Saturation Flow Module:												
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	0.00	0.00	0.00	0.68	0.32	1.00	0.21	1.70	0.09	0.03	1.88	0.09
Final Sat.:	0	0	0	337	156	577	119	977	55	19	1091	51
Capacity Analysis Module:												
Vol/Sat:	xxxx	xxxx	xxxx	0.21	0.21	0.39	0.41	0.41	0.40	0.42	0.41	0.41
Crit Moves:						****	****			****		
Delay/Veh:	0.0	0.0	0.0	11.4	11.4	12.1	13.0	12.7	12.5	12.9	12.8	12.7
Delay Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	0.0	0.0	0.0	11.4	11.4	12.1	13.0	12.7	12.5	12.9	12.8	12.7
LOS by Move:	*	*	*	B	B	B	B	B	B	B	B	B
ApproachDel:	xxxxxx			11.9			12.8			12.8		
Delay Adj:	xxxxx			1.00			1.00			1.00		
ApprAdjDel:	xxxxxx			11.9			12.8			12.8		
LOS by Appr:	*			B			B			B		
AllWayAvgQ:	0.0	0.0	0.0	0.2	0.2	0.6	0.6	0.6	0.6	0.7	0.6	0.6

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APPENDIX F-II

GENERAL PLAN BUILDOUT WITH PROJECT TRAFFIC CONDITIONS

AM General Plan Buildout Plus Project
Walmart, Tehachapi
Linscott, Law and Greenspan, Engineers

Level Of Service Computation Report
2000 HCM Operations Method (Future Volume Alternative)

****

Intersection #1 Woodford Tehachapi Road at Valley Boulevard (SR-202)

****

Cycle (sec):	90	Critical Vol./Cap.(X):	0.580
Loss Time (sec):	12	Average Delay (sec/veh):	21.1
Optimal Cycle:	90	Level Of Service:	C

****

Street Name:	Woodford Tehachapi Road						Valley Boulevard (SR-202)					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Control:	Permitted			Permitted			Protected			Protected		
Rights:	Include			Include			Include			Include		
Min. Green:	6	6	6	6	6	6	6	6	6	6	6	6
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	0 0	1! 0	0	1 0	1 0	1	1 0	0 1	0	1 0	1 0	1
Volume Module:												
Base Vol:	143	27	49	193	27	53	43	329	23	32	619	40
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	143	27	49	193	27	53	43	329	23	32	619	40
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	143	27	49	193	27	53	43	329	23	32	619	40
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	143	27	49	193	27	53	43	329	23	32	619	40
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	143	27	49	193	27	53	43	329	23	32	619	40
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	143	27	49	193	27	53	43	329	23	32	619	40
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.75	0.75	0.75	0.77	1.00	0.85	0.95	0.99	0.99	0.95	1.00	0.85
Lanes:	0.66	0.12	0.22	1.00	1.00	1.00	1.00	0.93	0.07	1.00	1.00	1.00
Final Sat.:	935	177	320	1461	1900	1615	1805	1758	123	1805	1900	1615
Capacity Analysis Module:												
Vol/Sat:	0.15	0.15	0.15	0.13	0.01	0.03	0.02	0.19	0.19	0.02	0.33	0.02
Crit Moves:		****					****				****	
Green Time:	23.0	23.0	23.0	23.0	23.0	23.0	6.0	40.6	40.6	14.4	49.0	49.0
Volume/Cap:	0.60	0.60	0.60	0.52	0.06	0.13	0.36	0.42	0.42	0.11	0.60	0.05
Delay/Veh:	32.2	32.2	32.2	30.0	25.3	25.9	42.0	17.0	17.0	32.5	14.8	9.6
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	32.2	32.2	32.2	30.0	25.3	25.9	42.0	17.0	17.0	32.5	14.8	9.6
LOS by Move:	C	C	C	C	C	C	D	B	B	C	B	A
HCM2k95thQ:	12	12	12	10	1	2	3	13	13	2	22	1

****

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AM General Plan Buildout Plus Project
Walmart, Tehachapi
Linscott, Law and Greenspan, Engineers

Level Of Service Computation Report
2000 HCM Unsignalized Method (Future Volume Alternative)

****

Intersection #7 Tehachapi Boulevard at SR-58 Eastbound Ramps

****

Average Delay (sec/veh): 1.5 Worst Case Level Of Service: B[10.8]

****

Street Name:	Tehachapi Boulevard						SR-58 Eastbound Ramps					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Control:	Uncontrolled			Uncontrolled			Stop Sign			Stop Sign		
Rights:	Include			Include			Include			Include		
Lanes:	0 0	0 1	0	0 0	1 0	0	0 1	0 0	1	0 0	0 0	0
Volume Module:												
Base Vol:	0	538	339	0	238	0	0	1	173	0	0	0
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	0	538	339	0	238	0	0	1	173	0	0	0
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	0	538	339	0	238	0	0	1	173	0	0	0
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	0	538	339	0	238	0	0	1	173	0	0	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
FinalVolume:	0	538	339	0	238	0	0	1	173	0	0	0
Critical Gap Module:												
Critical Gp:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	6.4	6.5	6.2	xxxxx	xxxx	xxxxx
FollowUpTim:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	3.5	4.0	3.3	xxxxx	xxxx	xxxxx
Capacity Module:												
Cnflict Vol:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	946	1115	238	xxxx	xxxx	xxxxx
Potent Cap.:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	293	210	806	xxxx	xxxx	xxxxx
Move Cap.:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	293	210	806	xxxx	xxxx	xxxxx
Volume/Cap:	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	0.00	0.00	0.21	xxxx	xxxx	xxxx
Level Of Service Module:												
2Way95thQ:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	0.8	xxxx	xxxx	xxxxx
Control Del:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	10.7	xxxxx	xxxx	xxxxx
LOS by Move:	*	*	*	*	*	*	*	*	B	*	*	*
Movement:	LT -	LTR -	RT	LT -	LTR -	RT	LT -	LTR -	RT	LT -	LTR -	RT
Shared Cap.:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	210	xxxx	xxxxx	xxxx	xxxx	xxxxx
SharedQueue:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	0.0	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Shrd ConDel:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	22.3	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Shared LOS:	*	*	*	*	*	*	C	*	*	*	*	*
ApproachDel:	xxxxxx			xxxxxx			10.8			xxxxxx		
ApproachLOS:	*			*			B			*		

****

Note: Queue reported is the number of cars per lane.

****

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AM General Plan Buildout Plus Project
Walmart, Tehachapi
Linscott, Law and Greenspan, Engineers

Level Of Service Computation Report
2000 HCM Operations Method (Future Volume Alternative)

****

Intersection #8 Tehachapi Boulevard/Tucker Road at Red Apple Avenue/Tehachapi Bo

****

Cycle (sec):	90	Critical Vol./Cap.(X):	0.626
Loss Time (sec):	16	Average Delay (sec/veh):	30.9
Optimal Cycle:	90	Level Of Service:	C

****

Street Name:	Tehachapi Boulevard/Tucker Road						Red Apple Avenue/Tehachapi Boulev					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Control:	Protected			Protected			Protected			Protected		
Rights:	Include			Include			Include			Include		
Min. Green:	6	6	6	6	6	6	6	6	6	6	6	6
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	1 0	2 0	1	1 0	2 0	1	1 0	1 0	1	1 0	1 0	1
Volume Module:												
Base Vol:	99	531	157	84	264	56	213	439	140	163	220	109
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	99	531	157	84	264	56	213	439	140	163	220	109
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	99	531	157	84	264	56	213	439	140	163	220	109
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	99	531	157	84	264	56	213	439	140	163	220	109
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	99	531	157	84	264	56	213	439	140	163	220	109
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	99	531	157	84	264	56	213	439	140	163	220	109
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.95	0.95	0.85	0.95	0.95	0.85	0.95	1.00	0.85	0.95	1.00	0.85
Lanes:	1.00	2.00	1.00	1.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Sat.:	1805	3610	1615	1805	3610	1615	1805	1900	1615	1805	1900	1615
Capacity Analysis Module:												
Vol/Sat:	0.05	0.15	0.10	0.05	0.07	0.03	0.12	0.23	0.09	0.09	0.12	0.07
Crit Moves:		****		****				****		****		
Green Time:	13.3	21.1	21.1	6.7	14.6	14.6	23.3	33.2	33.2	13.0	22.9	22.9
Volume/Cap:	0.37	0.63	0.41	0.63	0.45	0.21	0.46	0.63	0.23	0.63	0.46	0.27
Delay/Veh:	35.5	32.4	29.9	49.5	34.7	33.2	28.7	25.1	19.8	41.0	29.0	27.2
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	35.5	32.4	29.9	49.5	34.7	33.2	28.7	25.1	19.8	41.0	29.0	27.2
LOS by Move:	D	C	C	D	C	C	C	C	B	D	C	C
HCM2k95thQ:	6	15	8	7	8	3	10	19	5	10	11	5

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Level Of Service Computation Report
2000 HCM Operations Method (Future Volume Alternative)

Intersection #10 Tucker Road at Valley Boulevard (SR-202)

Cycle (sec):	90	Critical Vol./Cap.(X):	0.712
Loss Time (sec):	16	Average Delay (sec/veh):	32.1
Optimal Cycle:	90	Level Of Service:	C

Street Name:	Tucker Road						Valley Boulevard (SR-202)					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Control:	Protected			Protected			Protected			Protected		
Rights:	Include			Include			Include			Include		
Min. Green:	6	6	6	6	6	6	6	6	6	6	6	6
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	1 0	1 1	0	1 0	2 0	1	1 0	1 0	1	1 0	1 0	1
Volume Module:												
Base Vol:	90	125	162	99	69	202	193	353	21	127	576	49
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	90	125	162	99	69	202	193	353	21	127	576	49
Added Vol:	0	0	0	0	0	0	193	353	21	127	576	49
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	90	125	162	99	69	202	0	0	0	0	0	0
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	193	353	21	127	576	49
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	90	125	162	99	69	202	1.00	1.00	1.00	1.00	1.00	1.00
Reduct Vol:	0	0	0	0	0	0	193	353	21	127	576	49
Reduced Vol:	90	125	162	99	69	202	0	0	0	0	0	0
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	193	353	21	127	576	49
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	90	125	162	99	69	202	1.00	1.00	1.00	1.00	1.00	1.00
							193	353	21	127	576	49
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.95	0.87	0.87	0.95	0.95	0.85	0.95	1.00	0.85	0.95	1.00	0.85
Lanes:	1.00	1.00	1.00	1.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Sat.:	1805	1652	1652	1805	3610	1615	1805	1900	1615	1805	1900	1615
Capacity Analysis Module:												
Vol/Sat:	0.05	0.08	0.10	0.05	0.02	0.13	0.11	0.19	0.01	0.07	0.30	0.03
Crit Moves:	****					****	****				****	
Green Time:	6.3	13.2	13.2	9.0	15.8	15.8	13.5	37.6	37.6	14.2	38.3	38.3
Volume/Cap:	0.71	0.52	0.67	0.55	0.11	0.71	0.71	0.44	0.03	0.44	0.71	0.07
Delay/Veh:	58.2	36.3	40.4	42.3	31.2	43.1	44.9	19.1	15.5	35.4	24.3	15.3
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	58.2	36.3	40.4	42.3	31.2	43.1	44.9	19.1	15.5	35.4	24.3	15.3
LOS by Move:	E	D	D	D	C	D	D	B	B	D	C	B
HCM2k95thQ:	8	8	11	7	2	13	13	14	1	7	25	2

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Level Of Service Computation Report
2000 HCM Operations Method (Future Volume Alternative)

****

Intersection #17 Curry Street at Valley Boulevard (SR-202)

****

Cycle (sec):	90	Critical Vol./Cap.(X):	0.543
Loss Time (sec):	12	Average Delay (sec/veh):	22.1
Optimal Cycle:	90	Level Of Service:	C

****

Street Name:	Curry Street						Valley Boulevard (SR-202)					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Control:	Permitted			Permitted			Protected			Protected		
Rights:	Include			Include			Include			Include		
Min. Green:	6	6	6	6	6	6	6	6	6	6	6	6
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	1 0	1 0	1	1 0	1 0	1	1 0	0 1	0	1 0	1 0	1
Volume Module:												
Base Vol:	27	81	77	40	42	197	149	411	14	38	505	74
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	27	81	77	40	42	197	149	411	14	38	505	74
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	27	81	77	40	42	197	149	411	14	38	505	74
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	27	81	77	40	42	197	149	411	14	38	505	74
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	27	81	77	40	42	197	149	411	14	38	505	74
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	27	81	77	40	42	197	149	411	14	38	505	74
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.73	1.00	0.85	0.70	1.00	0.85	0.95	1.00	1.00	0.95	1.00	0.85
Lanes:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.97	0.03	1.00	1.00	1.00
Final Sat.:	1395	1900	1615	1336	1900	1615	1805	1828	62	1805	1900	1615
Capacity Analysis Module:												
Vol/Sat:	0.02	0.04	0.05	0.03	0.02	0.12	0.08	0.22	0.22	0.02	0.27	0.05
Crit Moves:						****	****				****	
Green Time:	20.2	20.2	20.2	20.2	20.2	20.2	13.7	44.6	44.6	13.2	44.1	44.1
Volume/Cap:	0.09	0.19	0.21	0.13	0.10	0.54	0.54	0.45	0.45	0.14	0.54	0.09
Delay/Veh:	27.7	28.5	28.7	28.1	27.8	32.5	37.5	15.2	15.2	33.7	16.6	12.3
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	27.7	28.5	28.7	28.1	27.8	32.5	37.5	15.2	15.2	33.7	16.6	12.3
LOS by Move:	C	C	C	C	C	C	D	B	B	C	B	B
HCM2k95thQ:	1	4	4	2	2	11	9	15	15	2	18	2

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Level Of Service Computation Report
2000 HCM 4-Way Stop Method (Future Volume Alternative)

****

Intersection #19 Green Street at Tehachapi Boulevard

****

Cycle (sec):	100	Critical Vol./Cap.(X):	0.330
Loss Time (sec):	0	Average Delay (sec/veh):	10.0
Optimal Cycle:	0	Level Of Service:	B

****

Street Name:	Green Street						Tehachapi Boulevard					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Control:	Stop Sign			Stop Sign			Stop Sign			Stop Sign		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	0 0	0 0	0	0 1	0 0	1	0 1	0 1	0	0 1	0 1	0
Volume Module:												
Base Vol:	0	0	0	48	10	66	41	388	11	2	324	29
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	0	0	0	48	10	66	41	388	11	2	324	29
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	0	0	0	48	10	66	41	388	11	2	324	29
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	0	0	0	48	10	66	41	388	11	2	324	29
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	0	0	0	48	10	66	41	388	11	2	324	29
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	0	0	0	48	10	66	41	388	11	2	324	29
Saturation Flow Module:												
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	0.00	0.00	0.00	0.83	0.17	1.00	0.19	1.76	0.05	0.01	1.83	0.16
Final Sat.:	0	0	0	425	88	608	124	1192	34	7	1227	111
Capacity Analysis Module:												
Vol/Sat:	xxxx	xxxx	xxxx	0.11	0.11	0.11	0.33	0.33	0.32	0.27	0.26	0.26
Crit Moves:					****		****			****		
Delay/Veh:	0.0	0.0	0.0	10.1	10.1	8.8	10.5	10.4	10.2	9.9	9.8	9.7
Delay Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	0.0	0.0	0.0	10.1	10.1	8.8	10.5	10.4	10.2	9.9	9.8	9.7
LOS by Move:	*	*	*	B	B	A	B	B	B	A	A	A
ApproachDel:	xxxxxx				9.4			10.4			9.8	
Delay Adj:	xxxxx				1.00			1.00			1.00	
ApprAdjDel:	xxxxxx				9.4			10.4			9.8	
LOS by Appr:	*				A			B			A	
AllWayAvgQ:	0.0	0.0	0.0	0.1	0.1	0.1	0.5	0.5	0.5	0.3	0.3	0.3

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Level Of Service Computation Report
2000 HCM Operations Method (Future Volume Alternative)

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Intersection #1 Woodford Tehachapi Road at Valley Boulevard (SR-202)

****

Cycle (sec):	90	Critical Vol./Cap.(X):	0.671
Loss Time (sec):	12	Average Delay (sec/veh):	20.0
Optimal Cycle:	90	Level Of Service:	B

****

Street Name:	Woodford Tehachapi Road						Valley Boulevard (SR-202)					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Permitted			Permitted			Protected			Protected		
Rights:	Include			Include			Include			Include		
Min. Green:	6	6	6	6	6	6	6	6	6	6	6	6
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	0 0	1! 0	0	1 0	1 0	1	1 0	0 1	0	1 0	1 0	1
Volume Module:												
Base Vol:	94	34	88	118	17	53	41	729	67	26	505	49
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	94	34	88	118	17	53	41	729	67	26	505	49
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	94	34	88	118	17	53	41	729	67	26	505	49
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	94	34	88	118	17	53	41	729	67	26	505	49
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	94	34	88	118	17	53	41	729	67	26	505	49
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	94	34	88	118	17	53	41	729	67	26	505	49
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.80	0.80	0.80	0.83	1.00	0.85	0.95	0.99	0.99	0.95	1.00	0.85
Lanes:	0.43	0.16	0.41	1.00	1.00	1.00	1.00	0.92	0.08	1.00	1.00	1.00
Final Sat.:	659	239	617	1577	1900	1615	1805	1717	158	1805	1900	1615
Capacity Analysis Module:												
Vol/Sat:	0.14	0.14	0.14	0.07	0.01	0.03	0.02	0.42	0.42	0.01	0.27	0.03
Crit Moves:		****						****		****		
Green Time:	18.1	18.1	18.1	18.1	18.1	18.1	12.0	53.9	53.9	6.0	47.9	47.9
Volume/Cap:	0.71	0.71	0.71	0.37	0.04	0.16	0.17	0.71	0.71	0.22	0.50	0.06
Delay/Veh:	41.0	41.0	41.0	31.8	29.0	29.9	34.9	14.7	14.7	40.7	13.8	10.2
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	41.0	41.0	41.0	31.8	29.0	29.9	34.9	14.7	14.7	40.7	13.8	10.2
LOS by Move:	D	D	D	C	C	C	C	B	B	D	B	B
HCM2k95thQ:	13	13	13	6	1	3	2	28	28	2	17	1

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Level Of Service Computation Report
2000 HCM Unsignalized Method (Future Volume Alternative)

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Intersection #7 Tehachapi Boulevard at SR-58 Eastbound Ramps

****

Average Delay (sec/veh): 15.7 Worst Case Level Of Service: F[53.5]

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Street Name:	Tehachapi Boulevard						SR-58 Eastbound Ramps					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	- T	- R	L	- T	- R	L	- T	- R	L	- T	- R
Control:	Uncontrolled			Uncontrolled			Stop Sign			Stop Sign		
Rights:	Include			Include			Include			Include		
Lanes:	0 0 0 1 0			0 1 0 0 0			0 1 0 0 1			0 0 0 0 0		
Volume Module:												
Base Vol:	0	361	284	1	563	0	0	2	498	0	0	0
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	0	361	284	1	563	0	0	2	498	0	0	0
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	0	361	284	1	563	0	0	2	498	0	0	0
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	0	361	284	1	563	0	0	2	498	0	0	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
FinalVolume:	0	361	284	1	563	0	0	2	498	0	0	0
Critical Gap Module:												
Critical Gp:	xxxxx	xxxx	xxxxx	4.1	xxxx	xxxxx	6.4	6.5	6.2	xxxxx	xxxx	xxxxx
FollowUpTim:	xxxxx	xxxx	xxxxx	2.2	xxxx	xxxxx	3.5	4.0	3.3	xxxxx	xxxx	xxxxx
Capacity Module:												
Cnflict Vol:	xxxx	xxxx	xxxxx	645	xxxx	xxxxx	1068	1210	563	xxxx	xxxx	xxxxx
Potent Cap.:	xxxx	xxxx	xxxxx	950	xxxx	xxxxx	248	184	530	xxxx	xxxx	xxxxx
Move Cap.:	xxxx	xxxx	xxxxx	950	xxxx	xxxxx	247	184	530	xxxx	xxxx	xxxxx
Volume/Cap:	xxxx	xxxx	xxxx	0.00	xxxx	xxxx	0.00	0.01	0.94	xxxx	xxxx	xxxx
Level Of Service Module:												
2Way95thQ:	xxxx	xxxx	xxxxx	0.0	xxxx	xxxxx	xxxx	xxxx	11.8	xxxx	xxxx	xxxxx
Control Del:	xxxxx	xxxx	xxxxx	8.8	xxxx	xxxxx	xxxxx	xxxx	53.7	xxxxx	xxxx	xxxxx
LOS by Move:	*	*	*	A	*	*	*	*	F	*	*	*
Movement:	LT	- LTR	- RT	LT	- LTR	- RT	LT	- LTR	- RT	LT	- LTR	- RT
Shared Cap.:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	184	xxxx	xxxxx	xxxx	xxxx	xxxxx
SharedQueue:	xxxxx	xxxx	xxxxx	0.0	xxxx	xxxxx	0.0	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Shrd ConDel:	xxxxx	xxxx	xxxxx	8.8	xxxx	xxxxx	24.8	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Shared LOS:	*	*	*	A	*	*	C	*	*	*	*	*
ApproachDel:	xxxxxx			xxxxxx			53.5			xxxxxx		
ApproachLOS:	*			*			F			*		

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Note: Queue reported is the number of cars per lane.

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PM General Plan Buildout Plus Project
Walmart, Tehachapi
Linscott, Law and Greenspan, Engineers

Level Of Service Computation Report
2000 HCM Operations Method (Future Volume Alternative)

****

Intersection #8 Tehachapi Boulevard/Tucker Road at Red Apple Avenue/Tehachapi Bo

****

Cycle (sec):	90	Critical Vol./Cap.(X):	0.873
Loss Time (sec):	16	Average Delay (sec/veh):	41.3
Optimal Cycle:	101	Level Of Service:	D

****

Street Name:	Tehachapi Boulevard/Tucker Road						Red Apple Avenue/Tehachapi Boulev					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Control:	Protected			Protected			Protected			Protected		
Rights:	Include			Include			Include			Include		
Min. Green:	6	6	6	6	6	6	6	6	6	6	6	6
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	1 0	2 0	1	1 0	2 0	1	1 0	1 0	1	1 0	1 0	1
Volume Module:												
Base Vol:	272	359	238	142	557	284	115	382	119	343	399	92
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	272	359	238	142	557	284	115	382	119	343	399	92
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	272	359	238	142	557	284	115	382	119	343	399	92
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	272	359	238	142	557	284	115	382	119	343	399	92
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	272	359	238	142	557	284	115	382	119	343	399	92
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	272	359	238	142	557	284	115	382	119	343	399	92
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.95	0.95	0.85	0.95	0.95	0.85	0.95	1.00	0.85	0.95	1.00	0.85
Lanes:	1.00	2.00	1.00	1.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Sat.:	1805	3610	1615	1805	3610	1615	1805	1900	1615	1805	1900	1615
Capacity Analysis Module:												
Vol/Sat:	0.15	0.10	0.15	0.08	0.15	0.18	0.06	0.20	0.07	0.19	0.21	0.06
Crit Moves:	****					****		****		****		
Green Time:	15.5	22.0	22.0	11.7	18.1	18.1	9.7	20.7	20.7	19.6	30.6	30.6
Volume/Cap:	0.87	0.41	0.60	0.60	0.77	0.87	0.59	0.87	0.32	0.87	0.62	0.17
Delay/Veh:	58.9	28.9	32.8	41.4	38.8	56.7	43.0	50.6	29.3	52.8	26.6	20.9
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	58.9	28.9	32.8	41.4	38.8	56.7	43.0	50.6	29.3	52.8	26.6	20.9
LOS by Move:	E	C	C	D	D	E	D	D	C	D	C	C
HCM2k95thQ:	19	9	13	9	18	20	8	24	6	22	18	4

****

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PM General Plan Buildout Plus Project
Walmart, Tehachapi
Linscott, Law and Greenspan, Engineers

Level Of Service Computation Report
2000 HCM Operations Method (Future Volume Alternative)

****

Intersection #10 Tucker Road at Valley Boulevard (SR-202)

****

Cycle (sec):	100	Critical Vol./Cap.(X):	0.999
Loss Time (sec):	16	Average Delay (sec/veh):	58.1
Optimal Cycle:	120	Level Of Service:	E

****

Street Name:	Tucker Road						Valley Boulevard (SR-202)					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L - T - R			L - T - R			L - T - R			L - T - R		
Control:	Protected			Protected			Protected			Protected		
Rights:	Include			Include			Include			Include		
Min. Green:	6	6	6	6	6	6	6	6	6	6	6	6
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	1 0	1 1	0	1 0	2 0	1	1 0	1 0	1	1 0	1 0	1
Volume Module:												
Base Vol:	294	181	298	231	338	382	122	654	49	172	462	77
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	294	181	298	231	338	382	122	654	49	172	462	77
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	294	181	298	231	338	382	122	654	49	172	462	77
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	294	181	298	231	338	382	122	654	49	172	462	77
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	294	181	298	231	338	382	122	654	49	172	462	77
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	294	181	298	231	338	382	122	654	49	172	462	77
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.95	0.86	0.86	0.95	0.95	0.85	0.95	1.00	0.85	0.95	1.00	0.85
Lanes:	1.00	1.00	1.00	1.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Sat.:	1805	1637	1637	1805	3610	1615	1805	1900	1615	1805	1900	1615
Capacity Analysis Module:												
Vol/Sat:	0.16	0.11	0.18	0.13	0.09	0.24	0.07	0.34	0.03	0.10	0.24	0.05
Crit Moves:	****					****		****		****		
Green Time:	16.3	23.5	23.5	16.5	23.7	23.7	9.6	34.5	34.5	9.5	34.4	34.4
Volume/Cap:	1.00	0.47	0.78	0.78	0.40	1.00	0.71	1.00	0.09	1.00	0.71	0.14
Delay/Veh:	93.9	33.3	41.9	52.0	32.4	83.8	56.4	67.6	22.2	113.4	31.9	22.7
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	93.9	33.3	41.9	52.0	32.4	83.8	56.4	67.6	22.2	113.4	31.9	22.7
LOS by Move:	F	C	D	D	C	F	E	E	C	F	C	C
HCM2k95thQ:	25	11	20	16	9	30	10	44	2	17	24	3

****

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PM General Plan Buildout Plus Project
Walmart, Tehachapi
Linscott, Law and Greenspan, Engineers

Level Of Service Computation Report
2000 HCM Operations Method (Future Volume Alternative)

****

Intersection #17 Curry Street at Valley Boulevard (SR-202)

****

Cycle (sec):	90	Critical Vol./Cap.(X):	0.619
Loss Time (sec):	12	Average Delay (sec/veh):	24.8
Optimal Cycle:	90	Level Of Service:	C

****

Street Name:	Curry Street						Valley Boulevard (SR-202)					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Control:	Permitted			Permitted			Protected			Protected		
Rights:	Include			Include			Include			Include		
Min. Green:	6	6	6	6	6	6	6	6	6	6	6	6
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	1 0	1 0	1	1 0	1 0	1	1 0	0 1	0	1 0	1 0	1
Volume Module:												
Base Vol:	50	74	18	72	126	242	265	534	52	22	456	49
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	50	74	18	72	126	242	265	534	52	22	456	49
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	50	74	18	72	126	242	265	534	52	22	456	49
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	50	74	18	72	126	242	265	534	52	22	456	49
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	50	74	18	72	126	242	265	534	52	22	456	49
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	50	74	18	72	126	242	265	534	52	22	456	49
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.64	1.00	0.85	0.71	1.00	0.85	0.95	0.99	0.99	0.95	1.00	0.85
Lanes:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.91	0.09	1.00	1.00	1.00
Final Sat.:	1210	1900	1615	1347	1900	1615	1805	1709	166	1805	1900	1615
Capacity Analysis Module:												
Vol/Sat:	0.04	0.04	0.01	0.05	0.07	0.15	0.15	0.31	0.31	0.01	0.24	0.03
Crit Moves:						****	****				****	
Green Time:	21.8	21.8	21.8	21.8	21.8	21.8	21.3	46.3	46.3	9.9	34.9	34.9
Volume/Cap:	0.17	0.16	0.05	0.22	0.27	0.62	0.62	0.61	0.61	0.11	0.62	0.08
Delay/Veh:	27.2	27.1	26.2	27.7	28.0	33.4	33.5	16.5	16.5	36.3	23.8	17.5
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	27.2	27.1	26.2	27.7	28.0	33.4	33.5	16.5	16.5	36.3	23.8	17.5
LOS by Move:	C	C	C	C	C	C	C	B	B	D	C	B
HCM2k95thQ:	2	3	1	4	6	13	14	21	21	1	20	2

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PM General Plan Buildout Plus Project
Walmart, Tehachapi
Linscott, Law and Greenspan, Engineers

Level Of Service Computation Report
2000 HCM 4-Way Stop Method (Future Volume Alternative)

****

Intersection #19 Green Street at Tehachapi Boulevard

****

Cycle (sec):	100	Critical Vol./Cap.(X):	0.463
Loss Time (sec):	0	Average Delay (sec/veh):	13.5
Optimal Cycle:	0	Level Of Service:	B

****

Street Name:	Green Street						Tehachapi Boulevard					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Control:	Stop Sign			Stop Sign			Stop Sign			Stop Sign		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	0 0	0 0	0	0 1	0 0	1	0 1	0 1	0	0 1	0 1	0
Volume Module:												
Base Vol:	0	0	0	71	33	242	66	426	22	8	482	21
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	0	0	0	71	33	242	66	426	22	8	482	21
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	0	0	0	71	33	242	66	426	22	8	482	21
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	0	0	0	71	33	242	66	426	22	8	482	21
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	0	0	0	71	33	242	66	426	22	8	482	21
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	0	0	0	71	33	242	66	426	22	8	482	21
Saturation Flow Module:												
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	0.00	0.00	0.00	0.68	0.32	1.00	0.26	1.66	0.08	0.03	1.89	0.08
Final Sat.:	0	0	0	330	153	563	143	935	49	18	1070	47
Capacity Analysis Module:												
Vol/Sat:	xxxx	xxxx	xxxx	0.22	0.22	0.43	0.46	0.46	0.45	0.45	0.45	0.45
Crit Moves:						****	****			****		
Delay/Veh:	0.0	0.0	0.0	11.7	11.7	13.0	14.2	13.9	13.6	13.8	13.7	13.6
Delay Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	0.0	0.0	0.0	11.7	11.7	13.0	14.2	13.9	13.6	13.8	13.7	13.6
LOS by Move:	*	*	*	B	B	B	B	B	B	B	B	B
ApproachDel:	xxxxxx			12.6			13.9			13.7		
Delay Adj:	xxxxx			1.00			1.00			1.00		
ApprAdjDel:	xxxxxx			12.6			13.9			13.7		
LOS by Appr:	*			B			B			B		
AllWayAvgQ:	0.0	0.0	0.0	0.2	0.2	0.7	0.8	0.8	0.8	0.8	0.7	0.7

****

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APPENDIX F-III

GENERAL PLAN BUILDOUT WITH PROJECT WITH MITIGATION TRAFFIC CONDITIONS

AM General Plan Buildout Plus Project - Mitigation
Walmart, Tehachapi
Linscott, Law and Greenspan, Engineers

Level Of Service Computation Report
2000 HCM Unsignalized Method (Future Volume Alternative)

****

Intersection #7 Tehachapi Boulevard at SR-58 Eastbound Ramps

****

Average Delay (sec/veh): 0.0 Worst Case Level Of Service: A[0.0]

****

Street Name:	Tehachapi Boulevard						SR-58 Eastbound Ramps					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Control:	Uncontrolled			Uncontrolled			Stop Sign			Stop Sign		
Rights:	Include			Include			Ignore			Include		
Lanes:	0 0 0	1	0	0 0	1	0 0	1 0 0	0	1	0 0 0	0	0
Volume Module:												
Base Vol:	0	538	339	0	238	0	0	0	174	0	0	0
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	0	538	339	0	238	0	0	0	174	0	0	0
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	0	538	339	0	238	0	0	0	174	0	0	0
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
PHF Volume:	0	538	339	0	238	0	0	0	0	0	0	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
FinalVolume:	0	538	339	0	238	0	0	0	0	0	0	0
Critical Gap Module:												
Critical Gp:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	6.4	xxxx	6.2	xxxxx	xxxx	xxxxx
FollowUpTim:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	3.5	xxxx	3.3	xxxxx	xxxx	xxxxx
Capacity Module:												
Cnflict Vol:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	946	xxxx	238	xxxx	xxxx	xxxxx
Potent Cap.:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	293	xxxx	806	xxxx	xxxx	xxxxx
Move Cap.:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	293	xxxx	806	xxxx	xxxx	xxxxx
Volume/Cap:	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	0.00	xxxx	0.00	xxxx	xxxx	xxxx
Level Of Service Module:												
2Way95thQ:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
Control Del:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
LOS by Move:	*	*	*	*	*	*	*	*	*	*	*	*
Movement:	LT -	LTR -	RT	LT -	LTR -	RT	LT -	LTR -	RT	LT -	LTR -	RT
Shared Cap.:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
SharedQueue:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Shrd ConDel:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Shared LOS:	*	*	*	*	*	*	*	*	*	*	*	*
ApproachDel:	xxxxxx			xxxxxx			xxxxxx			xxxxxx		
ApproachLOS:	*			*			*			*		

****

Note: Queue reported is the number of cars per lane.

****

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AM General Plan Buildout Plus Project - Mitigation
Walmart, Tehachapi
Linscott, Law and Greenspan, Engineers

Level Of Service Computation Report
2000 HCM Operations Method (Future Volume Alternative)

Intersection #8 Tehachapi Boulevard/Tucker Road at Red Apple Avenue/Tehachapi Bo

Cycle (sec):	90	Critical Vol./Cap.(X):	0.573
Loss Time (sec):	16	Average Delay (sec/veh):	29.2
Optimal Cycle:	90	Level Of Service:	C

Street Name: Tehachapi Boulevard/Tucker Road Red Apple Avenue/Tehachapi Boulev

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Control:	Protected			Protected			Protected			Protected		
Rights:	Include			Ovl			Include			Include		
Min. Green:	6	6	6	6	6	6	6	6	6	6	6	6
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	1 0	2 0	1	1 0	2 0	1	1 0	1 0	1	2 0	1 0	1
Volume Module:												
Base Vol:	99	531	157	84	264	56	213	439	140	163	220	109
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	99	531	157	84	264	56	213	439	140	163	220	109
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	99	531	157	84	264	56	213	439	140	163	220	109
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	99	531	157	84	264	56	213	439	140	163	220	109
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	99	531	157	84	264	56	213	439	140	163	220	109
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	99	531	157	84	264	56	213	439	140	163	220	109
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.95	0.95	0.85	0.95	0.95	0.85	0.95	1.00	0.85	0.92	1.00	0.85
Lanes:	1.00	2.00	1.00	1.00	2.00	1.00	1.00	1.00	1.00	2.00	1.00	1.00
Final Sat.:	1805	3610	1615	1805	3610	1615	1805	1900	1615	3502	1900	1615
Capacity Analysis Module:												
Vol/Sat:	0.05	0.15	0.10	0.05	0.07	0.03	0.12	0.23	0.09	0.05	0.12	0.07
Crit Moves:		****		****				****		****		
Green Time:	14.5	23.1	23.1	7.3	15.9	37.9	22.0	36.3	36.3	7.3	21.6	21.6
Volume/Cap:	0.34	0.57	0.38	0.57	0.41	0.08	0.48	0.57	0.22	0.57	0.48	0.28
Delay/Veh:	34.2	30.0	28.1	45.2	33.3	15.7	30.0	21.9	17.7	42.7	30.2	28.3
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	34.2	30.0	28.1	45.2	33.3	15.7	30.0	21.9	17.7	42.7	30.2	28.3
LOS by Move:	C	C	C	D	C	B	C	C	B	D	C	C
HCM2k95thQ:	5	14	8	6	7	2	11	18	5	6	11	5

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Level Of Service Computation Report
2000 HCM Operations Method (Future Volume Alternative)

****

Intersection #10 Tucker Road at Valley Boulevard (SR-202)

****

Cycle (sec):	90	Critical Vol./Cap.(X):	0.575
Loss Time (sec):	16	Average Delay (sec/veh):	25.7
Optimal Cycle:	90	Level Of Service:	C

****

Street Name:	Tucker Road						Valley Boulevard (SR-202)					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L - T - R			L - T - R			L - T - R			L - T - R		
Control:	Protected			Protected			Protected			Protected		
Rights:	Ovl			Ovl			Include			Ovl		
Min. Green:	6	6	6	6	6	6	6	6	6	6	6	6
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	2 0	2 0	1	2 0	2 0	1	1 0	1 0	1	1 0	1 0	1
Volume Module:												
Base Vol:	90	125	162	99	69	202	193	353	21	127	576	49
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	90	125	162	99	69	202	193	353	21	127	576	49
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	90	125	162	99	69	202	193	353	21	127	576	49
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	90	125	162	99	69	202	193	353	21	127	576	49
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	90	125	162	99	69	202	193	353	21	127	576	49
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	90	125	162	99	69	202	193	353	21	127	576	49
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.92	0.95	0.85	0.92	0.95	0.85	0.95	1.00	0.85	0.95	1.00	0.85
Lanes:	2.00	2.00	1.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Sat.:	3502	3610	1615	3502	3610	1615	1805	1900	1615	1805	1900	1615
Capacity Analysis Module:												
Vol/Sat:	0.03	0.03	0.10	0.03	0.02	0.13	0.11	0.19	0.01	0.07	0.30	0.03
Crit Moves:		****		****			****				****	
Green Time:	6.0	6.0	23.0	6.0	6.0	22.2	16.2	45.0	45.0	17.0	45.8	51.8
Volume/Cap:	0.39	0.52	0.39	0.42	0.29	0.51	0.60	0.37	0.03	0.37	0.60	0.05
Delay/Veh:	41.3	42.6	28.3	41.6	40.6	30.3	36.9	14.1	11.4	32.5	16.6	8.4
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	41.3	42.6	28.3	41.6	40.6	30.3	36.9	14.1	11.4	32.5	16.6	8.4
LOS by Move:	D	D	C	D	D	C	D	B	B	C	B	A
HCM2k95thQ:	3	5	8	4	3	10	11	12	1	7	21	1

****

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Level Of Service Computation Report
2000 HCM Unsignalized Method (Future Volume Alternative)

Intersection #7 Tehachapi Boulevard at SR-58 Eastbound Ramps

Average Delay (sec/veh): 0.0 Worst Case Level Of Service: A[8.8]

Street Name:	Tehachapi Boulevard						SR-58 Eastbound Ramps					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L - T - R			L - T - R			L - T - R			L - T - R		
Control:	Uncontrolled			Uncontrolled			Stop Sign			Stop Sign		
Rights:	Include			Include			Ignore			Include		
Lanes:	0 0 0 1 0			0 1 0 0 0			1 0 0 0 1			0 0 0 0 0		
Volume Module:												
Base Vol:	0	361	284	1	563	0	0	0	500	0	0	0
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	0	361	284	1	563	0	0	0	500	0	0	0
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	0	361	284	1	563	0	0	0	500	0	0	0
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
PHF Volume:	0	361	284	1	563	0	0	0	0	0	0	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
FinalVolume:	0	361	284	1	563	0	0	0	0	0	0	0
Critical Gap Module:												
Critical Gp:	xxxxx	xxxx	xxxxx	4.1	xxxx	xxxxx	6.4	xxxx	6.2	xxxxx	xxxx	xxxxx
FollowUpTim:	xxxxx	xxxx	xxxxx	2.2	xxxx	xxxxx	3.5	xxxx	3.3	xxxxx	xxxx	xxxxx
Capacity Module:												
Cnflict Vol:	xxxx	xxxx	xxxxx	645	xxxx	xxxxx	1068	xxxx	563	xxxx	xxxx	xxxxx
Potent Cap.:	xxxx	xxxx	xxxxx	950	xxxx	xxxxx	248	xxxx	530	xxxx	xxxx	xxxxx
Move Cap.:	xxxx	xxxx	xxxxx	950	xxxx	xxxxx	247	xxxx	530	xxxx	xxxx	xxxxx
Volume/Cap:	xxxx	xxxx	xxxx	0.00	xxxx	xxxx	0.00	xxxx	0.00	xxxx	xxxx	xxxx
Level Of Service Module:												
2Way95thQ:	xxxx	xxxx	xxxxx	0.0	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
Control Del:	xxxxx	xxxx	xxxxx	8.8	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
LOS by Move:	*	*	*	A	*	*	*	*	*	*	*	*
Movement:	LT - LTR - RT			LT - LTR - RT			LT - LTR - RT			LT - LTR - RT		
Shared Cap.:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
SharedQueue:	xxxxx	xxxx	xxxxx	0.0	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Shrd ConDel:	xxxxx	xxxx	xxxxx	8.8	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Shared LOS:	*	*	*	A	*	*	*	*	*	*	*	*
ApproachDel:	xxxxxx			xxxxxx			xxxxxx			xxxxxx		
ApproachLOS:	*			*			*			*		

Note: Queue reported is the number of cars per lane.

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Level Of Service Computation Report
2000 HCM Operations Method (Future Volume Alternative)

Intersection #8 Tehachapi Boulevard/Tucker Road at Red Apple Avenue/Tehachapi Bo

Cycle (sec):	90	Critical Vol./Cap.(X):	0.735
Loss Time (sec):	16	Average Delay (sec/veh):	34.1
Optimal Cycle:	90	Level Of Service:	C

Street Name: Tehachapi Boulevard/Tucker Road Red Apple Avenue/Tehachapi Boulev

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Control:	Protected			Protected			Protected			Protected		
Rights:	Include			Ovl			Include			Include		
Min. Green:	6	6	6	6	6	6	6	6	6	6	6	6
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	1 0	2 0	1	1 0	2 0	1	1 0	1 0	1	2 0	1 0	1
Volume Module:												
Base Vol:	272	359	238	142	557	284	115	382	119	343	399	92
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	272	359	238	142	557	284	115	382	119	343	399	92
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	272	359	238	142	557	284	115	382	119	343	399	92
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	272	359	238	142	557	284	115	382	119	343	399	92
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	272	359	238	142	557	284	115	382	119	343	399	92
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	272	359	238	142	557	284	115	382	119	343	399	92
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.95	0.95	0.85	0.95	0.95	0.85	0.95	1.00	0.85	0.92	1.00	0.85
Lanes:	1.00	2.00	1.00	1.00	2.00	1.00	1.00	1.00	1.00	2.00	1.00	1.00
Final Sat.:	1805	3610	1615	1805	3610	1615	1805	1900	1615	3502	1900	1615
Capacity Analysis Module:												
Vol/Sat:	0.15	0.10	0.15	0.08	0.15	0.18	0.06	0.20	0.07	0.10	0.21	0.06
Crit Moves:	****				****			****		****		
Green Time:	18.5	24.4	24.4	13.0	18.9	27.7	8.8	24.6	24.6	12.0	27.8	27.8
Volume/Cap:	0.73	0.37	0.54	0.54	0.73	0.57	0.65	0.73	0.27	0.73	0.68	0.18
Delay/Veh:	40.9	26.8	29.5	38.1	37.0	27.7	47.3	35.1	26.0	43.4	30.4	23.0
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	40.9	26.8	29.5	38.1	37.0	27.7	47.3	35.1	26.0	43.4	30.4	23.0
LOS by Move:	D	C	C	D	D	C	D	D	C	D	C	C
HCM2k95thQ:	16	9	12	9	17	14	9	20	5	12	20	4

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Level Of Service Computation Report
2000 HCM Operations Method (Future Volume Alternative)

****

Intersection #10 Tucker Road at Valley Boulevard (SR-202)

****

Cycle (sec):	90	Critical Vol./Cap.(X):	0.842
Loss Time (sec):	16	Average Delay (sec/veh):	34.9
Optimal Cycle:	92	Level Of Service:	C

****

Street Name:	Tucker Road						Valley Boulevard (SR-202)					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Protected			Protected			Protected			Protected		
Rights:	Ovl			Ovl			Include			Ovl		
Min. Green:	6	6	6	6	6	6	6	6	6	6	6	6
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	2 0	2 0	1	2 0	2 0	1	1 0	1 0	1	1 0	1 0	1
Volume Module:												
Base Vol:	294	181	298	231	338	382	122	654	49	172	462	77
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	294	181	298	231	338	382	122	654	49	172	462	77
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	294	181	298	231	338	382	122	654	49	172	462	77
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	294	181	298	231	338	382	122	654	49	172	462	77
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	294	181	298	231	338	382	122	654	49	172	462	77
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	294	181	298	231	338	382	122	654	49	172	462	77
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.92	0.95	0.85	0.92	0.95	0.85	0.95	1.00	0.85	0.95	1.00	0.85
Lanes:	2.00	2.00	1.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Sat.:	3502	3610	1615	3502	3610	1615	1805	1900	1615	1805	1900	1615
Capacity Analysis Module:												
Vol/Sat:	0.08	0.05	0.18	0.07	0.09	0.24	0.07	0.34	0.03	0.10	0.24	0.05
Crit Moves:	****					****		****		****		
Green Time:	9.0	15.5	25.7	11.6	18.1	28.3	10.2	36.8	36.8	10.2	36.8	48.3
Volume/Cap:	0.84	0.29	0.65	0.51	0.47	0.75	0.60	0.84	0.07	0.84	0.60	0.09
Delay/Veh:	56.5	32.8	31.4	37.6	32.2	34.0	42.6	32.3	16.3	64.9	22.1	10.2
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	56.5	32.8	31.4	37.6	32.2	34.0	42.6	32.3	16.3	64.9	22.1	10.2
LOS by Move:	E	C	C	D	C	C	D	C	B	E	C	B
HCM2k95thQ:	13	5	15	7	9	20	8	32	2	14	19	2

****

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APPENDIX G

TRAFFIC SIGNAL WARRANT ANALYSIS WORKSHEETS

APPENDIX G-I

YEAR 2011 CUMULATIVE PLUS PROJECT TRAFFIC CONDITIONS

Peak Hour Traffic Signal Warrant Analysis[1]

CRITERIA A. ***Are all of the following three criteria met:*** **N**

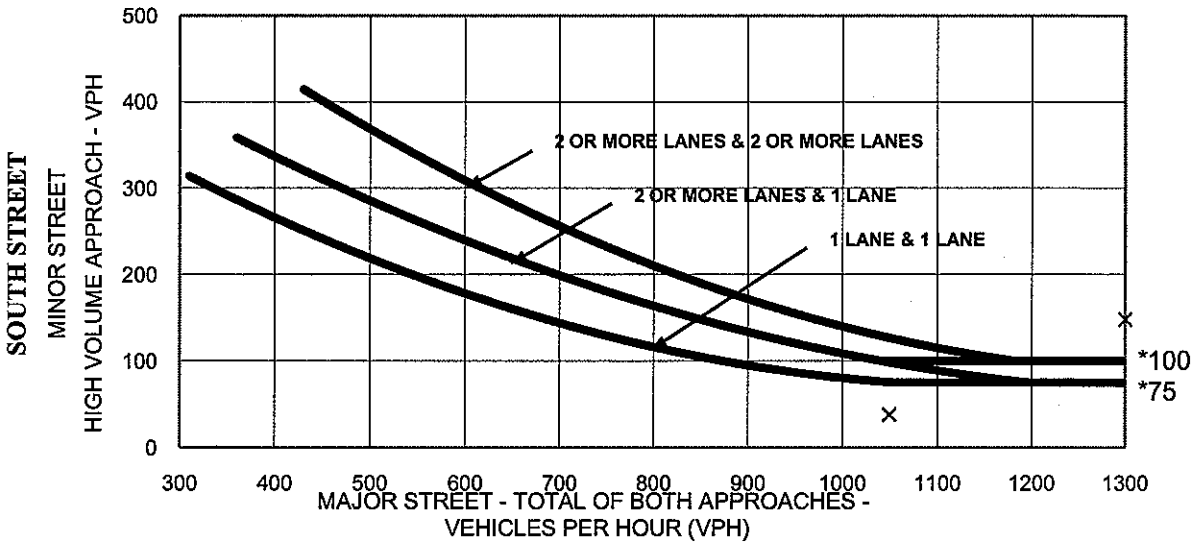
Criteria Description	Yes/No (Y/N)
1. The total stopped time delay experienced by the traffic on one minor-street approach (one direction only) controlled by a STOP sign equals or exceeds: 4 vehicle-hours for a one-lane approach; or 5 vehicle-hours for a two-lane approach, and	N
2. The volume on the same minor-street approach (one direction only) equals or exceeds 100 vehicles per hour for one moving lane of traffic or 150 vehicles per hour for two moving lanes, and	N
3. The total entering volume serviced during the hour equals or exceeds 650 vehicles per hour for intersections with three approaches or 800 vehicles per hour for intersections with four or more approaches.	Y

CRITERIA B. ***Does the plotted point [2] fall above the applicable curve in Figure 4C-3 (below) for the existing combination of approach lanes?*** **Y**

Approach	Number of Lanes		Vehicles Per Hour	
	1	2 or more	AM Pk Hr	PM Pk Hr
Major Street (Total of Both Approaches)	--	X	1,049	1,473
Minor Street (Higher of Approach)	--	X	38	148

FIGURE 4C-4. WARRANT 3, PEAK HOUR (70% FACTOR)

(COMMUNITY LESS THAN 10,000 POPULATION OR ABOVE 64 km/h OR ABOVE 40 mph ON MAJOR STREET)



VALLEY BOULEVARD (SR-202)

*Note: 100 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 75 vph applies as the lower threshold volume for a minor-street approach with one lane.

Has either Criteria A or B been satisfied?	Y

#2. South Street at Valley Boulevard (SR-202)
TRAFFIC SIGNAL WARRANT is SATISFIED
for Year 2011 Cumulative Plus Project

[1] *California Manual on Uniform Traffic Control Devices (MUTCD)* - Warrant #3

[2] *All-Way Stop Control (Part A of Warrant 3 is not applicable)*
the higher-volume minor-street approach (one direction only) for 1 hour (any four consecutive 15-minute periods) of an average day.

#2 Rural.xls

AM Cumulative Plus Project (2011) - Signal Warrant
Walmart, Tehachapi
Linscott, Law and Greenspan, Engineers

Peak Hour Delay Signal Warrant Report

****

Intersection #2 South Street at Valley Boulevard (SR-202)

****

Future Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound					South Bound					East Bound					West Bound				
Movement:	L	-	T	-	R	L	-	T	-	R	L	-	T	-	R	L	-	T	-	R
Control:	Stop Sign					Stop Sign					Uncontrolled					Uncontrolled				
Lanes:	1	0	0	0	1	0	0	0	0	0	0	0	1	0	1	1	0	1	0	0
Initial Vol:	12		0		26	0		0		0	0		557		30	33		428		0
ApproachDel:	13.2					xxxxxx					xxxxxx					xxxxxx				

Approach[northbound][lanes=2][control=Stop Sign]
Signal Warrant Rule #1: [vehicle-hours=0.1]
FAIL - Vehicle-hours less than 5 for two or more lane approach.
Signal Warrant Rule #2: [approach volume=38]
FAIL - Approach volume less than 150 for two or more lane approach.
Signal Warrant Rule #3: [approach count=3][total volume=1087]
SUCCEED - Total volume greater than or equal to 650 for intersection with less than four approaches.

SIGNAL WARRANT DISCLAIMER

This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

The peak hour warrant analysis in this report is not intended to replace a rigorous and complete traffic signal warrant analysis by the responsible jurisdiction. Consideration of the other signal warrants, which is beyond the scope of this software, may yield different results.

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PM Cumulative Plus Project (2011) - Signal Warrant
Walmart, Tehachapi
Linscott, Law and Greenspan, Engineers

Peak Hour Delay Signal Warrant Report

Intersection #2 South Street at Valley Boulevard (SR-202)

Future Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Stop Sign			Stop Sign			Uncontrolled			Uncontrolled		
Lanes:	1 0 0 0 1			0 0 0 0 0			0 0 1 0 1			1 0 1 0 0		
Initial Vol:	58	0	89	0	0	0	0	630	72	104	667	0
ApproachDel:	18.3			xxxxxx			xxxxxx			xxxxxx		

Approach[northbound][lanes=2][control=Stop Sign]
Signal Warrant Rule #1: [vehicle-hours=0.8]
FAIL - Vehicle-hours less than 5 for two or more lane approach.
Signal Warrant Rule #2: [approach volume=148]
FAIL - Approach volume less than 150 for two or more lane approach.
Signal Warrant Rule #3: [approach count=3][total volume=1621]
SUCCEED - Total volume greater than or equal to 650 for intersection with less than four approaches.

SIGNAL WARRANT DISCLAIMER
This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

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AM Cumulative Plus Project (2011) - Signal Warrant
Walmart, Tehachapi
Linscott, Law and Greenspan, Engineers

Peak Hour Volume Signal Warrant Report [Rural]

Intersection #2 South Street at Valley Boulevard (SR-202)

Future Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Stop Sign			Stop Sign			Uncontrolled			Uncontrolled		
Lanes:	1 0 0 0 1			0 0 0 0 0			0 0 1 0 1			1 0 1 0 0		
Initial Vol:	12	0	26	0	0	0	0	557	30	33	428	0

Major Street Volume: 1049
Minor Approach Volume: 38
Minor Approach Volume Threshold: 142

SIGNAL WARRANT DISCLAIMER
This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

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PM Cumulative Plus Project (2011) - Signal Warrant
Walmart, Tehachapi
Linscott, Law and Greenspan, Engineers

Peak Hour Volume Signal Warrant Report [Rural]

****

Intersection #2 South Street at Valley Boulevard (SR-202)

****

Future Volume Alternative: Peak Hour Warrant Met

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Stop Sign			Stop Sign			Uncontrolled			Uncontrolled		
Lanes:	1 0 0 0 1			0 0 0 0 0			0 0 1 0 1			1 0 1 0 0		
Initial Vol:	58	0	89	0	0	0	0	630	72	104	667	0

Major Street Volume: 1473
Minor Approach Volume: 148
Minor Approach Volume Threshold: 40 [less than minimum of 100]

SIGNAL WARRANT DISCLAIMER

This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

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Peak Hour Traffic Signal Warrant Analysis[1]

CRITERIA A. ***Are all of the following three criteria met:*** **N**

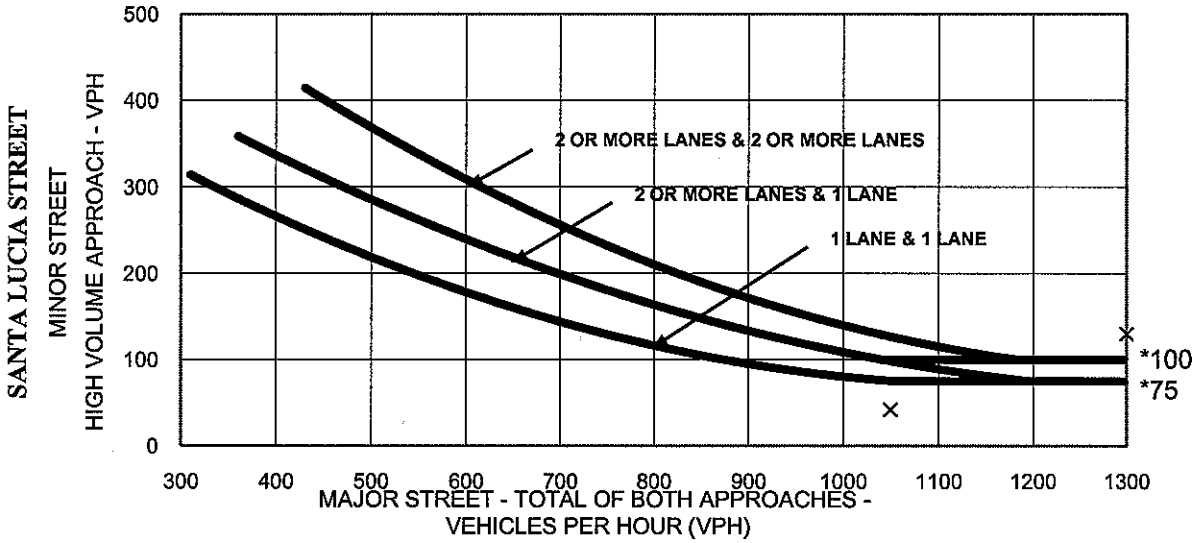
Criteria Description	Yes/No (Y/N)
1. The total stopped time delay experienced by the traffic on one minor-street approach (one direction only) controlled by a STOP sign equals or exceeds: 4 vehicle-hours for a one-lane approach; or 5 vehicle-hours for a two-lane approach, and	N
2. The volume on the same minor-street approach (one direction only) equals or exceeds 100 vehicles per hour for one moving lane of traffic or 150 vehicles per hour for two moving lanes, and	Y
3. The total entering volume serviced during the hour equals or exceeds 650 vehicles per hour for intersections with three approaches or 800 vehicles per hour for intersections with four or more approaches.	Y

CRITERIA B. ***Does the plotted point [2] fall above the applicable curve in Figure 4C-3 (below) for the existing combination of approach lanes?*** **Y**

Approach	Number of Lanes		Vehicles Per Hour	
	1	2 or more	AM Pk Hr	PM Pk Hr
Major Street (Total of Both Approaches)	--	X	1,049	1,512
Minor Street (Higher of Approach)	X	--	42	130

FIGURE 4C-4. WARRANT 3, PEAK HOUR (70% FACTOR)

(COMMUNITY LESS THAN 10,000 POPULATION OR ABOVE 64 km/h OR ABOVE 40 mph ON MAJOR STREET)



VALLEY BOULEVARD (SR-202)

*Note: 100 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 75 vph applies as the lower threshold volume for a minor-street approach with one lane.

Has either Criteria A or B been satisfied?	Y

#3. Santa Lucia Street at Valley Boulevard (SR-202)
TRAFFIC SIGNAL WARRANT is SATISFIED
for Year 2011 Cumulative Plus Project

[1] *California Manual on Uniform Traffic Control Devices (MUTCD)* - Warrant #3

[2] *All-Way Stop Control (Part A of Warrant 3 is not applicable)*
the higher-volume minor-street approach (one direction only) for 1 hour (any four consecutive 15-minute periods) of an average day.

#3 Rural.xls

AM Cumulative Plus Project (2011) - Signal Warrant
Walmart, Tehachapi
Linscott, Law and Greenspan, Engineers

Peak Hour Delay Signal Warrant Report

****

Intersection #3 Santa Lucia Street at Valley Boulevard (SR-202)

****

Future Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Stop Sign			Stop Sign			Uncontrolled			Uncontrolled		
Lanes:	0 0 1!	0 0		0 0 1!	0 0		1 0 0	1 0		1 0 0	1 0	
Initial Vol:	1	5	11	23	5	15	41	534	7	19	415	33
ApproachDel:	13.8			15.7			xxxxxx			xxxxxx		

Approach[northbound][lanes=1][control=Stop Sign]
Signal Warrant Rule #1: [vehicle-hours=0.1]
FAIL - Vehicle-hours less than 4 for one lane approach.
Signal Warrant Rule #2: [approach volume=18]
FAIL - Approach volume less than 100 for one lane approach.
Signal Warrant Rule #3: [approach count=4][total volume=1109]
SUCCEED - Total volume greater than or equal to 800 for intersection with four or more approaches.

Approach[southbound][lanes=1][control=Stop Sign]
Signal Warrant Rule #1: [vehicle-hours=0.2]
FAIL - Vehicle-hours less than 4 for one lane approach.
Signal Warrant Rule #2: [approach volume=42]
FAIL - Approach volume less than 100 for one lane approach.
Signal Warrant Rule #3: [approach count=4][total volume=1109]
SUCCEED - Total volume greater than or equal to 800 for intersection with four or more approaches.

SIGNAL WARRANT DISCLAIMER
This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

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PM Cumulative Plus Project (2011) - Signal Warrant
Walmart, Tehachapi
Linscott, Law and Greenspan, Engineers

Peak Hour Delay Signal Warrant Report

****

Intersection #3 Santa Lucia Street at Valley Boulevard (SR-202)

****

Future Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L - T - R			L - T - R			L - T - R			L - T - R		
Control:	Stop Sign			Stop Sign			Uncontrolled			Uncontrolled		
Lanes:	0 0 1! 0 0			0 0 1! 0 0			1 0 0 1 0			1 0 0 1 0		
Initial Vol:	3 24 32			49 18 63			76 651 1			40 658 87		
ApproachDel:	22.4			39.2			xxxxxx			xxxxxx		

Approach[northbound][lanes=1][control=Stop Sign]
Signal Warrant Rule #1: [vehicle-hours=0.4]
FAIL - Vehicle-hours less than 4 for one lane approach.
Signal Warrant Rule #2: [approach volume=59]
FAIL - Approach volume less than 100 for one lane approach.
Signal Warrant Rule #3: [approach count=4][total volume=1701]
SUCCEED - Total volume greater than or equal to 800 for intersection with four or more approaches.

Approach[southbound][lanes=1][control=Stop Sign]
Signal Warrant Rule #1: [vehicle-hours=1.4]
FAIL - Vehicle-hours less than 4 for one lane approach.
Signal Warrant Rule #2: [approach volume=130]
SUCCEED - Approach volume greater than or equal to 100 for one lane approach.
Signal Warrant Rule #3: [approach count=4][total volume=1701]
SUCCEED - Total volume greater than or equal to 800 for intersection with four or more approaches.

SIGNAL WARRANT DISCLAIMER

This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

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AM Cumulative Plus Project (2011) - Signal Warrant
Walmart, Tehachapi
Linscott, Law and Greenspan, Engineers

Peak Hour Volume Signal Warrant Report [Rural]

Intersection #3 Santa Lucia Street at Valley Boulevard (SR-202)

Future Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Stop Sign			Stop Sign			Uncontrolled			Uncontrolled		
Lanes:	0 0 1!	0 0		0 0 1!	0 0		1 0 0	1 0		1 0 0	1 0	
Initial Vol:	1	5	11	23	5	15	41	534	7	19	415	33

Major Street Volume: 1049
Minor Approach Volume: 42
Minor Approach Volume Threshold: 111

SIGNAL WARRANT DISCLAIMER
This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

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PM Cumulative Plus Project (2011) - Signal Warrant
Walmart, Tehachapi
Linscott, Law and Greenspan, Engineers

Peak Hour Volume Signal Warrant Report [Rural]

Intersection #3 Santa Lucia Street at Valley Boulevard (SR-202)

Future Volume Alternative: Peak Hour Warrant Met

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Stop Sign			Stop Sign			Uncontrolled			Uncontrolled		
Lanes:	0 0 1!	0 0		0 0 1!	0 0		1 0 0	1 0		1 0 0	1 0	
Initial Vol:	3	24	32	49	18	63	76	651	1	40	658	87

Major Street Volume: 1512
Minor Approach Volume: 130
Minor Approach Volume Threshold: 27 [less than minimum of 75]

SIGNAL WARRANT DISCLAIMER
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Peak Hour Traffic Signal Warrant Analysis[1]

CRITERIA A. ***Are all of the following three criteria met:*** -- [2]

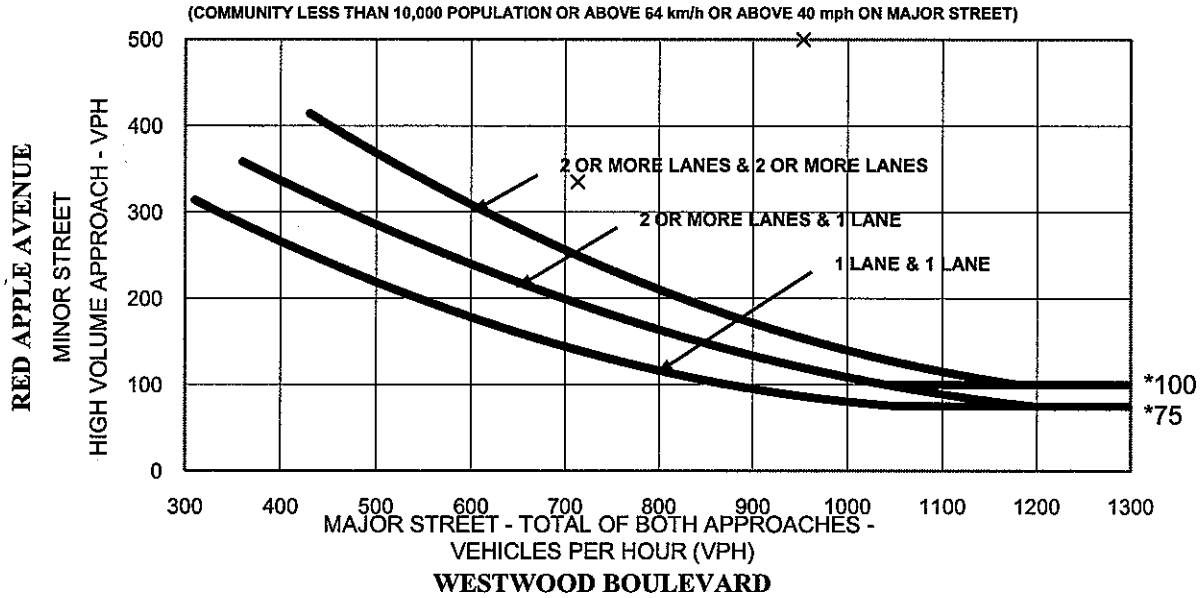
Criteria Description	Yes/No (Y/N)
1. The total stopped time delay experienced by the traffic on one minor-street approach (one direction only) controlled by a STOP sign equals or exceeds: 4 vehicle-hours for a one-lane approach; or 5 vehicle-hours for a two-lane approach, and	--
2. The volume on the same minor-street approach (one direction only) equals or exceeds 100 vehicles per hour for one moving lane of traffic or 150 vehicles per hour for two moving lanes, and	--
3. The total entering volume serviced during the hour equals or exceeds 650 vehicles per hour for intersections with three approaches or 800 vehicles per hour for intersections with four or more approaches.	--

CRITERIA B. ***Does the plotted point [3] fall above the applicable curve in Figure 4C-3 (below) for the existing combination of approach lanes?*** Y

Approach	Number of Lanes		Vehicles Per Hour	
	1	2 or more	AM Pk Hr	PM Pk Hr
Major Street (Total of Both Approaches)	--	X	713	953
Minor Street (Higher of Approach)	--	X	335	529

FIGURE 4C-4. WARRANT 3, PEAK HOUR (70% FACTOR)

(COMMUNITY LESS THAN 10,000 POPULATION OR ABOVE 64 km/h OR ABOVE 40 mph ON MAJOR STREET)



*Note: 100 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 75 vph applies as the lower threshold volume for a minor-street approach with one lane.

Has either Criteria A or B been satisfied?	Y

#5. Westwood Boulevard at Red Apple Avenue
TRAFFIC SIGNAL WARRANT is SATISFIED
for Year 2011 Cumulative Plus Project

[1] *California Manual on Uniform Traffic Control Devices (MUTCD)* - Warrant #3
[2] *All-Way Stop Control (Part A of Warrant 3 is not applicable)*
[3] The plotted point represents the vehicles per hour on the major street (total of both approaches) and the corresponding vehicles per hour on the higher-volume minor-street approach (one direction only) for 1 hour (any four consecutive 15-minute periods) of an average day.

#5 Rural.xls

AM Cumulative Plus Project (2011) - Signal Warrant
Walmart, Tehachapi
Linscott, Law and Greenspan, Engineers

Peak Hour Volume Signal Warrant Report [Rural]

Intersection #5 Westwood Boulevard at Red Apple Avenue

Future Volume Alternative: Peak Hour Warrant Met

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	- T	- R	L	- T	- R	L	- T	- R	L	- T	- R
Control:	Stop Sign			Stop Sign			Stop Sign			Stop Sign		
Lanes:	0 0	1 0	1	1 0	1 0	0	0 0	0 0	0	1 0	0 0	1
Initial Vol:	0	5	195	497	16	0	0	0	0	99	0	237

Major Street Volume: 713
Minor Approach Volume: 335
Minor Approach Volume Threshold: 259

SIGNAL WARRANT DISCLAIMER
This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

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PM Cumulative Plus Project (2011) - Signal Warrant
Walmart, Tehachapi
Linscott, Law and Greenspan, Engineers

Peak Hour Volume Signal Warrant Report [Rural]

Intersection #5 Westwood Boulevard at Red Apple Avenue

Future Volume Alternative: Peak Hour Warrant Met

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Stop Sign			Stop Sign			Stop Sign			Stop Sign		
Lanes:	0 0 1	0	1	1 0 1	0	0	0 0 0	0	0	1 0 0	0	1
Initial Vol:	0	46	185	497	32	0	0	0	0	248	0	705

Major Street Volume: 953
Minor Approach Volume: 529
Minor Approach Volume Threshold: 171

SIGNAL WARRANT DISCLAIMER
This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

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Peak Hour Traffic Signal Warrant Analysis[1]

CRITERIA A. ***Are all of the following three criteria met:*** **N**

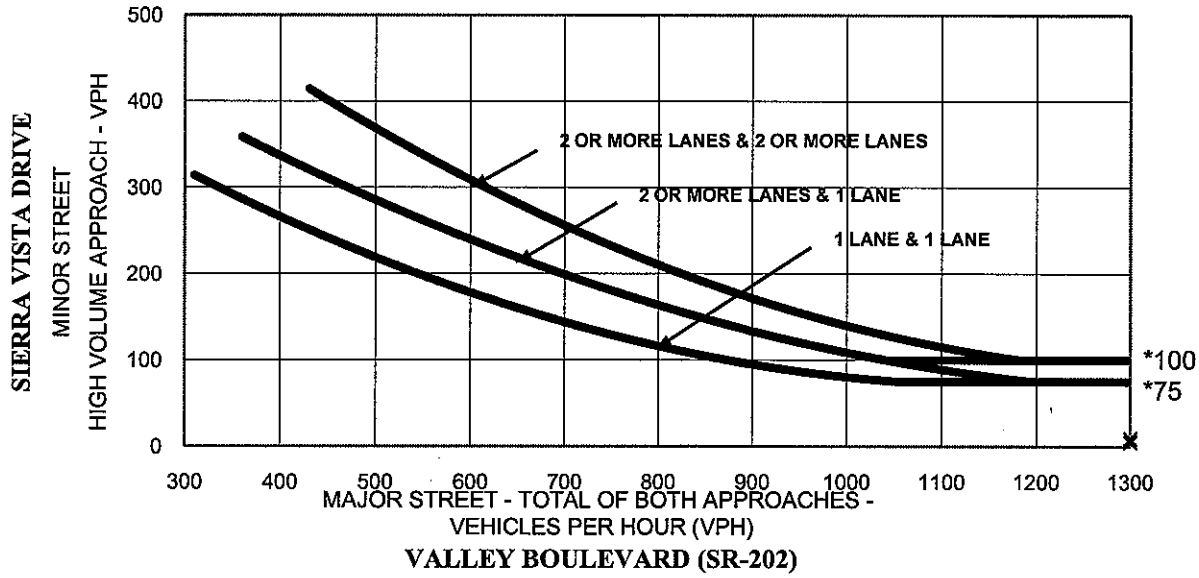
Criteria Description	Yes/No (Y/N)
1. The total stopped time delay experienced by the traffic on one minor-street approach (one direction only) controlled by a STOP sign equals or exceeds: 4 vehicle-hours for a one-lane approach; or 5 vehicle-hours for a two-lane approach, and	N
2. The volume on the same minor-street approach (one direction only) equals or exceeds 100 vehicles per hour for one moving lane of traffic or 150 vehicles per hour for two moving lanes, and	N
3. The total entering volume serviced during the hour equals or exceeds 650 vehicles per hour for intersections with three approaches or 800 vehicles per hour for intersections with four or more approaches.	Y

CRITERIA B. ***Does the plotted point [2] fall above the applicable curve in Figure 4C-3 (below) for the existing combination of approach lanes?*** **N**

Approach	Number of Lanes		Vehicles Per Hour	
	1	2 or more	AM Pk Hr	PM Pk Hr
Major Street (Total of Both Approaches)	X	--	1,384	2,043
Minor Street (Higher of Approach)	X	--	5	9

FIGURE 4C-4. WARRANT 3, PEAK HOUR (70% FACTOR)

(COMMUNITY LESS THAN 10,000 POPULATION OR ABOVE 64 km/h OR ABOVE 40 mph ON MAJOR STREET)



*Note: 100 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 75 vph applies as the lower threshold volume for a minor-street approach with one lane.

Has either Criteria A or B been satisfied?	N

#6. Sierra Vista Drive at Valley Boulevard (SR-202)
TRAFFIC SIGNAL WARRANT is NOT SATISFIED
for Year 2011 Cumulative Plus Project

[1] *California Manual on Uniform Traffic Control Devices (MUTCD)* - Warrant #3

[2] *All-Way Stop Control (Part A of Warrant 3 is not applicable)*
the higher-volume minor-street approach (one direction only) for 1 hour (any four consecutive 15-minute periods) of an average day.

#6 Rural.xls

AM Cumulative Plus Project (2011) - Signal Warrant
Walmart, Tehachapi
Linscott, Law and Greenspan, Engineers

Peak Hour Delay Signal Warrant Report

****

Intersection #6 Sierra Vista Drive at Valley Boulevard (SR-202)

****

Future Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound					South Bound					East Bound					West Bound				
Movement:	L	-	T	-	R	L	-	T	-	R	L	-	T	-	R	L	-	T	-	R
Control:	Stop Sign					Stop Sign					Uncontrolled					Uncontrolled				
Lanes:	0	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	1	0
Initial Vol:	0		0		0	0		0		5	0		763		0	0		618		3
ApproachDel:	xxxxxx					13.1					xxxxxx					xxxxxx				

Approach[southbound][lanes=1][control=Stop Sign]
Signal Warrant Rule #1: [vehicle-hours=0.0]
FAIL - Vehicle-hours less than 4 for one lane approach.
Signal Warrant Rule #2: [approach volume=5]
FAIL - Approach volume less than 100 for one lane approach.
Signal Warrant Rule #3: [approach count=3][total volume=1389]
SUCCEED - Total volume greater than or equal to 650 for intersection with less than four approaches.

SIGNAL WARRANT DISCLAIMER

This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

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PM Cumulative Plus Project (2011) - Signal Warrant
Walmart, Tehachapi
Linscott, Law and Greenspan, Engineers

Peak Hour Delay Signal Warrant Report

****

Intersection #6 Sierra Vista Drive at Valley Boulevard (SR-202)

****

Future Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Stop Sign			Stop Sign			Uncontrolled			Uncontrolled		
Lanes:	0 0 0	0 0	0	0 0	1! 0	0	0 1	0 0	0	0 0	0 1	0
Initial Vol:	0	0	0	5	0	4	4	906	0	0	1126	7
ApproachDel:	xxxxxx			66.3			xxxxxx			xxxxxx		

Approach[southbound][lanes=1][control=Stop Sign]
Signal Warrant Rule #1: [vehicle-hours=0.2]
FAIL - Vehicle-hours less than 4 for one lane approach.
Signal Warrant Rule #2: [approach volume=9]
FAIL - Approach volume less than 100 for one lane approach.
Signal Warrant Rule #3: [approach count=3][total volume=2052]
SUCCEED - Total volume greater than or equal to 650 for intersection with less than four approaches.

SIGNAL WARRANT DISCLAIMER

This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

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AM Cumulative Plus Project (2011) - Signal Warrant
Walmart, Tehachapi
Linscott, Law and Greenspan, Engineers

Peak Hour Volume Signal Warrant Report [Rural]

Intersection #6 Sierra Vista Drive at Valley Boulevard (SR-202)

Future Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Stop Sign			Stop Sign			Uncontrolled			Uncontrolled		
Lanes:	0 0 0 0 0			0 0 0 0 1			0 0 1 0 0			0 0 0 1 0		
Initial Vol:	0	0	0	0	0	5	0	763	0	0	618	3

Major Street Volume: 1384
Minor Approach Volume: 5
Minor Approach Volume Threshold: 40 [less than minimum of 75]

SIGNAL WARRANT DISCLAIMER
This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

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PM Cumulative Plus Project (2011) - Signal Warrant
Walmart, Tehachapi
Linscott, Law and Greenspan, Engineers

Peak Hour Volume Signal Warrant Report [Rural]

****

Intersection #6 Sierra Vista Drive at Valley Boulevard (SR-202)

****

Future Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Stop Sign			Stop Sign			Uncontrolled			Uncontrolled		
Lanes:	0 0 0 0 0			0 0 1! 0 0			0 1 0 0 0			0 0 0 1 0		
Initial Vol:	0	0	0	5	0	4	4	906	0	0	1126	7

Major Street Volume: 2043
Minor Approach Volume: 9
Minor Approach Volume Threshold: -24 [less than minimum of 75]

SIGNAL WARRANT DISCLAIMER
This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

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Peak Hour Traffic Signal Warrant Analysis[1]

CRITERIA A. ***Are all of the following three criteria met:*** **Y**

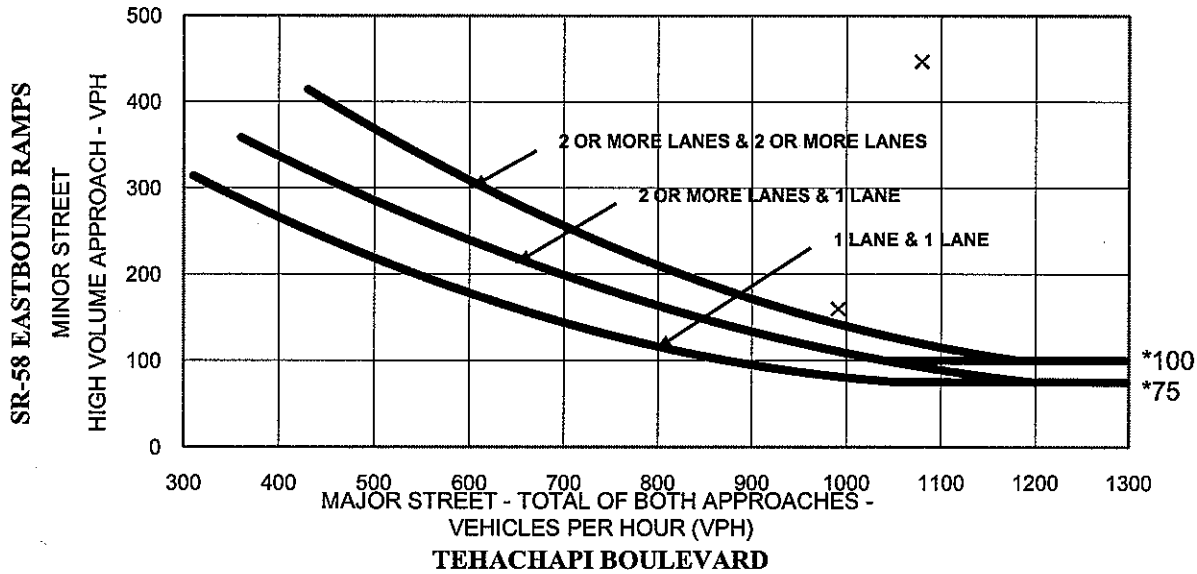
Criteria Description	Yes/No (Y/N)
1. The total stopped time delay experienced by the traffic on one minor-street approach (one direction only) controlled by a STOP sign equals or exceeds: 4 vehicle-hours for a one-lane approach; or 5 vehicle-hours for a two-lane approach, and	Y
2. The volume on the same minor-street approach (one direction only) equals or exceeds 100 vehicles per hour for one moving lane of traffic or 150 vehicles per hour for two moving lanes, and	Y
3. The total entering volume serviced during the hour equals or exceeds 650 vehicles per hour for intersections with three approaches or 800 vehicles per hour for intersections with four or more approaches.	Y

CRITERIA B. ***Does the plotted point [2] fall above the applicable curve in Figure 4C-3 (below) for the existing combination of approach lanes?*** **Y**

Approach	Number of Lanes		Vehicles Per Hour	
	1	2 or more	AM Pk Hr	PM Pk Hr
Major Street (Total of Both Approaches)	X	--	991	1,079
Minor Street (Higher of Approach)	--	X	160	447

FIGURE 4C-4. WARRANT 3, PEAK HOUR (70% FACTOR)

(COMMUNITY LESS THAN 10,000 POPULATION OR ABOVE 64 km/h OR ABOVE 40 mph ON MAJOR STREET)



*Note: 100 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 75 vph applies as the lower threshold volume for a minor-street approach with one lane.

Has either Criteria A or B been satisfied?	Y

#7. Tehachapi Boulevard at SR-58 Eastbound Ramps
TRAFFIC SIGNAL WARRANT is SATISFIED
for Year 2011 Cumulative Plus Project

[1] *California Manual on Uniform Traffic Control Devices (MUTCD)* - Warrant #3

[2] *All-Way Stop Control (Part A of Warrant 3 is not applicable)*
the higher-volume minor-street approach (one direction only) for 1 hour (any four consecutive 15-minute periods) of an average day.

#7 Rural.xls

AM Cumulative Plus Project (2011) - Signal Warrant
Walmart, Tehachapi
Linscott, Law and Greenspan, Engineers

Peak Hour Delay Signal Warrant Report

Intersection #7 Tehachapi Boulevard at SR-58 Eastbound Ramps

Future Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound					South Bound					East Bound					West Bound				
Movement:	L	-	T	-	R	L	-	T	-	R	L	-	T	-	R	L	-	T	-	R
Control:	Uncontrolled					Uncontrolled					Stop Sign					Stop Sign				
Lanes:	0	0	0	1	0	0	0	1	0	0	0	1	0	0	1	0	0	0	0	0
Initial Vol:	0	477		301		0	214		0		0		1		159	0		0		0
ApproachDel:	xxxxxx					xxxxxx					10.8					xxxxxx				

Approach[eastbound][lanes=2][control=Stop Sign]
Signal Warrant Rule #1: [vehicle-hours=0.5]
FAIL - Vehicle-hours less than 5 for two or more lane approach.
Signal Warrant Rule #2: [approach volume=160]
SUCCEED - Approach volume >= 150 for two or more lane approach.
Signal Warrant Rule #3: [approach count=3][total volume=1152]
SUCCEED - Total volume greater than or equal to 650 for intersection with less than four approaches.

SIGNAL WARRANT DISCLAIMER
This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

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PM Cumulative Plus Project (2011) - Signal Warrant
Walmart, Tehachapi
Linscott, Law and Greenspan, Engineers

Peak Hour Delay Signal Warrant Report

****

Intersection #7 Tehachapi Boulevard at SR-58 Eastbound Ramps

****

Future Volume Alternative: Peak Hour Warrant Met

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Uncontrolled			Uncontrolled			Stop Sign			Stop Sign		
Lanes:	0 0 0 1 0			0 1 0 0 0			0 1 0 0 1			0 0 0 0 0		
Initial Vol:	0	325	256	1	497	0	0	2	444	0	0	0
ApproachDel:	xxxxxx			xxxxxx			49.1			xxxxxx		

Approach[eastbound][lanes=2][control=Stop Sign]
Signal Warrant Rule #1: [vehicle-hours=6.1]
SUCCEED - Vehicle-hours >= 5 for two or more lane approach.
Signal Warrant Rule #2: [approach volume=447]
SUCCEED - Approach volume >= 150 for two or more lane approach.
Signal Warrant Rule #3: [approach count=3][total volume=1525]
SUCCEED - Total volume greater than or equal to 650 for intersection with less than four approaches.

SIGNAL WARRANT DISCLAIMER

This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

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AM Cumulative Plus Project (2011) - Signal Warrant
Walmart, Tehachapi
Linscott, Law and Greenspan, Engineers

Peak Hour Volume Signal Warrant Report [Rural]

****

Intersection #7 Tehachapi Boulevard at SR-58 Eastbound Ramps

****

Future Volume Alternative: Peak Hour Warrant Met

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	- T	- R	L	- T	- R	L	- T	- R	L	- T	- R
Control:	Uncontrolled			Uncontrolled			Stop Sign			Stop Sign		
Lanes:	0 0	0 1	0	0 0	1 0	0	0 1	0 0	1	0 0	0 0	0
Initial Vol:	0	477	301	0	214	0	0	1	159	0	0	0

Major Street Volume: 991
Minor Approach Volume: 160
Minor Approach Volume Threshold: 132

SIGNAL WARRANT DISCLAIMER

This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

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PM Cumulative Plus Project (2011) - Signal Warrant
Walmart, Tehachapi
Linscott, Law and Greenspan, Engineers

Peak Hour Volume Signal Warrant Report [Rural]

Intersection #7 Tehachapi Boulevard at SR-58 Eastbound Ramps

Future Volume Alternative: Peak Hour Warrant Met

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Uncontrolled			Uncontrolled			Stop Sign			Stop Sign		
Lanes:	0 0 0 1 0			0 1 0 0 0			0 1 0 0 1			0 0 0 0 0		
Initial Vol:	0	325	256	1	497	0	0	2	444	0	0	0

Major Street Volume: 1079
Minor Approach Volume: 447
Minor Approach Volume Threshold: 113

SIGNAL WARRANT DISCLAIMER
This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

The peak hour warrant analysis in this report is not intended to replace a rigorous and complete traffic signal warrant analysis by the responsible jurisdiction. Consideration of the other signal warrants, which is beyond the scope of this software, may yield different results.

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Peak Hour Traffic Signal Warrant Analysis[1]

CRITERIA A. ***Are all of the following three criteria met:*** **N**

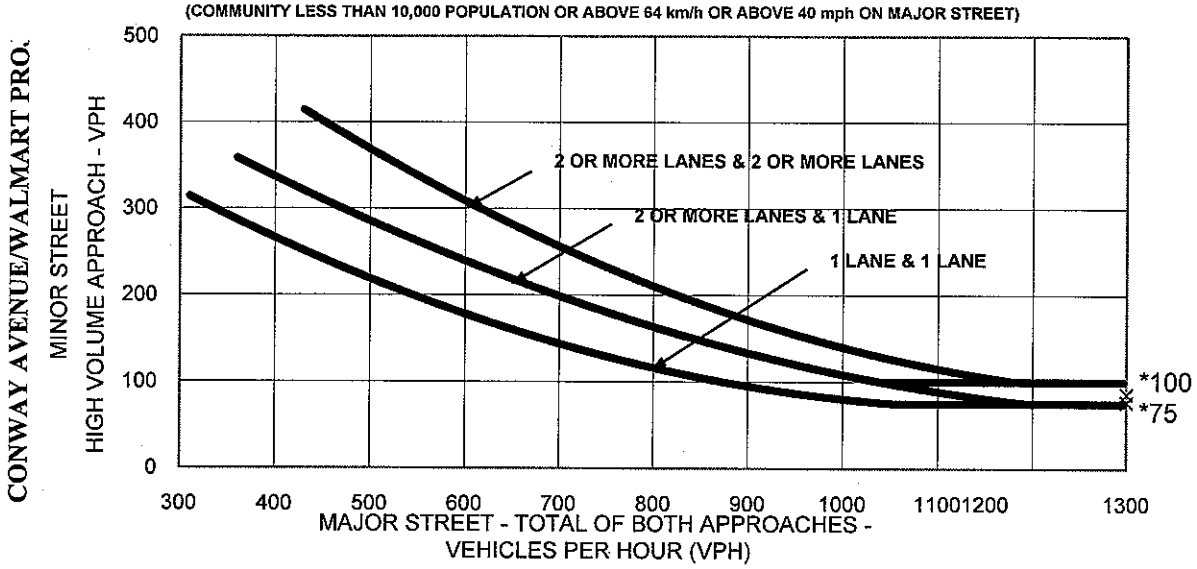
Criteria Description	Yes/No (Y/N)
1. The total stopped time delay experienced by the traffic on one minor-street approach (one direction only) controlled by a STOP sign equals or exceeds: 4 vehicle-hours for a one-lane approach; or 5 vehicle-hours for a two-lane approach, and	Y
2. The volume on the same minor-street approach (one direction only) equals or exceeds 100 vehicles per hour for one moving lane of traffic or 150 vehicles per hour for two moving lanes, and	N
3. The total entering volume serviced during the hour equals or exceeds 650 vehicles per hour for intersections with three approaches or 800 vehicles per hour for intersections with four or more approaches.	Y

CRITERIA B. ***Does the plotted point [2] fall above the applicable curve in Figure 4C-3 (below) for the existing combination of approach lanes?*** **Y**

Approach	Number of Lanes		Vehicles Per Hour	
	1	2 or more	AM Pk Hr	PM Pk Hr
Major Street (Total of Both Approaches)	--	X	1,968	2,470
Minor Street (Higher of Approach)	X	--	86	77

FIGURE 4C-4. WARRANT 3, PEAK HOUR (70% FACTOR)

(COMMUNITY LESS THAN 10,000 POPULATION OR ABOVE 64 km/h OR ABOVE 40 mph ON MAJOR STREET)



TUCKER ROAD

*Note: 100 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 75 vph applies as the lower threshold volume for a minor-street approach with one lane.

Has either Criteria A or B been satisfied?	Y

#9. Tucker Road at Conway Avenue/Walmart Project Driveway 2
TRAFFIC SIGNAL WARRANT is SATISFIED
for Year 2011 Cumulative Plus Project

[1] *California Manual on Uniform Traffic Control Devices (MUTCD)* - Warrant #3

[2] *All-Way Stop Control (Part A of Warrant 3 is not applicable)*
the higher-volume minor-street approach (one direction only) for 1 hour (any four consecutive 15-minute periods) of an average day.

#9 Rural.xls

AM Cumulative Plus Project (2011) - Signal Warrant
Walmart, Tehachapi
Linscott, Law and Greenspan, Engineers

Peak Hour Delay Signal Warrant Report

****

Intersection #9 Tucker Road at Conway Avenue/Walmart Project Driveway 2

****

Future Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Uncontrolled			Uncontrolled			Stop Sign			Stop Sign		
Lanes:	1 0 1	1 0		1 0 1	1 0		0 0 1!	0 0		0 0 1!	0 0	
Initial Vol:	23	886	4	7	1004	45	54	0	32	3	0	2
ApproachDel:	xxxxxx			xxxxxx			216.8			44.3		

Approach[eastbound] [lanes=1] [control=Stop Sign]
Signal Warrant Rule #1: [vehicle-hours=5.2]
SUCCEED - Vehicle-hours greater than or equal to 4 for one lane approach.
Signal Warrant Rule #2: [approach volume=86]
FAIL - Approach volume less than 100 for one lane approach.
Signal Warrant Rule #3: [approach count=4] [total volume=2059]
SUCCEED - Total volume greater than or equal to 800 for intersection with four or more approaches.

Approach[westbound] [lanes=1] [control=Stop Sign]
Signal Warrant Rule #1: [vehicle-hours=0.1]
FAIL - Vehicle-hours less than 4 for one lane approach.
Signal Warrant Rule #2: [approach volume=5]
FAIL - Approach volume less than 100 for one lane approach.
Signal Warrant Rule #3: [approach count=4] [total volume=2059]
SUCCEED - Total volume greater than or equal to 800 for intersection with four or more approaches.

SIGNAL WARRANT DISCLAIMER

This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

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PM Cumulative Plus Project (2011) - Signal Warrant
Walmart, Tehachapi
Linscott, Law and Greenspan, Engineers

Peak Hour Delay Signal Warrant Report

****

Intersection #9 Tucker Road at Conway Avenue/Walmart Project Driveway 2

****

Future Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound	South Bound	East Bound	West Bound
Movement:	L - T - R	L - T - R	L - T - R	L - T - R
Control:	Uncontrolled	Uncontrolled	Stop Sign	Stop Sign
Lanes:	1 0 1 1 0	1 0 1 1 0	0 0 1! 0 0	0 0 1! 0 0
Initial Vol:	23 1068 8	8 1309 54	46 1 30	8 0 6
ApproachDel:	xxxxxx	xxxxxx	724.0	105.9

Approach[eastbound] [lanes=1] [control=Stop Sign]
Signal Warrant Rule #1: [vehicle-hours=15.5]
SUCCEED - Vehicle-hours greater than or equal to 4 for one lane approach.
Signal Warrant Rule #2: [approach volume=77]
FAIL - Approach volume less than 100 for one lane approach.
Signal Warrant Rule #3: [approach count=4] [total volume=2561]
SUCCEED - Total volume greater than or equal to 800 for intersection with four or more approaches.

Approach[westbound] [lanes=1] [control=Stop Sign]
Signal Warrant Rule #1: [vehicle-hours=0.4]
FAIL - Vehicle-hours less than 4 for one lane approach.
Signal Warrant Rule #2: [approach volume=14]
FAIL - Approach volume less than 100 for one lane approach.
Signal Warrant Rule #3: [approach count=4] [total volume=2561]
SUCCEED - Total volume greater than or equal to 800 for intersection with four or more approaches.

SIGNAL WARRANT DISCLAIMER

This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

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AM Cumulative Plus Project (2011) - Signal Warrant
Walmart, Tehachapi
Linscott, Law and Greenspan, Engineers

Peak Hour Volume Signal Warrant Report [Rural]

****

Intersection #9 Tucker Road at Conway Avenue/Walmart Project Driveway 2

****

Future Volume Alternative: Peak Hour Warrant Met

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Uncontrolled			Uncontrolled			Stop Sign			Stop Sign		
Lanes:	1 0 1	1 0		1 0 1	1 0		0 0 1!	0 0		0 0 1!	0 0	
Initial Vol:	23	886	4	7	1004	45	54	0	32	3	0	2

Major Street Volume: 1968
Minor Approach Volume: 86
Minor Approach Volume Threshold: -34 [less than minimum of 75]

SIGNAL WARRANT DISCLAIMER

This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

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PM Cumulative Plus Project (2011) - Signal Warrant
Walmart, Tehachapi
Linscott, Law and Greenspan, Engineers

Peak Hour Volume Signal Warrant Report [Rural]

Intersection #9 Tucker Road at Conway Avenue/Walmart Project Driveway 2

Future Volume Alternative: Peak Hour Warrant Met

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Uncontrolled			Uncontrolled			Stop Sign			Stop Sign		
Lanes:	1 0 1	1 0		1 0 1	1 0		0 0 1!	0 0		0 0 1!	0 0	
Initial Vol:	23 1068	8		8 1309	54		46 1	30		8 0	6	

Major Street Volume: 2470
Minor Approach Volume: 77
Minor Approach Volume Threshold: -86 [less than minimum of 75]

SIGNAL WARRANT DISCLAIMER
This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

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Peak Hour Traffic Signal Warrant Analysis[1]

CRITERIA A. ***Are all of the following three criteria met:*** -- [2]

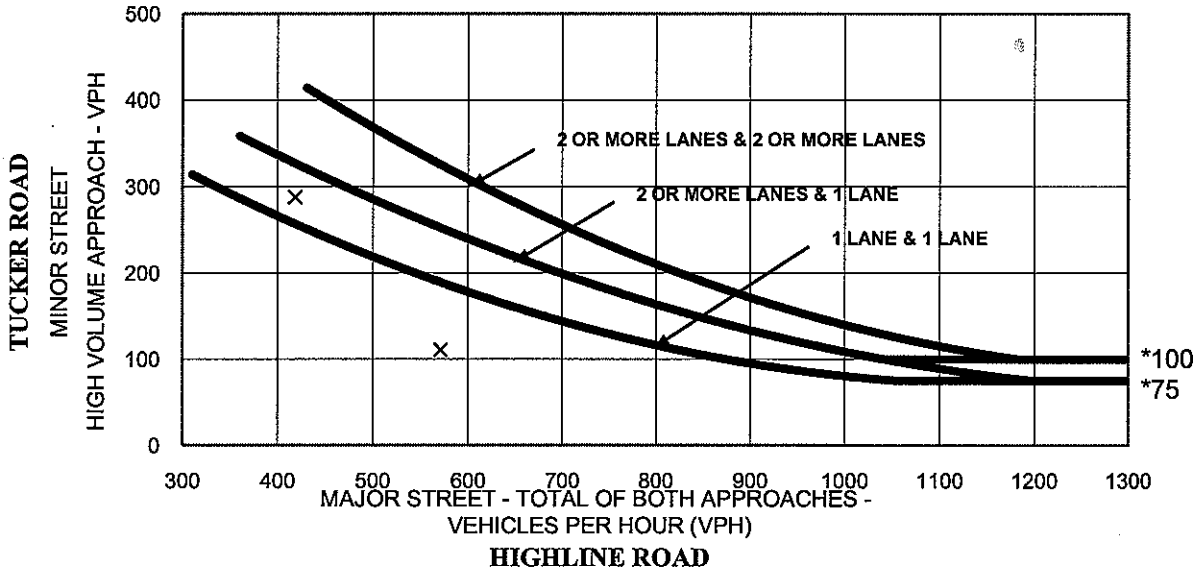
Criteria Description	Yes/No (Y/N)
1. The total stopped time delay experienced by the traffic on one minor-street approach (one direction only) controlled by a STOP sign equals or exceeds: 4 vehicle-hours for a one-lane approach; or 5 vehicle-hours for a two-lane approach, and	--
2. The volume on the same minor-street approach (one direction only) equals or exceeds 100 vehicles per hour for one moving lane of traffic or 150 vehicles per hour for two moving lanes, and	--
3. The total entering volume serviced during the hour equals or exceeds 650 vehicles per hour for intersections with three approaches or 800 vehicles per hour for intersections with four or more approaches.	--

CRITERIA B. ***Does the plotted point [3] fall above the applicable curve in Figure 4C-3 (below) for the existing combination of approach lanes?*** N

Approach	Number of Lanes		Vehicles Per Hour	
	1	2 or more	AM Pk Hr	PM Pk Hr
Major Street (Total of Both Approaches)	--	X	571	418
Minor Street (Higher of Approach)	X	--	111	288

FIGURE 4C-4. WARRANT 3, PEAK HOUR (70% FACTOR)

(COMMUNITY LESS THAN 10,000 POPULATION OR ABOVE 64 km/h OR ABOVE 40 mph ON MAJOR STREET)



*Note: 100 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 75 vph applies as the lower threshold volume for a minor-street approach with one lane.

Has either Criteria A or B been satisfied?	N

#11. Tucker Road at Highline Road
TRAFFIC SIGNAL WARRANT is NOT SATISFIED
for Year 2011 Cumulative Plus Project

[1] *California Manual on Uniform Traffic Control Devices (MUTCD)* - Warrant #3
[2] *All-Way Stop Control (Part A of Warrant 3 is not applicable)*
[3] The plotted point represents the vehicles per hour on the major street (total of both approaches) and the corresponding vehicles per hour on the higher-volume minor-street approach (one direction only) for 1 hour (any four consecutive 15-minute periods) of an average day.

#11 Rural.xls

AM Cumulative Plus Project (2011) - Signal Warrant
Walmart, Tehachapi
Linscott, Law and Greenspan, Engineers

Peak Hour Volume Signal Warrant Report [Rural]

Intersection #11 Tucker Road at Highline Road

Future Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound				South Bound				East Bound				West Bound			
Movement:	L	-	T	-	R	L	-	T	-	R	L	-	T	-	R	L	-	T	-	R
Control:	Stop Sign					Stop Sign					Stop Sign					Stop Sign				
Lanes:	0	0	1!	0	0	0	0	1!	0	0	0	1	0	0	1	0	0	1!	0	0
Initial Vol:	2		12		9	73		11		27	97		270		0	9		88		107

Major Street Volume: 571
Minor Approach Volume: 111
Minor Approach Volume Threshold: 251

SIGNAL WARRANT DISCLAIMER
This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

The peak hour warrant analysis in this report is not intended to replace a rigorous and complete traffic signal warrant analysis by the responsible jurisdiction. Consideration of the other signal warrants, which is beyond the scope of this software, may yield different results.

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PM Cumulative Plus Project (2011) - Signal Warrant
Walmart, Tehachapi
Linscott, Law and Greenspan, Engineers

Peak Hour Volume Signal Warrant Report [Rural]

****

Intersection #11 Tucker Road at Highline Road

****

Future Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Stop Sign			Stop Sign			Stop Sign			Stop Sign		
Lanes:	0 0 1!	0	0	0 0 1!	0	0	0 1	0	0 1	0 0 1!	0	0
Initial Vol:	7	20	14	126	22	140	68	71	3	12	162	102

Major Street Volume: 418
Minor Approach Volume: 288
Minor Approach Volume Threshold: 323

SIGNAL WARRANT DISCLAIMER

This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

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Peak Hour Traffic Signal Warrant Analysis[1]

CRITERIA A. ***Are all of the following three criteria met:*** **N**

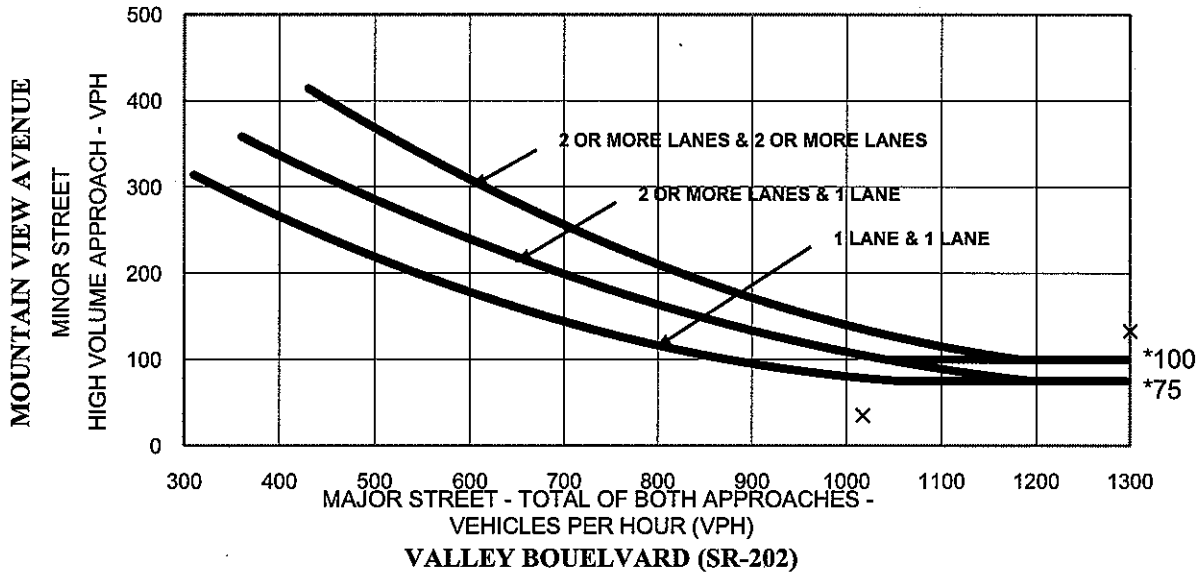
Criteria Description	Yes/No (Y/N)
1. The total stopped time delay experienced by the traffic on one minor-street approach (one direction only) controlled by a STOP sign equals or exceeds: 4 vehicle-hours for a one-lane approach; or 5 vehicle-hours for a two-lane approach, and	N
2. The volume on the same minor-street approach (one direction only) equals or exceeds 100 vehicles per hour for one moving lane of traffic or 150 vehicles per hour for two moving lanes, and	Y
3. The total entering volume serviced during the hour equals or exceeds 650 vehicles per hour for intersections with three approaches or 800 vehicles per hour for intersections with four or more approaches.	Y

CRITERIA B. ***Does the plotted point [2] fall above the applicable curve in Figure 4C-3 (below) for the existing combination of approach lanes?*** **Y**

Approach	Number of Lanes		Vehicles Per Hour	
	1	2 or more	AM Pk Hr	PM Pk Hr
Major Street (Total of Both Approaches)	--	X	1,017	1,390
Minor Street (Higher of Approach)	X	--	35	133

FIGURE 4C-4. WARRANT 3, PEAK HOUR (70% FACTOR)

(COMMUNITY LESS THAN 10,000 POPULATION OR ABOVE 64 km/h OR ABOVE 40 mph ON MAJOR STREET)



*Note: 100 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 75 vph applies as the lower threshold volume for a minor-street approach with one lane.

Has either Criteria A or B been satisfied?	Y

#12. Mountain View Avenue at Valley Bouelvard (SR-202)
TRAFFIC SIGNAL WARRANT is SATISFIED
for Year 2011 Cumulative Plus Project

[1] *California Manual on Uniform Traffic Control Devices (MUTCD)* - Warrant #3

[2] *All-Way Stop Control (Part A of Warrant 3 is not applicable)*
the higher-volume minor-street approach (one direction only) for 1 hour (any four consecutive 15-minute periods) of an average day.

#12 Rural.xls

AM Cumulative Plus Project (2011) - Signal Warrant
Walmart, Tehachapi
Linscott, Law and Greenspan, Engineers

Peak Hour Delay Signal Warrant Report

Intersection #12 Mountain View Avenue at Valley Boulevard (SR-202)

Future Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Stop Sign			Stop Sign			Uncontrolled			Uncontrolled		
Lanes:	0 0 0 0 0			0 0 1! 0 0			1 0 1 0 0			0 0 1 0 1		
Initial Vol:	0	0	0	8	0	27	35	499	0	0	464	19
ApproachDel:	xxxxxx			14.7			xxxxxx			xxxxxx		

Approach[southbound][lanes=1][control=Stop Sign]
Signal Warrant Rule #1: [vehicle-hours=0.1]
FAIL - Vehicle-hours less than 4 for one lane approach.
Signal Warrant Rule #2: [approach volume=35]
FAIL - Approach volume less than 100 for one lane approach.
Signal Warrant Rule #3: [approach count=3][total volume=1053]
SUCCEED - Total volume greater than or equal to 650 for intersection with less than four approaches.

SIGNAL WARRANT DISCLAIMER
This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

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PM Cumulative Plus Project (2011) - Signal Warrant
Walmart, Tehachapi
Linscott, Law and Greenspan, Engineers

Peak Hour Delay Signal Warrant Report

Intersection #12 Mountain View Avenue at Valley Boulevard (SR-202)

Future Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Stop Sign			Stop Sign			Uncontrolled			Uncontrolled		
Lanes:	0 0 0 0 0			0 0 1! 0 0			1 0 1 0 0			0 0 1 0 1		
Initial Vol:	0	0	0	24	0	109	72	678	0	0	619	21
ApproachDel:	xxxxxx			29.6			xxxxxx			xxxxxx		

Approach[southbound][lanes=1][control=Stop Sign]
Signal Warrant Rule #1: [vehicle-hours=1.1]
FAIL - Vehicle-hours less than 4 for one lane approach.
Signal Warrant Rule #2: [approach volume=133]
SUCCEED - Approach volume greater than or equal to 100 for one lane approach.
Signal Warrant Rule #3: [approach count=3][total volume=1522]
SUCCEED - Total volume greater than or equal to 650 for intersection with less than four approaches.

SIGNAL WARRANT DISCLAIMER
This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

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AM Cumulative Plus Project (2011) - Signal Warrant
Walmart, Tehachapi
Linscott, Law and Greenspan, Engineers

Peak Hour Volume Signal Warrant Report [Rural]

****

Intersection #12 Mountain View Avenue at Valley Boulevard (SR-202)

****

Future Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Stop Sign			Stop Sign			Uncontrolled			Uncontrolled		
Lanes:	0 0 0 0 0			0 0 1! 0 0			1 0 1 0 0			0 0 1 0 1		
Initial Vol:	0	0	0	8	0	27	35	499	0	0	464	19

Major Street Volume: 1017
Minor Approach Volume: 35
Minor Approach Volume Threshold: 118

SIGNAL WARRANT DISCLAIMER
This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

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PM Cumulative Plus Project (2011) - Signal Warrant
Walmart, Tehachapi
Linscott, Law and Greenspan, Engineers

Peak Hour Volume Signal Warrant Report [Rural]

Intersection #12 Mountain View Avenue at Valley Boulevard (SR-202)

Future Volume Alternative: Peak Hour Warrant Met

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	- T	- R	L	- T	- R	L	- T	- R	L	- T	- R
Control:	Stop Sign			Stop Sign			Uncontrolled			Uncontrolled		
Lanes:	0 0	0 0	0	0 0	1! 0	0	1 0	1 0	0	0 0	1 0	1
Initial Vol:	0	0	0	24	0	109	72	678	0	0	619	21

Major Street Volume: 1390
Minor Approach Volume: 133
Minor Approach Volume Threshold: 46 [less than minimum of 75]

SIGNAL WARRANT DISCLAIMER
This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

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Peak Hour Traffic Signal Warrant Analysis[1]

CRITERIA A. ***Are all of the following three criteria met:*** **N**

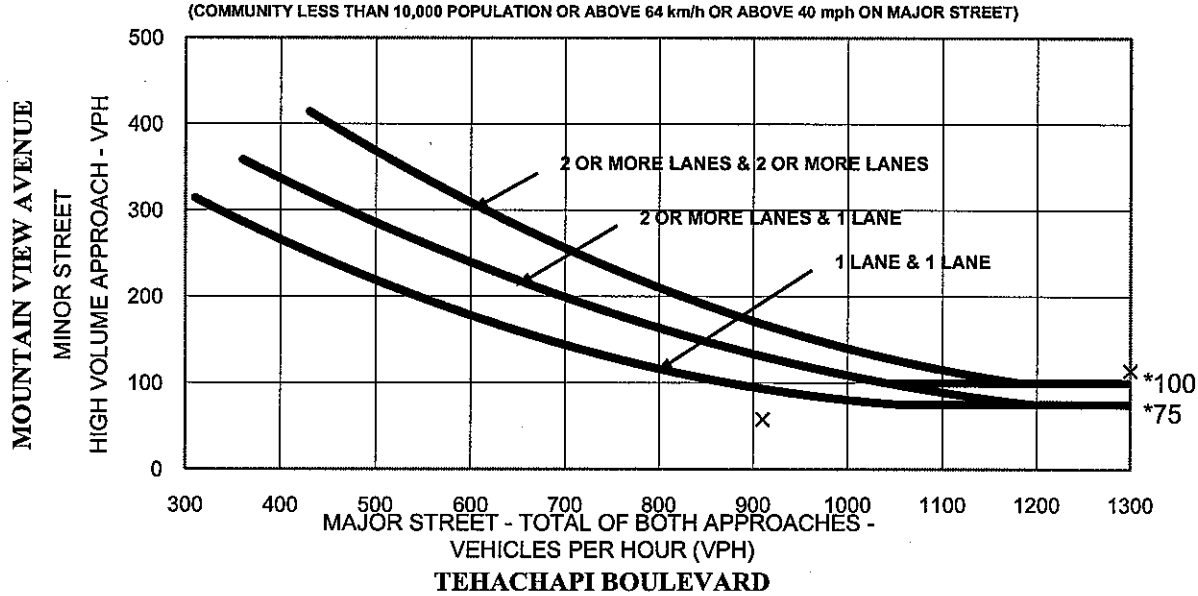
Criteria Description	Yes/No (Y/N)
1. The total stopped time delay experienced by the traffic on one minor-street approach (one direction only) controlled by a STOP sign equals or exceeds: 4 vehicle-hours for a one-lane approach; or 5 vehicle-hours for a two-lane approach, and	N
2. The volume on the same minor-street approach (one direction only) equals or exceeds 100 vehicles per hour for one moving lane of traffic or 150 vehicles per hour for two moving lanes, and	N
3. The total entering volume serviced during the hour equals or exceeds 650 vehicles per hour for intersections with three approaches or 800 vehicles per hour for intersections with four or more approaches.	Y

CRITERIA B. ***Does the plotted point [2] fall above the applicable curve in Figure 4C-3 (below) for the existing combination of approach lanes?*** **Y**

Approach	Number of Lanes		Vehicles Per Hour	
	1	2 or more	AM Pk Hr	PM Pk Hr
Major Street (Total of Both Approaches)	--	X	910	1,482
Minor Street (Higher of Approach)	--	X	58	114

FIGURE 4C-4. WARRANT 3, PEAK HOUR (70% FACTOR)

(COMMUNITY LESS THAN 10,000 POPULATION OR ABOVE 64 km/h OR ABOVE 40 mph ON MAJOR STREET)



*Note: 100 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 75 vph applies as the lower threshold volume for a minor-street approach with one lane.

Has either Criteria A or B been satisfied?	Y

#13. Mountain View Avenue at Tehachapi Boulevard
TRAFFIC SIGNAL WARRANT is SATISFIED
for Year 2011 Cumulative Plus Project

[1] *California Manual on Uniform Traffic Control Devices (MUTCD)* - Warrant #3

[2] *All-Way Stop Control (Part A of Warrant 3 is not applicable)*
the higher-volume minor-street approach (one direction only) for 1 hour (any four consecutive 15-minute periods) of an average day.

#13 Rural.xls

AM Cumulative Plus Project (2011) - Signal Warrant
Walmart, Tehachapi
Linscott, Law and Greenspan, Engineers

Peak Hour Delay Signal Warrant Report

****

Intersection #13 Mountain View Avenue at Tehachapi Boulevard

****

Future Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Stop Sign			Stop Sign			Uncontrolled			Uncontrolled		
Lanes:	0 1 0 0 1			1 0 0 0 0			1 0 1 0 1			1 0 1 0 1		
Initial Vol:	24	0	34	3	0	0	5	439	34	20	406	4
ApproachDel:	12.7			14.6			xxxxxx			xxxxxx		

Approach[northbound][lanes=2][control=Stop Sign]
Signal Warrant Rule #1: [vehicle-hours=0.2]
FAIL - Vehicle-hours less than 5 for two or more lane approach.
Signal Warrant Rule #2: [approach volume=58]
FAIL - Approach volume less than 150 for two or more lane approach.
Signal Warrant Rule #3: [approach count=4][total volume=971]
SUCCEED - Total volume greater than or equal to 800 for intersection with four or more approaches.

Approach[southbound][lanes=1][control=Stop Sign]
Signal Warrant Rule #1: [vehicle-hours=0.0]
FAIL - Vehicle-hours less than 4 for one lane approach.
Signal Warrant Rule #2: [approach volume=3]
FAIL - Approach volume less than 100 for one lane approach.
Signal Warrant Rule #3: [approach count=4][total volume=971]
SUCCEED - Total volume greater than or equal to 800 for intersection with four or more approaches.

SIGNAL WARRANT DISCLAIMER

This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

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PM Cumulative Plus Project (2011) - Signal Warrant
Walmart, Tehachapi
Linscott, Law and Greenspan, Engineers

Peak Hour Delay Signal Warrant Report

Intersection #13 Mountain View Avenue at Tehachapi Boulevard

Future Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound					South Bound					East Bound					West Bound				
Movement:	L	-	T	-	R	L	-	T	-	R	L	-	T	-	R	L	-	T	-	R
Control:	Stop Sign					Stop Sign					Uncontrolled					Uncontrolled				
Lanes:	0	1	0	0	1	0	0	1!	0	0	1	0	1	0	1	1	0	1	0	1
Initial Vol:	63		1		50	11		4		16	16		664		54	49		692		7
ApproachDel:	22.4					20.0					xxxxxx					xxxxxx				

Approach[northbound][lanes=2][control=Stop Sign]
Signal Warrant Rule #1: [vehicle-hours=0.7]
FAIL - Vehicle-hours less than 5 for two or more lane approach.
Signal Warrant Rule #2: [approach volume=114]
FAIL - Approach volume less than 150 for two or more lane approach.
Signal Warrant Rule #3: [approach count=4][total volume=1627]
SUCCEED - Total volume greater than or equal to 800 for intersection with four or more approaches.

Approach[southbound][lanes=1][control=Stop Sign]
Signal Warrant Rule #1: [vehicle-hours=0.2]
FAIL - Vehicle-hours less than 4 for one lane approach.
Signal Warrant Rule #2: [approach volume=31]
FAIL - Approach volume less than 100 for one lane approach.
Signal Warrant Rule #3: [approach count=4][total volume=1627]
SUCCEED - Total volume greater than or equal to 800 for intersection with four or more approaches.

SIGNAL WARRANT DISCLAIMER
This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

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AM Cumulative Plus Project (2011) - Signal Warrant
Walmart, Tehachapi
Linscott, Law and Greenspan, Engineers

Peak Hour Volume Signal Warrant Report [Rural]

Intersection #13 Mountain View Avenue at Tehachapi Boulevard

Future Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Stop Sign			Stop Sign			Uncontrolled			Uncontrolled		
Lanes:	0 1 0	0 1		1 0 0	0 0		1 0 1	0 1		1 0 1	0 1	
Initial Vol:	24	0	34	3	0	0	5	439	34	20	406	4

Major Street Volume: 910
Minor Approach Volume: 58
Minor Approach Volume Threshold: 185

SIGNAL WARRANT DISCLAIMER
This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

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PM Cumulative Plus Project (2011) - Signal Warrant
Walmart, Tehachapi
Linscott, Law and Greenspan, Engineers

Peak Hour Volume Signal Warrant Report [Rural]

Intersection #13 Mountain View Avenue at Tehachapi Boulevard

Future Volume Alternative: Peak Hour Warrant Met

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Stop Sign			Stop Sign			Uncontrolled			Uncontrolled		
Lanes:	0 1 0	0 1		0 0 1!	0 0		1 0 1	0 1		1 0 1	0 1	
Initial Vol:	63	1	50	11	4	16	16	664	54	49	692	7

Major Street Volume: 1482
Minor Approach Volume: 114
Minor Approach Volume Threshold: 38 [less than minimum of 100]

SIGNAL WARRANT DISCLAIMER
This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

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Peak Hour Traffic Signal Warrant Analysis[1]

CRITERIA A. ***Are all of the following three criteria met:*** **N**

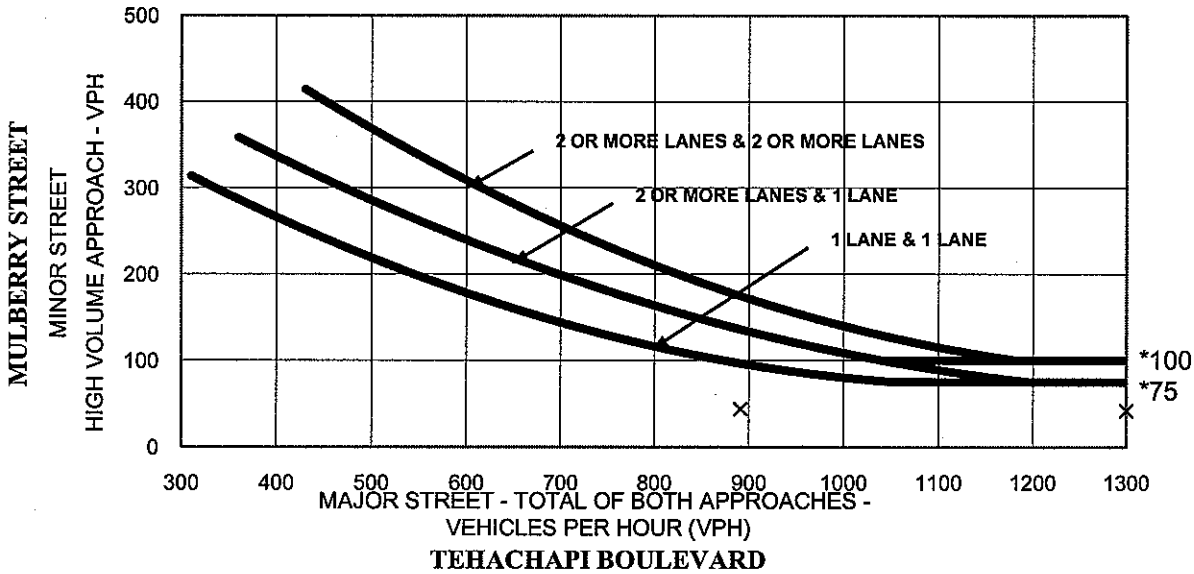
Criteria Description	Yes/No (Y/N)
1. The total stopped time delay experienced by the traffic on one minor-street approach (one direction only) controlled by a STOP sign equals or exceeds: 4 vehicle-hours for a one-lane approach; or 5 vehicle-hours for a two-lane approach, and	N
2. The volume on the same minor-street approach (one direction only) equals or exceeds 100 vehicles per hour for one moving lane of traffic or 150 vehicles per hour for two moving lanes, and	N
3. The total entering volume serviced during the hour equals or exceeds 650 vehicles per hour for intersections with three approaches or 800 vehicles per hour for intersections with four or more approaches.	Y

CRITERIA B. ***Does the plotted point [2] fall above the applicable curve in Figure 4C-3 (below) for the existing combination of approach lanes?*** **N**

Approach	Number of Lanes		Vehicles Per Hour	
	1	2 or more	AM Pk Hr	PM Pk Hr
Major Street (Total of Both Approaches)	--	X	891	1,557
Minor Street (Higher of Approach)	X	--	44	42

FIGURE 4C-4. WARRANT 3, PEAK HOUR (70% FACTOR)

(COMMUNITY LESS THAN 10,000 POPULATION OR ABOVE 64 km/h OR ABOVE 40 mph ON MAJOR STREET)



*Note: 100 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 75 vph applies as the lower threshold volume for a minor-street approach with one lane.

Has either Criteria A or B been satisfied?	N

#14. Mulberry Street at Tehachapi Boulevard
TRAFFIC SIGNAL WARRANT is NOT SATISFIED
for Year 2011 Cumulative Plus Project

[1] *California Manual on Uniform Traffic Control Devices (MUTCD)* - Warrant #3

[2] *All-Way Stop Control (Part A of Warrant 3 is not applicable)*
the higher-volume minor-street approach (one direction only) for 1 hour (any four consecutive 15-minute periods) of an average day.

#14 Rural.xls

AM Cumulative Plus Project (2011) - Signal Warrant
Walmart, Tehachapi
Linscott, Law and Greenspan, Engineers

Peak Hour Delay Signal Warrant Report

****

Intersection #14 Mulberry Street at Tehachapi Boulevard

****

Future Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Stop Sign			Stop Sign			Uncontrolled			Uncontrolled		
Lanes:	0 0 1! 0 0			0 0 1! 0 0			1 0 1 0 1			1 0 1 0 1		
Initial Vol:	27	0	18	0	0	0	0	484	21	21	364	1
ApproachDel:	13.0			xxxxxx			xxxxxx			xxxxxx		

Approach[northbound][lanes=1][control=Stop Sign]
Signal Warrant Rule #1: [vehicle-hours=0.2]
FAIL - Vehicle-hours less than 4 for one lane approach.
Signal Warrant Rule #2: [approach volume=44]
FAIL - Approach volume less than 100 for one lane approach.
Signal Warrant Rule #3: [approach count=3][total volume=936]
SUCCEED - Total volume greater than or equal to 650 for intersection with less than four approaches.

SIGNAL WARRANT DISCLAIMER

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PM Cumulative Plus Project (2011) - Signal Warrant
Walmart, Tehachapi
Linscott, Law and Greenspan, Engineers

Peak Hour Delay Signal Warrant Report

****

Intersection #14 Mulberry Street at Tehachapi Boulevard

****

Future Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound				South Bound				East Bound				West Bound			
Movement:	L	-	T	- R	L	-	T	- R	L	-	T	- R	L	-	T	- R
Control:	Stop Sign				Stop Sign				Uncontrolled				Uncontrolled			
Lanes:	0	0	1!	0 0	0	0	1!	0 0	1	0	1	0 1	1	0	1	0 1
Initial Vol:	8		0	2	15		0	27	23		727	9	2		756	40
ApproachDel:	20.9				18.6				xxxxxx				xxxxxx			

Approach[northbound][lanes=1][control=Stop Sign]
Signal Warrant Rule #1: [vehicle-hours=0.1]
FAIL - Vehicle-hours less than 4 for one lane approach.
Signal Warrant Rule #2: [approach volume=10]
FAIL - Approach volume less than 100 for one lane approach.
Signal Warrant Rule #3: [approach count=4][total volume=1608]
SUCCEED - Total volume greater than or equal to 800 for intersection with four or more approaches.

Approach[southbound][lanes=1][control=Stop Sign]
Signal Warrant Rule #1: [vehicle-hours=0.2]
FAIL - Vehicle-hours less than 4 for one lane approach.
Signal Warrant Rule #2: [approach volume=42]
FAIL - Approach volume less than 100 for one lane approach.
Signal Warrant Rule #3: [approach count=4][total volume=1608]
SUCCEED - Total volume greater than or equal to 800 for intersection with four or more approaches.

SIGNAL WARRANT DISCLAIMER

This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

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AM Cumulative Plus Project (2011) - Signal Warrant
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Peak Hour Volume Signal Warrant Report [Rural]

Intersection #14 Mulberry Street at Tehachapi Boulevard

Future Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	- T	- R	L	- T	- R	L	- T	- R	L	- T	- R
Control:	Stop Sign			Stop Sign			Uncontrolled			Uncontrolled		
Lanes:	0 0	1! 0	0	0 0	1! 0	0	1 0	1 0	1	1 0	1 0	1
Initial Vol:	27	0	18	0	0	0	0	484	21	21	364	1

Major Street Volume: 891
Minor Approach Volume: 44
Minor Approach Volume Threshold: 148

SIGNAL WARRANT DISCLAIMER
This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

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PM Cumulative Plus Project (2011) - Signal Warrant
Walmart, Tehachapi
Linscott, Law and Greenspan, Engineers

Peak Hour Volume Signal Warrant Report [Rural]

Intersection #14 Mulberry Street at Tehachapi Boulevard

Future Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Stop Sign			Stop Sign			Uncontrolled			Uncontrolled		
Lanes:	0 0 1! 0 0			0 0 1! 0 0			1 0 1 0 1			1 0 1 0 1		
Initial Vol:	8	0	2	15	0	27	23	727	9	2	756	40

Major Street Volume: 1557
Minor Approach Volume: 42
Minor Approach Volume Threshold: 20 [less than minimum of 75]

SIGNAL WARRANT DISCLAIMER
This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

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Peak Hour Traffic Signal Warrant Analysis[1]

CRITERIA A. ***Are all of the following three criteria met:*** **N**

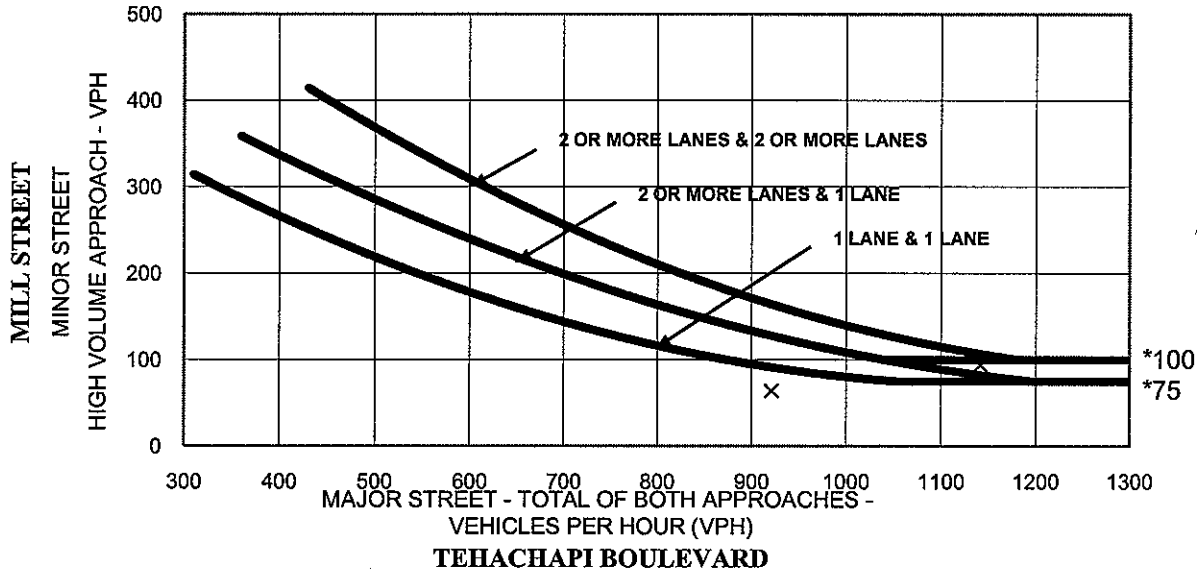
Criteria Description	Yes/No (Y/N)
1. The total stopped time delay experienced by the traffic on one minor-street approach (one direction only) controlled by a STOP sign equals or exceeds: 4 vehicle-hours for a one-lane approach; or 5 vehicle-hours for a two-lane approach, and	N
2. The volume on the same minor-street approach (one direction only) equals or exceeds 100 vehicles per hour for one moving lane of traffic or 150 vehicles per hour for two moving lanes, and	N
3. The total entering volume serviced during the hour equals or exceeds 650 vehicles per hour for intersections with three approaches or 800 vehicles per hour for intersections with four or more approaches.	Y

CRITERIA B. ***Does the plotted point [2] fall above the applicable curve in Figure 4C-3 (below) for the existing combination of approach lanes?*** **N**

Approach	Number of Lanes		Vehicles Per Hour	
	1	2 or more	AM Pk Hr	PM Pk Hr
Major Street (Total of Both Approaches)	--	X	921	1,141
Minor Street (Higher of Approach)	--	X	64	94

FIGURE 4C-4. WARRANT 3, PEAK HOUR (70% FACTOR)

(COMMUNITY LESS THAN 10,000 POPULATION OR ABOVE 64 km/h OR ABOVE 40 mph ON MAJOR STREET)



*Note: 100 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 75 vph applies as the lower threshold volume for a minor-street approach with one lane.

Has either Criteria A or B been satisfied?	N

#15. Mill Street at Tehachapi Boulevard
TRAFFIC SIGNAL WARRANT is NOT SATISFIED
for Year 2011 Cumulative Plus Project

[1] *California Manual on Uniform Traffic Control Devices (MUTCD)* - Warrant #3

[2] *All-Way Stop Control (Part A of Warrant 3 is not applicable)*
the higher-volume minor-street approach (one direction only) for 1 hour (any four consecutive 15-minute periods) of an average day.

#15 Rural.xls

AM Cumulative Plus Project (2011) - Signal Warrant
Walmart, Tehachapi
Linscott, Law and Greenspan, Engineers

Peak Hour Delay Signal Warrant Report

****

Intersection #15 Mill Street at Tehachapi Boulevard

****

Future Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Stop Sign			Stop Sign			Uncontrolled			Uncontrolled		
Lanes:	1 0 0 0 1			0 0 0 0 0			0 0 1 1 0			0 1 1 0 0		
Initial Vol:	26	0	38	0	0	0	0	463	28	36	394	0
ApproachDel:	13.4			xxxxxx			xxxxxx			xxxxxx		

Approach[northbound][lanes=2][control=Stop Sign]
Signal Warrant Rule #1: [vehicle-hours=0.2]
FAIL - Vehicle-hours less than 5 for two or more lane approach.
Signal Warrant Rule #2: [approach volume=64]
FAIL - Approach volume less than 150 for two or more lane approach.
Signal Warrant Rule #3: [approach count=3][total volume=985]
SUCCEED - Total volume greater than or equal to 650 for intersection with less than four approaches.

SIGNAL WARRANT DISCLAIMER

This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

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PM Cumulative Plus Project (2011) - Signal Warrant
Walmart, Tehachapi
Linscott, Law and Greenspan, Engineers

Peak Hour Delay Signal Warrant Report

Intersection #15 Mill Street at Tehachapi Boulevard

Future Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound					South Bound					East Bound					West Bound				
Movement:	L	-	T	-	R	L	-	T	-	R	L	-	T	-	R	L	-	T	-	R
Control:	Stop Sign					Stop Sign					Uncontrolled					Uncontrolled				
Lanes:	1	0	0	0	1	0	0	0	0	0	0	0	1	1	0	0	1	1	0	0
Initial Vol:	54		0		40	0		0		0	0		494		44	35		567		0
ApproachDel:	18.2					xxxxxx					xxxxxx					xxxxxx				

Approach[northbound][lanes=2][control=Stop Sign]
Signal Warrant Rule #1: [vehicle-hours=0.5]
FAIL - Vehicle-hours less than 5 for two or more lane approach.
Signal Warrant Rule #2: [approach volume=94]
FAIL - Approach volume less than 150 for two or more lane approach.
Signal Warrant Rule #3: [approach count=3][total volume=1235]
SUCCEED - Total volume greater than or equal to 650 for intersection with less than four approaches.

SIGNAL WARRANT DISCLAIMER
This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

The peak hour warrant analysis in this report is not intended to replace a rigorous and complete traffic signal warrant analysis by the responsible jurisdiction. Consideration of the other signal warrants, which is beyond the scope of this software, may yield different results.

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AM Cumulative Plus Project (2011) - Signal Warrant
Walmart, Tehachapi
Linscott, Law and Greenspan, Engineers

Peak Hour Volume Signal Warrant Report [Rural]

Intersection #15 Mill Street at Tehachapi Boulevard

Future Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound					South Bound					East Bound					West Bound				
Movement:	L	-	T	-	R	L	-	T	-	R	L	-	T	-	R	L	-	T	-	R
Control:	Stop Sign					Stop Sign					Uncontrolled					Uncontrolled				
Lanes:	1	0	0	0	1	0	0	0	0	0	0	0	1	1	0	0	1	1	0	0
Initial Vol:	26		0		38	0		0		0	0		463		28	36		394		0

Major Street Volume: 921
Minor Approach Volume: 64
Minor Approach Volume Threshold: 182

SIGNAL WARRANT DISCLAIMER
This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

The peak hour warrant analysis in this report is not intended to replace a rigorous and complete traffic signal warrant analysis by the responsible jurisdiction. Consideration of the other signal warrants, which is beyond the scope of this software, may yield different results.

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PM Cumulative Plus Project (2011) - Signal Warrant
Walmart, Tehachapi
Linscott, Law and Greenspan, Engineers

Peak Hour Volume Signal Warrant Report [Rural]

Intersection #15 Mill Street at Tehachapi Boulevard

Future Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound					South Bound					East Bound					West Bound				
Movement:	L	-	T	-	R	L	-	T	-	R	L	-	T	-	R	L	-	T	-	R
Control:	Stop Sign					Stop Sign					Uncontrolled					Uncontrolled				
Lanes:	1	0	0	0	1	0	0	0	0	0	0	0	1	1	0	0	1	1	0	0
Initial Vol:	54		0		40	0		0		0	0		494		44	35		567		0

Major Street Volume: 1141
Minor Approach Volume: 94
Minor Approach Volume Threshold: 117

SIGNAL WARRANT DISCLAIMER
This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

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Peak Hour Traffic Signal Warrant Analysis[1]

CRITERIA A. ***Are all of the following three criteria met:*** -- [2]

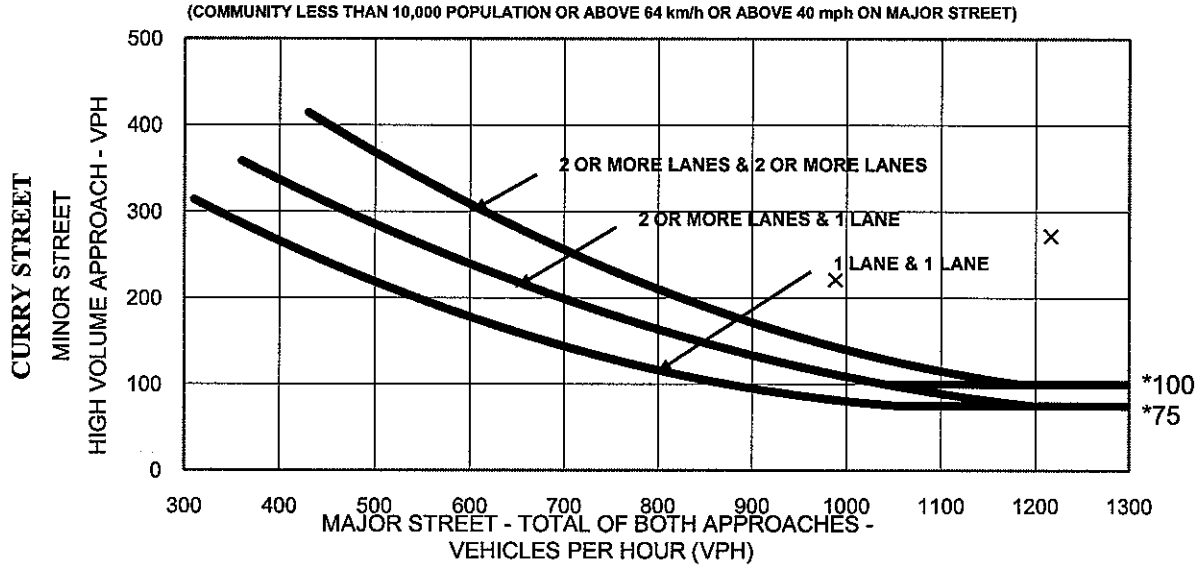
Criteria Description	Yes/No (Y/N)
1. The total stopped time delay experienced by the traffic on one minor-street approach (one direction only) controlled by a STOP sign equals or exceeds: 4 vehicle-hours for a one-lane approach; or 5 vehicle-hours for a two-lane approach, and	--
2. The volume on the same minor-street approach (one direction only) equals or exceeds 100 vehicles per hour for one moving lane of traffic or 150 vehicles per hour for two moving lanes, and	--
3. The total entering volume serviced during the hour equals or exceeds 650 vehicles per hour for intersections with three approaches or 800 vehicles per hour for intersections with four or more approaches.	--

CRITERIA B. ***Does the plotted point [3] fall above the applicable curve in Figure 4C-3 (below) for the existing combination of approach lanes?*** Y

Approach	Number of Lanes		Vehicles Per Hour	
	1	2 or more	AM Pk Hr	PM Pk Hr
Major Street (Total of Both Approaches)	--	X	988	1,216
Minor Street (Higher of Approach)	--	X	221	272

FIGURE 4C-4. WARRANT 3, PEAK HOUR (70% FACTOR)

(COMMUNITY LESS THAN 10,000 POPULATION OR ABOVE 64 km/h OR ABOVE 40 mph ON MAJOR STREET)



*Note: 100 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 75 vph applies as the lower threshold volume for a minor-street approach with one lane.

Has either Criteria A or B been satisfied?	Y

#16. Curry Street at Tehachapi Boulevard
TRAFFIC SIGNAL WARRANT is SATISFIED
for Year 2011 Cumulative Plus Project

[1] *California Manual on Uniform Traffic Control Devices (MUTCD)* - Warrant #3
[2] *All-Way Stop Control (Part A of Warrant 3 is not applicable)*
[3] The plotted point represents the vehicles per hour on the major street (total of both approaches) and the corresponding vehicles per hour on the higher-volume minor-street approach (one direction only) for 1 hour (any four consecutive 15-minute periods) of an average day.

#16 Rural.xls

AM Cumulative Plus Project (2011) - Signal Warrant
Walmart, Tehachapi
Linscott, Law and Greenspan, Engineers

Peak Hour Volume Signal Warrant Report [Rural]

****

Intersection #16 Curry Street at Tehachapi Boulevard

****

Future Volume Alternative: Peak Hour Warrant Met

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Stop Sign			Stop Sign			Stop Sign			Stop Sign		
Lanes:	0 1 0	1 0		0 0 1	0 0		0 1 0	1 0		0 1 0	1 0	
Initial Vol:	58	2	161	0	3	0	2	441	63	98	383	1

Major Street Volume: 988
Minor Approach Volume: 221
Minor Approach Volume Threshold: 160

SIGNAL WARRANT DISCLAIMER

This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

The peak hour warrant analysis in this report is not intended to replace a rigorous and complete traffic signal warrant analysis by the responsible jurisdiction. Consideration of the other signal warrants, which is beyond the scope of this software, may yield different results.

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PM Cumulative Plus Project (2011) - Signal Warrant
Walmart, Tehachapi
Linscott, Law and Greenspan, Engineers

Peak Hour Volume Signal Warrant Report [Rural]

Intersection #16 Curry Street at Tehachapi Boulevard

Future Volume Alternative: Peak Hour Warrant Met

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Stop Sign			Stop Sign			Stop Sign			Stop Sign		
Lanes:	0 1 0	1 0		0 0 1!	0 0		0 1 0	1 0		0 1 0	1 0	
Initial Vol:	111	3	158	4	0	3	5	398	106	182	523	2

Major Street Volume: 1216
Minor Approach Volume: 272
Minor Approach Volume Threshold: 98 [less than minimum of 100]

SIGNAL WARRANT DISCLAIMER
This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

The peak hour warrant analysis in this report is not intended to replace a rigorous and complete traffic signal warrant analysis by the responsible jurisdiction. Consideration of the other signal warrants, which is beyond the scope of this software, may yield different results.

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Peak Hour Traffic Signal Warrant Analysis[1]

CRITERIA A. ***Are all of the following three criteria met:*** **N**

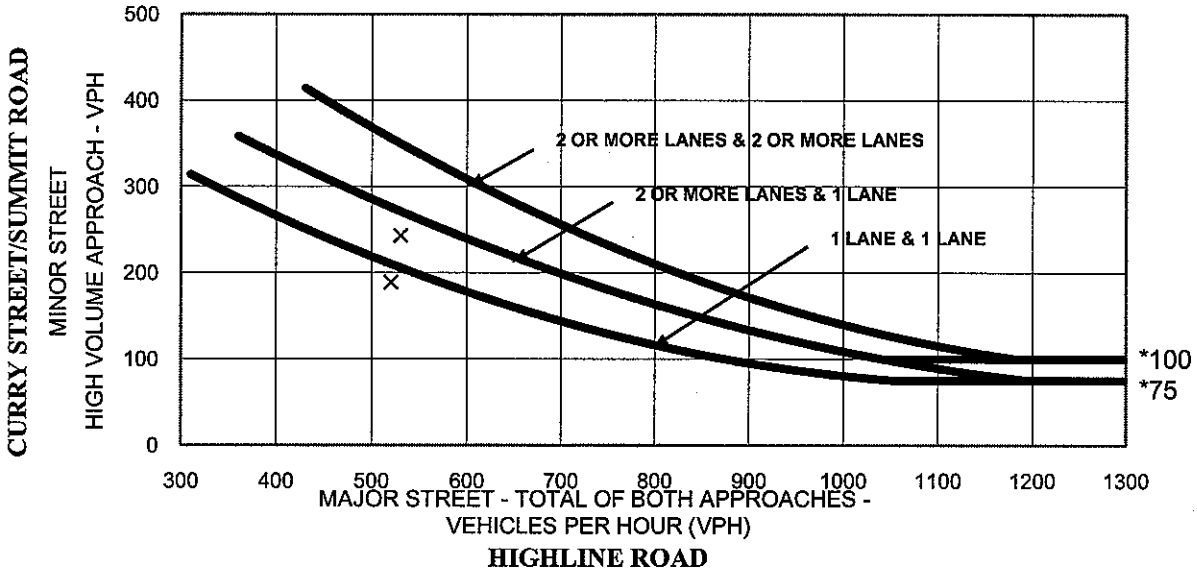
Criteria Description	Yes/No (Y/N)
1. The total stopped time delay experienced by the traffic on one minor-street approach (one direction only) controlled by a STOP sign equals or exceeds: 4 vehicle-hours for a one-lane approach; or 5 vehicle-hours for a two-lane approach, and	N
2. The volume on the same minor-street approach (one direction only) equals or exceeds 100 vehicles per hour for one moving lane of traffic or 150 vehicles per hour for two moving lanes, and	Y
3. The total entering volume serviced during the hour equals or exceeds 650 vehicles per hour for intersections with three approaches or 800 vehicles per hour for intersections with four or more approaches.	N

CRITERIA B. ***Does the plotted point [2] fall above the applicable curve in Figure 4C-3 (below) for the existing combination of approach lanes?*** **N**

Approach	Number of Lanes		Vehicles Per Hour	
	1	2 or more	AM Pk Hr	PM Pk Hr
Major Street (Total of Both Approaches)	X	--	530	520
Minor Street (Higher of Approach)	--	X	243	189

FIGURE 4C-4. WARRANT 3, PEAK HOUR (70% FACTOR)

(COMMUNITY LESS THAN 10,000 POPULATION OR ABOVE 64 km/h OR ABOVE 40 mph ON MAJOR STREET)



*Note: 100 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 75 vph applies as the lower threshold volume for a minor-street approach with one lane.

Has either Criteria A or B been satisfied?	N

#18. Curry Street/Summit Road at Highline Road
TRAFFIC SIGNAL WARRANT is NOT SATISFIED
for Year 2011 Cumulative Plus Project

[1] *California Manual on Uniform Traffic Control Devices (MUTCD)* - Warrant #3

[2] *All-Way Stop Control (Part A of Warrant 3 is not applicable)*
the higher-volume minor-street approach (one direction only) for 1 hour (any four consecutive 15-minute periods) of an average day.

#18 Rural.xls

```
AM Cumulative Plus Project (2011) - Signal Warrant
                    Walmart, Tehachapi
          Linscott, Law and Greenspan, Engineers

                Peak Hour Delay Signal Warrant Report
*****************************************************************************
Intersection #18 Curry Street/Summit Road at Highline Road
*****************************************************************************
Future Volume Alternative: Peak Hour Warrant NOT Met
------------|---------------||---------------||---------------||---------------|
Approach:      North Bound      South Bound       East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Control:        Stop Sign        Stop Sign       Uncontrolled     Uncontrolled
Lanes:        0  0  1! 0  0    0  1  0  0  1    0  0  1! 0  0    0  0  1! 0  0
Initial Vol:    4   17     1   123   18   102   111  255     7     3   98    55
ApproachDel:      17.2             19.2            xxxxxx           xxxxxx
------------|---------------||---------------||---------------||---------------|
Approach[northbound][lanes=1][control=Stop Sign]
Signal Warrant Rule #1: [vehicle-hours=0.1]
   FAIL - Vehicle-hours less than 4 for one lane approach.
Signal Warrant Rule #2: [approach volume=22]
   FAIL - Approach volume less than 100 for one lane approach.
Signal Warrant Rule #3: [approach count=4][total volume=795]
   FAIL - Total volume less than 650 for intersection
          with less than four approaches.
-----------------------------------------------------------------------------
Approach[southbound][lanes=2][control=Stop Sign]
Signal Warrant Rule #1: [vehicle-hours=1.3]
   FAIL - Vehicle-hours less than 5 for two or more lane approach.
Signal Warrant Rule #2: [approach volume=243]
   SUCCEED - Approach volume >= 150 for two or more lane approach.
Signal Warrant Rule #3: [approach count=4][total volume=795]
   FAIL - Total volume less than 650 for intersection
          with less than four approaches.
-----------------------------------------------------------------------------
SIGNAL WARRANT DISCLAIMER
This peak hour signal warrant analysis should be considered solely as an
"indicator" of the likelihood of an unsignalized intersection warranting
a traffic signal in the future.  Intersections that exceed this warrant
are probably more likely to meet one or more of the other volume based
signal warrant (such as the 4-hour or 8-hour warrants).

The peak hour warrant analysis in this report is not intended to replace
a rigorous and complete traffic signal warrant analysis by the responsible
jurisdiction.  Consideration of the other signal warrants, which is beyond
the scope of this software, may yield different results.
```

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PM Cumulative Plus Project (2011) - Signal Warrant
Walmart, Tehachapi
Linscott, Law and Greenspan, Engineers

Peak Hour Delay Signal Warrant Report

****

Intersection #18 Curry Street/Summit Road at Highline Road

****

Future Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	- T	- R	L	- T	- R	L	- T	- R	L	- T	- R
Control:	Stop Sign			Stop Sign			Uncontrolled			Uncontrolled		
Lanes:	0 0	1! 0	0	0 1	0 0	1	0 0	1! 0	0	0 0	1! 0	0
Initial Vol:	8	22	3	72	21	97	115	89	10	2	167	137
ApproachDel:	17.4			15.1			xxxxxx			xxxxxx		

Approach[northbound][lanes=1][control=Stop Sign]
Signal Warrant Rule #1: [vehicle-hours=0.2]
FAIL - Vehicle-hours less than 4 for one lane approach.
Signal Warrant Rule #2: [approach volume=33]
FAIL - Approach volume less than 100 for one lane approach.
Signal Warrant Rule #3: [approach count=4][total volume=743]
FAIL - Total volume less than 650 for intersection
with less than four approaches.

Approach[southbound][lanes=2][control=Stop Sign]
Signal Warrant Rule #1: [vehicle-hours=0.8]
FAIL - Vehicle-hours less than 5 for two or more lane approach.
Signal Warrant Rule #2: [approach volume=189]
SUCCEED - Approach volume >= 150 for two or more lane approach.
Signal Warrant Rule #3: [approach count=4][total volume=743]
FAIL - Total volume less than 650 for intersection
with less than four approaches.

SIGNAL WARRANT DISCLAIMER
This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

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AM Cumulative Plus Project (2011) - Signal Warrant
Walmart, Tehachapi
Linscott, Law and Greenspan, Engineers

Peak Hour Volume Signal Warrant Report [Rural]

****

Intersection #18 Curry Street/Summit Road at Highline Road

****

Future Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Stop Sign			Stop Sign			Uncontrolled			Uncontrolled		
Lanes:	0 0 1! 0 0			0 1 0 0 1			0 0 1! 0 0			0 0 1! 0 0		
Initial Vol:	4	17	1	123	18	102	111	255	7	3	98	55

Major Street Volume: 530
Minor Approach Volume: 243
Minor Approach Volume Threshold: 267

SIGNAL WARRANT DISCLAIMER
This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

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PM Cumulative Plus Project (2011) - Signal Warrant
Walmart, Tehachapi
Linscott, Law and Greenspan, Engineers

Peak Hour Volume Signal Warrant Report [Rural]

****

Intersection #18 Curry Street/Summit Road at Highline Road

****

Future Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Stop Sign			Stop Sign			Uncontrolled			Uncontrolled		
Lanes:	0 0 1! 0 0			0 1 0 0 1			0 0 1! 0 0			0 0 1! 0 0		
Initial Vol:	8	22	3	72	21	97	115	89	10	2	167	137

Major Street Volume: 520
Minor Approach Volume: 189
Minor Approach Volume Threshold: 270

SIGNAL WARRANT DISCLAIMER
This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

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Peak Hour Traffic Signal Warrant Analysis[1]

CRITERIA A. ***Are all of the following three criteria met:*** -- [2]

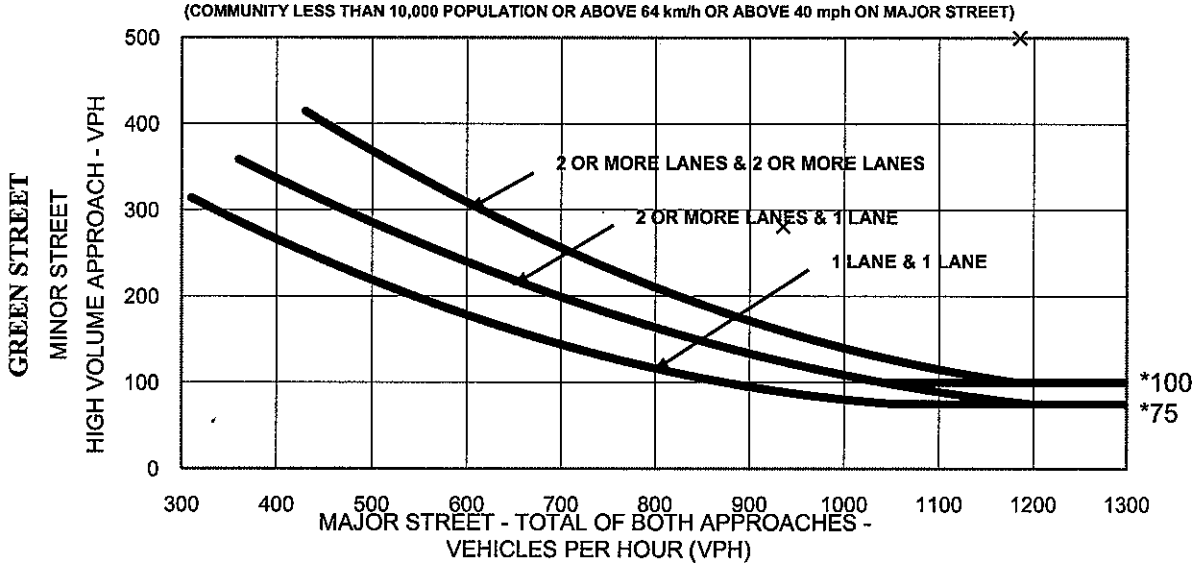
Criteria Description	Yes/No (Y/N)
1. The total stopped time delay experienced by the traffic on one minor-street approach (one direction only) controlled by a STOP sign equals or exceeds: 4 vehicle-hours for a one-lane approach; or 5 vehicle-hours for a two-lane approach, and	--
2. The volume on the same minor-street approach (one direction only) equals or exceeds 100 vehicles per hour for one moving lane of traffic or 150 vehicles per hour for two moving lanes, and	--
3. The total entering volume serviced during the hour equals or exceeds 650 vehicles per hour for intersections with three approaches or 800 vehicles per hour for intersections with four or more approaches.	--

CRITERIA B. ***Does the plotted point [3] fall above the applicable curve in Figure 4C-3 (below) for the existing combination of approach lanes?*** Y

Approach	Number of Lanes		Vehicles Per Hour	
	1	2 or more	AM Pk Hr	PM Pk Hr
Major Street (Total of Both Approaches)	--	X	935	1,185
Minor Street (Higher of Approach)	--	X	281	585

FIGURE 4C-4. WARRANT 3, PEAK HOUR (70% FACTOR)

(COMMUNITY LESS THAN 10,000 POPULATION OR ABOVE 64 km/h OR ABOVE 40 mph ON MAJOR STREET)



TEHACHAPI ROAD

*Note: 100 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 75 vph applies as the lower threshold volume for a minor-street approach with one lane.

Has either Criteria A or B been satisfied?	Y

#19. Green Street at Tehachapi Road
TRAFFIC SIGNAL WARRANT is SATISFIED
for Year 2011 Cumulative Plus Project

[1] *California Manual on Uniform Traffic Control Devices (MUTCD)* - Warrant #3
[2] *All-Way Stop Control (Part A of Warrant 3 is not applicable)*
[3] The plotted point represents the vehicles per hour on the major street (total of both approaches) and the corresponding vehicles per hour on the higher-volume minor-street approach (one direction only) for 1 hour (any four consecutive 15-minute periods) of an average day.

#19 Rural.xls

AM Cumulative Plus Project (2011) - Signal Warrant
Walmart, Tehachapi
Linscott, Law and Greenspan, Engineers

Peak Hour Volume Signal Warrant Report [Rural]

Intersection #19 Green Street at Tehachapi Boulevard

Future Volume Alternative: Peak Hour Warrant Met

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Stop Sign			Stop Sign			Stop Sign			Stop Sign		
Lanes:	0 0 0 0 0			0 1 0 0 1			0 1 0 1 0			0 1 0 1 0		
Initial Vol:	0	0	0	75	22	184	241	342	24	7	197	124

Major Street Volume: 935
Minor Approach Volume: 281
Minor Approach Volume Threshold: 177

SIGNAL WARRANT DISCLAIMER
This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

The peak hour warrant analysis in this report is not intended to replace a rigorous and complete traffic signal warrant analysis by the responsible jurisdiction. Consideration of the other signal warrants, which is beyond the scope of this software, may yield different results.

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PM Cumulative Plus Project (2011) - Signal Warrant
Walmart, Tehachapi
Linscott, Law and Greenspan, Engineers

Peak Hour Volume Signal Warrant Report [Rural]

****

Intersection #19 Green Street at Tehachapi Boulevard

****

Future Volume Alternative: Peak Hour Warrant Met

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	- T	- R	L	- T	- R	L	- T	- R	L	- T	- R
Control:	Stop Sign			Stop Sign			Stop Sign			Stop Sign		
Lanes:	0 0 0	0 0		0 1	0 0	1	0 1	0 1	0	0 1	0 1	0
Initial Vol:	0	0	0	115	68	402	295	386	77	44	298	84

Major Street Volume: 1185
Minor Approach Volume: 585
Minor Approach Volume Threshold: 106

SIGNAL WARRANT DISCLAIMER

This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

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APPENDIX G-II

GENERAL PLAN BUILDOUT WITH PROJECT TRAFFIC CONDITIONS

Peak Hour Traffic Signal Warrant Analysis[1]

CRITERIA A. ***Are all of the following three criteria met:*** **Y**

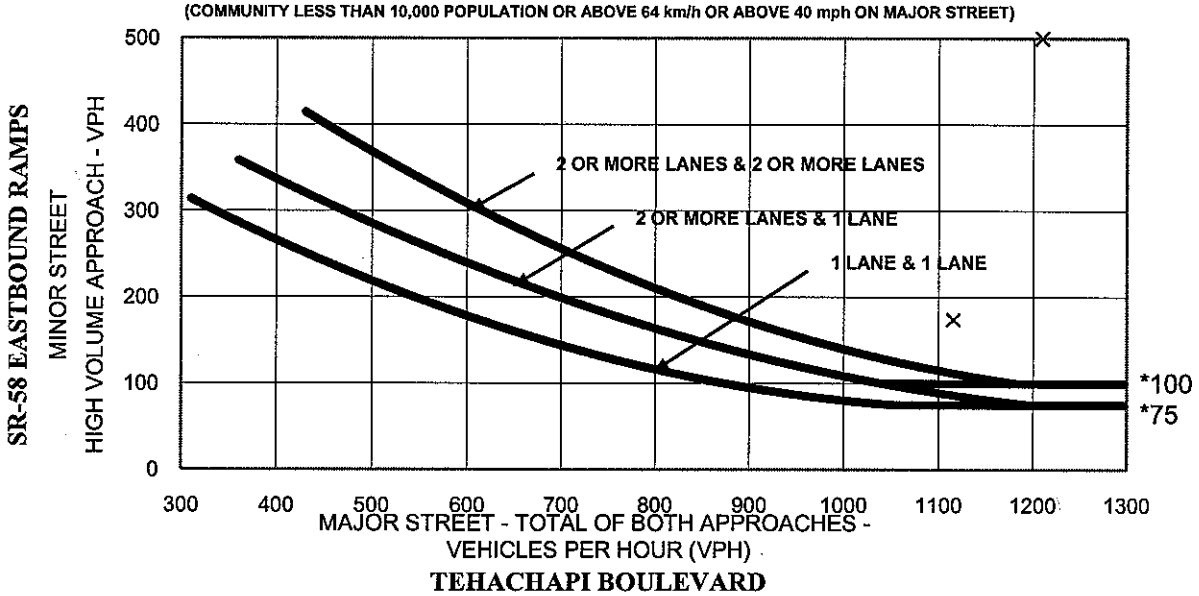
Criteria Description	Yes/No (Y/N)
1. The total stopped time delay experienced by the traffic on one minor-street approach (one direction only) controlled by a STOP sign equals or exceeds: 4 vehicle-hours for a one-lane approach; or 5 vehicle-hours for a two-lane approach, and	Y
2. The volume on the same minor-street approach (one direction only) equals or exceeds 100 vehicles per hour for one moving lane of traffic or 150 vehicles per hour for two moving lanes, and	Y
3. The total entering volume serviced during the hour equals or exceeds 650 vehicles per hour for intersections with three approaches or 800 vehicles per hour for intersections with four or more approaches.	Y

CRITERIA B. ***Does the plotted point [2] fall above the applicable curve in Figure 4C-3 (below) for the existing combination of approach lanes?*** **Y**

Approach	Number of Lanes		Vehicles Per Hour	
	1	2 or more	AM Pk Hr	PM Pk Hr
Major Street (Total of Both Approaches)	X	--	1,115	1,209
Minor Street (Higher of Approach)	--	X	174	500

FIGURE 4C-4. WARRANT 3, PEAK HOUR (70% FACTOR)

(COMMUNITY LESS THAN 10,000 POPULATION OR ABOVE 64 km/h OR ABOVE 40 mph ON MAJOR STREET)



TEHACHAPI BOULEVARD

*Note: 100 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 75 vph applies as the lower threshold volume for a minor-street approach with one lane.

Has either Criteria A or B been satisfied?	Y

#7. Tehachapi Boulevard at SR-58 Eastbound Ramps
TRAFFIC SIGNAL WARRANT is SATISFIED
for General Plan Buildout Plus Project

[1] *California Manual on Uniform Traffic Control Devices (MUTCD)* - Warrant #3

[2] *All-Way Stop Control (Part A of Warrant 3 is not applicable)*
the higher-volume minor-street approach (one direction only) for 1 hour (any four consecutive 15-minute periods) of an average day.

#7 Rural.xls

AM General Plan Buildout Plus Project - Signal Warrant
Walmart, Tehachapi
Linscott, Law and Greenspan, Engineers

Peak Hour Delay Signal Warrant Report

****

Intersection #7 Tehachapi Boulevard at SR-58 Eastbound Ramps

****

Future Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Uncontrolled			Uncontrolled			Stop Sign			Stop Sign		
Lanes:	0 0 0 1 0			0 0 1 0 0			0 1 0 0 1			0 0 0 0 0		
Initial Vol:	0	538	339	0	238	0	0	1	173	0	0	0
ApproachDel:	xxxxxx			xxxxxx			10.8			xxxxxx		

Approach[eastbound][lanes=2][control=Stop Sign]
Signal Warrant Rule #1: [vehicle-hours=0.5]
FAIL - Vehicle-hours less than 5 for two or more lane approach.
Signal Warrant Rule #2: [approach volume=174]
SUCCEED - Approach volume >= 150 for two or more lane approach.
Signal Warrant Rule #3: [approach count=3][total volume=1289]
SUCCEED - Total volume greater than or equal to 650 for intersection with less than four approaches.

SIGNAL WARRANT DISCLAIMER

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PM General Plan Buildout Plus Project - Signal Warrant
Walmart, Tehachapi
Linscott, Law and Greenspan, Engineers

Peak Hour Delay Signal Warrant Report

****

Intersection #7 Tehachapi Boulevard at SR-58 Eastbound Ramps

****

Future Volume Alternative: Peak Hour Warrant Met

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Uncontrolled			Uncontrolled			Stop Sign			Stop Sign		
Lanes:	0 0 0 1 0			0 1 0 0 0			0 1 0 0 1			0 0 0 0 0		
Initial Vol:	0	361	284	1	563	0	0	2	498	0	0	0
ApproachDel:	xxxxxx			xxxxxx			53.5			xxxxxx		

Approach[eastbound][lanes=2][control=Stop Sign]
Signal Warrant Rule #1: [vehicle-hours=7.4]
SUCCEED - Vehicle-hours >= 5 for two or more lane approach.
Signal Warrant Rule #2: [approach volume=500]
SUCCEED - Approach volume >= 150 for two or more lane approach.
Signal Warrant Rule #3: [approach count=3][total volume=1709]
SUCCEED - Total volume greater than or equal to 650 for intersection with less than four approaches.

SIGNAL WARRANT DISCLAIMER

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AM General Plan Buildout Plus Project - Signal Warrant
Walmart, Tehachapi
Linscott, Law and Greenspan, Engineers

Peak Hour Volume Signal Warrant Report [Rural]

Intersection #7 Tehachapi Boulevard at SR-58 Eastbound Ramps

Future Volume Alternative: Peak Hour Warrant Met

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Uncontrolled			Uncontrolled			Stop Sign			Stop Sign		
Lanes:	0 0 0 1 0			0 0 1 0 0			0 1 0 0 1			0 0 0 0 0		
Initial Vol:	0	538	339	0	238	0	0	1	173	0	0	0

Major Street Volume: 1115
Minor Approach Volume: 174
Minor Approach Volume Threshold: 106

SIGNAL WARRANT DISCLAIMER
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PM General Plan Buildout Plus Project - Signal Warrant
Walmart, Tehachapi
Linscott, Law and Greenspan, Engineers

Peak Hour Volume Signal Warrant Report [Rural]

****

Intersection #7 Tehachapi Boulevard at SR-58 Eastbound Ramps

****

Future Volume Alternative: Peak Hour Warrant Met

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	- T	- R	L	- T	- R	L	- T	- R	L	- T	- R
Control:	Uncontrolled			Uncontrolled			Stop Sign			Stop Sign		
Lanes:	0 0 0	1	0	0 1 0	0	0	0 1 0	0	1	0 0 0	0	0
Initial Vol:	0	361	284	1	563	0	0	2	498	0	0	0

Major Street Volume: 1209
Minor Approach Volume: 500
Minor Approach Volume Threshold: 89 [less than minimum of 100]

SIGNAL WARRANT DISCLAIMER

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Peak Hour Traffic Signal Warrant Analysis[1]

CRITERIA A. ***Are all of the following three criteria met:*** -- [2]

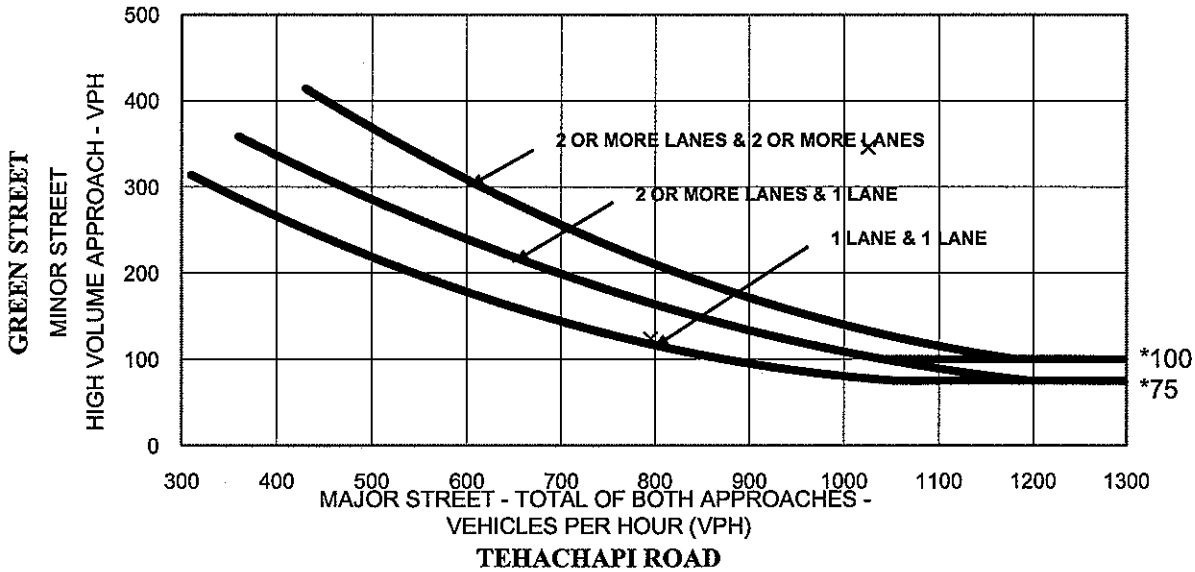
Criteria Description	Yes/No (Y/N)
1. The total stopped time delay experienced by the traffic on one minor-street approach (one direction only) controlled by a STOP sign equals or exceeds: 4 vehicle-hours for a one-lane approach; or 5 vehicle-hours for a two-lane approach, and	--
2. The volume on the same minor-street approach (one direction only) equals or exceeds 100 vehicles per hour for one moving lane of traffic or 150 vehicles per hour for two moving lanes, and	--
3. The total entering volume serviced during the hour equals or exceeds 650 vehicles per hour for intersections with three approaches or 800 vehicles per hour for intersections with four or more approaches.	--

CRITERIA B. ***Does the plotted point [3] fall above the applicable curve in Figure 4C-3 (below) for the existing combination of approach lanes?*** Y

Approach	Number of Lanes		Vehicles Per Hour	
	1	2 or more	AM Pk Hr	PM Pk Hr
Major Street (Total of Both Approaches)	--	X	795	1,025
Minor Street (Higher of Approach)	--	X	124	346

FIGURE 4C-4. WARRANT 3, PEAK HOUR (70% FACTOR)

(COMMUNITY LESS THAN 10,000 POPULATION OR ABOVE 64 km/h OR ABOVE 40 mph ON MAJOR STREET)



*Note: 100 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 75 vph applies as the lower threshold volume for a minor-street approach with one lane.

Has either Criteria A or B been satisfied?	Y

#19. Green Street at Tehachapi Road
TRAFFIC SIGNAL WARRANT is SATISFIED
for General Plan Buildout Plus Project

[1] *California Manual on Uniform Traffic Control Devices (MUTCD)* - Warrant #3

[2] *All-Way Stop Control (Part A of Warrant 3 is not applicable)*

[3] The plotted point represents the vehicles per hour on the major street (total of both approaches) and the corresponding vehicles per hour on the higher-volume minor-street approach (one direction only) for 1 hour (any four consecutive 15-minute periods) of an average day.

#19 Rural.xls

AM General Plan Buildout Plus Project - Signal Warrant
Walmart, Tehachapi
Linscott, Law and Greenspan, Engineers

Peak Hour Volume Signal Warrant Report [Rural]

****

Intersection #19 Green Street at Tehachapi Boulevard

****

Future Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Stop Sign			Stop Sign			Stop Sign			Stop Sign		
Lanes:	0 0 0 0 0			0 1 0 0 1			0 1 0 1 0			0 1 0 1 0		
Initial Vol:	0	0	0	48	10	66	41	388	11	2	324	29

Major Street Volume: 795
Minor Approach Volume: 124
Minor Approach Volume Threshold: 226

SIGNAL WARRANT DISCLAIMER

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PM General Plan Buildout Plus Project - Signal Warrant
Walmart, Tehachapi
Linscott, Law and Greenspan, Engineers

Peak Hour Volume Signal Warrant Report [Rural]

Intersection #19 Green Street at Tehachapi Boulevard

Future Volume Alternative: Peak Hour Warrant Met

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Stop Sign			Stop Sign			Stop Sign			Stop Sign		
Lanes:	0 0 0 0 0			0 1 0 0 1			0 1 0 1 0			0 1 0 1 0		
Initial Vol:	0	0	0	71	33	242	66	426	22	8	482	21

Major Street Volume: 1025
Minor Approach Volume: 346
Minor Approach Volume Threshold: 149

SIGNAL WARRANT DISCLAIMER
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APPENDIX H

SYNCHRO INTERSECTION QUEUING LENGTH ANALYSIS WORKSHEETS

APPENDIX H-I

YEAR 2011 CUMULATIVE PLUS PROJECT TRAFFIC CONDITIONS

Lane Configurations												
Volume (vph)	0	1	159	0	0	0	0	477	301	0	214	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	50		0	0		0	0		0	0		0
Storage Lanes	0		1	0		0	0		0	0		0
Taper Length (ft)	25		25	25		25	25		25	25		25
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.850					0.948				
Flt Protected												
Satd. Flow (prot)	0	1863	1583	0	0	0	0	1766	0	0	1863	0
Flt Permitted												
Satd. Flow (perm)	0	1863	1583	0	0	0	0	1766	0	0	1863	0
Link Speed (mph)		50			50			50			50	
Link Distance (ft)		150			1582			3007			628	
Travel Time (s)		2.0			21.6			41.0			8.6	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	0	1	177	0	0	0	0	530	334	0	238	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	1	177	0	0	0	0	864	0	0	238	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Sign Control		Stop			Stop			Free			Free	

Intersection Summary

Area Type: Other
Control Type: Unsignalized
Intersection Capacity Utilization 53.5% ICU Level of Service A
Analysis Period (min) 15

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	0	1	159	0	0	0	0	477	301	0	214	0
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Hourly flow rate (vph)	0	1	177	0	0	0	0	530	334	0	238	0
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type								None			None	
Median storage veh)												
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	935	1102	238	1112	935	697	238			864		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	935	1102	238	1112	935	697	238			864		
tC, single (s)	7.1	6.5	6.2	7.1	6.5	6.2	4.1			4.1		
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.2			2.2		
p0 queue free %	100	99	78	100	100	100	100			100		
cM capacity (veh/h)	246	212	801	144	265	441	1329			778		

Direction, Lane #	EB 1	EB 2	NB 1	SB 1
Volume Total	1	177	864	238
Volume Left	0	0	0	0
Volume Right	0	177	334	0
cSH	212	801	1700	778
Volume to Capacity	0.01	0.22	0.51	0.00
Queue Length 95th (ft)	0	18	0	0
Control Delay (s)	22.1	10.8	0.0	0.0
Lane LOS	C	B		
Approach Delay (s)	10.8		0.0	0.0
Approach LOS	B			

Intersection Summary			
Average Delay	1.5		
Intersection Capacity Utilization	53.5%	ICU Level of Service	A
Analysis Period (min)	15		

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	186	389	125	150	201	96	90	475	142	78	238	51
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	150		80	200		0	250		50	150		50
Storage Lanes	1		1	1		1	1		1	1		1
Taper Length (ft)	25		25	25		25	25		25	25		25
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Frt			0.850			0.850			0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1770	1863	1583	1770	1863	1583	1770	3539	1583	1770	3539	1583
Flt Permitted	0.950			0.950			0.950			0.950		
Satd. Flow (perm)	1770	1863	1583	1770	1863	1583	1770	3539	1583	1770	3539	1583
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			90			107			98			57
Link Speed (mph)		35			35			50			50	
Link Distance (ft)		380			581			362			300	
Travel Time (s)		7.4			11.3			4.9			4.1	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	207	432	139	167	223	107	100	528	158	87	264	57
Shared Lane Traffic (%)												
Lane Group Flow (vph)	207	432	139	167	223	107	100	528	158	87	264	57
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2	1	1	2	1	1	2	1	1	2	1
Detector Template	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Leading Detector (ft)	20	100	20	20	100	20	20	100	20	20	100	20
Trailing Detector (ft)	0	0	0	0	0	0	0	0	0	0	0	0
Detector 1 Position(ft)	0	0	0	0	0	0	0	0	0	0	0	0
Detector 1 Size(ft)	20	6	20	20	6	20	20	6	20	20	6	20
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Prot		Perm	Prot		Perm	Prot		Perm	Prot		Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases			4			8			2			6
Detector Phase	7	4	4	3	8	8	5	2	2	1	6	6

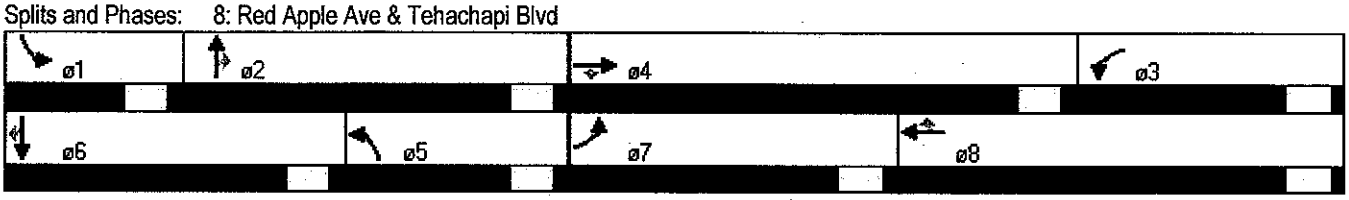
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Switch Phase												
Minimum Initial (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Minimum Split (s)	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0
Total Split (s)	22.0	34.0	34.0	18.0	30.0	30.0	15.0	26.0	26.0	12.0	23.0	23.0
Total Split (%)	24.4%	37.8%	37.8%	20.0%	33.3%	33.3%	16.7%	28.9%	28.9%	13.3%	25.6%	25.6%
Maximum Green (s)	18.0	30.0	30.0	14.0	26.0	26.0	11.0	22.0	22.0	8.0	19.0	19.0
Yellow Time (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lead/Lag	Lead	Lead	Lead	Lag	Lag	Lag	Lag	Lag	Lag	Lead	Lead	Lead
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	None	None	None	None	None	None	None	C-Min	C-Min	None	C-Min	C-Min
Act Effct Green (s)	15.0	25.5	25.5	12.4	22.9	22.9	13.3	30.1	30.1	8.0	24.9	24.9
Actuated g/C Ratio	0.17	0.28	0.28	0.14	0.25	0.25	0.15	0.33	0.33	0.09	0.28	0.28
v/c Ratio	0.70	0.82	0.27	0.68	0.47	0.22	0.38	0.45	0.27	0.55	0.27	0.12
Control Delay	48.2	43.0	10.6	48.2	28.2	4.9	24.0	15.0	5.8	53.0	30.6	10.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	48.2	43.0	10.6	48.2	28.2	4.9	24.0	15.0	5.8	53.0	30.6	10.2
LOS	D	D	B	D	C	A	C	B	A	D	C	B
Approach Delay		38.6			29.9			14.3			32.5	
Approach LOS		D			C			B			C	
90th %ile Green (s)	18.0	30.0	30.0	14.0	26.0	26.0	14.7	22.0	22.0	8.0	15.3	15.3
90th %ile Term Code	Max	Max	Max	Max	Hold	Hold	Hold	Coord	Coord	Max	Coord	Coord
70th %ile Green (s)	18.0	29.7	29.7	14.3	26.0	26.0	16.7	22.0	22.0	8.0	13.3	13.3
70th %ile Term Code	Max	Gap	Gap	Max	Hold	Hold	Hold	Coord	Coord	Max	Coord	Coord
50th %ile Green (s)	15.7	26.7	26.7	13.7	24.7	24.7	15.0	23.8	23.8	9.8	18.6	18.6
50th %ile Term Code	Gap	Gap	Gap	Gap	Hold	Hold	Hold	Coord	Coord	Gap	Coord	Coord
30th %ile Green (s)	13.3	22.8	22.8	11.6	21.1	21.1	13.5	31.3	31.3	8.3	26.1	26.1
30th %ile Term Code	Gap	Gap	Gap	Gap	Hold	Hold	Hold	Coord	Coord	Gap	Coord	Coord
10th %ile Green (s)	9.9	18.1	18.1	8.5	16.7	16.7	0.0	51.4	51.4	0.0	51.4	51.4
10th %ile Term Code	Gap	Gap	Gap	Gap	Hold	Hold	Skip	Coord	Coord	Skip	Coord	Coord
Queue Length 50th (ft)	98	197	18	82	92	0	35	81	0	42	60	0
Queue Length 95th (ft)	158	280	53	139	155	22	52	96	12	#92	96	28
Internal Link Dist (ft)		300			501			282			220	
Turn Bay Length (ft)	150		80	200			250		50	150		50
Base Capacity (vph)	354	621	588	276	538	533	279	1184	595	165	1058	513
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.58	0.70	0.24	0.61	0.41	0.20	0.36	0.45	0.27	0.53	0.25	0.11

Intersection Summary

Area Type: Other
Cycle Length: 90
Actuated Cycle Length: 90
Offset: 7 (8%), Referenced to phase 2:NBT and 6:SBT, Start of Green
Natural Cycle: 55

Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.82
Intersection Signal Delay: 28.1 Intersection LOS: C
Intersection Capacity Utilization 59.6% ICU Level of Service B
Analysis Period (min) 15
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 8: Red Apple Ave & Tehachapi Blvd



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	54	0	32	3	0	2	23	886	4	7	1004	45
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	0		0	100		0	100		100
Storage Lanes	0		0	0		0	1		0	1		0
Taper Length (ft)	25		25	25		25	25		25	25		25
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	1.00	0.95	0.95
Frt		0.949			0.946			0.999			0.994	
Flt Protected		0.970			0.971		0.950			0.950		
Satd. Flow (prot)	0	1715	0	0	1711	0	1770	3536	0	1770	3518	0
Flt Permitted		0.970			0.971		0.950			0.950		
Satd. Flow (perm)	0	1715	0	0	1711	0	1770	3536	0	1770	3518	0
Link Speed (mph)		25			25			50			50	
Link Distance (ft)		1436			278			1331			507	
Travel Time (s)		39.2			7.6			18.2			6.9	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	60	0	36	3	0	2	26	984	4	8	1116	50
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	96	0	0	5	0	26	988	0	8	1166	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Sign Control		Stop			Stop			Free			Free	

Intersection Summary

Area Type: Other
Control Type: Unsignalized
Intersection Capacity Utilization 41.9% ICU Level of Service A
Analysis Period (min) 15

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	54	0	32	3	0	2	23	886	4	7	1004	45
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Hourly flow rate (vph)	60	0	36	3	0	2	26	984	4	8	1116	50
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type								None			None	
Median storage veh)												
Upstream signal (ft)											507	
pX, platoon unblocked	0.79	0.79	0.79	0.79	0.79		0.79					
vC, conflicting volume	1702	2196	583	1647	2219	494	1166			989		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	1348	1977	0	1278	2006	494	666			989		
tC, single (s)	7.5	6.5	6.9	7.5	6.5	6.9	4.1			4.1		
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.2			2.2		
p0 queue free %	27	100	96	96	100	100	96			99		
cM capacity (veh/h)	83	46	852	90	44	521	723			695		

Direction, Lane #	EB 1	WB 1	NB 1	NB 2	NB 3	SB 1	SB 2	SB 3
Volume Total	96	6	26	656	333	8	744	422
Volume Left	60	3	26	0	0	8	0	0
Volume Right	36	2	0	0	4	0	0	50
cSH	124	134	723	1700	1700	695	1700	1700
Volume to Capacity	0.77	0.04	0.04	0.39	0.20	0.01	0.44	0.25
Queue Length 95th (ft)	98	3	2	0	0	1	0	0
Control Delay (s)	94.7	33.1	10.2	0.0	0.0	10.2	0.0	0.0
Lane LOS	F	D	B			B		
Approach Delay (s)	94.7	33.1	0.3			0.1		
Approach LOS	F	D						

Intersection Summary			
Average Delay	4.2		
Intersection Capacity Utilization	41.9%	ICU Level of Service	A
Analysis Period (min)	15		

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	413	302	133	156	302	235	223	283	160	231	279	360
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	200		200	160		0	220		0	160		0
Storage Lanes	1		1	1		1	1		0	1		0
Taper Length (ft)	25		25	25		25	25		25	25		25
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	1.00	0.95	0.95
Frt			0.850			0.850		0.946			0.915	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1770	1863	1583	1770	1863	1583	1770	3348	0	1770	3238	0
Flt Permitted	0.950			0.950			0.950			0.950		
Satd. Flow (perm)	1770	1863	1583	1770	1863	1583	1770	3348	0	1770	3238	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			148			261		107			314	
Link Speed (mph)		45			40			50			50	
Link Distance (ft)		300			183			1100			1331	
Travel Time (s)		4.5			3.1			15.0			18.2	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	459	336	148	173	336	261	248	314	178	257	310	400
Shared Lane Traffic (%)												
Lane Group Flow (vph)	459	336	148	173	336	261	248	492	0	257	710	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2	1	1	2	1	1	2		1	2	
Detector Template	Left	Thru	Right	Left	Thru	Right	Left	Thru		Left	Thru	
Leading Detector (ft)	20	100	20	20	100	20	20	100		20	100	
Trailing Detector (ft)	0	0	0	0	0	0	0	0		0	0	
Detector 1 Position(ft)	0	0	0	0	0	0	0	0		0	0	
Detector 1 Size(ft)	20	6	20	20	6	20	20	6		20	6	
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Prot		Perm	Prot		Perm	Prot			Prot		
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases			4			8						
Detector Phase	7	4	4	3	8	8	5	2		1	6	

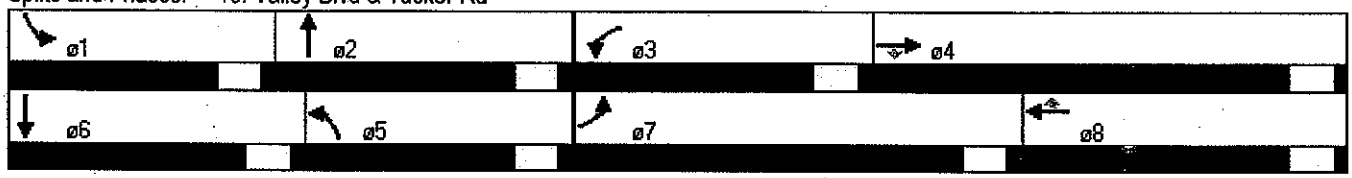
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Switch Phase												
Minimum Initial (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0		2.0	2.0	
Minimum Split (s)	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0		6.0	6.0	
Total Split (s)	30.0	32.0	32.0	20.0	22.0	22.0	18.0	20.0	0.0	18.0	20.0	0.0
Total Split (%)	33.3%	35.6%	35.6%	22.2%	24.4%	24.4%	20.0%	22.2%	0.0%	20.0%	22.2%	0.0%
Maximum Green (s)	26.0	28.0	28.0	16.0	18.0	18.0	14.0	16.0		14.0	16.0	
Yellow Time (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0		3.0	3.0	
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0		1.0	1.0	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lag	Lag		Lead	Lead	
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes		Yes	Yes	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0		3.0	3.0	
Recall Mode	None	None	None	None	None	None	None	C-Min		None	C-Min	
Act Effct Green (s)	25.2	29.6	29.6	13.3	17.7	17.7	14.0	16.9		14.2	17.1	
Actuated g/C Ratio	0.28	0.33	0.33	0.15	0.20	0.20	0.16	0.19		0.16	0.19	
v/c Ratio	0.93	0.55	0.24	0.66	0.92	0.50	0.90	0.69		0.92	0.82	
Control Delay	58.5	29.2	5.2	48.3	66.8	7.9	73.7	32.5		69.0	21.8	
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Total Delay	58.5	29.2	5.2	48.3	66.8	7.9	73.7	32.5		69.0	21.8	
LOS	E	C	A	D	E	A	E	C		E	C	
Approach Delay		39.7			42.7			46.3			34.4	
Approach LOS		D			D			D			C	
90th %ile Green (s)	26.0	28.0	28.0	16.0	18.0	18.0	14.0	16.0		14.0	16.0	
90th %ile Term Code	Max	Max	Max	Max	Max	Max	Max	Coord		Max	Coord	
70th %ile Green (s)	26.0	28.0	28.0	16.0	18.0	18.0	14.0	16.0		14.0	16.0	
70th %ile Term Code	Max	Hold	Hold	Max	Max	Max	Max	Coord		Max	Coord	
50th %ile Green (s)	26.0	30.0	30.0	14.0	18.0	18.0	14.0	16.0		14.0	16.0	
50th %ile Term Code	Max	Hold	Hold	Gap	Max	Max	Max	Coord		Max	Coord	
30th %ile Green (s)	26.0	32.2	32.2	11.8	18.0	18.0	14.0	16.0		14.0	16.0	
30th %ile Term Code	Max	Hold	Hold	Gap	Max	Max	Max	Coord		Max	Coord	
10th %ile Green (s)	22.0	29.9	29.9	8.7	16.6	16.6	13.9	20.4		15.0	21.5	
10th %ile Term Code	Gap	Hold	Hold	Gap	Gap	Gap	Gap	Coord		Gap	Coord	
Queue Length 50th (ft)	220	135	0	82	165	0	123	96		108	75	
Queue Length 95th (ft)	#377	218	37	138	#303	55	#245	145		#248	#111	
Internal Link Dist (ft)		220			103			1020			1251	
Turn Bay Length (ft)	200		200	160			220			160		
Base Capacity (vph)	511	613	620	315	373	525	275	715		279	870	
Starvation Cap Reductn	0	0	0	0	0	0	0	0		0	0	
Spillback Cap Reductn	0	0	0	0	0	0	0	0		0	0	
Storage Cap Reductn	0	0	0	0	0	0	0	0		0	0	
Reduced v/c Ratio	0.90	0.55	0.24	0.55	0.90	0.50	0.90	0.69		0.92	0.82	

Intersection Summary

Area Type: Other
Cycle Length: 90
Actuated Cycle Length: 90
Offset: 35 (39%), Referenced to phase 2:NBT and 6:SBT, Start of Green
Natural Cycle: 70

Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.93
Intersection Signal Delay: 40.3 Intersection LOS: D
Intersection Capacity Utilization 83.8% ICU Level of Service E
Analysis Period (min) 15
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 10: Valley Blvd & Tucker Rd



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	6	0	25	64	0	69	41	807	94	53	963	4
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	75		0	0		0	150		250	180		0
Storage Lanes	1		0	2		0	1		1	1		0
Taper Length (ft)	25		25	25		25	25		25	25		25
Lane Util. Factor	1.00	1.00	1.00	0.97	1.00	1.00	1.00	0.95	1.00	1.00	0.95	0.95
Frt		0.850			0.850				0.850		0.999	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1770	1583	0	3433	1583	0	1770	3539	1583	1770	3536	0
Flt Permitted	0.950			0.950			0.950			0.950		
Satd. Flow (perm)	1770	1583	0	3433	1583	0	1770	3539	1583	1770	3536	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		239			366				104		1	
Link Speed (mph)		25			25			50			50	
Link Distance (ft)		292			291			507			406	
Travel Time (s)		8.0			7.9			6.9			5.5	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	7	0	28	71	0	77	46	897	104	59	1070	4
Shared Lane Traffic (%)												
Lane Group Flow (vph)	7	28	0	71	77	0	46	897	104	59	1074	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		24			24			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2		1	2	1	1	2	
Detector Template	Left	Thru		Left	Thru		Left	Thru	Right	Left	Thru	
Leading Detector (ft)	20	100		20	100		20	100	20	20	100	
Trailing Detector (ft)	0	0		0	0		0	0	0	0	0	
Detector 1 Position(ft)	0	0		0	0		0	0	0	0	0	
Detector 1 Size(ft)	20	6		20	6		20	6	20	20	6	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Split			Split			Prot		Perm	Prot		
Protected Phases	4	4		8	8		5	2		1	6	
Permitted Phases									2			
Detector Phase	4	4		8	8		5	2	2	1	6	

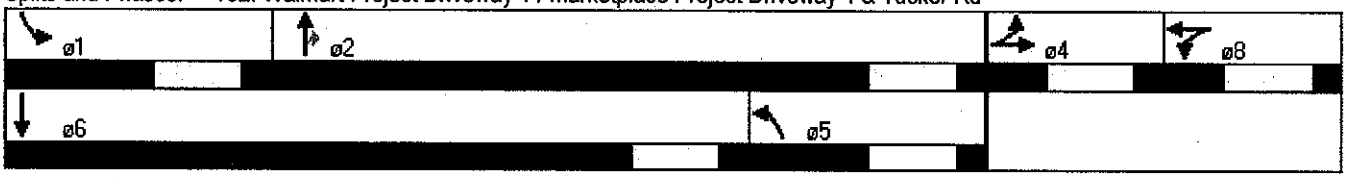
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Switch Phase												
Minimum Initial (s)	2.0	2.0		2.0	2.0		2.0	2.0	2.0	2.0	2.0	
Minimum Split (s)	6.0	6.0		6.0	6.0		6.0	6.0	6.0	6.0	6.0	
Total Split (s)	6.0	6.0	0.0	6.0	6.0	0.0	8.0	24.0	24.0	9.0	25.0	0.0
Total Split (%)	13.3%	13.3%	0.0%	13.3%	13.3%	0.0%	17.8%	53.3%	53.3%	20.0%	55.6%	0.0%
Maximum Green (s)	2.0	2.0		2.0	2.0		4.0	20.0	20.0	5.0	21.0	
Yellow Time (s)	3.0	3.0		3.0	3.0		3.0	3.0	3.0	3.0	3.0	
All-Red Time (s)	1.0	1.0		1.0	1.0		1.0	1.0	1.0	1.0	1.0	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lead/Lag							Lag	Lag	Lag	Lead	Lead	
Lead-Lag Optimize?							Yes	Yes	Yes	Yes	Yes	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0	3.0	3.0	3.0	
Recall Mode	None	None		None	None		None	C-Min	C-Min	None	C-Min	
Act Effct Green (s)	4.1	4.1		4.4	4.4		5.2	29.3	29.3	5.7	29.7	
Actuated g/C Ratio	0.09	0.09		0.10	0.10		0.12	0.65	0.65	0.13	0.66	
v/c Ratio	0.04	0.08		0.21	0.16		0.23	0.39	0.10	0.26	0.46	
Control Delay	21.0	0.4		23.2	0.7		20.8	7.4	2.5	22.6	5.7	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Total Delay	21.0	0.4		23.2	0.7		20.8	7.4	2.5	22.6	5.7	
LOS	C	A		C	A		C	A	A	C	A	
Approach Delay		4.5			11.5			7.5			6.6	
Approach LOS		A			B			A			A	
90th %ile Green (s)	2.0	2.0		2.0	2.0		4.0	20.0	20.0	5.0	21.0	
90th %ile Term Code	Max	Max		Max	Max		Max	Coord	Coord	Max	Coord	
70th %ile Green (s)	2.0	2.0		2.0	2.0		4.0	20.0	20.0	5.0	21.0	
70th %ile Term Code	Max	Max		Max	Max		Max	Coord	Coord	Max	Coord	
50th %ile Green (s)	0.0	0.0		6.4	6.4		0.0	30.6	30.6	0.0	30.6	
50th %ile Term Code	Skip	Skip		Gap	Gap		Skip	Coord	Coord	Skip	Coord	
30th %ile Green (s)	0.0	0.0		5.9	5.9		0.0	31.1	31.1	0.0	31.1	
30th %ile Term Code	Skip	Skip		Gap	Gap		Skip	Coord	Coord	Skip	Coord	
10th %ile Green (s)	0.0	0.0		0.0	0.0		0.0	41.0	41.0	0.0	41.0	
10th %ile Term Code	Skip	Skip		Skip	Skip		Skip	Coord	Coord	Skip	Coord	
Queue Length 50th (ft)	1	0		7	0		15	71	3	15	24	
Queue Length 95th (ft)	10	0		#25	0		m23	m174	m8	m35	101	
Internal Link Dist (ft)		212			211			427			326	
Turn Bay Length (ft)	75						150		250	180		
Base Capacity (vph)	162	362		333	484		204	2308	1068	223	2337	
Starvation Cap Reductn	0	0		0	0		0	0	0	0	0	
Spillback Cap Reductn	0	0		0	0		0	0	0	0	0	
Storage Cap Reductn	0	0		0	0		0	0	0	0	0	
Reduced v/c Ratio	0.04	0.08		0.21	0.16		0.23	0.39	0.10	0.26	0.46	

Intersection Summary

Area Type: Other
Cycle Length: 45
Actuated Cycle Length: 45
Offset: 0 (0%), Referenced to phase 2:NBT and 6:SBT, Start of Green
Natural Cycle: 40

Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.46
Intersection Signal Delay: 7.3 Intersection LOS: A
Intersection Capacity Utilization 48.6% ICU Level of Service A
Analysis Period (min) 15
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 102: Walmart Project Driveway 1 / Marketplace Project Driveway 4 & Tucker Rd



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	475	96	46	400	0	0	0	53	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	80		0	80		0	0		0	0		0
Storage Lanes	0		0	1		0	0		1	0		0
Taper Length (ft)	25		25	25		25	25		25	25		25
Lane Util. Factor	1.00	0.95	0.95	1.00	0.95	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.975							0.865			
Flt Protected				0.950								
Satd. Flow (prot)	0	3451	0	1770	3539	0	0	0	1611	0	0	0
Flt Permitted				0.950								
Satd. Flow (perm)	0	3451	0	1770	3539	0	0	0	1611	0	0	0
Link Speed (mph)		35			35			25			25	
Link Distance (ft)		581			310			266			227	
Travel Time (s)		11.3			6.0			7.3			6.2	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	0	528	107	51	444	0	0	0	59	0	0	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	635	0	51	444	0	0	0	59	0	0	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Sign Control		Free			Free			Stop			Stop	

Intersection Summary

Area Type: Other
Control Type: Unsignalized
Intersection Capacity Utilization 26.2% ICU Level of Service A
Analysis Period (min) 15

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	0	475	96	46	400	0	0	0	53	0	0	0
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Hourly flow rate (vph)	0	528	107	51	444	0	0	0	59	0	0	0
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type		None			None							
Median storage veh)												
Upstream signal (ft)		581			310							
pX, platoon unblocked												
vC, conflicting volume	444			634			906	1128	317	869	1181	222
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	444			634			906	1128	317	869	1181	222
tC, single (s)	4.1			4.1			7.5	6.5	6.9	7.5	6.5	6.9
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	100			95			100	100	91	100	100	100
cM capacity (veh/h)	1112			945			222	192	679	215	178	781

Direction, Lane #	EB 1	EB 2	WB 1	WB 2	WB 3	NB 1
Volume Total	352	283	51	222	222	59
Volume Left	0	0	51	0	0	0
Volume Right	0	107	0	0	0	59
cSH	1700	1700	945	1700	1700	679
Volume to Capacity	0.21	0.17	0.05	0.13	0.13	0.09
Queue Length 95th (ft)	0	0	4	0	0	6
Control Delay (s)	0.0	0.0	9.0	0.0	0.0	10.8
Lane LOS			A			B
Approach Delay (s)	0.0		0.9			10.8
Approach LOS						B

Intersection Summary			
Average Delay	0.9		
Intersection Capacity Utilization	26.2%	ICU Level of Service	A
Analysis Period (min)	15		

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	519	40	48	365	0	79	0	41	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	80		0	160		0	0		0	0		0
Storage Lanes	1		0	1		0	0		1	0		0
Taper Length (ft)	25		25	25		25	25		25	25		25
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.989							0.850			
Flt Protected				0.950				0.950				
Satd. Flow (prot)	1863	1842	0	1770	1863	0	0	1770	1583	0	1863	0
Flt Permitted				0.950				0.950				
Satd. Flow (perm)	1863	1842	0	1770	1863	0	0	1770	1583	0	1863	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		7							46			
Link Speed (mph)		35			35			25			25	
Link Distance (ft)		310			1488			268			223	
Travel Time (s)		6.0			29.0			7.3			6.1	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	0	577	44	53	406	0	88	0	46	0	0	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	621	0	53	406	0	0	88	46	0	0	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2		1	2	1	1	2	
Detector Template	Left	Thru		Left	Thru		Left	Thru	Right	Left	Thru	
Leading Detector (ft)	20	100		20	100		20	100	20	20	100	
Trailing Detector (ft)	0	0		0	0		0	0	0	0	0	
Detector 1 Position(ft)	0	0		0	0		0	0	0	0	0	
Detector 1 Size(ft)	20	6		20	6		20	6	20	20	6	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Prot			Prot			Split		Perm	Split		
Protected Phases	7	4		3	8		2	2		6	6	
Permitted Phases									2			
Detector Phase	7	4		3	8		2	2	2	6	6	

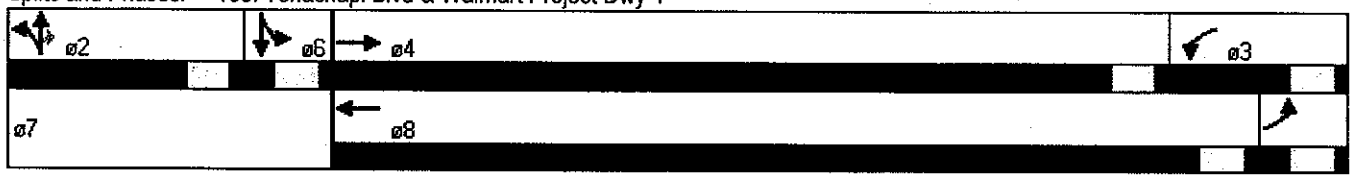
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Switch Phase												
Minimum Initial (s)	2.0	2.0		2.0	2.0		2.0	2.0	2.0	2.0	2.0	
Minimum Split (s)	6.0	6.0		6.0	6.0		6.0	6.0	6.0	6.0	6.0	
Total Split (s)	6.0	56.0	0.0	12.0	62.0	0.0	16.0	16.0	16.0	6.0	6.0	0.0
Total Split (%)	6.7%	62.2%	0.0%	13.3%	68.9%	0.0%	17.8%	17.8%	17.8%	6.7%	6.7%	0.0%
Maximum Green (s)	2.0	52.0		8.0	58.0		12.0	12.0	12.0	2.0	2.0	
Yellow Time (s)	3.0	3.0		3.0	3.0		3.0	3.0	3.0	3.0	3.0	
All-Red Time (s)	1.0	1.0		1.0	1.0		1.0	1.0	1.0	1.0	1.0	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lead/Lag	Lag	Lead		Lag	Lead							
Lead-Lag Optimize?	Yes	Yes		Yes	Yes							
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0	3.0	3.0	3.0	
Recall Mode	None	C-Max		None	C-Max		Min	Min	Min	Min	Min	
Act Effct Green (s)		57.3		7.3	64.5			9.5	9.5			
Actuated g/C Ratio		0.64		0.08	0.72			0.11	0.11			
v/c Ratio		0.53		0.37	0.30			0.47	0.22			
Control Delay		5.8		46.5	5.4			45.7	13.9			
Queue Delay		0.0		0.0	0.0			0.0	0.0			
Total Delay		5.8		46.5	5.4			45.7	13.9			
LOS		A		D	A			D	B			
Approach Delay		5.8			10.2			34.8				
Approach LOS		A			B			C				
90th %ile Green (s)	0.0	52.0		8.0	64.0		12.0	12.0	12.0	2.0	2.0	
90th %ile Term Code	Skip	Coord		Max	Coord		Max	Max	Max	Max	Max	
70th %ile Green (s)	0.0	52.0		8.0	64.0		11.3	11.3	11.3	2.7	2.7	
70th %ile Term Code	Skip	Coord		Max	Coord		Gap	Gap	Gap	Max	Max	
50th %ile Green (s)	0.0	52.0		8.0	64.0		9.8	9.8	9.8	4.2	4.2	
50th %ile Term Code	Skip	Coord		Max	Coord		Gap	Gap	Gap	Max	Max	
30th %ile Green (s)	0.0	64.2		0.0	64.2		8.3	8.3	8.3	5.5	5.5	
30th %ile Term Code	Skip	Coord		Skip	Coord		Gap	Gap	Gap	Gap	Gap	
10th %ile Green (s)	0.0	66.5		0.0	66.5		6.0	6.0	6.0	5.5	5.5	
10th %ile Term Code	Skip	Coord		Skip	Coord		Gap	Gap	Gap	Gap	Gap	
Queue Length 50th (ft)		99		25	63			42	0			
Queue Length 95th (ft)		116		58	97			81	27			
Internal Link Dist (ft)		230			1408			188			143	
Turn Bay Length (ft)				160								
Base Capacity (vph)		1176		157	1336			236	251			
Starvation Cap Reductn		0		0	0			0	0			
Spillback Cap Reductn		0		0	0			0	0			
Storage Cap Reductn		0		0	0			0	0			
Reduced v/c Ratio		0.53		0.34	0.30			0.37	0.18			

Intersection Summary

Area Type: Other
Cycle Length: 90
Actuated Cycle Length: 90
Offset: 28 (31%), Referenced to phase 4:EBT and 8:WBT, Start of Green
Natural Cycle: 55

Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.53
Intersection Signal Delay: 10.6 | Intersection LOS: B
Intersection Capacity Utilization 47.5% | ICU Level of Service A
Analysis Period (min) 15

Splits and Phases: 105: Tehachapi Blvd & Walmart Project Dwy 4



Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Volume (vph)	678	31	27	315	18	14
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)		0	100		0	0
Storage Lanes		0	1		1	0
Taper Length (ft)		25	25		25	25
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.994				0.940	
Flt Protected			0.950		0.973	
Satd. Flow (prot)	1852	0	1770	1863	1704	0
Flt Permitted			0.950		0.973	
Satd. Flow (perm)	1852	0	1770	1863	1704	0
Link Speed (mph)	35			35	25	
Link Distance (ft)	804			170	263	
Travel Time (s)	15.7			3.3	7.2	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	753	34	30	350	20	16
Shared Lane Traffic (%)						
Lane Group Flow (vph)	787	0	30	350	36	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	12			12	12	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)		9	15		15	9
Sign Control	Free			Free	Stop	

Intersection Summary

Area Type: Other
Control Type: Unsignalized
Intersection Capacity Utilization 47.6% ICU Level of Service A
Analysis Period (min) 15

Movement	EBL	EBT	WBL	WBT	NBL	NBR
Lane Configurations						
Volume (veh/h)	678	31	27	315	18	14
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Hourly flow rate (vph)	753	34	30	350	20	16
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None			None		
Median storage veh)						
Upstream signal (ft)				550		
pX, platoon unblocked					0.92	
vC, conflicting volume			788		1181	771
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			788		1151	771
tC, single (s)			4.1		6.4	6.2
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
p0 queue free %			96		90	96
cM capacity (veh/h)			832		193	400

Direction, Lane #	EB 1	WB 1	WB 2	NB 1
Volume Total	788	30	350	36
Volume Left	0	30	0	20
Volume Right	34	0	0	16
cSH	1700	832	1700	250
Volume to Capacity	0.46	0.04	0.21	0.14
Queue Length 95th (ft)	0	2	0	11
Control Delay (s)	0.0	9.5	0.0	21.8
Lane LOS		A		C
Approach Delay (s)	0.0	0.7		21.8
Approach LOS				C

Intersection Summary			
Average Delay	0.9		
Intersection Capacity Utilization	47.6%	ICU Level of Service	A
Analysis Period (min)	15		

Lane Group	EBL	EBR	NBL	NBT	SBL	SBR
Lane Configurations						
Volume (vph)	693	0	0	342	0	6
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt						0.865
Flt Protected						
Satd. Flow (prot)	1863	0	0	1863	0	1611
Flt Permitted						
Satd. Flow (perm)	1863	0	0	1863	0	1611
Link Speed (mph)	35			35	25	
Link Distance (ft)	170			380	265	
Travel Time (s)	3.3			7.4	7.2	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	770	0	0	380	0	7
Shared Lane Traffic (%)						
Lane Group Flow (vph)	770	0	0	380	0	7
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	12			12	0	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)		9	15		15	9
Sign Control	Free			Free	Stop	

Intersection Summary

Area Type: Other
Control Type: Unsignalized
Intersection Capacity Utilization 46.5% ICU Level of Service A
Analysis Period (min) 15

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR
Lane Configurations									
Volume (veh/h)	693	0	0	342	0	6			
Sign Control	Free			Free	Stop				
Grade	0%			0%	0%				
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90			
Hourly flow rate (vph)	770	0	0	380	0	7			
Pedestrians									
Lane Width (ft)									
Walking Speed (ft/s)									
Percent Blockage									
Right turn flare (veh)									
Median type	None			None					
Median storage veh)									
Upstream signal (ft)				380					
pX, platoon unblocked					0.90				
vC, conflicting volume			770		1150	770			
vC1, stage 1 conf vol									
vC2, stage 2 conf vol									
vCu, unblocked vol			770		1112	770			
tC, single (s)			4.1		6.4	6.2			
tC, 2 stage (s)									
tF (s)			2.2		3.5	3.3			
p0 queue free %			100		100	98			
cM capacity (veh/h)			844		208	401			

Direction, Lane #	EB 1	WB 1	NB 1
Volume Total	770	380	7
Volume Left	0	0	0
Volume Right	0	0	7
cSH	1700	1700	401
Volume to Capacity	0.45	0.22	0.02
Queue Length 95th (ft)	0	0	1
Control Delay (s)	0.0	0.0	14.1
Lane LOS			B
Approach Delay (s)	0.0	0.0	14.1
Approach LOS			B

Intersection Summary			
Average Delay	0.1		
Intersection Capacity Utilization	46.5%	ICU Level of Service	A
Analysis Period (min)	15		

Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Volume (vph)	0	6	10	872	1015	5
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0	0	60			0
Storage Lanes	0	1	1			0
Taper Length (ft)	25	25	25			25
Lane Util. Factor	1.00	1.00	1.00	0.95	0.95	0.95
Frt		0.865			0.999	
Flt Protected			0.950			
Satd. Flow (prot)	0	1611	1770	3539	3536	0
Flt Permitted			0.950			
Satd. Flow (perm)	0	1611	1770	3539	3536	0
Link Speed (mph)	25			50	50	
Link Distance (ft)	288			406	100	
Travel Time (s)	7.9			5.5	1.4	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	0	7	11	969	1128	6
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	7	11	969	1134	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	0			12	12	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	9	15			9
Sign Control	Stop			Free	Free	

Intersection Summary

Area Type: Other
Control Type: Unsignalized
Intersection Capacity Utilization 38.2% ICU Level of Service A
Analysis Period (min) 15

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Volume (veh/h)	0	6	10	872	1015	5
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Hourly flow rate (vph)	0	7	11	969	1128	6
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type				None	None	
Median storage veh)						
Upstream signal (ft)				406	462	
pX, platoon unblocked	0.86	0.95	0.95			
vC, conflicting volume	1637	567	1133			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	1159	441	1037			
tC, single (s)	6.8	6.9	4.1			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.2			
p0 queue free %	100	99	98			
cM capacity (veh/h)	160	536	633			

Direction, Lane #	EB 1	NB 1	NB 2	NB 3	SB 1	SB 2
Volume Total	7	11	484	484	752	381
Volume Left	0	11	0	0	0	0
Volume Right	7	0	0	0	0	6
cSH	536	633	1700	1700	1700	1700
Volume to Capacity	0.01	0.02	0.28	0.28	0.44	0.22
Queue Length 95th (ft)	1	1	0	0	0	0
Control Delay (s)	11.8	10.8	0.0	0.0	0.0	0.0
Lane LOS	B	B				
Approach Delay (s)	11.8	0.1			0.0	
Approach LOS	B					

Intersection Summary			
Average Delay	0.1		
Intersection Capacity Utilization	38.2%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	2	444	0	0	0	0	325	256	1	497	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	50		0	0		0	0		0	0		0
Storage Lanes	0		1	0		0	0		0	0		0
Taper Length (ft)	25		25	25		25	25		25	25		25
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.850					0.941				
Flt Protected												
Satd. Flow (prot)	0	1863	1583	0	0	0	0	1753	0	0	1863	0
Flt Permitted												
Satd. Flow (perm)	0	1863	1583	0	0	0	0	1753	0	0	1863	0
Link Speed (mph)		50			50			50			50	
Link Distance (ft)		150			1582			3007			628	
Travel Time (s)		2.0			21.6			41.0			8.6	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	0	2	493	0	0	0	0	361	284	1	552	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	2	493	0	0	0	0	645	0	0	553	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Sign Control		Stop			Stop			Free			Free	

Intersection Summary

Area Type: Other
Control Type: Unsignalized
Intersection Capacity Utilization 60.4% ICU Level of Service B
Analysis Period (min) 15

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	0	2	444	0	0	0	0	325	256	1	497	0
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Hourly flow rate (vph)	0	2	493	0	0	0	0	361	284	1	552	0
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type								None			None	
Median storage veh)												
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	1058	1200	552	1552	1058	503	552			646		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	1058	1200	552	1552	1058	503	552			646		
tC, single (s)	7.1	6.5	6.2	7.1	6.5	6.2	4.1			4.1		
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.2			2.2		
p0 queue free %	100	99	7	100	100	100	100			100		
cM capacity (veh/h)	202	185	533	7	224	568	1018			940		

Direction, Lane #	EB 1	EB 2	NB 1	SB 1
Volume Total	2	493	646	553
Volume Left	0	0	0	1
Volume Right	0	493	284	0
cSH	185	533	1700	940
Volume to Capacity	0.01	0.93	0.38	0.00
Queue Length 95th (ft)	1	249	0	0
Control Delay (s)	24.7	50.5	0.0	0.0
Lane LOS	C	F		A
Approach Delay (s)	50.4		0.0	0.0
Approach LOS	F			

Intersection Summary			
Average Delay	14.8		
Intersection Capacity Utilization	60.4%	ICU Level of Service	B
Analysis Period (min)	15		

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	103	345	179	302	359	82	242	328	211	126	499	249
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	150		80	200		0	250		50	150		50
Storage Lanes	1		1	1		1	1		1	1		1
Taper Length (ft)	25		25	25		25	25		25	25		25
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Frt			0.850			0.850			0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1770	1863	1583	1770	1863	1583	1770	3539	1583	1770	3539	1583
Flt Permitted	0.950			0.950			0.950			0.950		
Satd. Flow (perm)	1770	1863	1583	1770	1863	1583	1770	3539	1583	1770	3539	1583
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			126			91			208			157
Link Speed (mph)		35			35			50			50	
Link Distance (ft)		380			581			362			300	
Travel Time (s)		7.4			11.3			4.9			4.1	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	114	383	199	336	399	91	269	364	234	140	554	277
Shared Lane Traffic (%)												
Lane Group Flow (vph)	114	383	199	336	399	91	269	364	234	140	554	277
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2	1	1	2	1	1	2	1	1	2	1
Detector Template	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Leading Detector (ft)	20	100	20	20	100	20	20	100	20	20	100	20
Trailing Detector (ft)	0	0	0	0	0	0	0	0	0	0	0	0
Detector 1 Position(ft)	0	0	0	0	0	0	0	0	0	0	0	0
Detector 1 Size(ft)	20	6	20	20	6	20	20	6	20	20	6	20
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Prot		Perm	Prot		Perm	Prot		Perm	Prot		Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases			4			8			2			6
Detector Phase	7	4	4	3	8	8	5	2	2	1	6	6

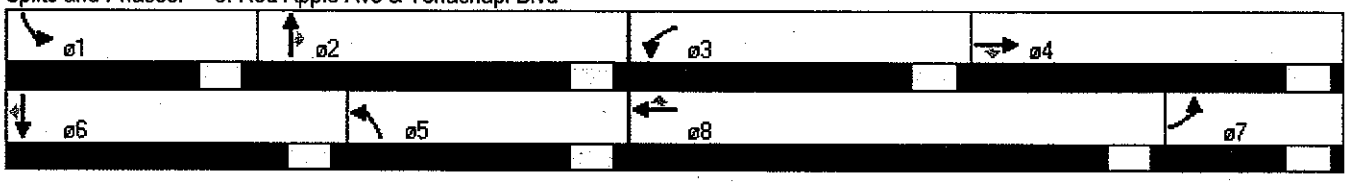
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Switch Phase												
Minimum Initial (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Minimum Split (s)	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0
Total Split (s)	12.0	25.0	25.0	23.0	36.0	36.0	19.0	25.0	25.0	17.0	23.0	23.0
Total Split (%)	13.3%	27.8%	27.8%	25.6%	40.0%	40.0%	21.1%	27.8%	27.8%	18.9%	25.6%	25.6%
Maximum Green (s)	8.0	21.0	21.0	19.0	32.0	32.0	15.0	21.0	21.0	13.0	19.0	19.0
Yellow Time (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lead/Lag	Lag	Lag	Lag	Lead	Lead	Lead	Lag	Lag	Lag	Lead	Lead	Lead
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	None	None	None	None	None	None	None	C-Min	C-Min	None	C-Min	C-Min
Act Effct Green (s)	14.3	20.4	20.4	18.6	24.7	24.7	15.2	23.7	23.7	11.3	19.8	19.8
Actuated g/C Ratio	0.16	0.23	0.23	0.21	0.27	0.27	0.17	0.26	0.26	0.13	0.22	0.22
v/c Ratio	0.40	0.91	0.44	0.92	0.78	0.18	0.90	0.39	0.41	0.63	0.71	0.59
Control Delay	42.1	61.0	14.9	61.6	37.7	6.3	55.6	15.9	6.3	50.2	38.6	19.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	42.1	61.0	14.9	61.6	37.7	6.3	55.6	15.9	6.3	50.2	38.6	19.7
LOS	D	E	B	E	D	A	E	B	A	D	D	B
Approach Delay		44.7			44.0			25.6			34.9	
Approach LOS		D			D			C			C	
90th %ile Green (s)	8.0	21.0	21.0	19.0	32.0	32.0	15.0	21.0	21.0	13.0	19.0	19.0
90th %ile Term Code	Max	Max	Max	Max	Max	Max	Max	Coord	Coord	Max	Coord	Coord
70th %ile Green (s)	11.6	21.0	21.0	19.0	28.4	28.4	15.0	21.0	21.0	13.0	19.0	19.0
70th %ile Term Code	Max	Max	Max	Max	Gap	Gap	Max	Coord	Coord	Max	Coord	Coord
50th %ile Green (s)	15.3	21.0	21.0	19.0	24.7	24.7	15.0	21.7	21.7	12.3	19.0	19.0
50th %ile Term Code	Hold	Max	Max	Max	Gap	Gap	Max	Coord	Coord	Gap	Coord	Coord
30th %ile Green (s)	18.5	21.0	21.0	19.0	21.5	21.5	16.0	23.6	23.6	10.4	18.0	18.0
30th %ile Term Code	Hold	Max	Max	Max	Gap	Gap	Max	Coord	Coord	Gap	Coord	Coord
10th %ile Green (s)	18.2	17.9	17.9	17.1	16.8	16.8	14.9	31.4	31.4	7.6	24.1	24.1
10th %ile Term Code	Hold	Gap	Gap	Gap	Gap	Gap	Gap	Coord	Coord	Gap	Coord	Coord
Queue Length 50th (ft)	51	186	29	168	189	7	131	69	44	67	137	52
Queue Length 95th (ft)	#131	#327	83	#305	255	m32	#259	93	50	119	188	125
Internal Link Dist (ft)		300			501			282			220	
Turn Bay Length (ft)	150		80	200			250		50	150		50
Base Capacity (vph)	282	435	466	374	662	621	299	934	571	256	787	474
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.40	0.88	0.43	0.90	0.60	0.15	0.90	0.39	0.41	0.55	0.70	0.58

Intersection Summary

Area Type: Other
Cycle Length: 90
Actuated Cycle Length: 90
Offset: 23 (26%), Referenced to phase 2:NBT and 6:SBT, Start of Green
Natural Cycle: 80

Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.92
Intersection Signal Delay: 36.8 Intersection LOS: D
Intersection Capacity Utilization 75.4% ICU Level of Service D
Analysis Period (min) 15
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 8: Red Apple Ave & Tehachapi Blvd



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	46	1	30	8	0	6	23	1068	8	8	1309	54
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	0		0	100		0	100		100
Storage Lanes	0		0	0		0	1		0	1		0
Taper Length (ft)	25		25	25		25	25		25	25		25
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	1.00	0.95	0.95
Frt		0.948			0.941			0.999			0.994	
Flt Protected		0.971			0.973		0.950			0.950		
Satd. Flow (prot)	0	1715	0	0	1706	0	1770	3536	0	1770	3518	0
Flt Permitted		0.971			0.973		0.950			0.950		
Satd. Flow (perm)	0	1715	0	0	1706	0	1770	3536	0	1770	3518	0
Link Speed (mph)		25			25			50			50	
Link Distance (ft)		1436			278			1331			507	
Travel Time (s)		39.2			7.6			18.2			6.9	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	51	1	33	9	0	7	26	1187	9	9	1454	60
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	85	0	0	16	0	26	1196	0	9	1514	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Sign Control		Stop			Stop			Free			Free	

Intersection Summary

Area Type: Other
Control Type: Unsignalized
Intersection Capacity Utilization 50.1% ICU Level of Service A
Analysis Period (min) 15

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	46	1	30	8	0	6	23	1068	8	8	1309	54
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Hourly flow rate (vph)	51	1	33	9	0	7	26	1187	9	9	1454	60
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type								None			None	
Median storage veh)												
Upstream signal (ft)											507	
pX, platoon unblocked	0.73	0.73	0.73	0.73	0.73		0.73					
vC, conflicting volume	2153	2749	757	2021	2774	598	1514			1196		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	1844	2657	0	1663	2692	598	971			1196		
tC, single (s)	7.5	6.5	6.9	7.5	6.5	6.9	4.1			4.1		
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.2			2.2		
p0 queue free %	0	93	96	78	100	99	95			98		
cM capacity (veh/h)	32	15	794	40	15	446	517			580		

Direction, Lane #	EB 1	WB 1	NB 1	NB 2	NB 3	SB 1	SB 2	SB 3
Volume Total	86	16	26	791	404	9	970	545
Volume Left	51	9	26	0	0	9	0	0
Volume Right	33	7	0	0	9	0	0	60
cSH	50	66	517	1700	1700	580	1700	1700
Volume to Capacity	1.72	0.24	0.05	0.47	0.24	0.02	0.57	0.32
Queue Length 95th (ft)	183	18	3	0	0	1	0	0
Control Delay (s)	525.5	76.0	12.3	0.0	0.0	11.3	0.0	0.0
Lane LOS	F	F	B			B		
Approach Delay (s)	525.5	76.0	0.3			0.1		
Approach LOS	F	F						

Intersection Summary			
Average Delay	16.4		
Intersection Capacity Utilization	50.1%	ICU Level of Service	A
Analysis Period (min)	15		

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	500	304	133	156	287	288	220	283	167	353	326	479
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	200		200	160		0	220		0	160		0
Storage Lanes	1		1	1		1	1		0	1		0
Taper Length (ft)	25		25	25		25	25		25	25		25
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	1.00	0.95	0.95
Frt			0.850			0.850		0.944			0.911	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1770	1863	1583	1770	1863	1583	1770	3341	0	1770	3224	0
Flt Permitted	0.950			0.950			0.950			0.950		
Satd. Flow (perm)	1770	1863	1583	1770	1863	1583	1770	3341	0	1770	3224	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			148			320		110			369	
Link Speed (mph)		45			40			50			50	
Link Distance (ft)		300			183			1100			1331	
Travel Time (s)		4.5			3.1			15.0			18.2	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	556	338	148	173	319	320	244	314	186	392	362	532
Shared Lane Traffic (%)												
Lane Group Flow (vph)	556	338	148	173	319	320	244	500	0	392	894	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2	1	1	2	1	1	2		1	2	
Detector Template	Left	Thru	Right	Left	Thru	Right	Left	Thru		Left	Thru	
Leading Detector (ft)	20	100	20	20	100	20	20	100		20	100	
Trailing Detector (ft)	0	0	0	0	0	0	0	0		0	0	
Detector 1 Position(ft)	0	0	0	0	0	0	0	0		0	0	
Detector 1 Size(ft)	20	6	20	20	6	20	20	6		20	6	
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Prot		Perm	Prot		Perm	Prot			Prot		
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases			4			8						
Detector Phase	7	4	4	3	8	8	5	2		1	6	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Switch Phase												
Minimum Initial (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0		2.0	2.0	
Minimum Split (s)	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0		6.0	6.0	
Total Split (s)	32.0	31.0	31.0	20.0	19.0	19.0	17.0	15.0	0.0	24.0	22.0	0.0
Total Split (%)	35.6%	34.4%	34.4%	22.2%	21.1%	21.1%	18.9%	16.7%	0.0%	26.7%	24.4%	0.0%
Maximum Green (s)	28.0	27.0	27.0	16.0	15.0	15.0	13.0	11.0		20.0	18.0	
Yellow Time (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0		3.0	3.0	
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0		1.0	1.0	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lag	Lag		Lead	Lead	
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes		Yes	Yes	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0		3.0	3.0	
Recall Mode	None	None	None	None	None	None	None	C-Min		None	C-Min	
Act Effct Green (s)	28.0	29.7	29.7	13.3	15.0	15.0	13.0	11.0		20.0	18.0	
Actuated g/C Ratio	0.31	0.33	0.33	0.15	0.17	0.17	0.14	0.12		0.22	0.20	
v/c Ratio	1.01	0.55	0.24	0.66	1.03	0.60	0.95	0.99		1.00	0.95	
Control Delay	73.4	29.6	5.3	48.3	97.0	9.4	86.0	70.1		65.5	30.6	
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Total Delay	73.4	29.6	5.3	48.3	97.0	9.4	86.0	70.1		65.5	30.6	
LOS	E	C	A	D	F	A	F	E		E	C	
Approach Delay		49.5			52.1			75.3			41.2	
Approach LOS		D			D			E			D	
90th %ile Green (s)	28.0	27.0	27.0	16.0	15.0	15.0	13.0	11.0		20.0	18.0	
90th %ile Term Code	Max	Max	Max	Max	Max	Max	Max	Coord		Max	Coord	
70th %ile Green (s)	28.0	27.0	27.0	16.0	15.0	15.0	13.0	11.0		20.0	18.0	
70th %ile Term Code	Max	Hold	Hold	Max	Max	Max	Max	Coord		Max	Coord	
50th %ile Green (s)	28.0	29.0	29.0	14.0	15.0	15.0	13.0	11.0		20.0	18.0	
50th %ile Term Code	Max	Hold	Hold	Gap	Max	Max	Max	Coord		Max	Coord	
30th %ile Green (s)	28.0	31.2	31.2	11.8	15.0	15.0	13.0	11.0		20.0	18.0	
30th %ile Term Code	Max	Hold	Hold	Gap	Max	Max	Max	Coord		Max	Coord	
10th %ile Green (s)	28.0	34.3	34.3	8.7	15.0	15.0	13.0	11.0		20.0	18.0	
10th %ile Term Code	Max	Hold	Hold	Gap	Max	Max	Max	Coord		Max	Coord	
Queue Length 50th (ft)	~281	139	0	82	~172	0	123	105		149	110	
Queue Length 95th (ft)	#469	223	37	138	#315	63	#250	#199		#351	#243	
Internal Link Dist (ft)		220			103			1020			1251	
Turn Bay Length (ft)	200		200	160			220			160		
Base Capacity (vph)	551	615	622	315	311	531	256	505		393	940	
Starvation Cap Reductn	0	0	0	0	0	0	0	0		0	0	
Spillback Cap Reductn	0	0	0	0	0	0	0	0		0	0	
Storage Cap Reductn	0	0	0	0	0	0	0	0		0	0	
Reduced v/c Ratio	1.01	0.55	0.24	0.55	1.03	0.60	0.95	0.99		1.00	0.95	

Intersection Summary

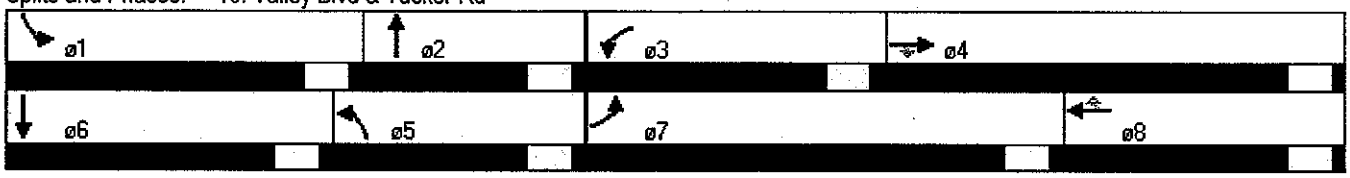
Area Type: Other
Cycle Length: 90
Actuated Cycle Length: 90
Offset: 60 (67%), Referenced to phase 2:NBT and 6:SBT, Start of Green
Natural Cycle: 90

Control Type: Actuated-Coordinated
Maximum v/c Ratio: 1.03
Intersection Signal Delay: 52.3 Intersection LOS: D
Intersection Capacity Utilization 92.8% ICU Level of Service F
Analysis Period (min) 15

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 10: Valley Blvd & Tucker Rd



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	51	0	142	168	0	118	125	839	155	116	1063	47
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	75		0	0		0	150		250	180		0
Storage Lanes	1		0	2		0	1		1	1		0
Taper Length (ft)	25		25	25		25	25		25	25		25
Lane Util. Factor	1.00	1.00	1.00	0.97	1.00	1.00	1.00	0.95	1.00	1.00	0.95	0.95
Frt		0.850			0.850				0.850		0.994	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1770	1583	0	3433	1583	0	1770	3539	1583	1770	3518	0
Flt Permitted	0.950			0.950			0.950			0.950		
Satd. Flow (perm)	1770	1583	0	3433	1583	0	1770	3539	1583	1770	3518	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		258			355				172		7	
Link Speed (mph)		25			25			50			50	
Link Distance (ft)		292			291			507			406	
Travel Time (s)		8.0			7.9			6.9			5.5	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	57	0	158	187	0	131	139	932	172	129	1181	52
Shared Lane Traffic (%)												
Lane Group Flow (vph)	57	158	0	187	131	0	139	932	172	129	1233	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		24			24			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2		1	2	1	1	2	
Detector Template	Left	Thru		Left	Thru		Left	Thru	Right	Left	Thru	
Leading Detector (ft)	20	100		20	100		20	100	20	20	100	
Trailing Detector (ft)	0	0		0	0		0	0	0	0	0	
Detector 1 Position(ft)	0	0		0	0		0	0	0	0	0	
Detector 1 Size(ft)	20	6		20	6		20	6	20	20	6	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Split			Split			Prot		Perm	Prot		
Protected Phases	4	4		8	8		5	2		1	6	
Permitted Phases									2			
Detector Phase	4	4		8	8		5	2	2	1	6	

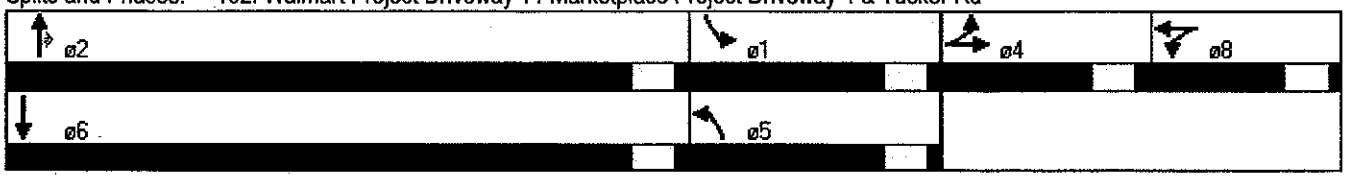
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Switch Phase												
Minimum Initial (s)	2.0	2.0		2.0	2.0		2.0	2.0	2.0	2.0	2.0	
Minimum Split (s)	6.0	6.0		6.0	6.0		6.0	6.0	6.0	6.0	6.0	
Total Split (s)	14.0	14.0	0.0	13.0	13.0	0.0	17.0	46.0	46.0	17.0	46.0	0.0
Total Split (%)	15.6%	15.6%	0.0%	14.4%	14.4%	0.0%	18.9%	51.1%	51.1%	18.9%	51.1%	0.0%
Maximum Green (s)	10.0	10.0		9.0	9.0		13.0	42.0	42.0	13.0	42.0	
Yellow Time (s)	3.0	3.0		3.0	3.0		3.0	3.0	3.0	3.0	3.0	
All-Red Time (s)	1.0	1.0		1.0	1.0		1.0	1.0	1.0	1.0	1.0	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lead/Lag							Lag	Lead	Lead	Lag	Lead	
Lead-Lag Optimize?							Yes	Yes	Yes	Yes	Yes	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0	3.0	3.0	3.0	
Recall Mode	None	None		None	None		None	C-Min	C-Min	None	C-Min	
Act Effct Green (s)	8.1	8.1		9.0	9.0		11.3	40.7	40.7	16.2	45.7	
Actuated g/C Ratio	0.09	0.09		0.10	0.10		0.13	0.45	0.45	0.18	0.51	
v/c Ratio	0.36	0.42		0.54	0.27		0.63	0.58	0.21	0.40	0.69	
Control Delay	44.4	3.5		44.7	1.4		37.9	14.2	0.8	36.9	12.8	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Total Delay	44.4	3.5		44.7	1.4		37.9	14.2	0.8	36.9	12.8	
LOS	D	A		D	A		D	B	A	D	B	
Approach Delay		14.3			26.9			15.0			15.1	
Approach LOS		B			C			B			B	
90th %ile Green (s)	10.0	10.0		9.0	9.0		13.0	39.9	39.9	15.1	42.0	
90th %ile Term Code	Max	Max		Max	Max		Max	Coord	Coord	Max	Coord	
70th %ile Green (s)	9.5	9.5		9.5	9.5		13.0	35.7	35.7	19.3	42.0	
70th %ile Term Code	Gap	Gap		Max	Max		Max	Coord	Coord	Hold	Coord	
50th %ile Green (s)	8.3	8.3		10.2	10.2		12.3	37.0	37.0	18.5	43.2	
50th %ile Term Code	Gap	Gap		Gap	Gap		Gap	Coord	Coord	Hold	Coord	
30th %ile Green (s)	7.0	7.0		9.0	9.0		10.4	42.4	42.4	15.6	47.6	
30th %ile Term Code	Gap	Gap		Gap	Gap		Gap	Coord	Coord	Hold	Coord	
10th %ile Green (s)	5.5	5.5		7.4	7.4		7.6	48.6	48.6	12.5	53.5	
10th %ile Term Code	Gap	Gap		Gap	Gap		Gap	Coord	Coord	Hold	Coord	
Queue Length 50th (ft)	27	0		45	0		73	98	2	66	171	
Queue Length 95th (ft)	59	1		76	0		m86	m113	m1	m100	m207	
Internal Link Dist (ft)		212			211			427			326	
Turn Bay Length (ft)	75						150		250	180		
Base Capacity (vph)	197	405		356	483		256	1707	852	321	1788	
Starvation Cap Reductn	0	0		0	0		0	0	0	0	0	
Spillback Cap Reductn	0	0		0	0		0	0	0	0	0	
Storage Cap Reductn	0	0		0	0		0	0	0	0	0	
Reduced v/c Ratio	0.29	0.39		0.53	0.27		0.54	0.55	0.20	0.40	0.69	

Intersection Summary

Area Type: Other
Cycle Length: 90
Actuated Cycle Length: 90
Offset: 89 (99%), Referenced to phase 2:NBT and 6:SBT, Start of Green
Natural Cycle: 60

Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.69
Intersection Signal Delay: 16.2 Intersection LOS: B
Intersection Capacity Utilization 64.7% ICU Level of Service C
* Analysis Period (min) 15
m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 102: Walmart Project Driveway 1 / Marketplace Project Driveway 4 & Tucker Rd



Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations											
Volume (vph)	0	562	86	50	706	0	0	0	67	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	80		0	80		0	0		0	0		0
Storage Lanes	0		0	1		0	0		1	0		0
Taper Length (ft)	25		25	25		25	25		25	25		25
Lane Util. Factor	1.00	0.95	0.95	1.00	0.95	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.980							0.865			
Flt Protected				0.950								
Satd. Flow (prot)	0	3468	0	1770	3539	0	0	0	1611	0	0	0
Flt Permitted				0.950								
Satd. Flow (perm)	0	3468	0	1770	3539	0	0	0	1611	0	0	0
Link Speed (mph)		35			35			25			25	
Link Distance (ft)		581			310			266			227	
Travel Time (s)		11.3			6.0			7.3			6.2	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	0	624	96	56	784	0	0	0	74	0	0	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	720	0	56	784	0	0	0	74	0	0	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Sign Control		Free			Free			Stop			Stop	

Intersection Summary

Area Type: Other
Control Type: Unsignalized
Intersection Capacity Utilization 29.1% ICU Level of Service A
Analysis Period (min) 15

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	0	562	86	50	706	0	0	0	67	0	0	0
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Hourly flow rate (vph)	0	624	96	56	784	0	0	0	74	0	0	0
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type		None			None							
Median storage veh)												
Upstream signal (ft)		581			310							
pX, platoon unblocked												
vC, conflicting volume	784			720			1176	1568	360	1282	1616	392
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	784			720			1176	1568	360	1282	1616	392
tC, single (s)	4.1			4.1			7.5	6.5	6.9	7.5	6.5	6.9
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	100			94			100	100	88	100	100	100
cM capacity (veh/h)	830			877			140	103	637	103	96	607

Direction, Lane #	EB 1	EB 2	WB 1	WB 2	WB 3	NB 1
Volume Total	416	304	56	392	392	74
Volume Left	0	0	56	0	0	0
Volume Right	0	96	0	0	0	74
cSH	1700	1700	877	1700	1700	637
Volume to Capacity	0.24	0.18	0.06	0.23	0.23	0.12
Queue Length 95th (ft)	0	0	4	0	0	9
Control Delay (s)	0.0	0.0	9.4	0.0	0.0	11.4
Lane LOS			A			B
Approach Delay (s)	0.0		0.6			11.4
Approach LOS						B

Intersection Summary			
Average Delay	0.8		
Intersection Capacity Utilization	29.1%	ICU Level of Service	A
Analysis Period (min)	15		

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	612	47	86	656	0	101	0	66	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	80		0	160		0	0		0	0		0
Storage Lanes	1		0	1		0	0		1	0		0
Taper Length (ft)	25		25	25		25	25		25	25		25
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.989							0.850			
Flt Protected				0.950				0.950				
Satd. Flow (prot)	1863	1842	0	1770	1863	0	0	1770	1583	0	1863	0
Flt Permitted				0.950				0.950				
Satd. Flow (perm)	1863	1842	0	1770	1863	0	0	1770	1583	0	1863	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		7							73			
Link Speed (mph)		35			35			25			25	
Link Distance (ft)		310			1488			268			223	
Travel Time (s)		6.0			29.0			7.3			6.1	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	0	680	52	96	729	0	112	0	73	0	0	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	732	0	96	729	0	0	112	73	0	0	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2		1	2	1	1	2	
Detector Template	Left	Thru		Left	Thru		Left	Thru	Right	Left	Thru	
Leading Detector (ft)	20	100		20	100		20	100	20	20	100	
Trailing Detector (ft)	0	0		0	0		0	0	0	0	0	
Detector 1 Position(ft)	0	0		0	0		0	0	0	0	0	
Detector 1 Size(ft)	20	6		20	6		20	6	20	20	6	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Prot			Prot			Split		Perm	Split		
Protected Phases	7	4		3	8		2	2		6	6	
Permitted Phases									2			
Detector Phase	7	4		3	8		2	2	2	6	6	

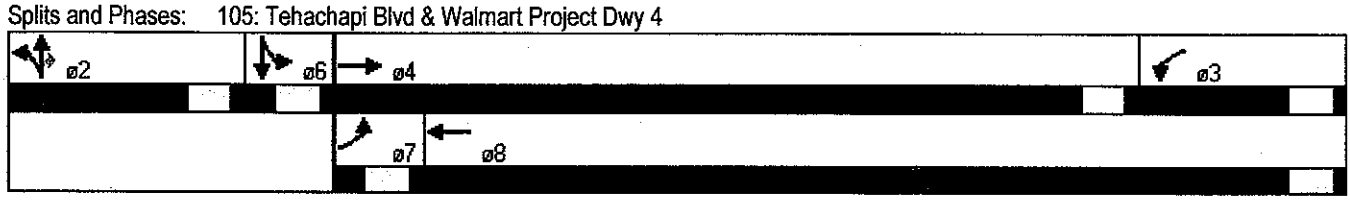
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Switch Phase												
Minimum Initial (s)	2.0	2.0		2.0	2.0		2.0	2.0	2.0	2.0	2.0	
Minimum Split (s)	6.0	6.0		6.0	6.0		6.0	6.0	6.0	6.0	6.0	
Total Split (s)	6.0	54.0	0.0	14.0	62.0	0.0	16.0	16.0	16.0	6.0	6.0	0.0
Total Split (%)	6.7%	60.0%	0.0%	15.6%	68.9%	0.0%	17.8%	17.8%	17.8%	6.7%	6.7%	0.0%
Maximum Green (s)	2.0	50.0		10.0	58.0		12.0	12.0	12.0	2.0	2.0	
Yellow Time (s)	3.0	3.0		3.0	3.0		3.0	3.0	3.0	3.0	3.0	
All-Red Time (s)	1.0	1.0		1.0	1.0		1.0	1.0	1.0	1.0	1.0	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lead/Lag	Lead	Lead		Lag	Lag							
Lead-Lag Optimize?	Yes	Yes		Yes	Yes							
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0	3.0	3.0	3.0	
Recall Mode	None	C-Max		None	C-Max		Min	Min	Min	Min	Min	
Act Effct Green (s)		53.2		9.3	64.4			10.2	10.2			
Actuated g/C Ratio		0.59		0.10	0.72			0.11	0.11			
v/c Ratio		0.67		0.53	0.55			0.56	0.30			
Control Delay		9.8		48.9	8.0			48.4	12.5			
Queue Delay		0.0		0.0	0.0			0.0	0.0			
Total Delay		9.8		48.9	8.0			48.4	12.5			
LOS		A		D	A			D	B			
Approach Delay		9.8			12.7			34.2				
Approach LOS		A			B			C				
90th %ile Green (s)	0.0	50.0		10.0	64.0		12.0	12.0	12.0	2.0	2.0	
90th %ile Term Code	Skip	Coord		Max	Coord		Max	Max	Max	Max	Max	
70th %ile Green (s)	0.0	50.0		10.0	64.0		12.0	12.0	12.0	2.0	2.0	
70th %ile Term Code	Skip	Coord		Max	Coord		Max	Max	Max	Max	Max	
50th %ile Green (s)	0.0	50.0		10.0	64.0		11.0	11.0	11.0	3.0	3.0	
50th %ile Term Code	Skip	Coord		Max	Coord		Gap	Gap	Gap	Max	Max	
30th %ile Green (s)	0.0	50.0		10.0	64.0		9.2	9.2	9.2	4.8	4.8	
30th %ile Term Code	Skip	Coord		Hold	Coord		Gap	Gap	Gap	Max	Max	
10th %ile Green (s)	0.0	65.8		0.0	65.8		6.7	6.7	6.7	5.5	5.5	
10th %ile Term Code	Skip	Coord		Skip	Coord		Gap	Gap	Gap	Gap	Gap	
Queue Length 50th (ft)		147		46	147			53	0			
Queue Length 95th (ft)		m304		89	218			99	34			
Internal Link Dist (ft)		230			1408			188			143	
Turn Bay Length (ft)				160								
Base Capacity (vph)		1091		197	1332			236	274			
Starvation Cap Reductn		0		0	0			0	0			
Spillback Cap Reductn		0		0	0			0	0			
Storage Cap Reductn		0		0	0			0	0			
Reduced v/c Ratio		0.67		0.49	0.55			0.47	0.27			

Intersection Summary

Area Type: Other
Cycle Length: 90
Actuated Cycle Length: 90
Offset: 7 (8%), Referenced to phase 4:EBT and 8:WBT, Start of Green
Natural Cycle: 60

Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.67
Intersection Signal Delay: 13.8 Intersection LOS: B
Intersection Capacity Utilization 55.4% ICU Level of Service B
Analysis Period (min) 15
m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 105: Tehachapi Blvd & Walmart Project Dwy 4



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Volume (vph)	0	25	24	982	1200	14
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0	0	60			0
Storage Lanes	0	1	1			0
Taper Length (ft)	25	25	25			25
Lane Util. Factor	1.00	1.00	1.00	0.95	0.95	0.95
Frt		0.865			0.998	
Flt Protected			0.950			
Satd. Flow (prot)	0	1611	1770	3539	3532	0
Flt Permitted			0.950			
Satd. Flow (perm)	0	1611	1770	3539	3532	0
Link Speed (mph)	25			50	50	
Link Distance (ft)	288			406	100	
Travel Time (s)	7.9			5.5	1.4	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	0	28	27	1091	1333	16
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	28	27	1091	1349	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	0			12	12	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	9	15			9
Sign Control	Stop			Free	Free	

Intersection Summary

Area Type: Other
Control Type: Unsignalized
Intersection Capacity Utilization 43.6% ICU Level of Service A
Analysis Period (min) 15

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Volume (veh/h)	0	25	24	982	1200	14
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Hourly flow rate (vph)	0	28	27	1091	1333	16
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type				None	None	
Median storage veh)						
Upstream signal (ft)				406	462	
pX, platoon unblocked	0.88	0.86	0.86			
vC, conflicting volume	1940	674	1349			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	1061	291	1077			
tC, single (s)	6.8	6.9	4.1			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.2			
p0 queue free %	100	95	95			
cM capacity (veh/h)	182	605	552			

Direction, Lane #	EB 1	NB 1	NB 2	NB 3	SB 1	SB 2
Volume Total	28	27	546	546	889	460
Volume Left	0	27	0	0	0	0
Volume Right	28	0	0	0	0	16
cSH	605	552	1700	1700	1700	1700
Volume to Capacity	0.05	0.05	0.32	0.32	0.52	0.27
Queue Length 95th (ft)	3	3	0	0	0	0
Control Delay (s)	11.2	11.8	0.0	0.0	0.0	0.0
Lane LOS	B	B				
Approach Delay (s)	11.2	0.3			0.0	
Approach LOS	B					

Intersection Summary			
Average Delay	0.3		
Intersection Capacity Utilization	43.6%	ICU Level of Service	A
Analysis Period (min)	15		

APPENDIX H-II

YEAR 2011 CUMULATIVE PLUS PROJECT WITH MITIGATION TRAFFIC CONDITIONS

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	0	159	0	0	0	0	477	301	0	214	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	50		0	0		0	0		0	0		0
Storage Lanes	1		1	0		0	0		0	0		0
Taper Length (ft)	25		25	25		25	25		25	25		25
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.850					0.948				
Flt Protected												
Satd. Flow (prot)	1863	0	1583	0	0	0	0	1766	0	0	1863	0
Flt Permitted												
Satd. Flow (perm)	1863	0	1583	0	0	0	0	1766	0	0	1863	0
Link Speed (mph)		50			50			50			50	
Link Distance (ft)		150			1582			3007			628	
Travel Time (s)		2.0			21.6			41.0			8.6	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	0	0	177	0	0	0	0	530	334	0	238	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	0	177	0	0	0	0	864	0	0	238	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Sign Control		Stop			Stop			Free			Free	

Intersection Summary

Area Type: Other
Control Type: Unsignalized
Intersection Capacity Utilization 46.8% ICU Level of Service A
Analysis Period (min) 15

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	0	0	159	0	0	0	0	477	301	0	214	0
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Hourly flow rate (vph)	0	0	177	0	0	0	0	530	334	0	238	0
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type								None			None	
Median storage veh)												
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	935	1102	238	935	935	697	238			864		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	935	1102	238	935	935	697	238			864		
tC, single (s)	7.1	6.5	*0.5	7.1	6.5	6.2	4.1			4.1		
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.2			2.2		
p0 queue free %	100	100	85	100	100	100	100			100		
cM capacity (veh/h)	246	212	1169	209	265	441	1329			778		

Direction, Lane #	EB 1	EB 2	NB 1	SB 1
Volume Total	0	177	864	238
Volume Left	0	0	0	0
Volume Right	0	177	334	0
cSH	1700	1169	1700	778
Volume to Capacity	0.00	0.15	0.51	0.00
Queue Length 95th (ft)	0	12	0	0
Control Delay (s)	0.0	8.6	0.0	0.0
Lane LOS	A	A		
Approach Delay (s)	8.6		0.0	0.0
Approach LOS	A			

Intersection Summary			
Average Delay	1.2		
Intersection Capacity Utilization	46.8%	ICU Level of Service	A
Analysis Period (min)	15		

* User Entered Value

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	186	389	125	150	201	96	90	475	142	78	238	51
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	150		80	200		0	250		50	150		50
Storage Lanes	1		1	2		1	1		1	1		1
Taper Length (ft)	25		25	25		25	25		25	25		25
Lane Util. Factor	1.00	1.00	1.00	0.97	1.00	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Frt			0.850			0.850			0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1770	1863	1583	3433	1863	1583	1770	3539	1583	1770	3539	1583
Flt Permitted	0.950			0.950			0.950			0.950		
Satd. Flow (perm)	1770	1863	1583	3433	1863	1583	1770	3539	1583	1770	3539	1583
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			134			107			146			57
Link Speed (mph)		35			35			50			50	
Link Distance (ft)		380			581			362			300	
Travel Time (s)		7.4			11.3			4.9			4.1	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	207	432	139	167	223	107	100	528	158	87	264	57
Shared Lane Traffic (%)												
Lane Group Flow (vph)	207	432	139	167	223	107	100	528	158	87	264	57
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		24			24			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2	1	1	2	1	1	2	1	1	2	1
Detector Template	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Leading Detector (ft)	20	100	20	20	100	20	20	100	20	20	100	20
Trailing Detector (ft)	0	0	0	0	0	0	0	0	0	0	0	0
Detector 1 Position(ft)	0	0	0	0	0	0	0	0	0	0	0	0
Detector 1 Size(ft)	20	6	20	20	6	20	20	6	20	20	6	20
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Prot		Perm	Prot		Perm	Prot		Perm	Prot		pm+ov
Protected Phases	7	4		3	8		5	2		1	6	7
Permitted Phases			4			8			2			6
Detector Phase	7	4	4	3	8	8	5	2	2	1	6	7

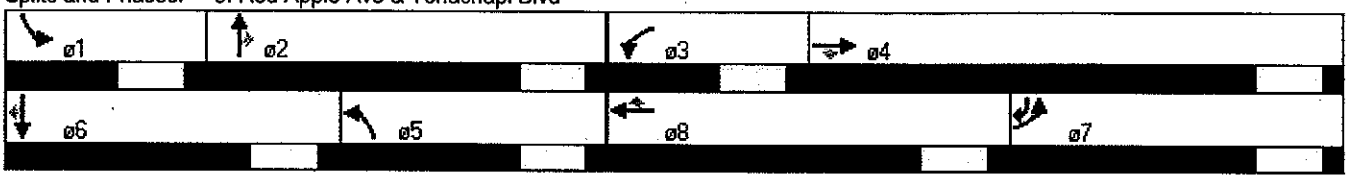
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Switch Phase												
Minimum Initial (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Minimum Split (s)	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0
Total Split (s)	15.0	24.0	24.0	9.0	18.0	18.0	12.0	18.0	18.0	9.0	15.0	15.0
Total Split (%)	25.0%	40.0%	40.0%	15.0%	30.0%	30.0%	20.0%	30.0%	30.0%	15.0%	25.0%	25.0%
Maximum Green (s)	11.0	20.0	20.0	5.0	14.0	14.0	8.0	14.0	14.0	5.0	11.0	11.0
Yellow Time (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lead/Lag	Lag	Lag	Lag	Lead	Lead	Lead	Lag	Lag	Lag	Lead	Lead	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	None	None	None	None	None	None	None	C-Min	C-Min	None	C-Min	None
Act Effct Green (s)	11.0	19.1	19.1	5.6	11.7	11.7	8.0	17.6	17.6	5.7	15.3	30.2
Actuated g/C Ratio	0.18	0.32	0.32	0.09	0.20	0.20	0.13	0.29	0.29	0.10	0.26	0.50
v/c Ratio	0.64	0.73	0.23	0.52	0.61	0.27	0.43	0.51	0.28	0.52	0.29	0.07
Control Delay	33.2	26.6	4.6	30.6	28.0	7.3	17.8	11.6	3.2	40.1	21.7	3.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	33.2	26.6	4.6	30.6	28.0	7.3	17.8	11.6	3.2	40.1	21.7	3.7
LOS	C	C	A	C	C	A	B	B	A	D	C	A
Approach Delay		24.4			24.4			10.7			23.1	
Approach LOS		C			C			B			C	
90th %ile Green (s)	11.0	20.0	20.0	5.0	14.0	14.0	8.0	14.0	14.0	5.0	11.0	11.0
90th %ile Term Code	Max	Max	Max	Max	Max	Max	Max	Coord	Coord	Max	Coord	Max
70th %ile Green (s)	11.0	20.0	20.0	5.0	14.0	14.0	8.2	14.0	14.0	5.0	10.8	11.0
70th %ile Term Code	Max	Max	Max	Max	Max	Max	Max	Coord	Coord	Max	Coord	Max
50th %ile Green (s)	12.3	19.6	19.6	5.0	12.3	12.3	9.3	14.0	14.0	5.4	10.1	12.3
50th %ile Term Code	Gap	Gap	Gap	Max	Gap	Gap	Hold	Coord	Coord	Max	Coord	Gap
30th %ile Green (s)	12.8	16.4	16.4	6.8	10.4	10.4	8.8	13.5	13.5	7.3	12.0	12.8
30th %ile Term Code	Hold	Gap	Gap	Max	Gap	Gap	Hold	Coord	Coord	Gap	Coord	Hold
10th %ile Green (s)	7.7	19.5	19.5	0.0	7.8	7.8	0.0	32.5	32.5	0.0	32.5	7.7
10th %ile Term Code	Gap	Hold	Hold	Skip	Gap	Gap	Skip	Coord	Coord	Skip	Coord	Gap
Queue Length 50th (ft)	60	118	1	27	68	0	20	54	0	27	40	0
Queue Length 95th (ft)	#129	#199	28	#55	118	32	47	54	2	#76	66	15
Internal Link Dist (ft)		300			501			282			220	
Turn Bay Length (ft)	150		80	200			250		50	150		50
Base Capacity (vph)	343	621	617	319	435	451	250	1044	570	168	914	822
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.60	0.70	0.23	0.52	0.51	0.24	0.40	0.51	0.28	0.52	0.29	0.07

Intersection Summary

Area Type: Other
Cycle Length: 60
Actuated Cycle Length: 60
Offset: 19 (32%), Referenced to phase 2:NBT and 6:SBT, Start of Green
Natural Cycle: 50

Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.73
Intersection Signal Delay: 19.8 Intersection LOS: B
Intersection Capacity Utilization 55.5% ICU Level of Service B
Analysis Period (min) 15
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 8: Red Apple Ave & Tehachapi Blvd



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	0	86	0	0	5	23	886	4	7	1004	45
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	0		0	100		0	100		100
Storage Lanes	0		1	0		1	1		0	1		0
Taper Length (ft)	25		25	25		25	25		25	25		25
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	1.00	0.95	0.95
Frt			0.865			0.865		0.999			0.994	
Flt Protected							0.950			0.950		
Satd. Flow (prot)	0	0	1611	0	0	1611	1770	3536	0	1770	3518	0
Flt Permitted							0.950			0.950		
Satd. Flow (perm)	0	0	1611	0	0	1611	1770	3536	0	1770	3518	0
Link Speed (mph)		25			25			50			50	
Link Distance (ft)		1436			278			1331			507	
Travel Time (s)		39.2			7.6			18.2			6.9	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	0	0	96	0	0	6	26	984	4	8	1116	50
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	0	96	0	0	6	26	988	0	8	1166	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			24			24	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Sign Control		Stop			Stop			Free			Free	

Intersection Summary

Area Type: Other
Control Type: Unsignalized
Intersection Capacity Utilization 41.2% ICU Level of Service A
Analysis Period (min) 15

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	0	0	86	0	0	5	23	886	4	7	1004	45
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Hourly flow rate (vph)	0	0	96	0	0	6	26	984	4	8	1116	50
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type								Raised			Raised	
Median storage veh)								1			1	
Upstream signal (ft)											507	
pX, platoon unblocked	0.82	0.82	0.82	0.82	0.82		0.82					
vC, conflicting volume	1705	2196	583	1707	2219	494	1166			989		
vC1, stage 1 conf vol	1156	1156		1038	1038							
vC2, stage 2 conf vol	549	1040		669	1181							
vCu, unblocked vol	1424	2022	59	1427	2050	494	768			989		
tC, single (s)	7.5	6.5	6.9	7.5	6.5	6.9	4.1			4.1		
tC, 2 stage (s)	6.5	5.5		6.5	5.5							
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.2			2.2		
p0 queue free %	100	100	88	100	100	99	96			99		
cM capacity (veh/h)	197	162	817	177	155	521	692			695		

Direction, Lane #	EB 1	WB 1	NB 1	NB 2	NB 3	SB 1	SB 2	SB 3
Volume Total	96	6	26	656	333	8	744	422
Volume Left	0	0	26	0	0	8	0	0
Volume Right	96	6	0	0	4	0	0	50
cSH	817	521	692	1700	1700	695	1700	1700
Volume to Capacity	0.12	0.01	0.04	0.39	0.20	0.01	0.44	0.25
Queue Length 95th (ft)	9	1	3	0	0	1	0	0
Control Delay (s)	10.0	12.0	10.4	0.0	0.0	10.2	0.0	0.0
Lane LOS	A	B	B			B		
Approach Delay (s)	10.0	12.0	0.3			0.1		
Approach LOS	A	B						

Intersection Summary			
Average Delay	0.6		
Intersection Capacity Utilization	41.2%	ICU Level of Service	A
Analysis Period (min)	15		

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	413	302	133	156	302	235	223	283	160	231	279	360
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	200		200	160		0	220		0	160		0
Storage Lanes	2		1	1		1	1		0	2		1
Taper Length (ft)	25		25	25		25	25		25	25		25
Lane Util. Factor	0.97	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	0.97	0.95	1.00
Frt			0.850			0.850		0.946				0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	3433	1863	1583	1770	1863	1583	1770	3348	0	3433	3539	1583
Flt Permitted	0.950			0.950			0.950			0.950		
Satd. Flow (perm)	3433	1863	1583	1770	1863	1583	1770	3348	0	3433	3539	1583
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			148			119		172				174
Link Speed (mph)		45			40			50			50	
Link Distance (ft)		300			183			1100			1331	
Travel Time (s)		4.5			3.1			15.0			18.2	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	459	336	148	173	336	261	248	314	178	257	310	400
Shared Lane Traffic (%)												
Lane Group Flow (vph)	459	336	148	173	336	261	248	492	0	257	310	400
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		24			24			24			24	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2	1	1	2	1	1	2		1	2	1
Detector Template	Left	Thru	Right	Left	Thru	Right	Left	Thru		Left	Thru	Right
Leading Detector (ft)	20	100	20	20	100	20	20	100		20	100	20
Trailing Detector (ft)	0	0	0	0	0	0	0	0		0	0	0
Detector 1 Position(ft)	0	0	0	0	0	0	0	0		0	0	0
Detector 1 Size(ft)	20	6	20	20	6	20	20	6		20	6	20
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Prot		Perm	Prot		pm+ov	Prot			Prot		pm+ov
Protected Phases	7	4		3	8	1	5	2		1	6	7
Permitted Phases			4			8						6
Detector Phase	7	4	4	3	8	1	5	2		1	6	7

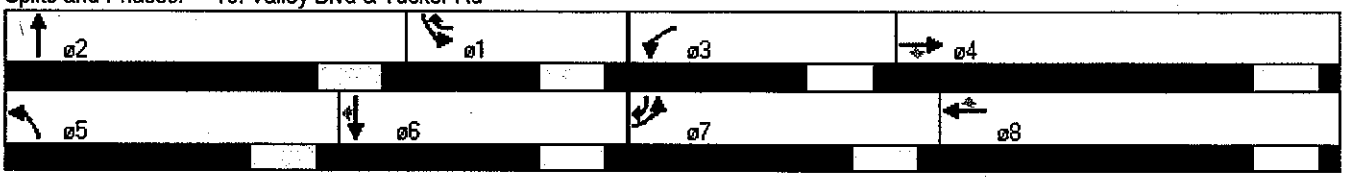
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Switch Phase												
Minimum Initial (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0		2.0	2.0	2.0
Minimum Split (s)	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0		6.0	6.0	6.0
Total Split (s)	14.0	20.0	20.0	12.0	18.0	10.0	15.0	18.0	0.0	10.0	13.0	14.0
Total Split (%)	23.3%	33.3%	33.3%	20.0%	30.0%	16.7%	25.0%	30.0%	0.0%	16.7%	21.7%	23.3%
Maximum Green (s)	10.0	16.0	16.0	8.0	14.0	6.0	11.0	14.0		6.0	9.0	10.0
Yellow Time (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0		1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lead		Lag	Lag	Lead
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes		Yes	Yes	Yes
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0
Recall Mode	None	None	None	None	None	None	None	C-Min		None	C-Min	None
Act Effct Green (s)	10.0	15.5	15.5	7.9	13.4	21.9	10.6	12.1		8.6	10.0	24.0
Actuated g/C Ratio	0.17	0.26	0.26	0.13	0.22	0.36	0.18	0.20		0.14	0.17	0.40
v/c Ratio	0.80	0.70	0.29	0.74	0.81	0.40	0.79	0.61		0.52	0.53	0.54
Control Delay	37.1	29.2	5.4	47.2	39.4	6.0	44.0	17.3		28.8	25.0	7.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
Total Delay	37.1	29.2	5.4	47.2	39.4	6.0	44.0	17.3		28.8	25.0	7.8
LOS	D	C	A	D	D	A	D	B		C	C	A
Approach Delay		29.3			29.8			26.2			18.9	
Approach LOS		C			C			C			B	
90th %ile Green (s)	10.0	16.0	16.0	8.0	14.0	6.0	11.0	14.0		6.0	9.0	10.0
90th %ile Term Code	Max	Max	Max	Max	Max	Max	Max	Coord		Max	Coord	Max
70th %ile Green (s)	10.0	16.0	16.0	8.0	14.0	6.3	11.0	13.7		6.3	9.0	10.0
70th %ile Term Code	Max	Max	Max	Max	Max	Max	Max	Coord		Max	Coord	Max
50th %ile Green (s)	10.0	16.0	16.0	8.0	14.0	8.8	11.0	11.2		8.8	9.0	10.0
50th %ile Term Code	Max	Hold	Hold	Max	Max	Max	Max	Coord		Max	Coord	Max
30th %ile Green (s)	10.0	16.0	16.0	8.0	14.0	10.4	11.0	9.6		10.4	9.0	10.0
30th %ile Term Code	Max	Hold	Hold	Max	Max	Hold	Max	Coord		Hold	Coord	Max
10th %ile Green (s)	10.0	13.4	13.4	7.5	10.9	11.3	9.2	11.8		11.3	13.9	10.0
10th %ile Term Code	Gap	Hold	Hold	Gap	Gap	Hold	Gap	Coord		Hold	Coord	Gap
Queue Length 50th (ft)	73	95	0	54	100	13	76	48		43	53	46
Queue Length 95th (ft)	#131	#172	32	#129	#203	36	#166	81		#81	61	0
Internal Link Dist (ft)		220			103			1020			1251	
Turn Bay Length (ft)	200		200	160			220			160		
Base Capacity (vph)	572	497	531	236	435	654	325	913		490	589	737
Starvation Cap Reductn	0	0	0	0	0	0	0	0		0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0		0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0		0	0	0
Reduced v/c Ratio	0.80	0.68	0.28	0.73	0.77	0.40	0.76	0.54		0.52	0.53	0.54

Intersection Summary

Area Type: Other
Cycle Length: 60
Actuated Cycle Length: 60
Offset: 32 (53%), Referenced to phase 2:NBT and 6:SBT, Start of Green
Natural Cycle: 55

Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.81
Intersection Signal Delay: 25.8 Intersection LOS: C
Intersection Capacity Utilization 61.1% ICU Level of Service B
Analysis Period (min) 15
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 10: Valley Blvd & Tucker Rd



Lane Group	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR			
Lane Configurations												
Volume (vph)	6	0	25	64	0	69	41	807	94	53	963	4
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	75		0	0		0	150		250	180		0
Storage Lanes	1		0	2		0	1		1	1		0
Taper Length (ft)	25		25	25		25	25		25	25		25
Lane Util. Factor	1.00	1.00	1.00	0.97	1.00	1.00	1.00	0.95	1.00	1.00	0.95	0.95
Frt		0.850			0.850				0.850		0.999	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1770	1583	0	3433	1583	0	1770	3539	1583	1770	3536	0
Flt Permitted	0.950			0.950			0.950			0.950		
Satd. Flow (perm)	1770	1583	0	3433	1583	0	1770	3539	1583	1770	3536	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		222			297				104		1	
Link Speed (mph)		25			25			50			50	
Link Distance (ft)		292			291			507			406	
Travel Time (s)		8.0			7.9			6.9			5.5	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	7	0	28	71	0	77	46	897	104	59	1070	4
Shared Lane Traffic (%)												
Lane Group Flow (vph)	7	28	0	71	77	0	46	897	104	59	1074	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		24			24			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2		1	2	1	1	2	
Detector Template	Left	Thru		Left	Thru		Left	Thru	Right	Left	Thru	
Leading Detector (ft)	20	100		20	100		20	100	20	20	100	
Trailing Detector (ft)	0	0		0	0		0	0	0	0	0	
Detector 1 Position(ft)	0	0		0	0		0	0	0	0	0	
Detector 1 Size(ft)	20	6		20	6		20	6	20	20	6	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Split			Split			Prot		Perm	Prot		
Protected Phases	4	4		8	8		5	2		1	6	
Permitted Phases									2			
Detector Phase	4	4		8	8		5	2	2	1	6	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Switch Phase												
Minimum Initial (s)	2.0	2.0		2.0	2.0		2.0	2.0	2.0	2.0	2.0	
Minimum Split (s)	6.0	6.0		6.0	6.0		6.0	6.0	6.0	6.0	6.0	
Total Split (s)	7.0	7.0	0.0	8.0	8.0	0.0	9.0	35.0	35.0	10.0	36.0	0.0
Total Split (%)	11.7%	11.7%	0.0%	13.3%	13.3%	0.0%	15.0%	58.3%	58.3%	16.7%	60.0%	0.0%
Maximum Green (s)	3.0	3.0		4.0	4.0		5.0	31.0	31.0	6.0	32.0	
Yellow Time (s)	3.0	3.0		3.0	3.0		3.0	3.0	3.0	3.0	3.0	
All-Red Time (s)	1.0	1.0		1.0	1.0		1.0	1.0	1.0	1.0	1.0	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lead/Lag							Lag	Lead	Lead	Lag	Lead	
Lead-Lag Optimize?							Yes	Yes	Yes	Yes	Yes	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0	3.0	3.0	3.0	
Recall Mode	None	None		None	None		None	C-Min	C-Min	None	C-Min	
Act Effct Green (s)	4.6	4.6		5.2	5.2		6.3	39.0	39.0	7.6	42.4	
Actuated g/C Ratio	0.08	0.08		0.09	0.09		0.10	0.65	0.65	0.13	0.71	
v/c Ratio	0.05	0.09		0.24	0.19		0.25	0.39	0.10	0.26	0.43	
Control Delay	27.7	0.5		28.2	1.0		29.1	5.3	1.5	25.5	6.0	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Total Delay	27.7	0.5		28.2	1.0		29.1	5.3	1.5	25.5	6.0	
LOS	C	A		C	A		C	A	A	C	A	
Approach Delay		5.9			14.1			6.0			7.0	
Approach LOS		A			B			A			A	
90th %ile Green (s)	3.0	3.0		4.0	4.0		5.2	29.3	29.3	7.7	31.8	
90th %ile Term Code	Max	Max		Max	Max		Max	Coord	Coord	Max	Coord	
70th %ile Green (s)	3.4	3.4		4.0	4.0		7.8	25.7	25.7	10.9	28.8	
70th %ile Term Code	Max	Max		Max	Max		Gap	Coord	Coord	Hold	Coord	
50th %ile Green (s)	0.0	0.0		6.6	6.6		0.0	34.1	34.1	7.3	45.4	
50th %ile Term Code	Skip	Skip		Gap	Gap		Skip	Coord	Coord	Gap	Coord	
30th %ile Green (s)	0.0	0.0		6.1	6.1		0.0	45.9	45.9	0.0	45.9	
30th %ile Term Code	Skip	Skip		Gap	Gap		Skip	Coord	Coord	Skip	Coord	
10th %ile Green (s)	0.0	0.0		0.0	0.0		0.0	56.0	56.0	0.0	56.0	
10th %ile Term Code	Skip	Skip		Skip	Skip		Skip	Coord	Coord	Skip	Coord	
Queue Length 50th (ft)	2	0		10	0		15	33	1	14	23	
Queue Length 95th (ft)	12	0		26	0		m29	m81	m3	m46	132	
Internal Link Dist (ft)		212			211			427			326	
Turn Bay Length (ft)	75						150		250	180		
Base Capacity (vph)	136	327		300	409		185	2383	1100	226	2538	
Starvation Cap Reductn	0	0		0	0		0	0	0	0	0	
Spillback Cap Reductn	0	0		0	0		0	0	0	0	0	
Storage Cap Reductn	0	0		0	0		0	0	0	0	0	
Reduced v/c Ratio	0.05	0.09		0.24	0.19		0.25	0.38	0.09	0.26	0.42	

Intersection Summary

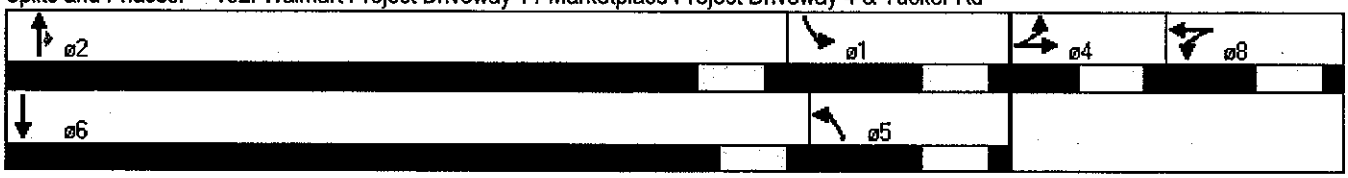
Area Type: Other
Cycle Length: 60
Actuated Cycle Length: 60
Offset: 1 (2%), Referenced to phase 2:NBT and 6:SBT, Start of Green
Natural Cycle: 40

102: Walmart Project Driveway 1 / Marketplace Project Driveway 4 & Tucker Rd

AM Peak Hour

Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.43
Intersection Signal Delay: 7.0 | Intersection LOS: A
Intersection Capacity Utilization 48.6% | ICU Level of Service A
Analysis Period (min) 15
m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 102: Walmart Project Driveway 1 / Marketplace Project Driveway 4 & Tucker Rd



Lane Group	SBL	SBT	SBR	EBL	EBT	WBL	WBT	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑↱		↰	↑↑					↱			
Volume (vph)	0	475	96	46	400	0	0	0	53	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	80		0	80		0	0		0	0		0
Storage Lanes	0		0	1		0	0		1	0		0
Taper Length (ft)	25		25	25		25	25		25	25		25
Lane Util. Factor	1.00	0.95	0.95	1.00	0.95	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.975							0.865			
Flt Protected				0.950								
Satd. Flow (prot)	0	3451	0	1770	3539	0	0	0	1611	0	0	0
Flt Permitted				0.950								
Satd. Flow (perm)	0	3451	0	1770	3539	0	0	0	1611	0	0	0
Link Speed (mph)		35			35			25			25	
Link Distance (ft)		581			310			266			227	
Travel Time (s)		11.3			6.0			7.3			6.2	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	0	528	107	51	444	0	0	0	59	0	0	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	635	0	51	444	0	0	0	59	0	0	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		24			24			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Sign Control		Free			Free			Stop			Stop	

Intersection Summary

Area Type: Other
Control Type: Unsignalized
Intersection Capacity Utilization 26.2% ICU Level of Service A
Analysis Period (min) 15

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑↱		↰	↑↑				↱			
Volume (veh/h)	0	475	96	46	400	0	0	0	53	0	0	0
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Hourly flow rate (vph)	0	528	107	51	444	0	0	0	59	0	0	0
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type		Raised			Raised							
Median storage veh)		1			1							
Upstream signal (ft)		581			310							
pX, platoon unblocked												
vC, conflicting volume	444			634			906	1128	317	869	1181	222
vC1, stage 1 conf vol							581	581		547	547	
vC2, stage 2 conf vol							324	547		323	634	
vCu, unblocked vol	444			634			906	1128	317	869	1181	222
tC, single (s)	4.1			4.1			7.5	6.5	6.9	7.5	6.5	6.9
tC, 2 stage (s)							6.5	5.5		6.5	5.5	
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	100			95			100	100	91	100	100	100
cM capacity (veh/h)	1112			945			342	313	679	327	287	781

Direction, Lane #	EB 1	EB 2	WB 1	WB 2	WB 3	NB 1
Volume Total	352	283	51	222	222	59
Volume Left	0	0	51	0	0	0
Volume Right	0	107	0	0	0	59
cSH	1700	1700	945	1700	1700	679
Volume to Capacity	0.21	0.17	0.05	0.13	0.13	0.09
Queue Length 95th (ft)	0	0	4	0	0	6
Control Delay (s)	0.0	0.0	9.0	0.0	0.0	10.8
Lane LOS			A			B
Approach Delay (s)	0.0		0.9			10.8
Approach LOS						B

Intersection Summary			
Average Delay	0.9		
Intersection Capacity Utilization	26.2%	ICU Level of Service	A
Analysis Period (min)	15		

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	519	40	48	365	0	79	0	41	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	80		0	160		0	0		0	0		0
Storage Lanes	1		0	1		0	0		1	0		0
Taper Length (ft)	25		25	25		25	25		25	25		25
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.989							0.850			
Flt Protected				0.950				0.950				
Satd. Flow (prot)	1863	1842	0	1770	1863	0	0	1770	1583	0	1863	0
Flt Permitted				0.950				0.950				
Satd. Flow (perm)	1863	1842	0	1770	1863	0	0	1770	1583	0	1863	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		9							46			
Link Speed (mph)		35			35			25			25	
Link Distance (ft)		310			1488			268			223	
Travel Time (s)		6.0			29.0			7.3			6.1	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	0	577	44	53	406	0	88	0	46	0	0	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	621	0	53	406	0	0	88	46	0	0	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2		1	2	1	1	2	
Detector Template	Left	Thru		Left	Thru		Left	Thru	Right	Left	Thru	
Leading Detector (ft)	20	100		20	100		20	100	20	20	100	
Trailing Detector (ft)	0	0		0	0		0	0	0	0	0	
Detector 1 Position(ft)	0	0		0	0		0	0	0	0	0	
Detector 1 Size(ft)	20	6		20	6		20	6	20	20	6	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Prot			Prot			Split		Perm	Split		
Protected Phases	7	4		3	8		2	2		6	6	
Permitted Phases									2			
Detector Phase	7	4		3	8		2	2	2	6	6	

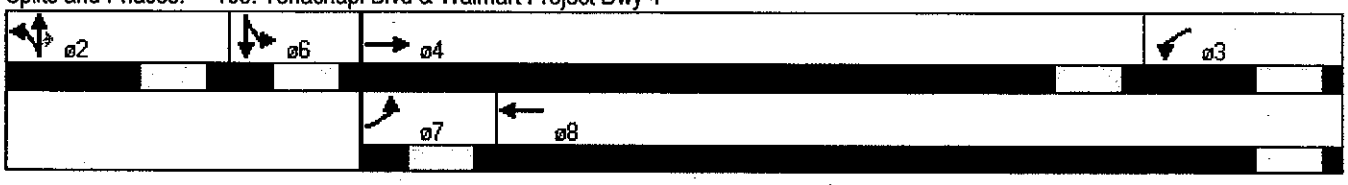
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Switch Phase												
Minimum Initial (s)	2.0	2.0		2.0	2.0		2.0	2.0	2.0	2.0	2.0	
Minimum Split (s)	6.0	6.0		6.0	6.0		6.0	6.0	6.0	6.0	6.0	
Total Split (s)	6.0	35.0	0.0	9.0	38.0	0.0	10.0	10.0	10.0	6.0	6.0	0.0
Total Split (%)	10.0%	58.3%	0.0%	15.0%	63.3%	0.0%	16.7%	16.7%	16.7%	10.0%	10.0%	0.0%
Maximum Green (s)	2.0	31.0		5.0	34.0		6.0	6.0	6.0	2.0	2.0	
Yellow Time (s)	3.0	3.0		3.0	3.0		3.0	3.0	3.0	3.0	3.0	
All-Red Time (s)	1.0	1.0		1.0	1.0		1.0	1.0	1.0	1.0	1.0	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lead/Lag	Lead	Lead		Lag	Lag							
Lead-Lag Optimize?	Yes	Yes		Yes	Yes							
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0	3.0	3.0	3.0	
Recall Mode	None	C-Max		None	C-Max		Min	Min	Min	Min	Min	
Act Effct Green (s)		34.6		5.0	40.0			5.9	5.9			
Actuated g/C Ratio		0.58		0.08	0.67			0.10	0.10			
v/c Ratio		0.58		0.36	0.33			0.51	0.23			
Control Delay		8.0		33.2	5.1			36.7	12.3			
Queue Delay		0.0		0.0	0.0			0.0	0.0			
Total Delay		8.0		33.2	5.1			36.7	12.3			
LOS		A		C	A			D	B			
Approach Delay		8.0			8.4			28.3				
Approach LOS		A			A			C				
90th %ile Green (s)	0.0	31.0		5.0	40.0		6.0	6.0	6.0	2.0	2.0	
90th %ile Term Code	Skip	Coord		Max	Coord		Max	Max	Max	Max	Max	
70th %ile Green (s)	0.0	31.0		5.0	40.0		6.0	6.0	6.0	2.0	2.0	
70th %ile Term Code	Skip	Coord		Max	Coord		Max	Max	Max	Max	Max	
50th %ile Green (s)	0.0	31.0		5.0	40.0		6.0	6.0	6.0	2.0	2.0	
50th %ile Term Code	Skip	Coord		Max	Coord		Max	Max	Max	Max	Max	
30th %ile Green (s)	0.0	40.0		0.0	40.0		6.0	6.0	6.0	2.0	2.0	
30th %ile Term Code	Skip	Coord		Skip	Coord		Max	Max	Max	Max	Max	
10th %ile Green (s)	0.0	40.0		0.0	40.0		5.5	5.5	5.5	2.5	2.5	
10th %ile Term Code	Skip	Coord		Skip	Coord		Gap	Gap	Gap	Max	Max	
Queue Length 50th (ft)		46		16	45			27	0			
Queue Length 95th (ft)		81		42	75			#68	22			
Internal Link Dist (ft)		230			1408			188			143	
Turn Bay Length (ft)				160								
Base Capacity (vph)		1066		148	1242			177	200			
Starvation Cap Reductn		0		0	0			0	0			
Spillback Cap Reductn		0		0	0			0	0			
Storage Cap Reductn		0		0	0			0	0			
Reduced v/c Ratio		0.58		0.36	0.33			0.50	0.23			

Intersection Summary

Area Type: Other
Cycle Length: 60
Actuated Cycle Length: 60
Offset: 7 (12%), Referenced to phase 4:EBT and 8:WBT, Start of Green
Natural Cycle: 55

Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.58
Intersection Signal Delay: 10.4 Intersection LOS: B
Intersection Capacity Utilization 47.5% ICU Level of Service A
Analysis Period (min) 15
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 105: Tehachapi Blvd & Walmart Project Dwy 4



Lane Group	WBL	WBR	NBL	NBT	SBT	SBR
Lane Configurations						
Volume (vph)	0	6	10	872	1015	5
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0	0	60			0
Storage Lanes	0	1	1			0
Taper Length (ft)	25	25	25			25
Lane Util. Factor	1.00	1.00	1.00	0.95	0.95	0.95
Frt		0.865			0.999	
Flt Protected			0.950			
Satd. Flow (prot)	0	1611	1770	3539	3536	0
Flt Permitted			0.950			
Satd. Flow (perm)	0	1611	1770	3539	3536	0
Link Speed (mph)	25			50	50	
Link Distance (ft)	288			406	100	
Travel Time (s)	7.9			5.5	1.4	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	0	7	11	969	1128	6
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	7	11	969	1134	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	0			12	12	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	9	15			9
Sign Control	Stop			Free	Free	

Intersection Summary

Area Type: Other
Control Type: Unsignalized
Intersection Capacity Utilization 38.2% ICU Level of Service A
Analysis Period (min) 15

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Volume (veh/h)	0	6	10	872	1015	5
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Hourly flow rate (vph)	0	7	11	969	1128	6
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type				None	None	
Median storage veh)						
Upstream signal (ft)				406	462	
pX, platoon unblocked	0.87	0.96	0.96			
vC, conflicting volume	1637	567	1133			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	1212	461	1053			
tC, single (s)	6.8	6.9	4.1			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.2			
p0 queue free %	100	99	98			
cM capacity (veh/h)	149	524	630			

Direction, Lane #	EB 1	NB 1	NB 2	NB 3	SB 1	SB 2
Volume Total	7	11	484	484	752	381
Volume Left	0	11	0	0	0	0
Volume Right	7	0	0	0	0	6
cSH	524	630	1700	1700	1700	1700
Volume to Capacity	0.01	0.02	0.28	0.28	0.44	0.22
Queue Length 95th (ft)	1	1	0	0	0	0
Control Delay (s)	12.0	10.8	0.0	0.0	0.0	0.0
Lane LOS	B	B				
Approach Delay (s)	12.0	0.1			0.0	
Approach LOS	B					

Intersection Summary			
Average Delay	0.1		
Intersection Capacity Utilization	38.2%	ICU Level of Service	A
Analysis Period (min)	15		

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	0	444	0	0	0	0	325	256	1	497	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	50		0	0		0	0		0	0		0
Storage Lanes	1		1	0		0	0		0	0		0
Taper Length (ft)	25		25	25		25	25		25	25		25
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.850					0.941				
Flt Protected												
Satd. Flow (prot)	1863	0	1583	0	0	0	0	1753	0	0	1863	0
Flt Permitted												
Satd. Flow (perm)	1863	0	1583	0	0	0	0	1753	0	0	1863	0
Link Speed (mph)		50			50			50			50	
Link Distance (ft)		150			1582			2999			628	
Travel Time (s)		2.0			21.6			40.9			8.6	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	0	0	493	0	0	0	0	361	284	1	552	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	0	493	0	0	0	0	645	0	0	553	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Sign Control		Stop			Stop			Free			Free	

Intersection Summary

Area Type: Other
Control Type: Unsignalized
Intersection Capacity Utilization 60.4% ICU Level of Service B
Analysis Period (min) 15

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	0	0	444	0	0	0	0	325	256	1	497	0
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Hourly flow rate (vph)	0	0	493	0	0	0	0	361	284	1	552	0
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type								None			None	
Median storage veh)												
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	1058	1200	552	1058	1058	503	552			646		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	1058	1200	552	1058	1058	503	552			646		
tC, single (s)	7.1	6.5	*0.5	7.1	6.5	6.2	4.1			4.1		
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.2			2.2		
p0 queue free %	100	100	62	100	100	100	100			100		
cM capacity (veh/h)	202	185	1282	125	224	568	1018			940		

Direction, Lane #	EB 1	EB 2	NB 1	SB 1
Volume Total	0	493	646	553
Volume Left	0	0	0	1
Volume Right	0	493	284	0
cSH	1700	1282	1700	940
Volume to Capacity	0.00	0.38	0.38	0.00
Queue Length 95th (ft)	0	41	0	0
Control Delay (s)	0.0	9.6	0.0	0.0
Lane LOS	A	A		A
Approach Delay (s)	9.6		0.0	0.0
Approach LOS	A			

Intersection Summary			
Average Delay	2.8		
Intersection Capacity Utilization	60.4%	ICU Level of Service	B
Analysis Period (min)	15		

* User Entered Value

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	103	345	179	302	359	82	242	328	211	126	499	249
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	150		80	200		0	250		50	150		50
Storage Lanes	1		1	2		1	1		1	1		1
Taper Length (ft)	25		25	25		25	25		25	25		25
Lane Util. Factor	1.00	1.00	1.00	0.97	1.00	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Frt			0.850			0.850			0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1770	1863	1583	3433	1863	1583	1770	3539	1583	1770	3539	1583
Flt Permitted	0.950			0.950			0.950			0.950		
Satd. Flow (perm)	1770	1863	1583	3433	1863	1583	1770	3539	1583	1770	3539	1583
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			189			91			234			142
Link Speed (mph)		35			35			50			50	
Link Distance (ft)		380			581			362			300	
Travel Time (s)		7.4			11.3			4.9			4.1	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	114	383	199	336	399	91	269	364	234	140	554	277
Shared Lane Traffic (%)												
Lane Group Flow (vph)	114	383	199	336	399	91	269	364	234	140	554	277
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		24			24			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2	1	1	2	1	1	2	1	1	2	1
Detector Template	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Leading Detector (ft)	20	100	20	20	100	20	20	100	20	20	100	20
Trailing Detector (ft)	0	0	0	0	0	0	0	0	0	0	0	0
Detector 1 Position(ft)	0	0	0	0	0	0	0	0	0	0	0	0
Detector 1 Size(ft)	20	6	20	20	6	20	20	6	20	20	6	20
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Prot		Perm	Prot		Perm	Prot		Perm	Prot		pm+ov
Protected Phases	7	4		3	8		5	2		1	6	7
Permitted Phases			4			8			2			6
Detector Phase	7	4	4	3	8	8	5	2	2	1	6	7

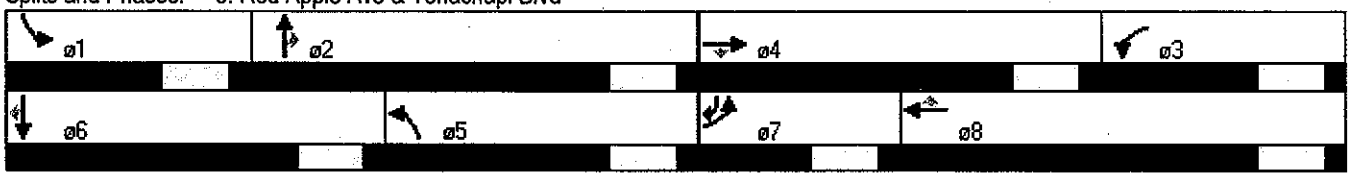
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Switch Phase												
Minimum Initial (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Minimum Split (s)	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0
Total Split (s)	9.0	18.0	18.0	11.0	20.0	20.0	14.0	20.0	20.0	11.0	17.0	9.0
Total Split (%)	15.0%	30.0%	30.0%	18.3%	33.3%	33.3%	23.3%	33.3%	33.3%	18.3%	28.3%	15.0%
Maximum Green (s)	5.0	14.0	14.0	7.0	16.0	16.0	10.0	16.0	16.0	7.0	13.0	5.0
Yellow Time (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lead/Lag	Lead	Lead	Lead	Lag	Lag	Lag	Lag	Lag	Lag	Lead	Lead	Lead
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	None	None	None	None	None	None	None	C-Min	C-Min	None	C-Min	None
Act Effct Green (s)	5.2	13.8	13.8	7.3	16.0	16.0	10.3	18.0	18.0	6.9	12.5	17.7
Actuated g/C Ratio	0.09	0.23	0.23	0.12	0.27	0.27	0.17	0.30	0.30	0.12	0.21	0.30
v/c Ratio	0.75	0.89	0.39	0.80	0.80	0.19	0.88	0.34	0.37	0.68	0.75	0.49
Control Delay	59.4	48.7	6.6	37.5	30.2	4.6	47.4	8.5	4.5	45.3	29.6	7.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	59.4	48.7	6.6	37.5	30.2	4.6	47.4	8.5	4.5	45.3	29.6	7.5
LOS	E	D	A	D	C	A	D	A	A	D	C	A
Approach Delay		38.4			30.4			19.5			25.6	
Approach LOS		D			C			B			C	
90th %ile Green (s)	5.0	14.0	14.0	7.0	16.0	16.0	10.0	16.0	16.0	7.0	13.0	5.0
90th %ile Term Code	Max	Max	Max	Max	Max	Max	Max	Coord	Coord	Max	Coord	Max
70th %ile Green (s)	5.0	14.0	14.0	7.0	16.0	16.0	10.0	16.0	16.0	7.0	13.0	5.0
70th %ile Term Code	Max	Max	Max	Max	Max	Max	Max	Coord	Coord	Max	Coord	Max
50th %ile Green (s)	5.0	14.0	14.0	7.0	16.0	16.0	10.0	16.0	16.0	7.0	13.0	5.0
50th %ile Term Code	Max	Max	Max	Max	Max	Max	Max	Coord	Coord	Max	Coord	Max
30th %ile Green (s)	5.0	14.0	14.0	7.0	16.0	16.0	10.1	16.0	16.0	7.0	12.9	5.0
30th %ile Term Code	Max	Max	Max	Max	Max	Max	Max	Coord	Coord	Max	Coord	Max
10th %ile Green (s)	5.9	13.2	13.2	8.7	16.0	16.0	11.4	26.1	26.1	0.0	10.7	5.9
10th %ile Term Code	Max	Gap	Gap	Max	Hold	Hold	Gap	Coord	Coord	Skip	Coord	Max
Queue Length 50th (ft)	36	118	2	49	80	0	89	36	21	44	86	16
Queue Length 95th (ft)	#104	#241	41	#108	#227	m9	#198	50	35	#109	#130	41
Internal Link Dist (ft)		300			501			282			220	
Turn Bay Length (ft)	150		80	200			250		50	150		50
Base Capacity (vph)	153	435	514	420	497	489	304	1063	639	207	767	567
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.75	0.88	0.39	0.80	0.80	0.19	0.88	0.34	0.37	0.68	0.72	0.49

Intersection Summary

Area Type: Other
Cycle Length: 60
Actuated Cycle Length: 60
Offset: 11 (18%), Referenced to phase 2:NBT and 6:SBT, Start of Green
Natural Cycle: 60

Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.89
Intersection Signal Delay: 27.8 Intersection LOS: C
Intersection Capacity Utilization 67.3% ICU Level of Service C
Analysis Period (min) 15
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 8: Red Apple Ave & Tehachapi Blvd



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	0	77	0	0	14	23	1068	8	8	1309	54
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	0		0	100		0	100		100
Storage Lanes	0		1	0		1	1		0	1		0
Taper Length (ft)	25		25	25		25	25		25	25		25
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	1.00	0.95	0.95
Frt			0.865			0.865		0.999			0.994	
Flt Protected							0.950			0.950		
Satd. Flow (prot)	0	0	1611	0	0	1611	1770	3536	0	1770	3518	0
Flt Permitted							0.950			0.950		
Satd. Flow (perm)	0	0	1611	0	0	1611	1770	3536	0	1770	3518	0
Link Speed (mph)		25			25			50			50	
Link Distance (ft)		1436			278			1331			507	
Travel Time (s)		39.2			7.6			18.2			6.9	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	0	0	86	0	0	16	26	1187	9	9	1454	60
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	0	86	0	0	16	26	1196	0	9	1514	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			24			24	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Sign Control		Stop			Stop			Free			Free	

Intersection Summary

Area Type: Other
Control Type: Unsignalized
Intersection Capacity Utilization 49.3% ICU Level of Service A
Analysis Period (min) 15

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	0	0	77	0	0	14	23	1068	8	8	1309	54
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Hourly flow rate (vph)	0	0	86	0	0	16	26	1187	9	9	1454	60
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type								Raised			Raised	
Median storage veh)								1			1	
Upstream signal (ft)											507	
pX, platoon unblocked	0.72	0.72	0.72	0.72	0.72		0.72					
vC, conflicting volume	2162	2749	757	2073	2774	598	1514			1196		
vC1, stage 1 conf vol	1502	1502		1242	1242							
vC2, stage 2 conf vol	660	1247		831	1532							
vCu, unblocked vol	1841	2653	0	1717	2688	598	945			1196		
tC, single (s)	7.5	6.5	6.9	7.5	6.5	6.9	4.1			4.1		
tC, 2 stage (s)	6.5	5.5		6.5	5.5							
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.2			2.2		
p0 queue free %	100	100	89	100	100	97	95			98		
cM capacity (veh/h)	134	114	784	136	107	446	522			580		

Direction, Lane #	EB 1	WB 1	NB 1	NB 2	NB 3	SB 1	SB 2	SB 3
Volume Total	86	16	26	791	404	9	970	545
Volume Left	0	0	26	0	0	9	0	0
Volume Right	86	16	0	0	9	0	0	60
cSH	784	446	522	1700	1700	580	1700	1700
Volume to Capacity	0.11	0.03	0.05	0.47	0.24	0.02	0.57	0.32
Queue Length 95th (ft)	8	2	3	0	0	1	0	0
Control Delay (s)	10.2	13.4	12.3	0.0	0.0	11.3	0.0	0.0
Lane LOS	B	B	B			B		
Approach Delay (s)	10.2	13.4	0.3			0.1		
Approach LOS	B	B						

Intersection Summary			
Average Delay	0.5		
Intersection Capacity Utilization	49.3%	ICU Level of Service	A
Analysis Period (min)	15		

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	500	304	133	156	287	288	220	283	167	353	326	479
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	200		200	160		0	220		0	160		0
Storage Lanes	2		1	1		1	1		0	2		1
Taper Length (ft)	25		25	25		25	25		25	25		25
Lane Util. Factor	0.97	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	0.97	0.95	1.00
Frt			0.850			0.850		0.944				0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	3433	1863	1583	1770	1863	1583	1770	3341	0	3433	3539	1583
Flt Permitted	0.950			0.950			0.950			0.950		
Satd. Flow (perm)	3433	1863	1583	1770	1863	1583	1770	3341	0	3433	3539	1583
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			148			74		177				145
Link Speed (mph)		45			40			50			50	
Link Distance (ft)		300			183			1100			1331	
Travel Time (s)		4.5			3.1			15.0			18.2	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	556	338	148	173	319	320	244	314	186	392	362	532
Shared Lane Traffic (%)												
Lane Group Flow (vph)	556	338	148	173	319	320	244	500	0	392	362	532
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		24			24			24			24	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2	1	1	2	1	1	2		1	2	1
Detector Template	Left	Thru	Right	Left	Thru	Right	Left	Thru		Left	Thru	Right
Leading Detector (ft)	20	100	20	20	100	20	20	100		20	100	20
Trailing Detector (ft)	0	0	0	0	0	0	0	0		0	0	0
Detector 1 Position(ft)	0	0	0	0	0	0	0	0		0	0	0
Detector 1 Size(ft)	20	6	20	20	6	20	20	6		20	6	20
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Prot		Perm	Prot		pm+ov	Prot			Prot		pm+ov
Protected Phases	7	4		3	8	1	5	2		1	6	7
Permitted Phases			4			8						6
Detector Phase	7	4	4	3	8	1	5	2		1	6	7

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Switch Phase												
Minimum Initial (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0		2.0	2.0	2.0
Minimum Split (s)	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0		6.0	6.0	6.0
Total Split (s)	16.0	20.0	20.0	12.0	16.0	13.0	14.0	15.0	0.0	13.0	14.0	16.0
Total Split (%)	26.7%	33.3%	33.3%	20.0%	26.7%	21.7%	23.3%	25.0%	0.0%	21.7%	23.3%	26.7%
Maximum Green (s)	12.0	16.0	16.0	8.0	12.0	9.0	10.0	11.0		9.0	10.0	12.0
Yellow Time (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0		1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lead/Lag	Lag	Lead	Lead	Lag	Lead	Lead	Lag	Lag		Lead	Lead	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes		Yes	Yes	Yes
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0
Recall Mode	None	None	None	None	None	None	None	C-Min		None	C-Min	None
Act Effct Green (s)	11.9	14.4	14.4	9.3	11.9	20.9	9.9	11.3		9.0	10.4	26.2
Actuated g/C Ratio	0.20	0.24	0.24	0.16	0.20	0.35	0.16	0.19		0.15	0.17	0.44
v/c Ratio	0.82	0.75	0.30	0.63	0.86	0.53	0.83	0.65		0.76	0.59	0.69
Control Delay	35.1	32.8	5.5	38.2	49.3	9.6	51.2	18.9		26.4	19.0	7.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
Total Delay	35.1	32.8	5.5	38.2	49.3	9.6	51.2	18.9		26.4	19.0	7.5
LOS	D	C	A	D	D	A	D	B		C	B	A
Approach Delay		30.1			31.3			29.5			16.5	
Approach LOS		C			C			C			B	
90th %ile Green (s)	12.0	16.0	16.0	8.0	12.0	9.0	10.0	11.0		9.0	10.0	12.0
90th %ile Term Code	Max	Max	Max	Max	Max	Max	Max	Coord		Max	Coord	Max
70th %ile Green (s)	12.0	16.0	16.0	8.0	12.0	9.0	10.0	11.0		9.0	10.0	12.0
70th %ile Term Code	Max	Max	Max	Max	Max	Max	Max	Coord		Max	Coord	Max
50th %ile Green (s)	12.0	16.0	16.0	8.0	12.0	9.0	10.0	11.0		9.0	10.0	12.0
50th %ile Term Code	Max	Max	Max	Max	Max	Max	Max	Coord		Max	Coord	Max
30th %ile Green (s)	12.0	13.8	13.8	10.2	12.0	9.0	10.0	11.0		9.0	10.0	12.0
30th %ile Term Code	Max	Gap	Gap	Hold	Max	Max	Max	Coord		Max	Coord	Max
10th %ile Green (s)	11.3	10.4	10.4	12.2	11.3	9.0	9.6	12.4		9.0	11.8	11.3
10th %ile Term Code	Gap	Gap	Gap	Hold	Gap	Gap	Gap	Coord		Gap	Coord	Gap
Queue Length 50th (ft)	87	96	0	54	99	25	76	49		57	51	0
Queue Length 95th (ft)	#150	#174	32	#129	#209	49	#172	88		#108	m76	1
Internal Link Dist (ft)		220			103			1020			1251	
Turn Bay Length (ft)	200		200	160			220			160		
Base Capacity (vph)	687	497	531	274	373	599	295	772		515	611	757
Starvation Cap Reductn	0	0	0	0	0	0	0	0		0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0		0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0		0	0	0
Reduced v/c Ratio	0.81	0.68	0.28	0.63	0.86	0.53	0.83	0.65		0.76	0.59	0.70

Intersection Summary

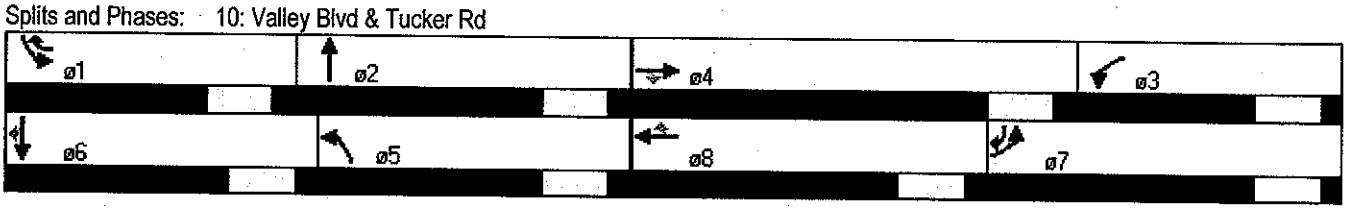
Area Type: Other
Cycle Length: 60
Actuated Cycle Length: 60
Offset: 55 (92%), Referenced to phase 2:NBT and 6:SBT, Start of Green
Natural Cycle: 60

Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.86
Intersection Signal Delay: 25.7 Intersection LOS: C
Intersection Capacity Utilization 67.0% ICU Level of Service C
Analysis Period (min) 15

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 10: Valley Blvd & Tucker Rd



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	51	0	142	168	0	118	125	839	155	116	1063	47
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	75		0	0		0	150		250	180		0
Storage Lanes	1		0	2		0	1		1	1		0
Taper Length (ft)	25		25	25		25	25		25	25		25
Lane Util. Factor	1.00	1.00	1.00	0.97	1.00	1.00	1.00	0.95	1.00	1.00	0.95	0.95
Frt		0.850			0.850				0.850		0.994	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1770	1583	0	3433	1583	0	1770	3539	1583	1770	3518	0
Flt Permitted	0.950			0.950			0.950			0.950		
Satd. Flow (perm)	1770	1583	0	3433	1583	0	1770	3539	1583	1770	3518	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		244			360				172		10	
Link Speed (mph)		25			25			50			50	
Link Distance (ft)		292			291			507			406	
Travel Time (s)		8.0			7.9			6.9			5.5	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	57	0	158	187	0	131	139	932	172	129	1181	52
Shared Lane Traffic (%)												
Lane Group Flow (vph)	57	158	0	187	131	0	139	932	172	129	1233	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		24			24			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2		1	2	1	1	2	
Detector Template	Left	Thru		Left	Thru		Left	Thru	Right	Left	Thru	
Leading Detector (ft)	20	100		20	100		20	100	20	20	100	
Trailing Detector (ft)	0	0		0	0		0	0	0	0	0	
Detector 1 Position(ft)	0	0		0	0		0	0	0	0	0	
Detector 1 Size(ft)	20	6		20	6		20	6	20	20	6	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Split			Split			Prot		Perm	Prot		
Protected Phases	4	4		8	8		5	2		1	6	
Permitted Phases									2			
Detector Phase	4	4		8	8		5	2	2	1	6	

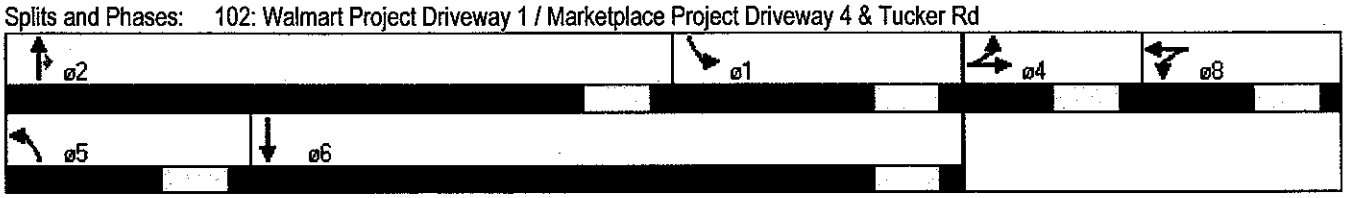
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Switch Phase												
Minimum Initial (s)	2.0	2.0		2.0	2.0		2.0	2.0	2.0	2.0	2.0	
Minimum Split (s)	6.0	6.0		6.0	6.0		6.0	6.0	6.0	6.0	6.0	
Total Split (s)	8.0	8.0	0.0	9.0	9.0	0.0	11.0	30.0	30.0	13.0	32.0	0.0
Total Split (%)	13.3%	13.3%	0.0%	15.0%	15.0%	0.0%	18.3%	50.0%	50.0%	21.7%	53.3%	0.0%
Maximum Green (s)	4.0	4.0		5.0	5.0		7.0	26.0	26.0	9.0	28.0	
Yellow Time (s)	3.0	3.0		3.0	3.0		3.0	3.0	3.0	3.0	3.0	
All-Red Time (s)	1.0	1.0		1.0	1.0		1.0	1.0	1.0	1.0	1.0	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lead/Lag							Lead	Lead	Lead	Lag	Lag	
Lead-Lag Optimize?							Yes	Yes	Yes	Yes	Yes	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0	3.0	3.0	3.0	
Recall Mode	None	None		None	None		None	C-Min	C-Min	None	C-Min	
Act Effct Green (s)	4.8	4.8		5.3	5.3		6.9	28.4	28.4	9.5	31.0	
Actuated g/C Ratio	0.08	0.08		0.09	0.09		0.12	0.47	0.47	0.16	0.52	
v/c Ratio	0.40	0.45		0.62	0.28		0.68	0.56	0.21	0.46	0.68	
Control Delay	37.2	5.5		37.2	1.5		42.5	10.6	1.8	19.2	7.0	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Total Delay	37.2	5.5		37.2	1.5		42.5	10.6	1.8	19.2	7.0	
LOS	D	A		D	A		D	B	A	B	A	
Approach Delay		13.9			22.5			13.0			8.2	
Approach LOS		B			C			B			A	
90th %ile Green (s)	4.0	4.0		5.0	5.0		7.0	26.0	26.0	9.0	28.0	
90th %ile Term Code	Max	Max		Max	Max		Max	Coord	Coord	Max	Coord	
70th %ile Green (s)	4.0	4.0		5.0	5.0		7.0	26.0	26.0	9.0	28.0	
70th %ile Term Code	Max	Max		Max	Max		Max	Coord	Coord	Max	Coord	
50th %ile Green (s)	4.0	4.0		5.0	5.0		7.0	23.7	23.7	11.3	28.0	
50th %ile Term Code	Max	Max		Max	Max		Max	Coord	Coord	Hold	Coord	
30th %ile Green (s)	6.3	6.3		5.0	5.0		7.0	20.6	20.6	12.1	25.7	
30th %ile Term Code	Max	Max		Max	Max		Max	Coord	Coord	Hold	Coord	
10th %ile Green (s)	0.0	0.0		6.5	6.5		0.0	45.5	45.5	0.0	45.5	
10th %ile Term Code	Skip	Skip		Gap	Gap		Skip	Coord	Coord	Skip	Coord	
Queue Length 50th (ft)	18	0		30	0		38	72	0	27	41	
Queue Length 95th (ft)	#54	13		#64	0		m#64	m90	m4	m54	62	
Internal Link Dist (ft)		212			211			427			326	
Turn Bay Length (ft)	75						150		250	180		
Base Capacity (vph)	141	351		303	468		207	1764	875	298	1852	
Starvation Cap Reductn	0	0		0	0		0	0	0	0	0	
Spillback Cap Reductn	0	0		0	0		0	0	0	0	0	
Storage Cap Reductn	0	0		0	0		0	0	0	0	0	
Reduced v/c Ratio	0.40	0.45		0.62	0.28		0.67	0.53	0.20	0.43	0.67	

Intersection Summary

Area Type: Other
Cycle Length: 60
Actuated Cycle Length: 60
Offset: 0 (0%), Referenced to phase 2:NBT and 6:SBT, Start of Green
Natural Cycle: 60

Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.68
Intersection Signal Delay: 11.9 Intersection LOS: B
Intersection Capacity Utilization 64.7% ICU Level of Service C
Analysis Period (min) 15
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 102: Walmart Project Driveway 1 / Marketplace Project Driveway 4 & Tucker Rd



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	562	86	50	706	0	0	0	67	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	80		0	80		0	0		0	0		0
Storage Lanes	0		0	1		0	0		1	0		0
Taper Length (ft)	25		25	25		25	25		25	25		25
Lane Util. Factor	1.00	0.95	0.95	1.00	0.95	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.980							0.865			
Flt Protected				0.950								
Satd. Flow (prot)	0	3468	0	1770	3539	0	0	0	1611	0	0	0
Flt Permitted				0.950								
Satd. Flow (perm)	0	3468	0	1770	3539	0	0	0	1611	0	0	0
Link Speed (mph)		35			35			25			25	
Link Distance (ft)		581			310			266			227	
Travel Time (s)		11.3			6.0			7.3			6.2	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	0	624	96	56	784	0	0	0	74	0	0	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	720	0	56	784	0	0	0	74	0	0	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		24			24			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Sign Control		Free			Free			Stop			Stop	

Intersection Summary

Area Type: Other
Control Type: Unsignalized
Intersection Capacity Utilization 29.1% ICU Level of Service A
Analysis Period (min) 15

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	612	47	86	659	0	101	0	66	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	80		0	160		0	0		0	0		0
Storage Lanes	1		0	1		0	0		1	0		0
Taper Length (ft)	25		25	25		25	25		25	25		25
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.989							0.850			
Flt Protected				0.950				0.950				
Satd. Flow (prot)	1863	1842	0	1770	1863	0	0	1770	1583	0	1863	0
Flt Permitted				0.950				0.950				
Satd. Flow (perm)	1863	1842	0	1770	1863	0	0	1770	1583	0	1863	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		9							73			
Link Speed (mph)		35			35			25			25	
Link Distance (ft)		310			1488			268			223	
Travel Time (s)		6.0			29.0			7.3			6.1	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	0	680	52	96	732	0	112	0	73	0	0	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	732	0	96	732	0	0	112	73	0	0	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2		1	2	1	1	2	
Detector Template	Left	Thru		Left	Thru		Left	Thru	Right	Left	Thru	
Leading Detector (ft)	20	100		20	100		20	100	20	20	100	
Trailing Detector (ft)	0	0		0	0		0	0	0	0	0	
Detector 1 Position(ft)	0	0		0	0		0	0	0	0	0	
Detector 1 Size(ft)	20	6		20	6		20	6	20	20	6	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Prot			Prot			Split		Perm	Split		
Protected Phases	7	4		3	8		2	2		6	6	
Permitted Phases									2			
Detector Phase	7	4		3	8		2	2	2	6	6	

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	0	562	86	50	706	0	0	0	67	0	0	0
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Hourly flow rate (vph)	0	624	96	56	784	0	0	0	74	0	0	0
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type		Raised			Raised							
Median storage veh)		1			1							
Upstream signal (ft)		581			310							
pX, platoon unblocked												
vC, conflicting volume	784			720			1176	1568	360	1282	1616	392
vC1, stage 1 conf vol							672	672		896	896	
vC2, stage 2 conf vol							503	896		387	720	
vCu, unblocked vol	784			720			1176	1568	360	1282	1616	392
tC, single (s)	4.1			4.1			7.5	6.5	6.9	7.5	6.5	6.9
tC, 2 stage (s)							6.5	5.5		6.5	5.5	
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	100			94			100	100	88	100	100	100
cM capacity (veh/h)	830			877			266	221	637	205	205	607

Direction, Lane #	EB 1	EB 2	WB 1	WB 2	WB 3	NB 1
Volume Total	416	304	56	392	392	74
Volume Left	0	0	56	0	0	0
Volume Right	0	96	0	0	0	74
cSH	1700	1700	877	1700	1700	637
Volume to Capacity	0.24	0.18	0.06	0.23	0.23	0.12
Queue Length 95th (ft)	0	0	4	0	0	9
Control Delay (s)	0.0	0.0	9.4	0.0	0.0	11.4
Lane LOS			A			B
Approach Delay (s)	0.0		0.6			11.4
Approach LOS						B

Intersection Summary			
Average Delay	0.8		
Intersection Capacity Utilization	29.1%	ICU Level of Service	A
Analysis Period (min)	15		

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Switch Phase												
Minimum Initial (s)	2.0	2.0		2.0	2.0		2.0	2.0	2.0	2.0	2.0	
Minimum Split (s)	6.0	6.0		6.0	6.0		6.0	6.0	6.0	6.0	6.0	
Total Split (s)	6.0	34.0	0.0	10.0	38.0	0.0	10.0	10.0	10.0	6.0	6.0	0.0
Total Split (%)	10.0%	56.7%	0.0%	16.7%	63.3%	0.0%	16.7%	16.7%	16.7%	10.0%	10.0%	0.0%
Maximum Green (s)	2.0	30.0		6.0	34.0		6.0	6.0	6.0	2.0	2.0	
Yellow Time (s)	3.0	3.0		3.0	3.0		3.0	3.0	3.0	3.0	3.0	
All-Red Time (s)	1.0	1.0		1.0	1.0		1.0	1.0	1.0	1.0	1.0	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lead/Lag	Lead	Lag		Lead	Lag							
Lead-Lag Optimize?	Yes	Yes		Yes	Yes							
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0	3.0	3.0	3.0	
Recall Mode	None	C-Max		None	C-Max		Min	Min	Min	Min	Min	
Act Effct Green (s)		32.0		5.9	40.0			6.0	6.0			
Actuated g/C Ratio		0.53		0.10	0.67			0.10	0.10			
v/c Ratio		0.74		0.55	0.59			0.63	0.33			
Control Delay		11.8		39.3	7.9			44.8	11.9			
Queue Delay		0.0		0.0	0.0			0.0	0.0			
Total Delay		11.8		39.3	7.9			44.8	11.9			
LOS		B		D	A			D	B			
Approach Delay		11.8			11.6			31.8				
Approach LOS		B			B			C				
90th %ile Green (s)	0.0	30.0		6.0	40.0		6.0	6.0	6.0	2.0	2.0	
90th %ile Term Code	Skip	Coord		Max	Coord		Max	Max	Max	Max	Max	
70th %ile Green (s)	0.0	30.0		6.0	40.0		6.0	6.0	6.0	2.0	2.0	
70th %ile Term Code	Skip	Coord		Max	Coord		Max	Max	Max	Max	Max	
50th %ile Green (s)	0.0	30.0		6.0	40.0		6.0	6.0	6.0	2.0	2.0	
50th %ile Term Code	Skip	Coord		Max	Coord		Max	Max	Max	Max	Max	
30th %ile Green (s)	0.0	30.0		6.0	40.0		6.0	6.0	6.0	2.0	2.0	
30th %ile Term Code	Skip	Coord		Max	Coord		Max	Max	Max	Max	Max	
10th %ile Green (s)	0.0	40.0		0.0	40.0		6.0	6.0	6.0	2.0	2.0	
10th %ile Term Code	Skip	Coord		Skip	Coord		Max	Max	Max	Max	Max	
Queue Length 50th (ft)		126		30	103			35	0			
Queue Length 95th (ft)		m166		#76	173			#91	28			
Internal Link Dist (ft)		230			1408			188			143	
Turn Bay Length (ft)				160								
Base Capacity (vph)		987		177	1242			177	224			
Starvation Cap Reductn		0		0	0			0	0			
Spillback Cap Reductn		0		0	0			0	0			
Storage Cap Reductn		0		0	0			0	0			
Reduced v/c Ratio		0.74		0.54	0.59			0.63	0.33			

Intersection Summary

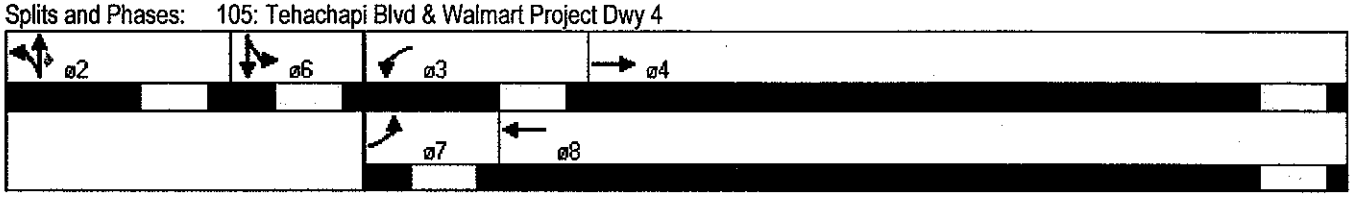
Area Type: Other
Cycle Length: 60
Actuated Cycle Length: 60
Offset: 32 (53%), Referenced to phase 4:EBT and 8:WBT, Start of Green
Natural Cycle: 60

Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.74
Intersection Signal Delay: 13.8 Intersection LOS: B
Intersection Capacity Utilization 55.4% ICU Level of Service B
Analysis Period (min) 15

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 105: Tehachapi Blvd & Walmart Project Dwy 4



Lane Group	WBL	WBR	NBL	NBT	SBT	SBR
Lane Configurations						
Volume (vph)	0	25	24	982	1200	14
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0	0	60			0
Storage Lanes	0	1	1			0
Taper Length (ft)	25	25	25			25
Lane Util. Factor	1.00	1.00	1.00	0.95	0.95	0.95
Frt		0.865			0.998	
Flt Protected			0.950			
Satd. Flow (prot)	0	1611	1770	3539	3532	0
Flt Permitted			0.950			
Satd. Flow (perm)	0	1611	1770	3539	3532	0
Link Speed (mph)	25			50	50	
Link Distance (ft)	288			406	100	
Travel Time (s)	7.9			5.5	1.4	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	0	28	27	1091	1333	16
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	28	27	1091	1349	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	0			12	12	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	9	15			9
Sign Control	Stop			Free	Free	

Intersection Summary

Area Type: Other
Control Type: Unsignalized
Intersection Capacity Utilization 43.6% ICU Level of Service A
Analysis Period (min) 15

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Volume (veh/h)	0	25	24	982	1200	14
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Hourly flow rate (vph)	0	28	27	1091	1333	16
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type				None	None	
Median storage veh)						
Upstream signal (ft)				406	462	
pX, platoon unblocked	0.87	0.86	0.86			
vC, conflicting volume	1940	674	1349			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	1051	286	1073			
tC, single (s)	6.8	6.9	4.1			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.2			
p0 queue free %	100	95	95			
cM capacity (veh/h)	185	609	553			

Direction, Lane #	EB 1	NB 1	NB 2	NB 3	SB 1	SB 2
Volume Total	28	27	546	546	889	460
Volume Left	0	27	0	0	0	0
Volume Right	28	0	0	0	0	16
cSH	609	553	1700	1700	1700	1700
Volume to Capacity	0.05	0.05	0.32	0.32	0.52	0.27
Queue Length 95th (ft)	3	3	0	0	0	0
Control Delay (s)	11.2	11.8	0.0	0.0	0.0	0.0
Lane LOS	B	B				
Approach Delay (s)	11.2	0.3			0.0	
Approach LOS	B					

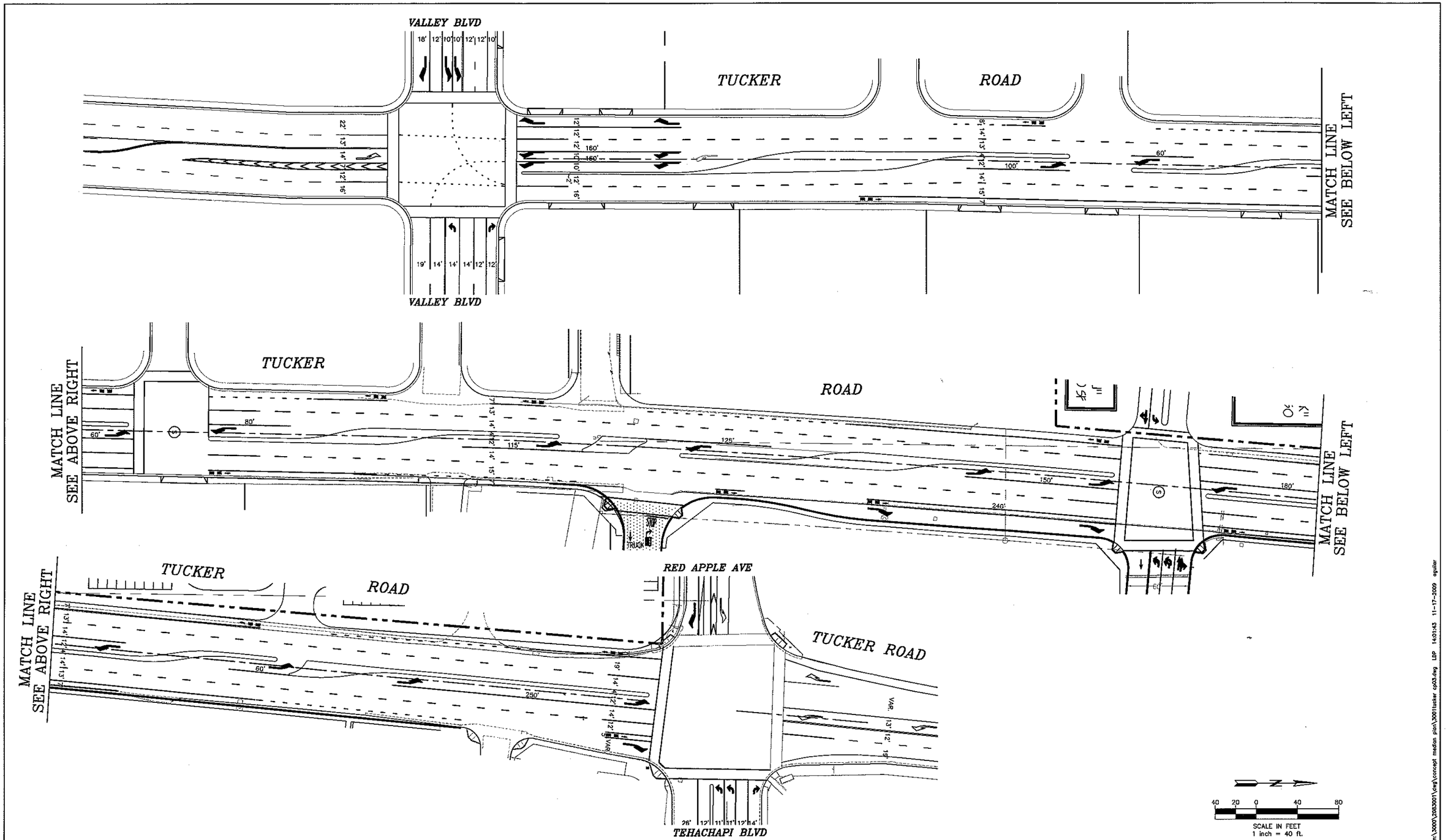
Intersection Summary			
Average Delay	0.3		
Intersection Capacity Utilization	43.6%	ICU Level of Service	A
Analysis Period (min)	15		

APPENDIX I

CONCEPT MEDIAN PLANS

APPENDIX I-I

TUCKER ROAD



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7590 Corporate Drive, Suite 122, Costa Mesa, CA 92626 (714) 641-5567
4542 Ruffner Street, Suite 100, San Diego, CA 92111 (858) 300-8800

REVISIONS					
No.	DATE	BY	DESCRIPTION	APP'D BY	DATE

BENCH MARK:

APPROVALS		
DIVISION	BY	DATE
DESIGN		
TRAFFIC		
RIGHT OF WAY		
UTILITIES		
PROJECT MANAGER		

APPROVED

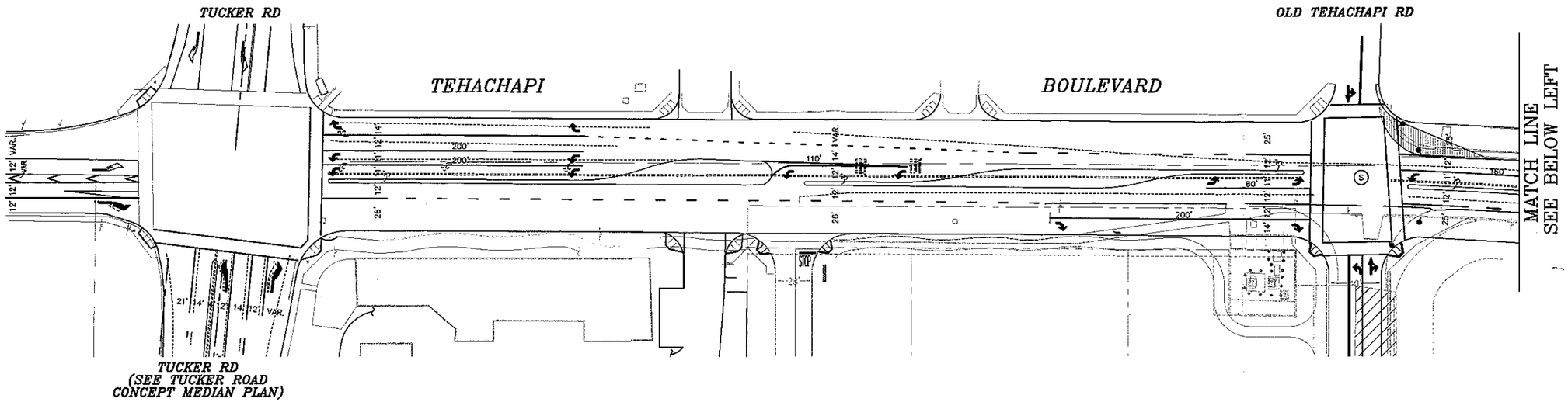
CHIEF ENGINEER RCE # DATE

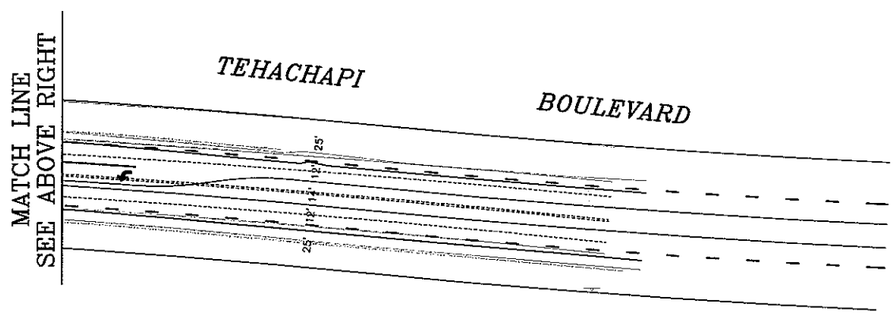
TUCKER ROAD CONCEPT MEDIAN PLAN TEHACHAPI APPENDIX I-I

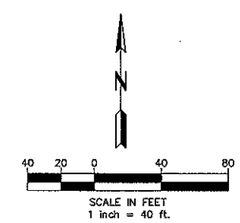
PROJECT NO. | DWG | SHEET OF

APPENDIX I-II

TEHACHAPI BOULEVARD







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DIVISION	BY	DATE
DESIGN		
TRAFFIC		
RIGHT OF WAY		
UTILITIES		
PROJECT MANAGER		

APPROVED

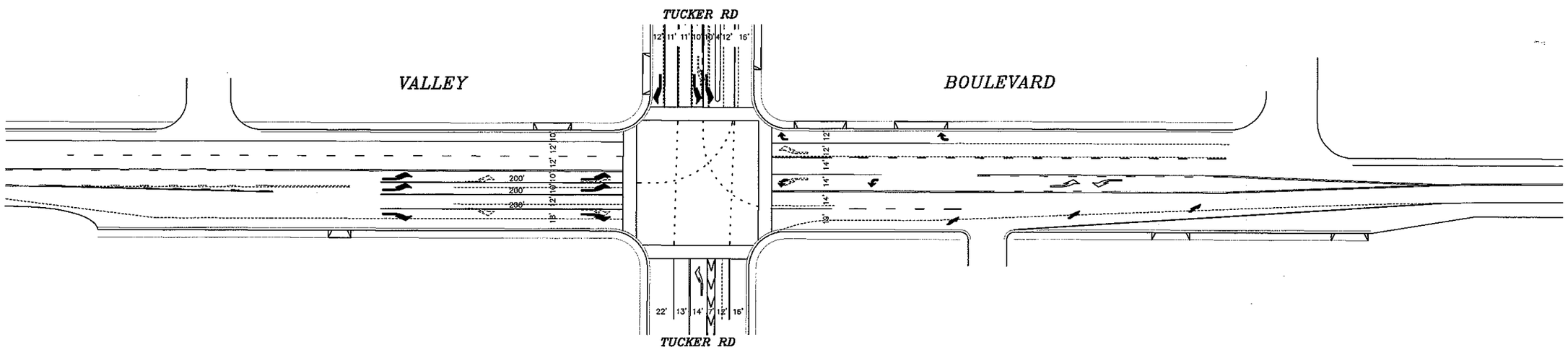
CHIEF ENGINEER RCE # DATE

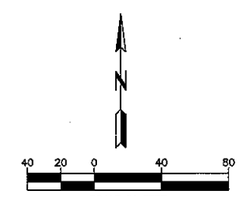
TEHACHAPI BOULEVARD CONCEPT MEDIAN PLAN TEHACHAPI APPENDIX I-II

PROJECT NO. | DWG | SHEET OF

APPENDIX I-III

VALLEY BOULEVARD





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PREPARED BY:

LINSCOTT LAW & GREENSPAN engineers

LINSCOTT, LAW & GREENSPAN, ENGINEERS
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REVISIONS

No.	DATE	BY	DESCRIPTION	APP'D BY	DATE

BENCH MARK:

APPROVALS

DIVISION	BY	DATE
DESIGN		
TRAFFIC		
RIGHT OF WAY		
UTILITIES		
PROJECT MANAGER		

APPROVED

CHIEF ENGINEER RCE # DATE

VALLEY BOULEVARD CONCEPT MEDIAN PLAN TEHACAHAPI APPENDIX I-III

PROJECT NO. | DWG | SHEET OF

APPENDIX I-IV

EXISTING TRAFFIC COUNTS FOR THE INTERSECTION OF TUCKER ROAD AND JIFFY LUBE/ORCHID PLAZA DRIVEWAY

Crenshaw Traffic Engineering

File Name : TUCKER-
Site Code : 01281001
Start Date : 1/28/2010
Page No : 1

Groups Printed- Unshifted

	TUCKER RD From North SB				JIFFY LUBE From East WB				TUCKER RD From South NB				SHOPPING CTR From West EB				
Start Time	Right	Thru	Left	Peds	Right	Thru	Left	Peds	Right	Thru	Left	Peds	Right	Thru	Left	Peds	Int. Tota
Factor	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	
07:00 AM	2	72	2	0	2	0	0	0	2	123	1	0	0	0	0	0	204
07:15 AM	0	55	2	0	0	0	0	0	0	122	2	0	2	1	0	0	184
07:30 AM	1	52	0	0	1	0	0	0	0	98	2	0	2	0	0	0	156
07:45 AM	2	41	1	0	0	0	1	0	0	100	4	0	1	0	0	0	150
Total	5	220	5	0	3	0	1	0	2	443	9	0	5	1	0	0	694
08:00 AM	0	61	1	0	1	0	3	0	4	85	4	0	2	0	0	0	16
08:15 AM	0	53	1	0	3	0	0	0	4	109	3	0	4	0	0	0	17
08:30 AM	1	77	5	0	2	0	3	0	4	105	3	0	2	0	0	0	20
08:45 AM	1	102	4	0	6	1	4	0	6	120	4	0	2	0	0	0	250
Total	2	293	11	0	12	1	10	0	18	419	14	0	10	0	0	0	790
09:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
09:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
09:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
09:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
01:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
01:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
01:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
01:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
02:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
02:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
02:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
02:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
03:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
03:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
03:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
03:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:00 PM	2	154	1	0	3	0	3	0	5	160	17	0	9	1	0	0	35
04:15 PM	6	152	4	0	3	0	6	0	1	110	10	0	11	1	2	0	30
04:30 PM	6	163	5	0	1	0	3	0	1	120	12	0	16	1	2	0	33
04:45 PM	2	152	2	0	3	0	4	0	3	126	10	0	12	0	2	0	31
Total	16	621	12	0	10	0	16	0	10	516	49	0	48	3	6	0	130

Crenshaw Traffic Engineering

File Name : TUCKER-
Site Code : 01281001
Start Date : 1/28/2010
Page No : 2

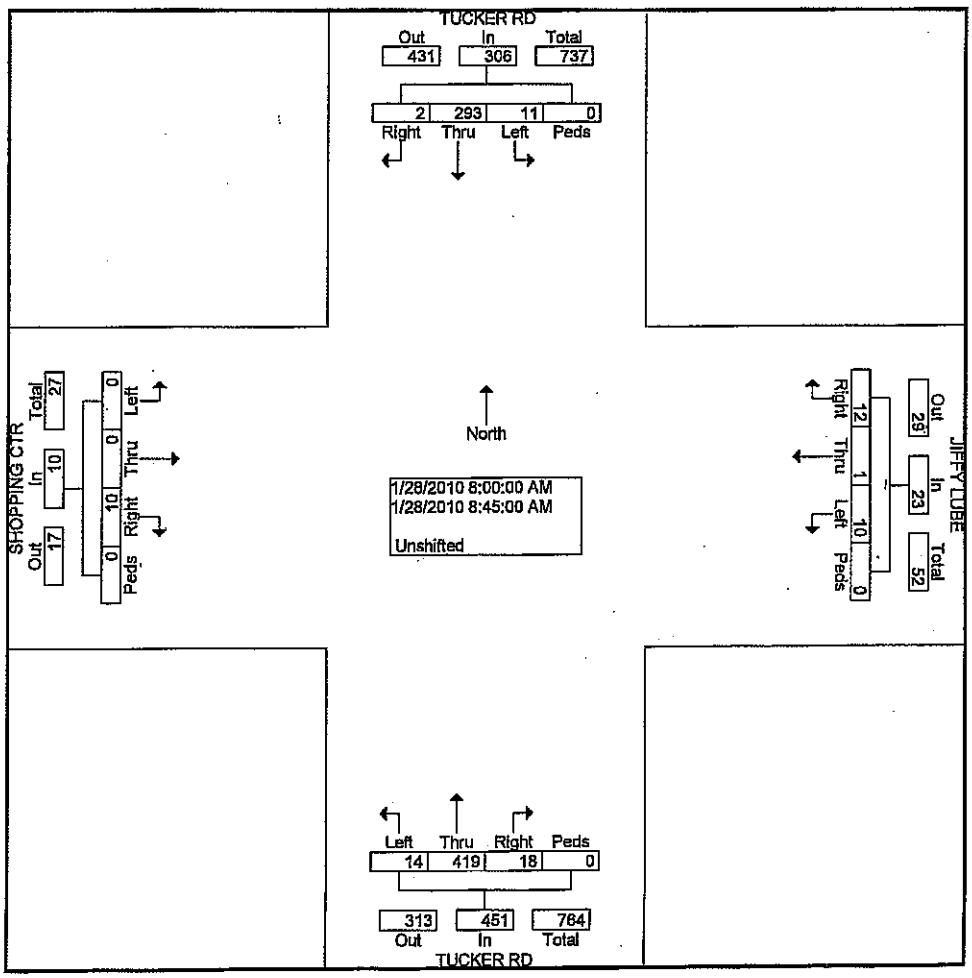
Groups Printed- Unshifted

	TUCKER RD From North				JIFFY LUBE From East				TUCKER RD From South				SHOPPING CTR From West				
Start Time	Right	Thru	Left	Peds	Right	Thru	Left	Peds	Right	Thru	Left	Peds	Right	Thru	Left	Peds	Int. Tota
Factor	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	
05:00 PM	7	163	1	0	4	0	2	0	5	135	13	0	14	0	2	0	346
05:15 PM	8	184	2	0	0	0	1	0	1	123	15	0	13	0	0	0	347
05:30 PM	5	163	0	0	1	0	2	0	2	122	9	0	11	0	2	0	317
05:45 PM	7	180	2	0	0	0	0	0	3	120	24	0	21	0	1	0	358
Total	27	690	5	0	5	0	5	0	11	500	61	0	59	0	5	0	1368
Grand Total	50	1824	33	0	30	1	32	0	41	1878	133	0	122	4	11	0	4159
Apprch %	2.6	95.6	1.7	0.0	47.6	1.6	50.8	0.0	2.0	91.5	6.5	0.0	89.1	2.9	8.0	0.0	
Total %	1.2	43.9	0.8	0.0	0.7	0.0	0.8	0.0	1.0	45.2	3.2	0.0	2.9	0.1	0.3	0.0	

Crenshaw Traffic Engineering

File Name : TUCKER-
Site Code : 01281001
Start Date : 1/28/2010
Page No : 3

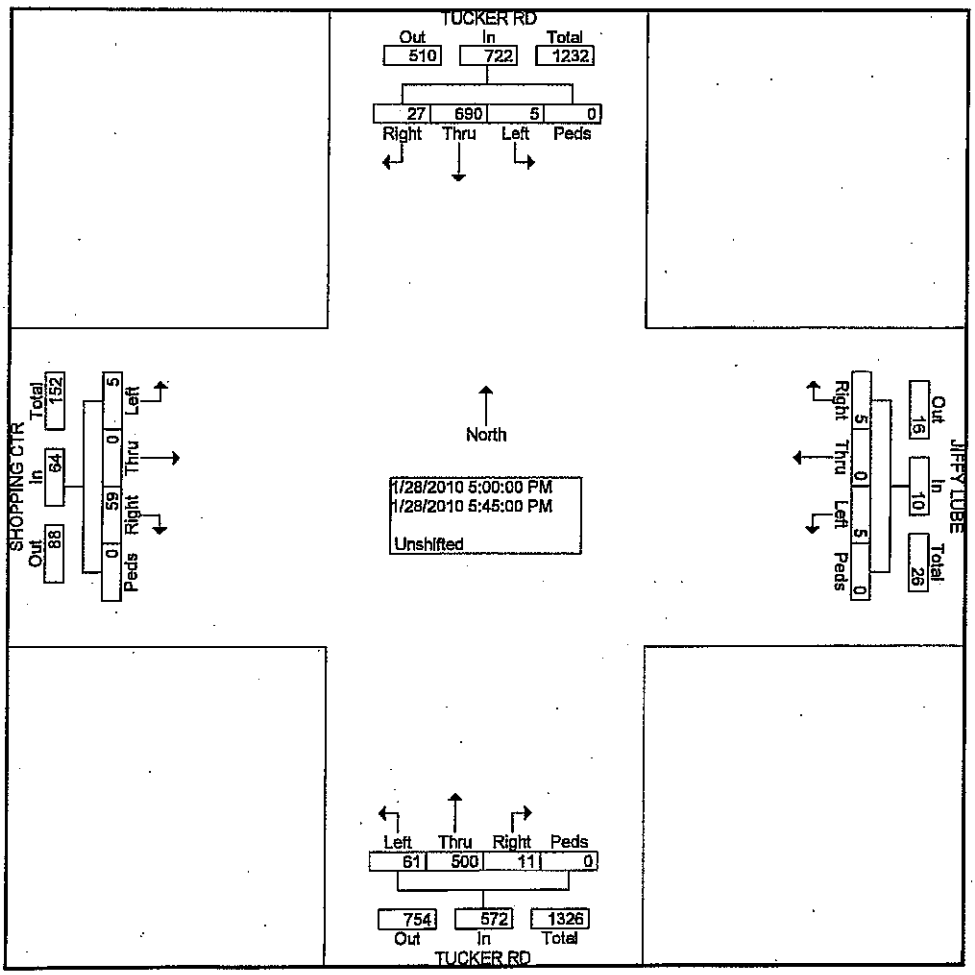
	TUCKER RD From North					JIFFY LUBE From East					TUCKER RD From South					SHOPPING CTR From West					
Start Time	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Int. Total
ak Hour From 07:00 AM to 11:45 AM - Peak 1 of 1																					
tersection	08:00 AM																				
Volume	2	293	11	0	306	12	1	10	0	23	18	419	14	0	451	10	0	0	0	10	790
Percent	0.7	95.8	3.6	0.0		52.2	4.3	43.5	0.0		4.0	92.9	3.1	0.0		100.0	0.0	0.0	0.0		
08:45 Volume	1	102	4	0	107	6	1	4	0	11	6	120	4	0	130	2	0	0	0	2	250
Peak Factor																					0.79
High Int.	08:45 AM					08:45 AM					08:45 AM					08:15 AM					
Volume	1	102	4	0	107	6	1	4	0	11	6	120	4	0	130	4	0	0	0	4	
Peak Factor					0.715					0.523					0.867					0.625	



Crenshaw Traffic Engineering

File Name : TUCKER-
Site Code : 01281001
Start Date : 1/28/2010
Page No : 4

	TUCKER RD From North					JIFFY LUBE From East					TUCKER RD From South					SHOPPING CTR From West					
Start Time	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Int. Total
ak Hour From 12:00 PM to 05:45 PM - Peak 1 of 1																					
tersection	05:00 PM																				
Volume	27	690	5	0	722	5	0	5	0	10	11	500	61	0	572	59	0	5	0	64	1368
Percent	3.7	95.6	0.7	0.0		50.0	0.0	50.0	0.0		1.9	87.4	10.7	0.0		92.2	0.0	7.8	0.0		
05:45 Volume	7	180	2	0	189	0	0	0	0	0	3	120	24	0	147	21	0	1	0	22	358
Peak Factor																					0.95
High Int.	05:15 PM					05:00 PM					05:00 PM					05:45 PM					
Volume	8	184	2	0	194	4	0	2	0	6	5	135	13	0	153	21	0	1	0	22	
Peak Factor					0.930					0.417					0.935					0.727	



APPENDIX I-V

YEAR 2011 CUMULATIVE PLUS PROJECT TRAFFIC CONDITIONS LEVEL OF SERVICE CALCULATION WORKSHEETS

AM Cumulative Plus Project (2011)
Walmart, Tehachapi
Linscott, Law and Greenspan, Engineers

Level Of Service Computation Report
2000 HCM Unsignalized Method (Future Volume Alternative)

****

Intersection #1000 Tucker Road at Jiffy Lube/Orchid Plaza Driveway

****

Average Delay (sec/veh): 0.7 Worst Case Level Of Service: C[22.2]

****

Street Name:	Tucker Road						Jiffy Lube/Orchid Plaza Driveway					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L - T - R			L - T - R			L - T - R			L - T - R		
Control:	Uncontrolled			Uncontrolled			Stop Sign			Stop Sign		
Rights:	Include			Include			Include			Include		
Lanes:	1 0 1 1 0			1 0 1 1 0			0 0 0 0 1			0 0 1! 0 0		
Volume Module:												
Base Vol:	14	419	18	11	293	2	0	0	10	10	1	12
Growth Adj:	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04
Initial Bse:	15	436	19	11	305	2	0	0	10	10	1	12
Added Vol:	0	297	0	0	212	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	15	733	19	11	517	2	0	0	10	10	1	12
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
PHF Volume:	16	814	21	13	574	2	0	0	12	12	1	14
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
FinalVolume:	16	814	21	13	574	2	0	0	12	12	1	14
Critical Gap Module:												
Critical Gp:	4.1	xxxx	xxxxx	4.1	xxxx	xxxxx	xxxxx	xxxx	6.9	7.5	6.5	6.9
FollowUpTim:	2.2	xxxx	xxxxx	2.2	xxxx	xxxxx	xxxxx	xxxx	3.3	3.5	4.0	3.3
Capacity Module:												
Cnflict Vol:	576	xxxx	xxxxx	835	xxxx	xxxxx	xxxx	xxxx	288	1169	1459	417
Potent Cap.:	1007	xxxx	xxxxx	807	xxxx	xxxxx	xxxx	xxxx	714	151	131	590
Move Cap.:	1007	xxxx	xxxxx	807	xxxx	xxxxx	xxxx	xxxx	714	145	126	590
Volume/Cap:	0.02	xxxx	xxxx	0.02	xxxx	xxxx	xxxx	xxxx	0.02	0.08	0.01	0.02
Level Of Service Module:												
2Way95thQ:	0.0	xxxx	xxxxx	0.0	xxxx	xxxxx	xxxx	xxxx	0.0	xxxx	xxxx	xxxxx
Control Del:	8.6	xxxx	xxxxx	9.5	xxxx	xxxxx	xxxxx	xxxx	10.1	xxxxx	xxxx	xxxxx
LOS by Move:	A	*	*	A	*	*	*	*	B	*	*	*
Movement:	LT - LTR - RT			LT - LTR - RT			LT - LTR - RT			LT - LTR - RT		
Shared Cap.:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	236	xxxxx
SharedQueue:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	0.4	xxxxx
Shrd ConDel:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	22.2	xxxxx
Shared LOS:	*	*	*	*	*	*	*	*	*	*	C	*
ApproachDel:	xxxxxx			xxxxxx			10.1			22.2		
ApproachLOS:	*			*			B			C		

****

Note: Queue reported is the number of cars per lane.

****

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PM Cumulative Plus Project (2011)
Walmart, Tehachapi
Linscott, Law and Greenspan, Engineers

Level Of Service Computation Report
2000 HCM Unsignalized Method (Future Volume Alternative)

****

Intersection #1000 Tucker Road at Jiffy Lube/Orchid Plaza Driveway

****

Average Delay (sec/veh): 1.5 Worst Case Level Of Service: F[64.8]

****

Street Name:	Tucker Road						Jiffy Lube/Orchid Plaza Driveway					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Control:	Uncontrolled			Uncontrolled			Stop Sign			Stop Sign		
Rights:	Include			Include			Include			Include		
Lanes:	1 0	1 1	0	1 0	1 1	0	0 0	1! 0	0	0 0	1! 0	0
Volume Module:												
Base Vol:	61	500	11	5	690	27	5	0	59	5	0	5
Growth Adj:	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04
Initial Bse:	63	520	11	5	718	28	5	0	61	5	0	5
Added Vol:	0	391	0	0	414	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	63	911	11	5	1132	28	5	0	61	5	0	5
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
PHF Volume:	70	1012	13	6	1257	31	6	0	68	6	0	6
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
FinalVolume:	70	1012	13	6	1257	31	6	0	68	6	0	6
Critical Gap Module:												
Critical Gp:	4.1	xxxx	xxxxx	4.1	xxxx	xxxxx	7.5	6.5	6.9	7.5	6.5	6.9
FollowUpTim:	2.2	xxxx	xxxxx	2.2	xxxx	xxxxx	3.5	4.0	3.3	3.5	4.0	3.3
Capacity Module:												
Cnflict Vol:	1289	xxxx	xxxxx	1025	xxxx	xxxxx	1932	2450	644	1800	2460	512
Potent Cap.:	545	xxxx	xxxxx	685	xxxx	xxxxx	41	31	420	51	31	512
Move Cap.:	545	xxxx	xxxxx	685	xxxx	xxxxx	36	27	420	38	27	512
Volume/Cap:	0.13	xxxx	xxxx	0.01	xxxx	xxxx	0.16	0.00	0.16	0.15	0.00	0.01
Level Of Service Module:												
2Way95thQ:	0.4	xxxx	xxxxx	0.0	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
Control Del:	12.6	xxxx	xxxxx	10.3	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
LOS by Move:	B	*	*	B	*	*	*	*	*	*	*	*
Movement:	LT -	LTR -	RT	LT -	LTR -	RT	LT -	LTR -	RT	LT -	LTR -	RT
Shared Cap.:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	229	xxxxx	xxxx	72	xxxxx
SharedQueue:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	1.3	xxxxx	xxxxx	0.5	xxxxx
Shrd ConDel:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	28.0	xxxxx	xxxxx	64.8	xxxxx
Shared LOS:	*	*	*	*	*	*	*	D	*	*	F	*
ApproachDel:	xxxxxx			xxxxxx			28.0			64.8		
ApproachLOS:	*			*			D			F		

****

Note: Queue reported is the number of cars per lane.

****

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APPENDIX I-VI

YEAR 2011 CUMULATIVE PLUS PROJECT TRAFFIC CONDITIONS TRAFFIC SIGNAL WARRANT ANALYSIS WORKSHEETS

Peak Hour Traffic Signal Warrant Analysis[1]

CRITERIA A. ***Are all of the following three criteria met:*** **N**

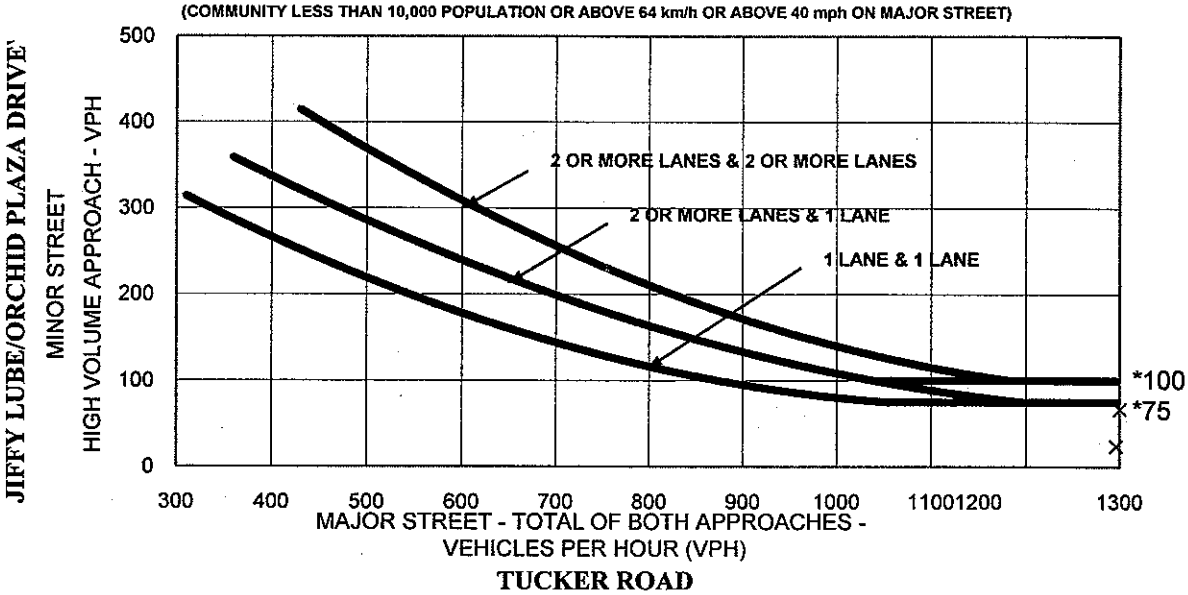
Criteria Description	Yes/No (Y/N)
1. The total stopped time delay experienced by the traffic on one minor-street approach (one direction only) controlled by a STOP sign equals or exceeds: 4 vehicle-hours for a one-lane approach; or 5 vehicle-hours for a two-lane approach, and	N
2. The volume on the same minor-street approach (one direction only) equals or exceeds 100 vehicles per hour for one moving lane of traffic or 150 vehicles per hour for two moving lanes, and	N
3. The total entering volume serviced during the hour equals or exceeds 650 vehicles per hour for intersections with three approaches or 800 vehicles per hour for intersections with four or more approaches.	Y

CRITERIA B. ***Does the plotted point [2] fall above the applicable curve in Figure 4C-3 (below) for the existing combination of approach lanes?*** **N**

Approach	Number of Lanes		Vehicles Per Hour	
	1	2 or more	AM Pk Hr	PM Pk Hr
Major Street (Total of Both Approaches)	--	X	1,296	2,151
Minor Street (Higher of Approach)	X	--	24	67

FIGURE 4C-4. WARRANT 3, PEAK HOUR (70% FACTOR)

(COMMUNITY LESS THAN 10,000 POPULATION OR ABOVE 64 km/h OR ABOVE 40 mph ON MAJOR STREET)



*Note: 100 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 75 vph applies as the lower threshold volume for a minor-street approach with one lane.

Has either Criteria A or B been satisfied?	N

#1000. Tucker Road at Jiffy Lube/Orchid Plaza Driveway
TRAFFIC SIGNAL WARRANT is NOT SATISFIED
for Year 2011 Cumulative Plus Project

[1] *California Manual on Uniform Traffic Control Devices (MUTCD)* - Warrant #3

[2] *All-Way Stop Control (Part A of Warrant 3 is not applicable)*
the higher-volume minor-street approach (one direction only) for 1 hour (any four consecutive 15-minute periods) of an average day.

#1000 Rural.xls

AM Cumulative Plus Project (2011)
Walmart, Tehachapi
Linscott, Law and Greenspan, Engineers

Peak Hour Delay Signal Warrant Report

****

Intersection #1000 Tucker Road at Jiffy Lube/Orchid Plaza Driveway

****

Future Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound	South Bound	East Bound	West Bound
Movement:	L - T - R	L - T - R	L - T - R	L - T - R
Control:	Uncontrolled	Uncontrolled	Stop Sign	Stop Sign
Lanes:	1 0 1 1 0	1 0 1 1 0	0 0 0 0 1	0 0 1! 0 0
Initial Vol:	15 733 19	11 517 2	0 0 10	10 1 12
ApproachDel:	xxxxxx	xxxxxx	10.1	22.2

Approach[eastbound][lanes=1][control=Stop Sign]
Signal Warrant Rule #1: [vehicle-hours=0.0]
FAIL - Vehicle-hours less than 4 for one lane approach.
Signal Warrant Rule #2: [approach volume=10]
FAIL - Approach volume less than 100 for one lane approach.
Signal Warrant Rule #3: [approach count=4][total volume=1331]
SUCCEED - Total volume greater than or equal to 800 for intersection with four or more approaches.

Approach[westbound][lanes=1][control=Stop Sign]
Signal Warrant Rule #1: [vehicle-hours=0.1]
FAIL - Vehicle-hours less than 4 for one lane approach.
Signal Warrant Rule #2: [approach volume=24]
FAIL - Approach volume less than 100 for one lane approach.
Signal Warrant Rule #3: [approach count=4][total volume=1331]
SUCCEED - Total volume greater than or equal to 800 for intersection with four or more approaches.

SIGNAL WARRANT DISCLAIMER

This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

The peak hour warrant analysis in this report is not intended to replace a rigorous and complete traffic signal warrant analysis by the responsible jurisdiction. Consideration of the other signal warrants, which is beyond the scope of this software, may yield different results.

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PM Cumulative Plus Project (2011)
Walmart, Tehachapi
Linscott, Law and Greenspan, Engineers

Peak Hour Delay Signal Warrant Report

****

Intersection #1000 Tucker Road at Jiffy Lube/Orchid Plaza Driveway

****

Future Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Uncontrolled			Uncontrolled			Stop Sign			Stop Sign		
Lanes:	1 0 1 1 0			1 0 1 1 0			0 0 1! 0 0			0 0 1! 0 0		
Initial Vol:	63	911	11	5	1132	28	5	0	61	5	0	5
ApproachDel:	xxxxxx			xxxxxx			28.0			64.8		

Approach[eastbound][lanes=1][control=Stop Sign]
Signal Warrant Rule #1: [vehicle-hours=0.5]
FAIL - Vehicle-hours less than 4 for one lane approach.
Signal Warrant Rule #2: [approach volume=67]
FAIL - Approach volume less than 100 for one lane approach.
Signal Warrant Rule #3: [approach count=4][total volume=2228]
SUCCEED - Total volume greater than or equal to 800 for intersection with four or more approaches.

Approach[westbound][lanes=1][control=Stop Sign]
Signal Warrant Rule #1: [vehicle-hours=0.2]
FAIL - Vehicle-hours less than 4 for one lane approach.
Signal Warrant Rule #2: [approach volume=10]
FAIL - Approach volume less than 100 for one lane approach.
Signal Warrant Rule #3: [approach count=4][total volume=2228]
SUCCEED - Total volume greater than or equal to 800 for intersection with four or more approaches.

SIGNAL WARRANT DISCLAIMER

This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

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AM Cumulative Plus Project (2011)
Walmart, Tehachapi
Linscott, Law and Greenspan, Engineers

Peak Hour Volume Signal Warrant Report [Urban]

****

Intersection #1000 Tucker Road at Jiffy Lube/Orchid Plaza Driveway

****

Future Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound	South Bound	East Bound	West Bound
Movement:	L - T - R	L - T - R	L - T - R	L - T - R
Control:	Uncontrolled	Uncontrolled	Stop Sign	Stop Sign
Lanes:	1 0 1 1 0	1 0 1 1 0	0 0 0 0 1	0 0 1! 0 0
Initial Vol:	15 733 19	11 517 2	0 0 10	10 1 12

Major Street Volume: 1296
Minor Approach Volume: 24
Minor Approach Volume Threshold: 195

SIGNAL WARRANT DISCLAIMER

This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

The peak hour warrant analysis in this report is not intended to replace a rigorous and complete traffic signal warrant analysis by the responsible jurisdiction. Consideration of the other signal warrants, which is beyond the scope of this software, may yield different results.

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PM Cumulative Plus Project (2011)
Walmart, Tehachapi
Linscott, Law and Greenspan, Engineers

Peak Hour Volume Signal Warrant Report [Urban]

****

Intersection #1000 Tucker Road at Jiffy Lube/Orchid Plaza Driveway

****

Future Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Uncontrolled			Uncontrolled			Stop Sign			Stop Sign		
Lanes:	1 0 1	1 0		1 0 1	1 0		0 0 1!	0 0		0 0 1!	0 0	
Initial Vol:	63	911	11	5	1132	28	5	0	61	5	0	5

Major Street Volume: 2151
Minor Approach Volume: 67
Minor Approach Volume Threshold: 21 [less than minimum of 100]

SIGNAL WARRANT DISCLAIMER

This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

The peak hour warrant analysis in this report is not intended to replace a rigorous and complete traffic signal warrant analysis by the responsible jurisdiction. Consideration of the other signal warrants, which is beyond the scope of this software, may yield different results.

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APPENDIX J

PROJECT DRIVEWAYS LEVEL OF SERVICE CALCULATION WORKSHEETS

APPENDIX J-I

YEAR 2011 CUMULATIVE PLUS PROJECT TRAFFIC CONDITIONS

AM Cumulative Plus Project (2011)
Walmart, Tehachapi
Linscott, Law and Greenspan, Engineers

Level Of Service Computation Report
2000 HCM Operations Method (Future Volume Alternative)

****

Intersection #102 Tucker Road at Walmart Project Driveway 1 / Marketplace Projec

****

Cycle (sec):	90	Critical Vol./Cap.(X):	0.422
Loss Time (sec):	16	Average Delay (sec/veh):	16.1
Optimal Cycle:	90	Level Of Service:	B

****

Street Name:	Tucker Road						Walmart Project Driveway 1 / Mark					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L - T - R			L - T - R			L - T - R			L - T - R		
Control:	Protected			Protected			Split Phase			Split Phase		
Rights:	Include			Include			Include			Include		
Min. Green:	6	6	6	6	6	6	6	6	6	6	6	6
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	1 0	2 0	1	1 0	1	1 0	1 0	0 1	0	2 0	0 1	0
Volume Module:												
Base Vol:	0	622	0	0	810	0	0	0	0	0	0	0
Growth Adj:	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04
Initial Bse:	0	647	0	0	842	0	0	0	0	0	0	0
Added Vol:	37	195	63	33	144	1	4	0	23	45	0	40
PasserByVol:	4	-35	31	20	-23	3	2	0	2	19	0	29
Initial Fut:	41	807	94	53	963	4	6	0	25	64	0	69
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
PHF Volume:	46	897	104	59	1070	4	7	0	28	71	0	77
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	46	897	104	59	1070	4	7	0	28	71	0	77
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	46	897	104	59	1070	4	7	0	28	71	0	77
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.95	0.95	0.85	0.95	0.95	0.95	0.95	1.00	0.85	0.92	1.00	0.85
Lanes:	1.00	2.00	1.00	1.00	1.99	0.01	1.00	0.00	1.00	2.00	0.00	1.00
Final Sat.:	1805	3610	1615	1805	3591	15	1805	0	1615	3502	0	1615
Capacity Analysis Module:												
Vol/Sat:	0.03	0.25	0.06	0.03	0.30	0.30	0.00	0.00	0.02	0.02	0.00	0.05
Crit Moves:	****				****		****			****		
Green Time:	6.0	45.6	45.6	12.3	51.9	51.9	6.0	0.0	6.0	10.1	0.0	10.1
Volume/Cap:	0.38	0.49	0.13	0.24	0.52	0.52	0.06	0.00	0.26	0.18	0.00	0.42
Delay/Veh:	42.2	14.8	11.8	35.2	11.7	11.7	39.5	0.0	41.2	36.4	0.0	38.8
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	42.2	14.8	11.8	35.2	11.7	11.7	39.5	0.0	41.2	36.4	0.0	38.8
LOS by Move:	D	B	B	D	B	B	D	A	D	D	A	D
HCM2k95thQ:	3	16	3	3	18	18	0	0	2	2	0	5

****

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AM Cumulative Plus Project (2011)
Walmart, Tehachapi
Linscott, Law and Greenspan, Engineers

Level Of Service Computation Report
2000 HCM Unsignalized Method (Future Volume Alternative)

****
Intersection #9 Tucker Road at Conway Avenue/Walmart Project Driveway 2
****
Average Delay (sec/veh): 9.4 Worst Case Level Of Service: F[216.8]
****

Street Name:	Tucker Road						Conway Avenue/Walmart Project Dri					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Control:	Uncontrolled			Uncontrolled			Stop Sign			Stop Sign		
Rights:	Include			Include			Include			Include		
Lanes:	1 0	1 1	0	1 0	1 1	0	0 0	1! 0	0	0 0	1! 0	0
Volume Module:												
Base Vol:	22	570	0	3	764	43	52	0	31	0	0	0
Growth Adj:	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04
Initial Bse:	23	593	0	3	795	45	54	0	32	0	0	0
Added Vol:	0	293	4	4	209	0	0	0	0	3	0	2
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	23	886	4	7	1004	45	54	0	32	3	0	2
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
PHF Volume:	25	984	4	8	1115	50	60	0	36	3	0	2
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
FinalVolume:	25	984	4	8	1115	50	60	0	36	3	0	2
Critical Gap Module:												
Critical Gp:	4.1	xxxx	xxxxx	4.1	xxxx	xxxxx	7.5	6.5	6.9	7.5	6.5	6.9
FollowUpTim:	2.2	xxxx	xxxxx	2.2	xxxx	xxxxx	3.5	4.0	3.3	3.5	4.0	3.3
Capacity Module:												
Cnflict Vol:	1165	xxxx	xxxxx	989	xxxx	xxxxx	1699	2195	582	1611	2218	494
Potent Cap.:	607	xxxx	xxxxx	707	xxxx	xxxxx	61	46	461	71	44	526
Move Cap.:	607	xxxx	xxxxx	707	xxxx	xxxxx	58	43	461	63	42	526
Volume/Cap:	0.04	xxxx	xxxx	0.01	xxxx	xxxx	1.03	0.00	0.08	0.05	0.00	0.00
Level Of Service Module:												
2Way95thQ:	0.1	xxxx	xxxxx	0.0	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
Control Del:	11.2	xxxx	xxxxx	10.1	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
LOS by Move:	B	*	*	B	*	*	*	*	*	*	*	*
Movement:	LT -	LTR -	RT	LT -	LTR -	RT	LT -	LTR -	RT	LT -	LTR -	RT
Shared Cap.:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	87	xxxxx	xxxx	97	xxxxx
SharedQueue:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	6.6	xxxxx	xxxxx	0.2	xxxxx
Shrd ConDel:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	217	xxxxx	xxxxx	44.3	xxxxx
Shared LOS:	*	*	*	*	*	*	*	F	*	*	E	*
ApproachDel:	xxxxxx			xxxxxx			216.8			44.3		
ApproachLOS:	*			*			F			E		

****
Note: Queue reported is the number of cars per lane.
****

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AM Cumulative Plus Project (2011)
Walmart, Tehachapi
Linscott, Law and Greenspan, Engineers

Level Of Service Computation Report
2000 HCM Unsignalized Method (Future Volume Alternative)

****

Intersection #104 Walmart Project Driveway 3 at Tehachapi Boulevard

****

Average Delay (sec/veh): 0.9 Worst Case Level Of Service: B[10.8]

****

Street Name:	Walmart Project Driveway 3						Tehachapi Boulevard					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Stop Sign			Stop Sign			Uncontrolled			Uncontrolled		
Rights:	Include			Include			Include			Include		
Lanes:	0 0 0 0 1			0 0 0 0 0			0 0 1 1 0			1 0 2 0 0		
Volume Module:												
Base Vol:	0	0	0	0	0	0	0	424	0	0	265	0
Growth Adj:	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04
Initial Bse:	0	0	0	0	0	0	0	441	0	0	276	0
Added Vol:	0	0	23	0	0	0	0	94	66	16	154	0
PasserByVol:	0	0	30	0	0	0	0	-60	30	30	-30	0
Initial Fut:	0	0	53	0	0	0	0	475	96	46	400	0
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
PHF Volume:	0	0	59	0	0	0	0	528	107	51	444	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
FinalVolume:	0	0	59	0	0	0	0	528	107	51	444	0
Critical Gap Module:												
Critical Gp:	xxxxx	xxxx	6.9	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	4.1	xxxx	xxxxx
FollowUpTim:	xxxxx	xxxx	3.3	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	2.2	xxxx	xxxxx
Capacity Module:												
Cnflict Vol:	xxxx	xxxx	317	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	634	xxxx	xxxxx
Potent Cap.:	xxxx	xxxx	684	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	958	xxxx	xxxxx
Move Cap.:	xxxx	xxxx	684	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	958	xxxx	xxxxx
Volume/Cap:	xxxx	xxxx	0.09	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	0.05	xxxx	xxxx
Level Of Service Module:												
2Way95thQ:	xxxx	xxxx	0.3	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	0.2	xxxx	xxxxx
Control Del:	xxxxx	xxxx	10.8	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	9.0	xxxx	xxxxx
LOS by Move:	*	*	B	*	*	*	*	*	*	A	*	*
Movement:	LT	LTR	RT	LT	LTR	RT	LT	LTR	RT	LT	LTR	RT
Shared Cap.:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
SharedQueue:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Shrd ConDel:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Shared LOS:	*	*	*	*	*	*	*	*	*	*	*	*
ApproachDel:		10.8			xxxxxx			xxxxxx			xxxxxx	
ApproachLOS:		B			*			*			*	

****

Note: Queue reported is the number of cars per lane.

****

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AM Cumulative Plus Project (2011)
Walmart, Tehachapi
Linscott, Law and Greenspan, Engineers

Level Of Service Computation Report
2000 HCM Operations Method (Future Volume Alternative)

****

Intersection #105 Walmart Project Driveway 4 at Tehachapi Boulevard

****

Cycle (sec):	90	Critical Vol./Cap.(X):	0.497
Loss Time (sec):	16	Average Delay (sec/veh):	12.0
Optimal Cycle:	90	Level Of Service:	B

****

Street Name:	Walmart Project Driveway 4						Tehachapi Boulevard					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Control:	Split Phase			Split Phase			Protected			Protected		
Rights:	Include			Include			Include			Include		
Min. Green:	6	6	6	6	6	6	6	6	6	6	6	6
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	0 1	0	0 1	0 0	1!	0 0	1 0	0	1 0	1 0	0	1 0
Volume Module:												
Base Vol:	0	0	0	0	0	0	0	424	0	0	265	0
Growth Adj:	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04
Initial Bse:	0	0	0	0	0	0	0	441	0	0	276	0
Added Vol:	63	0	15	0	0	0	0	106	12	30	107	0
PasserByVol:	16	0	26	0	0	0	0	-28	28	18	-18	0
Initial Fut:	79	0	41	0	0	0	0	519	40	48	365	0
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
PHF Volume:	88	0	46	0	0	0	0	577	44	53	405	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	88	0	46	0	0	0	0	577	44	53	405	0
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	88	0	46	0	0	0	0	577	44	53	405	0
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.95	1.00	0.85	1.00	1.00	1.00	1.00	0.99	0.99	0.95	1.00	1.00
Lanes:	1.00	0.00	1.00	0.00	1.00	0.00	1.00	0.93	0.07	1.00	1.00	0.00
Final Sat.:	1809	0	1615	0	1900	0	1900	1745	134	1805	1900	0
Capacity Analysis Module:												
Vol/Sat:	0.05	0.00	0.03	0.00	0.00	0.00	0.00	0.33	0.33	0.03	0.21	0.00
Crit Moves:	****							****		****		
Green Time:	8.7	0.0	8.7	0.0	0.0	0.0	0.0	59.3	59.3	6.0	65.3	0.0
Volume/Cap:	0.50	0.00	0.29	0.00	0.00	0.00	0.00	0.50	0.50	0.44	0.29	0.00
Delay/Veh:	40.9	0.0	38.8	0.0	0.0	0.0	0.0	8.1	8.1	43.0	4.4	0.0
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	40.9	0.0	38.8	0.0	0.0	0.0	0.0	8.1	8.1	43.0	4.4	0.0
LOS by Move:	D	A	D	A	A	A	A	A	A	D	A	A
HCM2k95thQ:	6	0	3	0	0	0	0	17	17	4	8	0

****

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PM Cumulative Plus Project (2011)
Walmart, Tehachapi
Linscott, Law and Greenspan, Engineers

Level Of Service Computation Report
2000 HCM Operations Method (Future Volume Alternative)

Intersection #102 Tucker Road at Walmart Project Driveway 1 / Marketplace Projec

Cycle (sec):	90	Critical Vol./Cap.(X):	0.729
Loss Time (sec):	16	Average Delay (sec/veh):	26.2
Optimal Cycle:	90	Level Of Service:	C

Street Name:	Tucker Road						Walmart Project Driveway 1 / Mark					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Control:	Protected			Protected			Split Phase			Split Phase		
Rights:	Include			Include			Include			Include		
Min. Green:	6	6	6	6	6	6	6	6	6	6	6	6
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	1 0	2 0	1	1 0	1 1	0	1 0	0 1	0	2 0	0 1	0
Volume Module:												
Base Vol:	0	703	0	0	921	0	0	0	0	0	0	0
Growth Adj:	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04
Initial Bse:	0	731	0	0	958	0	0	0	0	0	0	0
Added Vol:	92	180	116	65	200	3	17	0	96	117	0	79
PasserByVol:	33	-72	39	51	-95	44	34	0	46	51	0	39
Initial Fut:	125	839	155	116	1063	47	51	0	142	168	0	118
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
PHF Volume:	139	932	172	129	1181	52	57	0	158	187	0	131
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	139	932	172	129	1181	52	57	0	158	187	0	131
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	139	932	172	129	1181	52	57	0	158	187	0	131
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.95	0.95	0.85	0.95	0.94	0.94	0.95	1.00	0.85	0.92	1.00	0.85
Lanes:	1.00	2.00	1.00	1.00	1.92	0.08	1.00	0.00	1.00	2.00	0.00	1.00
Final Sat.:	1805	3610	1615	1805	3436	152	1805	0	1615	3502	0	1615
Capacity Analysis Module:												
Vol/Sat:	0.08	0.26	0.11	0.07	0.34	0.34	0.03	0.00	0.10	0.05	0.00	0.08
Crit Moves:	****				****				****			****
Green Time:	9.5	40.7	40.7	11.2	42.4	42.4	12.1	0.0	12.1	10.0	0.0	10.0
Volume/Cap:	0.73	0.57	0.24	0.57	0.73	0.73	0.23	0.00	0.73	0.48	0.00	0.73
Delay/Veh:	52.3	18.7	15.3	40.6	20.8	20.8	35.3	0.0	49.3	38.5	0.0	52.7
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	52.3	18.7	15.3	40.6	20.8	20.8	35.3	0.0	49.3	38.5	0.0	52.7
LOS by Move:	D	B	B	D	C	C	D	A	D	D	A	D
HCM2k95thQ:	11	19	6	8	27	27	3	0	11	6	0	10

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PM Cumulative Plus Project (2011)
Walmart, Tehachapi
Linscott, Law and Greenspan, Engineers

Level Of Service Computation Report
2000 HCM Unsignalized Method (Future Volume Alternative)

****

Intersection #9 Tucker Road at Conway Avenue/Walmart Project Driveway 2

****

Average Delay (sec/veh): 22.5 Worst Case Level Of Service: F[724.0]

****

Street Name:	Tucker Road						Conway Avenue/Walmart Project Dri					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Control:	Uncontrolled			Uncontrolled			Stop Sign			Stop Sign		
Rights:	Include			Include			Include			Include		
Lanes:	1 0	1 1	0	1 0	1 1	0	0 0	1! 0	0	0 0	1! 0	0
Volume Module:												
Base Vol:	22	659	0	0	869	52	44	1	29	0	0	0
Growth Adj:	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04
Initial Bse:	23	685	0	0	904	54	46	1	30	0	0	0
Added Vol:	0	383	8	8	405	0	0	0	0	8	0	6
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	23	1068	8	8	1309	54	46	1	30	8	0	6
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
PHF Volume:	25	1187	9	9	1454	60	51	1	34	9	0	7
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
FinalVolume:	25	1187	9	9	1454	60	51	1	34	9	0	7
Critical Gap Module:												
Critical Gp:	4.1	xxxx	xxxxx	4.1	xxxx	xxxxx	7.5	6.5	6.9	7.5	6.5	6.9
FollowUpTim:	2.2	xxxx	xxxxx	2.2	xxxx	xxxxx	3.5	4.0	3.3	3.5	4.0	3.3
Capacity Module:												
Cnflict Vol:	1514	xxxx	xxxxx	1196	xxxx	xxxxx	2146	2749	757	1988	2774	598
Potent Cap.:	447	xxxx	xxxxx	591	xxxx	xxxxx	28	20	354	37	19	450
Move Cap.:	447	xxxx	xxxxx	591	xxxx	xxxxx	26	19	354	30	18	450
Volume/Cap:	0.06	xxxx	xxxx	0.02	xxxx	xxxx	1.95	0.06	0.09	0.29	0.00	0.01
Level Of Service Module:												
2Way95thQ:	0.2	xxxx	xxxxx	0.0	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
Control Del:	13.5	xxxx	xxxxx	11.2	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
LOS by Move:	B	*	*	B	*	*	*	*	*	*	*	*
Movement:	LT -	LTR -	RT	LT -	LTR -	RT	LT -	LTR -	RT	LT -	LTR -	RT
Shared Cap.:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	41	xxxxx	xxxx	50	xxxxx
SharedQueue:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	9.1	xxxxx	xxxxx	1.1	xxxxx
Shrd ConDel:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	724	xxxxx	xxxxx	106	xxxxx
Shared LOS:	*	*	*	*	*	*	*	F	*	*	F	*
ApproachDel:	xxxxxx			xxxxxx			724.0			105.9		
ApproachLOS:	*			*			F			F		

****

Note: Queue reported is the number of cars per lane.

****

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PM Cumulative Plus Project (2011)
Walmart, Tehachapi
Linscott, Law and Greenspan, Engineers

Level Of Service Computation Report
2000 HCM Unsignalized Method (Future Volume Alternative)

****
Intersection #104 Walmart Project Driveway 3 at Tehachapi Boulevard
****
Average Delay (sec/veh): 0.8 Worst Case Level Of Service: B[11.3]
****

Street Name:	Walmart Project Driveway 3						Tehachapi Boulevard					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Stop Sign			Stop Sign			Uncontrolled			Uncontrolled		
Rights:	Include			Include			Include			Include		
Lanes:	0 0 0 0 1			0 0 0 0 0			0 0 1 1 0			1 0 2 0 0		
Volume Module:												
Base Vol:	0	0	0	0	0	0	0	472	0	0	540	0
Growth Adj:	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04
Initial Bse:	0	0	0	0	0	0	0	491	0	0	562	0
Added Vol:	0	0	37	0	0	0	0	131	56	20	174	0
PasserByVol:	0	0	30	0	0	0	0	-60	30	30	-30	0
Initial Fut:	0	0	67	0	0	0	0	562	86	50	706	0
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
PHF Volume:	0	0	74	0	0	0	0	624	96	56	784	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
FinalVolume:	0	0	74	0	0	0	0	624	96	56	784	0
Critical Gap Module:												
Critical Gp:	xxxxx	xxxx	6.9	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	4.1	xxxx	xxxxx
FollowUpTim:	xxxxx	xxxx	3.3	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	2.2	xxxx	xxxxx
Capacity Module:												
Cnflict Vol:	xxxx	xxxx	360	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	720	xxxx	xxxxx
Potent Cap.:	xxxx	xxxx	642	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	891	xxxx	xxxxx
Move Cap.:	xxxx	xxxx	642	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	891	xxxx	xxxxx
Volume/Cap:	xxxx	xxxx	0.12	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	0.06	xxxx	xxxx
Level Of Service Module:												
2Way95thQ:	xxxx	xxxx	0.4	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	0.2	xxxx	xxxxx
Control Del:	xxxxx	xxxx	11.3	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	9.3	xxxx	xxxxx
LOS by Move:	*	*	B	*	*	*	*	*	*	A	*	*
Movement:	LT	LTR	RT	LT	LTR	RT	LT	LTR	RT	LT	LTR	RT
Shared Cap.:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
SharedQueue:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Shrd ConDel:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Shared LOS:	*	*	*	*	*	*	*	*	*	*	*	*
ApproachDel:		11.3			xxxxxx			xxxxxx			xxxxxx	
ApproachLOS:		B			*			*			*	

****
Note: Queue reported is the number of cars per lane.
****

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PM Cumulative Plus Project (2011)
Walmart, Tehachapi
Linscott, Law and Greenspan, Engineers

Level Of Service Computation Report
2000 HCM Operations Method (Future Volume Alternative)

****

Intersection #105 Walmart Project Driveway 4 at Tehachapi Boulevard

****

Cycle (sec):	90	Critical Vol./Cap.(X):	0.614
Loss Time (sec):	16	Average Delay (sec/veh):	14.2
Optimal Cycle:	90	Level Of Service:	B

****

Street Name:	Walmart Project Driveway 4						Tehachapi Boulevard					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Control:	Split Phase			Split Phase			Protected			Protected		
Rights:	Include			Include			Include			Include		
Min. Green:	6	6	6	6	6	6	6	6	6	6	6	6
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	0 1	0	0 1	0 0	1!	0 0	1 0	0	1 0	1 0	0	1 0
Volume Module:												
Base Vol:	0	0	0	0	0	0	0	472	0	0	540	0
Growth Adj:	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04
Initial Bse:	0	0	0	0	0	0	0	491	0	0	562	0
Added Vol:	61	0	31	0	0	0	0	156	12	47	133	0
PasserByVol:	40	0	35	0	0	0	0	-35	35	39	-39	0
Initial Fut:	101	0	66	0	0	0	0	612	47	86	656	0
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
PHF Volume:	112	0	73	0	0	0	0	680	52	96	728	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	112	0	73	0	0	0	0	680	52	96	728	0
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	112	0	73	0	0	0	0	680	52	96	728	0
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.95	1.00	0.85	1.00	1.00	1.00	1.00	0.99	0.99	0.95	1.00	1.00
Lanes:	1.00	0.00	1.00	0.00	1.00	0.00	1.00	0.93	0.07	1.00	1.00	0.00
Final Sat.:	1809	0	1615	0	1900	0	1900	1745	134	1805	1900	0
Capacity Analysis Module:												
Vol/Sat:	0.06	0.00	0.05	0.00	0.00	0.00	0.00	0.39	0.39	0.05	0.38	0.00
Crit Moves:	****							****		****		
Green Time:	9.1	0.0	9.1	0.0	0.0	0.0	0.0	57.1	57.1	7.8	64.9	0.0
Volume/Cap:	0.61	0.00	0.45	0.00	0.00	0.00	0.00	0.61	0.61	0.61	0.53	0.00
Delay/Veh:	44.8	0.0	40.1	0.0	0.0	0.0	0.0	10.8	10.8	46.8	6.1	0.0
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	44.8	0.0	40.1	0.0	0.0	0.0	0.0	10.8	10.8	46.8	6.1	0.0
LOS by Move:	D	A	D	A	A	A	A	B	B	D	A	A
HCM2k95thQ:	8	0	5	0	0	0	0	22	22	7	17	0

****

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APPENDIX K

PROJECT DRIVEWAYS TRAFFIC SIGNAL WARRANT ANALYSIS WORKSHEETS

APPENDIX K-I

YEAR 2011 CUMULATIVE PLUS PROJECT TRAFFIC CONDITIONS

Peak Hour Traffic Signal Warrant Analysis[1]

CRITERIA A. ***Are all of the following three criteria met:*** **Y**

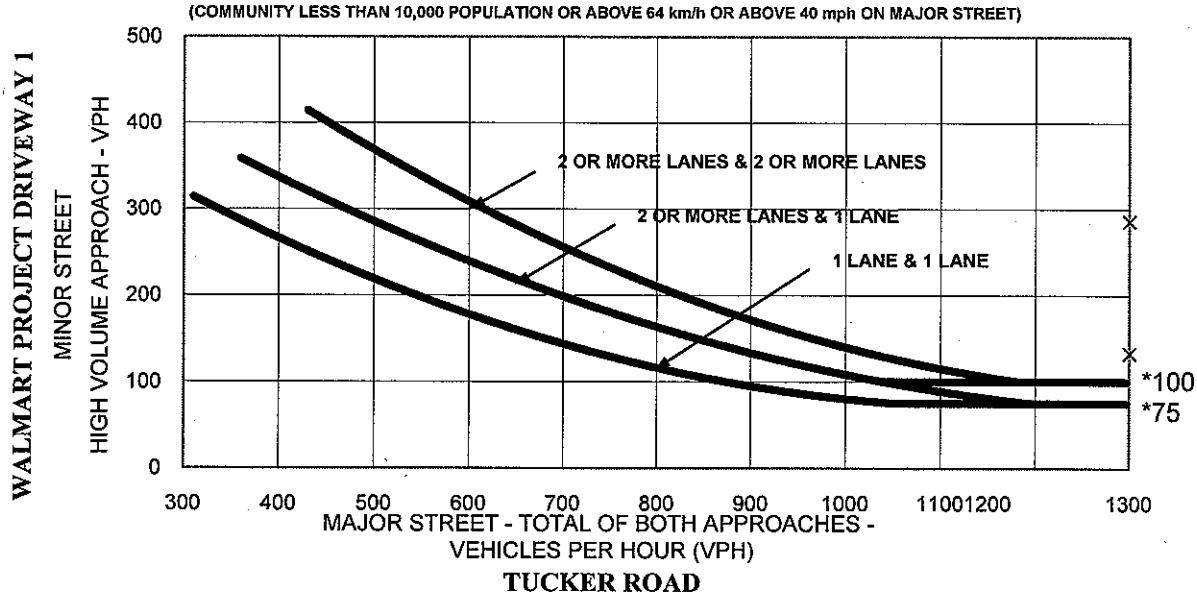
Criteria Description	Yes/No (Y/N)
1. The total stopped time delay experienced by the traffic on one minor-street approach (one direction only) controlled by a STOP sign equals or exceeds: 4 vehicle-hours for a one-lane approach; or 5 vehicle-hours for a two-lane approach, and	Y
2. The volume on the same minor-street approach (one direction only) equals or exceeds 100 vehicles per hour for one moving lane of traffic or 150 vehicles per hour for two moving lanes, and	Y
3. The total entering volume serviced during the hour equals or exceeds 650 vehicles per hour for intersections with three approaches or 800 vehicles per hour for intersections with four or more approaches.	Y

CRITERIA B. ***Does the plotted point [2] fall above the applicable curve in Figure 4C-3 (below) for the existing combination of approach lanes?*** **Y**

Approach	Number of Lanes		Vehicles Per Hour	
	1	2 or more	AM Pk Hr	PM Pk Hr
Major Street (Total of Both Approaches)	--	X	1,962	2,345
Minor Street (Higher of Approach)	--	X	133	286

FIGURE 4C-4. WARRANT 3, PEAK HOUR (70% FACTOR)

(COMMUNITY LESS THAN 10,000 POPULATION OR ABOVE 64 km/h OR ABOVE 40 mph ON MAJOR STREET)



*Note: 100 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 75 vph applies as the lower threshold volume for a minor-street approach with one lane.

Has either Criteria A or B been satisfied?	Y

#102. Tucker Road at Walmart Project Driveway 1
TRAFFIC SIGNAL WARRANT is SATISFIED
for Year 2011 Cumulative Plus Project

[1] *California Manual on Uniform Traffic Control Devices (MUTCD)* - Warrant #3

[2] *All-Way Stop Control (Part A of Warrant 3 is not applicable)*
the higher-volume minor-street approach (one direction only) for 1 hour (any four consecutive 15-minute periods) of an average day.

#102 Rural.xls

AM Cumulative Plus Project (2011) - Signal Warrant
Walmart, Tehachapi
Linscott, Law and Greenspan, Engineers

Peak Hour Delay Signal Warrant Report

****
Intersection #102 Tucker Road at Walmart Project Driveway 1 / Marketplace Projec
****

Future Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Uncontrolled			Uncontrolled			Stop Sign			Stop Sign		
Lanes:	1 0 2 0 1			1 0 1 1 0			1 0 0 1 0			2 0 0 1 0		
Initial Vol:	41	807	94	53	963	4	6	0	25	64	0	69
ApproachDel:	xxxxxx			xxxxxx			29.6			163.4		

Approach[eastbound] [lanes=2] [control=Stop Sign]
Signal Warrant Rule #1: [vehicle-hours=0.3]
FAIL - Vehicle-hours less than 5 for two or more lane approach.
Signal Warrant Rule #2: [approach volume=31]
FAIL - Approach volume less than 150 for two or more lane approach.
Signal Warrant Rule #3: [approach count=4] [total volume=2126]
SUCCEED - Total volume greater than or equal to 800 for intersection with four or more approaches.

Approach[westbound] [lanes=3] [control=Stop Sign]
Signal Warrant Rule #1: [vehicle-hours=6.0]
SUCCEED - Vehicle-hours >= 5 for two or more lane approach.
Signal Warrant Rule #2: [approach volume=133]
FAIL - Approach volume less than 150 for two or more lane approach.
Signal Warrant Rule #3: [approach count=4] [total volume=2126]
SUCCEED - Total volume greater than or equal to 800 for intersection with four or more approaches.

SIGNAL WARRANT DISCLAIMER
This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

The peak hour warrant analysis in this report is not intended to replace a rigorous and complete traffic signal warrant analysis by the responsible jurisdiction. Consideration of the other signal warrants, which is beyond the scope of this software, may yield different results.

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PM Cumulative Plus Project (2011) - Signal Warrant
Walmart, Tehachapi
Linscott, Law and Greenspan, Engineers

Peak Hour Delay Signal Warrant Report

****
Intersection #102 Tucker Road at Walmart Project Driveway 1 / Marketplace Projec
****
Future Volume Alternative: Peak Hour Warrant Met

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Uncontrolled			Uncontrolled			Stop Sign			Stop Sign		
Lanes:	1 0	2 0	1	1 0	1 1	0	1 0	0 1	0	2 0	0 1	0
Initial Vol:	125	839	155	116	1063	47	51	0	142	168	0	118
ApproachDel:	xxxxxx			xxxxxx			555.7			3453.5		

Approach[eastbound] [lanes=2] [control=Stop Sign]
Signal Warrant Rule #1: [vehicle-hours=29.8]
SUCCEED - Vehicle-hours >= 5 for two or more lane approach.
Signal Warrant Rule #2: [approach volume=193]
SUCCEED - Approach volume >= 150 for two or more lane approach.
Signal Warrant Rule #3: [approach count=4] [total volume=2824]
SUCCEED - Total volume greater than or equal to 800 for intersection with four or more approaches.

Approach[westbound] [lanes=3] [control=Stop Sign]
Signal Warrant Rule #1: [vehicle-hours=274.4]
SUCCEED - Vehicle-hours >= 5 for two or more lane approach.
Signal Warrant Rule #2: [approach volume=286]
SUCCEED - Approach volume >= 150 for two or more lane approach.
Signal Warrant Rule #3: [approach count=4] [total volume=2824]
SUCCEED - Total volume greater than or equal to 800 for intersection with four or more approaches.

SIGNAL WARRANT DISCLAIMER
This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

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AM Cumulative Plus Project (2011) - Signal Warrant
Walmart, Tehachapi
Linscott, Law and Greenspan, Engineers

Peak Hour Volume Signal Warrant Report [Rural]

****

Intersection #102 Tucker Road at Walmart Project Driveway 1 / Marketplace Projec

****

Future Volume Alternative: Peak Hour Warrant Met

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Uncontrolled			Uncontrolled			Stop Sign			Stop Sign		
Lanes:	1 0 2 0 1			1 0 1 1 0			1 0 0 1 0			2 0 0 1 0		
Initial Vol:	41	807	94	53	963	4	6	0	25	64	0	69

Major Street Volume: 1962
Minor Approach Volume: 133
Minor Approach Volume Threshold: -46 [less than minimum of 100]

SIGNAL WARRANT DISCLAIMER

This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

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PM Cumulative Plus Project (2011) - Signal Warrant
Walmart, Tehachapi
Linscott, Law and Greenspan, Engineers

Peak Hour Volume Signal Warrant Report [Rural]

****

Intersection #102 Tucker Road at Walmart Project Driveway 1 / Marketplace Projec

****

Future Volume Alternative: Peak Hour Warrant Met

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Uncontrolled			Uncontrolled			Stop Sign			Stop Sign		
Lanes:	1 0 2 0 1			1 0 1 1 0			1 0 0 1 0			2 0 0 1 0		
Initial Vol:	125	839	155	116	1063	47	51	0	142	168	0	118

Major Street Volume: 2345
Minor Approach Volume: 286
Minor Approach Volume Threshold: -100 [less than minimum of 100]

SIGNAL WARRANT DISCLAIMER
This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

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Peak Hour Traffic Signal Warrant Analysis[1]

CRITERIA A. ***Are all of the following three criteria met:*** **N**

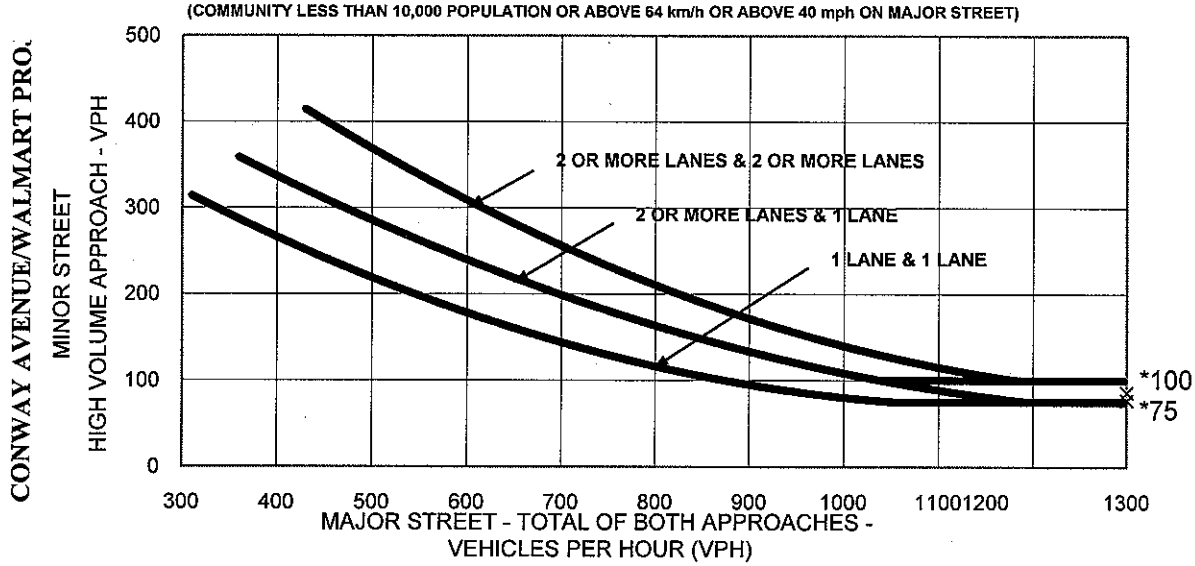
Criteria Description	Yes/No (Y/N)
1. The total stopped time delay experienced by the traffic on one minor-street approach (one direction only) controlled by a STOP sign equals or exceeds: 4 vehicle-hours for a one-lane approach; or 5 vehicle-hours for a two-lane approach, and	Y
2. The volume on the same minor-street approach (one direction only) equals or exceeds 100 vehicles per hour for one moving lane of traffic or 150 vehicles per hour for two moving lanes, and	N
3. The total entering volume serviced during the hour equals or exceeds 650 vehicles per hour for intersections with three approaches or 800 vehicles per hour for intersections with four or more approaches.	Y

CRITERIA B. ***Does the plotted point [2] fall above the applicable curve in Figure 4C-3 (below) for the existing combination of approach lanes?*** **Y**

Approach	Number of Lanes		Vehicles Per Hour	
	1	2 or more	AM Pk Hr	PM Pk Hr
Major Street (Total of Both Approaches)	--	X	1,968	2,470
Minor Street (Higher of Approach)	X	--	86	77

FIGURE 4C-4. WARRANT 3, PEAK HOUR (70% FACTOR)

(COMMUNITY LESS THAN 10,000 POPULATION OR ABOVE 64 km/h OR ABOVE 40 mph ON MAJOR STREET)



TUCKER ROAD

*Note: 100 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 75 vph applies as the lower threshold volume for a minor-street approach with one lane.

Has either Criteria A or B been satisfied?	Y

#9. Tucker Road at Conway Avenue/Walmart Project Driveway 2
TRAFFIC SIGNAL WARRANT is SATISFIED
for Year 2011 Cumulative Plus Project

[1] *California Manual on Uniform Traffic Control Devices (MUTCD)* - Warrant #3
[2] *All-Way Stop Control (Part A of Warrant 3 is not applicable)*
the higher-volume minor-street approach (one direction only) for 1 hour (any four consecutive 15-minute periods) of an average day.

#9 Rural.xls

AM Cumulative Plus Project (2011) - Signal Warrant
Walmart, Tehachapi
Linscott, Law and Greenspan, Engineers

Peak Hour Delay Signal Warrant Report

****

Intersection #9 Tucker Road at Conway Avenue/Walmart Project Driveway 2

****

Future Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Uncontrolled			Uncontrolled			Stop Sign			Stop Sign		
Lanes:	1 0 1	1 0		1 0 1	1 0		0 0 1!	0 0		0 0 1!	0 0	
Initial Vol:	23	886	4	7	1004	45	54	0	32	3	0	2
ApproachDel:	xxxxxx			xxxxxx			216.8			44.3		

Approach[eastbound] [lanes=1] [control=Stop Sign]
Signal Warrant Rule #1: [vehicle-hours=5.2]
SUCCEED - Vehicle-hours greater than or equal to 4 for one lane approach.
Signal Warrant Rule #2: [approach volume=86]
FAIL - Approach volume less than 100 for one lane approach.
Signal Warrant Rule #3: [approach count=4] [total volume=2059]
SUCCEED - Total volume greater than or equal to 800 for intersection with four or more approaches.

Approach[westbound] [lanes=1] [control=Stop Sign]
Signal Warrant Rule #1: [vehicle-hours=0.1]
FAIL - Vehicle-hours less than 4 for one lane approach.
Signal Warrant Rule #2: [approach volume=5]
FAIL - Approach volume less than 100 for one lane approach.
Signal Warrant Rule #3: [approach count=4] [total volume=2059]
SUCCEED - Total volume greater than or equal to 800 for intersection with four or more approaches.

SIGNAL WARRANT DISCLAIMER

This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

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PM Cumulative Plus Project (2011) - Signal Warrant
Walmart, Tehachapi
Linscott, Law and Greenspan, Engineers

Peak Hour Delay Signal Warrant Report

****

Intersection #9 Tucker Road at Conway Avenue/Walmart Project Driveway 2

****

Future Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Uncontrolled			Uncontrolled			Stop Sign			Stop Sign		
Lanes:	1 0	1 1	0	1 0	1 1	0	0 0	1! 0	0	0 0	1! 0	0
Initial Vol:	23	1068	8	8	1309	54	46	1	30	8	0	6
ApproachDel:	xxxxxx			xxxxxx			724.0			105.9		

Approach[eastbound] [lanes=1] [control=Stop Sign]
Signal Warrant Rule #1: [vehicle-hours=15.5]
SUCCEED - Vehicle-hours greater than or equal to 4 for one lane approach.
Signal Warrant Rule #2: [approach volume=77]
FAIL - Approach volume less than 100 for one lane approach.
Signal Warrant Rule #3: [approach count=4] [total volume=2561]
SUCCEED - Total volume greater than or equal to 800 for intersection with four or more approaches.

Approach[westbound] [lanes=1] [control=Stop Sign]
Signal Warrant Rule #1: [vehicle-hours=0.4]
FAIL - Vehicle-hours less than 4 for one lane approach.
Signal Warrant Rule #2: [approach volume=14]
FAIL - Approach volume less than 100 for one lane approach.
Signal Warrant Rule #3: [approach count=4] [total volume=2561]
SUCCEED - Total volume greater than or equal to 800 for intersection with four or more approaches.

SIGNAL WARRANT DISCLAIMER

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AM Cumulative Plus Project (2011) - Signal Warrant
Walmart, Tehachapi
Linscott, Law and Greenspan, Engineers

Peak Hour Volume Signal Warrant Report [Rural]

****

Intersection #9 Tucker Road at Conway Avenue/Walmart Project Driveway 2

****

Future Volume Alternative: Peak Hour Warrant Met

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Uncontrolled			Uncontrolled			Stop Sign			Stop Sign		
Lanes:	1 0 1	1 0		1 0 1	1 0		0 0 1!	0 0		0 0 1!	0 0	
Initial Vol:	23	886	4	7	1004	45	54	0	32	3	0	2

Major Street Volume: 1968
Minor Approach Volume: 86
Minor Approach Volume Threshold: -34 [less than minimum of 75]

SIGNAL WARRANT DISCLAIMER

This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

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PM Cumulative Plus Project (2011) - Signal Warrant
Walmart, Tehachapi
Linscott, Law and Greenspan, Engineers

Peak Hour Volume Signal Warrant Report [Rural]

****

Intersection #9 Tucker Road at Conway Avenue/Walmart Project Driveway 2

****

Future Volume Alternative: Peak Hour Warrant Met

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Uncontrolled			Uncontrolled			Stop Sign			Stop Sign		
Lanes:	1 0 1	1 0		1 0 1	1 0		0 0 1!	0 0		0 0 1!	0 0	
Initial Vol:	23	1068	8	8	1309	54	46	1	30	8	0	6

Major Street Volume: 2470
Minor Approach Volume: 77
Minor Approach Volume Threshold: -86 [less than minimum of 75]

SIGNAL WARRANT DISCLAIMER

This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

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Peak Hour Traffic Signal Warrant Analysis[1]

CRITERIA A. ***Are all of the following three criteria met:*** **N**

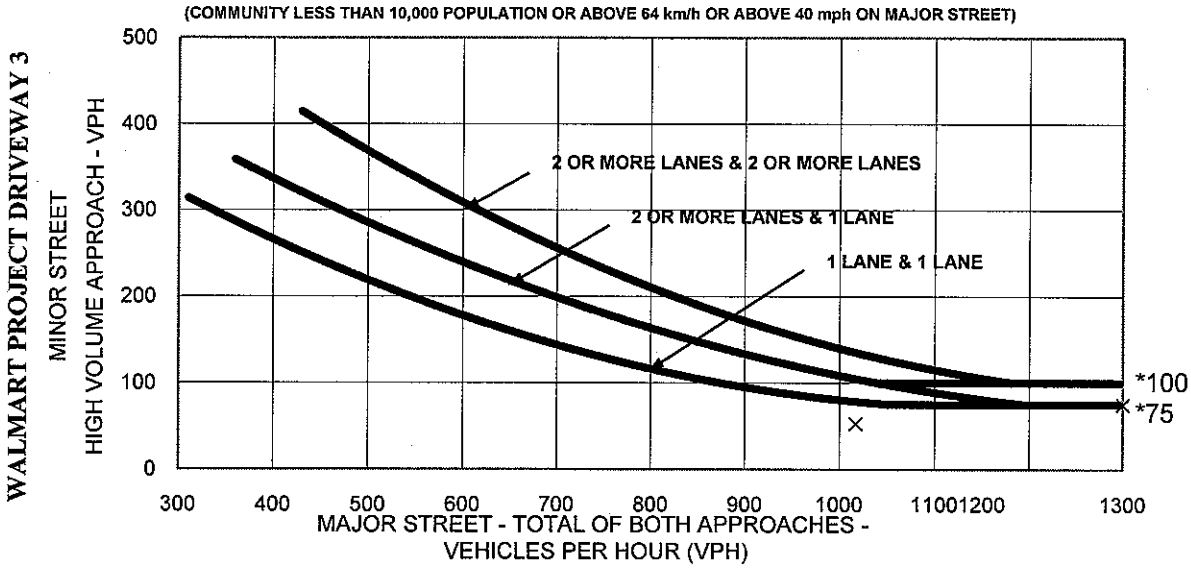
Criteria Description	Yes/No (Y/N)
1. The total stopped time delay experienced by the traffic on one minor-street approach (one direction only) controlled by a STOP sign equals or exceeds: 4 vehicle-hours for a one-lane approach; or 5 vehicle-hours for a two-lane approach, and	N
2. The volume on the same minor-street approach (one direction only) equals or exceeds 100 vehicles per hour for one moving lane of traffic or 150 vehicles per hour for two moving lanes, and	N
3. The total entering volume serviced during the hour equals or exceeds 650 vehicles per hour for intersections with three approaches or 800 vehicles per hour for intersections with four or more approaches.	Y

CRITERIA B. ***Does the plotted point [2] fall above the applicable curve in Figure 4C-3 (below) for the existing combination of approach lanes?*** **N**

Approach	Number of Lanes		Vehicles Per Hour	
	1	2 or more	AM Pk Hr	PM Pk Hr
Major Street (Total of Both Approaches)	--	X	1,017	1,403
Minor Street (Higher of Approach)	X	--	53	75

FIGURE 4C-4. WARRANT 3, PEAK HOUR (70% FACTOR)

(COMMUNITY LESS THAN 10,000 POPULATION OR ABOVE 64 km/h OR ABOVE 40 mph ON MAJOR STREET)



*Note: 100 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 75 vph applies as the lower threshold volume for a minor-street approach with one lane.

Has either Criteria A or B been satisfied?	N

#104. Walmart Project Driveway 3 at Tehachapi Boulevard
TRAFFIC SIGNAL WARRANT is NOT SATISFIED
for Year 2011 Cumulative Plus Project

[1] *California Manual on Uniform Traffic Control Devices (MUTCD)* - Warrant #3

[2] *All-Way Stop Control (Part A of Warrant 3 is not applicable)*
the higher-volume minor-street approach (one direction only) for 1 hour (any four consecutive 15-minute periods) of an average day.

#104 Rural.xls

AM Cumulative Plus Project (2011) - Signal Warrant
Walmart, Tehachapi
Linscott, Law and Greenspan, Engineers

Peak Hour Delay Signal Warrant Report

****

Intersection #104 Walmart Project Driveway 3 at Tehachapi Boulevard

****

Future Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound					South Bound					East Bound					West Bound				
Movement:	L	-	T	-	R	L	-	T	-	R	L	-	T	-	R	L	-	T	-	R
Control:	Stop Sign					Stop Sign					Uncontrolled					Uncontrolled				
Lanes:	0	0	0	0	1	0	0	0	0	0	0	0	1	1	0	1	0	2	0	0
Initial Vol:	0		0		53	0		0		0	0		475		96	46		400		0
ApproachDel:	10.8					xxxxxx					xxxxxx					xxxxxx				

Approach[northbound] [lanes=1] [control=Stop Sign]
Signal Warrant Rule #1: [vehicle-hours=0.2]
FAIL - Vehicle-hours less than 4 for one lane approach.
Signal Warrant Rule #2: [approach volume=53]
FAIL - Approach volume less than 100 for one lane approach.
Signal Warrant Rule #3: [approach count=3] [total volume=1070]
SUCCEED - Total volume greater than or equal to 650 for intersection with less than four approaches.

SIGNAL WARRANT DISCLAIMER

This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

The peak hour warrant analysis in this report is not intended to replace a rigorous and complete traffic signal warrant analysis by the responsible jurisdiction. Consideration of the other signal warrants, which is beyond the scope of this software, may yield different results.

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PM Cumulative Plus Project (2011) - Signal Warrant
Walmart, Tehachapi
Linscott, Law and Greenspan, Engineers

Peak Hour Delay Signal Warrant Report

****

Intersection #104 Walmart Project Driveway 3 at Tehachapi Boulevard

****

Future Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Stop Sign			Stop Sign			Uncontrolled			Uncontrolled		
Lanes:	0 0 0 0 1			0 0 0 0 0			0 0 1 1 0			1 0 2 0 0		
Initial Vol:	0	0	67	0	0	0	0	562	86	50	706	0
ApproachDel:	11.3			xxxxxx			xxxxxx			xxxxxx		

Approach[northbound] [lanes=1] [control=Stop Sign]
Signal Warrant Rule #1: [vehicle-hours=0.2]
FAIL - Vehicle-hours less than 4 for one lane approach.
Signal Warrant Rule #2: [approach volume=67]
FAIL - Approach volume less than 100 for one lane approach.
Signal Warrant Rule #3: [approach count=3] [total volume=1470]
SUCCEED - Total volume greater than or equal to 650 for intersection with less than four approaches.

SIGNAL WARRANT DISCLAIMER

This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

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AM Cumulative Plus Project (2011) - Signal Warrant
Walmart, Tehachapi
Linscott, Law and Greenspan, Engineers

Peak Hour Volume Signal Warrant Report [Rural]

****

Intersection #104 Walmart Project Driveway 3 at Tehachapi Boulevard

****

Future Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Stop Sign			Stop Sign			Uncontrolled			Uncontrolled		
Lanes:	0 0 0	0 1		0 0 0	0 0		0 0 1	1 0		1 0 2	0 0	
Initial Vol:	0	0	53	0	0	0	0	475	96	46	400	0

Major Street Volume: 1017
Minor Approach Volume: 53
Minor Approach Volume Threshold: 118

SIGNAL WARRANT DISCLAIMER

This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

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PM Cumulative Plus Project (2011) - Signal Warrant
Walmart, Tehachapi
Linscott, Law and Greenspan, Engineers

Peak Hour Volume Signal Warrant Report [Rural]

****

Intersection #104 Walmart Project Driveway 3 at Tehachapi Boulevard

****

Future Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Stop Sign			Stop Sign			Uncontrolled			Uncontrolled		
Lanes:	0 0 0 0 1			0 0 0 0 0			0 0 1 1 0			1 0 2 0 0		
Initial Vol:	0	0	67	0	0	0	0	562	86	50	706	0

Major Street Volume: 1403
Minor Approach Volume: 67
Minor Approach Volume Threshold: 44 [less than minimum of 75]

SIGNAL WARRANT DISCLAIMER

This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

The peak hour warrant analysis in this report is not intended to replace a rigorous and complete traffic signal warrant analysis by the responsible jurisdiction. Consideration of the other signal warrants, which is beyond the scope of this software, may yield different results.

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Peak Hour Traffic Signal Warrant Analysis[1]

CRITERIA A. ***Are all of the following three criteria met:*** **Y**

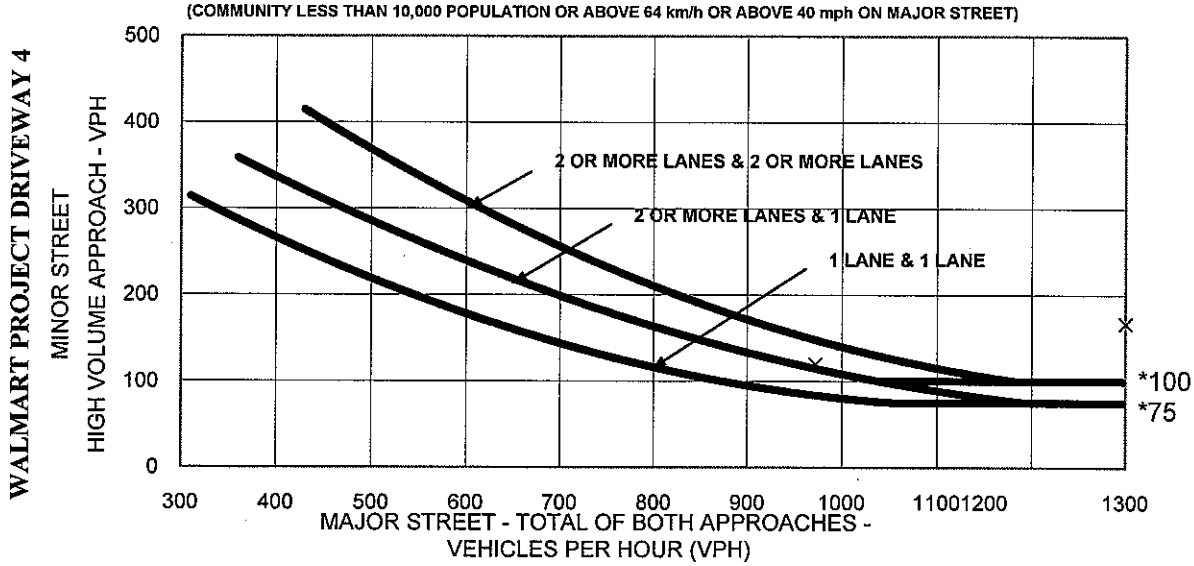
Criteria Description	Yes/No (Y/N)
1. The total stopped time delay experienced by the traffic on one minor-street approach (one direction only) controlled by a STOP sign equals or exceeds: 4 vehicle-hours for a one-lane approach; or 5 vehicle-hours for a two-lane approach, and	Y
2. The volume on the same minor-street approach (one direction only) equals or exceeds 100 vehicles per hour for one moving lane of traffic or 150 vehicles per hour for two moving lanes, and	Y
3. The total entering volume serviced during the hour equals or exceeds 650 vehicles per hour for intersections with three approaches or 800 vehicles per hour for intersections with four or more approaches.	Y

CRITERIA B. ***Does the plotted point [2] fall above the applicable curve in Figure 4C-3 (below) for the existing combination of approach lanes?*** **Y**

Approach	Number of Lanes		Vehicles Per Hour	
	1	2 or more	AM Pk Hr	PM Pk Hr
Major Street (Total of Both Approaches)	--	X	972	1,400
Minor Street (Higher of Approach)	--	X	120	167

FIGURE 4C-4. WARRANT 3, PEAK HOUR (70% FACTOR)

(COMMUNITY LESS THAN 10,000 POPULATION OR ABOVE 64 km/h OR ABOVE 40 mph ON MAJOR STREET)



TEHACHAPI BOULEVARD

*Note: 100 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 75 vph applies as the lower threshold volume for a minor-street approach with one lane.

Has either Criteria A or B been satisfied?	Y

#105. Walmart Project Driveway 4 at Tehachapi Boulevard
TRAFFIC SIGNAL WARRANT is SATISFIED
for Year 2011 Cumulative Plus Project

[1] *California Manual on Uniform Traffic Control Devices (MUTCD)* - Warrant #3

[2] *All-Way Stop Control (Part A of Warrant 3 is not applicable)*
the higher-volume minor-street approach (one direction only) for 1 hour (any four consecutive 15-minute periods) of an average day.

#105 Rural.xls

AM Cumulative Plus Project (2011) - Signal Warrant
Walmart, Tehachapi
Linscott, Law and Greenspan, Engineers

Peak Hour Delay Signal Warrant Report

****

Intersection #105 Walmart Project Driveway 4 at Tehachapi Boulevard

****

Future Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Stop Sign			Stop Sign			Uncontrolled			Uncontrolled		
Lanes:	0 1	0 0	1	0 0	1! 0	0	1 0	0 1	0	1 0	0 1	0
Initial Vol:	79	0	41	0	0	0	0	519	40	48	365	0
ApproachDel:	24.9			xxxxxx			xxxxxx			xxxxxx		

Approach[northbound] [lanes=2] [control=Stop Sign]
Signal Warrant Rule #1: [vehicle-hours=0.8]
FAIL - Vehicle-hours less than 5 for two or more lane approach.
Signal Warrant Rule #2: [approach volume=120]
FAIL - Approach volume less than 150 for two or more lane approach.
Signal Warrant Rule #3: [approach count=3] [total volume=1092]
SUCCEED - Total volume greater than or equal to 650 for intersection with less than four approaches.

SIGNAL WARRANT DISCLAIMER

This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

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PM Cumulative Plus Project (2011) - Signal Warrant
Walmart, Tehachapi
Linscott, Law and Greenspan, Engineers

Peak Hour Delay Signal Warrant Report

****

Intersection #105 Walmart Project Driveway 4 at Tehachapi Boulevard

****

Future Volume Alternative: Peak Hour Warrant Met

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Stop Sign			Stop Sign			Uncontrolled			Uncontrolled		
Lanes:	0 1	0 0	1	0 0	1! 0	0	1 0	0 1	0	1 0	0 1	0
Initial Vol:	101	0	66	0	0	0	0	612	47	86	656	0
ApproachDel:	118.9			xxxxxx			xxxxxx			xxxxxx		

Approach[northbound] [lanes=2] [control=Stop Sign]
Signal Warrant Rule #1: [vehicle-hours=5.5]
SUCCEED - Vehicle-hours >= 5 for two or more lane approach.
Signal Warrant Rule #2: [approach volume=167]
SUCCEED - Approach volume >= 150 for two or more lane approach.
Signal Warrant Rule #3: [approach count=3] [total volume=1567]
SUCCEED - Total volume greater than or equal to 650 for intersection with less than four approaches.

SIGNAL WARRANT DISCLAIMER

This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

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AM Cumulative Plus Project (2011) - Signal Warrant
Walmart, Tehachapi
Linscott, Law and Greenspan, Engineers

Peak Hour Volume Signal Warrant Report [Rural]

****

Intersection #105 Walmart Project Driveway 4 at Tehachapi Boulevard

****

Future Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Stop Sign			Stop Sign			Uncontrolled			Uncontrolled		
Lanes:	0 1 0	0 1		0 0 1!	0 0		1 0 0	1 0		1 0 0	1 0	
Initial Vol:	79	0	41	0	0	0	0	519	40	48	365	0

Major Street Volume: 972
Minor Approach Volume: 120
Minor Approach Volume Threshold: 165

SIGNAL WARRANT DISCLAIMER
This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

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PM Cumulative Plus Project (2011) - Signal Warrant
Walmart, Tehachapi
Linscott, Law and Greenspan, Engineers

Peak Hour Volume Signal Warrant Report [Rural]

****

Intersection #105 Walmart Project Driveway 4 at Tehachapi Boulevard

****

Future Volume Alternative: Peak Hour Warrant Met

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Stop Sign			Stop Sign			Uncontrolled			Uncontrolled		
Lanes:	0 1	0 0	1	0 0	1! 0	0	1 0	0 1	0	1 0	0 1	0
Initial Vol:	101	0	66	0	0	0	0	612	47	86	656	0

Major Street Volume: 1400
Minor Approach Volume: 167
Minor Approach Volume Threshold: 55 [less than minimum of 100]

SIGNAL WARRANT DISCLAIMER

This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

The peak hour warrant analysis in this report is not intended to replace a rigorous and complete traffic signal warrant analysis by the responsible jurisdiction. Consideration of the other signal warrants, which is beyond the scope of this software, may yield different results.

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APPENDIX L

TEHACHAPI REGION TRANSPORTATION IMPACT FEE PROGRAM FACILITIES LIST

Tehachapi Region Transportation Impact Fee Program Facilities List

TIF Project Number	STREET NAME	LIMITS FROM	LIMITS TO	IMPROVEMENT LENGTH MILES	NUMBER of LANES PROPOSED	LANES FUNDED by FEE	NOTES	TOTAL COST	Percent TIF Funded	TIF Cost	% Core	Cost Core	% Non-Core	Cost Non-Core
1	Bear Valley Rd	Bear Valley Entr	Cummings Valley Rd	1.12	2	2	Add 2 lanes to Collector	$ 1,474,816.00	100%	$ 1,474,816.00	2%	$ 29,496.32	98%	$ 1,445,319.68
2	Bear Valley Rd	CV Elementary Ent #1					Add Signal	$ 140,000.00	100%	$ 140,000.00	2%	$ 2,800.00	98%	$ 137,200.00
3	Cummings Valley Rd	Bear Valley Rd	Valley Blvd (SH 202)	0.40	2	2	Add 2 lanes to Collector	$ 528,715.15	100%	$ 528,715.15	2%	$ 10,574.30	98%	$ 518,140.85
4	Cummings Valley Rd	Bear Valley Rd					Add Signal	$ 140,000.00	100%	$ 140,000.00	2%	$ 2,800.00	98%	$ 137,200.00
5	Dennison Rd	SH 58	Tehachapi Blvd	0.55	2	2	Add 2 lanes to Collector	$ 549,240.00	100%	$ 549,240.00	59%	$ 324,051.60	41%	$ 225,188.40
6	EB 58 Off Ramp	Roadway Taper	Tehachapi Blvd	0.08	2	2	Add 2 lanes to Arterial	$ 152,651.52	100%	$ 152,651.52	59%	$ 90,064.39	41%	$ 62,587.12
7	EB 58 Off Ramp	Roadway Taper	Tucker Road (SH 202)	0.02	2	2	Add 2 lanes to Arterial	$ 45,454.55	80%	$ 36,363.64	34%	$ 12,363.64	66%	$ 24,000.00
8	Highline Road	Banducci					Add Signal	$ 140,000.00	88%	$ 123,200.00	5%	$ 6,160.00	95%	$ 117,040.00
9A	Highline Road	Banducci	Tucker Road	3.10	2	2	Add 2 lanes to Arterial	$ 7,182,080.00	88%	$ 6,320,230.40	5%	$ 316,011.52	95%	$ 6,004,218.88
9B	Highline Road	Tucker Road	Tehachapi-Willow Springs	4.00	2	2	Add 2 lanes to Arterial	$ 9,267,200.00	100%	$ 9,267,200.00	5%	$ 463,360.00	95%	$ 8,803,840.00
10	Highline Road	Tucker Road					Add Signal	$ 140,000.00	100%	$ 140,000.00	5%	$ 7,000.00	95%	$ 133,000.00
11	Highline Road	Curry Str					Add Signal	$ 140,000.00	100%	$ 140,000.00	5%	$ 7,000.00	95%	$ 133,000.00
12	Highline Road	Dennison Rd					Add Signal	$ 140,000.00	100%	$ 140,000.00	5%	$ 7,000.00	95%	$ 133,000.00
13	Red Apple Rd	Westwood Blvd					Add Signal	$ 140,000.00	100%	$ 140,000.00	5%	$ 7,000.00	95%	$ 133,000.00
14	Red Apple Rd	Westwood Blvd	Tucker Road (SH 202)	0.78	2	2	Add 2 lanes to Arterial	$ 1,807,104.00	100%	$ 1,807,104.00	5%	$ 90,355.20	95%	$ 1,716,748.80
15	Red Apple Rd	Reeves Str					Add Signal	$ 140,000.00	100%	$ 140,000.00	5%	$ 7,000.00	95%	$ 133,000.00
16	Red Apple Rd	Tucker Road (SH 202)					Upgrade Signal	$ 140,000.00	100%	$ 140,000.00	30%	$ 42,000.00	70%	$ 98,000.00
17	Tehachapi Blvd	Tucker Road (SH 202)	Mulberry Str	0.58	2	2	Add 2 lanes to Collector	$ 580,000.00	95%	$ 551,000.00	80%	$ 440,800.00	20%	$ 110,200.00
18	Tehachapi Blvd	Mtn View Ave					Add Signal	$ 140,000.00	91%	$ 127,400.00	80%	$ 101,920.00	20%	$ 25,480.00
19	Tehachapi Blvd	Mulberry Str					Add Signal	$ 140,000.00	97%	$ 135,800.00	80%	$ 108,640.00	20%	$ 27,160.00
20	Tehachapi Blvd	Mill Str					Add Signal	$ 140,000.00	99%	$ 138,600.00	80%	$ 110,880.00	20%	$ 27,720.00
21	Tehachapi Blvd	Green Str					Add Signal	$ 140,000.00	100%	$ 140,000.00	80%	$ 112,000.00	20%	$ 28,000.00
22	Tehachapi Blvd	Curry Str					Add Signal	$ 140,000.00	100%	$ 140,000.00	80%	$ 112,000.00	20%	$ 28,000.00
23	Tehachapi Blvd	Hayes					Add Signal	$ 140,000.00	100%	$ 140,000.00	80%	$ 112,000.00	20%	$ 28,000.00
24	Tehachapi Blvd	Hayes	Dennison Rd	0.52	2	2	Add 2 lanes to Collector	$ 520,000.00	100%	$ 520,000.00	80%	$ 416,000.00	20%	$ 104,000.00
25	Tehachapi Blvd	Snyder					Add Signal	$ 140,000.00	100%	$ 140,000.00	80%	$ 112,000.00	20%	$ 28,000.00
26	Tehachapi Blvd	Dennison Rd					Add Signal	$ 140,000.00	100%	$ 140,000.00	80%	$ 112,000.00	20%	$ 28,000.00
27	Tehachapi Blvd	EB 58 Off Ramp					Add Signal	$ 140,000.00	100%	$ 140,000.00	35%	$ 49,000.00	65%	$ 91,000.00
28	Tehachapi Blvd	WB 58 Off Ramp					Add Signal	$ 140,000.00	100%	$ 140,000.00	35%	$ 49,000.00	65%	$ 91,000.00
28	Tehachapi Blvd	Dennison Rd	Tehachapi-Willow Springs	2.05	2	2	Add 2 lanes to Collector	$ 2,050,000.00	100%	$ 2,050,000.00	10%	$ 205,000.00	90%	$ 1,845,000.00
29	Tehachapi-Willow Springs	Tehachapi Blvd					Add Signal	$ 140,000.00	100%	$ 140,000.00	10%	$ 14,000.00	90%	$ 126,000.00
30	Tehachapi-Willow Springs	Tehachapi Blvd	Highline	1.08	2	2	Add 2 lanes to Collector	$ 1,080,000.00	100%	$ 1,080,000.00	10%	$ 108,000.00	90%	$ 972,000.00
31	Tehachapi-Willow Springs	Highline					Add Signal	$ 140,000.00	100%	$ 140,000.00	10%	$ 14,000.00	90%	$ 126,000.00
32	Tehachapi-Willow Springs	Highline	2-Lane Taper	0.12	2	2	Add 2 lanes to Collector	$ 116,098.48	100%	$ 116,098.48	10%	$ 11,609.85	90%	$ 104,488.64
33	Tucker Road (SH 202)	EB 58 Off Ramp	Red Apple Rd	0.61	2	2	Add 2 lanes to Arterial	$ 1,424,305.45	80%	$ 1,139,444.36	34%	$ 387,411.08	66%	$ 752,033.28
34	Tucker Road (SH 202)	Tehachapi Creek Bridge Expansion					Expand Bridge	$ 1,500,000.00	80%	$ 1,200,000.00	34%	$ 408,000.00	66%	$ 792,000.00
35	Tucker Road	Cherry Lane					Add Signal	$ 140,000.00	100%	$ 140,000.00	10%	$ 14,000.00	90%	$ 126,000.00
36	Tucker Road	Cherry Lane	Highline Road	0.77	2	2	Add 2 lanes to Arterial	$ 1,540,000.00	100%	$ 1,540,000.00	10%	$ 154,000.00	90%	$ 1,386,000.00
37	Valley Blvd (SH 202)	Cummings Valley Rd (west)					Add Signal	$ 140,000.00	100%	$ 140,000.00	2%	$ 2,800.00	98%	$ 137,200.00
38	Valley Blvd (SH 202)	Cummings Valley Rd (west)	Old Town Rd	3.26	2	2	Add 2 lanes to Arterial	$ 7,552,768.00	83%	$ 6,268,797.44	2%	$ 125,375.95	98%	$ 6,143,421.49
39	Valley Blvd (SH 202)	Old Town Road					Add Signal	$ 140,000.00	83%	$ 116,200.00	5%	$ 5,810.00	95%	$ 110,390.00
40	Valley Blvd (SH 202)	Old Town Road	Woodford-Teh Road	1.91	2	2	Add 2 lanes to Arterial	$ 4,425,088.00	84%	$ 3,717,073.92	5%	$ 185,853.70	95%	$ 3,531,220.22
41	Valley Blvd (SH 202)	Schout Road					Add Signal	$ 140,000.00	100%	$ 140,000.00	5%	$ 7,000.00	95%	$ 133,000.00
42	Valley Blvd (SH 202)	Woodford-Teh Road					Upgrade Signal	$ 140,000.00	100%	$ 140,000.00	5%	$ 7,000.00	95%	$ 133,000.00
43	Valley Blvd (SH 202)	Woodford-Teh Road	Golden Hills Blvd	0.51	2	2	Add 2 lanes to Arterial	$ 1,020,000.00	100%	$ 1,020,000.00	5%	$ 51,000.00	95%	$ 969,000.00
44	Valley Blvd (SH 202)	Shopping (W Entr)					Add Signal	$ 140,000.00	100%	$ 140,000.00	5%	$ 7,000.00	95%	$ 133,000.00
45	Valley Blvd (SH 202)	Shopping (E Entr)					Add Signal	$ 140,000.00	100%	$ 140,000.00	5%	$ 7,000.00	95%	$ 133,000.00
46	Valley Blvd (SH 202)	Golden Hills Blvd					Upgrade Signal	$ 140,000.00	100%	$ 140,000.00	5%	$ 7,000.00	95%	$ 133,000.00
47	Valley Blvd (SH 202)	Golden Hills Blvd	Sierra Vista	0.70	2	2	Add 2 lanes to Arterial	$ 1,621,760.00	100%	$ 1,621,760.00	5%	$ 81,088.00	95%	$ 1,540,672.00
48	Valley Blvd (SH 202)	Sierra Vista					Add Signal	$ 140,000.00	100%	$ 140,000.00	5%	$ 7,000.00	95%	$ 133,000.00
49	Valley Blvd (SH 202)	Sierra Vista	Tucker Road	0.32	2	2	Add 2 lanes to Arterial	$ 640,000.00	100%	$ 640,000.00	10%	$ 64,000.00	90%	$ 576,000.00
50	Valley Blvd	Tucker Road	Dennison Rd	1.93	2	2	Add 2 lanes to Collector	$ 1,930,000.00	100%	$ 1,930,000.00	80%	$ 1,544,000.00	20%	$ 386,000.00
51	Valley Blvd	Mtn View Ave					Add Signal	$ 140,000.00	100%	$ 140,000.00	80%	$ 112,000.00	20%	$ 28,000.00
52	Valley Blvd	Mill Str					Add Signal	$ 140,000.00	100%	$ 140,000.00	80%	$ 112,000.00	20%	$ 28,000.00
53	Valley Blvd	Curry Str					Upgrade Signal	$ 140,000.00	100%	$ 140,000.00	80%	$ 112,000.00	20%	$ 28,000.00
54	Valley Blvd	Snyder					Add Signal	$ 140,000.00	100%	$ 140,000.00	80%	$ 112,000.00	20%	$ 28,000.00
55	Valley Blvd	Dennison Rd					Add Signal	$ 140,000.00	100%	$ 140,000.00	80%	$ 112,000.00	20%	$ 28,000.00
56	Westwood Blvd	Woodford-Teh Road	Golden Hills Blvd	2.04	2	2	Lane Striping Only, Total 5 lanes	$ 10,200.00	100%	$ 10,200.00	5%	$ 510.00	95%	$ 9,690.00
57	Westwood Blvd	Golden Hills Blvd					Add Signal	$ 140,000.00	100%	$ 140,000.00	5%	$ 7,000.00	95%	$ 133,000.00
58	Woodford-Teh Road	Country Club Dr	Valley Blvd (SH 202)	1.76	2	2	Add 2 lanes to Collector	$ 1,760,000.00	100%	$ 1,760,000.00	2%	$ 35,600.00	98%	$ 1,744,400.00
59	Woodford-Teh Road	Westwood Blvd					Add Signal	$ 140,000.00	100%	$ 140,000.00	2%	$ 2,800.00	98%	$ 137,200.00
60	Woodford-Teh Road	Golden Hills Blvd					Add Signal	$ 140,000.00	100%	$ 140,000.00	2%	$ 2,800.00	98%	$ 137,200.00
								$ 54,117,481.15		$ 50,581,894.91		$ 7,287,935.55		$ 43,293,959.36

Appendix L

Fiscal Impact Analysis

DRAFT

FISCAL IMPACT ANALYSIS

PROPOSED WALMART
TEHACHAPI, CA

December 1, 2009

Prepared for:

City of Tehachapi

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I. INTRODUCTION

This report evaluates the fiscal impacts that development of the proposed Walmart project would have on the City of Tehachapi. The project site totals approximately 25 acres located at the southeast corner of Tehachapi Boulevard and Tucker Road (State Route 202). For purposes of this analysis, the project is assumed to include the following components:

- A 165,000 square foot Walmart store, including 34,293 square feet devoted to grocery sales/support; and
- "Out lot" development totaling 11,800 square feet.

The out lots do not currently have identified uses as part of the application and will be developed at a later time. In order to fully evaluate the project's potential fiscal impacts, this study assumes these parcels will be developed with the following probable uses:

- Out lot 1: 5,200 square feet of retail;
- Out lot 2: 3,100 square-foot fast food restaurant with drive through; and
- Out lot 3: 3,500 square-foot fast food restaurant with drive through.

The fiscal analysis projects the annually recurring impact that the proposed project will have on the City's budget. The analysis considers the following fiscal revenues:

- Sales tax revenue;
- Property tax revenue;
- Property tax in-lieu of Vehicle License Fee (VLF);
- Utility franchise fees; and
- Business license taxes.

Although the project is located within a Redevelopment Project Area, the City's General Fund would still receive a portion of the property tax increment generated by the project. The General Fund "pass through" payment would be approximately 4% of the total property tax increment generated by the project.[1]

In addition to projecting fiscal revenues, the analysis also evaluates the major fiscal costs that the City would incur to provide public services to the project area. These include the following:

- Police protection costs;
- Fire protection costs; and
- Public works maintenance costs.

[1]Per City of Tehachapi, Finance Director.

II. EXECUTIVE SUMMARY

This section summarizes the proposed project's direct fiscal impacts on the City of Tehachapi. The indicated impacts would accrue to the City on an annual basis after full buildout of the project and are expressed in 2009 dollars.

Fiscal Revenues – General Fund

Table II-1, on the following page, summarizes annual City General Fund revenues that would be directly generated by the proposed project. Total new General Fund revenue generated by the proposed project is projected to be approximately $496,000 per year at project buildout.

The revenue projections provided in this analysis include only annually-recurring income sources; one-time revenues such as building permit fees are not included as they are generally assumed to represent an off-set of a corresponding City cost and thus do not represent net income to the City.

Fiscal Costs – General Fund

Table II-1 also provides a summary projection of the direct fiscal costs that the City would incur to provide public services to the project site. Total fiscal costs are projected to be approximately $43,000 per year at project buildout.

Net Fiscal Benefit – General Fund

The proposed project would generate a net fiscal benefit to the City's General Fund of approximately $453,000 per year at project buildout.

Property Tax Increment – Tehachapi Redevelopment Agency

At full buildout, the proposed project would generate $176,800 per year in annual property tax increment for the Tehachapi Redevelopment Agency, including $132,600 in unrestricted funds and $44,200 in Low-Moderate Income (LMI) Housing Set-Aside funds. The property tax increment distribution is shown on Table II-2 on page 3.

Table II-1
Net Fiscal Impact
Proposed Walmart Project
City of Tehachapi

GENERAL FUND (GF) IMPACTS:	**Annual Impact**
Revenues:	
Sales Tax	$434,121
Property Tax Increment (GF pass-through)	$8,840
Property Tax In Lieu of VLF	$42,193
Utility Franchise Fees	$7,880
Business License Tax	$3,500
Total Revenues	*$496,534*
Expenditures:	
Police Protection	$11,405
Fire Protection	$30,500
Public Works Maintenance	$1,193
Total Expenditures	*$43,098*
Net Fiscal Benefit, General Fund	**$453,436**

Source: City of Tehachapi; Kern County Fire Department; The Natelson Dale Group, Inc. (TNDG).

Table II-2
Projected Property Tax Increment by Entity
Tehachapi Walmart Project

TAXING ENTITY	**Annual Amount**
Redevelopment Agency	$132,600
Low-Moderate Income Housing Set Aside	$44,200
City General Fund pass-through	$8,840
Other pass-through payments	$35,360
Total	**$221,000**

Source: City of Tehachapi; TNDG.

III. FISCAL REVENUES

The proposed project would generate new City General Fund revenues in the following categories:

- Sales tax revenue;
- Property tax revenue;
- Property tax in-lieu of Vehicle License Fee (VLF);
- Utility franchise fees; and
- Business license taxes.

This section describes the assumptions and factors that were used to project annual revenues in each category.

Sales Tax Revenue

Sales tax revenues have been estimated based on the square footages of retail commercial space planned for the project and standard sales per square foot ratios for each category. The following factors have been assumed to project total taxable sales:

- Walmart general merchandise space: annual sales volumes of $300 per square foot;
- Walmart food store space: annual sales volumes of $621 per square foot, 15% of which are assumed to be taxable;
- Retail Out lot: annual sales volumes of $300 per square foot; and
- Fast food Out lots: annual sales volumes of $400 per square foot.

Table III-1, on the following page, shows the detailed sales tax calculations.

Property Tax Revenue

Table III-2, on page 6, shows the projected development value that has been assumed for purposes of calculating the incremental property tax base. The projected value is based on a factor of $125 per square foot of building area.

Based on information provided by the City's Finance Department, the net tax increment accruing to the City's General Fund is projected at approximately 4% of the incremental property tax revenue. The remaining 96% of the net tax increment will accrue to the Tehachapi Redevelopment Agency and other County agencies through statutory pass through payments. Table III-3, on page 6, calculates the annual net property tax revenue associated with the proposed project.

Table III-1
Estimate of Taxable Retail Sales (2009 Dollars)
Proposed Walmart Project
City of Tehachapi

Store	Square Feet	Sales per Sq. Ft.	Total Sales ($000s)	Percent Taxable	Taxable Sales ($000s)
Walmart Grocery	34,293	$621	$21,296	15.0%	$3,194
Walmart General	130,707	300	39,212	100.0%	39,212
Retail Out lot	5,200	300	1,560	100.0%	1,560
Fast food Out lot 1	3,100	400	1,240	100.0%	1,240
Fast food Out lot 2	3,500	400	1,400	100.0%	1,400
TOTAL / AVERAGE	176,800	$366.00	$64,708	72.0%	$46,606
Maximum Sales Tax Diversion					($3,194)
NET TAXABLE SALES					$43,412
Total Sales Tax Revenue @ 1.0% of Taxable Sales					***$434,121***

Source: TNDG.

Table III-2
Estimate of Assessed Value (2009 Dollars)
Proposed Walmart Project
City of Tehachapi

Assessed Value per Square Foot of Building Space	$125.00

Store	Square Feet	Assessed Value
Walmart Supercenter	165,000	$20,625,000
Retail Out Lot	5,200	$650,000
Fast food Out lot 1	3,100	$387,500
Fast food Out lot 2	3,500	$437,500
TOTAL	176,800	$22,100,000

Source: TNDG.

Table III-3
Total Property Tax Increment by Agency (2009 Dollars)
Proposed Walmart Project
City of Tehachapi

Total Assessed Value	$22,100,000
Total Property Tax Increment @ 1.0% of Assessed Value	$221,000

Taxing Entity	Tax Increment Share	Total Tax Increment
Redevelopment Agency	0.60	$132,600
LMI Housing Set-Aside	0.20	$44,200
City General Fund pass through	0.04	$8,840
Other pass-through payments	0.16	$35,360

Source: City of Tehachapi; TNDG.

Property Tax In Lieu of Vehicle License Fee (VLF) Revenue

The City receives property tax payments from the State in lieu of Vehicle License Fee (VLF) revenues. This separate property tax line item accrues to the City's General Fund and is part of the "triple flip" arrangement whereby the State reduced the amount of VLF allocated to cities and replaced it with additional property tax payments. The amount of property tax in lieu of VLF that the City receives from the State increases annually based on the percentage increase in the City's total assessed valuation. As shown on Table III-4, below, the amount of property tax in lieu of VLF accruing to the City is projected to increase by 3.7%, or $42,193, based on the incremental assessed value generated by the proposed project.

Table III-4
Projected Property Tax in Lieu of VLF Revenue (2009 Dollars)
Proposed Walmart Project
City of Tehachapi

Calculation Factor	Amount
Property Tax in-lieu of VLF, FY 2008-09	$1,151,760
Citywide Assessed Valuation (AV), FY 2008-09	$603,271,498
Incremental Assessed Value from Project 1/	$22,100,000
Percentage Increase over FY 2008-09 Base	3.7%
Incremental Property Tax in Lieu of VLF Revenue	$42,193

Source: City of Tehachapi; TNDG.
Source: 1/ See Table III-2.

Utility Franchise Fees

The project would utility franchise fee revenue based on consumption of electricity and natural gas at the project site. Utility billings have been estimated based on annual expenditures per 1,000 square feet of retail commercial space for both electricity and gas consumption. According to information provided by the City's Finance Department, the City receives franchise fee revenue equivalent to 2.0% and 1.0% of utility billings for electricity and natural gas, respectively.

Table III-5, on the following page, provides the detailed calculations utilized to estimate new franchise fee revenue generated by the project.

Table III-5
Franchise Fee Calculations (2009 Dollars)
Proposed Walmart Project
City of Tehachapi

Utility	Annual Expenditures Per 1,000 SF	Franchise Fee Rate	Franchise Fee Revenue Per 1,000 SF
Electricity	$2,042	2.0%	$40.84
Gas	$373	1.0%	$3.73
TOTAL	$2,415		$44.57
Franchise Tax Revenue			**$7,879.98**

Source: Department of Energy, Commercial Buildings Energy Consumption Survey (CBECS); City of Tehachapi, Finance Department; TNDG.

Business License Taxes

According to information provided by the City's Finance Department, the City collects a flat business license tax based on ranges of business gross receipts. For businesses that generate gross receipts of $1 to $2 million per year, the annual business license tax is equal to $500, while businesses with annual gross receipts of $10 million or more pay a business license tax of $2,000 per year. Table III-6, on the following page, provides the projected business license taxes that would be paid by the individual businesses at the proposed project, based on their annual sales estimates provided in Table III-1. As shown in the table, the project is projected to generate $3,500 in new business license tax revenue for the City.

Table III-6
Business License Calculations (2009 Dollars)
Proposed Walmart Project
City of Tehachapi

Store	Annual Gross Revenue (000's) 1/	Annual Fee
Walmart	$60,508	$2,000
Retail Out lot	$1,560	500
Fast food Out lot 1	$1,240	500
Fast food Out lot 2	$1,400	500
TOTAL	$64,708	$3,500

Source: City of Tehachapi, Finance Department; TNDG
Notes: 1/ See Table III-1 for estimate of sales by business.

IV. FISCAL COSTS

The proposed project would require ongoing City services in three major categories:

1. Police protection services to be provided by the City of Tehachapi Police Department;
2. Fire protection and related services to be provided by the Kern County Fire Department; and
3. Infrastructure maintenance to be provided by the Tehachapi Department of Public Works.

The methodologies for projecting cost impacts to these Departments are described below.

Law Enforcement

Police protection services to the project site are provided by City of Tehachapi Police Department. To estimate the number of police service calls that the proposed project would generate, the Department obtained data from the Los Angeles County Sheriff's Department (LASD) on the number of police service calls to four Walmart stores (including two Supercenters) for the most recent fiscal year in the cities of Palmdale and Lancaster. The highest number of police service calls among the sample of four stores was 165, which we have used for purposes of estimating potential number of service calls to the Tehachapi store. In addition, for this sample of stores, the average service time per call was approximately 1.5 hours. It should be noted that this estimate of annual service calls is based on a larger store along with different market area demographics, both of which would likely lead to an elevated number of service calls relative to the proposed Tehachapi location. Thus, this projected number of service calls should be considered an upper bound of the actual number of calls the proposed project would likely generate.

The hourly cost, including salary and benefits, for a "top step" (senior) officer is approximately $46.08 per hour[2]. Based on the service call assumptions discussed above, and the Department's cost structure, it is estimated that the annual cost impact to the Police Department to service the project would be approximately $11,045, as shown in Table IV-1 on the following page. It also should be noted that the City's Police Department currently operates with only 2 police officers on patrol per shift. As such, the Police Department may recommend that an additional police officer be hired so that one officer can be assigned exclusively to the proposed project, based on a similar policing arrangement at the Lancaster Walmart Supercenter store[3]. In this case, the cost impact would be higher than the estimated amount provided in Table IV-1.

[2] Per Chief of Police, City of Tehachapi Police Department.
[3] In Lancaster, there is a dedicated patrol deputy that is assigned exclusively to the retail center anchored by the existing Walmart Supercenter store. The officer's contract fee is divided as follows: Walmart Corporation (60%), City of Lancaster (20%), and other stores in the retail shopping center (20%).

Table IV-1
Police Protection Costs (2009 Dollars)
Proposed Walmart Project
City of Tehachapi

Annual Costs Required to Service Proposed Walmart Store	
Police calls per year	165
Estimated hours per call	1.5
Police cost per hour	$46.08
Total Police protection costs per year	**$11,405**

Source: City of Tehachapi Police Department; TNDG.

Fire Department

Fire protection services to the project site would be provided by the Kern County Fire Department. Based on data from the Los Angeles County Fire Department (LACFD) for service calls to the existing Lancaster and Palmdale Walmart stores, the Tehachapi Fire Department estimates that the proposed project will generate approximately 50 calls per service per year with an average service call time of 2 hours. Along with service calls, the Department also estimates that the proposed project will generate 10 hours per year in fire prevention-related activities. Based on the Department's existing cost structure, it is estimated that the annual cost impact to the Fire Department to service the project would be approximately $30,500 ($30,000 for service calls, $500 for prevention activities), as shown in Table IV-2 on the following page.

Given that fire protection services are provided through a contract with Kern County, the direct project-related fire protection service costs would be borne by the County. However, we have evaluated this as a City cost impact under the assumption that the cost of the contract will increase by the same amount as the estimated fire protection costs generated by the proposed project.

Table IV-2
Fire Protection Costs (2009 Dollars)
Proposed Walmart Project
City of Tehachapi

SERVICE CALLS (Type 1 Engine, 3-person crew):	
Calls per year	50
Hours per call	2
Cost per hour	$250
Overhead factor	18.83%
Total cost per year	$29,708
Round to:	$30,000
PREVENTION ACTIVITIES:	
Hours per year	10
Cost per hour	$44
Total cost per year	$440
Round to:	$500
Grand Total:	***$30,500***

Source: Kern County Fire Department; TNDG.

Public Works

The City's Public Works Department will be responsible for maintaining new infrastructure associated with proposed project. The Department estimates the cost of maintaining new infrastructure associated with the proposed project at $1,193.15 per year[4]. This estimate is based on the following assumptions:

- New City-maintained infrastructure related to the proposed project would be limited to a new turn lane on Tehachapi Boulevard (16-foot strip, 253 feet long); and
- A 4-year maintenance cycle (of which the above annualized cost equals 25%).

[4] Per Public Works Director, City of Tehachapi Public Works Department.