# Disney | ABC Studios at The Ranch

## Draft Environmental Impact Report

## Volume IX

SCH No. 2010011010
County Project No. TR071216-(5)
Plan Amendment No. 200900010
Zone Change No. 200900012
Vesting Tentative Tract Map No. 071216
Conditional Use Permit No. 200900126
Oak Tree Permit No. 200900041
Parking Permit No. 201000002
Environmental Review No. 200900112

Lead Agency:
**County of Los Angeles**
**Department of Regional Planning**
**Impact Analysis Section**
320 West Temple Street, Room 1348
Los Angeles, California 90012

**May 2012**

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**May 2012**

Prepared By:

matrix environmental

6701 Center Drive West, Suite 900
Los Angeles, California 90045

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# Appendix J.1

## Los Angeles County Sheriff's Department and California Highway Patrol Correspondence

3/5/10
Attn: Mike Dunkle
No. of Pages: 7
Fax. No. (323) 415-3342

matrix environmental

January 14, 2010

Captain Jacques A. La Berge
**COUNTY OF LOS ANGELES**
**SHERIFF'S DEPARTMENT**
Santa Clarita Valley Station
23740 W. Magic Mountain Parkway
Valencia, California 91355

**RE: DISNEY I ABC STUDIOS AT THE RANCH – REQUEST FOR SHERIFF SERVICE INFORMATION**

Dear Captain La Berge,

In coordination with the County of Los Angeles, Matrix Environmental is preparing an Environmental Impact Report (EIR) for Disney I ABC Studios at the Ranch (the Proposed Project) pursuant to the California Environmental Quality Act (CEQA).

In order to adequately identify and assess the full range of the Proposed Project's potential impacts, early consultation with public agencies is being conducted. As the Proposed Project is located in the County of Los Angeles and is served by the Los Angeles County Sheriff's Department (LACSD), we are requesting information from your agency. The following is a brief description of the Proposed Project and a list of requested information that we would like to obtain to complete our analysis.

**PROJECT DESCRIPTION**

The Project site consists of Golden Oak Ranch (the Ranch), located at 19802 Placerita Canyon Road in the unincorporated Santa Clarita Valley area of Los Angeles County, and is bordered to the west and north by State Route 14 (SR-14). The Ranch is an 890-acre working filming ranch used in the production of motion pictures, television programming, commercials and photographic images, as well as related ancillary uses and activities, agricultural uses, and oil production. The Ranch is situated at the bottom of Placerita Canyon, with relatively steep hillsides and ridgelines to the north and south measuring approximately 350 feet in height. The proposed Development Area is comprised of approximately 56 acres in the westernmost portion of the Ranch, which is separated from the remainder of the property by a 330-foot strip of land owned by the City of Los Angeles Department of Water and Power (LADWP) that traverses the Ranch in a generally northwest to southeast direction and is used to support existing electrical transmission lines. A substantial portion of the Development Area would be located on two large, mostly barren fill pads adjacent to SR-14, which are separated by Placerita Creek. The eastern portion of the Ranch property includes private in-holdings within Angeles National Forest.

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The Proposed Project would provide for the development of state-of-the-art studio uses and associated film and television production facilities. The Proposed Project would provide up to twelve soundstages, production offices, six mills, a warehouse, writers/producers bungalows, a commissary with associated amenities, an administration building, a central utility plant, an electrical substation, a bridge over Placerita Creek, drainage devices, and on-site parking, much of which would be located within the LADWP transmission corridor. Buildout of the Proposed Project would result in a total of approximately 555,950 gross square feet of building area, plus approximately 66,300 square feet of ancillary facilities. Table 1 on page 3 provides the development program for the Proposed Project with twelve soundstages.

In addition, off-site traffic and utilities improvements, as well as vacation of the portion of Delden Road right-of-way through the Development Area are proposed. Site access would continue to be provided from Placerita Canyon Road. As under existing conditions, operating hours for filming could occur 24 hours per day. Business operating hours for the Ranch office are typically between 6:00 A.M. and 6:00 P.M. Completion of the project is expected to occur as early as 2014 or as late as 2020.

The remaining areas of the Ranch would continue to operate as a working filming ranch, as has occurred since at least 1959. Approximately 30 acres of the existing 225-acre outdoor filming area are located within the proposed Development Area. Thus, with implementation of the Proposed Project, approximately 195 acres of the Ranch would continue to be used for outdoor filming/movie ranch uses with some agricultural uses. In addition, the remaining approximately 639 acres of the Ranch would be used primarily as a filming backdrop with some agricultural and oil production uses.

The Proposed Project also includes an option to develop studio office uses in lieu of four soundstages and two mills within the northern portion of the Development Area. As shown in Table 2 on page 3, buildout of the Proposed Project with the studio office uses option would result in a total of approximately 510,000 gross square feet of building area, plus approximately 66,300 square feet of ancillary facilities.

## REQUESTED INFORMATION

To aid us in assessing potential impacts to existing sheriff services, Matrix Environmental is requesting the following information regarding LACSD services and facilities:

- Sheriff station(s) and/or other facilities providing sheriff protection services to the Project site;

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Captain Jacques A. La Berge
**COUNTY OF LOS ANGELES**
**SHERIFF'S DEPARTMENT**
January 14, 2010 - Page 3

**TABLE 1**
**PROJECT BUILDOUT WITH TWELVE SOUNDSTAGES**

| Use | Building GSF | Quantity | Total GSF |
|---|---|---|---|
| Soundstages | 19,800 | 12 | 237,600 |
| Production Offices | 28,125 | 6 | 168,750 |
| Mills | 11,500 | 6 | 69,000 |
| Warehouse | 23,000 | 1 | 23,000 |
| Writers/Producers Bungalows | 1,725 | 6 | 10,350 |
| Commissary/Amenities | 17,250 | 1 | 17,250 |
| Administration | 30,000 | 1 | 30,000 |
| **Total** | | | **555,950** |
| Ancillary Facilities | | | |
| Central Utility Plant | | 1 | 20,000 |
| Electrical Substation | | 1 | 46,300 |

*Note: GSF – Gross Square Feet*

*Source: Johnson Fain, 2009.*

**TABLE 2**
**PROJECT OPTION - BUILDOUT WITH EIGHT SOUNDSTAGES AND STUDIO OFFICES**

| Use | Building GSF | Quantity | Total GSF |
|---|---|---|---|
| Soundstages | 19,800 | 8 | 158,400 |
| Production Offices | 28,125 | 4 | 112,500 |
| Mills | 11,500 | 4 | 46,000 |
| Warehouse | 23,000 | 1 | 23,000 |
| Writers/Producers Bungalows | 1,725 | 6 | 10,350 |
| Studio Office | 112,500 | 1 | 112,500 |
| Commissary/Amenities | 17,250 | 1 | 17,250 |
| Administration | 30,000 | 1 | 30,000 |
| **Total** | | | **510,000** |
| Ancillary Facilities | | | |
| Central Utility Plant | | 1 | 20,000 |
| Electrical Substation | | 1 | 46,300 |

*Note: GSF – Gross Square Feet*

*Source: Johnson Fain, 2009.*

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- Staffing and equipment for each sheriff station/facility serving the Project site (e.g., patrol cars, total full-time and part-time staff, number of officers on 24-hour duty, etc.);
- Population served for each sheriff station/facility serving the Project site and boundaries of service area/division;
- Special service teams (i.e., SWAT and K-9) available within the division and sheriff stations;
- A general overview of the department's emergency response system (i.e., dispatch system, standard procedures and protocols, etc.);
- Most recent data on associated response times for Part I Crime, Part II Crime, and Noncriminal Incidents for the station/facility serving the Project area;
- Planned improvements to the sheriff protection facilities in the service area of the Project site (i.e., expansion, new facilities, additional staffing, etc.), if applicable; and
- Any special sheriff protection requirements due to the specific attributes of the Proposed Project.

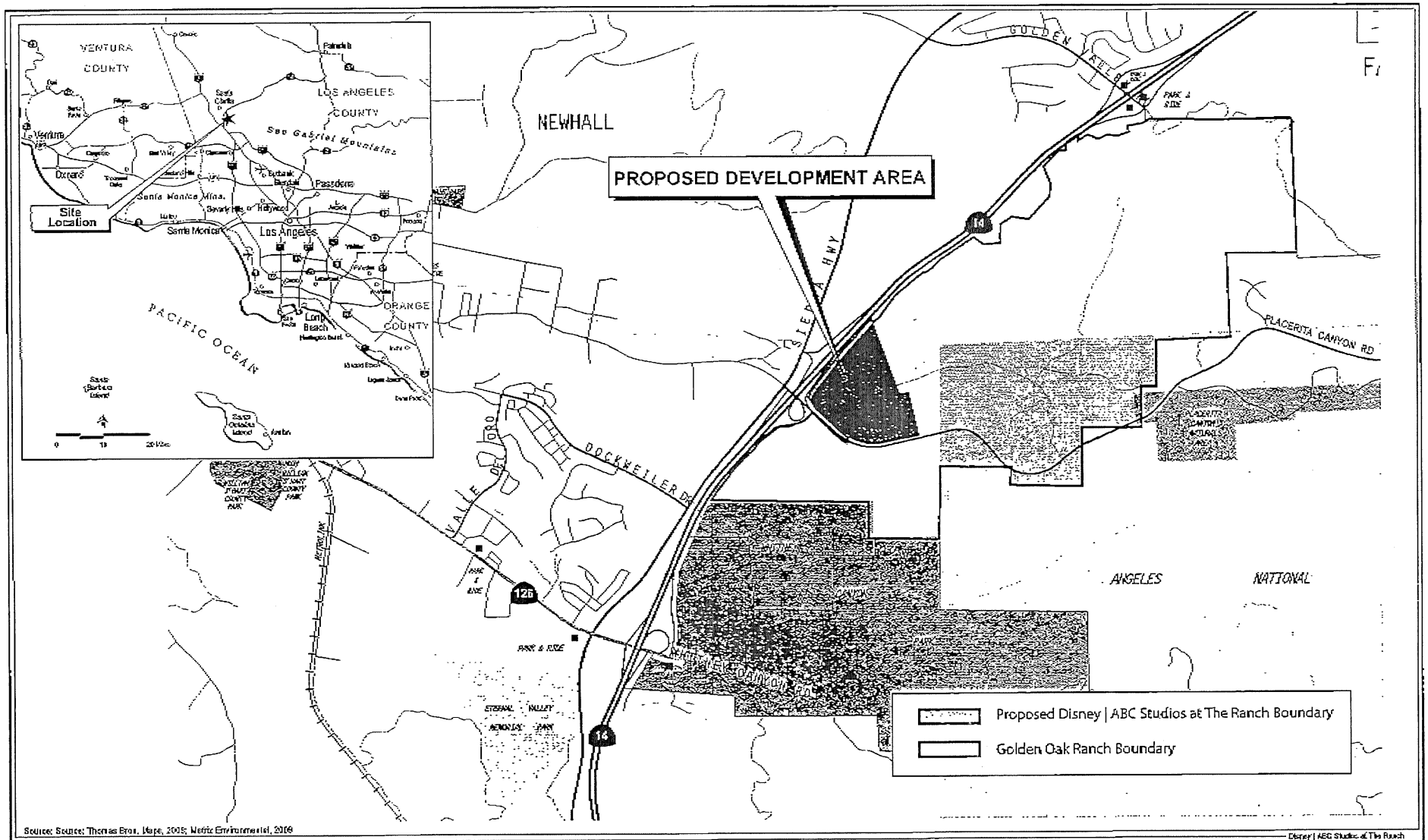
Please feel free to contact me at (424) 207-5333 or via email at a.rogers@matrixeir.com to discuss our information needs and/or any questions regarding the project. We would appreciate a response to the information requests set forth in this letter by January 27, 2010. We thank you for your time and assistance.

Sincerely,
**MATRIX ENVIRONMENTAL**

Ashley Rogers

Ashley Rogers
Principal Planner

Enclosures: Regional and Local Vicinity Map, Conceptual Site Plan, Option Conceptual Site Plan



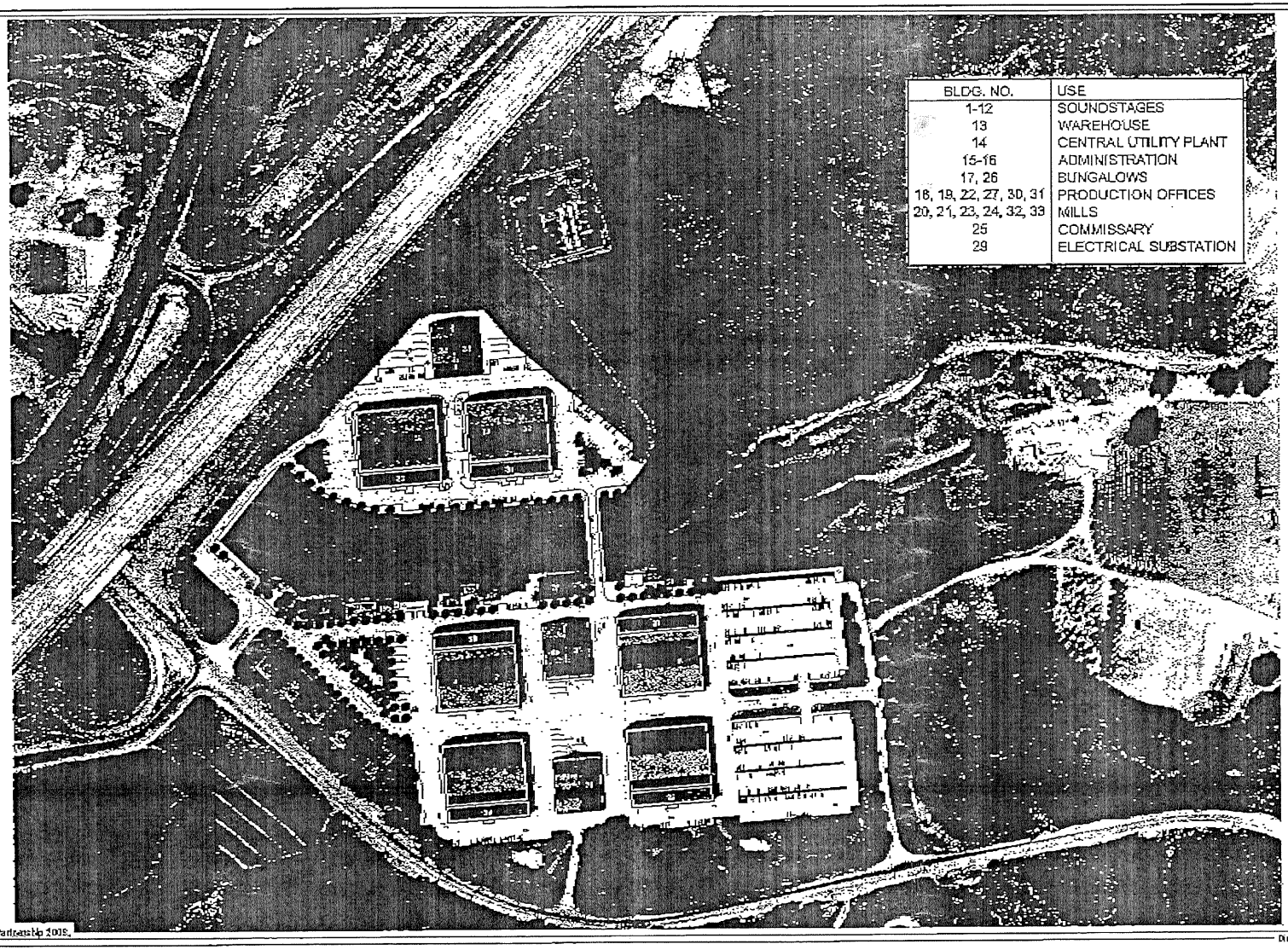

Source: Source: Thomas Bros. Maps, 2005; Matrix Environmental, 2009

Disney | ABC Studios at The Ranch

matrix environmental

Approximate Scale in Feet

**Figure A-1**
Regional and Local Vicinity Map



| BLDG. NO. | USE |
|---|---|
| 1-12 | SOUNDSTAGES |
| 13 | WAREHOUSE |
| 14 | CENTRAL UTILITY PLANT |
| 15-16 | ADMINISTRATION |
| 17, 26 | BUNGALOWS |
| 18, 19, 22, 27, 30, 31 | PRODUCTION OFFICES |
| 20, 21, 23, 24, 32, 33 | MILLS |
| 25 | COMMISSARY |
| 29 | ELECTRICAL SUBSTATION |

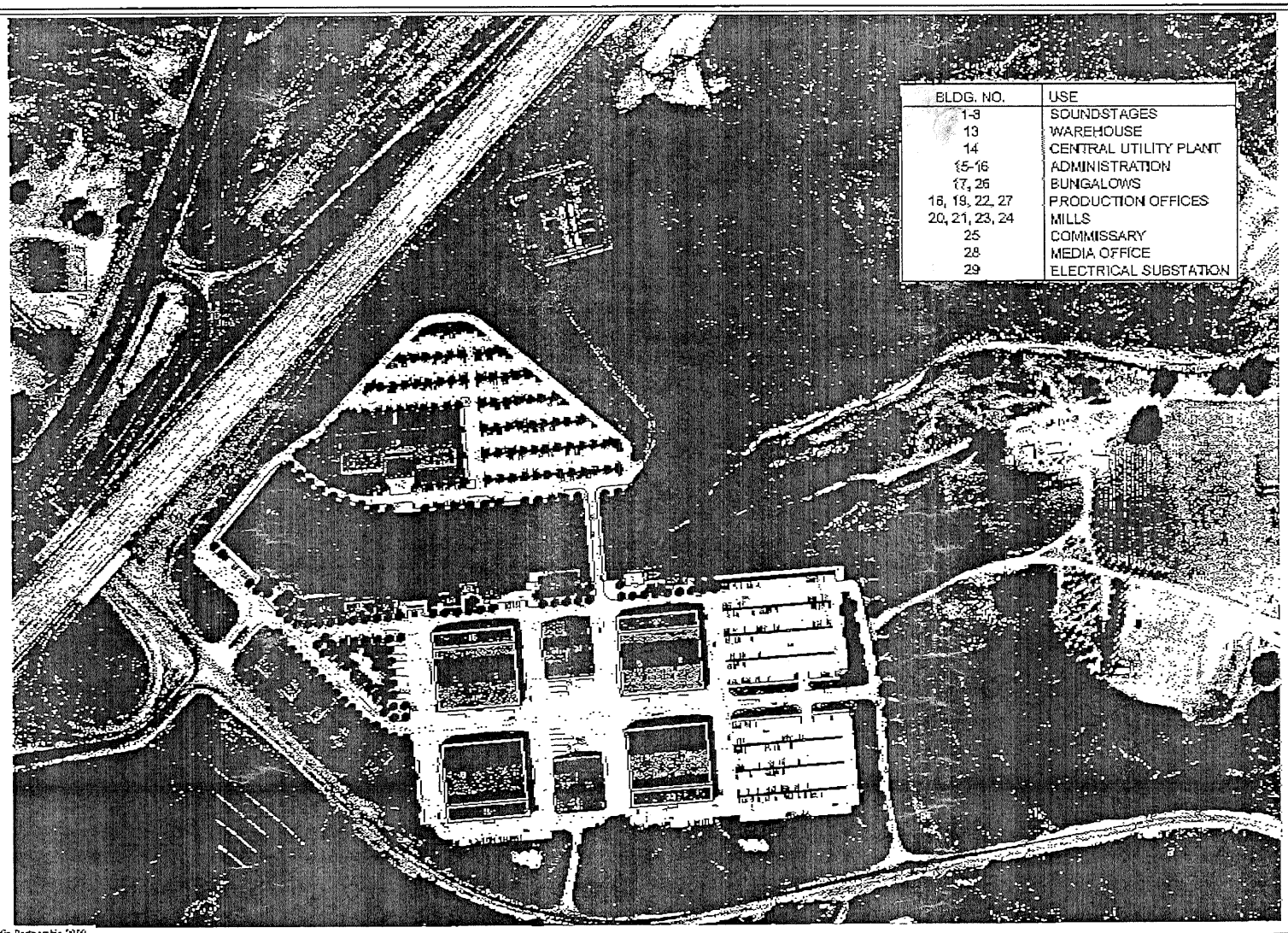
Source: Johnson Fain 2005; DIN Partnership 2005.

Disney | ABC Studios at The Ranch

matrix environmental

0 50' 100' 200'
Approximate Scale in Feet

Figure A-5
Conceptual Site Plan



| BLDG. NO. | USE |
|---|---|
| 1-3 | SOUNDSTAGES |
| 13 | WAREHOUSE |
| 14 | CENTRAL UTILITY PLANT |
| 15-16 | ADMINISTRATION |
| 17, 26 | BUNGALOWS |
| 18, 19, 22, 27 | PRODUCTION OFFICES |
| 20, 21, 23, 24 | MILLS |
| 25 | COMMISSARY |
| 28 | MEDIA OFFICE |
| 29 | ELECTRICAL SUBSTATION |

Source: Johnson Fain 2009; Olin Partnership 2009.

Disney/ABC Studios at The Ranch

matrix environmental

Approximate Scale in Feet

**Figure A-6**
Option Conceptual Site Plan

*County of Los Angeles*
**Sheriff's Department Headquarters**
*4700 Ramona Boulevard*
*Monterey Park, California 91754-2169*
(661) 255-1121

*Leroy D. Baca, Sheriff*

March 8, 2010

Ms. Ashley Rogers
Matrix Environmental
6701 Center Drive, Suite 900
Los Angeles, California 90045

Dear Ms. Rogers:

NOTICE OF PREPARATION
DISNEY / ABC STUDIOS AT THE RANCH
TENTATIVE TRACT NO. TR071216

The proposed Disney / ABC Studios project located at 19802 Placerita Canyon Road, consisting of film and production facilities on 56 acres, is located in the unincorporated area of Los Angeles County. The area is serviced by the Los Angeles County Sheriff's Department, Santa Clarita Valley Station, 23740 Magic Mountain Parkway, Valencia 91355. The proposed project site is located at the northeast corner of the Antelope Valley Freeway and Placerita Canyon Road, approximately 5-6 miles from the Santa Clarita Valley Station.

It is anticipated that the non-emergent response time to a request for service would be approximately 45-60 minutes. The priority response time would be approximately 10-15 minutes and the response time under emergent circumstances would be approximately 4-8 minutes. All response times are approximations, and would be dependent on both the deployment of area radio cars, and traffic conditions.

At present, all law enforcement services with the exception of traffic services (traffic enforcement and traffic accident investigation are handled by the California Highway Patrol) are handled by the Los Angeles County Sheriff's Department.

This station serves an area of 656 square miles, which is made up of the City of Santa Clarita and unincorporated county between the Los Angeles City Limits to the south, the Kern County Line to the north and involving all area between the Ventura County Line to the west and the township of Agua Dulce to the east. The population served by our station is approximately 250,000 residents.

Since this project is a non-residential project, it is difficult for us to anticipate the numbers of personnel on the project site at any given time and therefore we would not anticipate an increase in our station compliment.

It is suggested, for crime prevention purposes and for the security and safety of the working personnel on site, the following measures should be implemented during site and building layout design:

- Proper lighting in open areas and parking lots;
- Provide sufficient street lighting for the project streets;
- Provide Knox Box entry key system for fire department along with law enforcement, if gated entries are planned in the project area;
- Ensure that the required building address numbers be lighted and readily apparent from the street for emergency response agencies.

Should you have further questions, please feel free to call me at (661) 255-1121 estension 5101, or Deputy Patrick Rissler at extension 5159.

Sincerely,

LEROY D. BACA, SHERIFF

Michael W. Dunkle, Acting Captain
Santa Clarita Valley Station

MWD:par

*County of Los Angeles*
**Sheriff's Department Headquarters**
*4700 Ramona Boulevard*
*Monterey Park, California 91754-2169*
(661) 255-1121

*Leroy D. Baca, Sheriff*

February 22, 2011

Ms. Jessica Viramontes
Matrix Environmental
6701 Center Drive, Suite 900
Los Angeles, California 90045

Dear Ms. Viramontes:

DISNEY / ABC STUDIOS AT THE RANCH
TENTATIVE TRACT NO. TR071216

I have received your request for additional questions regarding the Environmental Impact Report of the Disney / ABC Studios at the Ranch project located at 19802 Placerita Canyon Road.

I would like to answer your questions in the numeric order that you had written:

1. In the event that additional staffing is required for larger emergencies, can additional officers be called in from other Sheriff Department areas?

   *Yes, dependent on the nature of the incident, or emergency we would have additional support from other stations.*

2. What is the current staffing of the Santa Clarita Valley Station?

   *Currently we have 170 sworn deputies to patrol an area of 656 square miles of area.*

3. How many service calls did the Santa Clarita Valley Station receive during the past calendar year?

   *The Santa Clarita Valley Sheriff's Station responded to 52,125 total calls for service in 2010.*

Your questions number 4 and 5 regarding response times, were answered in our letter dated March 8, 2010 to Ms. Ashley Rogers, and that paragraph reads as follows:

It is anticipated that the non-emergent response time to a request for service would be approximately 45-60 minutes. The priority response time would be approximately 10-15 minutes and the response time under emergent circumstances would be approximately 4-8 minutes. All response times are approximations, and would be dependent on both the deployment of area radio cars, and traffic conditions.

6. How many incidents did the Santa Clarita Valley Station handle during the last calendar year (broken down by Part I, Part II and non-criminal incidents)?

   *In 2010 there were 4,371 Part I crimes, 6,732 Part II crimes and 9,328 non-criminal incidents in the Santa Clarita Valley.*

7. Is the Santa Clarita Valley Station currently exceeding its capacity in terms of how many officers are currently assigned there? If so, are there any planned improvements for the station and when would these improvements be completed?

   *Yes. The station was built in 1972. To handle the growing number of personnel, office space has been leased in an adjacent building to house the Detective Bureau. The vacated space is currently in the process of several major renovation projects including the expansion of the current secretarial area and the expansion and remodeling of the desk and dispatch areas. The projects are expected to be completed by the end off the year.*

8. Is there an ideal officer to population ratio the Sheriff's Department tries to maintain?

   *Yes, our ideal officer to population ratio is one deputy per 1,000 residents.*

I hope this answers your questions, should you have further questions, please feel free to call me at (661) 255-1121 estension 5101, or Deputy Patrick Rissler at extension 5159.

Sincerely,

LEROY D. BACA, SHERIFF

Paul Becker, Captain
Santa Clarita Valley Station

## Jessica Viramontes

**From:** Jorge Martinez [JorMartinez@chp.ca.gov]
**Sent:** Tuesday, April 27, 2010 12:50 PM
**To:** Jessica Simkin
**Subject:** Re: CHP Questions Regarding Disney/ABC Studios at the Ranch

Ms. Simkin,

Sorry I could not respond with this information yesterday. Total # of citations/arrests made by the Newhall CHP Station last year was approx. 54,850. Of this #, 1,803 resulted in physical arrest/incarceration. Arrest stats within the project site are not available. Hope this helps.

Sergeant Jorge Martinez
Newhall Area
(661) 294-5540
Fax: (661) 294-5548

>>> "Jessica Simkin" <j.simkin@matrixeir.com> 4/26/2010 9:32 AM >>>
Hi Sergeant Martinez,

Thank you for your help during our conversation earlier today.

My additional question is what was the number of total citations/arrests by the Newhall Station during the last year? Also, if available, could you please let me know how many of these citations/arrests were in close proximity to the project site (I've attached some figures to this e-mail to give you an idea of where the project site is located and what is being proposed)?

Thank you again for your help!

Jessica Simkin
Planner

6701 Center Drive, Suite 900

Los Angeles, California 90045

Tel: (424) 207-5333

Fax: (424) 207-5349

Direct: (424)-207-5334

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# Appendix J.2

## Los Angeles County Fire Department Correspondence

| | |
|---|---|
| **From:** | Aguirre, Debbie |
| **To:** | Jessica Viramontes |
| **Cc:** | Bagwell, Loretta; Whaling, Mark |
| **Subject:** | RE: Follow-up Questions for Golden Oak Ranch |
| **Date:** | Thursday, April 07, 2011 3:38:43 PM |

---

Based upon Capt Whaling's verification of the actual driving time, please use 8 minutes in the DEIR.

---

**From:** Jessica Viramontes [mailto:J.Viramontes@matrixeir.com]
**Sent:** Thursday, April 07, 2011 3:33 PM
**To:** Whaling, Mark; Aguirre, Debbie
**Subject:** RE: Follow-up Questions for Golden Oak Ranch

Hi Ms. Aguirre,

Did you want to revise your estimate of 9 to 10 minutes based on Mr. Whaling's driving time? Or should I include your original estimate in the Draft Environmental Impact Report?

Thanks,
Jessica

---

**From:** Whaling, Mark [mailto:MWhaling@fire.lacounty.gov]
**Sent:** Friday, April 01, 2011 4:09 PM
**To:** Jessica Viramontes; Aguirre, Debbie
**Subject:** RE: Follow-up Questions for Golden Oak Ranch

Debbie
The Time of 7.5 is the driving time from the drivway of FS 123 to the gate of Golden Oak Ranch.
Mark

---

**From:** Jessica Viramontes [J.Viramontes@matrixeir.com]
**Sent:** Monday, March 28, 2011 11:06 AM
**To:** Aguirre, Debbie; Whaling, Mark
**Subject:** RE: Follow-up Questions for Golden Oak Ranch

Thank you for resending the response, Ms. Aguirre. I have one follow up question for both of you.

Mr. Whaling, you indicated that the average response time for Fire Station 123 would be approximately 7.5 minutes or less. In the response below, Ms. Aguirre indicates it would be approximately 9-10 minutes. Which time would you like me to include in the EIR?

Please note that our sources currently indicate that for suburban areas, the County Fire Department has response time goals of 8 minutes for the first arriving unit and 12 minutes for an advanced life support (paramedic) unit. Therefore, if we include the time that Ms. Aguierre provided, we will be stating that Fire Station 123 currently doesn't meet the response time goal. If this isn't accurate, please let me know.

Thanks for your help and please let me know if you have any questions.

Thanks,
Jessica

---

**From:** Aguirre, Debbie [mailto:DAguirre@fire.lacounty.gov]
**Sent:** Wednesday, February 23, 2011 5:33 PM
**To:** Whaling, Mark; Jessica Viramontes
**Subject:** RE: Follow-up Questions for Golden Oak Ranch

Resending response – please reply to acknowledge receipt.

---

**From:** Aguirre, Debbie
**Sent:** Wednesday, January 12, 2011 5:30 PM
**To:** 'j.viramontes@matrixeir.com'
**Subject:** RE: Follow-up Questions for Golden Oak Ranch

4. Average response time by call type for Fire Station 123 (fire-related, EMS, and other): Please note that FS 123 has a jurisdiction of 13 square miles which encompasses both suburban and rural areas – average response times can be dramatically impacted by a handful of rural area calls. For 2010, average first-in response times for FS 123's area were:

   Fire: 9.5 minutes; EMS: 7 minutes, all other (including non-emergencies): 8:41 minutes

5. Average response time to Golden Oak Ranch for Fire Station 123: There were no responses to Golden Oak Ranch since 2009. Based upon a distance of 4 miles from FS 123, we estimate response times would be 9 to 10 minutes.

Please let me know if you need additional information.

Debbie Aguirre, Chief
Planning Division
Los Angeles County Fire Department
323 881-2404

**From:** Whaling, Mark
**To:** Jessica Viramontes
**Cc:** Lindaman, Ted; steve.sligh@disney.com
**Subject:** RE: Follow-up Questions for Golden Oak Ranch
**Date:** Friday, December 31, 2010 9:13:55 AM

---

Good Morning Jessica

Here are the answers to your question

1- Daily 3 , (When the weather gets hotter and dryer the department may increase that number to 4, 5, 6 or 10)
2- Yes ... One Type 1 Fire Engine with 3 Personnel and one Type four Fire Engine manned when needed. also a reserve Fire engine is stored here and manned when needed here or else where.
3- Fire- 115 EMS-207 Other- 49
4- Call let me know what degree of accuracy you need
5- We will time it this morning and get back to you

Mark Whaling
FS 123 C
661-252-1235

---

**From:** Jessica Viramontes [J.Viramontes@matrixeir.com]
**Sent:** Tuesday, December 28, 2010 12:46 PM
**To:** Whaling, Mark
**Subject:** Follow-up Questions for Golden Oak Ranch

Hi Captain Whaling,

I am following up on some correspondence you had with my coworker, Ashley Rogers, at the beginning of the month regarding the Disney I ABC Studios at the Ranch (the Proposed Project). While we did receive some information from you, we would appreciate answers to these follow up responses so that we may provide a complete analysis of fire services in relation to the Proposed Project.

1. Number of staff on duty on a 24-hr basis at Fire Station 123
2. Please confirm Station 123 just has an engine company in terms of equipment
3. Total number of calls for service in 2009 for Fire Station 123, broken down by fire-related, EMS, and other
4. Average response time by call type for Fire Station 123 (fire-related, EMS, and other)
5. Average response time to Golden Oak Ranch for Fire Station 123

I wanted to provide these questions to you via email. Unless I hear differently from you, I'll be following up via telephone tomorrow morning.

Please feel free to contact me at (415) 439-8381 or via email to discuss our information needs and/or any questions regarding the project. I thank you for your time and assistance.

Thanks,
Jessica Viramontes
Planner

| | |
|---|---|
| **From:** | Whaling, Mark |
| **To:** | Jessica Viramontes |
| **Cc:** | steve.sligh@disney.com; Lindaman, Ted |
| **Subject:** | RE: Follow-up Questions for Golden Oak Ranch |
| **Date:** | Friday, December 31, 2010 2:29:34 PM |

---

4- Responce times ... Call and lets talk ..... there are alot of ways to calculate this ..
5- Normalle drive from Fs 123 to Golden Oak Ranch was 7:23 today Responce time would be faster

---

**From:** Jessica Viramontes [J.Viramontes@matrixeir.com]
**Sent:** Tuesday, December 28, 2010 12:46 PM
**To:** Whaling, Mark
**Subject:** Follow-up Questions for Golden Oak Ranch

Hi Captain Whaling,

I am following up on some correspondence you had with my coworker, Ashley Rogers, at the beginning of the month regarding the Disney I ABC Studios at the Ranch (the Proposed Project). While we did receive some information from you, we would appreciate answers to these follow up responses so that we may provide a complete analysis of fire services in relation to the Proposed Project.

1. Number of staff on duty on a 24-hr basis at Fire Station 123
2. Please confirm Station 123 just has an engine company in terms of equipment
3. Total number of calls for service in 2009 for Fire Station 123, broken down by fire-related, EMS, and other
4. Average response time by call type for Fire Station 123 (fire-related, EMS, and other)
5. Average response time to Golden Oak Ranch for Fire Station 123

I wanted to provide these questions to you via email. Unless I hear differently from you, I'll be following up via telephone tomorrow morning.

Please feel free to contact me at (415) 439-8381 or via email to discuss our information needs and/or any questions regarding the project. I thank you for your time and assistance.

Thanks,
Jessica Viramontes
Planner

# COUNTY OF LOS ANGELES

FIRE DEPARTMENT

1320 NORTH EASTERN AVENUE
LOS ANGELES, CALIFORNIA 90063-3294

(323) 890-4330

P. MICHAEL FREEMAN
FIRE CHIEF
FORESTER & FIRE WARDEN


March 5, 2010

Ashley Rogers, Principal Planner
Matrix Environmental
6701 Center Drive, Suite 900
Los Angeles, CA 90045

Dear Ms. Rogers:

**DISNEY I ABC STUDIOS AT THE RANCH: REQUEST FOR SHERIFF SERVICE INFORMATION, LACO (FFER #201000013)**

The project has been reviewed by the Planning Division, Land Development Unit, Forestry Division, and Health Hazardous Materials Division of the County of Los Angeles Fire Department. The following are their comments:

**PLANNING DIVISION:**

1. Fire Station(s) providing fire protection and emergency medical services to the Project area, including address, approximate distance/response time to the Project area, Fire Station service boundaries and/or population, first in, and backup responders(s) for each station listed are:

   a. Fire Station 104 (Temporary), located at 26201 Golden Valley Road, Santa Clarita, CA 91350, is the jurisdictional station (1st-due) for this property. It is approximately 3.5 miles north of the project site and is staffed 24 hours a day with full time personnel. It has a 4-person quint, which is a combination engine/ladder truck apparatus, staffed with 1 Fire Captain, 1 Fire Fighter Specialist, and 2 Fire Fighters.

   b. Fire Station 73 located at 24875 N. San Fernando Road, Santa Clarita, CA 91321, is the 2nd due station for this property. It is approximately 3.3 miles from the project site and is staffed 24 hours a day with full time personnel. It has a 4-person engine company staffed with 1 Fire Captain, 1 Fire Fighter Specialist and 2 Fire Fighters, and a 2-person Paramedic Squad staffed with 2 Fire Fighter/Paramedics.

2. Equipment and staffing for each station serving the Project area, including engines, trucks, squads, total full-time and part-time staff, number of Fire Fighters on 24-hour duty, Paramedic staff and services, etc. See answer to Question #1.

3. Main access route(s) from the Fire Station(s) serving the Project area to the Project area; Access routes are contingent upon the location of the resource at the time of dispatch, the resource being dispatched, road closures and other road conditions at the time of the incident.

4. A general overview of the Department's emergency response system (i.e., emergency response plans, standard operation protocols and procedures, etc.). Calls received by the dispatch center are dispatched to the jurisdictional engine company for the incident location. If the jurisdictional engine company is not available, the next closest available unit will handle. Several units may be dispatched to an incident in accordance with the level of service required based on the incident type. For instance, an EMS incident will require the nearest available basic life support unit (an engine), the nearest advanced life support unit (a paramedic squad) and an ambulance.

5. Most recent data on emergency responses and response times for each station serving the Project area and the County as a whole (broken up by incident type).

During calendar year 2009, Fire Station 104's incident data was as follows:

| Type | Emergency Incidents | Avg. Response time |
|---|---|---|
| EMS | 161 | 5:49 |
| Fire | 5 | 5:56 |
| Other | 42 | 5:34 |

During calendar year 2009, Fire Station 73's incident data was as follows:

| Type | Emergency Incidents | Avg. Response time |
|---|---|---|
| EMS | 1524 | 5:04 |
| Fire | 70 | 5:29 |
| Other | 343 | 5:32 |

The most recent response information we have for the District's entire jurisdiction is for calendar year 2008 as follows:

| Type | Total Incidents |
|---|---|
| EMS | 205,978 |
| Fire | 8,640 |
| Other | 82,327 |

6. Planned improvements to the fire protection facilities in the service area of the Project (i.e., fire flow, access, expansion, new facilities, additional staffing, etc.), if applicable; For the Project area, the Fire Department's 2009 Developer Fee Detailed Fire Station Plan includes a permanent station to replace temporary Fire Station 104 and one new station, Fire Station 150, which is scheduled to be operational by 2011. Once operational, Fire 150 will replace Fire Station 104 as the jurisdiction station (1st-due) for this project. Fire Station 150 will be approximately 1.3 miles from the project site.

7. Mutual aid agreements relevant to the Proposed Project's service area; The Fire Department maintains a Mutual Aid Agreement with the U.S.D.A. Forest Service (Angeles National Forest).

8. Fire Safety requirements as relevant to the Proposed Project's service area: To be answered by Land Development Unit.

**LAND DEVELOPMENT UNIT:**

1. The Statutory Responsibilities of the County of Los Angeles Fire Department, Land Development Unit, are the review of, and comment on, all projects within the unincorporated areas of the County of Los Angeles. Our emphasis is on the availability of sufficient water supplies for fire fighting operations and local/regional access issues. However, we review all projects for issues that may have a significant impact on the County of Los Angeles Fire Department.

2. This property is located within the area described by the Forester and Fire Warden as a Very High Fire Hazard Severity Zone (VHFHSZ). All applicable fire code and ordinance requirements for construction, access, water mains, fire hydrants, fire flows, brush clearance and fuel modification plans, must be met.

3. The Fire Department's Land Development Unit has reviewed and provided comments to the submitted Tentative Tract Map TR71216 and Conditions Use Permit RCUP T200900126. We have enclosed a copy of those reports which reflect specific comments and/or conditions of approval associated with those permits.

4. The development of this project must comply with all applicable code and ordinance requirements for construction, access, water main, fire flows and fire hydrants.

5. The County of Los Angeles Fire Department, Land Development Unit appreciates the opportunity to comment on this project. Other comments maybe provided when additional details and/or documents are provided for review.

6. Should any questions arise regarding subdivision, water systems, or access, please contact the County of Los Angeles Fire Department, Land Development Unit, Inspector Juan Padilla, at (323) 890-4243.

**FORESTRY DIVISION – OTHER ENVIRONMENTAL CONCERNS:**

1. The statutory responsibilities of the County of Los Angeles Fire Department, Forestry Division include erosion control, watershed management, rare and endangered species, vegetation, fuel modification for Very High Fire Hazard Severity Zones or Fire Zone 4, archeological and cultural resources, and the County Oak Tree Ordinance. Potential impacts in these areas should be addressed in the Final Environmental Impact Report.

**HEALTH HAZARDOUS MATERIALS DIVISION:**

1. The review of the "Notice of Preparation" indicates that the Ranch has been used over the past decades for agriculture, oil production, motion picture and television film production, set construction in addition to storage of fuels, pesticides and other hazardous materials on-site.

2. Based on the above information, the site uses may have contributed to soil contamination. Therefore, it is requested that the subject development seeks oversight from the State Department of Toxic Substances Control or Los Angeles County Fire Department, Health Hazardous Materials Division for assessment and mitigation of potential contamination prior to issuance of any grading permit.

If you have any additional questions, please contact this office at (323) 890-4330.

Very truly yours,

JOHN R. TODD, CHIEF, FORESTRY DIVISION
PREVENTION SERVICES BUREAU

JRT:lj

Enclosure

# COUNTY OF LOS ANGELES
# FIRE DEPARTMENT

5823 Rickenbacker Road
Commerce, California 90040

## CONDITIONS OF APPROVAL FOR SUBDIVISION - UNINCORPORATED

Subdivision No: TR 71216 Map Date: October 28, 2009

C.U.P. _____ Vicinity _____

☒ **FIRE DEPARTMENT HOLD** on the tentative map shall remain until verification from the Los Angeles County Fire Dept. Planning Section is received, stating adequacy of service. Contact (323) 881–2404.

☒ Access shall comply with Title 21 (County of Los Angeles Subdivision Code) and Section 503 of the Fire Code, which requires all weather access. All weather access may require paving.

☒ Fire Department access shall be extended to within 150 feet distance of any exterior portion of all structures.

☒ Where driveways extend further than 150 feet and are of single access design, turnarounds suitable for fire protection equipment use shall be provided and shown on the final map. Turnarounds shall be designed, constructed and maintained to insure their integrity for Fire Department use. Where topography dictates, turnarounds shall be provided for driveways that extend over 150 feet in length.

☒ The private driveways shall be indicated on the final map as "Private Driveway and Firelane" with the widths clearly depicted. Driveways shall be maintained in accordance with the Fire Code.

☒ Vehicular access must be provided and maintained serviceable throughout construction to all required fire hydrants. All required fire hydrants shall be installed, tested and accepted prior to construction.

☒ This property is located within the area described by the Fire Department as "Very High Fire Hazard Severity Zone" (formerly Fire Zone 4). A "Fuel Modification Plan" shall be submitted and approved prior to Tentative Map clearance. (Contact: Fuel Modification Unit, Fire Station #32, 605 North Angeleno Avenue, Azusa, CA 91702-2904, Phone (626) 969-5205 for details).

☒ Provide Fire Department or City approved street signs and building access numbers prior to occupancy.

☐ Additional fire protection systems shall be installed in lieu of suitable access and/or fire protection water.

☐ The final concept map, which has been submitted to this department for review, has fulfilled the conditions of approval recommended by this department for access only.

☐ These conditions must be secured by a C.U.P. and/or Covenant and Agreement approved by the County of Los Angeles Fire Department prior to final map clearance.

☐ The Fire Department has no additional requirements for this division of land.

Comments: **See additional sheet for all holds and conditions of approvals for this project:**

By Inspector: *Juan C. Padilla* Date December 15, 2009

Land Development Unit – Fire Prevention Division – (323) 890-4243, Fax (323) 890-9783

# COUNTY OF LOS ANGELES
# FIRE DEPARTMENT

5823 Rickenbacker Road
Commerce, California 90040

## WATER SYSTEM REQUIREMENTS - UNICORPORATED

Subdivision No: TR 71216 Map Date: October 28, 2009

Revised Report _____

☐ The County Forester and Fire Warden is prohibited from setting requirements for water mains, fire hydrants and fire flows as a condition of approval for this division of land as presently zoned and/or submitted. However, water requirements may be necessary at the time of building permit issuance.

☒ The required fire flow for public fire hydrants at this location is **5000** gallons per minute at 20 psi for a duration of 5 hours, over and above maximum daily domestic demand. 3 Hydrant(s) flowing simultaneously may be used to achieve the required fire flow.

☐ The required fire flow for private on-site hydrants is ____ gallons per minute at 20 psi. Each private on-site hydrant must be capable of flowing ____ gallons per minute at 20 psi with two hydrants flowing simultaneously, one of which must be the furthest from the public water source.

☐ Fire hydrant requirements are as follows:

Install ____ public fire hydrant(s). Upgrade / Verify existing ____ public fire hydrant(s).

Install ____ private on-site fire hydrant(s).

☒ All hydrants shall measure 6"x 4"x 2-1/2" brass or bronze, conforming to current AWWA standard C503 or approved equal. All on-site hydrants shall be installed a minimum of 25' feet from a structure or protected by a two (2) hour rated firewall.
☐ Location: As per map on file with the office.
☐ Other location: ____

☒ All required fire hydrants shall be installed, tested and accepted or bonded for prior to Final Map approval. Vehicular access shall be provided and maintained serviceable throughout construction.

☐ The County of Los Angeles Fire Department is not setting requirements for water mains, fire hydrants and fire flows as a condition of approval for this division of land as presently zoned and/or submitted.

☒ Additional water system requirements will be required when this land is further subdivided and/or during the building permit process.

☐ Hydrants and fire flows are adequate to meet current Fire Department requirements.

☒ Fire hydrant upgrade is not necessary, if existing hydrant(s) meet(s) fire flow requirements. Submit original water availability form to our office.

Comments: **All water system requirements along with fire hydrant locations shall be determined upon access acceptance by the Fire Department prior to Tentative Map clearance.**
**See additional sheet for all water system conditions of approval.**

All hydrants shall be installed in conformance with Title 20, County of Los Angeles Government Code and County of Los Angeles Fire Code, or appropriate city regulations. This shall include minimum six-inch diameter mains. Arrangements to meet these requirements must be made with the water purveyor serving the area.

By Inspector *Juan C. Padilla* Date December 15, 2009

Land Development Unit – Fire Prevention Division – (323) 890-4243, Fax (323) 890-9783

# COUNTY OF LOS ANGELES
# FIRE DEPARTMENT

5823 Rickenbacker Road
Commerce, California 90040

## LAND DEVELOPMENT UNIT REQUIREMENTS
## ADDITIONAL PAGE

**Subdivision No:** TR 71216 **Map Date:** October 28, 2009

### TENTATIVE MAP - HOLDS

1 Provide a clearance letter from the Los Angeles County Fire Department Planning Section prior to Tentative Map clearance.

2 Provide an approved Preliminary Fuel Modification Plan prior to Tentative Map clearance.

3 Label all on-site roadways to be used a Fire Department access as "Private Driveway and Fire Lane". Indicate compliance on the Tentative Map.

4 The proposed Private Driveway and Fire Lane shall provide a minimum turning radius of 32ft on centerline. Indicate compliance on the Tentative Map.

5 Fire Department vehicular access shall be extended to within 150ft to all portions of exterior walls for all proposed structures, including the Mill buildings.
Indicate compliance on the Tentative Map.

6 Clarify the "Ribbon Gutter" being proposed on Section D-D within the Private Driveway and Fire Lanes.

### EXHIBIT MAP CONDITIONS OF APPROVAL

7 Record a reciprocal access agreement for all Private Driveways and Fire Lanes to the satisfaction of the Department of Regional Planning, especially for the fire lanes under the LADWP Transmission Corridor.

8 Fire Department vehicular access crossing any portion of the Flood Plain shall be designed to the Department of Public Works standards and Section 503.2.6 of the Los Angeles County Fire Code (Title 32).

9 Due to the proximity of the LADWP overhead powerlines, all proposed buildings and parking area shall ensure compliance with Los Angeles County Fire Department Regulation 27.

10 Any proposed gates shall be shown on the Exhibit Map along with a design cross section. Gates shall also comply with Los Angeles County Fire Department Regulation 5.

11 Final access approval for the Filming Studios shall be further reviewed for compliance at which time the final design plans are submitted for building permit clearances or C.U.P. review.

12 The required fire flow for each public fire hydrant maybe reduced during once final building design has been submitted for review.

13 Multiple water source points of connections maybe required for fire suppression purposes.

By Inspector: Juan C. Padilla Date: December 15, 2009

Land Development Unit – Fire Prevention Division – (323) 890-4243, Fax (323) 890-9783

# COUNTY OF LOS ANGELES
# FIRE DEPARTMENT

**5823 Rickenbacker Road**
**Commerce, California 90040-3027**

**DATE:** March 8, 2010

**TO:** Department of Regional Planning
Permits and Variances

**PROJECT #:** TR 71216 (T200900126)

**LOCATION:** 19802 Placerita Canyon Road, Newhall

☐ The Fire Department Land Development Unit has no additional requirements for this permit.

☐ The required fire flow for this development is ____ gallons per minute for _ hours. The water mains in the street, fronting this property must be capable of delivering this flow at 20 pounds per square inch residual pressure.

☐ Install __ Public and/or __ On-site and/or __ Verify / Upgrade 6" X 4" X 2 1/2" fire hydrants, conforming to AWWA C503-75 or approved equal. All installations must meet Fire Department specifications. Fire hydrant systems must be installed in accordance with the Utility Manual of Ordinance 7834 and all installations must be inspected and flow tested prior to final approval.

☒ **Comments:** The Fire Department has cleared the CUP for Public Hearing with the following conditions of approval.

☒ **Water:** Public Fire Hydrants and fire flow requirements will be determined during the Tentative Map review for the proposed 18 lot subdivision (Sound Stages). Additional water system requirements will be required for any proposed structures within the subdivision boundary or any future structures in the remaining ranch property in compliance to the Los Angeles County Fire Code and Los Angeles County Fire Department Regulations. Architectural plans shall be submitted to the Fire Department for review and approval.

☒ **Access:** Fire Department access to the subdivision is being addressed during the Tentative Map review. For the remaining ranch property, access shall provide an all weather access surface with minimum width of 20ft and subject to any applicable Los Angeles County Fire Code and Los Angeles County Fire Department Regulations for any future structure. Architectural plans shall be submitted to the Fire Department for review and approval.

☒ **Special Requirements:** This property is located within the area described by the Fire Department as "Very High Fire Hazard Severity Zone" (formerly Fire Zone 4). An "Approved Fuel Modification Plan" is required for any proposed structure prior to building permit issuance. Contact: Fuel Modification Unit, Fire Station #32, 605 North Angeleno Avenue, Azusa, CA 91702-2904, Phone (626) 969-5205 for details.

All proposed new construction within the subdivision and any future construction in the remaining ranch property is subject to compliance with any applicable Los Angeles County Fire Code, Los Angeles County Building Code, and any Los Angeles County Fire Department Regulations.

All new permanent facades that fall within the scope of the current edition of Los Angeles County Fire Department Regulation #29 shall be constructed and maintained in accordance with that Regulation. An adequate water supply for each new permanent façade is required prior to construction. The required water supply shall be approved by the Fire Marshal prior to building permit issuance based on the façade's size, construction type, and proximity to adjacent structures

Fire Protection facilities; including access must be provided prior to and during construction. Should any questions arise regarding this matter, please feel free to call our office at (323) 890-4243.

Inspector: Juan C. Padilla

Land Development Unit – Fire Prevention Division – Office (323) 890-4243 Fax (323) 890-9783

To: Steve Sligh
Senior Ranch Manager
Golden Oak Ranch
19802 Placerita Canyon Road
Newhall CA. 91321

From: Captain Mark Whaling
Los Angeles County fire Department
Fire Station 123
26321 Sand Canyon
Santa Clarita CA 91351

Subject: Firs Station Order Files

This Memo is to confirm the Firs Station Order Files that Services Golden Oak Ranch.

The first in station is Fire Station 123, Battalion 22
Located at 26321 Sand Canyon Santa Clarita CA 91351

The second in station is Fire Station 73, Battalion 6
Located at 24875 N. Railroad Ave. Newhall CA 91321

The Third in station is Fire Station 104, Battalion 22
Located at 26201 Golden Valley Rd. Santa Clarita CA 91350

Any Question or concerns regarding the Firs Station Order Files you may contact me at 661-252-1235

Captain Mark Whaling
Fire Station 123

## Jessica Viramontes

**From:** Whaling, Mark [MWhaling@fire.lacounty.gov]
**Sent:** Monday, November 01, 2010 7:55 AM
**To:** Ashley Rogers
**Subject:** RE: FSO for Golden Oak Ranch
**Attachments:** image001.jpg

Good Mo0rning
A new station is planned for Golden Valley and the 14
that is station 150
The pad is there .... but no due date as of yet .. years out I believe
It would be Golden Oaks new first in when completed ...
Mark

---

**From:** Ashley Rogers [a.rogers@matrixeir.com]
**Sent:** Friday, October 29, 2010 3:48 PM
**To:** Whaling, Mark
**Cc:** Sligh, Steve
**Subject:** RE: FSO for Golden Oak Ranch

Hello Captain Whaling. Thank you for sending the FSO letter indicating the stations that serve Golden Oak Ranch. Could you please confirm whether Fire Station 105, once complete, will become the new first-in station for the Ranch? Or will it fall somewhere else within the priority list you indicated?

Thanks much,
Ashley Rogers


**Ashley Rogers**
*Principal Planner*

matrix environmental
6701 Center Drive, Suite 900
Los Angeles, California 90045
Tel: (510) 530-3585
Fax: (510) 530-3585



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Please consider the environment before printing this email.


---

**From:** Sligh, Steve [mailto:Steve.Sligh@disney.com]
**Sent:** Wednesday, October 27, 2010 7:42 AM
**To:** Ashley Rogers; Stephanie Eyestone-Jones; McBrearty, Dan; Kathleen Truman
**Subject:** FW: FSO for Golden Oak Ranch

Attached.

**From:** Whaling, Mark [mailto:MWhaling@fire.lacounty.gov]
**Sent:** Tuesday, October 26, 2010 1:18 PM
**To:** Sligh, Steve
**Cc:** Lindaman, Ted
**Subject:** FSO for Golden Oak Ranch

Steve attached is the FSO Order Memo

Chief This is just FYI for you

**From:** Whaling, Mark
**To:** Jessica Viramontes
**Cc:** Lindaman, Ted; steve.sligh@disney.com
**Subject:** RE: Follow-up Questions for Golden Oak Ranch
**Date:** Friday, December 31, 2010 9:13:55 AM

---

Good Morning Jessica

Here are the answers to your question

1- Daily 3 , (When the weather gets hotter and dryer the department may increase that number to 4, 5, 6 or 10)
2- Yes ... One Type 1 Fire Engine with 3 Personnel and one Type four Fire Engine manned when needed. also a reserve Fire engine is stored here and manned when needed here or else where.
3- Fire- 115 EMS-207 Other- 49
4- Call let me know what degree of accuracy you need
5- We will time it this morning and get back to you

Mark Whaling
FS 123 C
661-252-1235

---

**From:** Jessica Viramontes [J.Viramontes@matrixeir.com]
**Sent:** Tuesday, December 28, 2010 12:46 PM
**To:** Whaling, Mark
**Subject:** Follow-up Questions for Golden Oak Ranch

Hi Captain Whaling,

I am following up on some correspondence you had with my coworker, Ashley Rogers, at the beginning of the month regarding the Disney I ABC Studios at the Ranch (the Proposed Project). While we did receive some information from you, we would appreciate answers to these follow up responses so that we may provide a complete analysis of fire services in relation to the Proposed Project.

1. Number of staff on duty on a 24-hr basis at Fire Station 123
2. Please confirm Station 123 just has an engine company in terms of equipment
3. Total number of calls for service in 2009 for Fire Station 123, broken down by fire-related, EMS, and other
4. Average response time by call type for Fire Station 123 (fire-related, EMS, and other)
5. Average response time to Golden Oak Ranch for Fire Station 123

I wanted to provide these questions to you via email. Unless I hear differently from you, I'll be following up via telephone tomorrow morning.

Please feel free to contact me at (415) 439-8381 or via email to discuss our information needs and/or any questions regarding the project. I thank you for your time and assistance.

Thanks,
Jessica Viramontes
Planner

| | |
|---|---|
| **From:** | Whaling, Mark |
| **To:** | Jessica Viramontes |
| **Cc:** | steve.sligh@disney.com; Lindaman, Ted |
| **Subject:** | RE: Follow-up Questions for Golden Oak Ranch |
| **Date:** | Friday, December 31, 2010 2:29:34 PM |

---

4- Responce times ... Call and lets talk ..... there are alot of ways to calculate this ..
5- Normalle drive from Fs 123 to Golden Oak Ranch was 7:23 today Responce time would be faster

---

**From:** Jessica Viramontes [J.Viramontes@matrixeir.com]
**Sent:** Tuesday, December 28, 2010 12:46 PM
**To:** Whaling, Mark
**Subject:** Follow-up Questions for Golden Oak Ranch

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2. Please confirm Station 123 just has an engine company in terms of equipment
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I wanted to provide these questions to you via email. Unless I hear differently from you, I'll be following up via telephone tomorrow morning.

Please feel free to contact me at (415) 439-8381 or via email to discuss our information needs and/or any questions regarding the project. I thank you for your time and assistance.

Thanks,
Jessica Viramontes
Planner

# Appendix K.1

## Water Supply Assessment

NCWD

**NEWHALL COUNTY WATER DISTRICT**
23780 North Pine Street • P.O. Box 220970 • Santa Clarita, CA 91322-0970
(661) 259-3610 Phone • (661) 259-9673 Fax • email: mail@ncwd.org

**Directors:** B. J. ATKINS, *President* MARIA GUTZEIT, *Vice President* KATHY COLLEY DANIEL MORTENSEN LYNNE A. PLAMBECK

April 12, 2010

Department of Regional Planning
County of Los Angeles
320 West Temple Street, Room 1348
Los Angeles, CA 90012-3225

Attn: Richard J. Bruckner

Re: ***Disney ABC Studios at The Ranch Project Water Supply Assessment***

Dear Mr. Bruckner:

In response to your letter dated February 8, 2010, the District is sending you the Water Supply Assessment (WSA) for the Disney ABC Studios at The Ranch project (Project). The Project as currently proposed would provide up to 555,950 square feet of development.

The Project would be part of the Newhall Service Area, subject to the adopted Master Plan and Connection Fee Policy for that Service Area. The Developer of the Project will be required to enter into an agreement with the District relating to the design and construction of water system improvements related to the Project.

This water supply assessment will expire April, 2013. If you have not approved the project by then, please contact us for updated information.

If you have any questions regarding this information, please contact Steve Cole at (661) 259-3610.

Very truly yours,

NEWHALL COUNTY WATER DISTRICT

Stephen L. Cole
General Manager

Enclosure:

Cc: Dan McBrearty, Disney

**NEWHALL COUNTY WATER DISTRICT**

## REQUIRED WATER SUPPLY ASSESSMENT (WSA) (SB 610)

Water Code § 10910 *et seq.*

TO: (The Lead Agency)
Department of Regional Planning
County of Los Angeles
320 West Temple Street, Room 1348
Los Angeles, CA 90012-3225

(Applicant's Name and Address)
Golden Oak Ranch Properties
19802 Placerita Canyon Road
Newhall, CA 91321

**Project Information**

Project Title: **Disney | ABC Studios at The Ranch**

- ☐ Residential: No. of dwelling units: _____
- ☐ Shopping center or business: No. of employees _____, Sq. ft. of floor space _____
- ☑ Commercial: No. of employees 1,240, Sq. ft. of floor space 555,950
- ☐ Hotel or motel: No. of employees _____, Sq. ft. of floor space _____
- ☐ Industrial, manufacturing, or processing: No. of employees _____, Sq. ft. of floor space _____
- ☐ Mixed use (check and complete all above that apply)
- ☑ Other: ancillary uses (66,300 sq. ft. for central utility plant and an electrical substation)
- ☐ Number of existing service connections _____

**Water Supply Assessment (WSA)** (see supporting documents)

On APRIL 8, 2010, the Board of Directors of the NEWHALL CWD (name of water purveyor) made the following determination regarding the above-described project:

☑ The projected water demand for the project ☑ was ☐ was not included in Newhall County Water District most recently adopted Urban Water Management Plan.

☑ A sufficient water supply **is** available for the project.
The total water supplies available to Newhall County Water District during normal, single-dry, and multiple-dry years with a 20-year projection will meet the projected water demand of the project in addition to the demand of existing and other planned future uses, including, but not limited to, agricultural and manufacturing uses.

☐ A sufficient water supply **is not** available for the project. [Plan for acquiring and developing sufficient water supply attached. Water Code § 10911(a)]

☐ A sufficient water supply **will be** available based on the attached plan (Sec 10911 of the WC)

The foregoing determination is based on the following Water Supply Assessment Information and supporting information in the records of Newhall County Water District (name of water purveyor)

| Signature | Title | Date |
|---|---|---|
| | G.M. | 4.12.2010 |

Supporting Documents (Check those that apply)

1. ☑ Urban Water Management Plan dated: 2005

2. ☑ 20-Year Projection Water Supply Assessment addressing:

   - ☑ Normal year, single dry, and multiple dry years supply and demand
   - ☑ Proposed project water demand
   - ☑ Existing and planned future uses water demand
   - ☑ Existing Agricultural and manufacturing water demands using water not supplied by the public water system
   - ☑ Water supply entitlements
   - ☑ Water rights
   - ☑ Water service contracts
   - ☑ Quantity of water delivered in prior years to the water purveyor
   - ☑ Capital Outlay Program to finance the water delivery infrastructure
   - ☑ State, Federal, and Local Permits for construction of the water delivery infrastructure
   - ☑ Regulatory approvals in order to deliver the water supply
   - ☑ Other entities with entitlements, rights, or contracts to the same source of supply
   - ☑ Description of groundwater basin (if applicable)
   - ☐ Adjudication decree or order (if applicable)
   - ☑ Analysis to determine potential for overdrafting of the basin
   - ☑ Groundwater hydrology report

3. ☑ Other documents as applicable

   - ☑ Reclaimed Water Master Plan
   - ☑ Integrated Water Resource Plan
   - ☑ Annual Water Report
   - ☐ Water Management Plan (for PUC regulated water purveyors)
   - ☐ County Sanitation District 2015 Master Plan
   - ☐ SCAG Documents
     - ☐ RHNA
     - ☐ Transportation projections

# SB 610 WATER SUPPLY ASSESSMENT

Disney | ABC Studios at The Ranch

April 2010

NCWD

NEWHALL COUNTY WATER DISTRICT

**Prepared By:**

Newhall County Water District
23780 N. Pine Street
Santa Clarita, California 91322-0970
(661) 259-3610

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# 1.0 INTRODUCTION

## 1.1 Background

Disney/ABC Studios at The Ranch (Proposed Project) would be located at 19802 Placerita Canyon Road in the unincorporated Santa Clarita Valley area of Los Angeles County. The Proposed Project would provide up to 555,950 square feet of development, including twelve soundstages, production offices, six mills, a warehouse, writers/producers bungalows, a commissary, an administration building, parking, a central utility plant, and an electrical substation within the proposed Development Area of approximately 56 acres on the westernmost portion of the 890-acre Golden Oak Ranch (Ranch). In addition, the Proposed Project would include an option to develop studio offices in lieu of four soundstages and two mills within the northern portion of the Development Area. The remainder of the Ranch would continue to be operated as a working filming ranch where motion picture and television filming, set construction and agricultural activities have occurred since before 1959. Figure 1-1 shows the approximate location of the Proposed Project.

Newhall County Water District (NCWD) has been identified as the retail water purveyor for the Proposed Project. NCWD distributes a combination of imported water from the Castaic Lake Water Agency (CLWA) and groundwater from local wells. NCWD is one of four water purveyors in the Santa Clarita Valley and currently supplies a population of approximately 30,000 with over 9,500 service connections.

Legislation places additional requirements upon NCWD as the water purveyor for the Proposed Project. Senate Bill 610 (Costa) added Water Code sections 10910-10915 effective January 1, 2002, regarding land use and planning as well as water supply availability.

Once it is determined a project is subject to the California Environmental Quality Act, and that the project meets specified thresholds, SB 610 requires cities and counties to identify any public water system that may supply water for the project and to request that public water systems prepare a specified water supply assessment to be included in any environmental document prepared for the project. The assessment includes, among other information, an identification of existing water supply entitlements, water rights, or water service contracts relevant to the identified water supply for the proposed project and water received in prior years pursuant to those entitlements, rights, and contracts.

## 1.2 Purpose

The purpose of this Water Supply Assessment (WSA) is to comply with the requirements of SB 610 with respect to the water demands of the Proposed Project and answer the basic question:

*Will the water supplier's total projected water supplies available during normal, single dry, and multiple dry water years during a 20-year projection meet the projected water demand of the Proposed Project, in addition to the water supplier's existing and planned future uses, including agricultural and manufacturing uses?*

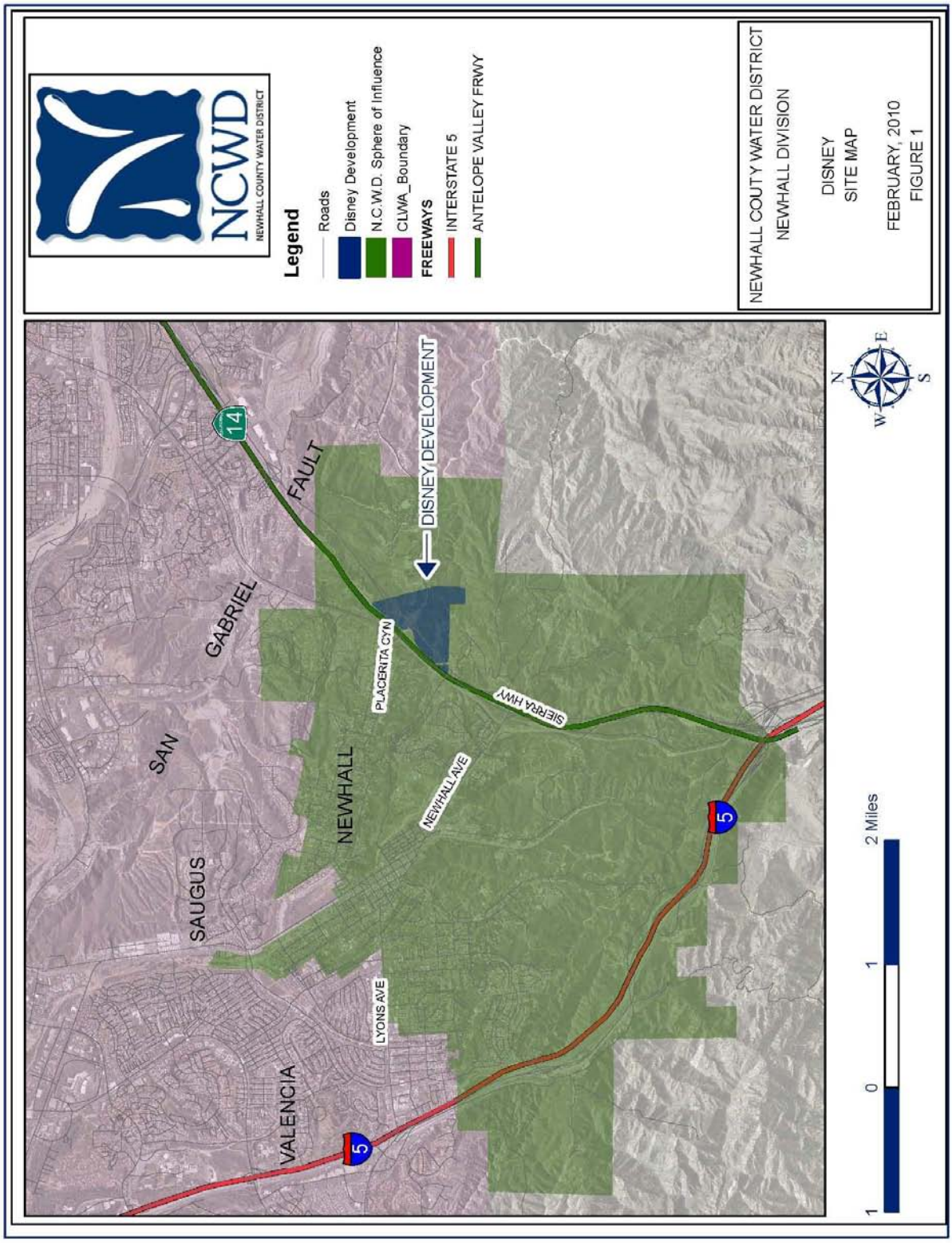
## 1.3 District's 2005 Urban Water Management Plan

SB 610 provides that if the projected water demand associated with the Proposed Project was accounted for in the urban water management plan (UWMP) adopted by the retail water purveyor, then relevant information from that document may be incorporated into the SB 610

WSA. The 2005 UWMP (2005 UWMP) was adopted by NCWD on November 9, 2005, and appropriately filed with the California Department of Water Resources (DWR). The 2005 UWMP was a regional planning effort by NCWD, CLWA, and the other Santa Clarita Valley water purveyors that built upon previous documents, specifically the 2000 UWMP and an amendment to the 2000 UWMP. The 2005 UWMP includes the following eight major sections:

1. Introduction
2. Water Use
3. Water Resources
4. Recycled Water
5. Water Quality
6. Reliability Planning
7. Demand Management Measures
8. Water Shortage Contingency Planning

Figure 1-1


NCWD
NEWHALL COUNTY WATER DISTRICT
Legend
Roads
Disney Development
N.C.W.D. Sphere of Influence
CLWA_Boundary
FREEWAYS
INTERSTATE 5
ANTELOPE VALLEY FRWY
NEWHALL COUTY WATER DISTRICT
NEWHALL DIVISION
DISNEY
SITE MAP
FEBRUARY, 2010
FIGURE 1
DISNEY DEVELOPMENT
SAN GABRIEL FAULT
SAUGUS
NEWHALL
VALENCIA
PLACERITA CYN
NEWHALL AVE
LYONS AVE
SIERRA HWY
14
5
5
N
E
S
W
1
0
1
2 Miles

The timing of the Proposed Project places it within the timeframe for calculating "planned future uses" within the 2030 water supply projection included in the 2005 UWMP. The 2005 UWMP projects an annual growth rate in water demand of approximately 2.2 percent over a 25-year period for the Santa Clarita Valley. The 2005 UWMP anticipated increases in the number of commercial accounts and demand in acre-feet through 2030. The Project would be classified as a commercial project and would fall within the demand anticipated for commercial projects within NCWD's service area through 2030 (see Table 2-5 in the 2005 UWMP).

In December, 2009, DWR provided the most recent analysis of delivery reliability estimates to the SWP contractors (DWR Reliability Report Draft, 2009). In NCWD's judgment, the 2005 UWMP updated with the recent reliability report provides the best available information regarding water supply and demand projections. The estimated projected deliveries have been updated to reflect the DWR December, 2009 updated reliability estimates (Reference Tables 2-1-A and 2-2-A below).

## 1.4 NCWD Policies, Regulatory Approvals and Permits

### NCWD Policies

The Project will be subject to all NCWD policies, rules and regulations that govern development and connection to the NCWD water system. It will be the responsibility of the Proposed Project applicant to make appropriate financial and contractual arrangements with NCWD to assure the necessary improvements are made to the water supply infrastructure. Following the receipt of the appropriate application, arrangements can be made for the installation of water facilities required to meet the needs of the Proposed Project.

### Regulatory Approvals and Permits

The State of California Department of Public Health and the County of Los Angeles will issue permits and regulatory approvals for constructing the necessary improvements to supply and deliver water to the Proposed Project.

## 1.5 Information Relied Upon in Preparation of this WSA

The following list identifies the documentation that has been relied upon in the preparation of this WSA. Copies of the referenced documents are available for review at NCWD by contacting Eunie Kang, (661) 259-3610, and can be obtained upon the payment of the costs of reproduction. These documents are part of NCWD's record of proceedings for the preparation of this WSA:

1. *2005 Urban Water Management Plan*, prepared for Castaic Lake Water Agency, CLWA's Santa Clarita Division, Newhall County Water District, Valencia Water Company, Los Angeles County Waterworks District No. 36, prepared by Black & Veatch, Nancy Clemm, Kennedy Jenks Consultants, Jeff Lambert, Luhdorff & Scalmanini, Richard Slade and Associates, November 2005. (2005 UWMP)
2. *Analysis of Groundwater Supplies and Groundwater Basin Yield, Upper Santa Clara River Groundwater Basin, East Subbasin, Los Angeles County, California*, prepared in support of the August 2001 Memorandum of Understanding between the Upper Basin Water Purveyors and the United Water Conservation District, prepared by CH2MHill in cooperation with Luhdorff & Scalmanini, August 2005. (Basin Yield Study, 2005)
3. *Analysis of Groundwater Supplies and Groundwater Basin Yield, Upper Santa Clara River Groundwater Basin, East Subbasin, Los Angeles County, California*, prepared in support of the August 2001 Memorandum of Understanding between the Upper Basin Water Purveyors and the United Water Conservation District, prepared by CH2MHill in cooperation with Luhdorff & Scalmanini, February 2009. (Basin Yield Study, 2009)
4. *Interim Remedial Action Plan, prepared for CLWA by Kennedy/Jenks Consultants, December 2005.*

5. *Santa Clarita Valley Water Report 2008*, prepared for CLWA, Los Angeles County Waterworks District No. 36, Newhall County Water District, and Valencia Water Company by Luhdorff and Scalmanini, Consulting Engineers, April 2009. (SCVWR, 2008)

6. *2001 Update Report: Hydrogeologic Conditions in the Alluvial and Saugus Formation Aquifer Systems,* prepared for Santa Clarita Valley Water Purveyors by Richard C. Slade and Associates, LLC, July 2002. (Slade, 2002)

7. *Revised Draft Additional Analysis to the Newhall Ranch Specific Plan and Water Reclamation Plant Final Environmental Impact Report,* prepared for Los Angeles County Department of Regional Planning, November 2002. (Newhall Ranch, 2002)

8. CLWA Capital Improvement Program prepared by Kennedy/Jenks Consultants, 2003.

9. *Water Supply Reliability Plan Draft Report* prepared for CLWA by Kennedy/Jenks Consultants, September 2003.

10. *Memorandum of Understanding Between the Santa Clara River Valley Upper Basin Water Purveyors and United Water Conservation District*, August 2001. (MOU, 2001)

11. *Groundwater Management Plan - Santa Clara River Valley Groundwater Basin, East Subbasin*, prepared for CLWA by Luhdorff & Scalmanini Consulting Engineers, December 2003.

12. *Regional Groundwater Flow Model for the Santa Clarita Valley: Model Development and Calibration*, prepared for Upper Basin Water Purveyors (CLWA, CLWA Santa Clarita Water Division, Newhall County Water District and Valencia Water Company) by CH2MHill, April 2004.

13. *Analysis of Perchlorate Containment in Groundwater Near the Whittaker-Bermite Property, Santa Clarita, California*, prepared for Upper Basin Water Purveyors in Support of the Department of Health Services 97-005 Permit Application by CH2MHill, December 2004.

14. *Analysis of Near-Term Groundwater Capture Areas for Production Wells Located Near the Whittaker-Bermite Property (Santa Clarita, California)*, prepared for Upper Basin Water Purveyors in support of the amended 2000 UWMP by CH2MHill, December 21, 2004.

15. *Mitigated Negative Declaration – Groundwater Containment, Treatment and Restoration Project*, CLWA, August 2005.

16. Water Supply Contract Between the State of California Department of Water Resources and CLWA, 1963 (plus amendments, including the "Monterey Amendment," 1995, and Amendment No. 18, 1999, the transfer of 41,000 acre-feet of entitlement from Kern County Water Agency to CLWA).

17. 2002 Semitropic Groundwater Storage Program and Point of Delivery Agreement Among the Department of Water Resources of the State of California, CLWA and Kern County Water Agency.

18. 2002 *Draft Recycled Water Master Plan* prepared for CLWA by Kennedy/Jenks Consultants.

19. *Draft Program Environmental Impact Report – Recycled Water Master Plan*, prepared for CLWA by Bon Terra Consulting, November 2006.

20. *Final Program Environmental Impact Report – Recycled Water Master Plan*, prepared for CLWA by Bon Terra Consulting, March 2007.

21. 2003 Semitropic Groundwater Storage Program prepared for CLWA by Kennedy/Jenks Consultants.

22. *Draft Environmental Impact Report – Supplemental Water Project Transfer of 41,000 acre-feet of State Water Project Table A Amount,* prepared for CLWA by Science Applications International Corporation, June 2004.

23. *Final Environmental Impact Report – Supplemental Water Project Transfer of 41,000 acre-feet of State Water Project Table A Amount,* prepared for CLWA by Science Applications International Corporation, December 2004.

24. *Draft Environmental Impact Report - Rosedale-Rio Bravo Water Storage District (RRBWSD) Water Banking and Exchange Program,* prepared for CLWA by Science Applications International Corporation, August 2005.

25. *Final Environmental Impact Report - Rosedale-Rio Bravo Water Storage District (RRBWSD) Water Banking and Exchange Program,* prepared for CLWA by Science Applications International Corporation, October 2005.

26. *Draft Environmental Impact Report – Castaic Lake Water Agency Water Acquisition from the Buena Vista Water Storage District and Rosedale-Rio Bravo Water Storage District (RRBWSD) Water Banking and Recovery Program,* prepared for CLWA by Science Applications International Corporation, June 2006.

27. *Final Environmental Impact Report – Castaic Lake Water Agency Water Acquisition from the Buena Vista Water Storage District and Rosedale-Rio Bravo Water Storage District (RRBWSD) Water Banking and Recovery Program,* prepared for CLWA by Science Applications International Corporation, October 2006.

28. *California Department of Water Resources, California's Groundwater, Bulletin 118, Santa Clara River Valley Groundwater Basin, Santa Clara River Valley East Subbasin,* February, 2004.

29. *California Department of Water Resources, Groundwater Basins in California, Bulletin 118-80,* January 1980. (DWR Bulletin 118-80, 1980)

30. *California Department of Water Resources*, *The State Water Project Delivery Reliability Report 2002*, May 2003. (DWR Reliability Report, 2003)

31. *California Department of Water Resources, Excerpts from the Working Draft of 2005 State Water Project Delivery Reliability,* May 25, 2005. (DWR Reliability Report Excerpts, 2005)

32. *California Department of Water Resources*, *The State Water Project Delivery Reliability Report 2005*, *Final*, April 2006. (DWR Reliability Report, 2006)

33. *California Department of Water Resources*, *The State Water Project Delivery Reliability Report 2007*, *Draft*, December 2007. (DWR Reliability Report Draft, 2007)

34. *California Department of Water Resources*, *The State Water Project Delivery Reliability Report 2007*, August 2008. (DWR Reliability Report, 2007)

35. *California Department of Water Resources*, *The State Water Project Delivery Reliability Report 2009*, *Draft*, December 2009. (DWR Reliability Report Draft, 2009)

36. *California Department of Water Resources*, *Draft Environmental Impact Report, Monterey Amendment to the State Water Project Contracts (Including Kern Water Bank Transfer) and Associated Actions as Part of a Settlement Agreement* October 2007. (Monterey Plus, 2007)

37. *California Department of Water Resources*, *Final Environmental Impact Report, Monterey Amendment to the State Water Project Contracts (Including Kern Water Bank Transfer) and Associated Actions as Part of a Settlement Agreement,* February 2010. (Monterey Plus, 2010)

38. CLWA Letter to Los Angeles County Department of Regional Planning, February 2010. (CLWA Letter, February 2010)

39. *Additional CEQA Findings Regarding the Newhall Ranch Final Additional Analysis to the Partially Certified Final EIR for the Newhall Ranch Specific Plan and Water Reclamation Plant.* Los Angeles County, March 2003. (Newhall Ranch, 2003)

40. *Santa Clarita Valley Water Use Efficiency Strategic Plan*, prepared for Santa Clarita Valley Family of Water Suppliers (CLWA, CLWA Santa Clarita Water Division, Los Angeles County Waterworks District No. 36, Newhall County Water District and Valencia Water Company) by A & N Technical Services, Inc, September 2008. (WUESP, 2008)

# 2.0 EXISTING WATER RESOURCES

The first substantive requirement of the SB 610 WSA is the identification and description of the existing water supply sources in the public water system that will serve the Proposed Project. Water Code §10910(d) requires the WSA to include an identification of any existing water supply entitlements, water rights, or water service contracts relevant to the identified water supply for the Proposed Project, and a description of the quantities of water received in prior years by the public water system.

The current water supply for the Santa Clarita Valley is derived from three primary sources:

1. Imported State Water Project (SWP) Water and Additional Reliability Supplies
2. Groundwater from the Alluvial Aquifer
3. Groundwater from the Saugus Formation

In addition, recycled water is now available through CLWA, which frees up SWP and groundwater for other uses.

These sources of water supply can be characterized as 1) *imported supplies*, transported via the SWP and consisting of SWP Table A Amounts and additional reliability supplies; and 2) *local supplies*, consisting of groundwater and recycled water. All of these sources are necessary to meet the regional demands identified in the 2005 UWMP.

The following information is taken from the 2005 UWMP except as noted.

## 2.1 Imported Supplies

### 2.1.1 SWP Table A Amount

Since 1980, local supplies in the Santa Clarita Valley have been supplemented with imported water from the SWP. Imported water obtained from the SWP through CLWA is the largest source of water for municipal use in the Santa Clarita Valley. The SWP contractual Table A Amount, depending on annual allocation, currently meets more than half of local demand. "Table A Amount" refers to the maximum amount of water a SWP contractor may request each year from the SWP. Table A is used in determining each contractor's proportionate share, or allocation, of the total SWP water supply DWR determines to be available each year. The reliability of SWP supplies is subject to both annual hydrology and planned improvements to the system. The Table A Amount is not equivalent to actual deliveries of water in any given year.

The following information responds to specific requirements of Water Code §10910(d) regarding the identification of existing water supply entitlements, water rights and water service contracts relevant to the identified water supply for the Proposed Project:

**Wholesaler's entitlements to its supplies:** CLWA has an annual Table A contract amount from the State Water Project in the amount of 95,200 acre-feet (af). This Table A Amount is a maximum and does not reflect the actual amount of water available to CLWA from the State Water Project, which varies from year to year. In an effort to assess the impact of these varying conditions on SWP supply reliability, the Department of Water Resources (DWR) issued its "State Water Project Delivery Reliability Report" in May 2003 (DWR Reliability Report, 2003). The report assists SWP contractors in assessing the reliability of the SWP component of their overall supplies. In April, 2006, DWR provided updated delivery reliability estimates to the SWP contractors (DWR Reliability Report Excerpts, 2005). This updated analysis indicates that the

SWP, using existing facilities operated under current regulatory and operational constraints, and with all contractors requesting delivery of their full Table A Amounts in most years, could deliver 77 percent of total Table A Amounts on a long-term average basis. This analysis also projects that SWP deliveries during multiple-year dry periods could average about 25 to 40 percent of total Table A Amounts and could possibly be as low as 4 to 5 percent during an unusually dry single year. During wetter years, or more than 25 percent of the time, 100 percent of full Table A Amounts is projected to be available. The 2005 UWMP used the DWR May 25, 2005 delivery reliability estimates to calculate projected deliveries to CLWA during normal, single dry, and multiple dry years. The estimated projected deliveries have been updated to reflect the DWR April, 2006 updated reliability estimates (Reference Tables 2-1 and 2-2 below).

On January 26, 2010 the California Department of Water Resources (DWR) issued its "State Water Project Delivery Reliability Report 2009 Draft" (DWR Reliability Report Draft, 2009), an assessment of the SWP supply availability and reliability. The 2009 report describes three areas of significant uncertainty for State Water Project delivery reliability: (1) climate change and sea level rise; (2) vulnerability of Delta levees to failure; and (3) the biological opinions. Despite this uncertainty, the DWR report provides the most current and best available information. Based on this new information, CLWA has provided updated water supply projection tables (CLWA Letter, February 2010). The tables illustrate that there are sufficient water supplies available for pending and future residential and commercial developments within the CLWA service area for the foreseeable future through 2030 as originally set forth in the 2005 Santa Clarita Valley Urban Water Management Plan. According to CLWA, the discussion of water supply in a WSA and in environmental documents should be tempered, though, by noting that while the Draft SWP Reliability Report represents a reasonable scenario as required by CEQA, recent reductions in supply close the gap between the available supply and demand in the future, thereby making the CLWA service area more subject to shortages in certain dry years. Accordingly, the reduction in SWP supply reinforces the need to continue diligent efforts to conserve potable water and increase the use of recycled water, both to meet the goals in the 2005 UWMP and to maximize utilization of potable water supplies. The estimated projected deliveries have been updated to reflect the DWR December, 2009 updated reliability estimates (Reference Tables 2-1-A and 2-2-A below).

## Table 2-1
## Wholesaler-Identified and -Quantified Existing and Planned Sources of Water Available to CLWA for Average/Normal Years (2005 UWMP)[(I)]

| Wholesaler (Supply Source) | 2010 | 2015 | 2020 | 2025 | 2030 |
|---|---|---|---|---|---|
| DWR (SWP) | | | | | |
| Table A Supply (af) | 66,600 | 69,500 | 71,400 | 73,300 | 73,300 |
| % of Table A Amount | 70% | 73% | 75% | 77% | 77% |

**Notes:**

[(1)] The percentages of Table A Amount projected to be available are taken from Table 6-1 of DWR's "The State Water Project Delivery Reliability Report 2005" (DWR Reliability Report, 2006). Supplies are calculated by multiplying CLWA's Table A Amount of 95,200 af by these percentages.

## Table 2-1-A
## Wholesaler-Identified and -Quantified Existing and Planned Sources of Water Available to CLWA for Average/Normal Years (State Water Project Delivery Reliability Report Draft, 2009)[(1)]

| Wholesaler (Supply Source) | 2010 | 2015 | 2020 | 2025 | 2030 |
|---|---|---|---|---|---|
| DWR (SWP) | | | | | |
| Table A Supply (af) | 57,120 | 57,120 | 57,120 | 57,120 | 57,120 |
| % of Table A Amount | 60% | 60% | 60% | 60% | 60% |

**Notes:**

[(1)] The percentages of Table A Amount projected to be available are taken from Tables 6-12 and 6-13 of DWR's "The State Water Project Delivery Reliability Report 2009 Draft" (DWR Reliability Report Draft, 2009). Supplies are calculated by multiplying CLWA's Table A Amount of 95,200 af by 60 percent.

## Table 2-2
## Wholesale Supply Reliability (2005 UWMP)[1]

| Wholesaler | Single Dry Year [2] | Multiple Dry Years [3] |
|---|---|---|
| **DWR (SWP** Supply) | | |
| 2005 | | |
| Table A Supply (af) | 3,800 | 30,500 |
| % of Table A Amount | 4% | 32% |
| | | |
| 2025/2030 | | |
| Table A Supply (af) | 4,800 | 31,400 |
| % of Table A Amount | 5% | 33% |

**Notes:**

(1) The percentages of Table A Amount projected to be available are taken from Table 6-1 of DWR's "State Water Project Delivery Reliability 2006 Report" (DWR Reliability Report, 2006). Supplies are calculated by multiplying CLWA's Table A Amount of 95,200 af by these percentages.

(2) Based on the worst case historic single dry year of 1977.

(3) Supplies shown are annual averages over four consecutive dry years, based on the worst case historic four-year dry period of 1931-1934.

## Table 2-2-A
## Wholesale Supply Reliability (DWR Reliability Report Draft, 2009)[1]

| Wholesaler | Single Dry Year [2] | Multiple Dry Years [3] |
|---|---|---|
| **DWR (SWP** Supply) | | |
| 2009 | | |
| Table A Supply (af) | 6,664 | 32,368 |
| % of Table A Amount | 7% | 34% |
| | | |
| 2029 | | |
| Table A Supply (af) | 10,472 | 33,320 |
| % of Table A Amount | 11% | 35% |

**Notes:**

(1) The percentages of Table A Amount projected to be available are taken from Tables 6-4 and 6-13 of DWR's "State Water Project Delivery Reliability Report 2009 Draft" (DWR Reliability Report Draft, 2009). Supplies are calculated by multiplying CLWA's Table A Amount of 95,200 af by the conservative percentages.

(2) Based on the worst case historic single dry year of 1977.

(3) Supplies shown are annual averages over four consecutive dry years, based on the worst case historic four-year dry period of 1931-1934.

### 2.1.2 Existing Additional Water Sources

The following existing additional water sources are available to meet demands when necessary.

- **Buena Vista/Rosedale-Rio Bravo Water Storage District Water Acquisition:** In early 2007, CLWA finalized a Water Acquisition Agreement with the Buena Vista Water Storage District (Buena Vista) and the Rosedale-Rio Bravo Water Storage District (Rosedale-Rio Bravo) in Kern County. Under this Program, Buena Vista's high flow Kern River entitlements (and other acquired waters that may become available) are captured and recharged within Rosedale-Rio Bravo's service area on an ongoing basis. CLWA will receive 11,000 af of these supplies annually through either exchange of Buena Vista's and Rosedale-Rio Bravo's SWP supplies or through direct delivery of water to the California Aqueduct via the Cross Valley Canal.

- **Nickel Water:** The Newhall Ranch Specific Plan and Water Reclamation Plant Revised Draft Additional Analysis, November 2002 describes an additional source of water that has been acquired by the Newhall Ranch Specific Plan applicant for use. The Newhall Ranch Specific Plan applicant has secured 1,607 af of water under contract with Nickel Family LLC in Kern County. This water is 100 percent reliable on a year-to-year basis, and not subject to the annual fluctuations that can occur to the SWP in dry year conditions (Newhall Ranch, 2002). Although this water is not available to the Proposed Project, it adds to the ability to meet total demands, including those of the Proposed Project.

- **Flexible Storage Accounts:** The 2005 UWMP describes that as a part of its Water Supply Contract with DWR, CLWA has access to a portion of the storage capacity of Castaic Lake. This Flexible Storage Account allows CLWA to borrow up to 4,684 af of the storage in Castaic Lake. Any amount that CLWA borrows must be replaced by CLWA within five years of its withdrawal. CLWA manages this storage by keeping the account full in normal and wet years and then delivering that stored amount (or portion of it) during dry periods. The account is refilled during the next year that adequate SWP supplies are available to CLWA to do so. CLWA has recently negotiated with Ventura County water agencies to obtain the use of their Flexible Storage Account. This will allow CLWA access to another 1,376 af of storage in Castaic Lake. CLWA access to this additional storage is available on a year-to-year basis for ten years, beginning in 2006.

- **Semitropic Water Storage District Banking:** The 2005 UWMP (pg. 3-22) identifies two existing contracts with the Semitropic Water Storage District under which CLWA has stored 59,000 acre-feet of water. In accordance with the terms of CLWA's storage agreements with Semitropic, 90 percent of the banked amount, or a total of 50,870 af, is recoverable through 2013 to meet CLWA water demands when needed. Withdrawals of up to 50,870 afy are potentially available in a dry year, but given possible competition for withdrawal capacity with other Semitropic banking partners in extremely dry years, it is assumed for the tables in Section 5.0 that about one third of the total amount stored could be withdrawn.

- **Rosedale-Rio Bravo Water Storage District Water Banking:** The 2005 UWMP (pg. 3-23) identifies one existing contract with the Rosedale-Rio Bravo Water Storage District under which CLWA has stored 64,898 af of water as of December 31, 2009. This banking program currently offers storage and pump-back capacity of 20,000 afy, with up to 100,000 af of storage capacity. This stored water will be called upon to meet demands when required and is recoverable through 2035.

- **Yuba Accord Water Program:** Though not identified in the 2005 UWMP, during March 2008 CLWA entered into an agreement to participate in the Yuba Accord Water Program.

Approximately 850 af of non-SWP water supply is available to CLWA in critically dry years as a result of the DWR entering into agreements with Yuba County Water Agency and the Bureau of Reclamation relating to settlement of water rights issues on the Lower Yuba River (Yuba Accord). Additional supplies will be available in wetter years. The quantity of water will vary depending on hydrology, and the extent of participation by other SWP contractors.

- **Newhall Land – Semitropic Water Storage District Banking:** The Newhall Ranch Specific Plan project applicant has entered into an agreement to reserve and purchase water storage capacity of up to 55,000 af in the Semitropic Water Storage District Groundwater Banking Project (Newhall Ranch, 2003). Sources of water that could be stored include, but are not limited to, the Nickel Water. The stored water can be extracted in dry years in amounts up to 4,950 afy. As of December 31, 2009, there is 18,828 af of water stored in the Semitropic Groundwater Storage Bank by The Newhall Land and Farming Company for the Newhall Ranch Specific Plan. Newhall Ranch is located within the CLWA service area. Delivery of stored water from the Newhall Land Semitropic Groundwater Bank requires further agreements between CLWA and Newhall Land. Although this water is not available to the Project, it adds to the ability to meet total demands, including those of the Project.

## 2.2 Groundwater

Water Code §10910(f) requires a WSA to include specific information describing groundwater resources if the water supply for a proposed project includes groundwater. Over the last 25 years, the water purveyors have developed a groundwater operating plan that includes municipal, agricultural and other smaller uses while maintaining the local Basin in a sustainable condition (i.e., no long term depletion of groundwater or interrelated surface water). In 2003, CLWA in cooperation with the retail water purveyors completed and adopted a Groundwater Management Plan in accordance with Water Code §10753. Among the elements of the adopted Plan is the preparation of annual groundwater management reports, such as the Santa Clarita Valley Water Report, that provides information about local groundwater conditions, SWP supplies, water conservation and recycled water. The following important studies have been prepared that serve to substantiate and ensure the sustainability of the local groundwater resources:

1. Slade (2002) updates prior reports and includes a detailed review of the hydrologic conditions and description of groundwater resources available to NCWD and other large municipal and agriculture groundwater producers, including SCWD, Valencia, The Newhall Land and Farming Company and the Wayside Honor Ranch operating within the Santa Clara River Valley East Subbasin, one of several subbasins identified along the Santa Clara River in Los Angeles and Ventura counties by Updated Bulletin 118 of the California Department of Water Resources. The shallow aquifer system is designated the Alluvial Aquifer and the deeper aquifer is designated the Saugus Formation. Slade reported that both aquifer systems were in good operating condition and not in a condition of overdraft. Also included are hundreds of other, small-scale water producers that account for less than 1 percent of total production from these aquifer systems (SCVWR, 2005).

2. In August 2005 and again in 2009, work was completed in support of a Memorandum of Understanding (MOU) entered into by NCWD, CLWA and the other water purveyors and United Water Conservation District (MOU, 2001). The MOU is a commitment by the water purveyors to expand on the previous knowledge of groundwater conditions and, using a regional groundwater flow model, evaluate the long term sustainability of the purveyor's groundwater operating plan under a range of existing and potential future

hydrologic conditions. The primary conclusion of the modeling analysis is that the groundwater operating plan will not cause detrimental short term or long term effects to the groundwater and surface water resources in the Santa Clarita Valley and is, therefore, sustainable (Basin Yield Study, 2005). The primary conclusion was again confirmed with the completion of an updated basin yield analysis in 2009 (Basin Yield Study, 2009).

The following sub-parts respond to specific requirements of Water Code §10910(f):

### 2.2.1 Water Code §10910(f)(1)

***Review of relevant information contained in the Urban Water Management Plan.***

Refer to Chapter 3, Water Resources and Appendix C, Groundwater Resources and Yield in the Santa Clarita Valley 2005 UWMP for an overview description of the local Alluvial and Saugus Formation aquifer systems, as well as historical and projected production consistent with the groundwater operating plan.

### 2.2.2 Water Code §10910(f)(2)

***Description of any groundwater basin or basins from which the proposed project will be supplied including information concerning adjudication and overdraft.***

The 2005 UWMP describes that the sole source of local groundwater for urban water supply in the Santa Clarita Valley is the groundwater Basin identified in the DWR Bulletin 118, 2003 Update as the Santa Clara River Valley Groundwater Basin, East Subbasin (Basin) (Basin No. 4-4.07). The Basin is comprised of two aquifer systems, the Alluvium and the Saugus Formation. The Alluvium generally underlies the Santa Clara River and its several tributaries, and the Saugus Formation underlies practically the entire Upper Santa Clara River area. There are also some scattered outcrops of Terrace deposits in the Basin that likely contain limited amounts of groundwater. Since these deposits are located in limited areas situated at elevations above the regional water table and are also of limited thickness, they are of no practical significance as aquifers and consequently have not been developed for any significant water supply.

Neither aquifer system is in overdraft at the present time (Slade, 2002) (SCVWR, 2009) (Basin Yield Study, 2009). In 2003, CLWA with the cooperation of the retail water purveyors completed and adopted a Groundwater Management Plan in accordance with Water Code §10753. The management objectives of the Plan are to ensure the ongoing use of local groundwater by maintaining the Basin in good operating condition (no overdraft), protecting water quality and preventing adverse impacts to surface waters. The groundwater basin has not been adjudicated and has not been identified as overdrafted or projected to be overdrafted by the Department of Water Resources in the most current Bulletin that characterizes the ground water Basin (DWR Bulletin 118-80, 1980).

### 2.2.3 Water Code §10910(f)(3)

***Description and analysis of the amount and location of groundwater pumped by the public water system for the past 5 years from any groundwater basin from which the proposed project will be supplied.***

During the past 5-year period (2004 to 2008), NCWD's production was approximately 1,728 af from the Alluvial Aquifer and approximately 3,697 af from the Saugus Formation. A summary of

the past 24 years of total groundwater production from the Alluvial Aquifer and Saugus Formation is set forth in Section 4.0 of this WSA.

Total pumpage from the Alluvial Aquifer in 2008 was approximately 41,716 af, an increase of about 2,943 af from the preceding year (SCVWR, 2008). Of the total Alluvial pumpage in 2008, 27,919 af was for municipal water supply, and the balance, about 13,797 af was for agriculture and other (minor) miscellaneous uses (SCVWR, 2008).

Over the last two decades, since the inception of SWP deliveries in 1980, total pumpage from the Alluvial Aquifer has ranged from a low of about 20,200 af (in 1983) to slightly more than 43,400 af (in 1999) (SCVWR, 2008).

Total pumpage from the Saugus Formation in 2008 was slightly more than 6,918 af, which is approximately 766 af less than pumped in the prior year (SCVWR 2008). Of the total Saugus Formation pumpage in 2008, most (5,965 af) was for municipal water supply, and the balance (953 af) was for agricultural and other (minor) uses (SCVWR, 2008). Saugus pumpage has remained stable, at an average of about 5,612 afy, since 1998 (SCVWR, 2008). On a long-term average basis since the importation of SWP water, total pumpage from the Saugus Formation has ranged from a low of about 3,700 afy (in 1999) to a high of nearly 14,917 afy in (1991); average pumpage from 1980 to present has been a slightly less than 7,000 afy (SCVWR, 2008). These numbers are at the lower end of the estimated range of the operational yield of the Saugus Formation (2005 UWMP).

### 2.2.4 Water Code §10910(f)(4)

***Description and analysis of the amount and location of groundwater that is projected to be pumped by the public water system from any basin from which the proposed project will be supplied.***

See Table 3-8 in the 2005 UWMP for a summary of the range of groundwater production projected by the retail water purveyors. To ensure sustainability, the purveyors have committed that the annual use of groundwater pumped collectively in any given year will not exceed the purveyors' operating plan as described in the Basin Yield Study (Basin Yield Study, 2009) and reported annually in the Santa Clarita Valley Water Report.

### 2.2.5 Water Code §10910(f)(5)

***Analysis of the sufficiency of the groundwater from the basin or basins from which the proposed project will be supplied to meet the projected water demand associated with the proposed project.***

NCWD has determined that the sufficiency of groundwater necessary to meet the initial and projected water demand associated with the Proposed Project was addressed in the 2005 UWMP. Therefore, as provided in Water Code §10910(f)(5), NCWD incorporates the following 2005 UWMP's conclusions regarding the adequacy of the groundwater supply.

For municipal water supply, with existing wells and pumps, the three retail water purveyors with Alluvial wells (NCWD, SCWD, and VWC) have a combined pumping capacity from active wells (not contaminated by perchlorate) of 36,120 gallons per minute (gpm), which translates into a current full-time Alluvial source capacity of approximately 58,000 afy. This is more than sufficient to meet the municipal, or urban, component of groundwater supply from the Alluvium, which is currently 20,000 to 25,000 afy of the total planned Alluvial pumping of 30,000 to 40,000 afy. (The balance of Alluvial pumping in the operating plan is for agricultural

and other, including small private, pumping.)

For municipal water supply with existing wells, the three retail water purveyors with Saugus wells (NCWD, SCWD, and VWC) have a combined pumping capacity from active wells (not contaminated by perchlorate) of 14,900 gpm, which translates into a full-time Saugus source capacity of 24,000 afy. These capacities do not include the four Saugus wells contaminated by perchlorate, although they indirectly reflect the capacity of one of the contaminated wells, VWC's Well 157, which has been sealed and abandoned, and replaced by VWC's Well 206 in a non-impacted part of the Basin. The four contaminated wells, one owned by NCWD and two owned by SCWD, in addition to the VWC well, represent a total of 7,900 gpm of pumping capacity (or full-time source capacity of about 12,700 afy) inactivated due to perchlorate contamination.

In terms of adequacy and availability, the combined active Saugus groundwater source capacity of municipal wells of 24,000 afy, is more than sufficient to meet the planned use of Saugus groundwater in normal years of 7,500 to 15,000 afy. This currently active capacity is also more than sufficient to meet water demands, in combination with other sources, if both of the next two years are dry. At that time, the combination of currently active capacity and restored impacted capacity, through a combination of treatment at two of the impacted wells and replacement well construction, will provide sufficient total Saugus capacity to meet the planned use of Saugus groundwater during multiple dry-years of 35,000 af, if that third year is also a dry year.

### 2.2.6 Perchlorate Contamination

Groundwater produced by NCWD consistently meets drinking water standards set by EPA and the California Department of Health Services. However the 2005 UWMP goes on to explain that ammonium perchlorate (perchlorate) has been a concern with respect to the groundwater quality since it was detected in four wells in the eastern part of the Saugus formation in 1997 and later in two wells in the Alluvial formation. Of the six wells that were initially removed from active water supply service upon the detection of perchlorate, four wells with a combined capacity of 7,200 gpm remain out of service. NCWD, CLWA and the other purveyors have developed an implementation plan that would restore this well capacity. The implementation plan includes a combination of treatment facilities and replacement wells. Treatment facilities for two of the impacted wells have been constructed and will be operational in 2010. A third well, SCWD’s Stadium Well has been replaced and will be operational in early 2010. Additional production restoration (replacement) wells to recover the total lost capacity of the impacted wells are currently in the planning stages.

In light of the preceding, with regard to the adequacy of groundwater as the local component of water supply in this WSA, the non-impacted groundwater supply will be sufficient to meet near-term water requirements as described in Section 2.2.5 above. Afterwards, the total groundwater capacity will be sufficient to meet the full range of normal and dry-year conditions as provided in the operating plan for groundwater supply.

## 2.3 Recycled Water

CLWA currently has a contract with the Los Angeles County Sanitation District for 1,700 afy of recycled water that became available in 2003 (Reference Table 4-2 in Section 4.0 of this WSA for historical recycled water deliveries). Currently, NCWD does not have any infrastructure in place to utilize recycled water. However, NCWD does indirectly benefit because any recycled water use will allow for offset potable water supplies (including groundwater and SWP water) to be used in other areas of the Santa Clarita Valley, including the Proposed Project.

# 3.0 PLANNED WATER RESOURCES

This WSA includes additional information related to obtaining planned additional water supplies. Potential future water sources discussed in the 2005 UWMP include acquisition of additional imported water supplies, recycled water, desalination, storm water runoff, increased dry year Saugus pumping, and additional SWP reliability projects. Demand side management programs (conservation) are also considered an important component of water supply resulting from efforts by NCWD, CLWA and the other retailers to reduce water demands on a long term basis.

The 2005 UWMP specifically identifies the following projected future sources of supply consisting of water transfers, additional groundwater banking programs (pg. 3-20), increased dry year Saugus pumping and additional recycled water (pg. 4-1) as necessary to meet the total projected demands through 2030.

## 3.1 Water Transfers

As indicated in the 2005 UWMP, CLWA, as a SWP contractor, could acquire new imported water supplies on behalf of NCWD through direct transfers or by contributing to the construction of new desalination facilities in other areas in exchange for imported water. One such example is the Buena Vista Water Storage District and the Rosedale-Rio Bravo Water Storage District. This District has developed a program that provides a firm water supply. This planned supply program provides a firm annual water supply based on existing and long-standing Kern River water rights. Environmental documentation has been completed for this program, which envisions a single partner purchasing a firm annual water supply, which can then be banked in years when it is not needed for withdrawal and delivery in later years. In early 2007, CLWA acquired 11,000 afy of firm supply as part of this program.

## 3.2 Additional Banking Programs

Also located in Kern County, immediately adjacent to the Kern Water Bank, Rosedale-Rio Bravo Water Storage District has completed environmental documentation for a Water Banking and Exchange Program which includes storage and pumpback capacity of 20,000 afy, with up to 100,000 af of storage capacity. The agreement for this program has been executed and is now in effect. As of December 31, 2007, CLWA has stored 64,898 af of water through this program.

The 2005 UWMP discusses water banking storage and pumpback capacity both north and south of CLWA's service area, the latter of which would provide an emergency supply in case of catastrophic outage along the California Aqueduct. With short-term storage now existing in the Semitropic program and long-term storage now existing with Rosedale-Rio Bravo, CLWA is assessing southern water banking opportunities with a number of entities.

Groundwater banking and conjunctive-use programs enhance the reliability of both the existing and future supplies. Table 3-1 summarizes CLWA's future reliability enhancement programs.

**Table 3-1**
**Future Reliability Enhancement Programs**

| Project Name | Year Available | Proposed Quantities (af) | | |
|---|---|---|---|---|
| | | Average/ Normal Year | Single Dry Year | Multiple Dry Years (1) |
| Additional Planned Banking Programs | 2014 | 0 | 20,000 | 20,000 |

(1) Supplies shown are maximum withdrawal capacity for each of four consecutive dry years.

## 3.3 Increased Dry-year Saugus Formation Pumping

The 2005 UWMP concludes (pg. 3-10) that pumping from the Saugus Formation in a given year is tied directly to the availability of other water supplies, particularly from the SWP. During average-year conditions within the SWP system, Saugus pumping ranges between 7,500 and 15,000 afy. Planned dry-year pumping from the Saugus Formation ranges between 15,000 and 25,000 afy during a drought year and can increase to between 21,000 and 25,000 afy if SWP deliveries are reduced for two consecutive years and between 21,000 and 35,000 afy if SWP deliveries are reduced for three consecutive years. Such high pumping would be followed by periods of reduced (average-year) pumping, at rates between 7,500 and 15,000 afy, to further enhance the effectiveness of natural recharge processes that would recover water levels and groundwater storage volumes after the higher pumping during dry years.

As mentioned in Section 2.2.5 of this WSA, the three retail water purveyors with Saugus wells (NCWD, SCWD, and VWC) have a combined pumping capacity from active wells (not contaminated by perchlorate) of 14,900 gpm, which translates into a full-time Saugus source capacity of 24,000 afy. These capacities do not include the four Saugus wells contaminated by perchlorate, although they indirectly reflect the capacity of one of the contaminated wells, VWC's Well 157, which has been sealed and abandoned, and replaced by VWC's Well 206 in a non-impacted part of the Basin. The four contaminated wells, one owned by NCWD and two owned by SCWD, in addition to the VWC well, represent a total of 7,900 gpm of pumping capacity (or full-time source capacity of about 12,700 afy) inactivated due to perchlorate contamination. Additional capacity to meet the dry-year operating plan will be met by the restoration of contaminated wells and new well construction.

## 3.4 Additional Recycled Water

Wastewater that has been highly treated and disinfected can be reused for landscape irrigation and other non-potable purposes. It is not suitable for use as potable water. In 1993, CLWA completed a *Reclaimed Water System Master Plan* to use recycled water as a reliable water source to meet some non-potable demand within the Santa Clarita Valley. In March, 2007 CLWA certified a Program Environmental Impact Report (PEIR) for the Recycled Water System Master Plan (Master Plan). The Master Plan is a proposed expansion of the existing recycled water system that would ultimately allow for the use of up to 17,400 afy of recycled water within the CLWA service area with full build out in the year 2030. The Master Plan includes facilities that would deliver recycled water to the NCWD service area and the delivery of the recycled water to the remainder of the CLWA service area would free up additional potable supplies for the NCWD. In addition to the CLWA Master Plan, the Newhall Ranch Specific Plan and Water Reclamation Plant Revised Draft Additional Analysis, November 2002, includes an additional 5,400 afy of water that will be delivered to that development once fully constructed (Newhall Ranch, 2002). Table 4-2 in Section 4.0 of this WSA may be referenced for historical recycled water deliveries.

## 3.5 Water Conservation

One of the assumptions in the 2005 UWMP is that potable water demand would be reduced by both existing and future users by no less than ten percent. Therefore, it is critical, if the Proposed Project is to avoid significant cumulative impacts to water supply, that it incorporates water conservation measures into the design the Proposed Project. The Proposed Project should include implementation of water conservation measures to reduce the overall demand to NCWD. In general, landscape irrigation can account for up to 70 percent of the water consumed at local residences. In order to reduce the water demand for the Proposed Project, specific measures should be included such as the use of xeriscaping and drought tolerant/native plantings. In addition, weather-sensitive irrigation timers should be installed to ensure all landscaping receives only the specific amount of water that it needs. Finally, the Project would need to comply with the County's recently-enacted Drought Tolerant Landscaping Ordinance, which requires use of landscaping which uses decreased amounts of irrigation.

Specifically, the Project may include the following water conservation features as part of its design: high-efficiency toilets (maximum 1.28 gallons per flush), including dual-flush water closets; high-efficiency urinals (maximum 0.125 gallon per flush) or waterless urinals; low-flow restroom faucets with a maximum flow rate of 0.5 gpm; and restroom faucets of a self-closing design (i.e., that automatically turn off when not in use). Use of these fixtures would reduce Project water demand by at least 20 percent. In addition, to reduce landscaping demand by at least 50 percent, the project may include the following features: weather-based irrigation controller with rain shutoff; matched precipitation (flow) rates for sprinkler heads; drip/microspray/subsurface irrigation where appropriate; minimum irrigation system distribution uniformity of 75 percent; use of permeable surfaces for non-vehicular traffic areas; proper hydro-zoning and turf minimization; and use of landscape contouring to minimize precipitation runoff.

In addition to incorporating water conservation measures into new projects, NCWD, CLWA and the local purveyors recently completed work on a Santa Clarita Valley Water Use Efficiency Strategic Plan (WUESP, 2008). This plan identifies specific programs to assure the achievement of the ten percent goal in the 2005 UWMP. These programs are being funded through a surcharge to the wholesale water rate.

Furthermore, the demand figures in the tables in Section 5.0 have not been adjusted to reflect the recent passage of SB 7X-7. This law requires that NCWD, CLWA and the local retailers demonstrate a per capita water reduction of ten percent in 2015 and twenty percent by 2020. As mentioned above, the 2005 UWMP includes a ten percent conservation factor through the year 2030. The 2010 UWMP will address a number of projected demand scenarios including one that reflects the impact of this legislation.

# 4.0 WATER USE

## 4.1 Historical Water Use

NCWD's water use for the last 28 years is shown in Table 4-1. Table 4-2 illustrates the region's water use for the same period.

**Table 4-1**
**Historical Water Use for Newhall County Water District**
**(acre-feet) (SCVWR, 2008)**

| Year | *State Water Project* | *Alluvium* | *Saugus Formation* | **Total** |
|---|---|---|---|---|
| 1980 | 0 | 1,170 | 2,363 | **3,533** |
| 1981 | 0 | 1,350 | 2,621 | **3,971** |
| 1982 | 0 | 1,178 | 2,672 | **3,850** |
| 1983 | 0 | 1,147 | 2,787 | **3,934** |
| 1984 | 0 | 1,549 | 2,955 | **4,504** |
| 1985 | 0 | 1,644 | 3,255 | **4,899** |
| 1986 | 0 | 1,842 | 3,548 | **5,390** |
| 1987 | 22 | 2,127 | 3,657 | **5,806** |
| 1988 | 142 | 2,283 | 4,041 | **6,466** |
| 1989 | 428 | 2,367 | 4,688 | **7,483** |
| 1990 | 796 | 1,936 | 4,746 | **7,478** |
| 1991 | 675 | 1,864 | 4,994 | **7,533** |
| 1992 | 802 | 1,994 | 5,160 | **7,956** |
| 1993 | 1,075 | 1,977 | 5,068 | **8,120** |
| 1994 | 906 | 2,225 | 5,103 | **8,234** |
| 1995 | 1,305 | 1,675 | 4,775 | **7,755** |
| 1996 | 1,213 | 1,803 | 4,871 | **7,887** |
| 1997 | 1,324 | 2,309 | 5,168 | **8,801** |
| 1998 | 1,769 | 1,761 | 4,557 | **8,087** |
| 1999 | 5,050 | 1,676 | 2,622 | **9,348** |
| 2000 | 6,024 | 1,508 | 2,186 | **9,718** |
| 2001 | 5,452 | 1,641 | 2,432 | **9,525** |
| 2002 | 5,986 | 981 | 3,395 | **10,362** |
| 2003 | 6,572 | 1,266 | 2,513 | **10,351** |
| 2004 | 5,896 | 1,582 | 3,739 | **11,217** |
| 2005 | 5,932 | 1,389 | 3,435 | **10,756** |
| 2006 | 5,898 | 2,149 | 3,423 | **11,470** |
| 2007 | 6,478 | 1,806 | 3,691 | **11,975** |
| 2008 | 5,428 | 1,717 | 4,195 | **11,340** |

**Table 4-2**
**Historical Total Water Use for the Santa Clarita Valley Region (acre-feet) (SCVWR, 2008)**

| Year | *State Water Project* | *Alluvium* | *Saugus Formation* | *Recycled Water* | **Total** |
|---|---|---|---|---|---|
| 1980 | 1,125 | 31,456 | 4,589 | - | **37,170** |
| 1981 | 5,816 | 30,793 | 4,970 | - | **41,579** |
| 1982 | 9,659 | 21,868 | 4,090 | - | **35,617** |
| 1983 | 9,185 | 20,286 | 3,852 | - | **33,323** |
| 1984 | 10,996 | 27,318 | 4,449 | - | **42,763** |
| 1985 | 11,823 | 25,347 | 4,715 | - | **41,885** |
| 1986 | 13,759 | 24,205 | 5,485 | - | **43,449** |
| 1987 | 16,285 | 22,642 | 5,561 | - | **44,488** |
| 1988 | 19,033 | 21,648 | 6,928 | - | **47,609** |
| 1989 | 21,618 | 23,721 | 7,759 | - | **53,098** |
| 1990 | 21,613 | 23,876 | 8,861 | - | **54,350** |
| 1991 | 7,968 | 27,187 | 14,917 | - | **50,072** |
| 1992 | 14,898 | 27,591 | 10,924 | - | **53,413** |
| 1993 | 13,836 | 30,126 | 10,610 | - | **54,572** |
| 1994 | 14,700 | 33,133 | 12,025 | - | **59,858** |
| 1995 | 17,002 | 34,464 | 8,560 | - | **60,026** |
| 1996 | 18,873 | 38,438 | 8,186 | - | **65,497** |
| 1997 | 23,215 | 39,599 | 7,745 | - | **70,559** |
| 1998 | 20,266 | 36,648 | 5,555 | - | **62,469** |
| 1999 | 27,302 | 43,406 | 3,716 | - | **74,424** |
| 2000 | 32,582 | 39,649 | 4,080 | - | **76,311** |
| 2001 | 35,369 | 37,273 | 4,140 | - | **76,782** |
| 2002 | 41,768 | 38,103 | 5,160 | - | **85,031** |
| 2003 | 44,419 | 33,577 | 4,207 | 700 | **82,904** |
| 2004 | 47,205 | 33,757 | 6,503 | 448 | **87,914** |
| 2005 | 38,034 | 38,648 | 6,453 | 438 | **83,573** |
| 2006 | 40,646 | 43,061 | 7,312 | 419 | **91,438** |
| 2007 | 45,332 | 38,773 | 7,684 | 470 | **92,260** |
| 2008 | 41,705 | 41,716 | 6,918 | 311 | **90,650** |

## 4.2 Water Use of Project

**Disney/ABC Studios at The Ranch Project Water Demand:**

In 2008, NCWD's service area-wide demands were approximately 11,340 af (SCVWR, 2008). It has been calculated that the Proposed Project will require approximately 90,594 gallons per day (gpd) or 102 afy for build-out of the proposed media office development option, which represents the Project's worst-case scenario in terms of water demand. The calculation of this demand is based on 120 percent of the Project's estimated wastewater generation, using land use-based wastewater generation factors provided by the Sanitation Districts of Los Angeles County. Application of this factor is typical for determining domestic water needs, as wastewater flows are frequently estimated to represent approximately 80 percent of total water usage. The total water demand of 102 afy also assumes Project operations at 365 days per year.

## 4.3 Future Water Use

The amount of water delivered by NCWD in the recent past and future projections by customer are summarized in Table 4-4 below. Table 4-5 summarizes the region's projected water demand as discussed in the 2005 Urban Water Management Plan.

**Table 4-4**
Past, Current, and Projected Water Demands (by customer type)
Newhall County Water District (2005 UWMP)

| Year | | Water Use Sectors | Single Family | Multi-Family | Comm-ercial | Construction/ Industrial | Institutional/ Government | Landscape | Total |
|---|---|---|---|---|---|---|---|---|---|
| 2000 | metered | No. of accounts | 6,608 | 293 | 377 | 11 | 18 | 127 | 7,434 |
| | | Deliveries (af) | 5,556 | 1,537 | 872 | 411 | 119 | 1,128 | 9,623 |
| 2005 | metered | No. of accounts | 8,047 | 293 | 399 | 35 | 59 | 232 | 9,065 |
| | | Deliveries (af) | 7,243 | 1,969 | 891 | 207 | 133 | 1,357 | 11,800 |
| 2010 | metered | No. of accounts | 9,735 | 425 | 425 | 60 | 75 | 300 | 11,020 |
| | | Deliveries (af) | 8,750 | 2,485 | 999 | 250 | 176 | 1,740 | 14,400 |
| 2015 | metered | No. of accounts | 10,730 | 450 | 450 | 85 | 90 | 425 | 12,230 |
| | | Deliveries (af) | 9,475 | 2,595 | 1,038 | 315 | 212 | 2,365 | 16,000 |
| 2020 | metered | No. of accounts | 11,865 | 475 | 475 | 110 | 105 | 550 | 13,580 |
| | | Deliveries (af) | 10,385 | 2,750 | 1,066 | 375 | 234 | 2,890 | 17,700 |
| 2025 | metered | No. of accounts | 12,620 | 500 | 500 | 135 | 120 | 675 | 14,550 |
| | | Deliveries (af) | 11,000 | 2,900 | 1,114 | 425 | 261 | 3,600 | 19,300 |
| 2030 | metered | No. of accounts | 14,050 | 525 | 525 | 160 | 135 | 800 | 16,195 |
| | | Deliveries (af) | 12,275 | 3,000 | 1,140 | 500 | 285 | 3,800 | 21,000 |

(1) UWMP 2005

**Table 4-5**
Regional Projected Water Demands (2005 UWMP)

| Purveyor | **Demand** (af) | | | | | | Annual Increase |
|---|---|---|---|---|---|---|---|
| | **2005** | **2010** | **2015** | **2020** | **2025** | **2030** | |
| CLWA SCWD | 30,400 | 35,000 | 39,100 | 43,100 | 47,100 | 51,100 | 2.1% |
| LACWWD #36 | 1,300 | 1,600 | 1,800 | 2,000 | 2,400 | 2,800 | 3.1% |
| NCWD | 11,800 | 14,400 | 16,000 | 17,700 | 19,300 | 21,000 | 2.4% |
| VWC | 30,200 | 35,100 | 40,200 | 43,700 | 50,600 | 54,400 | 2.4% |
| | | | | | | | |
| Total Purveyor | 73,700 | 86,100 | 97,100 | 106,500 | 119,400 | 129,300 | 2.2% |
| | | | | | | | |
| Agricultural/Private Uses | 15,600 | 13,950 | 12,300 | 10,650 | 9,000 | 9,000 | -- |
| | | | | | | | |
| Total (w/o conservation) | 89,300 | 100,050 | 109,400 | 117,150 | 128,400 | 138,300 | -- |
| | | | | | | | |
| Conservation (1) | (7,370) | (8,610) | (9,710) | (10,650) | (11,940) | (12,930) | -- |
| | | | | | | | |
| Total (w/conservation) | 81,930 | 91,440 | 99,690 | 106,500 | 116,460 | 125,370 | 1.3% |

(1) UWMP 2005

# 5.0 NORMAL, SINGLE-DRY, AND MULTIPLE-DRY YEAR PLANNING

The following sections summarize the existing and planned supplies and how they will be utilized during Normal, Single-Dry, and Multiple-Dry Years. The text and tables were taken from the 2005 UWMP, and updated by including the most recent reliability numbers from the State Water Project Delivery Reliability Report 2009 Draft, moving the 11,000 af of Buena Vista-Rosedale water from “Planned Supplies” to “Existing Supplies”, adding 1,607 af of Nickel Water to “Existing Supplies”, moving Rosedale-Rio Bravo banked water from “Planned Supplies” to “Existing Supplies” and updating to 64,898 af, adding 18,828 af of Semitropic Water Bank-Newhall Land to “Existing Supplies” and adding 5,400 af of Recycled Water for Newhall Ranch to “Planned Supplies” (see sections 2.1.1, 2.1.3 and 3.4 above).

## 5.1 Summary of Existing and Planned Supplies

A summary of existing and planned water supplies is presented in Table 5-1 below. Table 5-1 is not intended to be an operational plan for how supplies would be used in a particular year, but rather identifies the complete range of water supplies available under a range of hydrologic conditions. Diversity of supply allows NCWD, CLWA and the other purveyors the option of drawing on multiple sources of supply in response to changing conditions such as varying weather patterns (average/normal years, single dry years, multiple dry years), fluctuations in delivery amounts of SWP water, natural disasters and contamination with substances such as perchlorate. It is the stated goal of NCWD, CLWA and the other retail water purveyors to deliver a reliable and high quality water supply for their customers, even during dry periods. Based on conservative water supply and demand assumptions over the next 25 years in combination with conservation of non-essential demand during certain dry years, the water supply plan described in the 2005 UWMP successfully achieves this goal.

**Table 5-1**

**Summary of Current and Planned Water Supplies and Banking Programs[(1)]**

| Water Supply Sources | Supply (af) | | | | | |
|---|---|---|---|---|---|---|
| | 2007 | 2010 | 2015 | 2020 | 2025 | 2030 |
| **Existing Supplies (1)** | | | | | | |
| Wholesale (Imported) | *61,800* | *75,787* | *75,787* | *74,407* | *74,407* | *74,407* |
| SWP Table A Supply (2) | 57,120 | 57,120 | 57,120 | 57,120 | 57,120 | 57,120 |
| Buena Vista-Rosedale | 0 | 11,000 | 11,000 | 11,000 | 11,000 | 11,000 |
| Nickel Water - Newhall Ranch | 0 | 1,607 | 1,607 | 1,607 | 1,607 | 1,607 |
| Flexible Storage Account (CLWA) (3) | 4,680 | 4,680 | 4,680 | 4,680 | 4,680 | 4,680 |
| Flexible Storage Account (Ventura County) (3) (4) | 0 | 1,380 | 1,380 | 0 | 0 | 0 |
| Local Supplies | | | | | | |
| Groundwater | *40,000* | *46,000* | *46,000* | *46,000* | *46,000* | *46,000* |
| Alluvial Aquifer | 35,000 | 35,000 | 35,000 | 35,000 | 35,000 | 35,000 |
| Saugus Formation | 5,000 | 11,000 | 11,000 | 11,000 | 11,000 | 11,000 |
| Recycled Water | 1,700 | 1,700 | 1,700 | 1,700 | 1,700 | 1,700 |
| | | | | | | |
| **Total Existing Supplies** | 103,500 | 123,487 | 123,487 | 122,107 | 122,107 | 122,107 |
| | | | | | | |
| **Existing Banking Programs (3)** | | | | | | |
| Semitropic Water Bank (5) | 50,870 | 50,870 | 0 | 0 | 0 | 0 |
| Rosedale-Rio Bravo (7) | 64,898 | 64,898 | 64,898 | 64,898 | 64,898 | 64,898 |
| Semitropic Water Bank - Newhall Land (8) | 0 | 18,828 | 18,828 | 18,828 | 18,828 | 18,828 |
| | | | | | | |
| **Total Existing Banking Programs** | 115,768 | 134,596 | 83,726 | 83,726 | 83,726 | 83,726 |
| | | | | | | |
| **Planned Supplies (1)** | | | | | | |
| Local Supplies | | | | | | |
| Groundwater | *0* | *10,000* | *10,000* | *20,000* | *20,000* | *20,000* |
| Restored wells (Saugus Formation) | 0 | 10,000 | 10,000 | 10,000 | 10,000 | 10,000 |
| New Wells (Saugus Formation) | 0 | 0 | 0 | 10,000 | 10,000 | 10,000 |
| Recycled Water - CLWA (6) | 0 | 0 | 1,600 | 6,300 | 11,000 | 15,700 |
| Recycled Water - Newhall Ranch | 0 | 0 | 1,500 | 2,500 | 3,500 | 5,400 |
| | | | | | | |
| **Total Planned Supplies** | 0 | 10,000 | 13,100 | 28,800 | 34,500 | 41,100 |
| | | | | | | |
| **Planned Banking Programs (3)** | | | | | | |
| Additional Planned Banking | 0 | 0 | 20,000 | 20,000 | 20,000 | 20,000 |
| | | | | | | |
| **Total Planned Banking Programs** | 0 | 0 | 20,000 | 20,000 | 20,000 | 20,000 |

Notes:

(1) The values shown under "Existing Supplies" and "Planned Supplies" are supplies projected to be available in average/normal years. The values shown under "Existing Banking Programs" and "Planned Banking Programs" are total amounts currently in storage.

(2) SWP supplies are calculated by multiplying CLWA's Table A Amount of 95,200 af by percentages of average deliveries projected to be available, based on Tables 6-12 and 6-13 of DWR's "Draft State Water Project Delivery Reliability Report 2009". Year 2030 figure is calculated by multiplying DWR's 2029 percentage of 60%.

(3) Supplies shown are total amounts that can be withdrawn, and would typically be used only during dry years. Each water bank has annual limitations on withdrawals that are reflected in Single-Dry Year and Multiple-Dry Year Tables.

(4) Initial term of the Ventura County entities' flexible storage account is ten years (from 2006 to 2015).

(5) Supplies shown are the total amount currently in storage, and would typically be used only during dry years. Once the current storage amount is withdrawn, this supply would no longer be available and in any event, is not available after 2013.

(6) Recycled water supplies based on projections provided in Chapter 4, Recycled Water.

(7) CLWA has 64,898 af of recoverable water as of 12/31/09 in the Rosedale-Rio Bravo Water Banking and Recovery Program.

(8) Supplies shown are the total amounts currently in storage. As of December 31, 2009, there is 18,828 af of water stored in the Semitropic Groundwater Storage Bank by The Newhall Land and Farming Company for the Newhall Ranch Specific Plan. The stored water can be extracted form the bank in dry years in amounts up to 4,950 afy. Newhall Ranch is located within the CLWA service area.

## 5.2 Normal Water Year

Table 5-2 summarizes water supplies available to meet demands over the 20-year planning period during an average/normal year. As presented in the table, water supply is broken down into existing and planned water supply sources, including wholesale (imported) water, local supplies, transfers, and banking programs. Demands are shown with and without the effects of an assumed 10 percent urban reduction resulting from conservation best management practices.

**Table 5-2**
**Projected Average/Normal Year Supplies and Demands**

| Water Supply Sources | Supply (af) | | | | |
|---|---|---|---|---|---|
| | 2010 | 2015 | 2020 | 2025 | 2030 |
| **Existing Supplies** | | | | | |
| Wholesale (Imported) | *69,727* | *69,727* | *69,727* | *69,727* | *69,727* |
| SWP Table A Supply (1) | 57,120 | 57,120 | 57,120 | 57,120 | 57,120 |
| Buena Vista-Rosedale (4) | 11,000 | 11,000 | 11,000 | 11,000 | 11,000 |
| Nickel Water - Newhall Ranch | 1,607 | 1,607 | 1,607 | 1,607 | 1,607 |
| Flexible Storage Account (CLWA) (2) | 0 | 0 | 0 | 0 | 0 |
| Flexible Storage Account (Ventura County) (2) | 0 | 0 | 0 | 0 | 0 |
| Local Supplies | | | | | |
| Groundwater | *46,000* | *46,000* | *46,000* | *46,000* | *46,000* |
| Alluvial Aquifer | 35,000 | 35,000 | 35,000 | 35,000 | 35,000 |
| Saugus Formation | 11,000 | 11,000 | 11,000 | 11,000 | 11,000 |
| Recycled Water | 1,700 | 1,700 | 1,700 | 1,700 | 1,700 |
| | | | | | |
| **Total Existing Supplies** | 117,427 | 117,427 | 117,427 | 117,427 | 117,427 |
| | | | | | |
| **Existing Banking Programs** | | | | | |
| Semitropic Water Bank (2) | 0 | 0 | 0 | 0 | 0 |
| Rosedale-Rio Bravo (2) | 0 | 0 | 0 | 0 | 0 |
| Semitropic Water Bank - Newhall Land (2) | 0 | 0 | 0 | 0 | 0 |
| | | | | | |
| **Total Existing Banking Programs** | 0 | 0 | 0 | 0 | 0 |
| | | | | | |
| **Planned Supplies** | | | | | |
| Local Supplies | | | | | |
| Groundwater | *0* | *0* | *0* | *0* | *0* |
| Restored wells (Saugus Formation) (2) | 0 | 0 | 0 | 0 | 0 |
| New Wells (Saugus Formation) (2) | 0 | 0 | 0 | 0 | 0 |
| Recycled Water - CLWA (3) | 0 | 1,600 | 6,300 | 11,000 | 15,700 |
| Recycled Water - Newhall Ranch | 0 | 1,500 | 2,500 | 3,500 | 5,400 |
| | | | | | |
| **Total Planned Supplies** | 0 | 3,100 | 8,800 | 14,500 | 21,100 |
| | | | | | |
| **Planned Banking Programs** | | | | | |
| Additional Planned Banking (2) | 0 | 0 | 0 | 0 | 0 |
| | | | | | |
| **Total Planned Banking Programs** | 0 | 0 | 0 | 0 | 0 |
| | | | | | |
| **Total Existing and Planned Supplies and Banking** | 117,427 | 120,527 | 126,227 | 131,927 | 138,527 |
| | | | | | |
| **Total Estimated Demand (w/o conservation) (4)** | 100,050 | 109,400 | 117,150 | 128,400 | 138,300 |
| | | | | | |
| **Conservation (5)** | (8,600) | (9,700) | (10,700) | (11,900) | (12,900) |
| | | | | | |
| **Total Adjusted Demand** | 91,450 | 99,700 | 106,450 | 116,500 | 125,400 |

Notes:

(1) SWP supplies are calculated by multiplying CLWA's Table A Amount of 95,200 af by 60%.

(2) Not needed during average/normal years.

(3) Recycled water supplies based on projections provided in the 2005 UWMP Chapter 4, Recycled Water.

(4) Demands are for uses within the existing CLWA service area. Demands for any annexations to the CLWA service area are not included.

(5) Assumes 10 percent reduction on urban portion of total demand resulting from conservation best management practices, as discussed in the 2005 UWMP, Chapter 7.

## 5.3 Single-Dry Year

The water supplies and demands for CLWA's service area over the 20-year planning period were analyzed in the event that a single-dry year occurs, similar to the drought that occurred in California in 1977. Table 5-3 summarizes the existing and planned supplies available to meet demands during a single-dry year. Demand during dry years was assumed to increase by 10 percent.

**Table 5-3**
**Projected Single-Dry Year Supplies and Demands**

| Water Supply Sources | Supply (af) | | | | |
|---|---|---|---|---|---|
| | 2010 | 2015 | 2020 | 2025 | 2030 |
| **Existing Supplies** | | | | | |
| Wholesale (Imported) | *25,331* | *26,283* | *25,855* | *26,807* | *27,759* |
| SWP Table A Supply (1) | 6,664 | 7,616 | 8,568 | 9,520 | 10,472 |
| Buena Vista-Rosedale | 11,000 | 11,000 | 11,000 | 11,000 | 11,000 |
| Nickel Water - Newhall Ranch | 1,607 | 1,607 | 1,607 | 1,607 | 1,607 |
| Flexible Storage Account (CLWA) | 4,680 | 4,680 | 4,680 | 4,680 | 4,680 |
| Flexible Storage Account (Ventura County) (2) | 1,380 | 1,380 | 0 | 0 | 0 |
| Local Supplies | | | | | |
| Groundwater | *47,500* | *47,500* | *47,500* | *47,500* | *47,500* |
| Alluvial Aquifer | 32,500 | 32,500 | 32,500 | 32,500 | 32,500 |
| Saugus Formation | 15,000 | 15,000 | 15,000 | 15,000 | 15,000 |
| Recycled Water | 1,700 | 1,700 | 1,700 | 1,700 | 1,700 |
| | | | | | |
| **Total Existing Supplies** | 74,531 | 75,483 | 75,055 | 76,007 | 76,959 |
| | | | | | |
| **Existing Banking Programs** | | | | | |
| Semitropic Water Bank (3) | 17,000 | 0 | 0 | 0 | 0 |
| Rosedale-Rio Bravo (5) | 20,000 | 20,000 | 20,000 | 20,000 | 20,000 |
| Semitropic Water Bank - Newhall Land (10) | 4,950 | 4,950 | 4,950 | 4,950 | 4,950 |
| | | | | | |
| **Total Existing Banking Programs** | 41,950 | 24,950 | 24,950 | 24,950 | 24,950 |
| | | | | | |
| **Planned Supplies** | | | | | |
| Local Supplies | | | | | |
| Groundwater | *10,000* | *10,000* | *20,000* | *20,000* | *20,000* |
| Restored wells (Saugus Formation) | 10,000 | 10,000 | 10,000 | 10,000 | 10,000 |
| New Wells (Saugus Formation) | 0 | 0 | 10,000 | 10,000 | 10,000 |
| Recycled Water - CLWA (4) | 0 | 1,600 | 6,300 | 11,000 | 15,700 |
| Recycled Water - Newhall Ranch | 0 | 1,500 | 2,500 | 3,500 | 5,400 |
| | | | | | |
| **Total Planned Supplies** | 10,000 | 13,100 | 28,800 | 34,500 | 41,100 |
| | | | | | |
| **Planned Banking Programs** | | | | | |
| Additional Planned Banking (6) | 0 | 20,000 | 20,000 | 20,000 | 20,000 |
| | | | | | |
| **Total Planned Banking Programs** | 0 | 20,000 | 20,000 | 20,000 | 20,000 |
| | | | | | |
| **Total Existing and Planned Supplies and Banking** | 126,481 | 133,533 | 148,805 | 155,457 | 163,009 |
| | | | | | |
| **Total Estimated Demand (w/o conservation) (7) (8)** | 110,100 | 120,300 | 128,900 | 141,200 | 152,100 |
| | | | | | |
| **Conservation (9)** | (9,500) | (10,700) | (11,700) | (13,100) | (14,200) |
| | | | | | |
| **Total Adjusted Demand** | 100,600 | 109,600 | 117,200 | 128,100 | 137,900 |

Notes:

(1) SWP supplies are calculated by multiplying CLWA's Table A Amount of 95,200 af by percentages of single dry year deliveries projected to be avaible on Tables 6-4 and 6-13 of DWR's "Draft State Water Project Delivery Reliability Report 2009". Year 2030 figure is calculated by multiplying by DWR's 2029 percentage of 11%.

(2) Initial term of the Ventura County entities' flexible storage account is ten years (from 2006 to 2015).

(3) The total amount of water currently in storage is 50,870 af, available through 2013. Withdrawals of up to this amount are potentially available in a dry year, but given possible competition for withdrawal capacity with other Semitropic banking partners in extremely dry years, it is assumed here that about one third of the total amount stored could be withdrawn.

(4) Recycled water supplies based on projections provided in the 2005 UWMP Chapter 4, Recycled Water.

(5) CLWA has banked 64,898 af as of 12/31/09 in the Rosedale-Rio Bravo Water Banking and Recovery Program.

(6) Assumes increase in total demand of 10 percent during dry years.

(7) Assumes additional planned banking supplies available by 2014.

(8) Demands are for uses within the existing CLWA service area. Demands for any annexations to the CLWA service area are not included.

(9) Assumes 10 percent reduction on urban portion of total normal year demand resulting from conservation best management practices ([urban portion of total normal year demand x 1.10] * 0.10), as discussed in the 2005 UWMP, Chapter 7.

(10) Delivery of stored water from the Newhall Land Semitropic Groundwater Bank requires futher agreements between CLWA and Newhall Land.

## 5.4 Multiple-Dry Year

The water supplies and demands for CLWA's service area over the 20-year planning period were analyzed in the event that a four-year multiple-dry year event occurs, similar to the drought that occurred during the years 1931 to 1934. Table 5-4 summarizes the existing and planned supplies available to meet demands during multiple-dry years. Demand during dry years was assumed to increase by 10 percent.

**Table 5-4**
**Projected Multiple-Dry Year Supplies and Demands[1]**

| Water Supply Sources | 2010 | 2015 | 2020 | 2025 | 2030 |
|---|---|---|---|---|---|
| **Existing Supplies** | | | | | |
| Wholesale (Imported) | *46,485* | *46,485* | *47,097* | *47,097* | *47,097* |
| SWP Table A Supply (2) | 32,368 | 32,368 | 33,320 | 33,320 | 33,320 |
| Buena Vista-Rosedale | 11,000 | 11,000 | 11,000 | 11,000 | 11,000 |
| Nickel Water - Newhall Ranch | 1,607 | 1,607 | 1,607 | 1,607 | 1,607 |
| Flexible Storage Account (CLWA) (3) | 1,170 | 1,170 | 1,170 | 1,170 | 1,170 |
| Flexible Storage Account (Ventura County) (3) | 340 | 340 | 0 | 0 | 0 |
| Local Supplies | | | | | |
| Groundwater | *47,500* | *47,500* | *47,500* | *47,500* | *47,500* |
| Alluvial Aquifer | 32,500 | 32,500 | 32,500 | 32,500 | 32,500 |
| Saugus Formation (4) | 15,000 | 15,000 | 15,000 | 15,000 | 15,000 |
| Recycled Water | 1,700 | 1,700 | 1,700 | 1,700 | 1,700 |
| | | | | | |
| **Total Existing Supplies** | 95,685 | 95,685 | 96,297 | 96,297 | 96,297 |
| | | | | | |
| **Existing Banking Programs** | | | | | |
| Semitropic Water Bank (3) | 12,700 | 0 | 0 | 0 | 0 |
| Rosedale-Rio Bravo (6) (7) | 5,000 | 15,000 | 15,000 | 15,000 | 15,000 |
| Semitropic Water Bank - Newhall Land (12) | 4,950 | 4,950 | 4,950 | 4,950 | 4,950 |
| | | | | | |
| **Total Existing Banking Programs** | 22,650 | 19,950 | 19,950 | 19,950 | 19,950 |
| | | | | | |
| **Planned Supplies** | | | | | |
| Local Supplies | | | | | |
| Groundwater | *6,500* | *6,500* | *6,500* | *6,500* | *6,500* |
| Restored wells (Saugus Formation) (4) | 6,500 | 6,500 | 5,000 | 5,000 | 5,000 |
| New Wells (Saugus Formation) (4) | 0 | 0 | 1,500 | 1,500 | 1,500 |
| Recycled Water (5) | 0 | 1,600 | 6,300 | 11,000 | 15,700 |
| Recycled Water - Newhall Ranch | 0 | 1,500 | 2,500 | 3,500 | 5,400 |
| | | | | | |
| **Total Planned Supplies** | 6,500 | 9,600 | 15,300 | 21,000 | 27,600 |
| | | | | | |
| **Planned Banking Programs** | | | | | |
| Additional Planned Banking (7) (8) | 0 | 5,000 | 15,000 | 15,000 | 15,000 |
| | | | | | |
| **Total Planned Banking Programs** | 0 | 5,000 | 15,000 | 15,000 | 15,000 |
| | | | | | |
| **Total Existing and Planned Supplies and Banking** | 124,835 | 130,235 | 146,547 | 152,247 | 158,847 |
| | | | | | |
| **Total Estimated Demand (w/o conservation) (9) (10)** | 110,100 | 120,300 | 128,900 | 141,200 | 152,100 |
| | | | | | |
| **Conservation (11)** | (9,500) | (10,700) | (11,700) | (13,100) | (14,200) |
| | | | | | |
| **Total Adjusted Demand** | 100,600 | 109,600 | 117,200 | 128,100 | 137,900 |

Notes:

(1) Supplies shown are annual averages over four consecutive dry years (unless otherwise noted).
(2) SWP supplies are calculated by multiplying CLWA's Table A Amount of 95,200 af by percentages of average deliveries projected to be available during the worst case four-year drought of 1931-1934 as provided in Tables 6-4 and 6-13 of DWR's "Draft State Water Project Delivery Reliability Report 2009." Year 2030 figure is calculated by multiplying by DWR's 2029 perectage of 35%.
(3) Based on total amount of storage available divided by 4 (4-year dry period). Initial term of the Ventura County entities' flexible storage account is ten years (from 2006 to 2015).
(4) Total Saugus pumping is the average annual amount that would be pumped under the groundwater operating plan, as summarized in Table 3-6 ([11,000+15,000+25,000+35,000]/4).
(5) Recycled water supplies based on projections provided in the 2005 UWMP Chapter 4, Recycled Water.
(6) CLWA has banked 64,898 af as of 12/31/09 in the Rosedale-Rio Bravo Water Banking and Recovery Program.
(7) Average dry year period supplies could be up to 20,000 af for each program depending on storage amounts at the beginning of the dry period.
(8) Assumes additional planned banking supplies available by 2014.
(9) Assumes increase in total demand of 10 percent during dry years.
(10) Demands are for uses within the existing CLWA service area. Demands for any annexations to the CLWA service area are not included.
(11) Assumes 10 percent reduction on urban portion of total normal year demand resulting from conservation best management practices ([urban portion of total normal year demand x 1.10] * 0.10), as discussed in the 2005 UWMP, Chapter 7.
(12) Delivery of stored water from the Newhall Land Semitropic Groundwater Bank requires futher agreements between CLWA and Newhall Land.

## 6.0 CONCLUSION

Based on the analysis set forth in this WSA and as supported by the documents relied on for its preparation, NCWD's total projected water supplies available during the ensuing twenty years will meet the projected water demands associated with the Proposed Project, Disney/ABC Studios at The Ranch and existing and other planned uses within NCWD's service area. This determination is consistent with current information and NCWD's 2005 UWMP.

*This Water Supply Assessment shall expire and be of no further force and effect after (3) three years from the date of submittal.*

# Appendix K.2

## Water Report

DAVID EVANS
AND ASSOCIATES INC.

April 25, 2012

**VIA U.S. MAIL**

Ms. Ashley Rogers
Principal Planner
Matrix Environmental
6701 Center Drive West, Suite 900
Los Angeles, California 90045

Re: Disney | ABC Studios at The Ranch
Domestic and Fire Water Service Technical Report
Sanitary Sewer Service Technical Report

Dear Ms. Rogers,

After the completion of the Domestic and Fire Water Service Technical Report, the Sanitary Sewer Service Technical Report, and the Sewer Area Study and subsequent review by the County of Los Angeles Department of Public Works, minor modifications to the Project were made that do not affect these technical reports. In particular, the Development Area was increased from 56 acres to approximately 58 acres and an associated change to the Development Area boundary was made. In addition, the elevation of the southern portion of the Development Area (i.e., south of Placerita Creek) was increased by approximately five feet to improve circulation through the Development Area. This vertical change was made uniformly across the southern portion of the Development Area. Other minor changes to the design of certain drainage improvements and vehicular access between the Development Area and the eastern portion of the Ranch were also made that are not relevant to these studies. Overall, these changes do not affect the prior water and sewer analyses or proposed infrastructure as the increase in elevation of the southern portion of the Development Area was uniform and will not affect water or sewer flows. Further, all suggested mitigation measures and engineering recommendations would continue to be implemented, in addition to compliance with all applicable regulatory requirements.

While the Domestic and Fire Water Service Technical Report, the Sanitary Sewer Service Technical Report, and the Sewer Area Study may reflect slightly different Project conditions than addressed in the Draft EIR, the modifications do not affect the conclusions in our reports, and, with the Project design features and mitigation measures set forth in the Draft EIR, the Project's impacts on the environment would remain less than significant.

Very truly yours,

Robert Bathke
David Evans & Associates

cc: Ms. Christina Tran
County of Los Angeles Department of Regional Planning

4200 Concours Suite 200 Ontario California 91764 Telephone: 909.481.5750 Facsimile: 909.481.5757

# DISNEY | ABC STUDIOS AT THE RANCH
# GOLDEN OAK RANCH
# NEWHALL, CA

# DOMESTIC AND FIRE WATER SERVICE TECHNICAL REPORT

DAVID EVANS AND ASSOCIATES INC.

4200 Concours
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Ontario, CA 91764
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Prepared By: Tom Molina
Reviewed By: Jeff Rupp

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# 1.0 INTRODUCTION

Disney | ABC Studios at The Ranch (the "Proposed Project") would be located on the westernmost portion of Golden Oak Ranch ("Ranch") in the unincorporated Santa Clarita Valley area of Los Angeles County. The Proposed Project site is generally bounded by State Route (SR)-14 to the west, Placerita Canyon Road to the south, and mostly undeveloped land to the north and east. The site is approximately 56 acres in size, over 23 acres of which are two large, mostly barren fill pads deposited by Caltrans during construction of SR-14 in the early 1970s. The site is currently used for agriculture, film sets and parking. Placerita Creek generally bisects and flows east to west across the site.

The Proposed Project would provide for the development of studio uses and associated motion picture and television production facilities within the 56-acre site. The northern portion of the Proposed Project site would contain an electrical substation, four soundstages, production offices and two mills (or, with the option project, studio offices instead of four soundstages, production offices and two mills). The southern pad would contain eight soundstages, production offices, four mills, six writer/producer bungalows, an administration building, a commissary, a warehouse, and a central utility plant, as well as a surface parking lot to the east of the soundstages.

The grading for the Proposed Project would lower the height of the northern fill pad and create a smoother slope towards the east for the southern fill pad. The northern and southern portions of the Proposed Project site would be connected by two access roadways, a road on the west side along the embankment for the SR-14 and a bridge on the east side that would span Placerita Creek. Proposed water and sewer utilities would be constructed under the west access road to minimize loads on the proposed bridge. The main entrance for the Proposed Project would be directly across the northbound SR-14 exit to Placerita Canyon Road.

# 2.0 EXISTING WATER FLOW LEVELS AND SYSTEM CAPACITY

The Proposed Project site is mostly undeveloped and used for agriculture, film sets, and parking. The existing demand for domestic water within the Proposed Project site is limited. There are no public water service distribution infrastructure facilities on or near the Proposed Project site. The Project Site includes an uninhabited structure that would be removed and the Ranch foreman's mobile home, which would be relocated to another portion of the Ranch east of the Proposed Project site. The relocated mobile home would use the existing private water well system that is used currently by other residential buildings and the Ranch office in the eastern area of the Ranch.

With the relocation of the mobile home, the private well water system would have no more than four connections for human consumption (three for the residential buildings and one for the Ranch office). This system currently serves and would continue to serve approximately nine Ranch residents (including the Ranch Manager and the Ranch Foreman) and four additional, permanent Ranch staff. Other Ranch visitors, including all residents' guests, film location scouts, or managers, and Ranch meeting attendees, number less than 1 person per day on average. Accordingly, the total daily average of possible consumers of the Ranch's private well water system is less than 14 people.

Film crews at the Ranch are required to be completely self-contained and are not served in any way by the Ranch's private well water system; each crew provides its own power, water, food and restroom facilities. There was a total of 500 filming days over the two-year period including 2008 and 2009, with the average stay of a film crew at the Ranch being 2.84 production days and crews, during roughly the same period, ranging in size from 3 to 185 people. None of these film crew used the Ranch's private well water system in any way that involves human consumption.

Accordingly, the Ranch's private well water system does not qualify as a "state small water system", which is defined as "a system for the provision of piped water to the public for human consumption that serves at least five, but not more than 14, service connections and does not regularly service drinking water to more than an average of 25 individuals daily for more than 60 days out of the year." (Cal. Health & Safety Code, § 116275(n).)

Castaic Lake Water Agency (CLWA) is a water wholesaler that provides approximately half the water for Santa Clarita households and businesses and is a public agency that serves an area of 195 square miles in Los Angeles and Ventura counties. CLWA supplements local groundwater supplies with State Water Project (SWP) water from northern California. This water is treated and delivered to the local water retailers. The four retail purveyors served by CLWA are the Valencia Water Company (VWC), Los Angeles County Waterworks District 36 (LA36), Newhall County Water District (NCWD), and the Santa Clarita Water Division of CLWA (SCWD).

The Proposed Project site is within the service area of NCWD, which provides water supplied from local groundwater wells and CLWA-imported water. At present, NCWD does not have an existing distribution system that is adjacent to or near the Proposed Project site. However, NCWD has provided preliminary information on proposed improvements to its system required to serve the Proposed Project site via two alternatives:

Alternative A

A reservoir tank and waterline distribution system exists southwest of the Proposed Project site at Dockweiler Drive that is within the 1704 Pressure Zone, which, with improvements, would meet the Proposed Project's requirements. This system currently lacks sufficient reserve capacity and pressure to meet the projected fire flow demands of the Proposed Project. As a result, Alternative A would require the construction of a new booster pump station, a water tank, a water main and associated piping to serve the Proposed Project site.

Alternative B

An existing 12-inch water line is located along Placerita Canyon Road west of Sierra Highway that is supplied by two existing water tanks on a hilltop located north of Deputy Jake Drive and southwest of the Proposed Project site. These tanks and water distribution system are in the 1487 Pressure Zone, which, with improvements would meet the Proposed Project's requirements. This system currently lacks sufficient reserve capacity and pressure to meet the projected fire flow demands of the Proposed Project. As a result, Alternative B would require the construction of a new water tank, a booster pump station, a water main and associated piping to serve the Proposed Project site.

## 3.0 THE PROPOSED PROJECT'S WATER DEMAND

The Proposed Project would provide up to twelve soundstages, production offices, six mills, writers/producers bungalows, a commissary, an administration building, a warehouse, and a central utility plant. The proposed structures are listed in Table 1 below:

**TABLE 1**
**PROPOSED PROJECT BUILDINGS**
**PREFERRED OPTION**

| BUILDING TYPE | QTY | UNIT (SQ FT) | TOTAL (SQ FT) |
|---|---|---|---|
| Soundstages | 12 | 19,800 | 237,600 |
| Production Offices | 6 | 28,125 | 168,750 |
| Mills | 6 | 11,500 | 69,000 |
| Warehouse | 1 | 23,000 | 23,000 |
| Writer/Producer Bungalows | 6 | 1,725 | 10,350 |
| Commissary | 1 | 17,250 | 17,250 |
| Administration | 1 | 30,000 | 30,000 |
| | | Total Gross Square Footage (Sq. Ft.) | 555,950 |

In addition, the Proposed Project would include an option to develop studio offices in lieu of four soundstages and two mills within the northern portion of the Proposed Project site with the following proposed structures listed in Table 2 below:

**TABLE 2**
**PROPOSED PROJECT BUILDINGS – OPTION PROJECT**

| BUILDING TYPE | QTY | UNIT (SQ FT) | TOTAL (SQ FT) |
|---|---|---|---|
| Soundstages | 8 | 19,800 | 158,400 |
| Production Offices | 4 | 28,125 | 112,500 |
| Mills | 4 | 11,500 | 46,000 |
| Warehouse | 1 | 23,000 | 23,000 |
| Writer/Producer Bungalows | 6 | 1,725 | 10,350 |
| Commissary | 1 | 17,250 | 17,250 |
| Administration | 1 | 30,000 | 30,000 |
| Studio Offices | 1 | 112,500 | 112,500 |
| | Total Gross Square Footage (Sq. Ft.) | | 510,000 |

The Proposed Project also would contain a 20,000-square foot central utility plant and a 46,300-square foot electrical substation.

According to accepted standards, approximately 80 percent of domestic water use is discharged as wastewater. Therefore, in order to calculate the water demand, the sewer flows are multiplied by 1.20. The total domestic water demand for the Proposed Project is generally determined as 120% of wastewater flows, based on the projected wastewater generation from the Proposed Project. The Los Angeles County Sanitation District has a Connection Fee Loadings, Capacity Units, and Unit Rates Table that identifies structure category, type, size, and use. Based upon the Sanitation District's rates, the estimated wastewater and sewer flows for the Proposed Project would be approximately 66,800 gallons per day (GPD) while wastewater and sewer flows under the Option Proposed Project would be approximately 75,495 GPD.

As set forth in the calculation below, the water demand would be equivalent to approximately 33,066,810 gallons per year, or approximately 102 acre-feet per year.

75,495 GPD x 1.20 = 90,594 gallons per day (GPD)
90,594 GPD x 365 days = 33,066,810 gallons per year (GPY)
33,066,810 GPY / 325,851 gallons per acre-foot (AF) = 102 AFY

## 4.0 THE PROPOSED PROJECT'S SYSTEM IMPROVEMENTS

### A. On-site Water System Improvements

The on-site water distribution system would be a looped system at each of the building pad areas on the north and south side of Placerita Creek designed to meet fire flow requirements established by the County of Los Angeles Fire Department. The system would be designed to maintain a minimum pressure of 20 pounds per square inch (PSI) at ground level at all points in the distribution system under all conditions of flow. The soundstages, production offices, mills, writer/producer bungalows, administration building, commissary, and studio office building would have fire sprinkler systems throughout the buildings. The on-site water distribution system layout as well as the locations of proposed fire hydrants are shown on the exhibit in Appendix A.

## B. Offsite Water System Improvements

As previously indicated, the Proposed Project site would be serviced by NCWD. This water purveyor could serve the Proposed Project by two alternative means, as described below. See Appendix B for the exhibit regarding each alternative.

Alternative A

Alternative A would construct a water main from a point of connection to the existing water main at the intersection of Oakhurst Drive and Dockweiler Drive. The proposed water main would then run easterly along Dockweiler Drive to Sierra Highway, then northerly along Sierra Highway to Placerita Canyon Road, and then easterly to the Proposed Project site for a total length of approximately 6,300 feet. To supply the proposed water tank on the Ranch south of the Development Area, a proposed booster pump station would be constructed on NCWD property next to the two existing water tanks located west of the point of connection at Dockweiler Drive and north of Deputy Jake Drive.

Alternative B

Alternative B would have a point of connection to the existing water main that currently terminates near the City of Los Angeles Department of Water and Power (LADWP) aqueduct along Placerita Canyon Road west of Sierra Highway. This water line would be extended easterly along Placerita Canyon Road to the Proposed Project site for a total length of approximately 3,100 feet. The existing water tanks that supply this water distribution system are at a lower pressure zone elevation and NCWD has indicated the current system would not meet the required fire flow and residual pressure requirements of the Proposed Project. As a result, a booster pump station would be constructed along Placerita Canyon Road past all residential service connections in the lower pressure zone to provide the required pressure to the distribution system. An easement for placement of the booster pump on private property along Placerita Canyon Road would need to be obtained and be dedicated to NCWD.

Proposed Water Tank

For both Alternatives A and B, a water tank would be constructed on the Ranch on a hilltop south of Placerita Canyon Road. The elevation of the proposed tank would be such that the tank would be at the same water pressure zone as that of the existing tank north of Dockweiler Drive and NCWD would require this proposed water tank to be interconnected with its existing tanks. A water main along an existing unpaved maintenance road from the proposed water tank to Placerita Canyon Road and the Proposed Project's onsite water system would be constructed for a total length of 2,300 feet.

## 5.0 ANALYSIS OF AVAILABLE WATER SUPPLY TO MEET THE PROPOSED PROJECT'S DEMAND

The Los Angeles County Fire Department (LACFD) requires sufficient capacity for fire flows of 5,000 GPM at 20 PSI for a five-hour duration for new commercial land development. LACFD Regulation #8 allows for fire flow reductions to be granted for building type construction and fully sprinklered buildings. However, for structures that total 70,000 square feet or greater, such as the studio office building in the Option Proposed Project fire flows shall not be reduced below 3,500 GPM at 20 PSI for three hours. This demand quantity is used to perform the hydraulic analysis to size the Proposed Project's water delivery system that would consist of a 12- to 18-inch water main and, depending on which Alternative is selected, would generally follow Placerita Canyon Road and/or Sierra Highway.

Alternatives A and B would both require the construction of a water tank. NCWD would require construction of a 2,000,000 gallon tank to meets its projected service area needs based on other known related projects, even though the Proposed Project would require only a 730,000 gallon tank to meet the fire flow and domestic demands, calculated as follows:

Fire Flow Demand:

| | | |
|---|---|---|
| 3,500 GPM x 60 Min. x 3 Hour | = | 630, 000 gallons |

Domestic Average Daily Demand:

| | | |
|---|---|---|
| From Section 4.0 above | = | 90,594 gallons |
| | | 720,594 gallons |

Both alternatives would have a minimum of four fire hydrants along Placerita Canyon Road fronting the Proposed Project site. The Proposed Project's onsite water distribution system would be designed to provide sufficient capacity for domestic and fire flow requirements.

A summary of the proposed water delivery system improvements for both of the alternatives follows:

ALTERNATIVE A

| | |
|---|---|
| 12- to 18-inch Water Main | 6,300 Linear Feet |
| Booster Pump Station | 1 |
| Water Tank | one 2,000,000 gallon |
| 12- to 18-inch Water Main (Tank to Site) | 2,300 Linear Feet |

ALTERNATIVE B

| | |
|---|---|
| 12- to 18-inch Water Main | 3,100 Linear Feet |
| Booster Pump Station | 1 |
| Water Tank (1) | one 2,000,000 gallon |
| 12- to 18-inch Water Main (Tank to site) | 2,300 Linear Feet |

# 6.0 ANALYSIS OF CUMULATIVE IMPACTS

The California Urban Water Management Planning Act (Act) requires most water utilities to develop and update an Urban Water Management Plan (UWMP) every five years to identify short-term and long-term water demand management measures to meet growing water demands during normal, dry, and multi-dry years. The Act requires urban water suppliers to assess water supply reliability that compares total projected water use with the expected water supply over the next twenty years in five-year increments.

The 2005 UWMP (Plan) for the Castaic Lake Water Agency service area, which includes NCWD, concluded that a reliable and high quality water supply would be available to Santa Clarita Valley water customers, based on conservative water supply and demand assumptions and implementation of conservation measures. The projected 2030 water demand is estimated at 138,300 acre-feet. This estimate is in line with population growth projections prepared for the update of the City of Santa Clarita General Plan and the County's Santa Clarita Valley Area Plan. The Castaic Lake Water Agency determined there are sufficient water supplies available for pending and future development within the CLWA service area for the foreseeable future through 2030, as set forth in the 2005 UWMP.

The geographic boundary for the cumulative potable water analysis is the NCWD water service area, generally located to the west of the Proposed Project site and from which water service would be provided to the Development Area. Only one planned project falls within the cumulative impact boundary. The Kellstrom Project would include 102,700 square feet (SF) of office and commercial uses proposed at the southwest corner of Sierra Highway and Placerita Canyon Road. The Kellstrom Project would connect to the proposed NCWD system improvements for the Proposed Project described in Section 4.0.

Following the same accepted standards to calculate water demand as used for the Proposed Project, where approximately 80 percent of domestic water use is discharged as wastewater, and therefore, in order to calculate the water demand the sewer flows are multiplied by 1.20. Based upon the Sanitation District's rates, the estimated wastewater and sewer flows for the Kellstrom Project would be calculated as follows:

| | |
|---|---|
| Office | 95,000 SF |
| Restaurant (Drive-Up) | 7,700 SF |

| | | |
|---|---|---|
| 95, 000 x 200 Gallons/KSF | = | 19,000 GPD |
| 7,700 x 1000 Gallons/KSF | = | 7,700 GPD |
| | | 26,700 GPD |

Therefore water demand would be,

26,700 x 1.20 = 32,040 GPD.

The maximum fire protection water demand would be the same as that of the Proposed Project that requires sufficient capacity for fire flows of 5,000 GPM at 20 PSI for a five-hour duration.

Fire Flow Demand:

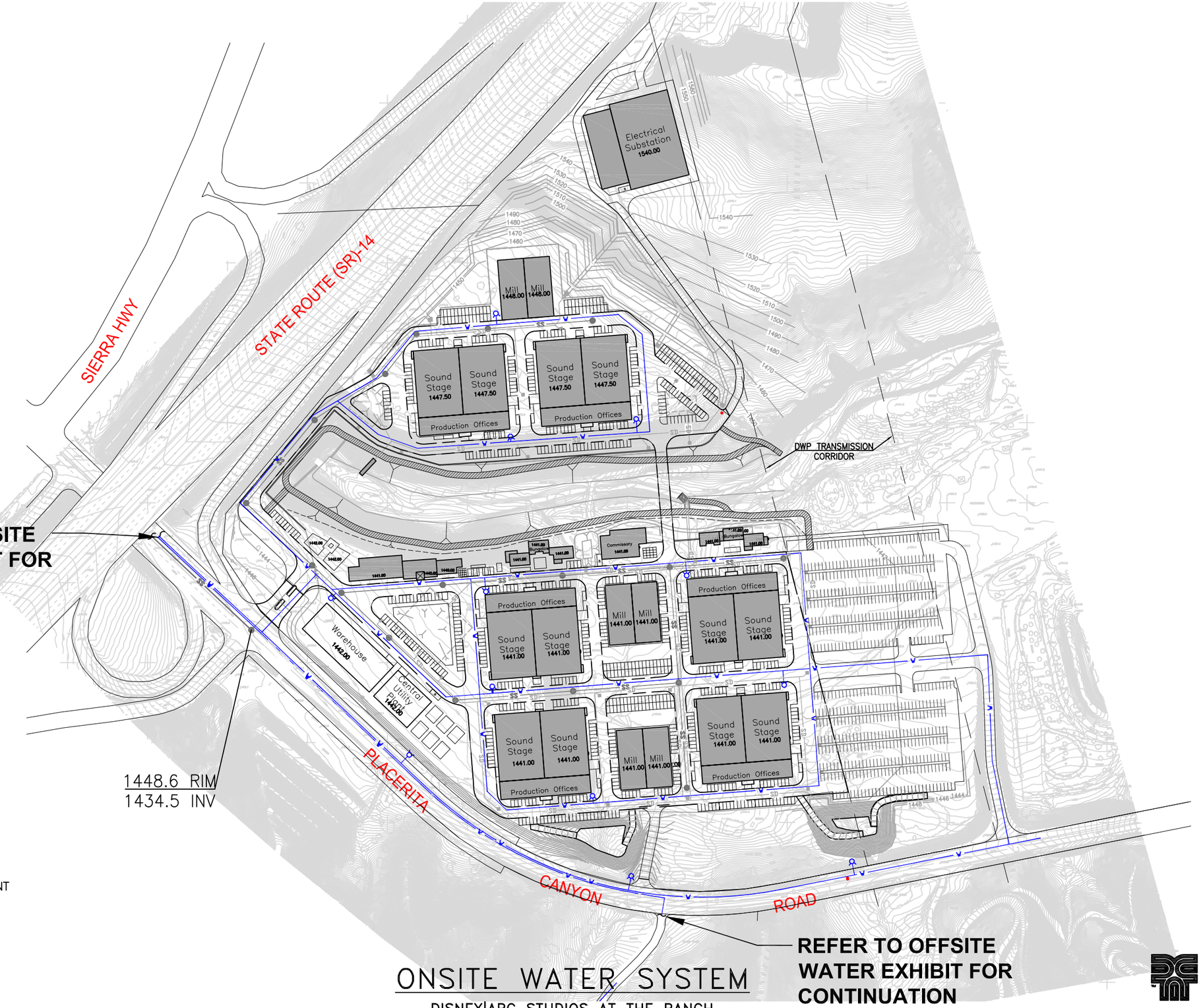
5000 GPM x 60 Min. x 5 Hour = 1,500,000 gallons

The total water demand for the Kellstrom Project would be 1,532,040 gallons.

This demand, in combination with the water demand for the Proposed Project, would be well within the capacity of the proposed water supply mains, storage capacity, and the extension of the existing NCWD's water supply system to be developed as part of the Proposed Project. Therefore, the Proposed Project in combination with other foreseeable development in the vicinity would not impair NCWD's ability to provide water service within its service area.

# APPENDIX A

**On-Site Water Service Plan Exhibit**




*LEGEND*

- EXISTING DWP EASEMENT
- W PROPOSED WATER
- FIRE HYDRANT
- PROPOSED BUILDING

SCALE: NTS

# ONSITE WATER SYSTEM

DISNEY|ABC STUDIOS AT THE RANCH

DAVID EVANS AND ASSOCIATES INC.
4200 Concours Suite 200
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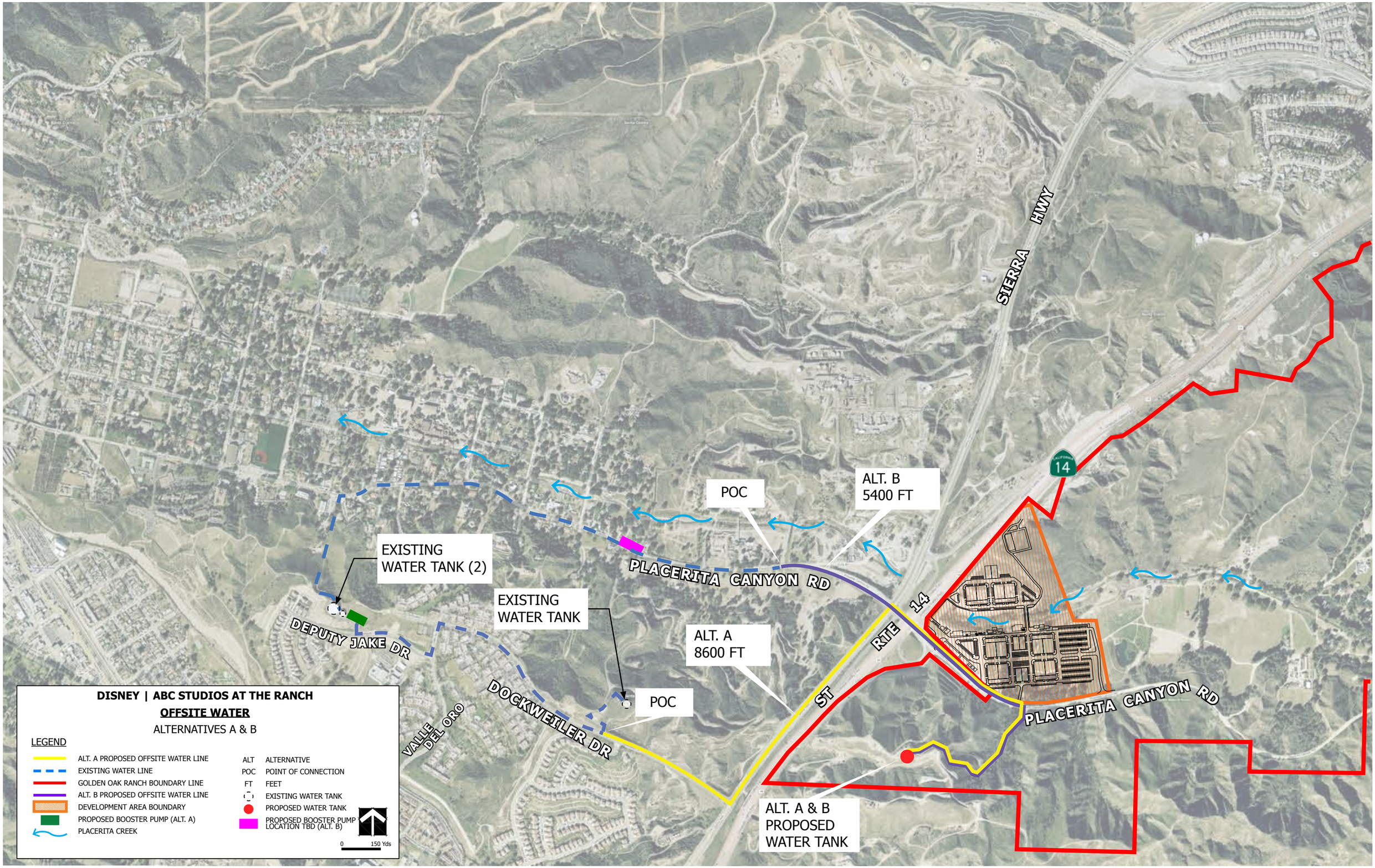
# APPENDIX B

**Off-Site Water Service Alternative Exhibit**


DISNEY | ABC STUDIOS AT THE RANCH
OFFSITE WATER
ALTERNATIVES A & B
LEGEND
ALT. A PROPOSED OFFSITE WATER LINE
EXISTING WATER LINE
GOLDEN OAK RANCH BOUNDARY LINE
ALT. B PROPOSED OFFSITE WATER LINE
DEVELOPMENT AREA BOUNDARY
PROPOSED BOOSTER PUMP (ALT. A)
PLACERITA CREEK
ALT ALTERNATIVE
POC POINT OF CONNECTION
FT FEET
EXISTING WATER TANK
PROPOSED WATER TANK
PROPOSED BOOSTER PUMP LOCATION TBD (ALT. B)
0 150 Yds
SIERRA HWY
14
ALT. B
5400 FT
POC
EXISTING
WATER TANK (2)
PLACERITA CANYON RD
EXISTING
WATER TANK
DEPUTY JAKE DR
ALT. A
8600 FT
RTE 14
ST
DOCKWEILER DR
POC
VALLE DEL ORO
PLACERITA CANYON RD
ALT. A & B
PROPOSED
WATER TANK

# Appendix K.3

## Sewer Report

DAVID EVANS
AND ASSOCIATES INC.

April 25, 2012

**VIA U.S. MAIL**

Ms. Ashley Rogers
Principal Planner
Matrix Environmental
6701 Center Drive West, Suite 900
Los Angeles, California 90045

Re: Disney | ABC Studios at The Ranch
Domestic and Fire Water Service Technical Report
Sanitary Sewer Service Technical Report

Dear Ms. Rogers,

After the completion of the Domestic and Fire Water Service Technical Report, the Sanitary Sewer Service Technical Report, and the Sewer Area Study and subsequent review by the County of Los Angeles Department of Public Works, minor modifications to the Project were made that do not affect these technical reports. In particular, the Development Area was increased from 56 acres to approximately 58 acres and an associated change to the Development Area boundary was made. In addition, the elevation of the southern portion of the Development Area (i.e., south of Placerita Creek) was increased by approximately five feet to improve circulation through the Development Area. This vertical change was made uniformly across the southern portion of the Development Area. Other minor changes to the design of certain drainage improvements and vehicular access between the Development Area and the eastern portion of the Ranch were also made that are not relevant to these studies. Overall, these changes do not affect the prior water and sewer analyses or proposed infrastructure as the increase in elevation of the southern portion of the Development Area was uniform and will not affect water or sewer flows. Further, all suggested mitigation measures and engineering recommendations would continue to be implemented, in addition to compliance with all applicable regulatory requirements.

While the Domestic and Fire Water Service Technical Report, the Sanitary Sewer Service Technical Report, and the Sewer Area Study may reflect slightly different Project conditions than addressed in the Draft EIR, the modifications do not affect the conclusions in our reports, and, with the Project design features and mitigation measures set forth in the Draft EIR, the Project's impacts on the environment would remain less than significant.

Very truly yours,

Robert Bathke
David Evans & Associates

cc: Ms. Christina Tran
County of Los Angeles Department of Regional Planning

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# DISNEY | ABC STUDIOS AT THE RANCH
# GOLDEN OAK RANCH
# NEWHALL, CA

# SANITARY SEWER SERVICE
# TECHNICAL REPORT

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# 1.0 INTRODUCTION

Disney | ABC Studios at The Ranch (the "Proposed Project") would be located on the westernmost portion of Golden Oak Ranch ("Ranch") in the unincorporated Santa Clarita Valley area of Los Angeles County. The Development Area is generally bounded by State Route (SR)-14 to the west, Placerita Canyon Road to the south, and mostly undeveloped land to the north and east. The Development Area is approximately 56 acres, over 23 acres of which are two large, mostly barren fill pads deposited by Caltrans during construction of SR-14 in the early 1970s. The Development Area is currently used for agriculture, film sets, and parking. Placerita Creek generally bisects and flows from east to west across the Development Area.

The Proposed Project would provide for the development of studio uses and associated motion picture and television production facilities within the 56-acre site. The northern portion of the Development Area would contain an electrical substation, four soundstages and two mills (or, with the option project, studio offices instead of the four soundstages and two mills). The southern pad would contain eight soundstages, four mills, six writer/producer bungalows, an administration building, a commissary, a warehouse, and a central utility plant, as well as a surface parking lot to the east of the soundstages.

The grading for the Proposed Project would lower the height of the northern fill pad and create a smoother slope toward the east and in the direction of the southern fill pad. The northern and southern portions of the Development Area would be connected by two access roadways, a road on the west side along the embankment for the SR-14, and a bridge on the east side that would span Placerita Creek. Proposed water and sewer utilities would be constructed under the west access road to minimize loads on the proposed bridge to the east. The main entrance for the Proposed Project would be directly across from the northbound SR-14 exit to Placerita Canyon Road.

# 2.0 EXISTING SANITARY SEWER INFRASTRUCTURE

The Development Area is in the unincorporated area of Los Angeles County and within the Santa Clarita Valley. There is no sanitary sewer infrastructure on or near the Development Area. As part of the Proposed Project, the Santa Clarita Valley Sanitation District (SCVSD), which is part of the County Sanitation Districts of Los Angeles County (CSDLAC), would need to annex the Development Area into the SCVSD before sanitary services could be provided, as the Development Area is currently outside the service boundaries of the CSDLAC.

The CSDLAC wastewater collection system is composed of service connections that tie into the local collection network. This local network,

composed of secondary and primary collectors, flows into the CSDLAC's trunk wastewater mains and the water reclamation plants. The CSDLAC maintains the wastewater trunk mains and the two water reclamation plants, and Los Angeles County Department of Public Works (Sewer Maintenance) maintains the local collection network for the City of Santa Clarita.

Most wastewater generated within the Santa Clarita Valley is treated at two existing water reclamation plants (WRPs), which are operated by CSDLAC. These two treatment facilities, the Saugus WRP, which is located at Springbrook Avenue in Saugus, and the Valencia WRP, which is located at The Old Road in Valencia, have been interconnected to form a regional treatment system known as the Santa Clarita Valley Joint Sewerage System (SCVJSS) operated by the Santa Clarita Valley Sanitation District (SCVSD). The two facilities provide primary, secondary, and tertiary treatment to wastewater. The SCVJSS has a combined permitted and design capacity of 28.1 million gallons per day (MGD) and currently treats an average daily flow of 20.5 MGD. As of 2009, approximately 7.6 MGD of treatment capacity is available for future development.[1]

The Development Area is mostly undeveloped and used for agriculture, film sets and parking. The Development Area includes an uninhabited structure that would be removed, and the Ranch foreman's mobile home, which would be relocated to another portion of the Ranch east of the Development Area. The limited wastewater and sewage generated by the mobile home is accommodated by an existing private septic system that would be removed and a new septic system to be installed when relocated as part of the Proposed Project. The other residential buildings and Ranch office in the eastern portion of the Ranch use private septic sewer systems. The Proposed Project would not change those uses.

The surrounding areas to the east and west of the Development Area along Placerita Canyon Road are largely undeveloped. Any developed properties are on private septic sewer systems.

There are two possible points of connection for the Development Area to join the existing SCVSD sanitary sewer collection system. The alternative alignments and conveyance methods are summarized as follows:

**Option 1 – Oak Orchard Alignment**

The proposed point of connection is at the intersection of Placeritos Boulevard and Meadview Avenue at an approximate distance of 9,800 feet west of the Development Area. The existing sanitary sewer main at this location is an 18-inch vitrified clay pipe (VCP) flowing westerly and is at a grade elevation

[1]Letter from LACSD dated Feb. 2, 2010. See Appendix D.

approximately 164 feet lower than the Development Area, which would allow for a gravity flow system improvement design.

**Option 2 – Force Main System to Golden Valley Road**

This alternative point of connection is near the intersection of Sierra Highway and Golden Valley Road at an approximate distance of 9,750 feet northwest of the Development Area. The existing sanitary sewer main at this location is an 8-inch vitrified clay pipe (VCP) flowing northwesterly and is at a grade elevation approximately 300 feet higher than the Development Area. The proposed improvements for this option include a sewer lift station, approximately 7,750 linear feet of dual force main sewer, and 6,400 linear feet of gravity flow sewer system.

## 3.0 THE PROPOSED PROJECT'S SEWAGE GENERATION

The Proposed Project would provide up to twelve soundstages, production offices, six mills, writers/producers bungalows, a commissary, an administration building, a warehouse, and a central utility plant. The proposed structures are listed on Table 1 below:

**TABLE 1**
**PROPOSED PROJECT BUILDINGS**

| BUILDING TYPE | QTY | UNIT (SQ FT) | TOTAL (SQ FT) |
|---|---|---|---|
| Soundstages | 12 | 19,800 | 237,600 |
| Production Offices | 6 | 28,125 | 168,750 |
| Mills | 6 | 11,500 | 69,000 |
| Warehouse | 1 | 23,000 | 23,000 |
| Writer/Producer Bungalows | 6 | 1,725 | 10,350 |
| Commissary | 1 | 17,250 | 17,250 |
| Administration | 1 | 30,000 | 30,000 |
| | | Total Gross Square Footage (Sq. Ft.) | 555,950 |

In addition, the Proposed Project would include an option to develop studio offices in lieu of four soundstages and two mills within the northern portion of the Development Area with the following proposed structures listed in Table 2 below:

**TABLE 2**
**PROPOSED PROJECT BUILDINGS – OPTION PROJECT**

| BUILDING TYPE | QTY | UNIT (SQ FT) | TOTAL (SQ FT) |
|---|---|---|---|
| Soundstages | 8 | 19,800 | 158,400 |
| Production Offices | 4 | 28,125 | 112,500 |
| Mills | 4 | 11,500 | 46,000 |
| Warehouse | 1 | 23,000 | 23,000 |
| Writer/Producer Bungalows | 6 | 1,725 | 10,350 |
| Commissary | 1 | 17,250 | 17,250 |
| Administration | 1 | 30,000 | 30,000 |
| Studio Offices | 1 | 112,500 | 112,500 |
| | Total Gross Square Footage (Sq. Ft.) | | 510,000 |

The Proposed Project also would contain a 20,000 square foot-central utility plant and a 46,300 square foot-electrical substation.

DEA calculated the projected average wastewater flows in gallons per day (GPD) that would be generated by the Proposed Project and the Proposed Project Option using wastewater loading flows from the Los Angeles County Sanitation Districts, which has a Connection Fee Loadings, Capacity Units, and Unit Rates Table that identifies structure category, type, size, and use. The table is attached as Appendix A.

**TABLE 3**
**PROPOSED PROJECT PROJECTED WASTEWATER FLOWS**

| BUILDING TYPE (SF/UNIT) | NO. UNITS | FLOW/UNIT (GPD)[2] | SUBTOTAL (GPD) |
|---|---|---|---|
| Soundstages (19,800) | 12 | 25/KSF | 5,940 |
| Production Offices (28,125) | 6 | 200/KSF | 33,750 |
| Mills (11,500) | 6 | 25/KSF | 1,725 |
| Warehouse (23,000) | 1 | 25/KSF | 575 |
| Writer/Producer Bungalows (1,725) | 6 | 260/DU | 1,560 |
| Commissary (17,250) | 1 | 1000/KSF | 17,250 |
| Administration Building (30,000) | 1 | 200/KSF | 6,000 |
| TOTAL | 33 | | 66,800 |

[2]CSDLAC Loadings for Each Class of Land Use See Appendix A.

**TABLE 4**
**PROPOSED PROJECT OPTION PROJECTED WASTEWATER FLOWS**

| BUILDING TYPE (SF/UNIT) | NO. UNITS | FLOW/UNIT (GPD)[2] | SUBTOTAL (GPD) |
|---|---|---|---|
| Soundstages (19,800) | 8 | 25/KSF | 3,960 |
| Production Offices (28,125) | 4 | 200/KSF | 22,500 |
| Mills (11,500) | 4 | 25/KSF | 1,150 |
| Warehouse (23,000) | 1 | 25/KSF | 575 |
| Writers/Producers Bungalow (1,725) | 6 | 260/DU | 1,560 |
| Commissary* (17,250) | 1 | 1000/KSF | 17,250 |
| Administration Building (30,000) | 1 | 200/KSF | 6,000 |
| Studio Offices (112,500) | 1 | 200/KSF | 22,500 |
| TOTAL | 26 | | 75,495 |

As indicated from the calculation tables above, the Proposed Project Option would have a higher average daily sewer flow of approximately 75,495 GPD, which is 8,695 GPD more than the Proposed Project wastewater flows.

The Proposed Project uses would not generate wastewater that would require additional treatment beyond that provided to domestic wastewater and sewage lines from bathrooms, restrooms, and kitchens. Kitchen drains would be provided with oil separators, in accordance with CSDLAC requirements, to treat wastewater prior to discharge into the onsite sewer system.

Sanitary sewer pipelines are generally designed to accommodate the expected peak flow generated from the adjoining land uses. Average daily flows are converted to peak flows through a formula that yields a peak flow two to three times the average daily flow, depending upon the volume of the average daily flow. With smaller average daily flows, there is a higher peak flow factor. For the purposes of this study, a peaking factor of three was used to calculate peak flow from the Proposed Project.

Proposed Project:

Average Daily Flow:

66,800 Gal./Day * 1 Day/24 Hours * 1 Hour/60 Minutes = 46.39 GPM

Peak Flow (Design Flow):

46.39 GPM * 3.0 = 139.17 GPM = 0.31 Cubic Feet/Second (CFS)

Proposed Project Option:

Average Daily Flow:

75,495 Gal./Day * 1 Day/24 Hours * 1 Hour/60 Minutes = 52.43 GPM

Peak Flow (Design Flow):

52.43 GPM * 3.0 = 157.29 GPM = 0.350 Cubic Feet/Second (CFS)

The higher peak flow amount from the Proposed Project Option will be used to design the sewer lines serving the Proposed Project.

## 4.0 SYSTEM IMPROVEMENTS REQUIRED FOR THE PROPOSED PROJECT

A. On-Site Sanitary Sewer System

The Proposed Project would need an on-site wastewater collection system to convey wastewater flow from the Development Area to existing sewer lines and treatment plants located off-site. On-site gravity sewers would be sized no smaller than 8 inches in diameter, except for building laterals, which would be a minimum of 6 inches. See Appendix B for a diagram of the proposed onsite sanitary sewer collection system. The sewer collection system would consist of a lower and upper branch of sewer pipes at the southern and northern buildings pads. All flows from the Development Area would flow by gravity toward Placerita Canyon Road.

Sanitary sewer service for the Proposed Project would be provided by connection to the existing City of Santa Clarita's local wastewater collection system through the construction of a new sanitary sewer main along Placerita Canyon Road. As described in detail below, two optional alignments have been identified that would provide connections to existing City of Santa Clarita sewer facilities.

In addition to obtaining permits from the City of Santa Clarita to tie into local sewer lines, the Proposed Project would need to file service and annexation applications with the CSDLAC. The CSDLAC would be responsible for processing and completing annexation proceedings with the Local Area Formation Commission (LAFCO) of Los Angeles County.

B. Off-Site Sanitary Sewer Service Alternate Options

There are two alignment options to connect to the existing City of Santa Clarita's local wastewater collection network situated west of the Development Area. See Appendix C for a figure depicting the two alignment options.

**Option 1 - Oak Orchard Alignment**

Under this option, the new sewer main would convey flows westerly along Placerita Canyon Road for an approximate distance of 2 miles to the existing City of Santa Clarita's local wastewater collection system to a point of connection tentatively identified at the intersection of Placeritos Boulevard and Meadview Avenue. This alignment allows for gravity flow and is described as follows:

From the on-site sewer collection system, the proposed off-site gravity sewer line would run westerly along Placerita Canyon Road to the west side of AES Pacific Inc. property, north along a proposed easement to Placeritos Boulevard, west on Placeritos Boulevard to Golden Oak Lane, north on Golden Oak Lane to Oak Orchard Road, west on Oak Orchard Road to Quigley Canyon Road, south on Quigley Canyon Road to rejoin Placeritos Boulevard, and then west on Placeritos Boulevard to join the existing Santa Clarita's local sewer system at Meadview Avenue. The total distance of the sewer line would be approximately 9,800 feet (1.86 miles).

**Option 2 - Force Main System to Golden Valley Road**

An alternate alignment would consist of a force main system to convey wastewater to an existing gravity sanitary sewer system at Golden Valley Road northwest of the Development Area.

The on-site gravity sewer collection system would convey wastewater from the Development Area to a proposed pump lift station, which would be constructed on Golden Oak Ranch south of Placerita Canyon Road. The wastewater would then be conveyed via a dual force main along Placerita Canyon Road west to Sierra Highway, then north along Sierra Highway to Golden Valley Road for a total distance of approximately 7,750 feet. From this point, the wastewater would then flow by gravity west along Golden Valley Road to join the existing Santa Clarita's local sewer system at an approximate distance of 2,000 feet from the intersection of Golden Valley Road and Sierra Highway. This gravity sewer main continues to the north along Golden Valley Road towards the CSDLAC trunk sewer, where the construction of a portion of this gravity sewer main has not been completed. This portion of the gravity sewer main, with a length of approximately 4,400 feet, would need to be constructed for the Proposed Project.

C. Off-Site Gravity Sewer Pipe Sizing

Sewer main sizing needs to consider wastewater flows generated by future development in the areas surrounding the Development Area, including wastewater flows from the Development Area, as well as connection of existing developed areas situated to the west.

Pipe sizing for gravity mains is determined on the basis of the design flow rate using the "Manning" formula with the following criteria:

$$Q = A \frac{1.486}{n} R^{2/3} S^{1/2}$$

Where:
Q = flow capacity, cfs
A = cross-sectional area, $ft^2$
n = coefficient of roughness
R = hydraulic radius, ft
S = slope

For computing the design capacity of a new sewer system, Manning's coefficient of roughness n = 0.013 is used and, because of the uncertainty in peak flow factors and to provide an adequate safety factor sewer pipelines in the smaller diameters, eight to twelve-inches in diameter, are designed to flow half full.

The difference in vertical grade elevations at Placerita Canyon Road and the Development Area entrance to the tentative point of connection on Placeritos Boulevard and Meadview Avenue is approximately 164 feet, which allows for gravity flow. Using a pipeline length of 9,800 feet, the slope for the sewer main would be 0.0167 (1.67%). For the purpose of this pipe-sizing calculation, a minimum slope of 1% was used.

Minimum slope and velocity criteria are used for gravity sewer pipelines in order to provide velocities that re-suspend solids under peak hour sewer flow rates. Maximum slope and velocity criteria for gravity sewer pipelines are used to prevent scour and liquid/solid separation. The velocity criteria for pipe diameters 6 to 15 inches range from a minimum of 2 feet/second to a maximum of 10 feet/second.

Thus, the proposed off-site sewer main should be sized with the following parameters:

Using an 8-inch (0.67 feet) diameter pipe,

S = Pipe Slope = 0.01
n = 0.013

R = pipe area/wetted perimeter = A/P

Area (A) = $3.14(0.67)^2/4$ =0.35
Half full: ½ (0.35) =0.18

Wetted Perimeter (P) = 3.14159(0.67/2) = 1.05 feet

Hydraulic Radius (R) = A/P = 0.17

Then,

$Q = (0.18)\ (1.486\ R^{2/3}\ S^{1/2})\ /\ 0.013$
$= 0.61$ cfs

$Q_{8\text{-inch}}$ (1/2 Full) = 0.61 cfs > $Q_{Design}$
= 0.35 cfs (Acceptable)

Check Velocity,

V = Q/A = 3.47 fps

$2.0_{Min} < 3.47 < 10.0_{Max}$ (Acceptable)

The calculation shows that wastewater can be conveyed from the Development Area to the existing sewer system in the City of Santa Clarita via an 8-inch sewer main for either the Proposed Project or the Proposed Project Option. The sewer main would encroach on Caltrans right-of-way at the SR-14 freeway and encasement of the sewer main for a length of 500 feet would be required. From Sierra Highway and westerly towards the existing City of Santa Clarita sewer line, the proposed sewer main would be sized per the City of Santa Clarita Development Services Department and the County's Department of Public Works guidelines and requirements.

As part of the standard project approval process, the City of Santa Clarita's Department of Public Works requires the project applicant to prepare a Sewer Area Study which assists the City in determining potential project-related impacts upon local conveyance facilities. The City of Santa Clarita reviews the Sewer Area Study and approval of this report is required prior to review of project sewer plans. If its determined that new or expanded facilities are required, the City of Santa Clarita would require the project applicant to either construct the necessary facilities or pay in-lieu fees to offset wastewater demand.

A *Sewer Area Study*[3] has been prepared for the area which is between the Development Area and the existing local collection network for the Option 1 Oak Orchard Alignment. This study indicates that the existing wastewater

[3] *Disney | ABC Studios at the Ranch Sewer Area Study*, David Evans & Assoc., March, 2010.

conveyance system from the Proposed Project point of connection to the CSDLAC trunk mains has adequate capacity and, therefore, it is not anticipated that any upgrades to the existing City of Santa Clarita collection system at the point of connection for Option 1 would be required due to the additional sewage flows generated by the Proposed Project.

## 5.0 ANALYSIS OF CUMULATIVE IMPACTS

The two existing WRPs operated by the CSDLAC in the Santa Clarita Valley have available capacity to serve the wastewater treatment needs of the Proposed Project. As indicated above, there is 7.6 MGD of unused capacity in the existing WRPs. Thus, the existing WRPs have sufficient capacity to accommodate the estimated 66,800 GPD of sewage and wastewater from the Proposed Project and related projects within the cumulative impact boundary area of the CSDLAC and the local sewer service area of the City of Santa Clarita, generally located to the west of the Proposed Project site, and from which wastewater service would be provided to the Development Area. Only one planned project falls within the cumulative impacts boundary. The Kellstrom Project would include 102,700 square feet (SF) of office and commercial uses at the southwest corner of Sierra Highway and Placerita Canyon Road. The Kellstrom Project would connect to the proposed Option 1 Oak Orchard sewer alignment described in Section 4.0.

Following the same accepted standards to calculate wastewater and sewer flows as used for the Proposed Project, based upon the Sanitation District's rates, the estimated wastewater and sewer flows for the Kellstrom Project would be calculated as follows:

| | |
|---|---|
| Office | 95,000 SF |
| Restaurant (Drive-Up) | 7,700 SF |

| | |
|---|---|
| 95, 000 x 200 Gallons/KSF | = 19,000 GPD |
| 513 x 1000 Gallons/KSF | = 7,700 GPD |
| | 26,700 GPD |

This wastewater flow in combination with the wastewater flows for the Proposed Project are well within the capacity of the proposed sewer mains to the point of connection at the City of Santa Clarita's local sewer system.

The mechanism used to fund expansion projects is the CSDLAC's Connection Fee Program. Prior to the connection of the local sewer network to the CSDLAC system, all new users are required to pay their fair share of the CSDLAC sewerage system expansion through a connection fee. The fees fund treatment capacity expansion and construction of trunk lines, while on-site sewer mains are the responsibility of the developer. The rate at which connections are made and revenues accumulate drives the rate at which

periodic expansions of the system are designed and built. The cyclical process of building phased expansions and collecting connection fees can continue indefinitely. The ultimate capacity of the WRPs is 34.1 MGD, which is sufficient to meet demand of total flows projected from the Santa Clarita Valley in 2015.[4] In addition, current projections indicate there would be sufficient capacity through anticipated construction build out.

In addition to sufficient existing and future capacity, it is anticipated that upon payment of applicable connection fees and compliance with the CSDLAC's permitting requirements, adequate capacity would be available on a cumulative basis. Approval of points of connection, encroachment permits, service area annexation, and quantification of available capacity would ensure that cumulative impacts to wastewater conveyance and treatment facilities would be less than significant.

[4] *Final 2015 Santa Clarita Valley Joint Sewerage System Facilities Plan*, CSDLAC, January 1998.

# APPENDIX A

**Los Angeles County Sanitation Districts Loadings for Each Class of Land Use**

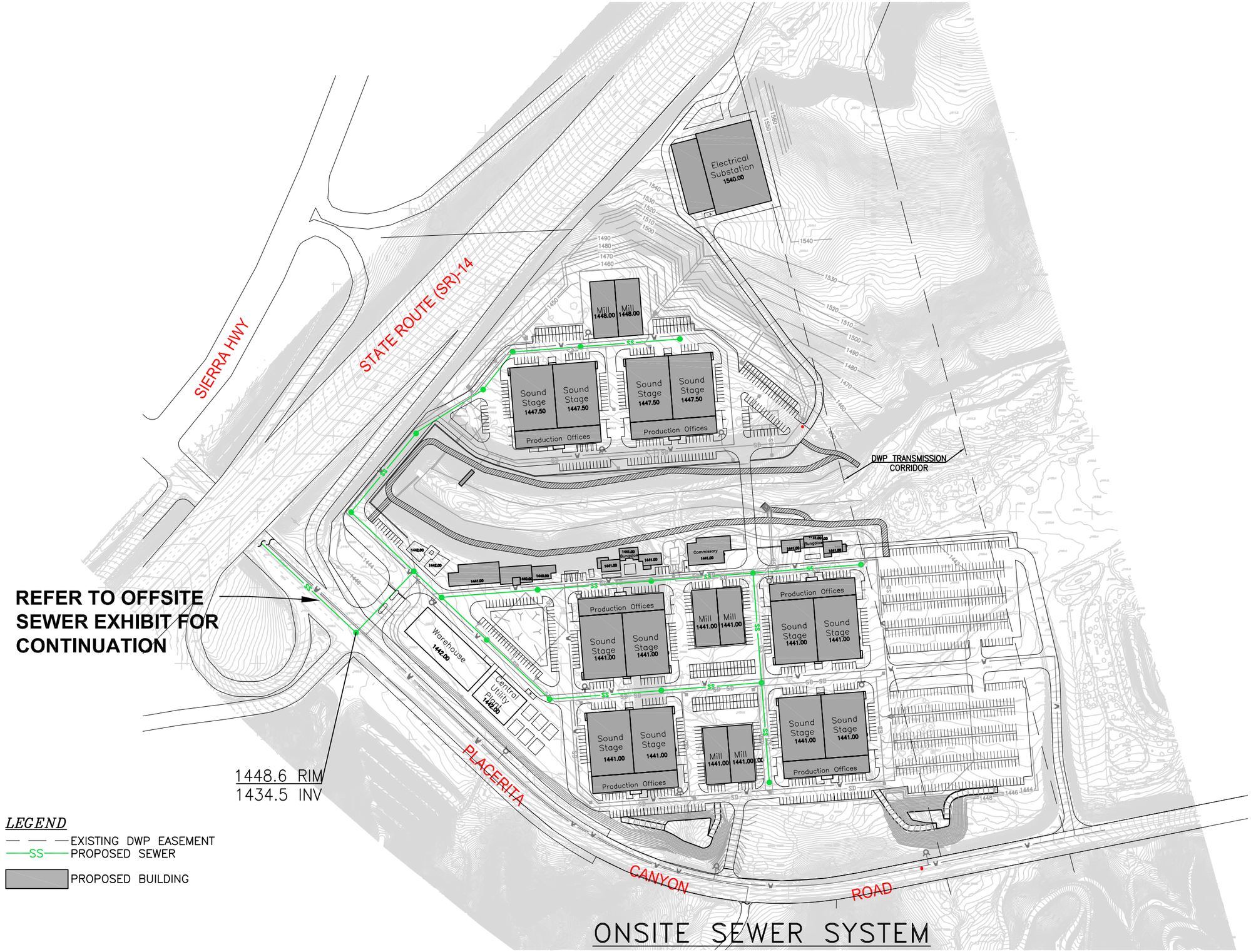
TABLE 1

# LOADINGS FOR EACH CLASS OF LAND USE

| DESCRIPTION | UNIT OF MEASURE | FLOW (Gallons Per Day) | COD (Pounds Per Day) | SUSPENDED SOLIDS (Pounds Per Day) |
|---|---|---|---|---|
| **RESIDENTIAL** | | | | |
| Single Family Home | Parcel | 260 | 1.22 | 0.59 |
| Duplex | Parcel | 312 | 1.46 | 0.70 |
| Triplex | Parcel | 468 | 2.19 | 1.05 |
| Fourplex | Parcel | 624 | 2.92 | 1.40 |
| Condominiums | Parcel | 195 | 0.92 | 0.44 |
| Single Family Home (reduced rate) | Parcel | 156 | 0.73 | 0.35 |
| Five Units or More | No. of Dwlg. Units | 156 | 0.73 | 0.35 |
| Mobile Home Parks | No. of Spaces | 156 | 0.73 | 0.35 |
| **COMMERCIAL** | | | | |
| Hotel/Motel/Rooming House | Room | 125 | 0.54 | 0.28 |
| Store | 1000 $ft^2$ | 100 | 0.43 | 0.23 |
| Supermarket | 1000 $ft^2$ | 150 | 2.00 | 1.00 |
| Shopping Center | 1000 $ft^2$ | 325 | 3.00 | 1.17 |
| Regional Mall | 1000 $ft^2$ | 150 | 2.10 | 0.77 |
| Office Building | 1000 $ft^2$ | 200 | 0.86 | 0.45 |
| Professional Building | 1000 $ft^2$ | 300 | 1.29 | 0.68 |
| Restaurant | 1000 $ft^2$ | 1,000 | 16.68 | 5.00 |
| Indoor Theatre | 1000 $ft^2$ | 125 | 0.54 | 0.28 |
| Car Wash | | | | |
| Tunnel - No Recycling | 1000 $ft^2$ | 3,700 | 15.86 | 8.33 |
| Tunnel - Recycling | 1000 $ft^2$ | 2,700 | 11.74 | 6.16 |
| Wand | 1000 $ft^2$ | 700 | 3.00 | 1.58 |
| Financial Institution | 1000 $ft^2$ | 100 | 0.43 | 0.23 |
| Service Shop | 1000 $ft^2$ | 100 | 0.43 | 0.23 |
| Animal Kennels | 1000 $ft^2$ | 100 | 0.43 | 0.23 |
| Service Station | 1000 $ft^2$ | 100 | 0.43 | 0.23 |
| Auto Sales/Repair | 1000 $ft^2$ | 100 | 0.43 | 0.23 |
| Wholesale Outlet | 1000 $ft^2$ | 100 | 0.43 | 0.23 |
| Nursery/Greenhouse | 1000 $ft^2$ | 25 | 0.11 | 0.06 |
| Manufacturing | 1000 $ft^2$ | 200 | 1.86 | 0.70 |
| Dry Manufacturing | 1000 $ft^2$ | 25 | 0.23 | 0.09 |
| Lumber Yard | 1000 $ft^2$ | 25 | 0.23 | 0.09 |
| Warehousing | 1000 $ft^2$ | 25 | 0.23 | 0.09 |
| Open Storage | 1000 $ft^2$ | 25 | 0.23 | 0.09 |
| Drive-in Theatre | 1000 $ft^2$ | 20 | 0.09 | 0.05 |

# APPENDIX B

**Proposed On – Site Sanitary Sewer Distribution System**




# ONSITE SEWER SYSTEM

DISNEY|ABC STUDIOS AT THE RANCH

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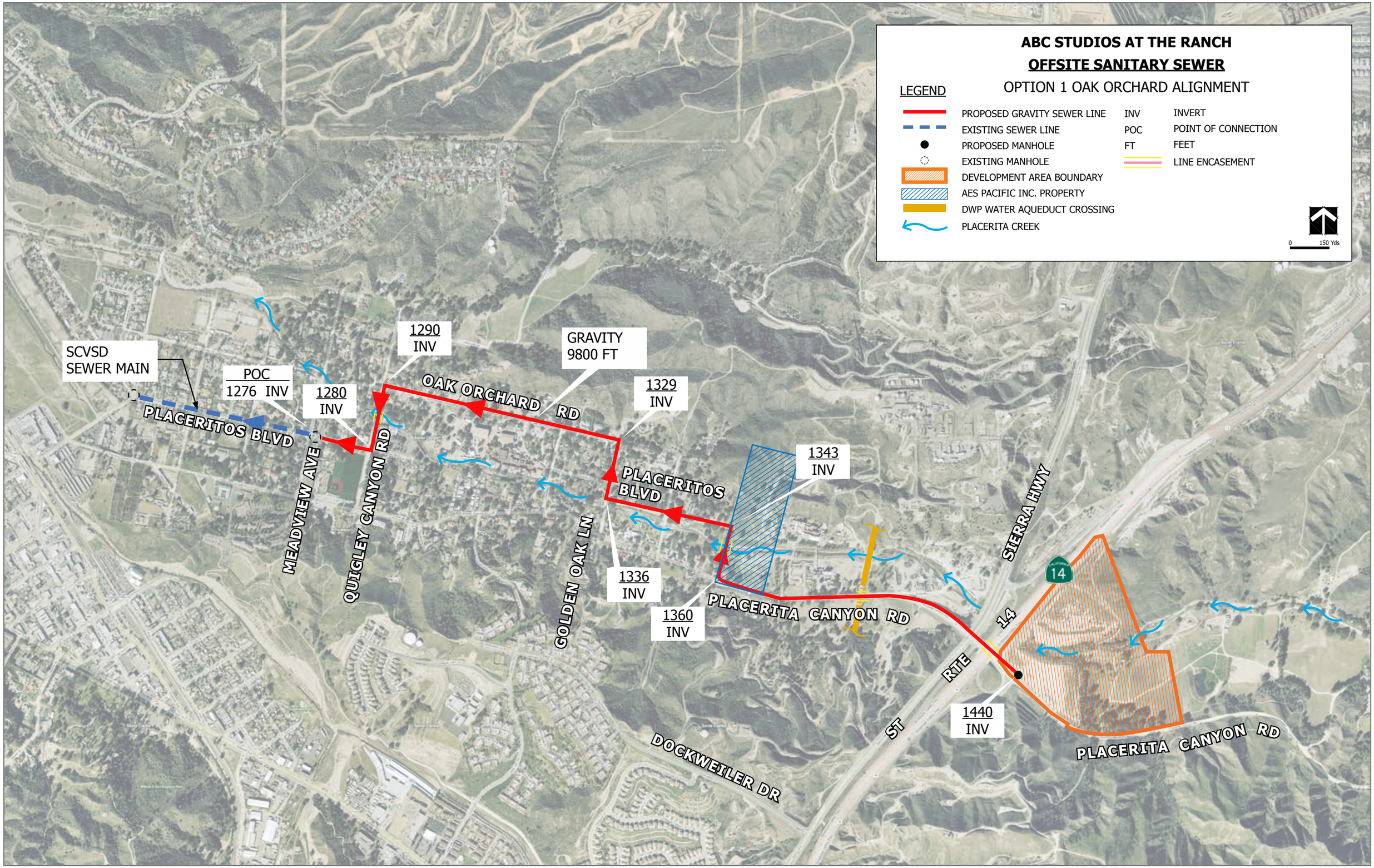
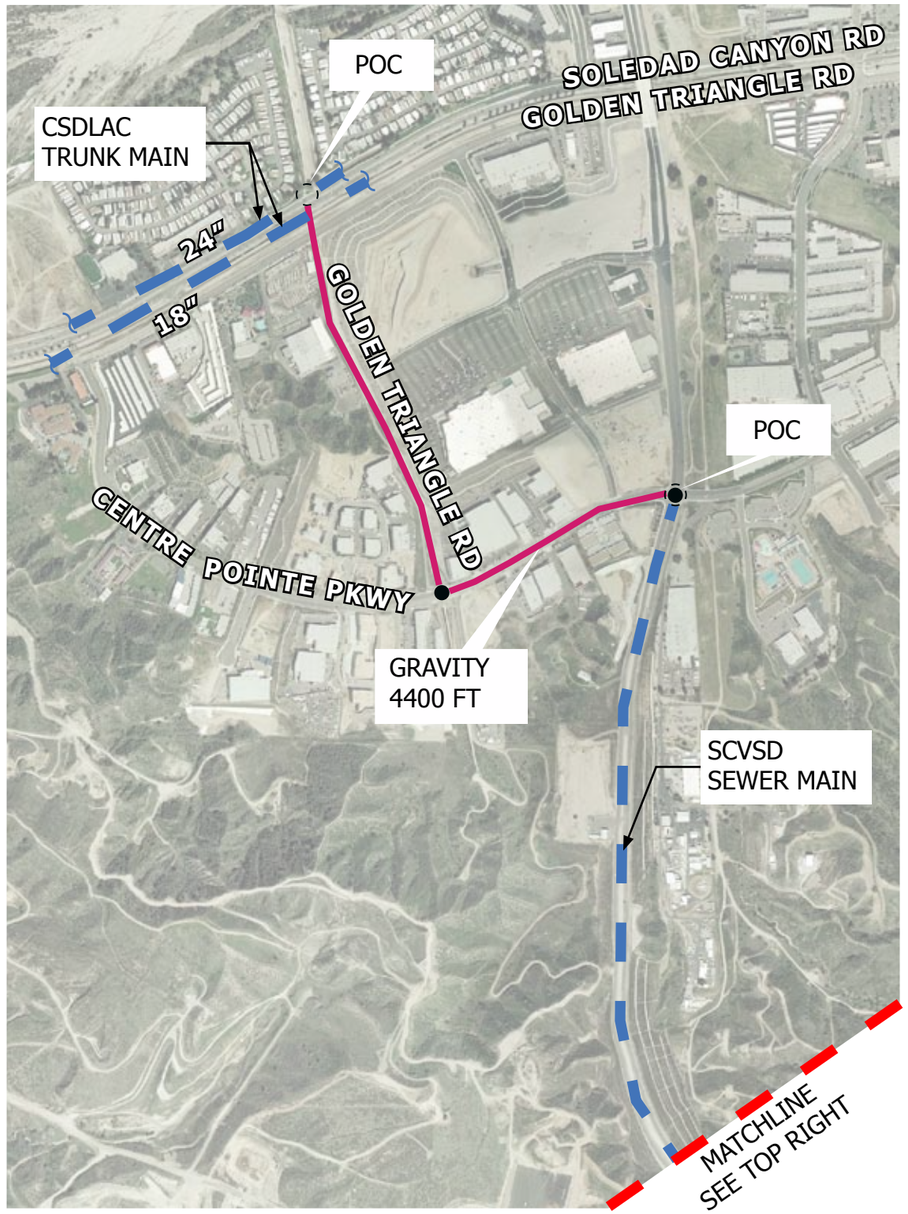
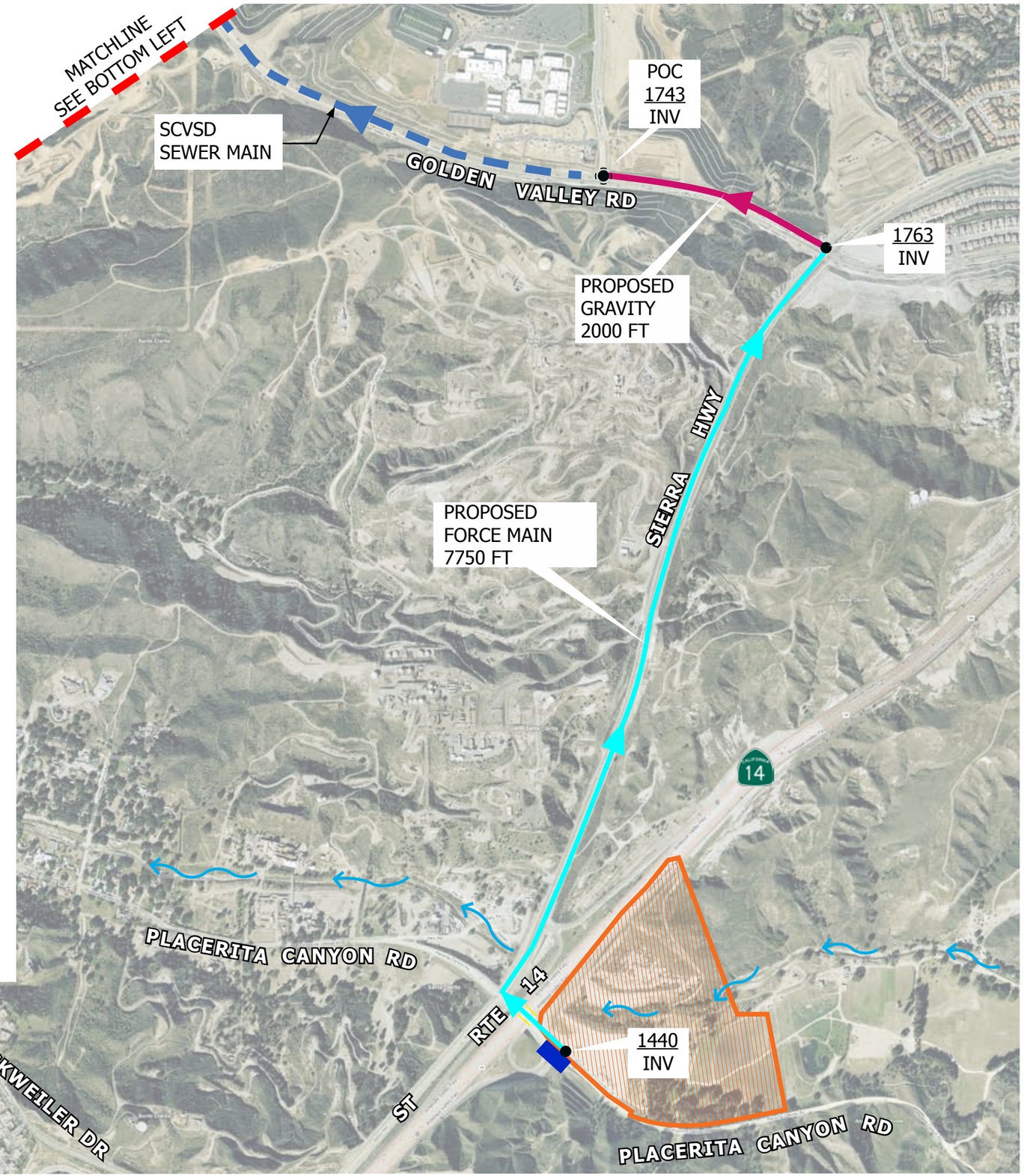
# APPENDIX C

**Off – Site Sanitary Sewer Service Alignment**


ABC STUDIOS AT THE RANCH
OFFSITE SANITARY SEWER
OPTION 1 OAK ORCHARD ALIGNMENT
LEGEND
PROPOSED GRAVITY SEWER LINE
EXISTING SEWER LINE
PROPOSED MANHOLE
EXISTING MANHOLE
DEVELOPMENT AREA BOUNDARY
AES PACIFIC INC. PROPERTY
DWP WATER AQUEDUCT CROSSING
PLACERITA CREEK
INV INVERT
POC POINT OF CONNECTION
FT FEET
LINE ENCASEMENT
0 150 Yds
SCVSD SEWER MAIN
POC 1276 INV
1280 INV
1290 INV
GRAVITY 9800 FT
1329 INV
1343 INV
1336 INV
1360 INV
1440 INV
PLACERITOS BLVD
OAK ORCHARD RD
MEADVIEW AVE
QUIGLEY CANYON RD
GOLDEN OAK LN
PLACERITA CANYON RD
SIERRA HWY
14
RITE
ST
DOCKWEILER DR




**ABC STUDIOS AT THE RANCH**

**OFFSITE SANITARY SEWER**

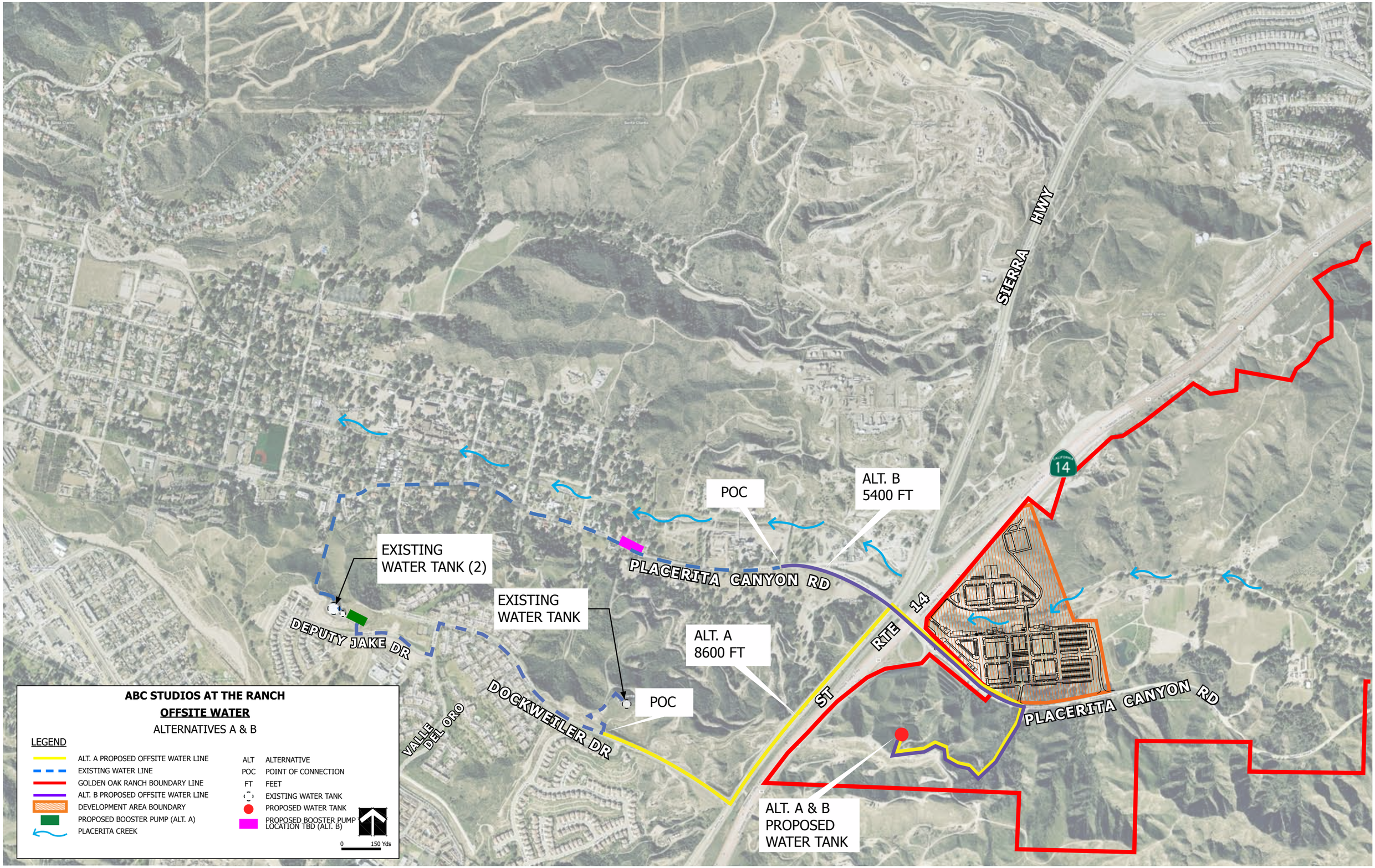
OPTION 2 FORCE MAIN SYSTEM TO GOLDEN VALLEY ROAD

LEGEND

- DUAL FORCE MAIN LINE
- EXISTING SEWER LINE
- PROPOSED MANHOLE
- GRAVITY LINE
- DEVELOPMENT AREA BOUNDARY
- PROPOSED PUMP LIFT STATION
- PLACERITA CREEK
- LINE ENCASEMENT

| | |
|---|---|
| INV | INVERT |
| POC | POINT OF CONNECTION |
| FT | FEET |
| 1440 | ELEVATION ABOVE SEA LEVEL |
| ( ) | PROPOSED CONNECTIONS |
| | MATCHLINE |

0 150 Yds


ABC STUDIOS AT THE RANCH
OFFSITE WATER
ALTERNATIVES A & B
LEGEND
ALT. A PROPOSED OFFSITE WATER LINE
EXISTING WATER LINE
GOLDEN OAK RANCH BOUNDARY LINE
ALT. B PROPOSED OFFSITE WATER LINE
DEVELOPMENT AREA BOUNDARY
PROPOSED BOOSTER PUMP (ALT. A)
PLACERITA CREEK
ALT ALTERNATIVE
POC POINT OF CONNECTION
FT FEET
EXISTING WATER TANK
PROPOSED WATER TANK
PROPOSED BOOSTER PUMP LOCATION TBD (ALT. B)
0 150 Yds
SIERRA HWY
14
ST RTE 14
PLACERITA CANYON RD
PLACERITA CANYON RD
DEPUTY JAKE DR
DOCKWEILER DR
VALLE DEL ORO
EXISTING WATER TANK (2)
EXISTING WATER TANK
POC
POC
ALT. B 5400 FT
ALT. A 8600 FT
ALT. A & B PROPOSED WATER TANK

# APPENDIX D

**Letter to LAC Regional Planning from County Sanitation Districts of LAC**

WATER RECLAMATION
SOLID WASTE MANAGEMENT

# COUNTY SANITATION DISTRICTS
## OF LOS ANGELES COUNTY

1955 Workman Mill Road, Whittier, CA 90601-1400
Mailing Address: P.O. Box 4998, Whittier, CA 90607-4998
Telephone: (562) 699-7411, FAX: (562) 699-5422
www.lacsd.org

STEPHEN R. MAGUIN
*Chief Engineer and General Manager*

February 2, 2010

File No: SCV-00.04-00

Ms. Christina Tran
Impact Analysis Section
Los Angeles County
Department of Regional Planning
320 West Temple Street
Los Angeles, CA 90012

Dear Ms. Tran:

**Disney/ABC Studios at the Ranch,**
**Tract Map No. 071216, Conditional Use Permit No. RCUPT200900126,**
**Zone Change No. RZCT200900012, Plan Amendment No. RPAT200900010,**
**Oak Tree Permit No. ROAKT200900041, Environmental No. RENVT200900112**

The County Sanitation Districts of Los Angeles County (Districts) received a Notice of Preparation of a Draft Environmental Impact Report for the subject project on January 11, 2010. We offer the following comments regarding sewerage service:

1. The project area is outside the jurisdictional boundaries of the Districts and will require annexation into the Santa Clarita Valley Sanitation District before sewerage service can be provided to the proposed development. For a copy of the Districts' Annexation Information and Processing Fees sheets, go to www.lacsd.org, Information Center, Will Serve Program, Obtain Will Serve Letter, and click on the appropriate link on page 2. For more specific information regarding the annexation procedure and fees, please contact Ms. Donna Kitt at extension 2708.

2. Because of the project's location, the flow originating from the proposed project would have to be transported to the Districts' trunk sewer by local sewer(s) that are not maintained by the Districts. If no local sewer lines currently exist, it is the responsibility of the developer to convey any wastewater generated by the project to the nearest local sewer and/or Districts' trunk sewer. Based on the information contained in the document received, the following is a list of Districts' trunk sewers that could serve the project area.

| Name | Location | Size (dia.) | Design Capacity (mgd) | Peak Flow (mgd) | Last Measured |
|---|---|---|---|---|---|
| San Fernando Road Trunk Sewer | In a right of way southeast of the intersection of San Fernando Road and Via Princessa | 18" | 4.3 | 0.4 | 2008 |
| Soledad Canyon Relief Trunk Sewer | In Soledad Canyon Road between Hope Way and Goldenrod Drive | 24" | 14.1 | 6.7 | 2008 |
| Soledad Canyon Trunk Sewer, Sections 1, 2, 3, & 4 | In Soledad Canyon Road between Hope Way and Goldenrod Drive | 18" | 3.7 | 2.0 | 2008 |

3. The District operates two water reclamation plants (WRPs), the Saugus WRP and the Valencia WRP, which provide wastewater treatment in the Santa Clarita Valley. These facilities are interconnected to form a regional treatment system known as the Santa Clarita Valley Joint Sewerage System (SCVJSS). The SCVJSS has a design capacity of 28.1 mgd and currently processes an average flow of 20.5 mgd.

4. The expected average wastewater flow from the project site is 66,800 gallons per day. For a copy of the Districts' average wastewater generation factors, go to www.lacsd.org, Information Center, Will Serve Program, Obtain Will Serve Letter, and click on the appropriate link on page 2.

5. The Districts are authorized by the California Health and Safety Code to charge a fee for the privilege of connecting (directly or indirectly) to the Districts' Sewerage System or increasing the strength or quantity of wastewater attributable to a particular parcel or operation already connected. This connection fee is a capital facilities fee that is imposed in an amount sufficient to construct an incremental expansion of the Sewerage System to accommodate the proposed project. Payment of a connection fee will be required before a permit to connect to the sewer is issued. For a copy of the Connection Fee Information Sheet, go to www.lacsd.org, Information Center, Will Serve Program, Obtain Will Serve Letter, and click on the appropriate link on page 2. For more specific information regarding the connection fee application procedure and fees, please contact the Connection Fee Counter at extension 2727.

6. In order for the Districts to conform to the requirements of the Federal Clean Air Act (CAA), the design capacities of the Districts' wastewater treatment facilities are based on the regional growth forecast adopted by the Southern California Association of Governments (SCAG). Specific policies included in the development of the SCAG regional growth forecast are incorporated into clean air plans, which are prepared by the South Coast and Antelope Valley Air Quality Management Districts in order to improve air quality in the South Coast and Mojave Desert Air Basins as mandated by the CAA. All expansions of Districts' facilities must be sized and service phased in a manner that will be consistent with the SCAG regional growth forecast for the counties of Los Angeles, Orange, San Bernardino, Riverside, Ventura, and Imperial. The available capacity of the Districts' treatment facilities will, therefore, be limited to levels associated with the approved growth identified by SCAG. As such, this letter does not constitute a guarantee of wastewater service, but is to advise you that the Districts intend to provide this service up to the levels that are legally permitted and to inform you of the currently existing capacity and any proposed expansion of the Districts' facilities.

If you have any questions, please contact the undersigned at (562) 908-4288, extension 2717.

Very truly yours,

Stephen R. Maguin

Adriana Raza
Customer Service Specialist
Facilities Planning Department

AR:ar

c: T. Molina
D. Kitt
M. Tremblay

Doc #: 1468995.1

# Appendix K.4

## Sewer Area Study

# SEWER AREA STUDY

## PC 12131 AS

FOR

## VESTING TENTATIVE TRACT MAP NO. 71216
## DISNEY | ABC STUDIOS AT THE RANCH
## NEWHALL, CALIFORNIA

PREPARED FOR:

**MATRIX ENVIRONMENTAL**
6701 CENTER DRIVE, SUITE 900
LOS ANGELES, CA 90045
TELEPHONE: (424) 207-5333

PREPARED BY:

REGISTERED PROFESSIONAL ENGINEER
JEFFREY KARL RUPP
NO. 42868
Exp. 3/31/2012
CIVIL
STATE OF CALIFORNIA

JEFFREY K. RUPP, P.E.

DAVID EVANS AND ASSOCIATES INC.
4200 Concours
Suite 200
Ontario, CA 91764
TELEPHONE: (909) 481-5750

**Sewer Area Study Approval for Tract No.** 71216

☐ No Upgrades Required
☐ Upgrades Required (Encroachment Permit Required for work in the City's Right-of-Way)

**City of Santa Clarita Development Services Division**

Signature: Date: 11/22/10

Approval Expires After 2 Years

SEWER AREA STUDY APPROVED
APPROVED BY: RCE NO. 52443 DATE 11/8/10
CHECKED BY: DATE
COUNTY OF LOS ANGELES
DEPARTMENT OF PUBLIC WORKS
LAND DEVELOPMENT DIVISION

**April 16, 2010**
**Revision 1-August 6, 2010**
**Revision 2-October 15, 2010**
**Revision 3-November 2, 2010**

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**APPENDIX A** **Figure 1 - Vicinity and Location**

**APPENDIX B** **Proposed On-Site Sanitary Sewer Distribution System**

**APPENDIX C** **Proposed Off-Site Sanitary Sewer Plan & Profile**

**APPENDIX D** **Existing Sewer Capacity Calculations**

**APPENDIX E** **Proposed Sewer Capacity Calculations**

**APPENDIX F** **References**

a. City of Santa Clarita Sewage Flow Coefficients
b. Los Angeles County Land Use and Coefficients/
   Los Angeles County Zoning Map
   LandVision-Zoning Map
c. County Standard S-C4
d. Copy of County Sewer Maintenance District Maps
e. Copy of Existing Main Line Sewer Plans
f. Copy of Proposed VTTM 71216 (11 x 17)

# 1.0 INTRODUCTION

This Sewer Area Study has been prepared by David Evans and Associates, Inc. for Disney | ABC Studios at The Ranch (Proposed Project), a motion picture and television studio to be located on 56 acres in the westernmost portion of the 890-acre Golden Oak Ranch (Ranch) in the unincorporated Santa Clarita Valley area of Los Angeles County.

The purpose of this area study is to demonstrate:

a) The capacity of the existing sewer segments from the Proposed Project site to the County Sanitation Districts of Los Angeles County (CSDLAC) maintained trunk sewers; and

b) The ability of the existing sewer facility to adequately service the Proposed Project.

This analysis includes all tributary flows to the sewer system from the Proposed Project site to the CSDLAC trunk line downstream of the Proposed Project site.

# 2.0 SITE DESCRIPTION

The Proposed Project site is generally bounded by State Route (SR) 14 on the west, Placerita Canyon Road on the south, and mostly undeveloped land on the north and east. Over 23 acres of the 56-acre Proposed Project Site consist of two large, mostly barren fill pads that were formed when Caltrans deposited dirt and gravel from grading during the construction of SR-14 in the early 1970s. These two fill pads are separated by Placerita Creek, which extends in an east-west direction across the Proposed Project site. The site is currently used for motion picture and television filming, associated set construction and parking, and agricultural activities. See Appendix A Figure 1, Vicinity and Location.

The Proposed Project site is in the unincorporated area of Los Angeles County and within the Santa Clarita Valley. There is no sanitary sewer infrastructure on or near the Proposed Project site. As part of the Proposed Project, the Santa Clarita Valley Sanitation District (SCVSD), which is part of the County Sanitation Districts of Los Angeles County (CSDLAC), would annex the Proposed Project site into the SCVSD before providing sanitary services, as the Proposed Project site is currently outside the service boundaries of the CSDLAC.

The proposed point of connection is the intersection of Placeritos Boulevard and Meadview Avenue, approximately 9,800 feet west of the Proposed Project. The existing sanitary sewer main at this location is an 18-inch vitrified clay pipe (VCP) flowing westerly and is at a grade elevation approximately 164 feet lower than the Proposed Project site, which would allow for a gravity flow system improvement design.

The surrounding areas to the east and west of the Proposed Project site along Placerita Canyon Road are largely undeveloped. Any developed properties are on private septic sewer systems. However, the study area for this report also encompasses the area to the east of the Proposed Project site as the natural drainage basin continues upstream from the Proposed Project site and the analysis must consider ultimate build-out conditions for the entire natural drainage basin.

The CSDLAC wastewater collection system is composed of service connections that tie into the local collection network. This local network, composed of secondary and primary collectors, flows into the CSDLAC's wastewater trunk mains and the water reclamation plants. The CSDLAC maintains the wastewater trunk mains and the two water reclamation plants, and Los Angeles County Department of Public Works (Sewer Maintenance) maintains the local collection network for the City of Santa Clarita.

## 3.0 PROPOSED PROJECT DESCRIPTION

The Proposed Project includes a request for approval of Vesting Tentative Tract Map No. 71216, which includes 20 lots. A copy of the tentative map is provided in Appendix F. The northern portion of the Proposed Project site would contain an electrical substation, four soundstages, production offices and two mills for set construction. An alternative development option for this area would provide for studio offices and the substation instead of the four soundstages, production offices and two mills. The southern portion would contain eight soundstages, production offices, four mills, six writer/producer bungalows, an administration building, a commissary building, a warehouse, a central utility plant, two debris basins, as well as a surface parking lot to the east of the soundstages.

Proposed On-Site Sanitary Sewer System

The Proposed Project would need an on-site wastewater collection system to convey wastewater flow from the Proposed Project site to sewer lines and treatment plants located off-site. On-site gravity sewers would be sized no smaller than 8 inches in diameter, except for building laterals, which would be a minimum of 6 inches. See Appendix B for a diagram of the proposed on-site sanitary sewer collection system. The sewer collection system would consist of a lower and upper branch of sewer pipes on the southern and northern buildings pads. All flows from the Proposed Project site would flow by gravity via on-site reciprocal easements over the private driveways for public utilities and maintenance purposes to a point-of-connection off-site at Placerita Canyon Road.

Sanitary sewer service for the Proposed Project would be provided by connection to the existing City of Santa Clarita's local wastewater collection system through the construction of a new sanitary sewer main along Placerita Canyon Road. See Proposed Off-Site sanitary sewer system description below.

In addition to obtaining permits from the City of Santa Clarita to tie into local sewer lines, the Proposed Project would need to file service and annexation applications with the CSDLAC. The CSDLAC would be responsible for processing and completing annexation proceedings with the Local Area Formation Commission (LAFCO) of Los Angeles County.

Proposed Off-Site Sanitary Sewer System

The new sewer main would convey flows westerly parallel to Placerita Canyon Road for an approximate distance of 2 miles to the existing City of Santa Clarita's local wastewater collection system to a point of connection tentatively identified at the intersection of Placeritos Boulevard and Meadview Avenue. This alignment allows for gravity flow and is described as follows:

From the on-site sewer system, the proposed off-site gravity sewer line would run westerly along Placerita Canyon Road to the west side of AES Pacific Inc. property, located at 20885 Placerita Canyon Road, north along a proposed easement to Placeritos Boulevard, west on Placeritos Boulevard to Golden Oak Lane, north on Golden Oak Lane to Oak Orchard Road, west on Oak Orchard Road to Quigley Canyon Road, south on Quigley Canyon Road to rejoin Placeritos Boulevard, and then west on Placeritos Boulevard to join Santa Clarita's existing local sewer system at Meadview Avenue. The total distance of the sewer line would be approximately 9,800 feet (1.86 miles). See Appendix C for the exhibit indicating the proposed Oak Orchard alignment and conceptual plan and profile.

Existing Sanitary Sewer System (SCVSD) to Trunk Line (CSDLAC)

From the point of connection at Meadview Avenue and Placeritos Boulevard, the existing 18 inch sewer main continues to flow westerly along Placeritos Boulevard to 12$^{th}$ Street where the main proceeds northwesterly parallel to Railroad Avenue to join the CSDLAC Trunk line.

## 4.0 SEWER PIPE CAPACITY ANALYSIS

The capacity analysis of the existing and proposed sewer mains was prepared in accordance with the City of Santa Clarita and Los Angeles County sewer area study policies.

Proposed Project

The projected average wastewater flows in cubic feet per second (CFS) that would be generated by the proposed sewer mains for the Proposed Project shall be determined by using the (Area) x (Coefficient) method, where the zoning coefficient is obtained from the Los Angeles County Land Use and Coefficients, attached as Appendix E (b).

Average Daily Flow:

44.28 Acres * 0.015 CFS/Acre = 0.66 CFS

Exhibit Map 2- Area 1

Area 1 is located within the SCVSD service area and consists mostly of a developed residential area and The Masters College. Both the Unit Count Method and the (Area) x (Coefficient) method are used to determine wastewater loading flows. See Table 1, Appendix E(a).

Exhibit Map 2a- Private Community

No sanitary sewer infrastructure currently exists within Private Community, which are located between the Proposed Project site and the SCVSD existing sewer system. These Areas consists mostly of developed residential areas. Any developed properties in these areas use private septic sewer systems.

Both the Unit Count Method and the (Area) x (Coefficient) method are used to calculate wastewater flows for Areas 2 and 3.

Exhibit Map 3 - Areas 2 and 3

No sanitary sewer infrastructure currently exists within Areas 2 and 3, which are located between the Proposed Project site and the SCVSD existing sewer system. These Areas consist of residential areas, commercially zoned properties and undeveloped land. Any developed properties in these areas use private septic sewer systems.

Both the Unit Count Method and the (Area) x (Coefficient) method are used to calculate wastewater flows for Areas 2 and 3.

Exhibit Map 4 - Area 4

Sewer main sizing needs to consider wastewater flows generated by future development in all areas surrounding the Proposed Project site. Accordingly, this analysis includes the natural drainage basin that continues upstream from the Proposed Project site. This area is mostly undeveloped, with a small single family home residential development northeast of the Proposed Project site. Accordingly, the (Area) x (Coefficient) method is used. The coefficient table is attached as Appendix E (b).

## 5.0 CONCLUSION

Based on the attached sewer area study calculations, the proposed sewer line on Placeritos Boulevard as well as the existing downstream main line to the Trunk Sewer can accommodate the cumulative calculated flow. Therefore, the existing sewer has adequate capacity for the Proposed Project and no improvement to the existing system between the Proposed Project's connection and the Trunk Sewer is required.

## 6.0 SEWER AREA STUDY TABLE AND MAP EXHIBITS

The data table that follows includes existing and proposed sewer mains from the Proposed Project site to the CSDLAC trunk sewer line.

The design capacity for the existing sewer pipes was obtained by using Kutter's formula with n = 0.013 and per County Standard S-C4 for a maximum design at half full.

For pipes with a diameter of 8 inches and smaller, the sewers have been designed to convey this flow when flowing half full. For pipes with a diameter of 15 inches and larger, the sewers have been designed to convey flow when flowing three-fourths full by depth.

SEWER ARE STUDY - Ultimate Proposed Sewer and Existing Sewer (Private Community)

| Area Number | Segment | | Pipe | | Zoning* | Single Family Residence (SFR) | Area (Acres) | Zoning Coeff. | Calculated Flow (cfs) | **Cumulative Calculated Flow (cfs) |
|---|---|---|---|---|---|---|---|---|---|---|
| | M.H. # | M.H. # | Size (in.) | Slope (%) | | | | | | |
| 1a | N/A | N/A | N/A | N/A | SFR | 116 | | 0.001 | 0.116 | 0.116 |
| 2a | N/A | N/A | N/A | N/A | RL | | 0.4 | 0.0015 | 0.001 | 0.117 |
| 3a | N/A | N/A | N/A | N/A | RL | | 2.50 | 0.0015 | 0.004 | 0.120 |
| 4a | N/A | N/A | N/A | N/A | RL | | 2.50 | 0.0015 | 0.004 | 0.124 |
| 5a | N/A | N/A | N/A | N/A | RL | | 6.99 | 0.0015 | 0.010 | 0.135 |
| | | | | | | | | | **Subtotal (Area 5a)=** | **0.135** |

* See Appendix F Reference a

SEWER ARE STUDY - Ultimate Proposed Sewer and Existing Sewer

| Area Number | Segment | | Pipe | | Single Family Residence | Area (Acres) | Zoning Coeff. | Calculated Flow (cfs) | **Cumulative Calculated Flow (cfs) | Cumulative Depth (ft) | PC or CI Construction Plan # | *% Full | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | M.H. # | M.H. # | Size (in.) | Slope (%) | | | | | | | | Determined by Flowmaster | ***Flow Depth/ (0.5 or 0.75xPipe Dia.) |
| 1[2a] | 222 | 221 | N/A | N/A | 3 | | 0.001 | 0.089 | 0.089 | - | PC 03-08 | - | - |
| 2 | 221 | 223 | N/A | N/A | 1 | | 0.001 | 0.001 | 0.136 | - | PC 03-08 | - | - |
| 3 | 223 | 180 | N/A | N/A | 4 | | 0.001 | 0.004 | 0.140 | - | PC 03-08 | - | - |
| 4 | 180 | 181 | 18 | 0.60 | 2 | | 0.001 | 0.002 | 0.142 | 0.15 | PC 03-08 | 9.9 | 13.3 |
| | 181 | 182 | 18 | 1.70 | | 0 | 0.001 | 0.000 | 0.142 | 0.12 | PC 03-08 | 7.9 | 10.7 |
| | 182 | 183 | 18 | 1.52 | | 0 | 0.001 | 0.000 | 0.142 | 0.12 | PC 03-08 | 8.1 | 10.7 |
| 5 | 183 | 184 | 18 | 1.45 | School (1500 students) | | | 0.046 | 0.188 | 0.14 | PC 03-08 | 9.2 | 12.4 |
| 6 | 184 | 185 | 18 | 0.40 | 3 | | 0.001 | 0.003 | 0.191 | 0.19 | PC 03-08 | 12.5 | 16.9 |
| 7 | 185 | 186 | 18 | 0.83 | 4 | | 0.001 | 0.004 | 0.195 | 0.16 | PC 03-08 | 10.7 | 14.2 |
| | 186 | 187 | 18 | 1.87 | | 0 | 0.001 | 0.000 | 0.195 | 0.13 | PC 03-08 | 8.9 | 11.6 |
| | | | | | | | | Proposed Sewer Line = | 4.856 | | | | |
| **Subtotal (Proposed Sewer Line + Area 7+Private Community Area) =** | | | | | | | | | **5.051** | | | | |
| 8 | 187 | 188 | 18 | 0.51 | 4 | | 0.001 | 0.004 | 5.055 | 0.91 | PC 03-08 | 60.4 | 80.9 |
| 9 | 188 | 189 | 18 | 0.81 | 5 | | 0.001 | 0.005 | 5.060 | 0.79 | PC 03-08 | 52.4 | 70.2 |
| 10 | 189 | 190 | 18 | 0.90 | | 2.5 | 0.0015 | 0.004 | 5.064 | 0.76 | PC 03-08 | 50.8 | 67.6 |
| | 190 | 191 | 18 | 1.08 | | 0 | 0.001 | 0.000 | 5.064 | 0.72 | PC 03-08 | 48.2 | 64.0 |
| 11 | 191 | 192 | 18 | 3.23 | School (150 students) | | | 0.002 | 5.066 | 0.54 | PC 03-08 | 35.9 | 48.0 |
| 12 | 216 | 217 | N/A | N/A | 8 | | 0.001 | 0.008 | 0.008 | - | PC 03-08 | - | - |
| 13 | 217 | 218 | N/A | N/A | 3 | | 0.001 | 0.003 | 0.011 | - | PC 03-08 | - | - |
| 14 | 218 | 219 | N/A | N/A | 2 | | 0.001 | 0.002 | 0.013 | - | PC 03-08 | - | - |
| 15 | 219 | 220 | N/A | N/A | 5 | | 0.001 | 0.005 | 0.018 | - | PC 03-08 | - | - |
| 16 | 220 | 192 | N/A | N/A | 1 | | 0.001 | 0.001 | 0.019 | - | PC 03-08 | - | - |
| **Subtotal (Area 11+Area 16) =** | | | | | | | | | **5.085** | | | | |
| 17 | 192 | 193 | 18 | 0.75 | 5 | | 0.001 | 0.005 | 5.090 | 0.81 | PC 03-08 | 53.8 | 72.0 |
| 18 | 193 | 194 | 18 | 0.83 | 7 | | 0.001 | 0.007 | 5.097 | 0.78 | PC 03-08 | 52.2 | 69.3 |
| | 194 | 199 | 18 | 0.95 | | 0 | 0.001 | 0.000 | 5.097 | 0.75 | PC 03-08 | 50.2 | 66.7 |
| 18a | 199 | - | N/A | N/A | 27 | | 0.001 | 0.027 | 5.124 | - | - | - | - |
| | 199 | - | N/A | N/A | | 9.7 | 0.0015 | 0.015 | 5.138 | - | - | - | - |
| | 199 | - | N/A | N/A | | 9.7 | 0.005 | 0.049 | 5.187 | - | - | - | - |
| 18b | 199 | - | N/A | N/A | 8 | | 0.001 | 0.008 | 5.195 | - | - | - | - |
| | 199 | - | N/A | N/A | | 4.83 | 0.0015 | 0.007 | 5.202 | - | - | - | - |
| 19 | 199 | 200 | 18 | 0.99 | 4 | | 0.001 | 0.004 | 5.206 | 0.75 | PC 03-08 | 50.2 | 66.7 |
| 20 | 200 | 201 | 18 | 0.98 | 4 | | 0.001 | 0.004 | 5.210 | 0.76 | PC 03-08 | 50.4 | 67.6 |
| 21 | 201 | 202 | 18 | 1.11 | 4 | | 0.001 | 0.004 | 5.214 | 0.73 | PC 03-08 | 50.2 | 64.9 |
| 22 | 202 | 203 | 18 | 1.00 | 4 | | 0.001 | 0.004 | 5.218 | 0.75 | PC 03-08 | 50.2 | 66.7 |
| 23 | 203 | 204 | 18 | 1.56 | 4 | | 0.001 | 0.004 | 5.222 | 0.66 | PC 03-08 | 44.3 | 58.7 |

*Calculated using Kutter's Formula with n=0.013 (FlowMaster)

**Based on current land use and coefficients per City of Santa Clarita & LA County, (Appendix E, Reference A&B)

***For pipes>15" % Full should be calculated by taking the flow depth divided by 0.75 times the pipe diameter

1[2a] Area was included in Exhibit Map-2a

SEWER ARE STUDY - Ultimate Proposed Sewer and Existing Sewer

| Area Number | Segment | | Pipe | | Single Family Residence | Area (Acres) | Zoning Coeff. | Calculated Flow (cfs) | **Cumulative Calculated Flow (cfs) | Cumulative Depth (ft) | PC or CI Construction Plan # | *% Full | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | M.H. # | M.H. # | Size (in.) | Slope (%) | | | | | | | | Determined by Flowmaster | ***Flow Depth/ (0.5 or 0.75xPipe Dia.) |
| 24 | 210 | 211 | N/A | N/A | 1 | | 0.001 | 0.001 | 0.001 | - | PC 03-08 | - | - |
| 25 | 211 | 215 | N/A | N/A | 3 | | 0.001 | 0.040 | 0.041 | - | PC 03-08 | - | - |
| | | | | | Church | 1.77 | 0.021 | | | - | PC 03-08 | - | - |
| | 215 | 198 | 8 | 0.92 | | | | 0.000 | 0.041 | 0.1 | PC 03-08 | 14.4 | 20.0 |
| 26 | 212 | 213 | N/A | N/A | 6 | | 0.001 | 0.006 | 0.006 | - | PC 03-08 | - | - |
| 27 | 213 | 214 | N/A | N/A | 4 | | 0.001 | 0.004 | 0.010 | - | PC 03-08 | - | - |
| 28 | 214 | 195 | N/A | N/A | 3 | | 0.001 | 0.003 | 0.013 | - | PC 03-08 | - | - |
| | 195 | 196 | 8 | 0.41 | | 0 | 0.001 | 0.000 | 0.013 | 0.07 | PC 03-08 | 10.4 | 14.0 |
| | 196 | 197 | 8 | 0.42 | | 0 | 0.001 | 0.000 | 0.013 | 0.07 | PC 03-08 | 10.3 | 14.0 |
| | 197 | 198 | 8 | 0.47 | | 0 | 0.001 | 0.000 | 0.013 | 0.07 | PC 03-08 | 10.0 | 14.0 |
| **Subtotal (Area 25+ Area 28)=** | | | | | | | | | **0.054** | | | | |
| | 198 | 204 | 8 | 0.60 | | 0 | 0.001 | 0.000 | 0.054 | 0.12 | PC 03-08 | 17.9 | 24.0 |
| **Subtotal (Area 11, 16, 23, 25, and 28) =** | | | | | | | | | **5.276** | | | | |
| 29 | 204 | 205 | 18 | 1.08 | 5 | | 0.001 | 0.005 | 5.281 | 0.74 | PC 03-08 | 49.4 | 65.8 |
| 30 | 205 | 206 | 18 | 1.08 | 5 | | 0.001 | 0.005 | 5.286 | 0.74 | PC 03-08 | 49.4 | 65.8 |
| 31 | 206 | 207 | 18 | 0.80 | 5 | | 0.001 | 0.005 | 5.291 | 0.81 | PC 03-08 | 54.0 | 72.0 |
| 32 | 207 | 208 | 18 | 0.60 | 6 | | 0.001 | 0.006 | 5.297 | 0.89 | PC 03-08 | 59.1 | 79.1 |
| 32a | 208 | - | N/A | N/A | | 5.2 | 0.0015 | 0.008 | 5.305 | - | - | - | - |
| 32b | 208 | - | N/A | N/A | 11 | | 0.001 | 0.011 | 5.316 | - | - | - | - |
| | 208 | - | N/A | N/A | | 76 | 0.021 | 1.596 | 6.912 | - | - | - | - |
| | 208 | - | N/A | N/A | | 22.96 | 0.0002 | 0.005 | 6.917 | - | - | - | - |
| | 208 | 209 | 18 | 1.84 | | 0 | 0.001 | 0.000 | 6.917 | 0.74 | PC 03-08 | 49.5 | 65.8 |
| | 209 | 920 | 18 | 1.26 | | 0 | 0.001 | 0.000 | 6.917 | 0.83 | PC 03-08 | 55.3 | 73.8 |
| | 920 | 919 | 18 | 1.70 | | 0 | 0.001 | 0.000 | 6.917 | 0.76 | PC 03-08 | 50.6 | 67.6 |
| | 919 | 918 | 18 | 0.63 | | 0 | 0.001 | 0.000 | 6.917 | 1.04 | PC 03-08 | 69.6 | 92.4 |
| | 918 | 917 | 18 | 0.92 | | 0 | 0.001 | 0.000 | 6.917 | 0.92 | PC 03-08 | 61.1 | 81.8 |
| | 917 | 916 | 18 | 4.34 | | 0 | 0.001 | 0.000 | 6.917 | 1.02 | PC 03-08 | 39.1 | 90.7 |
| | 916 | 915 | 18 | 1.04 | | 0 | 0.001 | 0.000 | 6.917 | 0.88 | PC 03-08 | 58.7 | 78.2 |
| | 915 | 914 | 18 | 0.53 | | 0 | 0.001 | 0.000 | 6.917 | 1.12 | PC 03-08 | 74.6 | 99.6 |
| | 914 | 913 | 18 | 1.14 | | 0 | 0.001 | 0.000 | 6.917 | 0.86 | PC 03-08 | 57.0 | 76.4 |

*Calculated using Kutter's Formula with n=0.013 (FlowMaster)

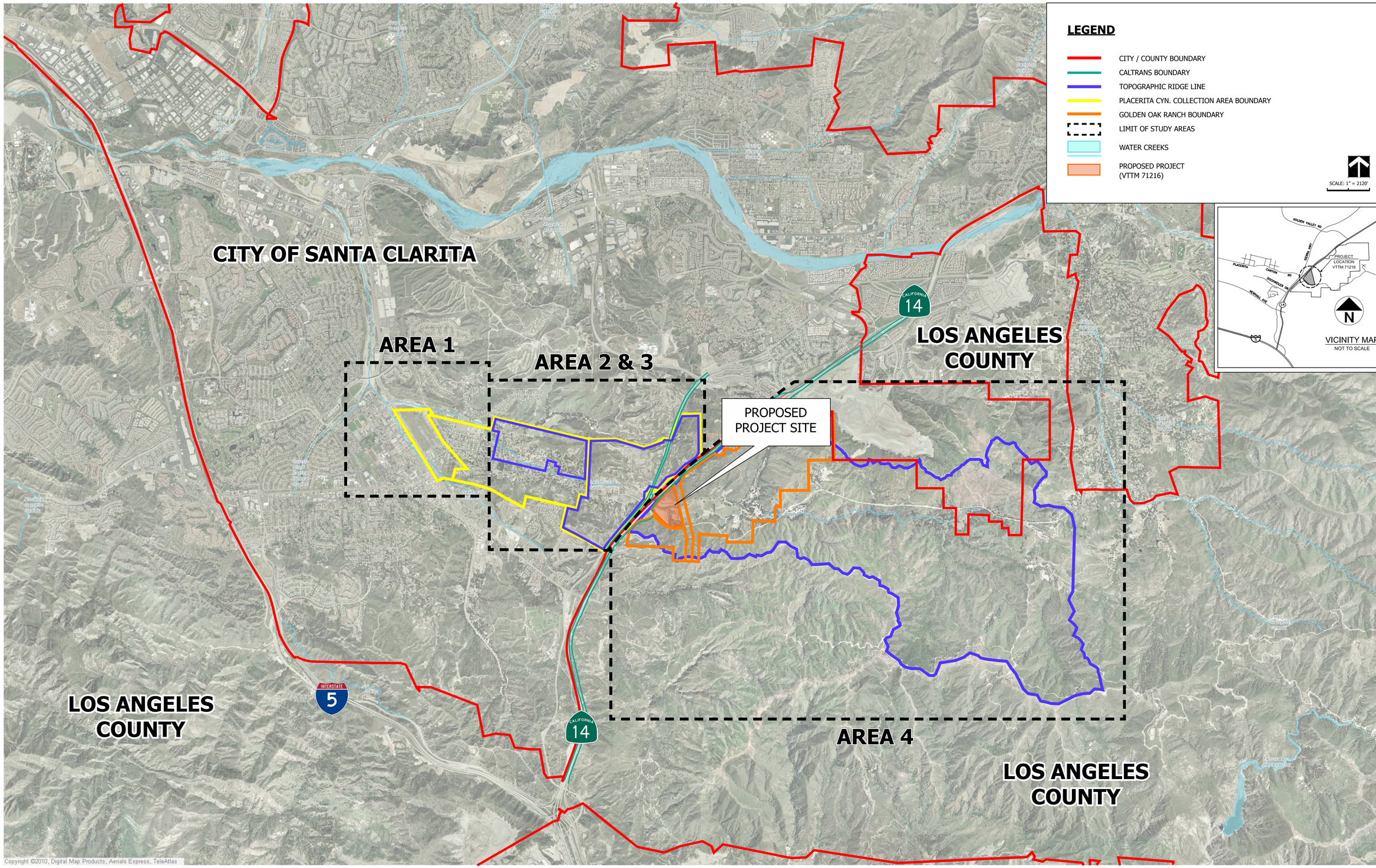
**Based on current land use and coefficients per City of Santa Clarita & LA County, (Appendix E, Reference A&B)

***For pipes>15" % Full should be calculated by taking the flow depth divided by 0.75 times the pipe diameter

SEWER ARE STUDY - Ultimate Proposed Sewer

| Node | Pipe | | SFR / DPX / TPX | Area (Acres) | Zoning Coeff. | Calculated Flow (cfs) | **Cumulative Calculated Flow (cfs) | Cumulative Depth (ft) | *% Full | |
|---|---|---|---|---|---|---|---|---|---|---|
| | Size (in.) | Slope (%) | | | | | | | Determined by Flowmaster | ***Flow Depth/ (0.5 or 0.75xPipe Dia.) |
| A to B | 12 | 3.61 | 38 | | 0.004 | 0.152 | 0.152 | 0.39 | 39.4 | 78.0 |
| | | | | 2774.2 | 0.0002 | 0.555 | 0.707 | | | |
| | | | | 814.12 | 0.0002 | 0.163 | 0.870 | | | |
| | | | | 137.53 | 0.004 | 0.550 | 1.420 | | | |
| | | | | 44.28 | 0.015 | 0.664 | 2.084 | | | |
| B to C | 15 | 2.37 | | 105.5 | 0.001 | 0.106 | 2.189 | 0.56 | 45.2 | 112.0 |
| | | | | 304.51 | 0.0015 | 0.457 | 2.646 | | | |
| | | | | 44.43 | 0.015 | 0.666 | 3.313 | | | |
| | | | | 34.89 | 0.021 | 0.733 | 4.045 | | | |
| C to D | 15 | 1.22 | - | - | 0.001 | 0.000 | 4.045 | 0.68 | 54.6 | 136.0 |
| D to E | 15 | 0.97 | 14 | | 0.0008 | 0.011 | 4.057 | 0.74 | 58.8 | 148.0 |
| | | | | 7.86 | 0.0015 | 0.012 | 4.068 | | | |
| E to F | 15 | 1.15 | 14 | | 0.0008 | 0.011 | 4.080 | 0.7 | 56.0 | 140.0 |
| | | | | 10 | 0.0015 | 0.015 | 4.095 | | | |
| F to G | 15 | 1.15 | 48 | | 0.0008 | 0.038 | 4.133 | 0.77 | 61.6 | 68.4 |
| | | | | 34.55 | 0.0015 | 0.052 | 4.185 | | | |
| | | | | 20.6 | 0.021 | 0.433 | 4.617 | | | |
| | | | | 10 | 0.015 | 0.150 | 4.767 | | | |
| G to H | 15 | 0.89 | 5 | | 0.0008 | 0.004 | 4.771 | 0.85 | 68.1 | 75.6 |
| | | | | 5.03 | 0.015 | 0.075 | 4.847 | | | |
| H to I | 15 | 0.75 | 11 | | 0.0008 | 0.009 | 4.856 | 0.91 | 72.8 | 80.9 |

*Calculated using Kutter's Formula with n=0.013 (FlowMaster)
**Based on current land use and coefficients per City of Santa Clarita & LA County, (Appendix E, Reference A&B)
***For pipes>15" % Full should be calculated by taking the flow depth divided by 0.75 times the pipe diameter

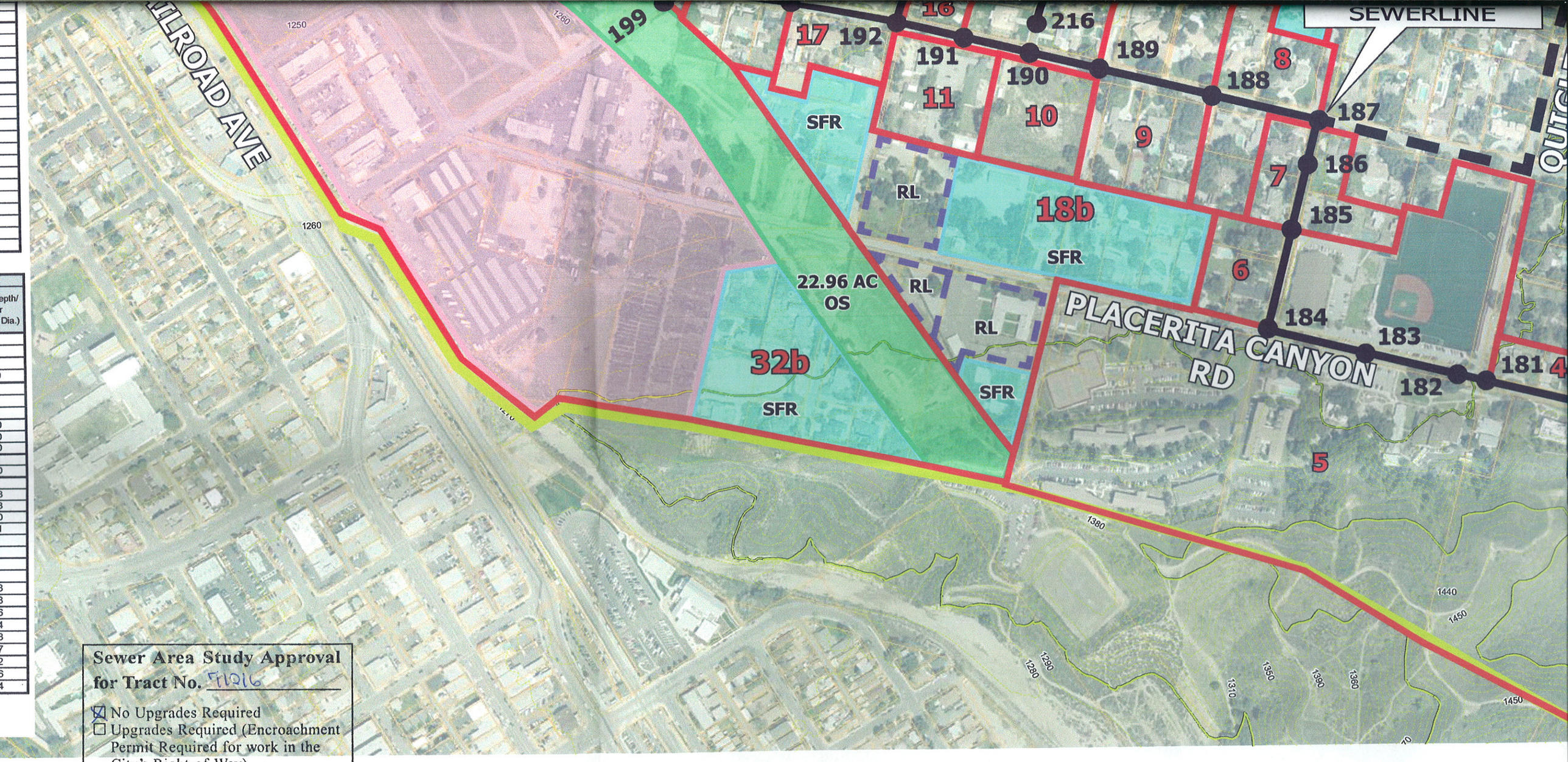



DAVID EVANS AND ASSOCIATES INC.

REGISTERED PROFESSIONAL ENGINEER JEFFREY ALAN RUPP NO. 42968 EXP. 12/31/2011 CIVIL STATE OF CALIFORNIA

**SEWER AREA STUDY**
**EXHIBIT MAP-1**
**OVERALL MAP**

**DISNEY | ABC STUDIOS AT THE RANCH**
VESTING TENATIVE TRACT MAP
NO. 71216
LOS ANGELES COUNTY, CALIFORNIA



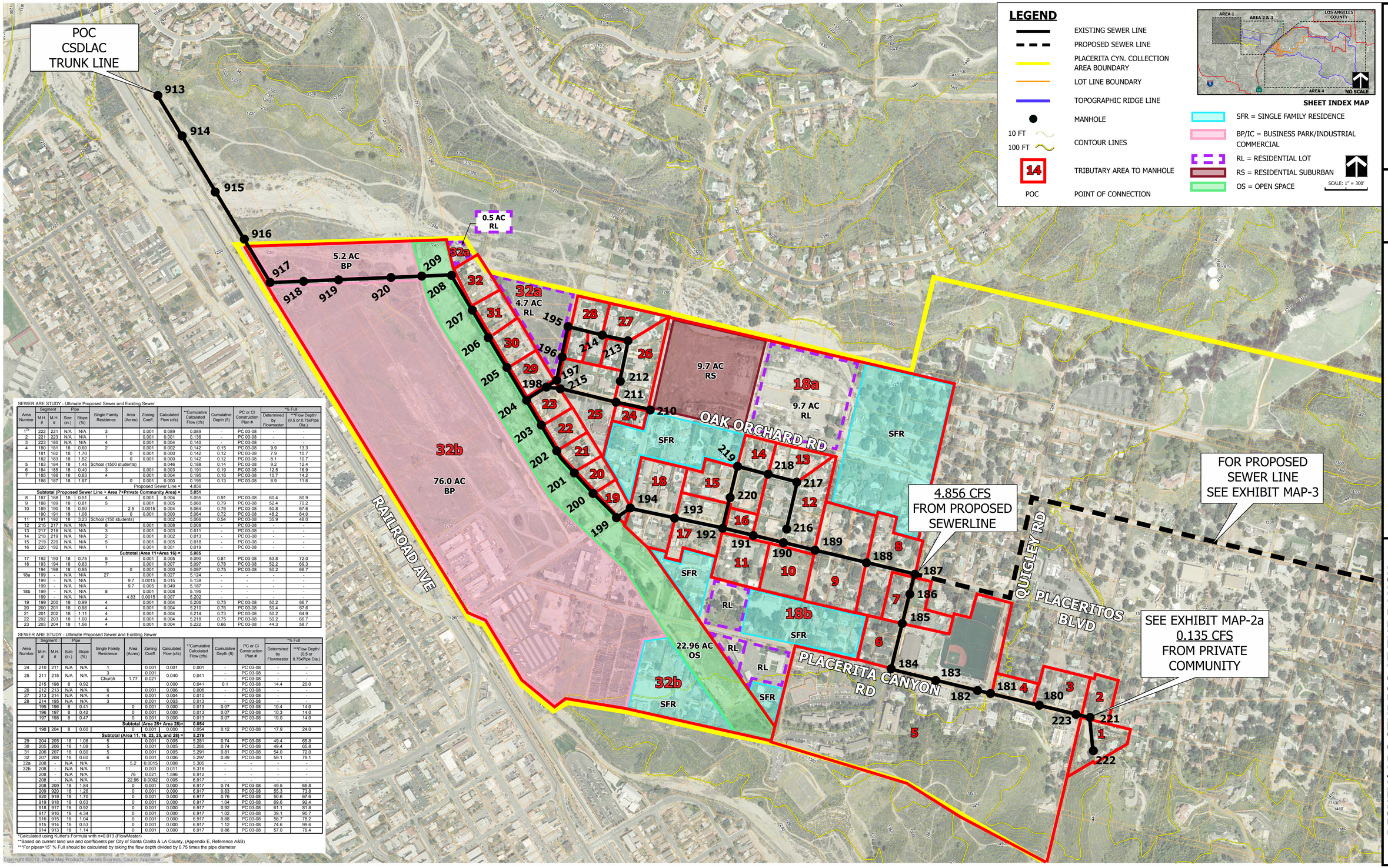

**Sewer Area Study Approval for Tract No.** 51216

☒ No Upgrades Required
☐ Upgrades Required (Encroachment Permit Required for work in the City's Right-of-Way)

City of Santa Clarita
**Development Services Division**

Signature: Date: 11/20/10

Approval Expires After 2 Years




SEWER ARE STUDY - Ultimate Proposed Sewer and Existing Sewer

| Area Number | Segment M.H. # | Segment M.H. # | Pipe Size (in.) | Pipe Slope (%) | Single Family Residence | Area (Acres) | Zoning Coeff. | Calculated Flow (cfs) | **Cumulative Calculated Flow (cfs) | Cumulative Depth (ft) | PC or CI Construction Plan # | Determined by Flowmaster | ***Flow Depth/ (0.5 or 0.75xPipe Dia.) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | | | | | *% Full | |
| 1** | 222 | 221 | N/A | N/A | 3 | | 0.001 | 0.089 | 0.089 | - | PC 03-08 | - | - |
| 2 | 221 | 223 | N/A | N/A | 1 | | 0.001 | 0.001 | 0.136 | - | PC 03-08 | - | - |
| 3 | 223 | 180 | N/A | N/A | 4 | | 0.001 | 0.004 | 0.140 | - | PC 03-08 | - | - |
| 4 | 180 | 181 | 18 | 0.60 | 2 | | 0.001 | 0.002 | 0.142 | 0.15 | PC 03-08 | 9.9 | 13.3 |
| | 181 | 182 | 18 | 1.70 | | 0 | 0.001 | 0.000 | 0.142 | 0.12 | PC 03-08 | 7.9 | 10.7 |
| | 182 | 183 | 18 | 1.52 | | 0 | 0.001 | 0.000 | 0.142 | 0.12 | PC 03-08 | 8.1 | 10.7 |
| 5 | 183 | 184 | 18 | 1.45 | School (1500 students) | | | 0.046 | 0.188 | 0.14 | PC 03-08 | 9.2 | 12.4 |
| 6 | 184 | 185 | 18 | 0.40 | 3 | | 0.001 | 0.003 | 0.191 | 0.19 | PC 03-08 | 12.5 | 16.9 |
| 7 | 185 | 186 | 18 | 0.83 | 4 | | 0.001 | 0.004 | 0.195 | 0.16 | PC 03-08 | 10.7 | 14.2 |
| | 186 | 187 | 18 | 1.87 | | 0 | 0.001 | 0.000 | 0.195 | 0.13 | PC 03-08 | 8.9 | 11.6 |
| | | | | | | | | Proposed Sewer Line = | 4.856 | | | | |
| | | | | | **Subtotal (Proposed Sewer Line + Area 7+Private Community Area) =** | | | | **5.051** | | | | |
| 8 | 187 | 188 | 18 | 0.51 | 4 | | 0.001 | 0.004 | 5.055 | 0.91 | PC 03-08 | 60.4 | 80.9 |
| 9 | 188 | 189 | 18 | 0.81 | 5 | | 0.001 | 0.005 | 5.060 | 0.79 | PC 03-08 | 52.4 | 70.2 |
| 10 | 189 | 190 | 18 | 0.90 | | 2.5 | 0.0015 | 0.004 | 5.064 | 0.76 | PC 03-08 | 50.8 | 67.6 |
| | 190 | 191 | 18 | 1.08 | | 0 | 0.001 | 0.000 | 5.064 | 0.72 | PC 03-08 | 48.2 | 64.0 |
| 11 | 191 | 192 | 18 | 3.23 | School (150 students) | | | 0.002 | 5.066 | 0.54 | PC 03-08 | 35.9 | 48.0 |
| 12 | 216 | 217 | N/A | N/A | 8 | | 0.001 | 0.008 | 0.008 | - | PC 03-08 | - | - |
| 13 | 217 | 218 | N/A | N/A | 3 | | 0.001 | 0.003 | 0.011 | - | PC 03-08 | - | - |
| 14 | 218 | 219 | N/A | N/A | 2 | | 0.001 | 0.002 | 0.013 | - | PC 03-08 | - | - |
| 15 | 219 | 220 | N/A | N/A | 5 | | 0.001 | 0.005 | 0.018 | - | PC 03-08 | - | - |
| 16 | 220 | 192 | N/A | N/A | 1 | | 0.001 | 0.001 | 0.019 | - | PC 03-08 | - | - |
| | | | | | **Subtotal (Area 11+Area 16) =** | | | | **5.085** | | | | |
| 17 | 192 | 193 | 18 | 0.75 | 5 | | 0.001 | 0.005 | 5.090 | 0.81 | PC 03-08 | 53.8 | 72.0 |
| 18 | 193 | 194 | 18 | 0.83 | 7 | | 0.001 | 0.007 | 5.097 | 0.78 | PC 03-08 | 52.2 | 69.3 |
| | 194 | 199 | 18 | 0.95 | | 0 | 0.001 | 0.000 | 5.097 | 0.75 | PC 03-08 | 50.2 | 66.7 |
| 18a | 199 | - | N/A | N/A | 27 | | 0.001 | 0.027 | 5.124 | - | - | - | - |
| | 199 | - | N/A | N/A | | 9.7 | 0.0015 | 0.015 | 5.138 | - | - | - | - |
| | 199 | - | N/A | N/A | | 9.7 | 0.005 | 0.049 | 5.187 | - | - | - | - |
| 18b | 199 | - | N/A | N/A | 8 | | 0.001 | 0.008 | 5.195 | - | - | - | - |
| | 199 | - | N/A | N/A | | 4.83 | 0.0015 | 0.007 | 5.202 | - | - | - | - |
| 19 | 199 | 200 | 18 | 0.99 | 4 | | 0.001 | 0.004 | 5.206 | 0.75 | PC 03-08 | 50.2 | 66.7 |
| 20 | 200 | 201 | 18 | 0.98 | 4 | | 0.001 | 0.004 | 5.210 | 0.76 | PC 03-08 | 50.4 | 67.6 |
| 21 | 201 | 202 | 18 | 1.11 | 4 | | 0.001 | 0.004 | 5.214 | 0.73 | PC 03-08 | 50.2 | 64.9 |
| 22 | 202 | 203 | 18 | 1.00 | 4 | | 0.001 | 0.004 | 5.218 | 0.75 | PC 03-08 | 50.2 | 66.7 |
| 23 | 203 | 204 | 18 | 1.56 | 4 | | 0.001 | 0.004 | 5.222 | 0.66 | PC 03-08 | 44.3 | 58.7 |

SEWER ARE STUDY - Ultimate Proposed Sewer and Existing Sewer

| Area Number | Segment M.H. # | Segment M.H. # | Pipe Size (in.) | Pipe Slope (%) | Single Family Residence | Area (Acres) | Zoning Coeff. | Calculated Flow (cfs) | **Cumulative Calculated Flow (cfs) | Cumulative Depth (ft) | PC or CI Construction Plan # | Determined by Flowmaster | ***Flow Depth/ (0.5 or 0.75xPipe Dia.) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | | | | | *% Full | |
| 24 | 210 | 211 | N/A | N/A | 1 | | 0.001 | 0.001 | 0.001 | - | PC 03-08 | - | - |
| 25 | 211 | 215 | N/A | N/A | 3 | | 0.001 | 0.040 | 0.041 | - | PC 03-08 | - | - |
| | | | | | Church | 1.77 | 0.021 | | | - | PC 03-08 | - | - |
| | 215 | 198 | 8 | 0.92 | | | 0.000 | 0.041 | 0.041 | 0.1 | PC 03-08 | 14.4 | 20.0 |
| 26 | 212 | 213 | N/A | N/A | 6 | | 0.001 | 0.006 | 0.006 | - | PC 03-08 | - | - |
| 27 | 213 | 214 | N/A | N/A | 4 | | 0.001 | 0.004 | 0.010 | - | PC 03-08 | - | - |
| 28 | 214 | 195 | N/A | N/A | 3 | | 0.001 | 0.003 | 0.013 | | PC 03-08 | | |
| | 195 | 196 | 8 | 0.41 | | 0 | 0.001 | 0.000 | 0.013 | 0.07 | PC 03-08 | 10.4 | 14.0 |
| | 196 | 197 | 8 | 0.42 | | 0 | 0.001 | 0.000 | 0.013 | 0.07 | PC 03-08 | 10.3 | 14.0 |
| | 197 | 198 | 8 | 0.47 | | 0 | 0.001 | 0.000 | 0.013 | 0.07 | PC 03-08 | 10.0 | 14.0 |
| | | | | | | | Subtotal (Area 25+ Area 28)= | | 0.054 | | | | |
| | 198 | 204 | 8 | 0.60 | | 0 | 0.001 | 0.000 | 0.054 | 0.12 | PC 03-08 | 17.9 | 24.0 |
| | | | | | **Subtotal (Area 11, 16, 23, 25, and 28) =** | | | | **5.276** | | | | |
| 29 | 204 | 205 | 18 | 1.08 | 5 | | 0.001 | 0.005 | 5.281 | 0.74 | PC 03-08 | 49.4 | 65.8 |
| 30 | 205 | 206 | 18 | 1.08 | 5 | | 0.001 | 0.005 | 5.286 | 0.74 | PC 03-08 | 49.4 | 65.8 |
| 31 | 206 | 207 | 18 | 0.80 | 5 | | 0.001 | 0.005 | 5.291 | 0.81 | PC 03-08 | 54.0 | 72.0 |
| 32 | 207 | 208 | 18 | 0.60 | 6 | | 0.001 | 0.006 | 5.297 | 0.89 | PC 03-08 | 59.1 | 79.1 |
| 32a | 208 | - | N/A | N/A | | 5.2 | 0.0015 | 0.008 | 5.305 | - | - | - | - |
| 32b | 208 | - | N/A | N/A | 11 | | 0.001 | 0.011 | 5.316 | - | - | - | - |
| | 208 | - | N/A | N/A | | 76 | 0.021 | 1.596 | 6.912 | - | - | - | - |
| | 208 | - | N/A | N/A | | 22.96 | 0.0002 | 0.005 | 6.917 | - | - | - | - |
| | 208 | 209 | 18 | 1.84 | | 0 | 0.001 | 0.000 | 6.917 | 0.74 | PC 03-08 | 49.5 | 65.8 |
| | 209 | 920 | 18 | 1.26 | | 0 | 0.001 | 0.000 | 6.917 | 0.83 | PC 03-08 | 55.3 | 73.8 |
| | 920 | 919 | 18 | 1.70 | | 0 | 0.001 | 0.000 | 6.917 | 0.76 | PC 03-08 | 50.6 | 67.6 |
| | 919 | 918 | 18 | 0.63 | | 0 | 0.001 | 0.000 | 6.917 | 1.04 | PC 03-08 | 69.6 | 92.4 |
| | 918 | 917 | 18 | 0.92 | | 0 | 0.001 | 0.000 | 6.917 | 0.92 | PC 03-08 | 61.1 | 81.8 |
| | 917 | 916 | 18 | 4.34 | | 0 | 0.001 | 0.000 | 6.917 | 1.02 | PC 03-08 | 39.1 | 90.7 |
| | 916 | 915 | 18 | 1.04 | | 0 | 0.001 | 0.000 | 6.917 | 0.88 | PC 03-08 | 58.7 | 78.2 |
| | 915 | 914 | 18 | 0.53 | | 0 | 0.001 | 0.000 | 6.917 | 1.12 | PC 03-08 | 74.6 | 99.6 |
| | 914 | 913 | 18 | 1.14 | | 0 | 0.001 | 0.000 | 6.917 | 0.86 | PC 03-08 | 57.0 | 76.4 |

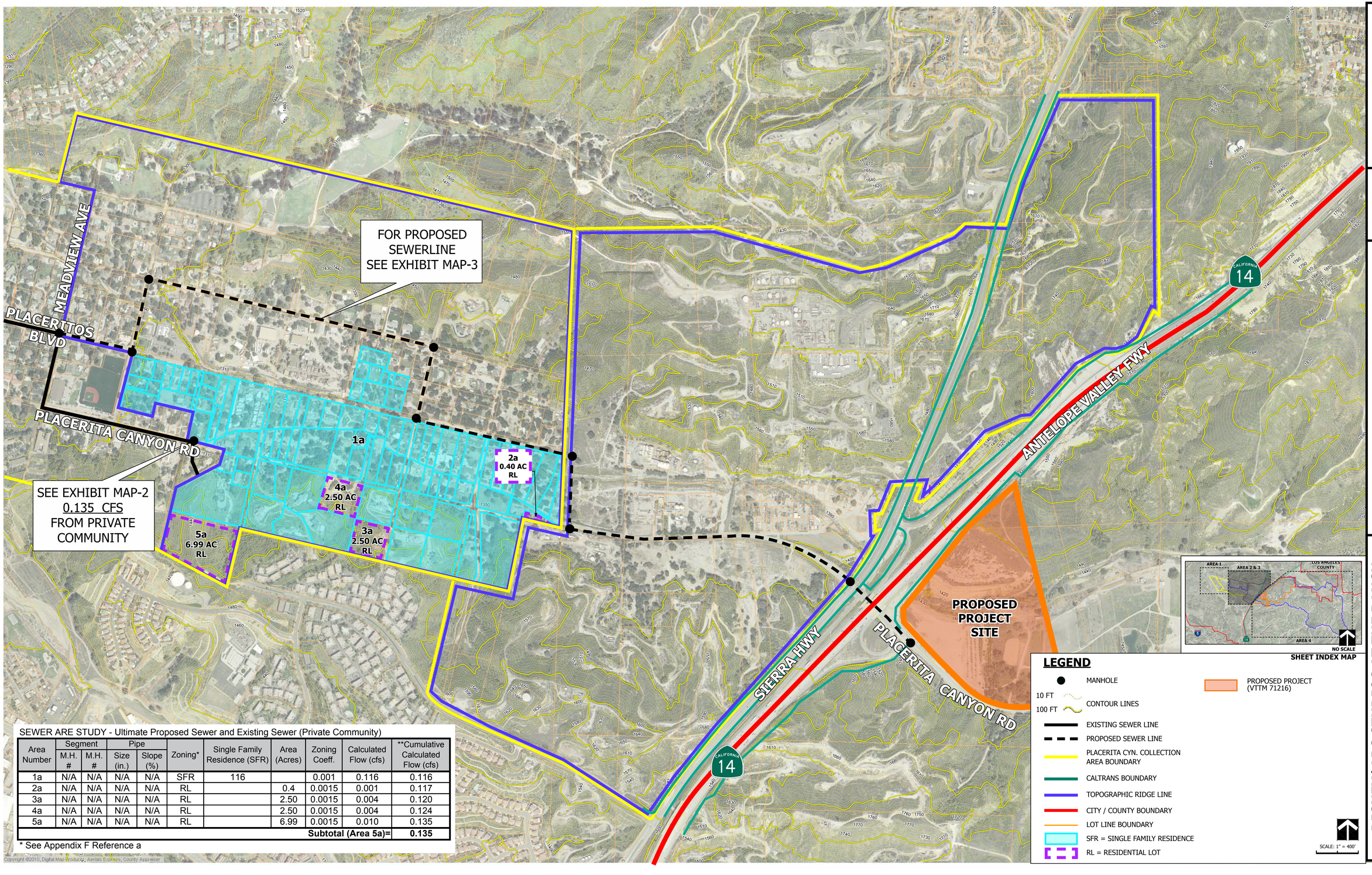
*Calculated using Kutter's Formula with n=0.013 (FlowMaster)
**Based on current land use and coefficients per City of Santa Clarita & LA County, (Appendix E, Reference A&B)
***For pipes>15" % Full should be calculated by taking the flow depth divided by 0.75 times the pipe diameter

DAVID EVANS AND ASSOCIATES INC.

REGISTERED PROFESSIONAL ENGINEER JEFFREY ALAN RUPP NO. 42968 EXP. 12/31/2010 CIVIL STATE OF CALIFORNIA

**SEWER AREA STUDY**
**EXHIBIT MAP-2**
**AREA 1**

**DISNEY | ABC STUDIOS AT THE RANCH**
VESTING TENATIVE TRACT MAP
NO. 71216
LOS ANGELES COUNTY, CALIFORNIA




SEWER ARE STUDY - Ultimate Proposed Sewer and Existing Sewer (Private Community)

| Area Number | Segment M.H. # | Segment M.H. # | Pipe Size (in.) | Pipe Slope (%) | Zoning* | Single Family Residence (SFR) | Area (Acres) | Zoning Coeff. | Calculated Flow (cfs) | **Cumulative Calculated Flow (cfs) |
|---|---|---|---|---|---|---|---|---|---|---|
| 1a | N/A | N/A | N/A | N/A | SFR | 116 | | 0.001 | 0.116 | 0.116 |
| 2a | N/A | N/A | N/A | N/A | RL | | 0.4 | 0.0015 | 0.001 | 0.117 |
| 3a | N/A | N/A | N/A | N/A | RL | | 2.50 | 0.0015 | 0.004 | 0.120 |
| 4a | N/A | N/A | N/A | N/A | RL | | 2.50 | 0.0015 | 0.004 | 0.124 |
| 5a | N/A | N/A | N/A | N/A | RL | | 6.99 | 0.0015 | 0.010 | 0.135 |
| | | | | | | | | | **Subtotal (Area 5a)=** | **0.135** |

* See Appendix F Reference a

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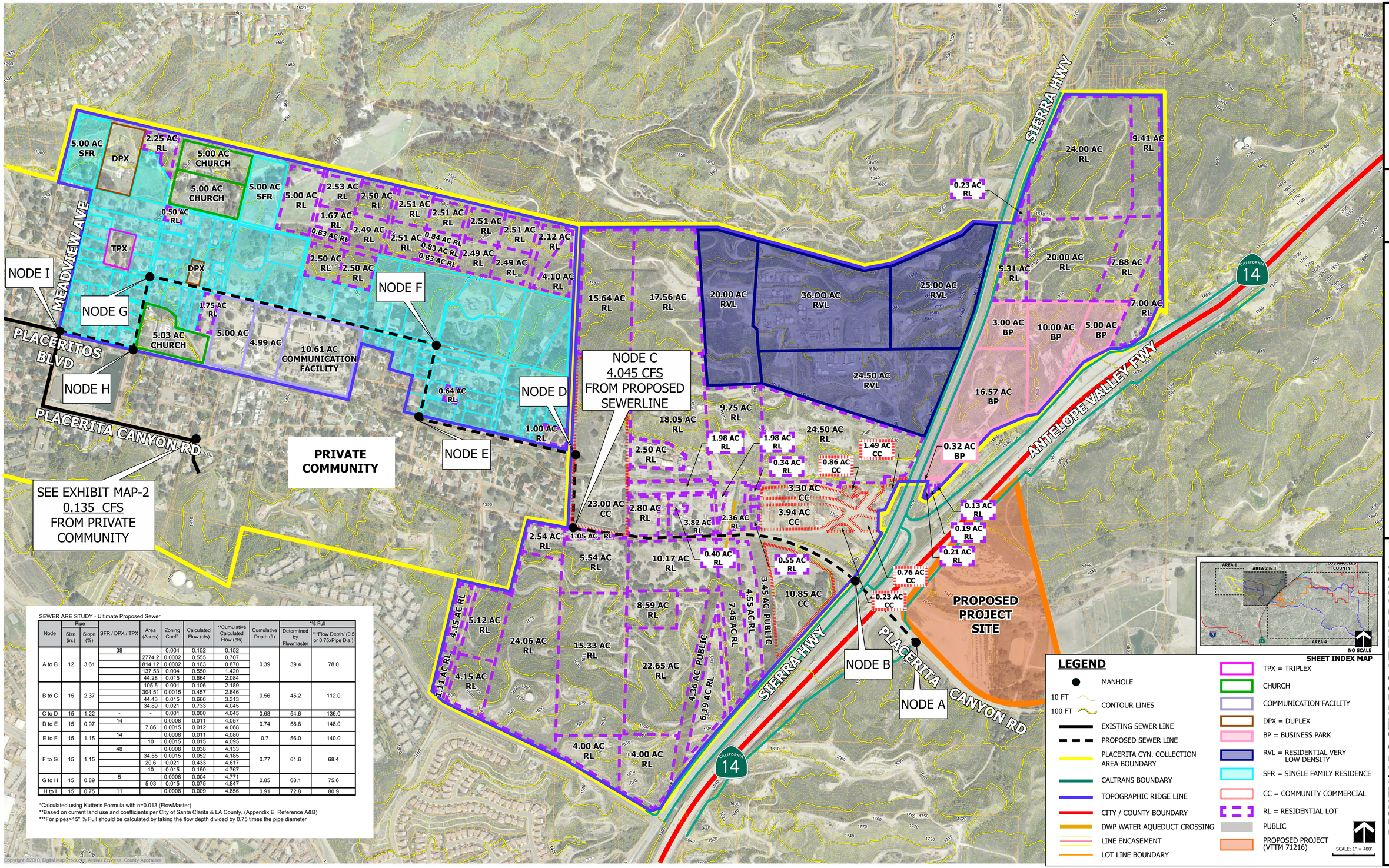
DAVID EVANS AND ASSOCIATES INC.

REGISTERED PROFESSIONAL ENGINEER JEFFREY A. RUPP NO. 42868 CIVIL STATE OF CALIFORNIA

**SEWER AREA STUDY**
**EXHIBIT MAP-2a**
**AREA 2 & 3**

**DISNEY | ABC STUDIOS AT THE RANCH**
VESTING TENATIVE TRACT MAP
NO. 71216
LOS ANGELES COUNTY, CALIFORNIA




SEWER ARE STUDY - Ultimate Proposed Sewer

| Node | Pipe Size (in.) | Pipe Slope (%) | SFR / DPX / TPX | Area (Acres) | Zoning Coeff. | Calculated Flow (cfs) | **Cumulative Calculated Flow (cfs) | Cumulative Depth (ft) | *% Full Determined by Flowmaster | *% Full ***Flow Depth/ (0.5 or 0.75xPipe Dia.) |
|---|---|---|---|---|---|---|---|---|---|---|
| A to B | 12 | 3.61 | 38 | | 0.004 | 0.152 | 0.152 | 0.39 | 39.4 | 78.0 |
| | | | | 2774.2 | 0.0002 | 0.555 | 0.707 | | | |
| | | | | 814.12 | 0.0002 | 0.163 | 0.870 | | | |
| | | | | 137.53 | 0.004 | 0.550 | 1.420 | | | |
| | | | | 44.28 | 0.015 | 0.664 | 2.084 | | | |
| B to C | 15 | 2.37 | | 105.5 | 0.001 | 0.106 | 2.189 | 0.56 | 45.2 | 112.0 |
| | | | | 304.51 | 0.0015 | 0.457 | 2.646 | | | |
| | | | | 44.43 | 0.015 | 0.666 | 3.313 | | | |
| | | | | 34.89 | 0.021 | 0.733 | 4.045 | | | |
| C to D | 15 | 1.22 | - | - | 0.000 | 0.000 | 4.045 | 0.68 | 54.6 | 136.0 |
| D to E | 15 | 0.97 | 14 | | 0.0008 | 0.011 | 4.057 | 0.74 | 58.8 | 148.0 |
| | | | | 7.86 | 0.0015 | 0.012 | 4.068 | | | |
| E to F | 15 | 1.15 | 14 | | 0.0008 | 0.011 | 4.080 | 0.7 | 56.0 | 140.0 |
| | | | | 10 | 0.0015 | 0.015 | 4.095 | | | |
| F to G | 15 | 1.15 | 48 | | 0.0008 | 0.038 | 4.133 | 0.77 | 61.6 | 68.4 |
| | | | | 34.55 | 0.0015 | 0.052 | 4.185 | | | |
| | | | | 20.6 | 0.021 | 0.433 | 4.617 | | | |
| | | | | 10 | 0.015 | 0.150 | 4.767 | | | |
| G to H | 15 | 0.89 | 5 | | 0.0008 | 0.004 | 4.771 | 0.85 | 68.1 | 75.6 |
| | | | | 5.03 | 0.015 | 0.075 | 4.847 | | | |
| H to I | 15 | 0.75 | 11 | | 0.0008 | 0.009 | 4.856 | 0.91 | 72.8 | 80.9 |

*Calculated using Kutter's Formula with n=0.013 (FlowMaster)
**Based on current land use and coefficients per City of Santa Clarita & LA County, (Appendix E, Reference A&B)
***For pipes>15" % Full should be calculated by taking the flow depth divided by 0.75 times the pipe diameter

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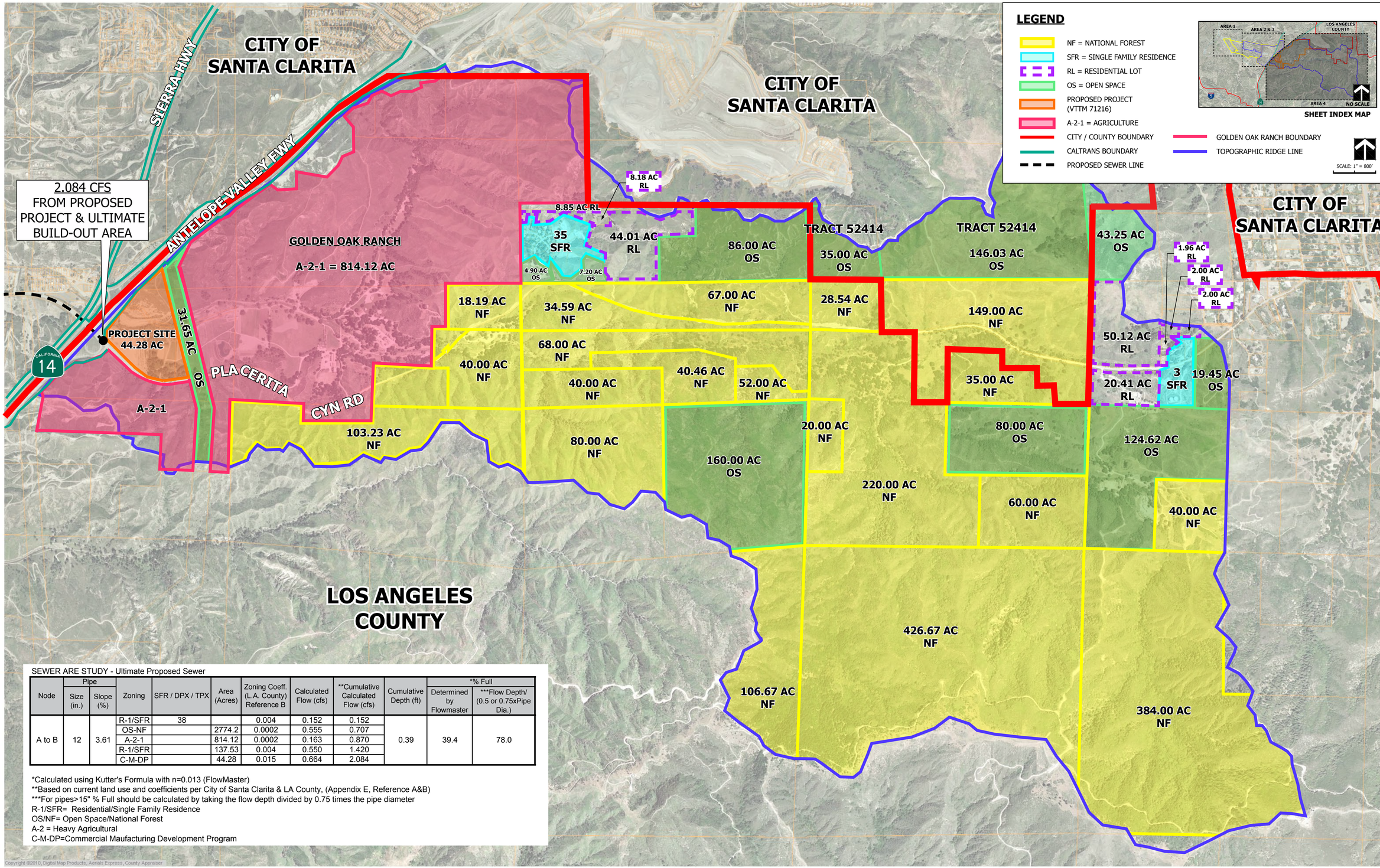
DAVID EVANS AND ASSOCIATES INC.

JEFFREY A. RUPP
No. 42968
Exp. 12/31/11
Civil
STATE OF CALIFORNIA
REGISTERED PROFESSIONAL ENGINEER

**SEWER AREA STUDY**
**EXHIBIT MAP-3**
**AREA 2 & 3**

**DISNEY|ABC STUDIOS AT THE RANCH**
VESTING TENATIVE TRACT MAP
NO. 71216
LOS ANGELES COUNTY, CALIFORNIA




SEWER ARE STUDY - Ultimate Proposed Sewer

| Node | Pipe Size (in.) | Pipe Slope (%) | Zoning | SFR / DPX / TPX | Area (Acres) | Zoning Coeff. (L.A. County) Reference B | Calculated Flow (cfs) | **Cumulative Calculated Flow (cfs) | Cumulative Depth (ft) | *% Full Determined by Flowmaster | *% Full ***Flow Depth/ (0.5 or 0.75xPipe Dia.) |
|---|---|---|---|---|---|---|---|---|---|---|---|
| A to B | 12 | 3.61 | R-1/SFR | 38 | | 0.004 | 0.152 | 0.152 | 0.39 | 39.4 | 78.0 |
| | | | OS-NF | | 2774.2 | 0.0002 | 0.555 | 0.707 | | | |
| | | | A-2-1 | | 814.12 | 0.0002 | 0.163 | 0.870 | | | |
| | | | R-1/SFR | | 137.53 | 0.004 | 0.550 | 1.420 | | | |
| | | | C-M-DP | | 44.28 | 0.015 | 0.664 | 2.084 | | | |

*Calculated using Kutter's Formula with n=0.013 (FlowMaster)
**Based on current land use and coefficients per City of Santa Clarita & LA County, (Appendix E, Reference A&B)
***For pipes>15" % Full should be calculated by taking the flow depth divided by 0.75 times the pipe diameter
R-1/SFR= Residential/Single Family Residence
OS/NF= Open Space/National Forest
A-2 = Heavy Agricultural
C-M-DP=Commercial Maufacturing Development Program

DAVID EVANS AND ASSOCIATES INC.

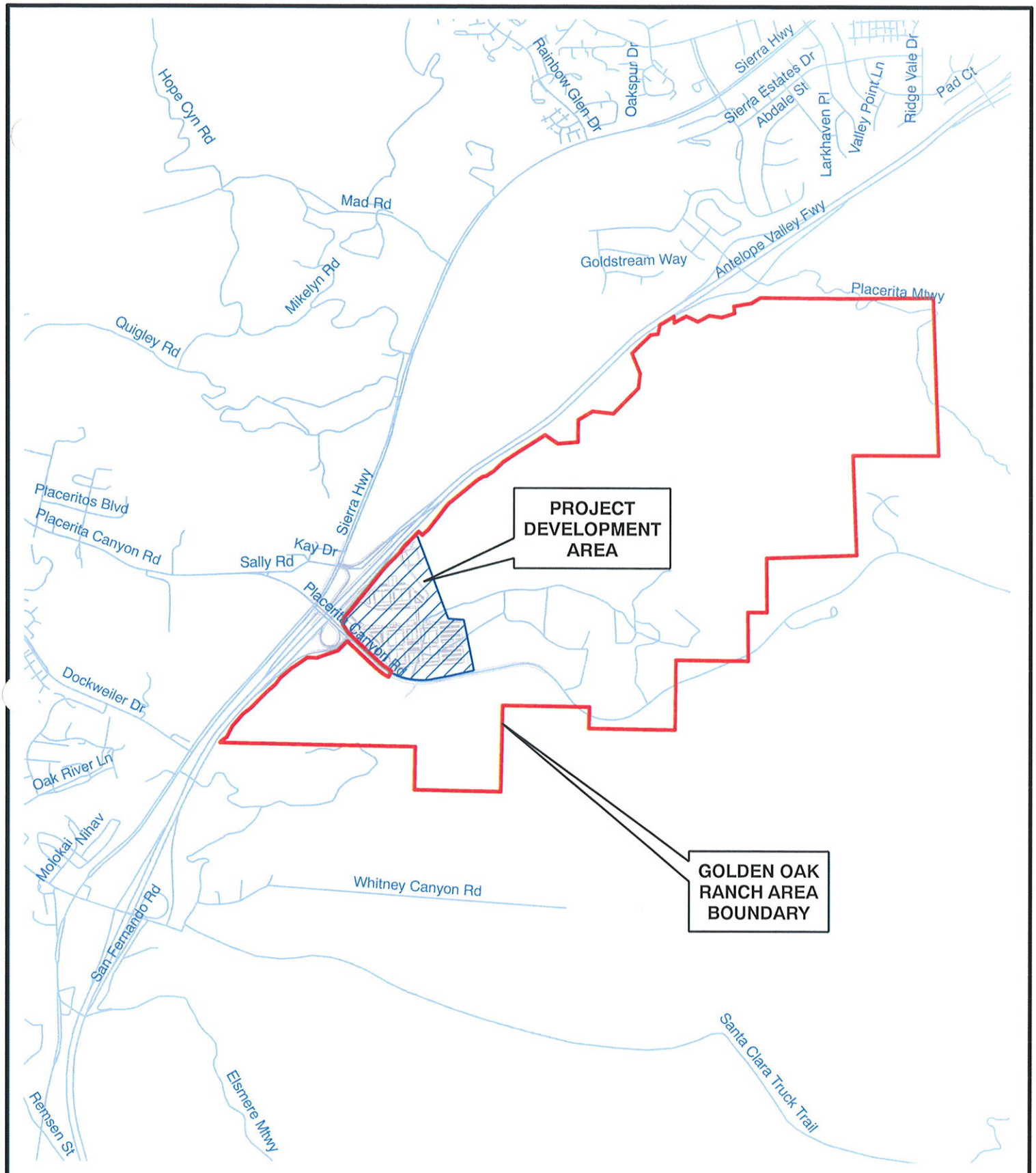
JEFFREY A. RUPP No. 42968 Exp. 12/31/2020 CIVIL STATE OF CALIFORNIA REGISTERED PROFESSIONAL ENGINEER

SEWER AREA STUDY
EXHIBIT MAP-4
AREA 4

DISNEY | ABC STUDIOS AT THE RANCH
VESTING TENATIVE TRACT MAP
NO. 71216
LOS ANGELES COUNTY, CALIFORNIA

# APPENDIX A

**Figure 1, Vicinity and Location**




2,000 0 Feet

**FIGURE 1**

DISNEY | ABC STUDIOS

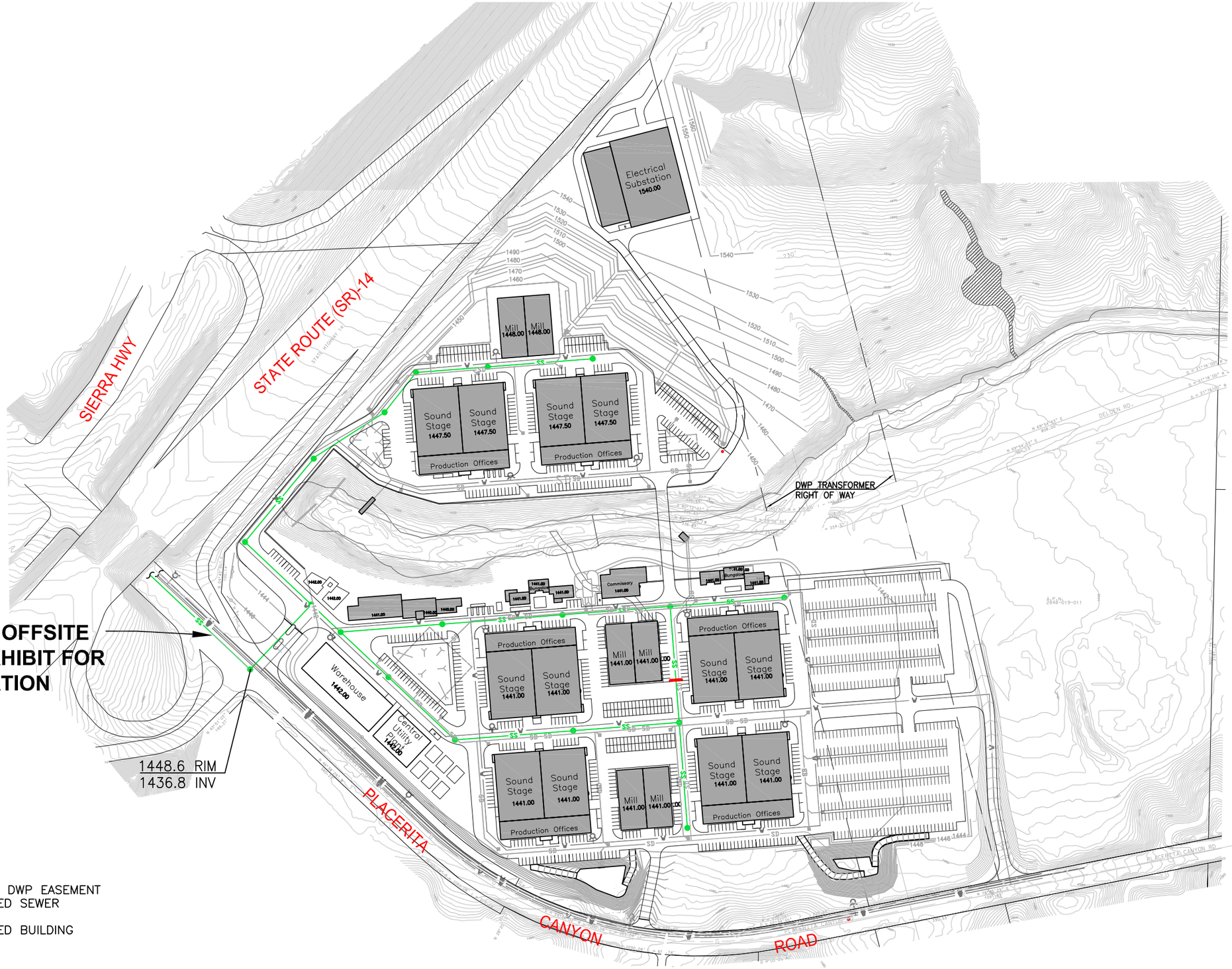
AT THE RANCH

VICINITY AND LOCATION

DAVID EVANS AND ASSOCIATES INC.
4200 Concours Suite 200
Ontario, California 91764
TELEPHONE: 909.481.5750
WEBSITE: www.deainc.com

# APPENDIX B

**Proposed On–Site Sanitary Sewer Distribution System**




*LEGEND*

— — — EXISTING DWP EASEMENT

—SS— PROPOSED SEWER

PROPOSED BUILDING

SCALE: NTS

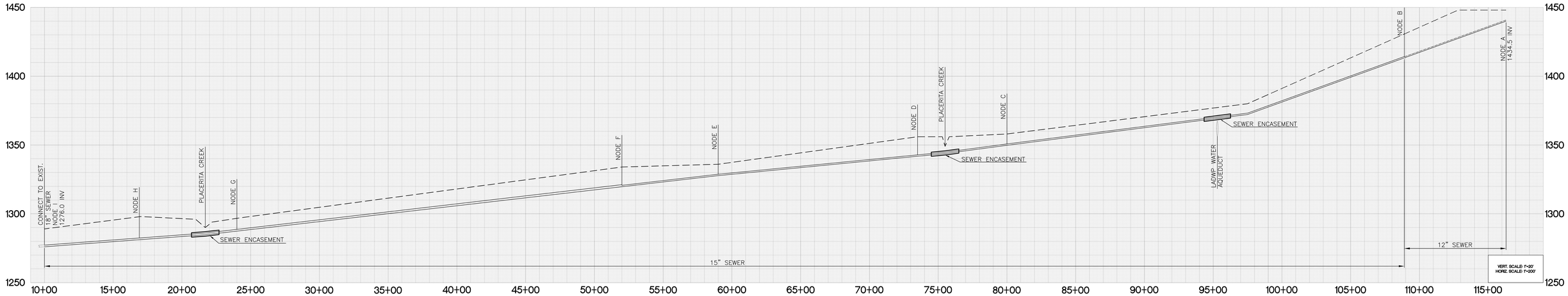
# ONSITE SEWER SYSTEM

DISNEY|ABC STUDIOS AT THE RANCH

DAVID EVANS AND ASSOCIATES INC.
4200 Concours Suite 200
California Ontario 91764
Phone: 909.481.5750

# APPENDIX C

**Proposed Off–Site Sanitary Sewer Plan & Profile**



0 100 200 400

SCALE: 1"=200'

# APPENDIX D

## Existing Sewer Capacity Calculations

# Worksheet for MH 180-181

## Project Description

| | |
|---|---|
| Friction Method | Kutter Formula |
| Solve For | Normal Depth |

## Input Data

| | | |
|---|---|---|
| Roughness Coefficient | 0.013 | |
| Channel Slope | 0.00600 | ft/ft |
| Diameter | 1.50 | ft |
| Discharge | 0.142 | $ft^3/s$ |

## Results

| | | |
|---|---|---|
| Normal Depth | 0.15 | ft |
| Flow Area | 0.09 | $ft^2$ |
| Wetted Perimeter | 0.96 | ft |
| Top Width | 0.90 | ft |
| Critical Depth | 0.14 | ft |
| Percent Full | 9.9 | % |
| Critical Slope | 0.00847 | ft/ft |
| Velocity | 1.56 | ft/s |
| Velocity Head | 0.04 | ft |
| Specific Energy | 0.19 | ft |
| Froude Number | 0.86 | |
| Maximum Discharge | 8.72 | $ft^3/s$ |
| Discharge Full | 8.03 | $ft^3/s$ |
| Slope Full | 0.00001 | ft/ft |
| Flow Type | SubCritical | |

## GVF Input Data

| | | |
|---|---|---|
| Downstream Depth | 0.00 | ft |
| Length | 0.00 | ft |
| Number Of Steps | 0 | |

## GVF Output Data

| | | |
|---|---|---|
| Upstream Depth | 0.00 | ft |
| Profile Description | | |
| Profile Headloss | 0.00 | ft |
| Average End Depth Over Rise | 0.00 | % |
| Normal Depth Over Rise | 9.94 | % |
| Downstream Velocity | Infinity | ft/s |
| Upstream Velocity | Infinity | ft/s |

# Worksheet for MH 181-182

## Project Description

| | |
|---|---|
| Friction Method | Kutter Formula |
| Solve For | Normal Depth |

## Input Data

| | | |
|---|---|---|
| Roughness Coefficient | 0.013 | |
| Channel Slope | 0.01700 | ft/ft |
| Diameter | 1.50 | ft |
| Discharge | 0.142 | $ft^3/s$ |

## Results

| | | |
|---|---|---|
| Normal Depth | 0.12 | ft |
| Flow Area | 0.06 | $ft^2$ |
| Wetted Perimeter | 0.85 | ft |
| Top Width | 0.81 | ft |
| Critical Depth | 0.14 | ft |
| Percent Full | 7.9 | % |
| Critical Slope | 0.00840 | ft/ft |
| Velocity | 2.19 | ft/s |
| Velocity Head | 0.07 | ft |
| Specific Energy | 0.19 | ft |
| Froude Number | 1.36 | |
| Maximum Discharge | 14.70 | $ft^3/s$ |
| Discharge Full | 13.54 | $ft^3/s$ |
| Slope Full | 0.00001 | ft/ft |
| Flow Type | SuperCritical | |

## GVF Input Data

| | | |
|---|---|---|
| Downstream Depth | 0.00 | ft |
| Length | 0.00 | ft |
| Number Of Steps | 0 | |

## GVF Output Data

| | | |
|---|---|---|
| Upstream Depth | 0.00 | ft |
| Profile Description | | |
| Profile Headloss | 0.00 | ft |
| Average End Depth Over Rise | 0.00 | % |
| Normal Depth Over Rise | 7.89 | % |
| Downstream Velocity | Infinity | ft/s |
| Upstream Velocity | Infinity | ft/s |

# Worksheet for MH 182-183

## Project Description

| | |
|---|---|
| Friction Method | Kutter Formula |
| Solve For | Normal Depth |

## Input Data

| | | |
|---|---|---|
| Roughness Coefficient | 0.013 | |
| Channel Slope | 0.01520 | ft/ft |
| Diameter | 1.50 | ft |
| Discharge | 0.142 | $ft^3/s$ |

## Results

| | | |
|---|---|---|
| Normal Depth | 0.12 | ft |
| Flow Area | 0.07 | $ft^2$ |
| Wetted Perimeter | 0.86 | ft |
| Top Width | 0.82 | ft |
| Critical Depth | 0.14 | ft |
| Percent Full | 8.1 | % |
| Critical Slope | 0.00851 | ft/ft |
| Velocity | 2.11 | ft/s |
| Velocity Head | 0.07 | ft |
| Specific Energy | 0.19 | ft |
| Froude Number | 1.30 | |
| Maximum Discharge | 13.90 | $ft^3/s$ |
| Discharge Full | 12.80 | $ft^3/s$ |
| Slope Full | 0.00001 | ft/ft |
| Flow Type | SuperCritical | |

## GVF Input Data

| | | |
|---|---|---|
| Downstream Depth | 0.00 | ft |
| Length | 0.00 | ft |
| Number Of Steps | 0 | |

## GVF Output Data

| | | |
|---|---|---|
| Upstream Depth | 0.00 | ft |
| Profile Description | | |
| Profile Headloss | 0.00 | ft |
| Average End Depth Over Rise | 0.00 | % |
| Normal Depth Over Rise | 8.08 | % |
| Downstream Velocity | Infinity | ft/s |
| Upstream Velocity | Infinity | ft/s |

# Worksheet for MH 183-184

## Project Description

| | |
|---|---|
| Friction Method | Kutter Formula |
| Solve For | Normal Depth |

## Input Data

| | | |
|---|---|---|
| Roughness Coefficient | 0.013 | |
| Channel Slope | 0.01450 | ft/ft |
| Diameter | 1.50 | ft |
| Discharge | 0.188 | $ft^3/s$ |

## Results

| | | |
|---|---|---|
| Normal Depth | 0.14 | ft |
| Flow Area | 0.08 | $ft^2$ |
| Wetted Perimeter | 0.93 | ft |
| Top Width | 0.87 | ft |
| Critical Depth | 0.16 | ft |
| Percent Full | 9.2 | % |
| Critical Slope | 0.00780 | ft/ft |
| Velocity | 2.29 | ft/s |
| Velocity Head | 0.08 | ft |
| Specific Energy | 0.22 | ft |
| Froude Number | 1.32 | |
| Maximum Discharge | 13.58 | $ft^3/s$ |
| Discharge Full | 12.50 | $ft^3/s$ |
| Slope Full | 0.00001 | ft/ft |
| Flow Type | SuperCritical | |

## GVF Input Data

| | | |
|---|---|---|
| Downstream Depth | 0.00 | ft |
| Length | 0.00 | ft |
| Number Of Steps | 0 | |

## GVF Output Data

| | | |
|---|---|---|
| Upstream Depth | 0.00 | ft |
| Profile Description | | |
| Profile Headloss | 0.00 | ft |
| Average End Depth Over Rise | 0.00 | % |
| Normal Depth Over Rise | 9.25 | % |
| Downstream Velocity | Infinity | ft/s |
| Upstream Velocity | Infinity | ft/s |

# Worksheet for MH 184-185

## Project Description

| | |
|---|---|
| Friction Method | Kutter Formula |
| Solve For | Normal Depth |

## Input Data

| | | |
|---|---|---|
| Roughness Coefficient | 0.013 | |
| Channel Slope | 0.00400 | ft/ft |
| Diameter | 1.50 | ft |
| Discharge | 0.191 | $ft^3/s$ |

## Results

| | | |
|---|---|---|
| Normal Depth | 0.19 | ft |
| Flow Area | 0.13 | $ft^2$ |
| Wetted Perimeter | 1.08 | ft |
| Top Width | 0.99 | ft |
| Critical Depth | 0.16 | ft |
| Percent Full | 12.5 | % |
| Critical Slope | 0.00774 | ft/ft |
| Velocity | 1.50 | ft/s |
| Velocity Head | 0.04 | ft |
| Specific Energy | 0.22 | ft |
| Froude Number | 0.74 | |
| Maximum Discharge | 7.11 | $ft^3/s$ |
| Discharge Full | 6.55 | $ft^3/s$ |
| Slope Full | 0.00001 | ft/ft |
| Flow Type | SubCritical | |

## GVF Input Data

| | | |
|---|---|---|
| Downstream Depth | 0.00 | ft |
| Length | 0.00 | ft |
| Number Of Steps | 0 | |

## GVF Output Data

| | | |
|---|---|---|
| Upstream Depth | 0.00 | ft |
| Profile Description | | |
| Profile Headloss | 0.00 | ft |
| Average End Depth Over Rise | 0.00 | % |
| Normal Depth Over Rise | 12.46 | % |
| Downstream Velocity | Infinity | ft/s |
| Upstream Velocity | Infinity | ft/s |

# Worksheet for MH 185-186

## Project Description

| | |
|---|---|
| Friction Method | Kutter Formula |
| Solve For | Normal Depth |

## Input Data

| | | |
|---|---|---|
| Roughness Coefficient | 0.013 | |
| Channel Slope | 0.00830 | ft/ft |
| Diameter | 1.50 | ft |
| Discharge | 0.195 | $ft^3/s$ |

## Results

| | | |
|---|---|---|
| Normal Depth | 0.16 | ft |
| Flow Area | 0.10 | $ft^2$ |
| Wetted Perimeter | 1.00 | ft |
| Top Width | 0.93 | ft |
| Critical Depth | 0.16 | ft |
| Percent Full | 10.7 | % |
| Critical Slope | 0.00774 | ft/ft |
| Velocity | 1.93 | ft/s |
| Velocity Head | 0.06 | ft |
| Specific Energy | 0.22 | ft |
| Froude Number | 1.03 | |
| Maximum Discharge | 10.26 | $ft^3/s$ |
| Discharge Full | 9.45 | $ft^3/s$ |
| Slope Full | 0.00001 | ft/ft |
| Flow Type | SuperCritical | |

## GVF Input Data

| | | |
|---|---|---|
| Downstream Depth | 0.00 | ft |
| Length | 0.00 | ft |
| Number Of Steps | 0 | |

## GVF Output Data

| | | |
|---|---|---|
| Upstream Depth | 0.00 | ft |
| Profile Description | | |
| Profile Headloss | 0.00 | ft |
| Average End Depth Over Rise | 0.00 | % |
| Normal Depth Over Rise | 10.65 | % |
| Downstream Velocity | Infinity | ft/s |
| Upstream Velocity | Infinity | ft/s |

# Worksheet for MH 186-187

## Project Description

| | |
|---|---|
| Friction Method | Kutter Formula |
| Solve For | Normal Depth |

## Input Data

| | | |
|---|---|---|
| Roughness Coefficient | 0.013 | |
| Channel Slope | 0.01870 | ft/ft |
| Diameter | 1.50 | ft |
| Discharge | 0.195 | $ft^3/s$ |

## Results

| | | |
|---|---|---|
| Normal Depth | 0.13 | ft |
| Flow Area | 0.08 | $ft^2$ |
| Wetted Perimeter | 0.91 | ft |
| Top Width | 0.85 | ft |
| Critical Depth | 0.16 | ft |
| Percent Full | 8.9 | % |
| Critical Slope | 0.00770 | ft/ft |
| Velocity | 2.53 | ft/s |
| Velocity Head | 0.10 | ft |
| Specific Energy | 0.23 | ft |
| Froude Number | 1.48 | |
| Maximum Discharge | 15.42 | $ft^3/s$ |
| Discharge Full | 14.20 | $ft^3/s$ |
| Slope Full | 0.00001 | ft/ft |
| Flow Type | SuperCritical | |

## GVF Input Data

| | | |
|---|---|---|
| Downstream Depth | 0.00 | ft |
| Length | 0.00 | ft |
| Number Of Steps | 0 | |

## GVF Output Data

| | | |
|---|---|---|
| Upstream Depth | 0.00 | ft |
| Profile Description | | |
| Profile Headloss | 0.00 | ft |
| Average End Depth Over Rise | 0.00 | % |
| Normal Depth Over Rise | 8.88 | % |
| Downstream Velocity | Infinity | ft/s |
| Upstream Velocity | Infinity | ft/s |

# Worksheet for MH 187-188

## Project Description

| | |
|---|---|
| Friction Method | Kutter Formula |
| Solve For | Normal Depth |

## Input Data

| | | |
|---|---|---|
| Roughness Coefficient | 0.013 | |
| Channel Slope | 0.00510 | ft/ft |
| Diameter | 1.50 | ft |
| Discharge | 5.055 | $ft^3/s$ |

## Results

| | | |
|---|---|---|
| Normal Depth | 0.91 | ft |
| Flow Area | 1.12 | $ft^2$ |
| Wetted Perimeter | 2.67 | ft |
| Top Width | 1.47 | ft |
| Critical Depth | 0.87 | ft |
| Percent Full | 60.4 | % |
| Critical Slope | 0.00589 | ft/ft |
| Velocity | 4.53 | ft/s |
| Velocity Head | 0.32 | ft |
| Specific Energy | 1.22 | ft |
| Froude Number | 0.92 | |
| Maximum Discharge | 8.04 | $ft^3/s$ |
| Discharge Full | 7.40 | $ft^3/s$ |
| Slope Full | 0.00240 | ft/ft |
| Flow Type | SubCritical | |

## GVF Input Data

| | | |
|---|---|---|
| Downstream Depth | 0.00 | ft |
| Length | 0.00 | ft |
| Number Of Steps | 0 | |

## GVF Output Data

| | | |
|---|---|---|
| Upstream Depth | 0.00 | ft |
| Profile Description | | |
| Profile Headloss | 0.00 | ft |
| Average End Depth Over Rise | 0.00 | % |
| Normal Depth Over Rise | 60.38 | % |
| Downstream Velocity | Infinity | ft/s |
| Upstream Velocity | Infinity | ft/s |

# Worksheet for MH 188-189

## Project Description

| | |
|---|---|
| Friction Method | Kutter Formula |
| Solve For | Normal Depth |

## Input Data

| | | |
|---|---|---|
| Roughness Coefficient | 0.013 | |
| Channel Slope | 0.00810 | ft/ft |
| Diameter | 1.50 | ft |
| Discharge | 5.060 | $ft^3/s$ |

## Results

| | | |
|---|---|---|
| Normal Depth | 0.79 | ft |
| Flow Area | 0.94 | $ft^2$ |
| Wetted Perimeter | 2.43 | ft |
| Top Width | 1.50 | ft |
| Critical Depth | 0.87 | ft |
| Percent Full | 52.4 | % |
| Critical Slope | 0.00589 | ft/ft |
| Velocity | 5.40 | ft/s |
| Velocity Head | 0.45 | ft |
| Specific Energy | 1.24 | ft |
| Froude Number | 1.20 | |
| Maximum Discharge | 10.14 | $ft^3/s$ |
| Discharge Full | 9.34 | $ft^3/s$ |
| Slope Full | 0.00240 | ft/ft |
| Flow Type | SuperCritical | |

## GVF Input Data

| | | |
|---|---|---|
| Downstream Depth | 0.00 | ft |
| Length | 0.00 | ft |
| Number Of Steps | 0 | |

## GVF Output Data

| | | |
|---|---|---|
| Upstream Depth | 0.00 | ft |
| Profile Description | | |
| Profile Headloss | 0.00 | ft |
| Average End Depth Over Rise | 0.00 | % |
| Normal Depth Over Rise | 52.40 | % |
| Downstream Velocity | Infinity | ft/s |
| Upstream Velocity | Infinity | ft/s |

# Worksheet for MH 189-190

## Project Description

| | |
|---|---|
| Friction Method | Kutter Formula |
| Solve For | Normal Depth |

## Input Data

| | | |
|---|---|---|
| Roughness Coefficient | 0.013 | |
| Channel Slope | 0.00900 | ft/ft |
| Diameter | 1.50 | ft |
| Discharge | 5.064 | $ft^3/s$ |

## Results

| | | |
|---|---|---|
| Normal Depth | 0.76 | ft |
| Flow Area | 0.90 | $ft^2$ |
| Wetted Perimeter | 2.38 | ft |
| Top Width | 1.50 | ft |
| Critical Depth | 0.87 | ft |
| Percent Full | 50.8 | % |
| Critical Slope | 0.00589 | ft/ft |
| Velocity | 5.61 | ft/s |
| Velocity Head | 0.49 | ft |
| Specific Energy | 1.25 | ft |
| Froude Number | 1.28 | |
| Maximum Discharge | 10.69 | $ft^3/s$ |
| Discharge Full | 9.84 | $ft^3/s$ |
| Slope Full | 0.00240 | ft/ft |
| Flow Type | SuperCritical | |

## GVF Input Data

| | | |
|---|---|---|
| Downstream Depth | 0.00 | ft |
| Length | 0.00 | ft |
| Number Of Steps | 0 | |

## GVF Output Data

| | | |
|---|---|---|
| Upstream Depth | 0.00 | ft |
| Profile Description | | |
| Profile Headloss | 0.00 | ft |
| Average End Depth Over Rise | 0.00 | % |
| Normal Depth Over Rise | 50.82 | % |
| Downstream Velocity | Infinity | ft/s |
| Upstream Velocity | Infinity | ft/s |

# Worksheet for MH 190-191

## Project Description

| | |
|---|---|
| Friction Method | Kutter Formula |
| Solve For | Normal Depth |

## Input Data

| | | |
|---|---|---|
| Roughness Coefficient | 0.013 | |
| Channel Slope | 0.01080 | ft/ft |
| Diameter | 1.50 | ft |
| Discharge | 5.064 | $ft^3/s$ |

## Results

| | | |
|---|---|---|
| Normal Depth | 0.72 | ft |
| Flow Area | 0.84 | $ft^2$ |
| Wetted Perimeter | 2.30 | ft |
| Top Width | 1.50 | ft |
| Critical Depth | 0.87 | ft |
| Percent Full | 48.2 | % |
| Critical Slope | 0.00589 | ft/ft |
| Velocity | 6.00 | ft/s |
| Velocity Head | 0.56 | ft |
| Specific Energy | 1.28 | ft |
| Froude Number | 1.41 | |
| Maximum Discharge | 11.71 | $ft^3/s$ |
| Discharge Full | 10.78 | $ft^3/s$ |
| Slope Full | 0.00240 | ft/ft |
| Flow Type | SuperCritical | |

## GVF Input Data

| | | |
|---|---|---|
| Downstream Depth | 0.00 | ft |
| Length | 0.00 | ft |
| Number Of Steps | 0 | |

## GVF Output Data

| | | |
|---|---|---|
| Upstream Depth | 0.00 | ft |
| Profile Description | | |
| Profile Headloss | 0.00 | ft |
| Average End Depth Over Rise | 0.00 | % |
| Normal Depth Over Rise | 48.23 | % |
| Downstream Velocity | Infinity | ft/s |
| Upstream Velocity | Infinity | ft/s |

# Worksheet for MH 191-192

## Project Description

| | |
|---|---|
| Friction Method | Kutter Formula |
| Solve For | Normal Depth |

## Input Data

| | | |
|---|---|---|
| Roughness Coefficient | 0.013 | |
| Channel Slope | 0.03230 | ft/ft |
| Diameter | 1.50 | ft |
| Discharge | 5.066 | $ft^3/s$ |

## Results

| | | |
|---|---|---|
| Normal Depth | 0.54 | ft |
| Flow Area | 0.57 | $ft^2$ |
| Wetted Perimeter | 1.93 | ft |
| Top Width | 1.44 | ft |
| Critical Depth | 0.87 | ft |
| Percent Full | 35.9 | % |
| Critical Slope | 0.00589 | ft/ft |
| Velocity | 8.87 | ft/s |
| Velocity Head | 1.22 | ft |
| Specific Energy | 1.76 | ft |
| Froude Number | 2.48 | |
| Maximum Discharge | 20.27 | $ft^3/s$ |
| Discharge Full | 18.67 | $ft^3/s$ |
| Slope Full | 0.00241 | ft/ft |
| Flow Type | SuperCritical | |

## GVF Input Data

| | | |
|---|---|---|
| Downstream Depth | 0.00 | ft |
| Length | 0.00 | ft |
| Number Of Steps | 0 | |

## GVF Output Data

| | | |
|---|---|---|
| Upstream Depth | 0.00 | ft |
| Profile Description | | |
| Profile Headloss | 0.00 | ft |
| Average End Depth Over Rise | 0.00 | % |
| Normal Depth Over Rise | 35.93 | % |
| Downstream Velocity | Infinity | ft/s |
| Upstream Velocity | Infinity | ft/s |

# Worksheet for MH 192-193

## Project Description

| | |
|---|---|
| Friction Method | Kutter Formula |
| Solve For | Normal Depth |

## Input Data

| | | |
|---|---|---|
| Roughness Coefficient | 0.013 | |
| Channel Slope | 0.00750 | ft/ft |
| Diameter | 1.50 | ft |
| Discharge | 5.090 | $ft^3/s$ |

## Results

| | | |
|---|---|---|
| Normal Depth | 0.81 | ft |
| Flow Area | 0.97 | $ft^2$ |
| Wetted Perimeter | 2.47 | ft |
| Top Width | 1.50 | ft |
| Critical Depth | 0.87 | ft |
| Percent Full | 53.8 | % |
| Critical Slope | 0.00590 | ft/ft |
| Velocity | 5.25 | ft/s |
| Velocity Head | 0.43 | ft |
| Specific Energy | 1.24 | ft |
| Froude Number | 1.15 | |
| Maximum Discharge | 9.75 | $ft^3/s$ |
| Discharge Full | 8.98 | $ft^3/s$ |
| Slope Full | 0.00243 | ft/ft |
| Flow Type | SuperCritical | |

## GVF Input Data

| | | |
|---|---|---|
| Downstream Depth | 0.00 | ft |
| Length | 0.00 | ft |
| Number Of Steps | 0 | |

## GVF Output Data

| | | |
|---|---|---|
| Upstream Depth | 0.00 | ft |
| Profile Description | | |
| Profile Headloss | 0.00 | ft |
| Average End Depth Over Rise | 0.00 | % |
| Normal Depth Over Rise | 53.79 | % |
| Downstream Velocity | Infinity | ft/s |
| Upstream Velocity | Infinity | ft/s |

# Worksheet for MH 193-194

## Project Description

| | |
|---|---|
| Friction Method | Kutter Formula |
| Solve For | Normal Depth |

## Input Data

| | | |
|---|---|---|
| Roughness Coefficient | 0.013 | |
| Channel Slope | 0.00830 | ft/ft |
| Diameter | 1.50 | ft |
| Discharge | 5.097 | $ft^3/s$ |

## Results

| | | |
|---|---|---|
| Normal Depth | 0.78 | ft |
| Flow Area | 0.93 | $ft^2$ |
| Wetted Perimeter | 2.42 | ft |
| Top Width | 1.50 | ft |
| Critical Depth | 0.87 | ft |
| Percent Full | 52.2 | % |
| Critical Slope | 0.00590 | ft/ft |
| Velocity | 5.46 | ft/s |
| Velocity Head | 0.46 | ft |
| Specific Energy | 1.25 | ft |
| Froude Number | 1.22 | |
| Maximum Discharge | 10.26 | $ft^3/s$ |
| Discharge Full | 9.45 | $ft^3/s$ |
| Slope Full | 0.00244 | ft/ft |
| Flow Type | SuperCritical | |

## GVF Input Data

| | | |
|---|---|---|
| Downstream Depth | 0.00 | ft |
| Length | 0.00 | ft |
| Number Of Steps | 0 | |

## GVF Output Data

| | | |
|---|---|---|
| Upstream Depth | 0.00 | ft |
| Profile Description | | |
| Profile Headloss | 0.00 | ft |
| Average End Depth Over Rise | 0.00 | % |
| Normal Depth Over Rise | 52.24 | % |
| Downstream Velocity | Infinity | ft/s |
| Upstream Velocity | Infinity | ft/s |

# Worksheet for MH 194-199

## Project Description

| | |
|---|---|
| Friction Method | Kutter Formula |
| Solve For | Normal Depth |

## Input Data

| | | |
|---|---|---|
| Roughness Coefficient | 0.013 | |
| Channel Slope | 0.00950 | ft/ft |
| Diameter | 1.50 | ft |
| Discharge | 5.097 | $ft^3/s$ |

## Results

| | | |
|---|---|---|
| Normal Depth | 0.75 | ft |
| Flow Area | 0.89 | $ft^2$ |
| Wetted Perimeter | 2.36 | ft |
| Top Width | 1.50 | ft |
| Critical Depth | 0.87 | ft |
| Percent Full | 50.2 | % |
| Critical Slope | 0.00590 | ft/ft |
| Velocity | 5.74 | ft/s |
| Velocity Head | 0.51 | ft |
| Specific Energy | 1.26 | ft |
| Froude Number | 1.31 | |
| Maximum Discharge | 10.98 | $ft^3/s$ |
| Discharge Full | 10.11 | $ft^3/s$ |
| Slope Full | 0.00244 | ft/ft |
| Flow Type | SuperCritical | |

## GVF Input Data

| | | |
|---|---|---|
| Downstream Depth | 0.00 | ft |
| Length | 0.00 | ft |
| Number Of Steps | 0 | |

## GVF Output Data

| | | |
|---|---|---|
| Upstream Depth | 0.00 | ft |
| Profile Description | | |
| Profile Headloss | 0.00 | ft |
| Average End Depth Over Rise | 0.00 | % |
| Normal Depth Over Rise | 50.22 | % |
| Downstream Velocity | Infinity | ft/s |
| Upstream Velocity | Infinity | ft/s |

# Worksheet for MH 199-200

## Project Description

| | |
|---|---|
| Friction Method | Kutter Formula |
| Solve For | Normal Depth |

## Input Data

| | | |
|---|---|---|
| Roughness Coefficient | 0.013 | |
| Channel Slope | 0.00990 | ft/ft |
| Diameter | 1.50 | ft |
| Discharge | 5.206 | $ft^3/s$ |

## Results

| | | |
|---|---|---|
| Normal Depth | 0.75 | ft |
| Flow Area | 0.89 | $ft^2$ |
| Wetted Perimeter | 2.36 | ft |
| Top Width | 1.50 | ft |
| Critical Depth | 0.88 | ft |
| Percent Full | 50.2 | % |
| Critical Slope | 0.00594 | ft/ft |
| Velocity | 5.86 | ft/s |
| Velocity Head | 0.53 | ft |
| Specific Energy | 1.29 | ft |
| Froude Number | 1.34 | |
| Maximum Discharge | 11.21 | $ft^3/s$ |
| Discharge Full | 10.32 | $ft^3/s$ |
| Slope Full | 0.00254 | ft/ft |
| Flow Type | SuperCritical | |

## GVF Input Data

| | | |
|---|---|---|
| Downstream Depth | 0.00 | ft |
| Length | 0.00 | ft |
| Number Of Steps | 0 | |

## GVF Output Data

| | | |
|---|---|---|
| Upstream Depth | 0.00 | ft |
| Profile Description | | |
| Profile Headloss | 0.00 | ft |
| Average End Depth Over Rise | 0.00 | % |
| Normal Depth Over Rise | 50.23 | % |
| Downstream Velocity | Infinity | ft/s |
| Upstream Velocity | Infinity | ft/s |

# Worksheet for MH 200-201

## Project Description

| | |
|---|---|
| Friction Method | Kutter Formula |
| Solve For | Normal Depth |

## Input Data

| | | |
|---|---|---|
| Roughness Coefficient | 0.013 | |
| Channel Slope | 0.00980 | ft/ft |
| Diameter | 1.50 | ft |
| Discharge | 5.210 | $ft^3/s$ |

## Results

| | | |
|---|---|---|
| Normal Depth | 0.76 | ft |
| Flow Area | 0.89 | $ft^2$ |
| Wetted Perimeter | 2.37 | ft |
| Top Width | 1.50 | ft |
| Critical Depth | 0.88 | ft |
| Percent Full | 50.4 | % |
| Critical Slope | 0.00594 | ft/ft |
| Velocity | 5.84 | ft/s |
| Velocity Head | 0.53 | ft |
| Specific Energy | 1.29 | ft |
| Froude Number | 1.33 | |
| Maximum Discharge | 11.16 | $ft^3/s$ |
| Discharge Full | 10.27 | $ft^3/s$ |
| Slope Full | 0.00254 | ft/ft |
| Flow Type | SuperCritical | |

## GVF Input Data

| | | |
|---|---|---|
| Downstream Depth | 0.00 | ft |
| Length | 0.00 | ft |
| Number Of Steps | 0 | |

## GVF Output Data

| | | |
|---|---|---|
| Upstream Depth | 0.00 | ft |
| Profile Description | | |
| Profile Headloss | 0.00 | ft |
| Average End Depth Over Rise | 0.00 | % |
| Normal Depth Over Rise | 50.40 | % |
| Downstream Velocity | Infinity | ft/s |
| Upstream Velocity | Infinity | ft/s |

# Worksheet for MH 201-202

## Project Description

| | |
|---|---|
| Friction Method | Kutter Formula |
| Solve For | Normal Depth |

## Input Data

| | | |
|---|---|---|
| Roughness Coefficient | 0.013 | |
| Channel Slope | 0.01110 | ft/ft |
| Diameter | 1.50 | ft |
| Discharge | 5.214 | $ft^3/s$ |

## Results

| | | |
|---|---|---|
| Normal Depth | 0.73 | ft |
| Flow Area | 0.85 | $ft^2$ |
| Wetted Perimeter | 2.32 | ft |
| Top Width | 1.50 | ft |
| Critical Depth | 0.88 | ft |
| Percent Full | 48.7 | % |
| Critical Slope | 0.00594 | ft/ft |
| Velocity | 6.11 | ft/s |
| Velocity Head | 0.58 | ft |
| Specific Energy | 1.31 | ft |
| Froude Number | 1.43 | |
| Maximum Discharge | 11.87 | $ft^3/s$ |
| Discharge Full | 10.93 | $ft^3/s$ |
| Slope Full | 0.00255 | ft/ft |
| Flow Type | SuperCritical | |

## GVF Input Data

| | | |
|---|---|---|
| Downstream Depth | 0.00 | ft |
| Length | 0.00 | ft |
| Number Of Steps | 0 | |

## GVF Output Data

| | | |
|---|---|---|
| Upstream Depth | 0.00 | ft |
| Profile Description | | |
| Profile Headloss | 0.00 | ft |
| Average End Depth Over Rise | 0.00 | % |
| Normal Depth Over Rise | 48.68 | % |
| Downstream Velocity | Infinity | ft/s |
| Upstream Velocity | Infinity | ft/s |

# Worksheet for MH 202-203

## Project Description

| | |
|---|---|
| Friction Method | Kutter Formula |
| Solve For | Normal Depth |

## Input Data

| | | |
|---|---|---|
| Roughness Coefficient | 0.013 | |
| Channel Slope | 0.01000 | ft/ft |
| Diameter | 1.50 | ft |
| Discharge | 5.218 | $ft^3/s$ |

## Results

| | | |
|---|---|---|
| Normal Depth | 0.75 | ft |
| Flow Area | 0.89 | $ft^2$ |
| Wetted Perimeter | 2.36 | ft |
| Top Width | 1.50 | ft |
| Critical Depth | 0.88 | ft |
| Percent Full | 50.2 | % |
| Critical Slope | 0.00595 | ft/ft |
| Velocity | 5.88 | ft/s |
| Velocity Head | 0.54 | ft |
| Specific Energy | 1.29 | ft |
| Froude Number | 1.35 | |
| Maximum Discharge | 11.27 | $ft^3/s$ |
| Discharge Full | 10.38 | $ft^3/s$ |
| Slope Full | 0.00255 | ft/ft |
| Flow Type | SuperCritical | |

## GVF Input Data

| | | |
|---|---|---|
| Downstream Depth | 0.00 | ft |
| Length | 0.00 | ft |
| Number Of Steps | 0 | |

## GVF Output Data

| | | |
|---|---|---|
| Upstream Depth | 0.00 | ft |
| Profile Description | | |
| Profile Headloss | 0.00 | ft |
| Average End Depth Over Rise | 0.00 | % |
| Normal Depth Over Rise | 50.15 | % |
| Downstream Velocity | Infinity | ft/s |
| Upstream Velocity | Infinity | ft/s |

# Worksheet for MH 203-204

## Project Description

| | |
|---|---|
| Friction Method | Kutter Formula |
| Solve For | Normal Depth |

## Input Data

| | | |
|---|---|---|
| Roughness Coefficient | 0.013 | |
| Channel Slope | 0.01560 | ft/ft |
| Diameter | 1.50 | ft |
| Discharge | 5.222 | $ft^3/s$ |

## Results

| | | |
|---|---|---|
| Normal Depth | 0.66 | ft |
| Flow Area | 0.76 | $ft^2$ |
| Wetted Perimeter | 2.18 | ft |
| Top Width | 1.49 | ft |
| Critical Depth | 0.88 | ft |
| Percent Full | 44.3 | % |
| Critical Slope | 0.00595 | ft/ft |
| Velocity | 6.91 | ft/s |
| Velocity Head | 0.74 | ft |
| Specific Energy | 1.41 | ft |
| Froude Number | 1.71 | |
| Maximum Discharge | 14.08 | $ft^3/s$ |
| Discharge Full | 12.97 | $ft^3/s$ |
| Slope Full | 0.00256 | ft/ft |
| Flow Type | SuperCritical | |

## GVF Input Data

| | | |
|---|---|---|
| Downstream Depth | 0.00 | ft |
| Length | 0.00 | ft |
| Number Of Steps | 0 | |

## GVF Output Data

| | | |
|---|---|---|
| Upstream Depth | 0.00 | ft |
| Profile Description | | |
| Profile Headloss | 0.00 | ft |
| Average End Depth Over Rise | 0.00 | % |
| Normal Depth Over Rise | 44.30 | % |
| Downstream Velocity | Infinity | ft/s |
| Upstream Velocity | Infinity | ft/s |

# Worksheet for MH 215-198

## Project Description

| | |
|---|---|
| Friction Method | Kutter Formula |
| Solve For | Normal Depth |

## Input Data

| | | |
|---|---|---|
| Roughness Coefficient | 0.013 | |
| Channel Slope | 0.00920 | ft/ft |
| Diameter | 0.67 | ft |
| Discharge | 0.041 | $ft^3/s$ |

## Results

| | | |
|---|---|---|
| Normal Depth | 0.10 | ft |
| Flow Area | 0.03 | $ft^2$ |
| Wetted Perimeter | 0.52 | ft |
| Top Width | 0.47 | ft |
| Critical Depth | 0.09 | ft |
| Percent Full | 14.4 | % |
| Critical Slope | 0.01150 | ft/ft |
| Velocity | 1.31 | ft/s |
| Velocity Head | 0.03 | ft |
| Specific Energy | 0.12 | ft |
| Froude Number | 0.90 | |
| Maximum Discharge | 1.18 | $ft^3/s$ |
| Discharge Full | 1.08 | $ft^3/s$ |
| Slope Full | 0.00003 | ft/ft |
| Flow Type | SubCritical | |

## GVF Input Data

| | | |
|---|---|---|
| Downstream Depth | 0.00 | ft |
| Length | 0.00 | ft |
| Number Of Steps | 0 | |

## GVF Output Data

| | | |
|---|---|---|
| Upstream Depth | 0.00 | ft |
| Profile Description | | |
| Profile Headloss | 0.00 | ft |
| Average End Depth Over Rise | 0.00 | % |
| Normal Depth Over Rise | 14.40 | % |
| Downstream Velocity | Infinity | ft/s |
| Upstream Velocity | Infinity | ft/s |

# Worksheet for MH 195-196

## Project Description

| | |
|---|---|
| Friction Method | Kutter Formula |
| Solve For | Normal Depth |

## Input Data

| | | |
|---|---|---|
| Roughness Coefficient | 0.013 | |
| Channel Slope | 0.00410 | ft/ft |
| Diameter | 0.67 | ft |
| Discharge | 0.013 | $ft^3/s$ |

## Results

| | | |
|---|---|---|
| Normal Depth | 0.07 | ft |
| Flow Area | 0.02 | $ft^2$ |
| Wetted Perimeter | 0.44 | ft |
| Top Width | 0.41 | ft |
| Critical Depth | 0.05 | ft |
| Percent Full | 10.4 | % |
| Critical Slope | 0.01688 | ft/ft |
| Velocity | 0.67 | ft/s |
| Velocity Head | 0.01 | ft |
| Specific Energy | 0.08 | ft |
| Froude Number | 0.55 | |
| Maximum Discharge | 0.78 | $ft^3/s$ |
| Discharge Full | 0.72 | $ft^3/s$ |
| Slope Full | 0.00001 | ft/ft |
| Flow Type | SubCritical | |

## GVF Input Data

| | | |
|---|---|---|
| Downstream Depth | 0.00 | ft |
| Length | 0.00 | ft |
| Number Of Steps | 0 | |

## GVF Output Data

| | | |
|---|---|---|
| Upstream Depth | 0.00 | ft |
| Profile Description | | |
| Profile Headloss | 0.00 | ft |
| Average End Depth Over Rise | 0.00 | % |
| Normal Depth Over Rise | 10.36 | % |
| Downstream Velocity | Infinity | ft/s |
| Upstream Velocity | Infinity | ft/s |

# Worksheet for MH 196-197

## Project Description

| | |
|---|---|
| Friction Method | Kutter Formula |
| Solve For | Normal Depth |

## Input Data

| | | |
|---|---|---|
| Roughness Coefficient | 0.013 | |
| Channel Slope | 0.00420 | ft/ft |
| Diameter | 0.67 | ft |
| Discharge | 0.013 | $ft^3/s$ |

## Results

| | | |
|---|---|---|
| Normal Depth | 0.07 | ft |
| Flow Area | 0.02 | $ft^2$ |
| Wetted Perimeter | 0.44 | ft |
| Top Width | 0.41 | ft |
| Critical Depth | 0.05 | ft |
| Percent Full | 10.3 | % |
| Critical Slope | -0.01688 | ft/ft |
| Velocity | 0.68 | ft/s |
| Velocity Head | 0.01 | ft |
| Specific Energy | 0.08 | ft |
| Froude Number | 0.55 | |
| Maximum Discharge | 0.79 | $ft^3/s$ |
| Discharge Full | 0.72 | $ft^3/s$ |
| Slope Full | 0.00001 | ft/ft |
| Flow Type | SubCritical | |

## GVF Input Data

| | | |
|---|---|---|
| Downstream Depth | 0.00 | ft |
| Length | 0.00 | ft |
| Number Of Steps | 0 | |

## GVF Output Data

| | | |
|---|---|---|
| Upstream Depth | 0.00 | ft |
| Profile Description | | |
| Profile Headloss | 0.00 | ft |
| Average End Depth Over Rise | 0.00 | % |
| Normal Depth Over Rise | 10.30 | % |
| Downstream Velocity | Infinity | ft/s |
| Upstream Velocity | Infinity | ft/s |

# Worksheet for MH 197-198

## Project Description

| | |
|---|---|
| Friction Method | Kutter Formula |
| Solve For | Normal Depth |

## Input Data

| | | |
|---|---|---|
| Roughness Coefficient | 0.013 | |
| Channel Slope | 0.00470 | ft/ft |
| Diameter | 0.67 | ft |
| Discharge | 0.013 | $ft^3/s$ |

## Results

| | | |
|---|---|---|
| Normal Depth | 0.07 | ft |
| Flow Area | 0.02 | $ft^2$ |
| Wetted Perimeter | 0.43 | ft |
| Top Width | 0.40 | ft |
| Critical Depth | 0.05 | ft |
| Percent Full | 10.0 | % |
| Critical Slope | 0.01688 | ft/ft |
| Velocity | 0.70 | ft/s |
| Velocity Head | 0.01 | ft |
| Specific Energy | 0.08 | ft |
| Froude Number | 0.58 | |
| Maximum Discharge | 0.84 | $ft^3/s$ |
| Discharge Full | 0.77 | $ft^3/s$ |
| Slope Full | 0.00001 | ft/ft |
| Flow Type | SubCritical | |

## GVF Input Data

| | | |
|---|---|---|
| Downstream Depth | 0.00 | ft |
| Length | 0.00 | ft |
| Number Of Steps | 0 | |

## GVF Output Data

| | | |
|---|---|---|
| Upstream Depth | 0.00 | ft |
| Profile Description | | |
| Profile Headloss | 0.00 | ft |
| Average End Depth Over Rise | 0.00 | % |
| Normal Depth Over Rise | 10.05 | % |
| Downstream Velocity | Infinity | ft/s |
| Upstream Velocity | Infinity | ft/s |

# Worksheet for MH 198-204

## Project Description

| | |
|---|---|
| Friction Method | Kutter Formula |
| Solve For | Normal Depth |

## Input Data

| | | |
|---|---|---|
| Roughness Coefficient | 0.013 | |
| Channel Slope | 0.00600 | ft/ft |
| Diameter | 0.67 | ft |
| Discharge | 0.054 | $ft^3/s$ |

## Results

| | | |
|---|---|---|
| Normal Depth | 0.12 | ft |
| Flow Area | 0.04 | $ft^2$ |
| Wetted Perimeter | 0.59 | ft |
| Top Width | 0.51 | ft |
| Critical Depth | 0.10 | ft |
| Percent Full | 17.9 | % |
| Critical Slope | 0.01082 | ft/ft |
| Velocity | 1.26 | ft/s |
| Velocity Head | 0.02 | ft |
| Specific Energy | 0.14 | ft |
| Froude Number | 0.77 | |
| Maximum Discharge | 0.95 | $ft^3/s$ |
| Discharge Full | 0.87 | $ft^3/s$ |
| Slope Full | 0.00004 | ft/ft |
| Flow Type | SubCritical | |

## GVF Input Data

| | | |
|---|---|---|
| Downstream Depth | 0.00 | ft |
| Length | 0.00 | ft |
| Number Of Steps | 0 | |

## GVF Output Data

| | | |
|---|---|---|
| Upstream Depth | 0.00 | ft |
| Profile Description | | |
| Profile Headloss | 0.00 | ft |
| Average End Depth Over Rise | 0.00 | % |
| Normal Depth Over Rise | 17.93 | % |
| Downstream Velocity | Infinity | ft/s |
| Upstream Velocity | Infinity | ft/s |

# Worksheet for MH 204-205

## Project Description

| | |
|---|---|
| Friction Method | Kutter Formula |
| Solve For | Normal Depth |

## Input Data

| | | |
|---|---|---|
| Roughness Coefficient | 0.013 | |
| Channel Slope | 0.01080 | ft/ft |
| Diameter | 1.50 | ft |
| Discharge | 5.281 | $ft^3/s$ |

## Results

| | | |
|---|---|---|
| Normal Depth | 0.74 | ft |
| Flow Area | 0.87 | $ft^2$ |
| Wetted Perimeter | 2.34 | ft |
| Top Width | 1.50 | ft |
| Critical Depth | 0.89 | ft |
| Percent Full | 49.4 | % |
| Critical Slope | 0.00598 | ft/ft |
| Velocity | 6.07 | ft/s |
| Velocity Head | 0.57 | ft |
| Specific Energy | 1.31 | ft |
| Froude Number | 1.40 | |
| Maximum Discharge | 11.71 | $ft^3/s$ |
| Discharge Full | 10.78 | $ft^3/s$ |
| Slope Full | 0.00261 | ft/ft |
| Flow Type | SuperCritical | |

## GVF Input Data

| | | |
|---|---|---|
| Downstream Depth | 0.00 | ft |
| Length | 0.00 | ft |
| Number Of Steps | 0 | |

## GVF Output Data

| | | |
|---|---|---|
| Upstream Depth | 0.00 | ft |
| Profile Description | | |
| Profile Headloss | 0.00 | ft |
| Average End Depth Over Rise | 0.00 | % |
| Normal Depth Over Rise | 49.42 | % |
| Downstream Velocity | Infinity | ft/s |
| Upstream Velocity | Infinity | ft/s |

# Worksheet for MH 205-206

## Project Description

| | |
|---|---|
| Friction Method | Kutter Formula |
| Solve For | Normal Depth |

## Input Data

| | | |
|---|---|---|
| Roughness Coefficient | 0.013 | |
| Channel Slope | 0.01080 | ft/ft |
| Diameter | 1.50 | ft |
| Discharge | 5.286 | $ft^3/s$ |

## Results

| | | |
|---|---|---|
| Normal Depth | 0.74 | ft |
| Flow Area | 0.87 | $ft^2$ |
| Wetted Perimeter | 2.34 | ft |
| Top Width | 1.50 | ft |
| Critical Depth | 0.89 | ft |
| Percent Full | 49.4 | % |
| Critical Slope | 0.00598 | ft/ft |
| Velocity | 6.07 | ft/s |
| Velocity Head | 0.57 | ft |
| Specific Energy | 1.31 | ft |
| Froude Number | 1.40 | |
| Maximum Discharge | 11.71 | $ft^3/s$ |
| Discharge Full | 10.78 | $ft^3/s$ |
| Slope Full | 0.00262 | ft/ft |
| Flow Type | SuperCritical | |

## GVF Input Data

| | | |
|---|---|---|
| Downstream Depth | 0.00 | ft |
| Length | 0.00 | ft |
| Number Of Steps | 0 | |

## GVF Output Data

| | | |
|---|---|---|
| Upstream Depth | 0.00 | ft |
| Profile Description | | |
| Profile Headloss | 0.00 | ft |
| Average End Depth Over Rise | 0.00 | % |
| Normal Depth Over Rise | 49.45 | % |
| Downstream Velocity | Infinity | ft/s |
| Upstream Velocity | Infinity | ft/s |

# Worksheet for MH 206-207

## Project Description

| | |
|---|---|
| Friction Method | Kutter Formula |
| Solve For | Normal Depth |

## Input Data

| | | |
|---|---|---|
| Roughness Coefficient | 0.013 | |
| Channel Slope | 0.00800 | ft/ft |
| Diameter | 1.50 | ft |
| Discharge | 5.291 | $ft^3/s$ |

## Results

| | | |
|---|---|---|
| Normal Depth | 0.81 | ft |
| Flow Area | 0.97 | $ft^2$ |
| Wetted Perimeter | 2.48 | ft |
| Top Width | 1.50 | ft |
| Critical Depth | 0.89 | ft |
| Percent Full | 54.0 | % |
| Critical Slope | 0.00598 | ft/ft |
| Velocity | 5.44 | ft/s |
| Velocity Head | 0.46 | ft |
| Specific Energy | 1.27 | ft |
| Froude Number | 1.19 | |
| Maximum Discharge | 10.08 | $ft^3/s$ |
| Discharge Full | 9.28 | $ft^3/s$ |
| Slope Full | 0.00262 | ft/ft |
| Flow Type | SuperCritical | |

## GVF Input Data

| | | |
|---|---|---|
| Downstream Depth | 0.00 | ft |
| Length | 0.00 | ft |
| Number Of Steps | 0 | |

## GVF Output Data

| | | |
|---|---|---|
| Upstream Depth | 0.00 | ft |
| Profile Description | | |
| Profile Headloss | 0.00 | ft |
| Average End Depth Over Rise | 0.00 | % |
| Normal Depth Over Rise | 54.00 | % |
| Downstream Velocity | Infinity | ft/s |
| Upstream Velocity | Infinity | ft/s |

# Worksheet for MH 207-208

## Project Description

| | |
|---|---|
| Friction Method | Kutter Formula |
| Solve For | Normal Depth |

## Input Data

| | | |
|---|---|---|
| Roughness Coefficient | 0.013 | |
| Channel Slope | 0.00600 | ft/ft |
| Diameter | 1.50 | ft |
| Discharge | 5.297 | $ft^3/s$ |

## Results

| | | |
|---|---|---|
| Normal Depth | 0.89 | ft |
| Flow Area | 1.09 | $ft^2$ |
| Wetted Perimeter | 2.63 | ft |
| Top Width | 1.48 | ft |
| Critical Depth | 0.89 | ft |
| Percent Full | 59.1 | % |
| Critical Slope | 0.00598 | ft/ft |
| Velocity | 4.88 | ft/s |
| Velocity Head | 0.37 | ft |
| Specific Energy | 1.26 | ft |
| Froude Number | 1.00 | |
| Maximum Discharge | 8.72 | $ft^3/s$ |
| Discharge Full | 8.03 | $ft^3/s$ |
| Slope Full | 0.00263 | ft/ft |
| Flow Type | SuperCritical | |

## GVF Input Data

| | | |
|---|---|---|
| Downstream Depth | 0.00 | ft |
| Length | 0.00 | ft |
| Number Of Steps | 0 | |

## GVF Output Data

| | | |
|---|---|---|
| Upstream Depth | 0.00 | ft |
| Profile Description | | |
| Profile Headloss | 0.00 | ft |
| Average End Depth Over Rise | 0.00 | % |
| Normal Depth Over Rise | 59.06 | % |
| Downstream Velocity | Infinity | ft/s |
| Upstream Velocity | Infinity | ft/s |

# Worksheet for MH 208-209

## Project Description

| | |
|---|---|
| Friction Method | Kutter Formula |
| Solve For | Normal Depth |

## Input Data

| | | |
|---|---|---|
| Roughness Coefficient | 0.013 | |
| Channel Slope | 0.01840 | ft/ft |
| Diameter | 1.50 | ft |
| Discharge | 6.917 | $ft^3/s$ |

## Results

| | | |
|---|---|---|
| Normal Depth | 0.74 | ft |
| Flow Area | 0.87 | $ft^2$ |
| Wetted Perimeter | 2.34 | ft |
| Top Width | 1.50 | ft |
| Critical Depth | 1.02 | ft |
| Percent Full | 49.5 | % |
| Critical Slope | 0.00675 | ft/ft |
| Velocity | 7.93 | ft/s |
| Velocity Head | 0.98 | ft |
| Specific Energy | 1.72 | ft |
| Froude Number | 1.83 | |
| Maximum Discharge | 15.30 | $ft^3/s$ |
| Discharge Full | 14.09 | $ft^3/s$ |
| Slope Full | 0.00446 | ft/ft |
| Flow Type | SuperCritical | |

## GVF Input Data

| | | |
|---|---|---|
| Downstream Depth | 0.00 | ft |
| Length | 0.00 | ft |
| Number Of Steps | 0 | |

## GVF Output Data

| | | |
|---|---|---|
| Upstream Depth | 0.00 | ft |
| Profile Description | | |
| Profile Headloss | 0.00 | ft |
| Average End Depth Over Rise | 0.00 | % |
| Normal Depth Over Rise | 49.50 | % |
| Downstream Velocity | Infinity | ft/s |
| Upstream Velocity | Infinity | ft/s |

# Worksheet for MH 209-920

## Project Description

| | |
|---|---|
| Friction Method | Kutter Formula |
| Solve For | Normal Depth |

## Input Data

| | | |
|---|---|---|
| Roughness Coefficient | 0.013 | |
| Channel Slope | 0.01260 | ft/ft |
| Diameter | 1.50 | ft |
| Discharge | 6.917 | $ft^3/s$ |

## Results

| | | |
|---|---|---|
| Normal Depth | 0.83 | ft |
| Flow Area | 1.00 | $ft^2$ |
| Wetted Perimeter | 2.52 | ft |
| Top Width | 1.49 | ft |
| Critical Depth | 1.02 | ft |
| Percent Full | 55.3 | % |
| Critical Slope | 0.00675 | ft/ft |
| Velocity | 6.90 | ft/s |
| Velocity Head | 0.74 | ft |
| Specific Energy | 1.57 | ft |
| Froude Number | 1.48 | |
| Maximum Discharge | 12.65 | $ft^3/s$ |
| Discharge Full | 11.65 | $ft^3/s$ |
| Slope Full | 0.00446 | ft/ft |
| Flow Type | SuperCritical | |

## GVF Input Data

| | | |
|---|---|---|
| Downstream Depth | 0.00 | ft |
| Length | 0.00 | ft |
| Number Of Steps | 0 | |

## GVF Output Data

| | | |
|---|---|---|
| Upstream Depth | 0.00 | ft |
| Profile Description | | |
| Profile Headloss | 0.00 | ft |
| Average End Depth Over Rise | 0.00 | % |
| Normal Depth Over Rise | 55.32 | % |
| Downstream Velocity | Infinity | ft/s |
| Upstream Velocity | Infinity | ft/s |

# Worksheet for MH 920-919

## Project Description

| | |
|---|---|
| Friction Method | Kutter Formula |
| Solve For | Normal Depth |

## Input Data

| | | |
|---|---|---|
| Roughness Coefficient | 0.013 | |
| Channel Slope | 0.01700 | ft/ft |
| Diameter | 1.50 | ft |
| Discharge | 6.917 | $ft^3/s$ |

## Results

| | | |
|---|---|---|
| Normal Depth | 0.76 | ft |
| Flow Area | 0.90 | $ft^2$ |
| Wetted Perimeter | 2.37 | ft |
| Top Width | 1.50 | ft |
| Critical Depth | 1.02 | ft |
| Percent Full | 50.6 | % |
| Critical Slope | 0.00675 | ft/ft |
| Velocity | 7.71 | ft/s |
| Velocity Head | 0.92 | ft |
| Specific Energy | 1.68 | ft |
| Froude Number | 1.76 | |
| Maximum Discharge | 14.70 | $ft^3/s$ |
| Discharge Full | 13.54 | $ft^3/s$ |
| Slope Full | 0.00446 | ft/ft |
| Flow Type | SuperCritical | |

## GVF Input Data

| | | |
|---|---|---|
| Downstream Depth | 0.00 | ft |
| Length | 0.00 | ft |
| Number Of Steps | 0 | |

## GVF Output Data

| | | |
|---|---|---|
| Upstream Depth | 0.00 | ft |
| Profile Description | | |
| Profile Headloss | 0.00 | ft |
| Average End Depth Over Rise | 0.00 | % |
| Normal Depth Over Rise | 50.62 | % |
| Downstream Velocity | Infinity | ft/s |
| Upstream Velocity | Infinity | ft/s |

# Worksheet for MH 919-918

## Project Description

| | |
|---|---|
| Friction Method | Kutter Formula |
| Solve For | Normal Depth |

## Input Data

| | | |
|---|---|---|
| Roughness Coefficient | 0.013 | |
| Channel Slope | 0.00630 | ft/ft |
| Diameter | 1.50 | ft |
| Discharge | 6.917 | $ft^3/s$ |

## Results

| | | |
|---|---|---|
| Normal Depth | 1.04 | ft |
| Flow Area | 1.31 | $ft^2$ |
| Wetted Perimeter | 2.96 | ft |
| Top Width | 1.38 | ft |
| Critical Depth | 1.02 | ft |
| Percent Full | 69.6 | % |
| Critical Slope | 0.00675 | ft/ft |
| Velocity | 5.27 | ft/s |
| Velocity Head | 0.43 | ft |
| Specific Energy | 1.48 | ft |
| Froude Number | 0.95 | |
| Maximum Discharge | 8.94 | $ft^3/s$ |
| Discharge Full | 8.23 | $ft^3/s$ |
| Slope Full | 0.00446 | ft/ft |
| Flow Type | SubCritical | |

## GVF Input Data

| | | |
|---|---|---|
| Downstream Depth | 0.00 | ft |
| Length | 0.00 | ft |
| Number Of Steps | 0 | |

## GVF Output Data

| | | |
|---|---|---|
| Upstream Depth | 0.00 | ft |
| Profile Description | | |
| Profile Headloss | 0.00 | ft |
| Average End Depth Over Rise | 0.00 | % |
| Normal Depth Over Rise | 69.63 | % |
| Downstream Velocity | Infinity | ft/s |
| Upstream Velocity | Infinity | ft/s |

# Worksheet for MH 918-917

## Project Description

| | |
|---|---|
| Friction Method | Kutter Formula |
| Solve For | Normal Depth |

## Input Data

| | | |
|---|---|---|
| Roughness Coefficient | 0.013 | |
| Channel Slope | 0.00920 | ft/ft |
| Diameter | 1.50 | ft |
| Discharge | 6.917 | $ft^3/s$ |

## Results

| | | |
|---|---|---|
| Normal Depth | 0.92 | ft |
| Flow Area | 1.13 | $ft^2$ |
| Wetted Perimeter | 2.69 | ft |
| Top Width | 1.46 | ft |
| Critical Depth | 1.02 | ft |
| Percent Full | 61.1 | % |
| Critical Slope | 0.00675 | ft/ft |
| Velocity | 6.12 | ft/s |
| Velocity Head | 0.58 | ft |
| Specific Energy | 1.50 | ft |
| Froude Number | 1.23 | |
| Maximum Discharge | 10.81 | $ft^3/s$ |
| Discharge Full | 9.95 | $ft^3/s$ |
| Slope Full | 0.00446 | ft/ft |
| Flow Type | SuperCritical | |

## GVF Input Data

| | | |
|---|---|---|
| Downstream Depth | 0.00 | ft |
| Length | 0.00 | ft |
| Number Of Steps | 0 | |

## GVF Output Data

| | | |
|---|---|---|
| Upstream Depth | 0.00 | ft |
| Profile Description | | |
| Profile Headloss | 0.00 | ft |
| Average End Depth Over Rise | 0.00 | % |
| Normal Depth Over Rise | 61.06 | % |
| Downstream Velocity | Infinity | ft/s |
| Upstream Velocity | Infinity | ft/s |

# Worksheet for MH 917-916

## Project Description

| | |
|---|---|
| Friction Method | Kutter Formula |
| Solve For | Normal Depth |

## Input Data

| | | |
|---|---|---|
| Roughness Coefficient | 0.013 | |
| Channel Slope | 0.04340 | ft/ft |
| Diameter | 1.50 | ft |
| Discharge | 6.917 | $ft^3/s$ |

## Results

| | | |
|---|---|---|
| Normal Depth | 0.59 | ft |
| Flow Area | 0.64 | $ft^2$ |
| Wetted Perimeter | 2.03 | ft |
| Top Width | 1.46 | ft |
| Critical Depth | 1.02 | ft |
| Percent Full | 39.1 | % |
| Critical Slope | 0.00675 | ft/ft |
| Velocity | 10.79 | ft/s |
| Velocity Head | 1.81 | ft |
| Specific Energy | 2.40 | ft |
| Froude Number | 2.88 | |
| Maximum Discharge | 23.50 | $ft^3/s$ |
| Discharge Full | 21.64 | $ft^3/s$ |
| Slope Full | 0.00446 | ft/ft |
| Flow Type | SuperCritical | |

## GVF Input Data

| | | |
|---|---|---|
| Downstream Depth | 0.00 | ft |
| Length | 0.00 | ft |
| Number Of Steps | 0 | |

## GVF Output Data

| | | |
|---|---|---|
| Upstream Depth | 0.00 | ft |
| Profile Description | | |
| Profile Headloss | 0.00 | ft |
| Average End Depth Over Rise | 0.00 | % |
| Normal Depth Over Rise | 39.13 | % |
| Downstream Velocity | Infinity | ft/s |
| Upstream Velocity | Infinity | ft/s |

# Worksheet for MH 916-915

## Project Description

| | |
|---|---|
| Friction Method | Kutter Formula |
| Solve For | Normal Depth |

## Input Data

| | | |
|---|---|---|
| Roughness Coefficient | 0.013 | |
| Channel Slope | 0.01040 | ft/ft |
| Diameter | 1.50 | ft |
| Discharge | 6.917 | $ft^3/s$ |

## Results

| | | |
|---|---|---|
| Normal Depth | 0.88 | ft |
| Flow Area | 1.08 | $ft^2$ |
| Wetted Perimeter | 2.62 | ft |
| Top Width | 1.48 | ft |
| Critical Depth | 1.02 | ft |
| Percent Full | 58.7 | % |
| Critical Slope | 0.00675 | ft/ft |
| Velocity | 6.41 | ft/s |
| Velocity Head | 0.64 | ft |
| Specific Energy | 1.52 | ft |
| Froude Number | 1.32 | |
| Maximum Discharge | 11.49 | $ft^3/s$ |
| Discharge Full | 10.58 | $ft^3/s$ |
| Slope Full | 0.00446 | ft/ft |
| Flow Type | SuperCritical | |

## GVF Input Data

| | | |
|---|---|---|
| Downstream Depth | 0.00 | ft |
| Length | 0.00 | ft |
| Number Of Steps | 0 | |

## GVF Output Data

| | | |
|---|---|---|
| Upstream Depth | 0.00 | ft |
| Profile Description | | |
| Profile Headloss | 0.00 | ft |
| Average End Depth Over Rise | 0.00 | % |
| Normal Depth Over Rise | 58.71 | % |
| Downstream Velocity | Infinity | ft/s |
| Upstream Velocity | Infinity | ft/s |

# Worksheet for MH 915-914

## Project Description

| | |
|---|---|
| Friction Method | Kutter Formula |
| Solve For | Normal Depth |

## Input Data

| | | |
|---|---|---|
| Roughness Coefficient | 0.013 | |
| Channel Slope | 0.00530 | ft/ft |
| Diameter | 1.50 | ft |
| Discharge | 6.917 | $ft^3/s$ |

## Results

| | | |
|---|---|---|
| Normal Depth | 1.12 | ft |
| Flow Area | 1.41 | $ft^2$ |
| Wetted Perimeter | 3.13 | ft |
| Top Width | 1.31 | ft |
| Critical Depth | 1.02 | ft |
| Percent Full | 74.6 | % |
| Critical Slope | 0.00675 | ft/ft |
| Velocity | 4.89 | ft/s |
| Velocity Head | 0.37 | ft |
| Specific Energy | 1.49 | ft |
| Froude Number | 0.83 | |
| Maximum Discharge | 8.19 | $ft^3/s$ |
| Discharge Full | 7.54 | $ft^3/s$ |
| Slope Full | 0.00446 | ft/ft |
| Flow Type | SubCritical | |

## GVF Input Data

| | | |
|---|---|---|
| Downstream Depth | 0.00 | ft |
| Length | 0.00 | ft |
| Number Of Steps | 0 | |

## GVF Output Data

| | | |
|---|---|---|
| Upstream Depth | 0.00 | ft |
| Profile Description | | |
| Profile Headloss | 0.00 | ft |
| Average End Depth Over Rise | 0.00 | % |
| Normal Depth Over Rise | 74.58 | % |
| Downstream Velocity | Infinity | ft/s |
| Upstream Velocity | Infinity | ft/s |

# Worksheet for MH 914-913

## Project Description

| | |
|---|---|
| Friction Method | Kutter Formula |
| Solve For | Normal Depth |

## Input Data

| | | |
|---|---|---|
| Roughness Coefficient | 0.013 | |
| Channel Slope | 0.01140 | ft/ft |
| Diameter | 1.50 | ft |
| Discharge | 6.917 | $ft^3/s$ |

## Results

| | | |
|---|---|---|
| Normal Depth | 0.86 | ft |
| Flow Area | 1.04 | $ft^2$ |
| Wetted Perimeter | 2.57 | ft |
| Top Width | 1.49 | ft |
| Critical Depth | 1.02 | ft |
| Percent Full | 57.0 | % |
| Critical Slope | 0.00675 | ft/ft |
| Velocity | 6.64 | ft/s |
| Velocity Head | 0.69 | ft |
| Specific Energy | 1.54 | ft |
| Froude Number | 1.40 | |
| Maximum Discharge | 12.03 | $ft^3/s$ |
| Discharge Full | 11.08 | $ft^3/s$ |
| Slope Full | 0.00446 | ft/ft |
| Flow Type | SuperCritical | |

## GVF Input Data

| | | |
|---|---|---|
| Downstream Depth | 0.00 | ft |
| Length | 0.00 | ft |
| Number Of Steps | 0 | |

## GVF Output Data

| | | |
|---|---|---|
| Upstream Depth | 0.00 | ft |
| Profile Description | | |
| Profile Headloss | 0.00 | ft |
| Average End Depth Over Rise | 0.00 | % |
| Normal Depth Over Rise | 57.05 | % |
| Downstream Velocity | Infinity | ft/s |
| Upstream Velocity | Infinity | ft/s |

# APPENDIX E

**Proposed Sewer Capacity Calculations**

# Worksheet for Node A to B

## Project Description

| | |
|---|---|
| Friction Method | Kutter Formula |
| Solve For | Normal Depth |

## Input Data

| | | |
|---|---|---|
| Roughness Coefficient | 0.013 | |
| Channel Slope | 0.03610 | ft/ft |
| Diameter | 1.00 | ft |
| Discharge | 2.084 | $ft^3/s$ |

## Results

| | | |
|---|---|---|
| Normal Depth | 0.39 | ft |
| Flow Area | 0.29 | $ft^2$ |
| Wetted Perimeter | 1.36 | ft |
| Top Width | 0.98 | ft |
| Critical Depth | 0.62 | ft |
| Percent Full | 39.4 | % |
| Critical Slope | 0.00749 | ft/ft |
| Velocity | 7.26 | ft/s |
| Velocity Head | 0.82 | ft |
| Specific Energy | 1.21 | ft |
| Froude Number | 2.36 | |
| Maximum Discharge | 7.06 | $ft^3/s$ |
| Discharge Full | 6.48 | $ft^3/s$ |
| Slope Full | 0.00376 | ft/ft |
| Flow Type | SuperCritical | |

## GVF Input Data

| | | |
|---|---|---|
| Downstream Depth | 0.00 | ft |
| Length | 0.00 | ft |
| Number Of Steps | 0 | |

## GVF Output Data

| | | |
|---|---|---|
| Upstream Depth | 0.00 | ft |
| Profile Description | | |
| Profile Headloss | 0.00 | ft |
| Average End Depth Over Rise | 0.00 | % |
| Normal Depth Over Rise | 39.36 | % |
| Downstream Velocity | Infinity | ft/s |
| Upstream Velocity | Infinity | ft/s |

# Worksheet for Node B to C

## Project Description

| | |
|---|---|
| Friction Method | Kutter Formula |
| Solve For | Normal Depth |

## Input Data

| | | |
|---|---|---|
| Roughness Coefficient | 0.013 | |
| Channel Slope | 0.02370 | ft/ft |
| Diameter | 1.25 | ft |
| Discharge | 4.045 | $ft^3/s$ |

## Results

| | | |
|---|---|---|
| Normal Depth | 0.56 | ft |
| Flow Area | 0.54 | $ft^2$ |
| Wetted Perimeter | 1.84 | ft |
| Top Width | 1.24 | ft |
| Critical Depth | 0.81 | ft |
| Percent Full | 45.2 | % |
| Critical Slope | 0.00704 | ft/ft |
| Velocity | 7.51 | ft/s |
| Velocity Head | 0.88 | ft |
| Specific Energy | 1.44 | ft |
| Froude Number | 2.01 | |
| Maximum Discharge | 10.55 | $ft^3/s$ |
| Discharge Full | 9.70 | $ft^3/s$ |
| Slope Full | 0.00415 | ft/ft |
| Flow Type | SuperCritical | |

## GVF Input Data

| | | |
|---|---|---|
| Downstream Depth | 0.00 | ft |
| Length | 0.00 | ft |
| Number Of Steps | 0 | |

## GVF Output Data

| | | |
|---|---|---|
| Upstream Depth | 0.00 | ft |
| Profile Description | | |
| Profile Headloss | 0.00 | ft |
| Average End Depth Over Rise | 0.00 | % |
| Normal Depth Over Rise | 45.18 | % |
| Downstream Velocity | Infinity | ft/s |
| Upstream Velocity | Infinity | ft/s |

# Worksheet for Node C to D

## Project Description

| | |
|---|---|
| Friction Method | Kutter Formula |
| Solve For | Normal Depth |

## Input Data

| | | |
|---|---|---|
| Roughness Coefficient | 0.013 | |
| Channel Slope | 0.01220 | ft/ft |
| Diameter | 1.25 | ft |
| Discharge | 4.045 | $ft^3/s$ |

## Results

| | | |
|---|---|---|
| Normal Depth | 0.68 | ft |
| Flow Area | 0.69 | $ft^2$ |
| Wetted Perimeter | 2.08 | ft |
| Top Width | 1.24 | ft |
| Critical Depth | 0.81 | ft |
| Percent Full | 54.6 | % |
| Critical Slope | 0.00704 | ft/ft |
| Velocity | 5.90 | ft/s |
| Velocity Head | 0.54 | ft |
| Specific Energy | 1.22 | ft |
| Froude Number | 1.40 | |
| Maximum Discharge | 7.57 | $ft^3/s$ |
| Discharge Full | 6.96 | $ft^3/s$ |
| Slope Full | 0.00415 | ft/ft |
| Flow Type | SuperCritical | |

## GVF Input Data

| | | |
|---|---|---|
| Downstream Depth | 0.00 | ft |
| Length | 0.00 | ft |
| Number Of Steps | 0 | |

## GVF Output Data

| | | |
|---|---|---|
| Upstream Depth | 0.00 | ft |
| Profile Description | | |
| Profile Headloss | 0.00 | ft |
| Average End Depth Over Rise | 0.00 | % |
| Normal Depth Over Rise | 54.61 | % |
| Downstream Velocity | Infinity | ft/s |
| Upstream Velocity | Infinity | ft/s |

# Worksheet for Node D to E

## Project Description

| | |
|---|---|
| Friction Method | Kutter Formula |
| Solve For | Normal Depth |

## Input Data

| | | |
|---|---|---|
| Roughness Coefficient | 0.013 | |
| Channel Slope | 0.00970 | ft/ft |
| Diameter | 1.25 | ft |
| Discharge | 4.068 | $ft^3/s$ |

## Results

| | | |
|---|---|---|
| Normal Depth | 0.74 | ft |
| Flow Area | 0.75 | $ft^2$ |
| Wetted Perimeter | 2.19 | ft |
| Top Width | 1.23 | ft |
| Critical Depth | 0.82 | ft |
| Percent Full | 58.8 | % |
| Critical Slope | 0.00706 | ft/ft |
| Velocity | 5.42 | ft/s |
| Velocity Head | 0.46 | ft |
| Specific Energy | 1.19 | ft |
| Froude Number | 1.22 | |
| Maximum Discharge | 6.74 | $ft^3/s$ |
| Discharge Full | 6.20 | $ft^3/s$ |
| Slope Full | 0.00419 | ft/ft |
| Flow Type | SuperCritical | |

## GVF Input Data

| | | |
|---|---|---|
| Downstream Depth | 0.00 | ft |
| Length | 0.00 | ft |
| Number Of Steps | 0 | |

## GVF Output Data

| | | |
|---|---|---|
| Upstream Depth | 0.00 | ft |
| Profile Description | | |
| Profile Headloss | 0.00 | ft |
| Average End Depth Over Rise | 0.00 | % |
| Normal Depth Over Rise | 58.82 | % |
| Downstream Velocity | Infinity | ft/s |
| Upstream Velocity | Infinity | ft/s |

# Worksheet for Node E to F

## Project Description

| | |
|---|---|
| Friction Method | Kutter Formula |
| Solve For | Normal Depth |

## Input Data

| | | |
|---|---|---|
| Roughness Coefficient | 0.013 | |
| Channel Slope | 0.01150 | ft/ft |
| Diameter | 1.25 | ft |
| Discharge | 4.095 | $ft^3/s$ |

## Results

| | | |
|---|---|---|
| Normal Depth | 0.70 | ft |
| Flow Area | 0.71 | $ft^2$ |
| Wetted Perimeter | 2.11 | ft |
| Top Width | 1.24 | ft |
| Critical Depth | 0.82 | ft |
| Percent Full | 56.0 | % |
| Critical Slope | 0.00708 | ft/ft |
| Velocity | 5.79 | ft/s |
| Velocity Head | 0.52 | ft |
| Specific Energy | 1.22 | ft |
| Froude Number | 1.35 | |
| Maximum Discharge | 7.35 | $ft^3/s$ |
| Discharge Full | 6.75 | $ft^3/s$ |
| Slope Full | 0.00425 | ft/ft |
| Flow Type | SuperCritical | |

## GVF Input Data

| | | |
|---|---|---|
| Downstream Depth | 0.00 | ft |
| Length | 0.00 | ft |
| Number Of Steps | 0 | |

## GVF Output Data

| | | |
|---|---|---|
| Upstream Depth | 0.00 | ft |
| Profile Description | | |
| Profile Headloss | 0.00 | ft |
| Average End Depth Over Rise | 0.00 | % |
| Normal Depth Over Rise | 56.02 | % |
| Downstream Velocity | Infinity | ft/s |
| Upstream Velocity | Infinity | ft/s |

# Worksheet for Node F to G

## Project Description

| | |
|---|---|
| Friction Method | Kutter Formula |
| Solve For | Normal Depth |

## Input Data

| | | |
|---|---|---|
| Roughness Coefficient | 0.013 | |
| Channel Slope | 0.01150 | ft/ft |
| Diameter | 1.25 | ft |
| Discharge | 4.767 | $ft^3/s$ |

## Results

| | | |
|---|---|---|
| Normal Depth | 0.77 | ft |
| Flow Area | 0.79 | $ft^2$ |
| Wetted Perimeter | 2.26 | ft |
| Top Width | 1.22 | ft |
| Critical Depth | 0.89 | ft |
| Percent Full | 61.6 | % |
| Critical Slope | 0.00773 | ft/ft |
| Velocity | 6.01 | ft/s |
| Velocity Head | 0.56 | ft |
| Specific Energy | 1.33 | ft |
| Froude Number | 1.31 | |
| Maximum Discharge | 7.35 | $ft^3/s$ |
| Discharge Full | 6.75 | $ft^3/s$ |
| Slope Full | 0.00575 | ft/ft |
| Flow Type | SuperCritical | |

## GVF Input Data

| | | |
|---|---|---|
| Downstream Depth | 0.00 | ft |
| Length | 0.00 | ft |
| Number Of Steps | 0 | |

## GVF Output Data

| | | |
|---|---|---|
| Upstream Depth | 0.00 | ft |
| Profile Description | | |
| Profile Headloss | 0.00 | ft |
| Average End Depth Over Rise | 0.00 | % |
| Normal Depth Over Rise | 61.64 | % |
| Downstream Velocity | Infinity | ft/s |
| Upstream Velocity | Infinity | ft/s |

# Worksheet for Node G to H

## Project Description

| | |
|---|---|
| Friction Method | Kutter Formula |
| Solve For | Normal Depth |

## Input Data

| | | |
|---|---|---|
| Roughness Coefficient | 0.013 | |
| Channel Slope | 0.00890 | ft/ft |
| Diameter | 1.25 | ft |
| Discharge | 4.847 | $ft^3/s$ |

## Results

| | | |
|---|---|---|
| Normal Depth | 0.85 | ft |
| Flow Area | 0.89 | $ft^2$ |
| Wetted Perimeter | 2.43 | ft |
| Top Width | 1.17 | ft |
| Critical Depth | 0.89 | ft |
| Percent Full | 68.1 | % |
| Critical Slope | 0.00782 | ft/ft |
| Velocity | 5.45 | ft/s |
| Velocity Head | 0.46 | ft |
| Specific Energy | 1.31 | ft |
| Froude Number | 1.10 | |
| Maximum Discharge | 6.46 | $ft^3/s$ |
| Discharge Full | 5.94 | $ft^3/s$ |
| Slope Full | 0.00594 | ft/ft |
| Flow Type | SuperCritical | |

## GVF Input Data

| | | |
|---|---|---|
| Downstream Depth | 0.00 | ft |
| Length | 0.00 | ft |
| Number Of Steps | 0 | |

## GVF Output Data

| | | |
|---|---|---|
| Upstream Depth | 0.00 | ft |
| Profile Description | | |
| Profile Headloss | 0.00 | ft |
| Average End Depth Over Rise | 0.00 | % |
| Normal Depth Over Rise | 68.06 | % |
| Downstream Velocity | Infinity | ft/s |
| Upstream Velocity | Infinity | ft/s |

# Worksheet for Node H to I

## Project Description

| | |
|---|---|
| Friction Method | Kutter Formula |
| Solve For | Normal Depth |

## Input Data

| | | |
|---|---|---|
| Roughness Coefficient | 0.013 | |
| Channel Slope | 0.00750 | ft/ft |
| Diameter | 1.25 | ft |
| Discharge | 4.856 | $ft^3/s$ |

## Results

| | | |
|---|---|---|
| Normal Depth | 0.91 | ft |
| Flow Area | 0.96 | $ft^2$ |
| Wetted Perimeter | 2.55 | ft |
| Top Width | 1.11 | ft |
| Critical Depth | 0.89 | ft |
| Percent Full | 72.8 | % |
| Critical Slope | 0.00783 | ft/ft |
| Velocity | 5.08 | ft/s |
| Velocity Head | 0.40 | ft |
| Specific Energy | 1.31 | ft |
| Froude Number | 0.97 | |
| Maximum Discharge | 5.93 | $ft^3/s$ |
| Discharge Full | 5.45 | $ft^3/s$ |
| Slope Full | 0.00596 | ft/ft |
| Flow Type | SubCritical | |

## GVF Input Data

| | | |
|---|---|---|
| Downstream Depth | 0.00 | ft |
| Length | 0.00 | ft |
| Number Of Steps | 0 | |

## GVF Output Data

| | | |
|---|---|---|
| Upstream Depth | 0.00 | ft |
| Profile Description | | |
| Profile Headloss | 0.00 | ft |
| Average End Depth Over Rise | 0.00 | % |
| Normal Depth Over Rise | 72.75 | % |
| Downstream Velocity | Infinity | ft/s |
| Upstream Velocity | Infinity | ft/s |

# APPENDIX F

**References**

**a.** **City of Santa Clarita Land Use and Coefficients**

**b.** **Los Angeles County Land Use and Coefficients/**
**Los Angeles County Zoning Map**
**LandVision-Zoning Map**

**c.** **County Standard S-C4**

**d.** **Copy of County Sewer Maintenance District Maps**

**e.** **Copy of Existing Main Line Sewer Plans**

**f.** **Copy of Proposed VTTM 71216 (11 x 17)**

City of Santa Clarita
Development Services Division

# SEWAGE FLOW COEFFICIENTS

| ZONING | DESCRIPTION | COEFFICIENT (cfs/gross acreage) | COEFFICIENT (cfs/dwelling unit) |
|---|---|---|---|
| OS | Open Space | 0.0002 | ------- |
| A | Agricultural - 1 single family home/ legal lot | 0.0002 | ------- |
| RE | Residential Estate – large custom single family homes on uniquely configured lots | 0.00075 | ------- |
| RVL | Residential Very Low Density - 1 DU/AC | 0.001 | 0.001 |
| RL | Residential Low Density – 2.2 DU/AC | 0.0015 | 0.001 |
| RS | Residential Suburban - 5 DU/AC | 0.005 | 0.001 |
| RM | Residential Moderate – 11 DU/AC | 0.012 | 0.001 |
| RMH | Residential Medium High – 20 DU/AC | 0.015 | 0.001 |
| RH | Residential High – 28 DU/AC | 0.023 | 0.001 |
| CTC | Commercial Town Center | 0.015 | ------- |
| CC | Community Commercial | 0.015 | ------- |
| CN | Commercial Neighborhood | 0.015 | ------- |
| CO | Commercial Office | 0.015 | ------- |
| VSR | Visitor Serving/Resort | 0.021 | ------- |
| BP | Business Park | 0.021 | ------- |
| IC | Industrial Commercial | 0.021 | ------- |
| I | Industrial | 0.021 | ------- |

Notes:

- The coefficient to be used for any zoned area not listed in this table will be determined by the City Engineer based upon the intended development and use.
- Open space coefficient: this coefficient is to account for water infiltration into sewer pipe.
- Coefficients in cfs/gross acreage shall be used for areas that are not yet developed and not yet entitled.
- Coefficients in cfs/dwelling unit shall be used for developed areas and areas that are entitled.

7

Estimated Average Daily Sewage Flows for Various Occupancies

| Occupancy | Abbreviation | *Average daily flow | |
|---|---|---|---|
| Apartment Buildings: | | | |
| Bachelor or Single dwelling units | Apt | ~~100~~ | gal/D.U. → 150 |
| 1 bedroom dwelling units | Apt | ~~150~~ | gal/D.U. → 200 |
| 2 bedroom dwelling units | Apt | ~~200~~ | gal/D.U. → 250 |
| 3 bedroom or more dwelling units | Apt | ~~250~~ | gal/D.U. → use 300 GPD per SMP |
| Auditoriums, churches, etc. | Aud | 5 | gal/seat |
| Automobile parking | P | 25 | gal/1000 sq ft gross floor area |
| Bars, cocktails lounges, etc. | Bar | 20 | gal/seat |
| Commercial Shops & Stores | CS | 100 | gal/1000 sq ft gross floor area |
| Hospitals (surgical) | HS | 500 | gal/bed |
| Hospitals (convalescent) | HC | 85 | gal/bed |
| Hotels | H | 150 | gal/room |
| Medical Buildings | MB | 300 | gal/1000 sq ft gross floor area |
| Motels | M | 150 | gal/unit |
| Office Buildings | Off | 200 | gal/1000 sq ft gross floor area |
| Restaurants, cafeterias, etc. | R | 50 | gal/seat |
| Schools: | | | |
| Elementary or Jr. High | S | 10 | gal/student |
| High Schools | HS | 15 | gal/student |
| Universities or Colleges | U | 20 | gal/student |
| College Dormitories | CD | 85 | gal/student |

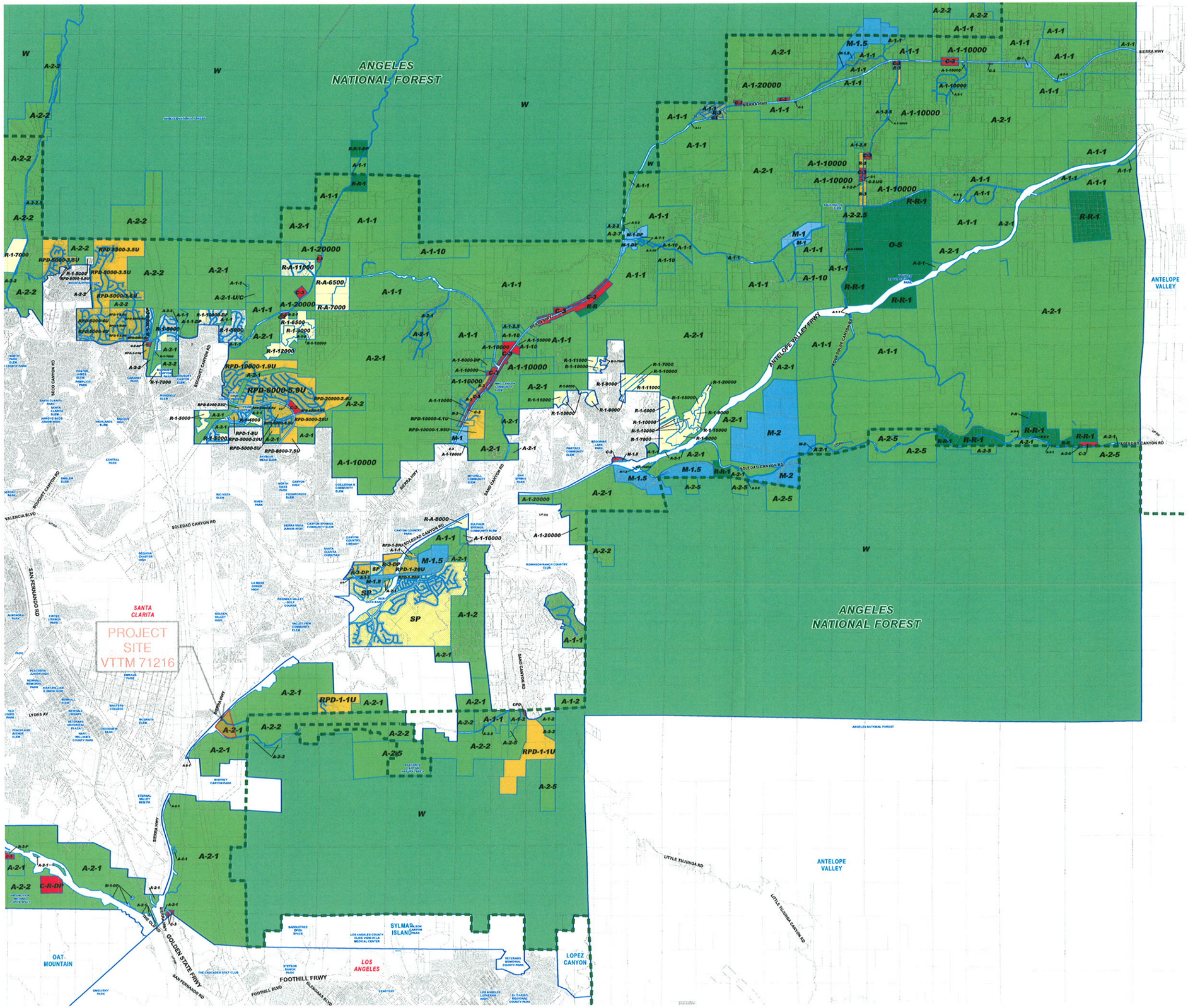
*Multiply the average daily flow by 2.5 to obtain the peak flow

**Zoning Coefficients**

| Zone | Coefficient (cfs/Acre) |
|---|---|
| **Agriculture** | **0.001** |
| **Residential+:** | |
| **R-1** | **0.004** |
| **R-2** | **0.008** |
| **R-3** | **0.012** |
| **R-4** | **0.016*** |
| **Commercial:** | |
| **C-1 through C-4** | **0.015*** |
| **Heavy Industrial:** | |
| **M1 through M-4** | **0.021*** |

***Individual building, commercial or industrial plant capacities shall be the determining factor when they exceed the coefficients shown**

**+ Use 0.001 (cfs/unit) for condominiums only**




# Los Angeles County

# SANTA CLARITA VALLEY SOUTH EAST PORTION (Sheet 4 of 4)

## Zoning

### LEGEND:

**Zoning**

- R-1 - Single-family residence
- R-2 - Two-family residence
- R-3-(U) - Limited multiple residence
- R-4-(U) - Unlimited residence
- R-A - Residential agriculture
- RPD - Residential planned development
- A-1 - Light agriculture
- A-2 - Heavy agriculture
- A-2-H - Heavy agriculture including hog ranches
- C-H - Commercial highway
- C-1 - Restricted business
- C-2 - Neighborhood commercial
- C-3 - Unlimited commercial
- C-M - Commercial manufacturing
- C-R - Commercial recreation
- CPD - Commercial planned development
- M-1 - Light manufacturing
- D-2 - Desert-Mountain
- IT - Institutional
- SP - Specific Plan
- M-1.5 - Restricted heavy manufacturing
- MPD - Manufacturing industrial planned development
- M-2 - Heavy manufacturing
- M-3 - Unclassified
- M-4 - Unlimited manufacturing
- M-2.5 - Aircraft, heavy industrial
- B-1 - Buffer strip
- B-2 - Corner buffer
- R-R - Resort and recreation
- W - Watershed
- P-R - Restricted parking
- SR-D - Scientific research and development
- O-S - Open space
- A-C - Arts and crafts
- MXD - Mixed use development

**Base Layers**

- Lot, Cut/Deed, Subdivision and Easement Line
- Parcels
- City / Unincorporated Community Boundary
- National Forest

NOTES:

The location of zoning boundaries is as accurate as can be portrayed at this scale. For more precise boundary locations, please contact the Land Development Coordinating Center (LDCC) at (213) 974-6411.

Parcel boundaries are from the parcel database maintained by the Department of Public Works or the Assessor's Office and may differ slightly from recent updates of House Numbering Maps. Parcels on the map reflect the most recent update from the Assessor's Office as of January 2010.

Dashed lines represent additional parcel linework (easements, cut/deed lines, lot lines, subdivision boundaries and tax rate area lines).

### VICINITY MAP:

NOTE: Colors denote incorporated cities and unincorporated areas and not land use classifications.
Blue Dashed Line is the Supervisorial District Boundary.

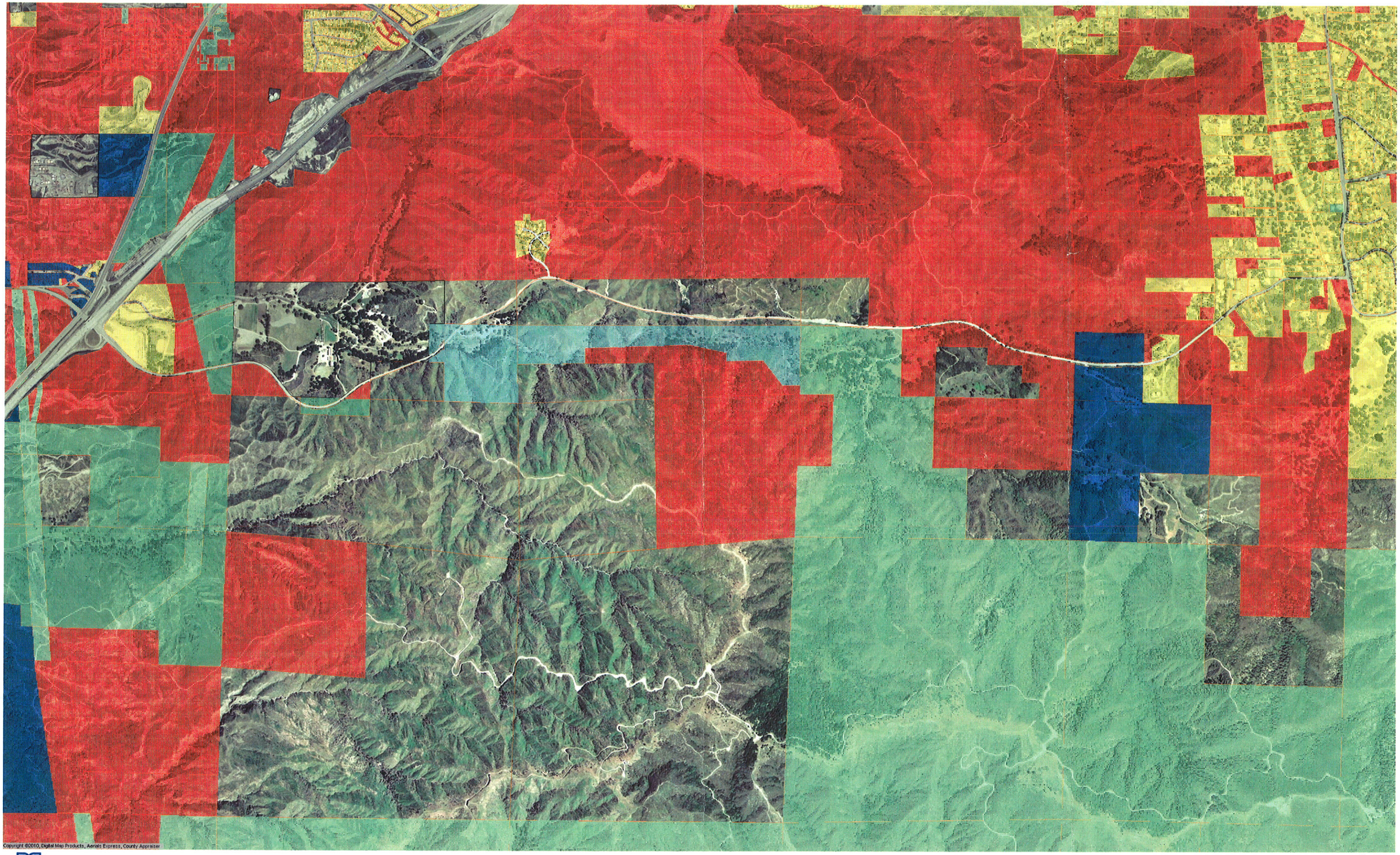
### KEY MAP:

Current as of: April 1, 2010

LOS ANGELES COUNTY
Department of Regional Planning
320 W. Temple St
Los Angeles, CA 90012

Scale in Feet

0 1,000 2,000 4,000 6,000 8,000




DAVID EVANS AND ASSOCIATES INC

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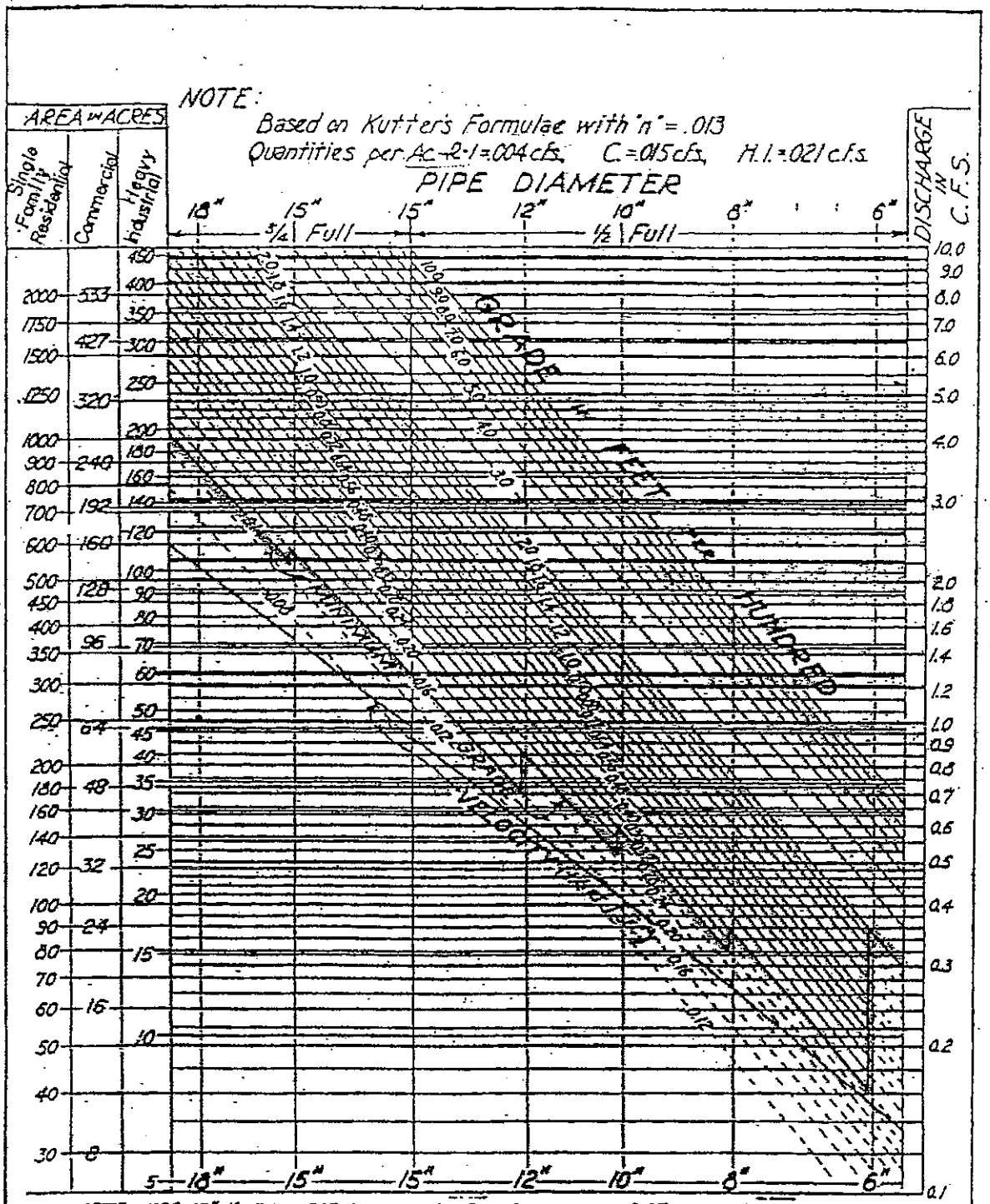
N

1" = 800'

LandVision




NOTE: USE 15" ½ FULL FOR COMPUTING DESIGN CAPACITY OF A NEW SEWER SYSTEM.
USE 15" 3/4 FULL FOR CHECKING CAPACITY OF EXIST. SEWER SYSTEM.

# FLOW DIAGRAM FOR THE DESIGN OF CIRCULAR SANITARY SEWERS

COUNTY OF LOS ANGELES
DEPARTMENT OF PUBLIC WORKS

ASSISTANT DEPUTY

COUNTY ENGINEER

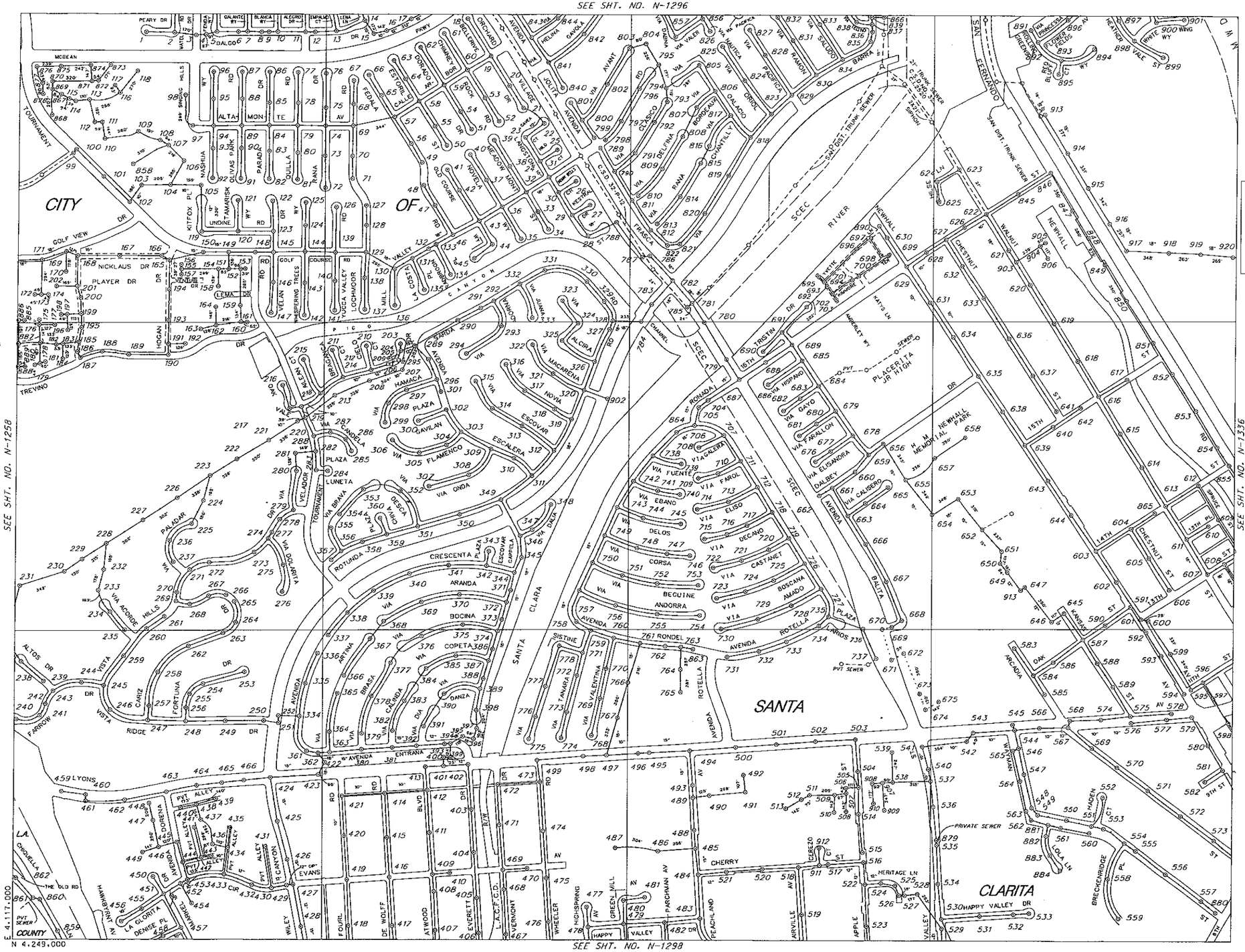
COUNTY ENGINEER STANDARD S-C4

DATE: 3/80

DESIGN RCE 10423

N-1297

A-41
A-42
A-47
A-48
X-48




THIS MAP IS INTENDED FOR USE ONLY AS OPERATIONS MAP BY LOS ANGELES COUNTY SEWER MAINTENANCE DISTRICTS. LOS ANGELES COUNTY EXPRESSLY DISCLAIMS ANY LIABILITY FOR ANY INACCURACIES WHICH MAY BE PRESENT IN THIS MAP.

AUTOMATED GRAPHICS

METERS
0 50 100 200 250
0 200 400 600 800
FEET

## LEGEND

- CLAY SEWERS MAINTAINED BY SMD, 8" UNLESS OTHERWISE NOTED
- PLASTIC SEWERS
- CONCRETE SEWERS
- CLAY SEWERS, LINED
- CEMENT SEWERS, LINED
- FORCE MAINS
- SEWERS NOT MAINTAINED BY SMD
- TRUNK SEWERS
- CITY BOUNDARY
- STANDARD MANHOLE
- DROP MANHOLE
- SHALLOW MANHOLE
- TRAP MANHOLE
- WEIR MANHOLE
- C.O. CLEANOUT
- L.H. LAMP HOLE
- PUMP STATION

TOTAL MH'S THIS MAP: 920

MAP REV
09-12-07

DATA BASE REV
06-02-88

N-1297

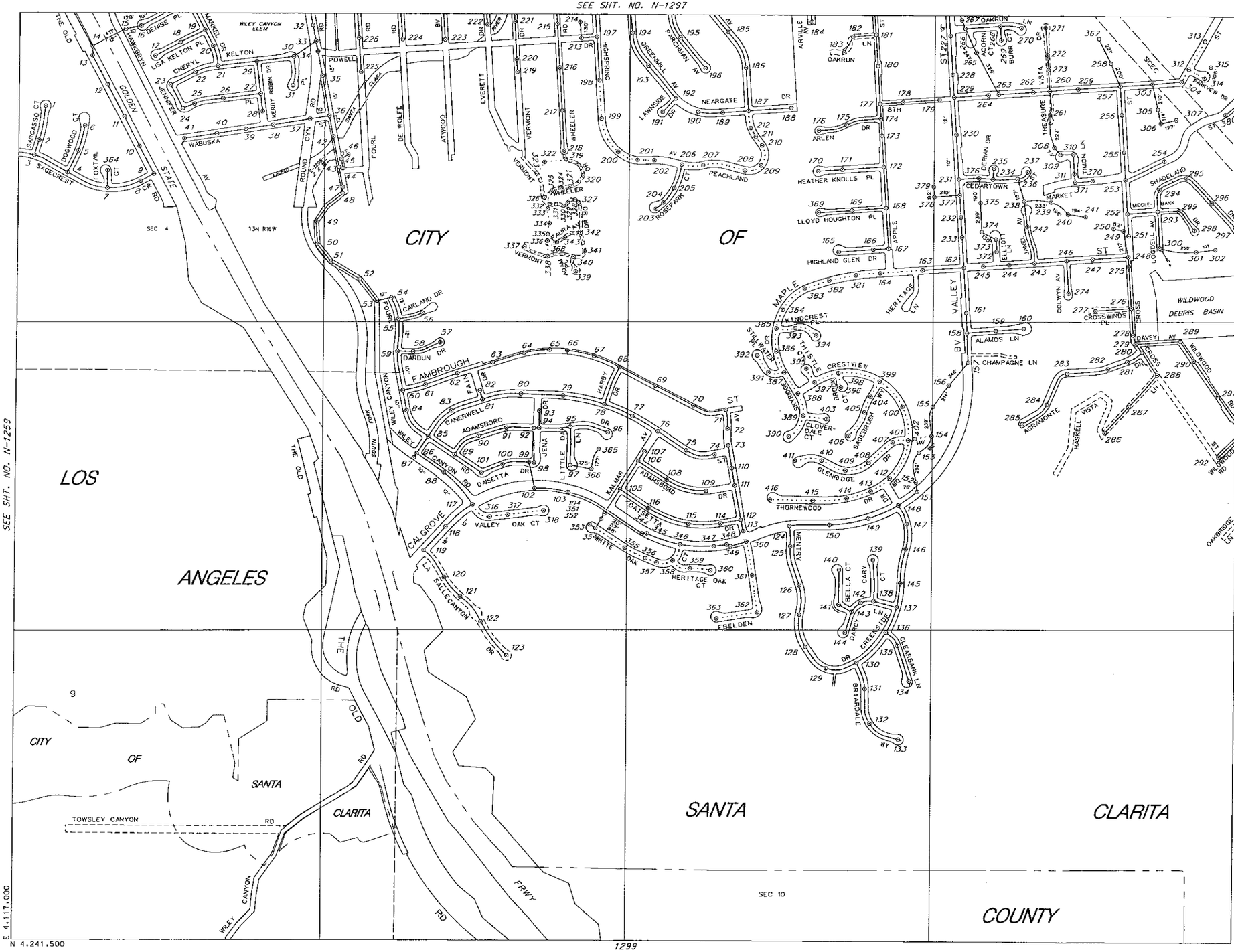
CONSOLIDATED S.M.D.

N-1297

T: 4550 F-7

2311.2411.1297

A-25
A-26
A-41
A-42

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AUTOMATED GRAPHICS

METERS
0 50 100 200 250
0 200 400 600 800
FEET

## LEGEND

- CLAY SEWERS MAINTAINED BY SMD. 8" UNLESS OTHERWISE NOTED
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- SHALLOW MANHOLE
- TRAP MANHOLE
- WEIR MANHOLE
- C.O. CLEANOUT
- L.H. LAMP HOLE
- PUMP STATION

TOTAL MH'S THIS MAP: 416

MAP REV
05-07-07

DATA BASE REV
05-20-93

CONSOLIDATED S.M.D.



T: 4640 G-3

2311.2311.1298

N-1336

SEE SHT. NO. N-1335

A-27
A-40
A-41
A-48

CITY OF SANTA CLARITA

THIS MAP IS INTENDED FOR USE ONLY AS OPERATIONS MAP BY LOS ANGELES COUNTY SEWER MAINTENANCE DISTRICTS. LOS ANGELES COUNTY EXPRESSLY DISCLAIMS ANY LIABILITY FOR ANY INACCURACIES WHICH MAY BE PRESENT IN THIS MAP.

SEE SHT. NO. N-1297

SEE SHT. NO. N-1376

SEE SHT. NO. N-1337

T 4 N R 16 W

T 4 N R 15 W

AUTOMATED GRAPHICS

METERS
0 50 100 200 250
0 200 400 600 800
FEET

## LEGEND

- CLAY SEWERS MAINTAINED BY SMD., 8" UNLESS OTHERWISE NOTED
- PLASTIC SEWERS
- CONCRETE SEWERS
- CLAY SEWERS, LINED
- CEMENT SEWERS, LINED
- FORCE MAINS
- SEWERS NOT MAINTAINED BY SMD
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- STANDARD MANHOLE
- DROP MANHOLE
- SHALLOW MANHOLE
- TRAP MANHOLE
- WEIR MANHOLE
- C.O. CLEANOUT
- L.H. LAMP HOLE
- PUMP STATION

TOTAL MH'S THIS MAP: 223

MAP REV
09-12-07

DATA BASE REV
07-11-88

CONSOLIDATED S.M.D.

N-1336

T: 4551 A-6

2311.2411.1336

N-1337

A-26
A-27

SEE SHT. NO. N-1336

SEE SHT. NO. N-1298

1338

1377

CITY OF SANTA CLARITA

LOS ANGELES COUNTY

WILLIAM S HART PARK

SAN FERNANDO

DOCKWEILER DR HWY

VALLEY FRWY

SEC 1 T3N R16W

SEC 6 T3N R15W

SEC 12 T3N R16W

SEC 7 T3N R15W

R 16 W / R 15 W

OAKRIVER PUMP STATION

POLYNESIAN AUTO CT AT 23450 SAN FERNANDO RD
NIHAU MOLOKAI
MONAKEA DIAMOND HEAD
HALEAKAL LAHAINA
KOHOOLAWE

WILDWOOD DEBRIS BASIN

NEWHALL CO WATER DISTRICT

SCEC

M W D

S P R R

PINE

WILDWOOD RD

OAKRIDGE LN

CANYON RD

SAN FERNANDO RD

SIERRA HWY

NEEDHAM AV

REUSEN ST

ANTELOPE

WAGNER

L A AQUEDUCT

E 4,127,000

N 4,241,500

THIS MAP IS INTENDED FOR USE ONLY AS OPERATIONS MAP BY LOS ANGELES COUNTY SEWER MAINTENANCE DISTRICTS. LOS ANGELES COUNTY EXPRESSLY DISCLAIMS ANY LIABILITY FOR ANY INACCURACIES WHICH MAY BE PRESENT IN THIS MAP.

AUTOMATED GRAPHICS

METERS 0 50 100 200 250
FEET 0 200 400 600 800

## LEGEND

- CLAY SEWERS MAINTAINED BY SMD. 8" UNLESS OTHERWISE NOTED
- PLASTIC SEWERS
- CONCRETE SEWERS
- CLAY SEWERS, LINED
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- DROP MANHOLE
- SHALLOW MANHOLE
- TRAP MANHOLE
- WEIR MANHOLE
- C.O. CLEANOUT
- L.H. LAMP HOLE
- PUMP STATION

TOTAL MH'S THIS MAP: 139

MAP REV
11-17-05

DATA BASE REV
07-01-88

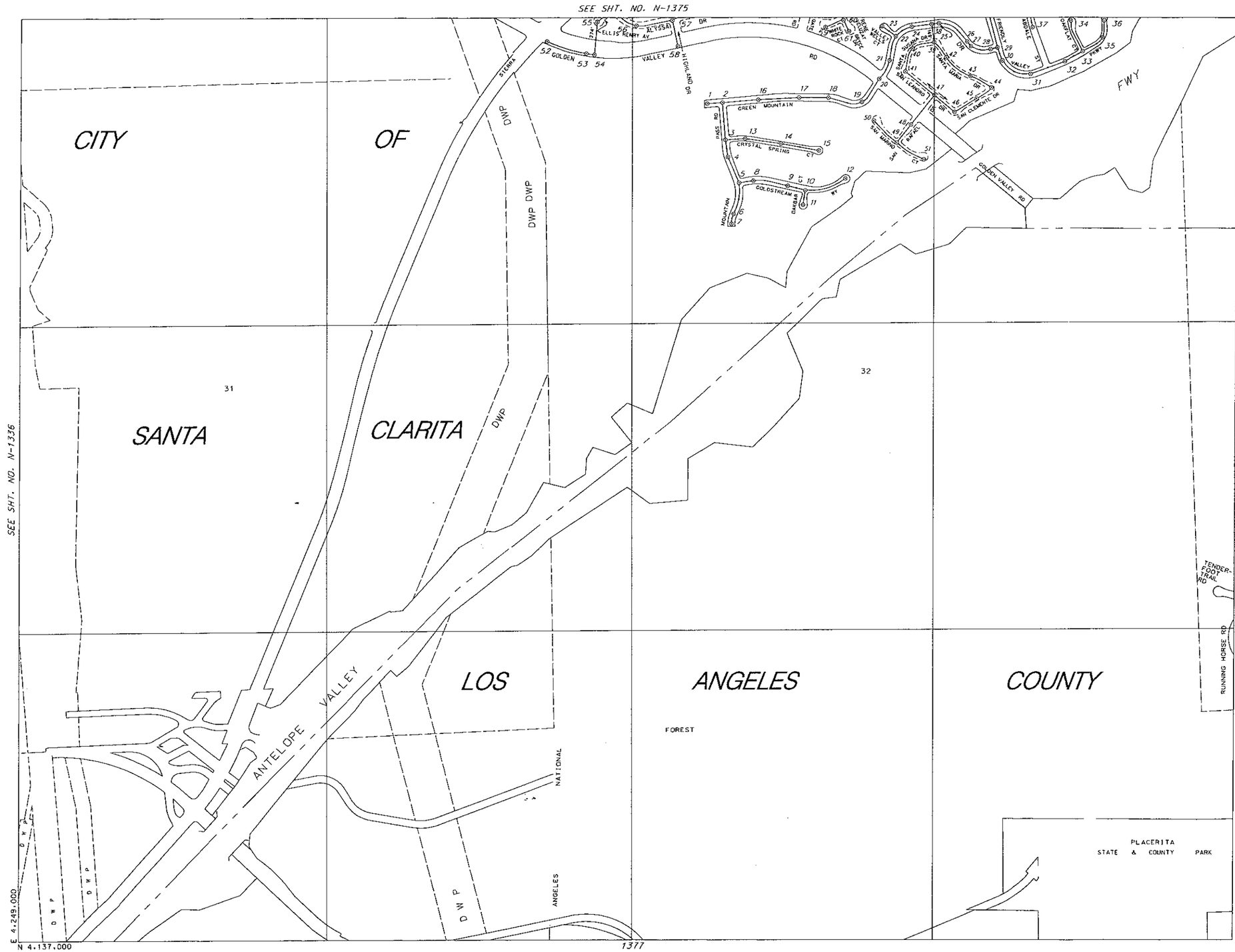
CONSOLIDATED S.M.D.

N-1337

T: 4641 A-3

2311.2311.1337

A-39
A-50
A-51

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N
AUTOMATED GRAPHICS

METERS
0 50 100 200 250
0 200 400 600 800
FEET

## LEGEND

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- TRAP MANHOLE
- WEIR MANHOLE
- C.O. CLEANOUT
- L.H. LAMP HOLE
- PUMP STATION

TOTAL MH'S THIS MAP: 58

MAP REV
11-30-06

DATA BASE REV
05-23-88

CONSOLIDATED S.M.D.



T: 4551 F-6

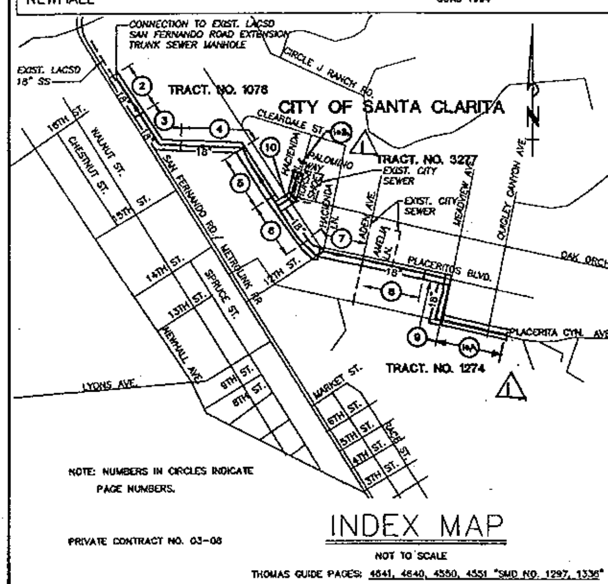
2311.2413.1376

## BENCH MARKS

BM: R–1469 Elev.: 1217.72

A STAINLESS STEEL ROD STAMPED "R 1469 1994" IN A SLEEVE WITH A FIVE INCH LOGO CAP 1.20 MILES NORTHWESTERLY ALONG SAN FERNANDO RD. FOR THE JUNCTION OF SIERRA HWY IN NEWHALL, THENCE 1.35 MILES NORTHWESTERLY ALONG THE SOUTHERN PACIFIC RAILROAD, 41.3 FEET NORTHEAST OF THE NORTHEAST CURB OF THE ROAD, 12.5 FEET SOUTHWEST OF THE NEAR RAIL, 2.0 FEET BELOW THE LEVEL OF THE TRACK AND 1.6 FEET EAST OF THE SOUTH END OF THE SOUTHWEST WINGWALL OF THE SOUTHEAST ABUTMENT OF THE RAILROAD BRIDGE SPANNING PLACERITA CREEK.

NEWHALL QUAD 1994




## INDEX MAP

NOT TO SCALE

PRIVATE CONTRACT NO. 03–08

THOMAS GUIDE PAGES: 4641, 4640, 4550, 4551 "SMD NO. 1297, 1336"

| NO. | REVISION | REVISED BY | APPROVED BY | DATE |
|---|---|---|---|---|
| 1 | ADDED SHEETS 10A & 10B | TETRA TECH | MH | 7/5/05 |
| | | | | |

## STORMWATER POLLUTION CONTROL REQUIREMENTS FOR SEWER CONSTRUCTION

1. Eroded sediments and other pollutants must be retained on site and may not be transported from the site via sheet flow, swales, area drains, natural drainage courses, or wind.
2. Stockpiles of earth and other construction related materials must be protected from being transported from the site by the forces of wind or water.
3. Fuels, oils, solvents, and other toxic materials must be stored in accordance with their listing and are not to contaminate the soil and surface waters. All approved storage containers are to be protected from the weather. Spills must be cleaned up immediately and disposed of in a proper manner. Spills may not be washed into the drainage system.
4. Excess or waste concrete may not be washed into the public way or any other drainage system. Provisions shall be made to retain concrete wastes on site until they can be disposed of as solid waste.
5. Trash and construction–related solid wastes must be deposited into a covered receptacle to prevent contamination of rainwater and dispersal by wind.
6. Sediments and other materials may not be tracked from the site by vehicle traffic. The construction entrance roadways must be stabilized so as to inhibit sediments from being deposited into the public way. Accidental depositions must be swept up immediately and may not be washed down by rain or other means.
7. Any slopes with disturbed soils or denuded of vegetation must be stabilized so as to inhibit erosion by wind and water.
8. The following notes and BMP's as outlined in, but not limited to, the Best Management Practice Handbook, California Stormwater Quality Task Force Task Force, Sacramento, California 1993, or the latest revised edition may apply during the construction of this project (additional measures may be required if deemed appropriate by County Inspectors)

| | |
|---|---|
| CA001 – DEWATERING OPERATIONS | ESC20 – GEOTEXTILES AND MATS |
| CA002 – PAVING OPERATIONS | ESC21 – DUST CONTROLS |
| CA003 – STRUCTURE CONSTRUCTION AND PAINTING | ESC22 – TEMPORARY STREAM CROSSING |
| CA010 – MATERIAL DELIVERY AND STORAGE | ESC23 – CONSTRUCTION ROAD STABILIZATION |
| CA011 – MATERIAL USE | ESC24 – STABILIZED CONSTRUCTION ENTRANCE |
| CA012 – SPILL PREVENTION AND CONTROL | ESC30 – EARTH DIKE |
| CA020 – SOLID WASTE MANAGEMENT | ESC31 – TEMPORARY DRAINS AND SWALES |
| CA021 – HAZARDOUS WASTE MANAGEMENT | ESC32 – SLOPE DRAIN |
| CA023 – CONCRETE WASTE MANAGEMENT | ESC40 – OUTLET PROTECTION |
| CA024 – SANITARY/SEPTIC WASTE MANAGEMENT | ESC41 – CHECK DAMS |
| CA030 – VEHICLE AND EQUIPMENT CLEANING | ESC42 – SLOPE ROUGHENING/TERRACING |
| CA031 – VEHICLE AND EQUIPMENT FUELING | ESC50 – SILT FENCE |
| CA032 – VEHICLE AND EQUIPMENT MAINTENANCE | ESC51 – STRAW BALE BARRIERS |
| CA040 – EMPLOYEE/SUBCONTRACTOR TRAINING | ESC52 – SANDBAG BARRIERS |
| ESC01 – SCHEDULING | ESC53 – BRUSH OR ROCK FILTER |
| ESC02 – PRESERVATION OF EXISTING VEGETATION | ESC54 – STORM DRAIN INLET PROTECTION |
| ESC10 – SEEDING AND PLANTING | ESC55 – SEDIMENT TRAP |
| ESC11 – MULCHING | ESC56 – SEDIMENT BASIN |

## PRIVATE ENGINEERS NOTICE TO CONTRACTORS:

THE EXISTENCE AND LOCATION OF ANY UNDERGROUND UTILITY PIPES OR STRUCTURES SHOWN ON THESE PLANS IS REQUIRED BY A SEARCH OF AVAILABLE RECORDS TO THE BEST OF OUR KNOWLEDGE. THERE ARE NO EXISTING UTILITIES EXCEPT AS SHOWN ON THIS MAP. THE CONTRACTOR IS REQUIRED TO TAKE PRECAUTIONARY MEASURES TO PROTECT THE UTILITY LINES SHOWN AND ANY OTHER LINES NOT OF RECORD OR NOT SHOWN ON THIS DRAWING. PRIOR TO EXCAVATION THE CONTRACTOR SHALL CALL TOLL FREE 1–800–422–4133 TO VERIFY THE UNDERGROUND LOCATION OF GAS AND TELEPHONE LINES. THE CONTRACTOR SHALL ALSO CALL MR. RAY CUMMINGS OF GENERAL TELEPHONE COMPANY AT 1–805–948 4871 SO THAT THEY CAN MARK THE LOCATION OF UNDERGROUND TELEPHONE LINES.

## JOB SITE SAFETY

By accepting this contract, contractor hereby releases and agrees to indemnify, defend, and hold harmless the owner, the City of Santa Clarita, the engineer (hereinafter Tetra Tech, Inc.) their present and subsidiary companies, agents, employees, consultants and representatives for any and all damage to persons or property or wrongful death regardless of whether or not such claim, damage, loss or expense is caused in whole or in part by the negligence, active or passive, of owner, engineer, their parent and subsidiary companies, as well as their agents and employees, excepting only the sole negligence of owner, engineer, their parent and subsidiary companies and their agents and employees to the fullest extent permitted by law. Such indemnification shall extend to all claims, demands, actions, or liability for injuries, death or damages occurring after completion of project, as well as during the work's progress. Contractor further agrees that it shall accomplish the above at its own cost, expense and risk exclusive of and regardless of any applicable insurance policy or position taken by any insurance company regarding coverage.

## PRIVATE CONTRACT SEWER GENERAL NOTES

1. A sewer construction permit shall be obtained and a fee paid for construction inspection and record plans to the City of Santa Clarita, 23920 Valencia Blvd, Suite 300 at least 72 hours prior to starting work under this permit. Copies of all other required permits, such as Road Excavation, Caltrans, etc., must be filed with the permit application.
2. The contractor shall notify the Public Works Inspectors by telephone at (661) 255–4942 at least 24 hours before starting any work under this contract.
3. Prior to issuance of the required sewer construction permit, the contractor shall obtain and file with the City of Santa Clarita, copies of a permit to excavate in City streets and a permit for excavation and trenches from the State of California Division of Industrial Safety, and a Certificate of Workers Compensation Insurance with the City of Santa Clarita named as the certificate holder to be notified 30 days prior to cancellation of this policy.
4. If work is done in a State Highway, a permit must be obtained from the State of California Division of Highways, 120 South Spring Street, Los Angeles, California.
5. Approval of this plan by the City of Santa Clarita does constitute a representation as to accuracy of the location or the existence or nonexistence of any underground utility pipe or structure within the limits of this project. This note applies to all pages.
6. The existence and location of any underground utility pipes or structures shown on these plans are obtained by a search of all available records.
7. All work shall be in accordance with the latest approved edition of the "Standard Specifications for Public Works Construction" including supplements, and the latest Special Provisions for the Construction of Sanitary Sewers, and shall be prosecuted only in the presence of the City of Santa Clarita.
8. The contractors attention is directed to Section 7–10.4.1 of the Standard Specifications for Public Works Construction in regard to safety orders and shall conform to the "minimum public safety requirement for open excavations" as shown in the Los Angeles County Public Works Standard 6008–0.
9. Elevations are in feet above U.S.C. and G.S. sea level datum of 1988.
10. No revisions shall be made to these plans without the approval of the City Engineer.
11. No representative of the City of Santa Clarita will survey or lay out any portion of the work.
12. Grades to which the improvement is to be constructed are shown on the plans and profiles. The grades are per the elevation of the surface above the centerline of the pipe.
13. The private engineer shall furnish the City of Santa Clarita with grade sheets and stationing for all house laterals and "Y" or "T" branches, and shall provide stakes for them at their proper locations with stationing plainly marked. All house laterals shall be constructed to a straight alignment at right angles from the mainline sewer except as shown on the plans. House laterals from chimneys shall not have angles of less than 45° with the M.L. sewer. Any change in the alignment shall be requested in writing by the private engineer.
14. The private engineer shall furnish the house lateral depth at the property line below the top of the curb elevation for each house lateral on the grade sheet.
15. No connection for the disposal of industrial wastes shall be made to sewers shown on these drawings until a permit for industrial wastewater discharge has been issued by the Sanitation Districts for said connection.
16. Before breaking into or construction of a county sanitation district sewer and prior to final acceptance of the project, a sanitation district inspector shall be notified by phone (661) 256–4683 so that the required inspections can be made. No connections for the disposal of industrial waste shall be made to sewers shown on these drawings until a permit for industrial wastewater discharge has been issued by the sanitation district for said connection

## CONSTRUCTION NOTES

1. Provide survey stakes on the property line or property lines produced at right angles to the sewer line at the centerline of each manhole
2. Vitrified clay pipe joints shall be type "D" or "G" per standard specifications section 208–2.
3. If a powerpole is within three feet of the sewer, the sewer shall be encased per standard plan S–2023, case II, two feet on each side from the point of interference.
4. All joints between cast iron pipe and vitrified clay shall be made with a rubber sleeve joint, type "D" (with bushing if necessary) per standard specifications section 208–2.
5. House laterals are to be constructed to the homeowners property line within MWD right–of–way and with inverts at the property line 6 feet below curb grade except as noted. Locations of house laterals and wyes are subject to change based on field conditions.
6. All wyes and/or house laterals are to be located at least five (5) feet apart and not closer than five (5) feet to any manhole per Los Angeles County Standards. All wyes and house laterals constructed are to be capped for future connection.
7. Wye or tee branches may be used for connections to the mainline sewers except as noted.
8. If during the course of construction, it is determined that there is less than four feet of cover over the top of a mainline or house lateral V.C.P. sewer which is not indicated on the plans, the pipes shall be encased per standard plan S–2023, case II, unless otherwise approved by the director of Public Works.
9. Refer to Standard Drawing 2100–1, "Requirements for Sanitary Sewers in the Vicinity of Pressure Water Mains" and comply with the requirements.
10. All structures shall be either brick sewer manholes per APWA standard plan 203–0 or precast concrete sewer manholes per APWA standard plan 200–2, or reinforced precast concrete manhole per L.A. Co. Dept. of Public Works standard plan 2003–2, except as noted.
11. Resurface all trenches within paved areas to meet Los Angeles County Public Works or California State Highway requirements in accordance with the permits.
12. Full compliance with section 306–1.3.4. of the standard specification will be required for backfill in street certification of backfill compaction and sand equivalents by a qualified civil engineer shall be provided by the permitee prior to the issuance of a certificate of partial acceptance.
13. All backfill and fills outside of the street right of way shall be compacted to 90% of the maximum density as determined by ASTM soil compaction test D 1557–78 method "D" unless otherwise specified. This shall be certified by a qualified civil engineer. This certification shall be submitted to the City of Santa Clarita prior to the acceptance of the work by the county.
14. Manhole tops in unimproved rights of way to be six inches above finished grade.
15. Sewers to be tested for leakage per section 306–1.4.4 of the standard specifications and special provisions.
16. The invert information that has been provided for all utilities are approximate values and must be verified in the field.
17. Contact Mr. Kimber Rose of MWD @ 818–832–2134 to schedule a preconstruction meeting at least 2 working days prior to working within MWD fee property.
18. Individual homeowners, for all lots, to provide and install backwater valves on lateral at time of future connection.

PROFILE, ALIGNMENT AND GRADE OF

# SANITARY SEWERS

TO BE CONSTRUCTED IN

THE CITY OF SANTA CLARITA

TRACT NO. 1078

PRIVATE CONTRACT NO. 03–08

CITY PROJECT #S2036

7 SHEETS: 13 PAGES

SCALE: HORIZ: 1"=40' VERT: 1"=4'


PREPARED IN THE OFFICES OF:
TETRA TECH, INC.
16241 Laguna Canyon Road, Suite 200
Irvine, California 92618
(949) 727–7099


REGISTERED PROFESSIONAL ENGINEER RICHARD STEVEN AGOR No. C57082 Exp. 12–31–05 CIVIL STATE OF CALIFORNIA 8-11-04

BY: RICHARD STEVEN AGOR DATE 8-11-04

## STANDARD PLANS:

The following latest revised standard plans on file in the office of the following department shall Apply in the construction of this project.

LOS ANGELES COUNTY DEPARTMENT OF PUBLIC WORKS

| | |
|---|---|
| APWA 208–1 | BREAKING INTO EXISTING MANHOLES |
| APWA 222–1 | HOUSE CONNECTION SEWER |
| APWA 223–1 | HOUSE CONNECTION REMODELING |
| 2000–0 | LEGEND FOR SANITARY SEWER PLANS AND PROFILES AND DISTRICT MAPS. |
| 2003–2 | REINFORCED PRECAST CONCRETE MANHOLE |
| 2021–1 | BEDDING FOR SEWER PIPE (ALSO SEE DETAIL 1/11) |
| 2023–2 | CONCRETE CRADLING AND ENCASEMENT |
| 2024–1 | WYE OR TEE SUPPORT |
| 2027–1 | ALLOWABLE TRENCH WIDTHS |
| 2028–1 | JACKING STEEL CASING FOR SEWER PIPE (ALSO SEE DETAIL 3/11) |
| 2100–1 | REQUIREMENTS FOR SANITARY SEWERS IN THE VICINITY OF PRESSURE WATER MAINS |
| 6008–1 | MINIMUM PUBLIC SAFETY REQUIREMENTS FOR OPEN EXCAVATIONS |

AREAS LABELED AS "CONSTRUCT WITHIN OAK TREE ZONE OF IMPACT" ARE AREAS THAT REQUIRE HAND DIGGING FOR THE INSTALLATION OF THE PIPELINE IN ACCORDANCE WITH THE OAK TREE PERMIT AND REPORT TO AVOID DAMAGE TO THE EXISTING OAK TREES.

LOS ANGELES COUNTY DEPT. OF PUBLIC WORKS CONSOLIDATED SEWER MAINTENANCE DISTRICT REVIEWED FOR MAINTENANCE

REVIEWED BY: 8/16/04
REVISED BY: DATE 9/6/05

CITY OF SANTA CLARITA, CALIFORNIA

ROBERT G. NEWMAN, DIRECTOR OF TRANSPORTATION AND ENGINEERING SERVICES

APPROVED FOR CONSTRUCTION: for RGN 8/13/04 (DATE)

CHECKED 8/13/04 (DATE)

APPROVED: COUNTY SANITATION DISTRICT NO. 26 OF LOS ANGELES COUNTY
JAMES F. STAHL – CHIEF ENGINEER AND GENERAL MANAGER

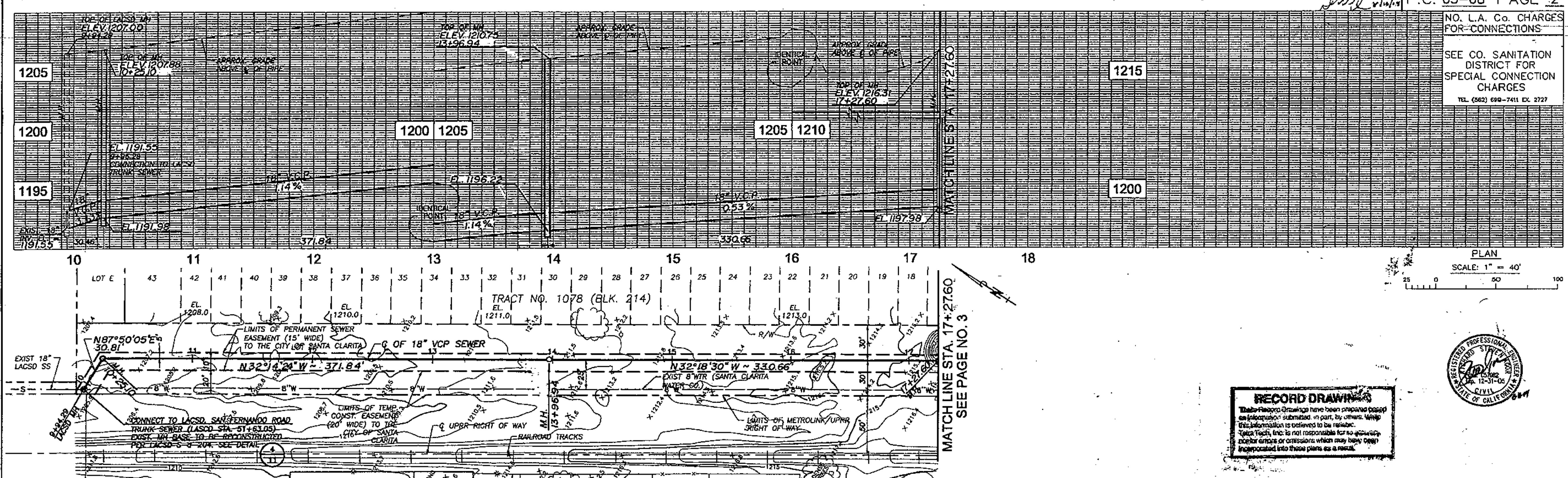
BY: OFFICE ENGINEER (DATE)

8/16/04 P.C. 03–08 PAGE 2

NO. L.A. Co. CHARGES FOR CONNECTIONS

SEE CO. SANITATION DISTRICT FOR SPECIAL CONNECTION CHARGES

TEL. (562) 699–7411 EX. 2727




RECORD DRAWINGS

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TRACT NO. 1078 P.C. 03–08

Sewer PC 03-08 Sheet 1 of 7

01365

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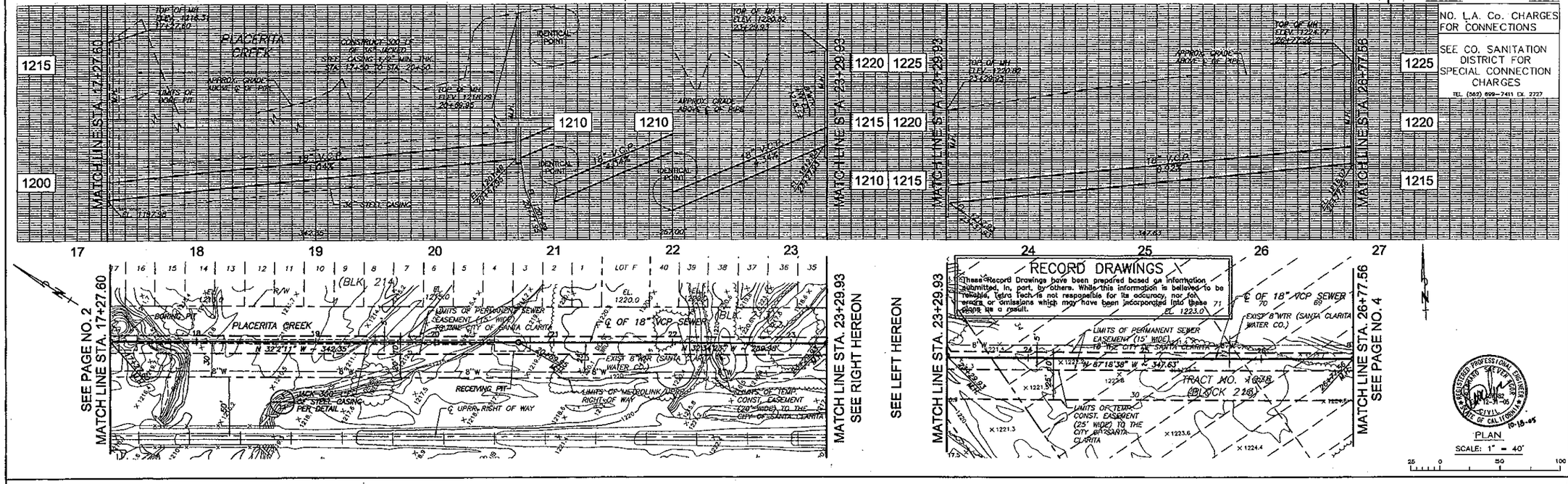
P.C. 03-08 PAGE 3

NO. L.A. Co. CHARGES FOR CONNECTIONS

SEE CO. SANITATION DISTRICT FOR SPECIAL CONNECTION CHARGES

TEL. (562) 699-7411 EX. 2727

TRACT NO. 1078 P.C. 03-08

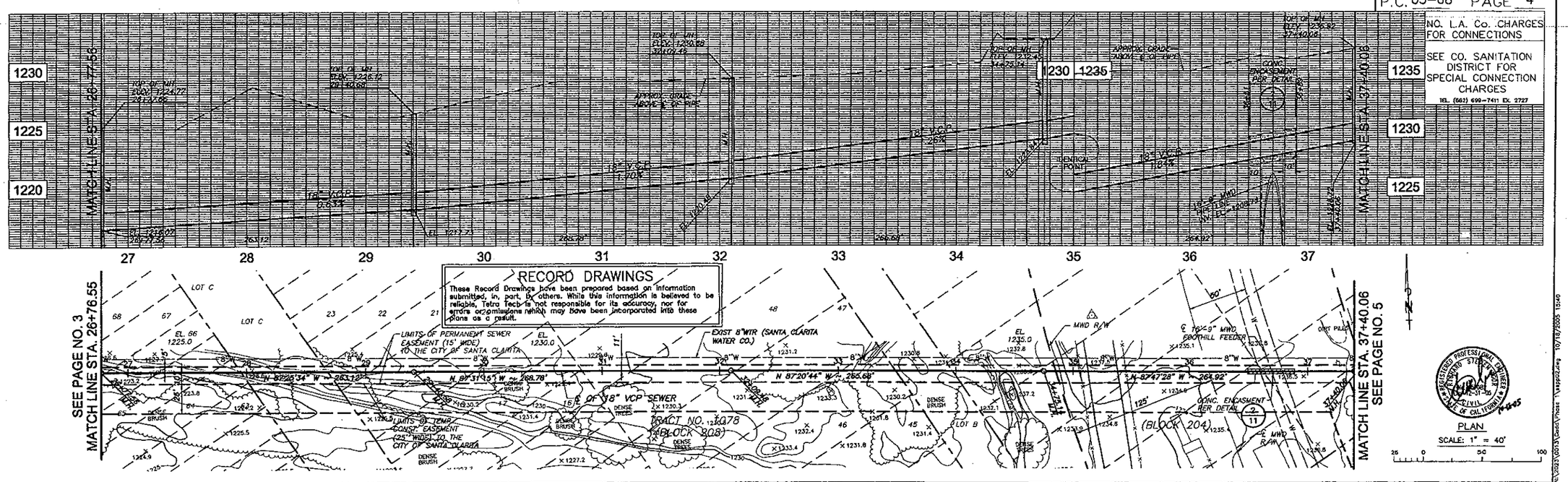



P.C. 03-08 PAGE 4

NO. L.A. Co. CHARGES FOR CONNECTIONS

SEE CO. SANITATION DISTRICT FOR SPECIAL CONNECTION CHARGES

TEL. (562) 699-7411 EX. 2727

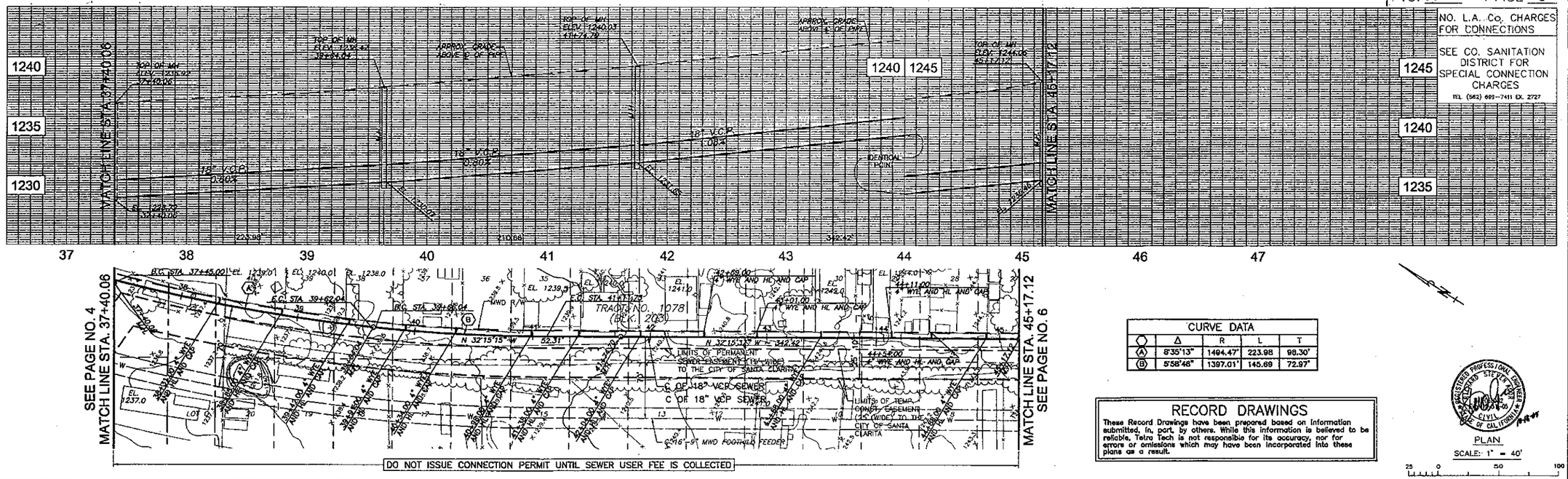



Sewer PC 03-08
Sheet 2 of 7
01585

P.C. 03-08 PAGE 5

NO. L.A. Co. CHARGES FOR CONNECTIONS

SEE CO. SANITATION DISTRICT FOR SPECIAL CONNECTION CHARGES
TEL (562) 699-7411 EX. 2727




| CURVE DATA | | | | |
|---|---|---|---|---|
| | Δ | R | L | T |
| A | 8°35'13" | 1494.47' | 223.98 | 98.30' |
| B | 5°58'46" | 1397.01' | 145.69 | 72.97' |

**RECORD DRAWINGS**

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REGISTERED PROFESSIONAL ENGINEER RICHARD STEVEN BOYD CIVIL STATE OF CALIFORNIA

PLAN

SCALE: 1" = 40'

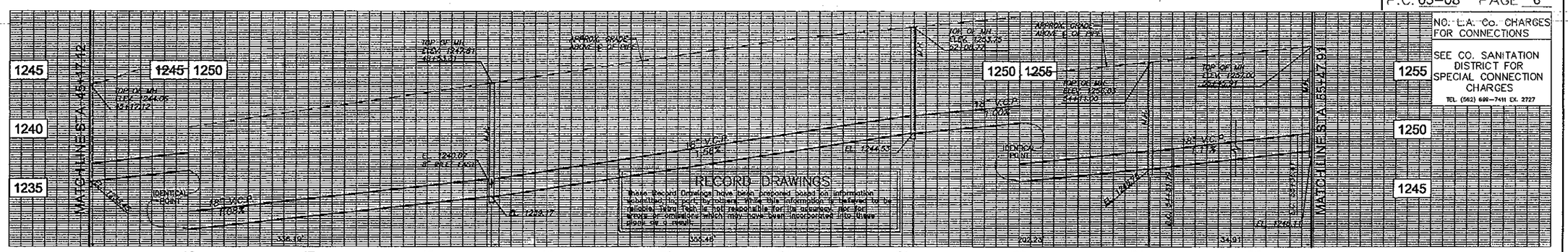
25 0 50 100

TRACT NO. 1078 P.C. 03-08

P.C. 03-08 PAGE 6

NO. L.A. Co. CHARGES FOR CONNECTIONS

SEE CO. SANITATION DISTRICT FOR SPECIAL CONNECTION CHARGES
TEL (562) 699-7411 EX. 2727




| CURVE DATA | | | | |
|---|---|---|---|---|
| | Δ | R | L | T |
| A | 13°19'16" | 450.00' | 104.62' | 52.55' |

REGISTERED PROFESSIONAL ENGINEER RICHARD STEVEN BOYD CIVIL STATE OF CALIFORNIA

PLAN

SCALE: 1" = 40'

25 0 50 100

Sewer PC 03-08
Sheet 3 of 7

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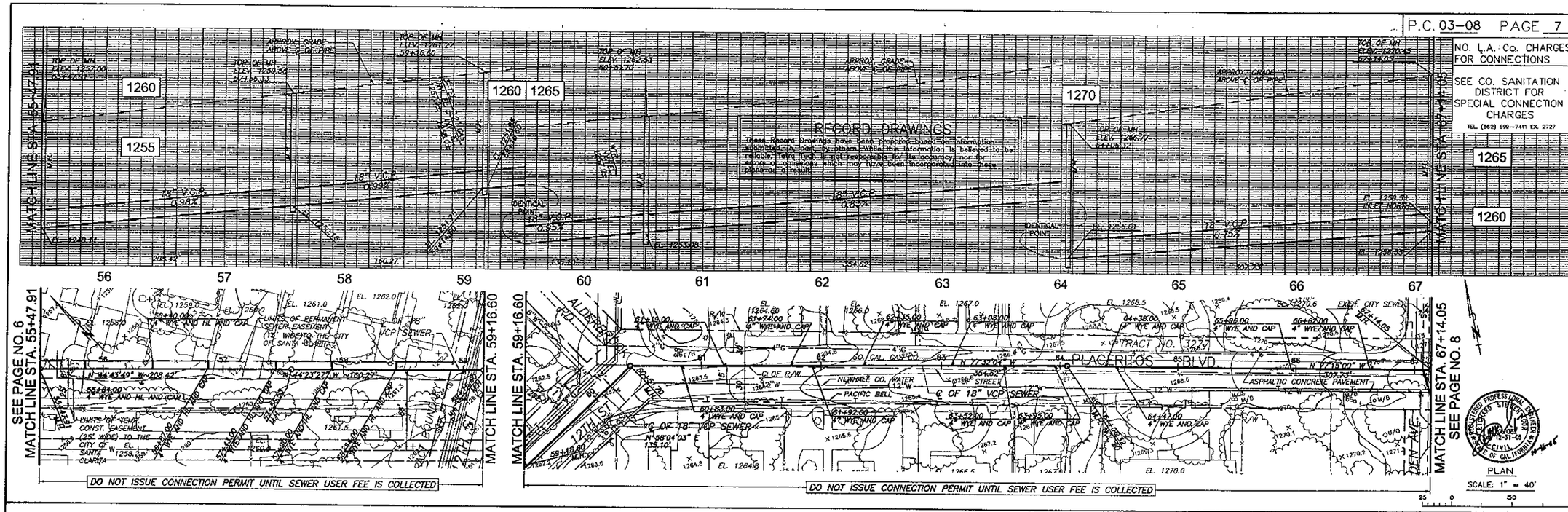
P.C. 03-08 PAGE 7

NO. L.A. Co. CHARGES FOR CONNECTIONS

SEE CO. SANITATION DISTRICT FOR SPECIAL CONNECTION CHARGES
TEL. (562) 699-7411 EX. 2727

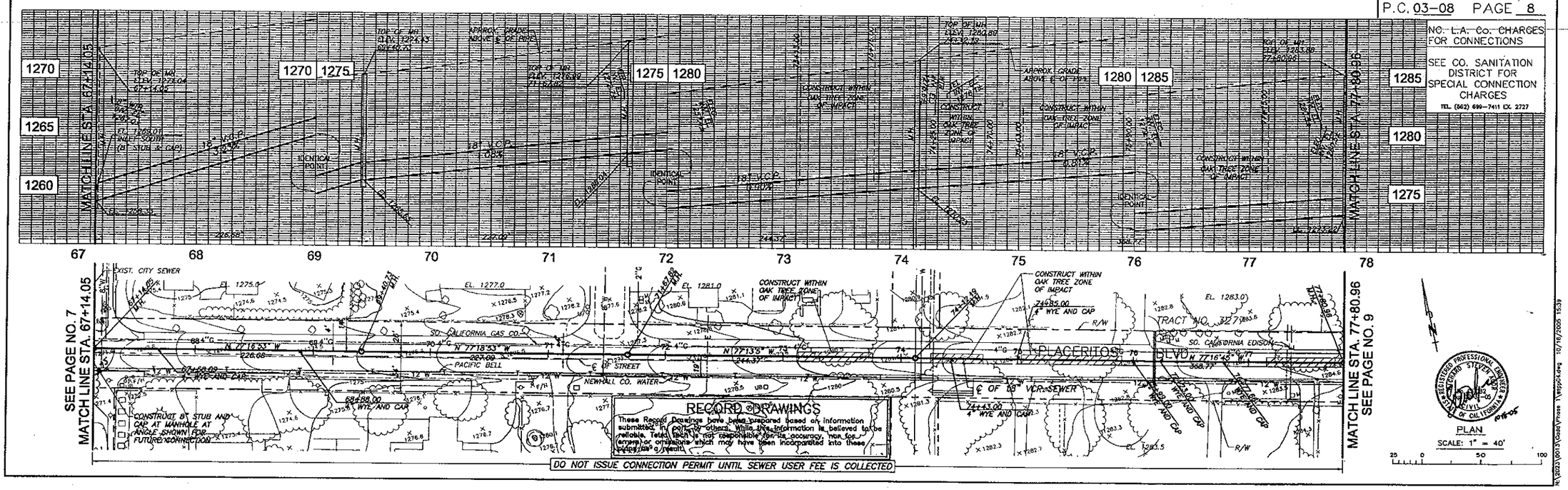



PLAN
SCALE: 1" = 40'

P.C. 03-08 PAGE 8

NO. L.A. Co. CHARGES FOR CONNECTIONS

SEE CO. SANITATION DISTRICT FOR SPECIAL CONNECTION CHARGES
TEL. (562) 699-7411 EX. 2727




PLAN
SCALE: 1" = 40'

TRACT NO. 1078 P.C. 03-08

Sewer PC 03-08
Sheet 4 of 7
01385

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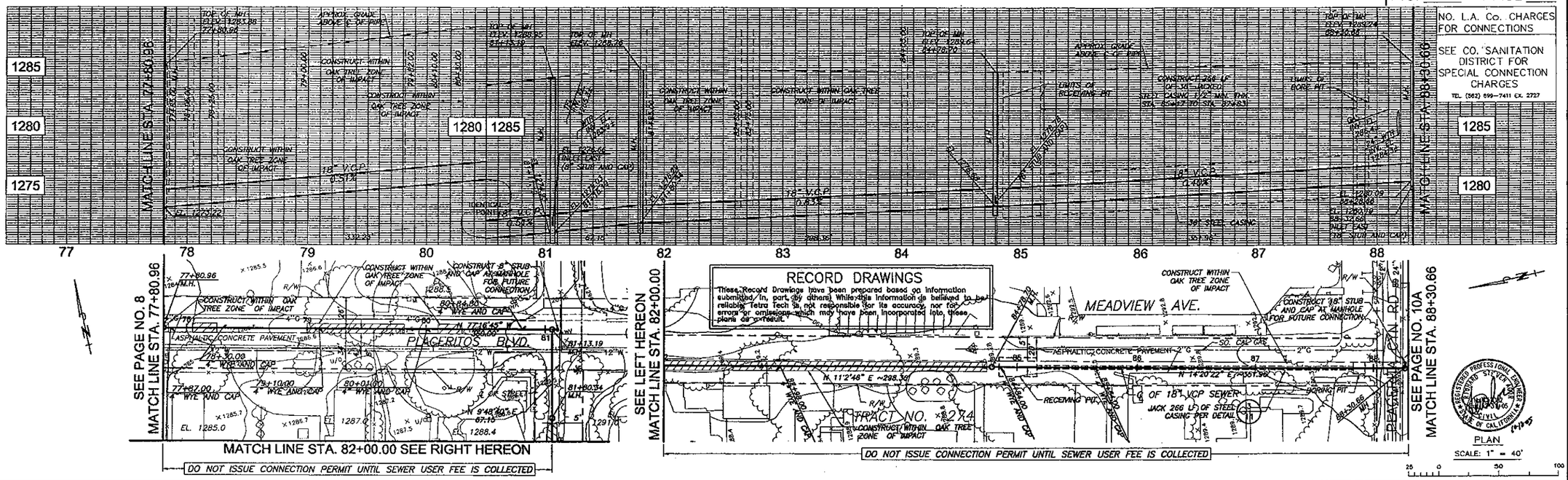
P.C. 03-08 PAGE 9

NO. L.A. Co. CHARGES FOR CONNECTIONS

SEE CO. SANITATION DISTRICT FOR SPECIAL CONNECTION CHARGES
TEL. (562) 699-7411 EX. 2727

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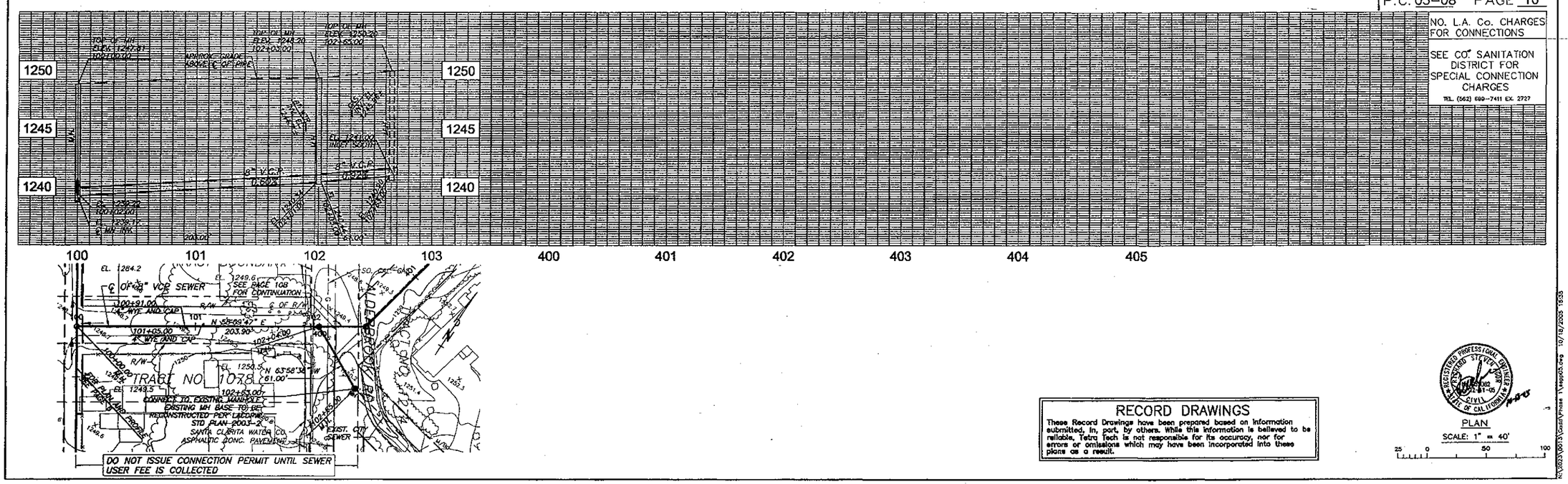
PLAN
SCALE: 1" = 40'

TRACT NO. 10078 P.C. 03-03

P.C. 03-08 PAGE 10

NO. L.A. Co. CHARGES FOR CONNECTIONS

SEE CO. SANITATION DISTRICT FOR SPECIAL CONNECTION CHARGES
TEL. (562) 699-7411 EX. 2727

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PLAN
SCALE: 1" = 40'

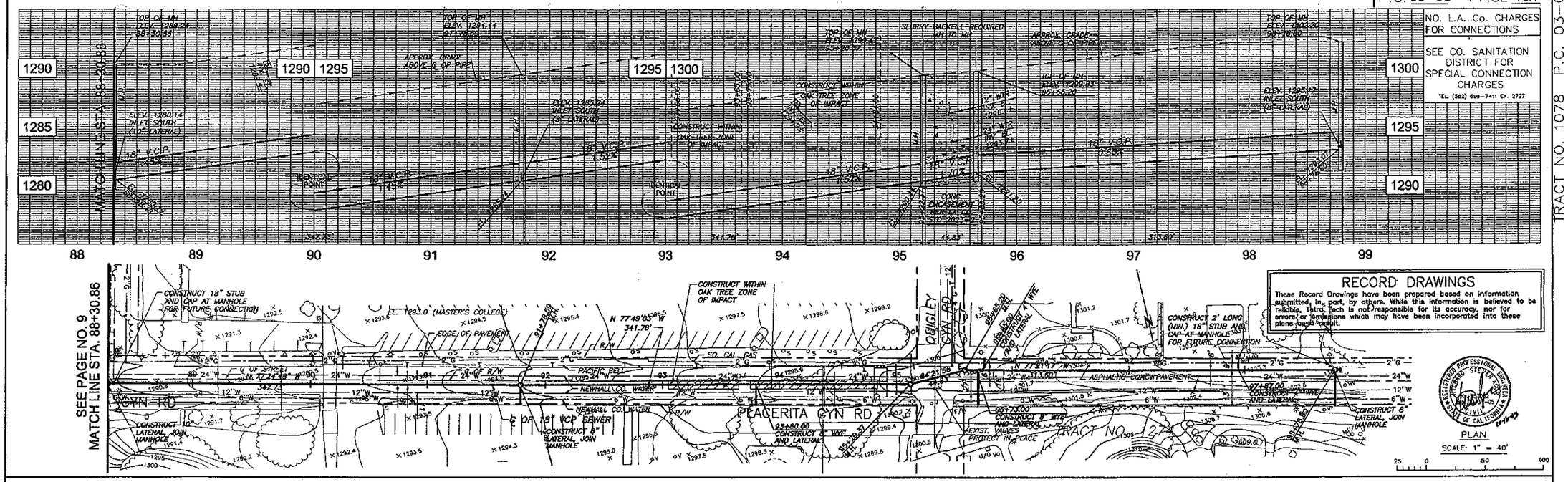
Sewer PC 03-08
Sheet 5 of 7
01365

P.C. 03-08 PAGE 10A

NO. L.A. Co. CHARGES FOR CONNECTIONS

SEE CO. SANITATION DISTRICT FOR SPECIAL CONNECTION CHARGES
TEL. (562) 699-7411 Ex. 2727

TRACT NO. 1078 P.C. 03-08

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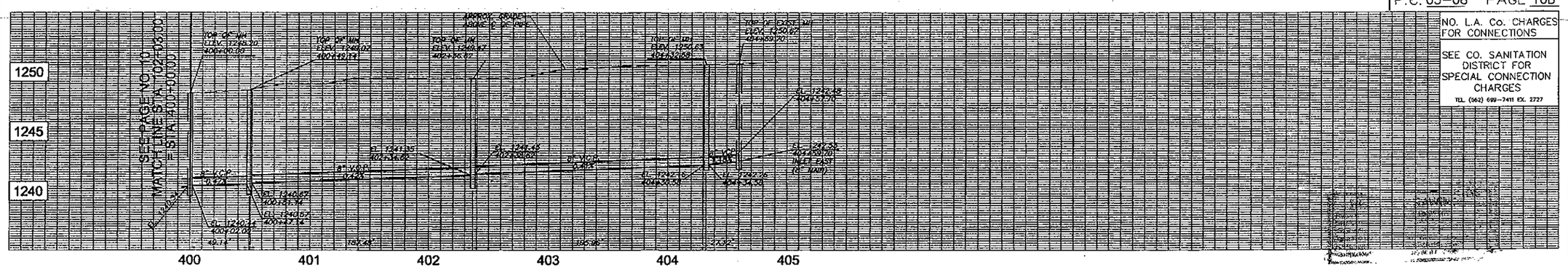
PLAN

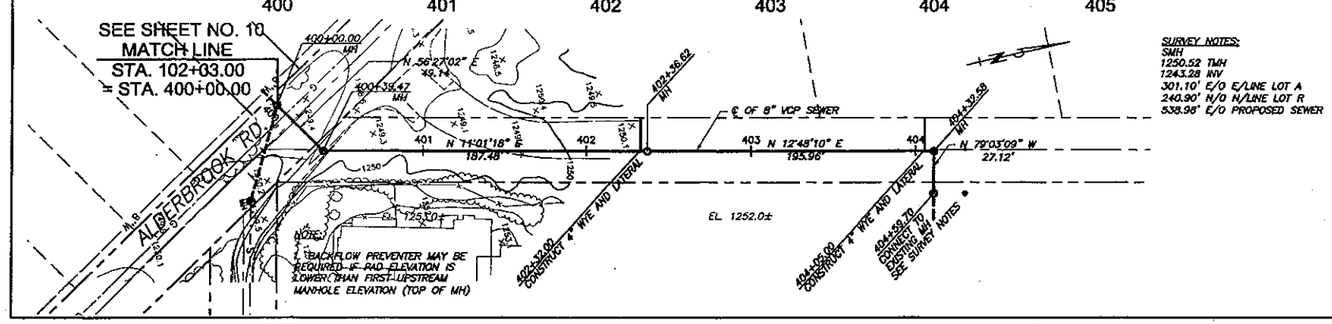
SCALE: 1" = 40'

P.C. 03-08 PAGE 10B

NO. L.A. Co. CHARGES FOR CONNECTIONS

SEE CO. SANITATION DISTRICT FOR SPECIAL CONNECTION CHARGES
TEL. (562) 699-7411 EX. 2727

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PLAN

SCALE: 1" = 40'

Sewer PC 03-08
Sheet 6 of 7
01365

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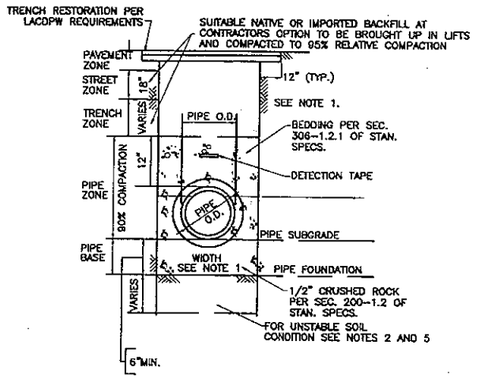
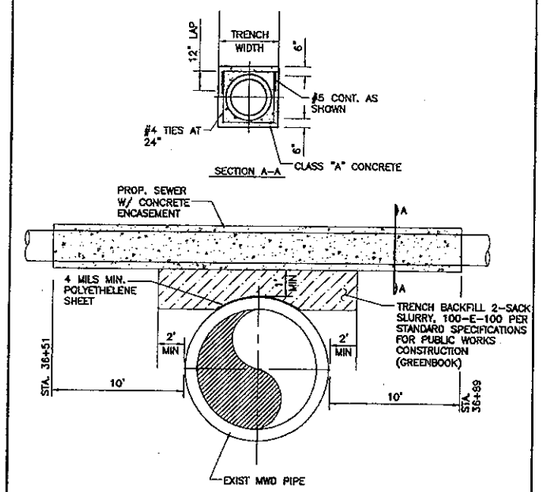



OVERWIDTH BEDDING

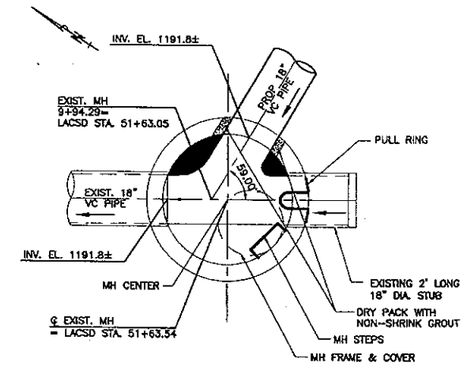
NOTES:

1. TRENCH WIDTH AT THE UPPER LIMIT OF THE PIPE ZONE SHALL BE WITHIN THE LIMITS AS SHOWN ON STD. DWG. 2021-1 (OLD DWG. S-33)
2. IF UNSTABLE SOIL IS ENCOUNTERED, GEOTECHNICAL REPRESENTATIVE SHALL DETERMINE DEPTH OF REMOVAL. SIZE OF FOUNDATION SHALL BE 1/2" CRUSHED ROCK.
3. ANY EXCAVATION DEEPER THAN 5' FT. MUST BE SHORED IN ACCORDANCE WITH CALIFORNIA ADMINISTRATION CODE TITLE 8, ARTICLE 6, SECTION 1539 THRU 1541.
4. A DETECTABLE MARKING TAPE SHALL BE USED PRIOR TO BACKFILL AS MANUFACTURED BY THOR ENTERPRISES, INC. (OR EQUAL). TAPE SHALL BE PLACED 1' FT. ABOVE PIPELINE LOCATION.
5. IF TRENCH BOTTOM CONDITIONS ARE SOFT OR PUMPING CONDITIONS DEVELOP GEOTEXTILE FABRIC SHALL BE PLACED ALONG THE TRENCH SUBGRADE AND COVERED WITH AT LEAST 1-FOOT OF COMPACTED PROCESSED MISCELLANEOUS BASE CONFORMING TO THE REQUIREMENTS OF SECTION 200-2.5 OF THE STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION.
6. THIS DETAIL APPLIES TO 15-INCH AND 18-INCH PIPELINES. FOR 8-INCH PIPELINES NORMAL TRENCH BEDDING CAN BE USED. SEE LACDPW STAN. PLAN 2021-1.

VCP PIPE BEDDING (1)
N.T.S.




CONCRETE ENCASEMENT AT MWD PIPELINE CROSSING (2)
N.T.S.




NOTES:

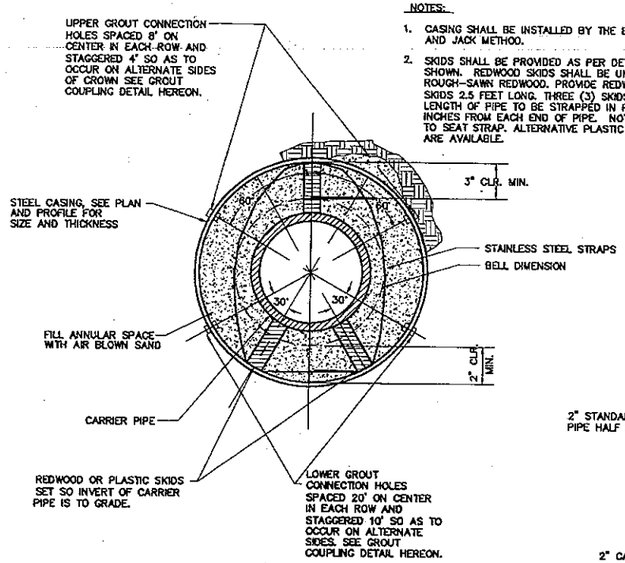
1. WHEN ALLOWED BY THE ENGINEER/INSPECTOR, THE CONTRACTOR SHALL BREAK INTO THE MANHOLE BASE, INSTALL THE PROPOSED VC PIPE, INSERT A FLEXIBLE SLEEVE THROUGH THE MANHOLE TO CONTAIN THE FLOW AND COMPLETE THE CHANNELIZATION OF THE MANHOLE BASE IN THE DRY.
2. EXISTING INVERT SHALL BE VERIFIED PRIOR TO CONSTRUCTION.

EXIST. MANHOLE AT STA. 9+94.29 =LACSD STA. 51+63.54 (4)
SCALE: 1/2" = 1'-0"

NO. L.A. Co. CHARGES FOR CONNECTIONS

SEE CO. SANITATION DISTRICT FOR SPECIAL CONNECTION CHARGES
TEL. (562) 699-7411 EX. 2727

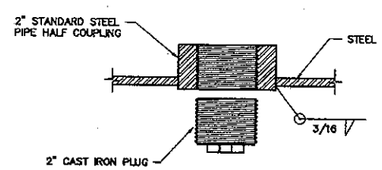
NOT USED (X)
N.T.S.




NOTES:

1. CASING SHALL BE INSTALLED BY THE BORE, AND JACK METHOD.
2. SKIDS SHALL BE PROVIDED AS PER DETAIL SHOWN. REDWOOD SKIDS SHALL BE UNFINISHED ROUGH-SAWN REDWOOD. PROVIDE REDWOOD SKIDS 2.5 FEET LONG. THREE (3) SKIDS PER LENGTH OF PIPE TO BE STRAPPED IN PLACE, 18 INCHES FROM EACH END OF PIPE. NOTCH SKID TO SEAT STRAP. ALTERNATIVE PLASTIC SKIDS ARE AVAILABLE.
3. CASING THICKNESS & DIAMETER SHOWN ARE MINIMUM. CONTRACTOR MAY ELECT TO USE THICKER WALL PIPE OR LARGER DIAMETER CASING AT NO ADDITIONAL COST.
4. ALL CASING SHALL BE JOINED BY CONTINUOUS WELD. ALL FIELD WELDS SHALL BE BUTT WELDED, FULL CIRCUMFERENCE WITH FULL PENETRATION.
5. EACH END OF CASING SHALL BE SEALED WITH A FLEXIBLE SEALER. PSI "END SEAL" OR APPROVED EQUAL.
6. CASINGS SHALL BE BORED AND JACKED TO A TOLERANCE OF 6" HORIZONTAL AND 2" VERTICAL AUGNMENT. UPSTREAM AND DOWNSTREAM ELEVATIONS OF CARRIER PIPE TO BE VERIFIED PRIOR TO FILLING ANNULAR SPACE. CARRIER PIPE VERTICAL TOLERANCE SHALL BE ZERO INCHES.
7. 2" STAINLESS STEEL BAND STRAPS SHALL BE USED TO SECURE SKIDS TO PIPE. STRAPS ARE TO BE 8 GAUGE BY 3/4" WIDE AS A MINIMUM. INSTALL THREE (3) STRAPS PER PIPE. STRAPS SHALL BE SNUGLY FIT TO CARRIER PIPE.
8. CASING PIPE SHALL BE NEW.
9. PERIPHERY OF CASING TO BE PRESSURE GROUTED AS SHOWN OR AS DIRECTED BY THE GEOTECHNICAL REPRESENTATIVE.

JACKED STEEL CASING (3)
N.T.S.




GROUT COUPLING

NOT USED (X)
N.T.S.

NOT USED (X)
N.T.S.

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NOT USED (X)
N.T.S.

REGISTERED PROFESSIONAL ENGINEER — STEVEN SAWYER — No. C37082 — Exp. 12-31-05 — CIVIL — STATE OF CALIFORNIA

PLAN
SCALE: AS SHOWN

Sewer PC 03-08
Sheet 7 of 7

01395

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# MAJOR LAND DIVISION
# VESTING TENTATIVE TRACT MAP NO. 71216
# SITE PLAN OPTION A

LOCATED IN THE UNINCORPORATED TERRITORY OF
THE COUNTY OF LOS ANGELES, STATE OF CALIFORNIA

## LEGAL DESCRIPTION

PARCEL E:
THAT PORTION OF LOT 1 AND THE SOUTH HALF OF THE NORTHEAST QUARTER OF SECTION 6 IN TOWNSHIP 3 NORTH, RANGE 15 WEST, SAN BERNARDINO MERIDIAN, IN THE COUNTY OF LOS ANGELES, STATE OF CALIFORNIA, ACCORDING TO THE OFFICIAL PLAT OF SAID LAND FILED IN THE DISTRICT LAND OFFICE JANUARY 25, 1875, WITHIN THE FOLLOWING DESCRIBED BOUNDARY:

BEGINNING AT THE NORTHEAST CORNER OF SAID SECTION 6; THENCE SOUTH ALONG THE EAST LINE OF SAID SECTION TO THE EAST QUARTER CORNER; THEN WEST 1115.60 FEET ALONG THE SOUTH LINE OF THE NORTHEAST QUARTER OF SAID SECTION; THENCE NORTH PARALLEL TO THE EAST LINE OF SAID SECTION TO THE NORTHERLY LINE OF SAID SECTION; THENCE EASTERLY ALONG THE NORTHERLY LINE OF SAID SECTION TO THE POINT OF BEGINNING.

EXCEPT THEREFROM THOSE PORTIONS TRANSFERRED TO THE CITY OF LOS ANGELES BY VIRTUE OF THAT CERTAIN DEED DATED FEBRUARY 23, 1981 AND RECORDED JUNE 2, 1981 IN THE OFFICIAL RECORDS OF LOS ANGELES COUNTY, CALIFORNIA, AS INSTRUMENT NO. 81-545064, SUBJECT TO ALL RESERVATIONS CONTAINED THEREIN.

PARCEL H:
THOSE PORTIONS OF LOTS 7, 8, AND 9 OF SECTION 31, T 4 N, R 15 W, SBM, ACCORDING TO THE OFFICIAL PLAT OF SAID LAND ON FILE IN THE OFFICE OF THE BUREAU OF LAND MANAGEMENT, DESCRIBED AS FOLLOWS:

BEGINNING AT THE SOUTHEASTERLY CORNER OF SAID LOT 7; THENCE ALONG THE EASTERLY LINE OF SAID LOT N 0 28' 13' W, 413.41 FEET TO THE SOUTHWESTERLY TERMINUS OF THAT COURSE HAVING A BEARING AND DISTANCE OF S 54 58' 30" W, 85.84 FEET AS DESCRIBED IN DEED (STATE PARCEL C994) RECORDED IN BOOK D4328, PAGE 885 OF OFFICIAL RECORDS, IN SAID OFFICE; THENCE ALONG SAID COURSE AND THAT COURSE HAVING A BEARING AND DISTANCE OF S 46 20' 06" E, 24.00 FEET AS DESCRIBED IN SAID DEED (STATE PARCEL C994), N 54 58' 30" E, 85.84 FEET AND N 46 20' 05" W, 24.00 FEET; THENCE ALONG THE NORTHWESTERLY PROLONGATION OF LAST SAID COURSE N 46 20' 05" W, 74.50 FEET TO A POINT IN THE EASTERLY LINE OF THE WEST HALF OF SAID LOT 9, DISTANCE THEREON N 0 28' 13" W, 530.69 FEET FROM SAID SOUTHEASTERLY CORNER OF LOT 7; THENCE S 43 02' 55" W, 325.02 FEET; THENCE S 36 15' 30" W, 100.84 FEET; THENCE S 44 14' 17" W, 200.01 FEET; THENCE S 48 14' 23" W, 50.16 FEET; THENCE S 42 26' 16" W, 79.33 FEET TO THE SOUTHERLY LINE OF SAID SECTION; THENCE ALONG SAID SOUTHERLY LINE N 87 24' 21" E, 516.87 FEET TO THE POINT OF BEGINNING.

EXCEPT THEREFROM THOSE PORTIONS TRANSFERRED TO THE CITY OF LOS ANGELES BY VIRTUE OF THAT CERTAIN DEED DATED FEBRUARY 23, 1981 AND RECORDED JUNE 2, 1981 IN THE OFFICIAL RECORDS OF LOS ANGELES COUNTY, CALIFORNIA, AS INSTRUMENT NO. 81-545064, SUBJECT TO ALL RESERVATIONS CONTAINED THEREIN.

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BEGINNING AT THE SOUTHEASTERLY CORNER OF SAID SECTION; THENCE ALONG THE SOUTHERLY LINE OF SAID SECTION, SOUTH 87 24' 21" WEST 1077.04 FEET TO THE TRUE POINT OF BEGINNING; THENCE NORTH 2 35' 39" WEST 661.45 FEET TO THE SOUTHEASTERLY LINE OF THE LAND CONVEYED TO THE STATE OF CALIFORNIA FOR FREEWAY PURPOSES (ANTELOPE VALLEY FREEWAY) BY DEED RECORDED APRIL 4, 1969 AS DOCUMENT NO. 285 IN BOOK D-4328, PAGE 885, OFFICIAL RECORDS, IN THE OFFICE OF THE COUNTY RECORDER OF SAID COUNTY; THENCE ALONG SAID SOUTHEASTERLY LINE, SOUTH 37 50' 29" WEST 138 FEET TO AN ANGLE POINT THEREIN; THENCE CONTINUING ALONG SAID SOUTHEASTERLY LINE THE FOLLOWING COURSES:

SOUTH 47 47' 00" WEST 125.32 FEET, SOUTH 46 20' 05" EAST, 24 FEET AND SOUTH 54 58' 30" WEST, 85.84 FEET TO THE MOST SOUTHERLY CORNER OF SAID LAND, BEING A POINT IN THE WEST LINE OF SAID LOT 8, DISTANT THEREON NORTH 0 28' 13" WEST 413.41 FEET FROM SAID SOUTHERLY LINE OF SAID SECTION; THENCE ALONG SAID WEST LINE SOUTH 0 28' 13" EAST 413.41 FEET TO SAID SOUTHERLY LINE; THENCE ALONG SAID SOUTHERLY LINE, NORTH 87 24' 21" EAST 257.21 FEET TO THE TRUE POINT OF BEGINNING.

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LOTS 1, 2 AND 3 AND THE SOUTH HALF OF THE NORTHEAST QUARTER; AND ALSO THE SOUTHEAST QUARTER OF THE NORTHWEST QUARTER, ALL IN SECTION 6, TOWNSHIP 3 NORTH, RANGE 15 WEST, SAN BERNARDINO MERIDIAN, IN THE COUNTY OF LOS ANGELES, STATE OF CALIFORNIA, ACCORDING TO THE OFFICIAL PLAT OF SAID LAND FILED IN THE DISTRICT LAND OFFICE, JANUARY 21, 1875.

EXCEPT THEREFROM THAT PORTION THEREOF DESCRIBED AS FOLLOWS:

THE SURFACE AND 500 FEET OF THE SUBSURFACE VERTICALLY IN DEPTH BELOW THE SURFACE OF THE FOLLOWING DESCRIBED PROPERTY SITUATE IN THE COUNTY OF LOS ANGELES, STATE OF CALIFORNIA, AS SAID SURFACE EXISTED ON AUGUST 19, 1963, TO-WIT:

THAT PORTION OF LOT 1 AND THE SOUTH HALF OF THE NORTHEAST QUARTER OF SECTION 6 IN TOWNSHIP 3 NORTH, RANGE 15 WEST, SAN BERNARDINO MERIDIAN, IN THE COUNTY OF LOS ANGELES, STATE OF CALIFORNIA, ACCORDING TO THE OFFICIAL PLAT OF SAID LAND FILED IN THE DISTRICT LAND OFFICE JANUARY 25, 1875, WITHIN THE FOLLOWING DESCRIBED BOUNDARY:

BEGINNING AT THE NORTHEAST CORNER OF SAID SECTION 6; THEN SOUTH ALONG THE EAST LINE OF SAID SECTION TO THE EAST QUARTER CORNER; THEN WEST 1115.60 FEET ALONG THE SOUTH LINE OF THE NORTHEAST QUARTER OF SAID SECTION; THEN NORTH PARALLEL TO THE EAST LINE OF SAID SECTION TO THE NORTHERLY LINE OF SAID SECTION; THENCE EASTERLY ALONG THE NORTHERLY LINE OF SAID SECTION TO THE POINT OF BEGINNING.

ALSO EXCEPT THEREFROM, THE SURFACE AND THAT PORTION OF THE SUBSURFACE LYING ABOVE A DEPTH OF 100 FEET MEASURED VERTICALLY DOWNWARD FROM SAID SURFACE, OF THAT PORTION OF THE SOUTHEAST QUARTER OF THE NORTHWEST QUARTER OF SAID SECTION 6, QUITCLAIMED AND SURRENDERED TO THE COUNTY OF LOS ANGELES BY PARCEL 33.6 OF THAT CERTAIN DOCUMENT DATED MAY 22, 1970 AND RECORDED ON NOVEMBER 24, 1970 AS INSTRUMENT NO. 3334 IN BOOK D4898, PAGE 203, OFFICIAL RECORDS IN THE OFFICE OF THE COUNTY RECORDER OF SAID COUNTY.

ALSO EXCEPT THEREFROM THOSE PORTIONS LYING WITHIN THE LINES OF THE 205 FOOT WIDE AND 120 FOOT WIDE STRIPS OF LAND AS DESCRIBED IN PARCEL NOS. 20-D, 20-E, 20-F, AND 20-G OF THE DEED TO THE CITY OF LOS ANGELES, RECORDED ON DECEMBER 30, 1970 AS INSTRUMENT NO. 46 IN BOOK D4929, PAGE 135, OFFICIAL RECORDS.

ALSO EXCEPT THEREFROM THOSE PORTIONS OF SAID LAND DESCRIBED IN THAT CERTAIN DEED TO THE STATE OF CALIFORNIA, RECORDED APRIL 5, 1976, AS INSTRUMENT NO. 41, OFFICIAL RECORDS.

ALSO EXCEPT THEREFROM THOSE PORTIONS OF SAID LAND, DESCRIBED IN THAT CERTAIN DEED TO THE CITY OF LOS ANGELES, RECORDED MAY 18, 1981, AS INSTRUMENT NO. 81-490750, OFFICIAL RECORDS.

ALSO EXCEPT FROM THE REMAINDER THEREOF, THAT PORTION WHICH LIES NORTHWESTERLY OF THAT PORTION OF THE BOUNDARY OF THE ANTELOPE VALLEY FREEWAY DESCRIBED IN PARCEL 1 (C 990-32, -33, PORTIONS OF C 990, C 990-1, -2, -3, -21 AND -22) IN THE DEED TO THE STATE OF CALIFORNIA BY DOCUMENT RECORDED APRIL 5, 1976 AS INSTRUMENT NO. 41, AS HAVING LENGTHS OF 1919.41 FEET, 700.39 FEET, AND 34.26 FEET.

## EASEMENTS

(1) AN EASEMENT FOR USE AS A PUBLIC HIGHWAY AND INCIDENTAL PURPOSES, RECORDED IN BOOK 18596, PAGE 127 OF OFFICIAL RECORDS
IN FAVOR OF: THE COUNTY OF LOS ANGELES, STATE OF CALIFORNIA; TO BE VACATED AND ABANDONED WITH APPROVAL OF TRACT MAP.
AFFECTS: PORTIONS OF PARCELS E & K (PLOTTED HEREON)

(2) AN EASEMENT FOR ELECTRIC LINE AND INCIDENTAL PURPOSES, RECORDED JULY 31, 1952 AS INSTRUMENT No. 2163 IN BOOK 39504, PAGE 49 OF OFFICIAL RECORDS.
IN FAVOR OF: SOUTHERN CALIFORNIA EDISON COMPANY, A CORPORATION; TO BE ABANDONED AND RELOCATED WITH APPROVAL OF TRACT MAP.
AFFECTS: PORTIONS OF PARCELS K (NOT PLOTTABLE FROM RECORD)

(3) AN EASEMENT FOR PUBLIC HIGHWAY, SLOPE AND INCIDENTAL PURPOSES, RECORDED MARCH 14, 1955 AS INSTRUMENT No. 3835 OF OFFICIAL RECORDS.
IN FAVOR OF: COUNTY OF LOS ANGELES; TO REMAIN.
AFFECTS: PORTIONS OF PARCELS E & K (PLOTTED HEREON)

(4) ABUTTER'S RIGHTS OF INGRESS AND EGRESS TO OR FROM THE FREEWAY HAVE BEEN RELINQUISHED IN THE DOCUMENT RECORDED MARCH 6, 1974 AS INSTRUMENT No. 3561 OF OFFICIAL RECORDS; TO REMAIN. (PLOTTED HEREON)

(5) AN EASEMENT FOR AERIAL AND UNDERGROUND ELECTRICAL LINES AND COMMUNICATION LINES AND INCIDENTAL PURPOSES, RECORDED MARCH 6, 1974 AS INSTRUMENT No. 3561 OF OFFICIAL RECORDS.
IN FAVOR OF: SOUTHERN CALIFORNIA EDISON COMPANY, A CALIFORNIA CORPORATION, ITS SUCCESSORS AND ASSIGNS; TO BE ABANDONED AND RELOCATED WITH APPROVAL OF TRACT MAP.
AFFECTS: PORTIONS OF PARCEL H (PLOTTED HEREON)

NOTE:
1. ONSITE GRADED ROADS DO NOT SHOW UP ON ANY RECORDED DOCUMENTS AS EASEMENTS.
2. (#) DENOTES EASEMENT PLOTTED HEREON

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## NOTES

1. THE SUBDIVIDER INTENDS TO FILE MULTIPLE FINAL MAPS PER CALIFORNIA GOVERNMENT CODE SECTION 66456.1 AS PART OF PROJECT PHASING. PERMISSION IS REQUESTED TO RECORD MULTIPLE MAPS.
2. MAINTENANCE OF STORM DRAIN LINES AND APPURTENANCES BY LOS ANGELES COUNTY PUBLIC WORKS AS INDICATED ON SHEET T-3. ALL OTHER DRAINAGE LINES AND APPURTENANCES TO BE MAINTAINED BY OWNER.
3. LANDSCAPED SLOPES AND OPEN SPACE AREAS TO BE MAINTAINED BY OWNER/APPLICANT.
4. ALL ON-SITE ACCESS ROADS AND BRIDGE TO BE MAINTAINED BY OWNER/APPLICANT.

| LOT # | GROSS (AC) | NET (AC) | PROPOSED LAND USE |
|---|---|---|---|
| 1 | 14.18 | 13.71 | ACCESS EASEMENT |
| 2 | 0.92 | 0.78 | WAREHOUSE |
| 3 | 0.94 | 0.89 | CENTRAL UTILITY PLANT |
| 4 | 1.86 | 1.60 | SOUNDSTAGES/PRODUCTION OFFICES |
| 5 | 1.28 | 1.01 | MILLS |
| 6 | 2.38 | 1.65 | SOUNDSTAGES/PRODUCTION OFFICES |
| 7 | 2.06 | 1.65 | SOUNDSTAGES/PRODUCTION OFFICES |
| 8 | 1.28 | 1.01 | MILLS |
| 9 | 1.86 | 1.65 | SOUNDSTAGES/PRODUCTION OFFICES |
| 10 | 0.80 | 0.70 | ADMINISTRATION BUILDING |
| 11 | 0.65 | 0.55 | BUNGALOWS |
| 12 | 0.46 | 0.41 | COMMISSARY |
| 13 | 0.65 | 0.49 | BUNGALOWS |
| 14 | 4.06 | 3.92 | PLACERITA CREEK |
| 15 | 2.19 | 1.64 | SOUNDSTAGES/PRODUCTION OFFICES |
| 16 | 2.01 | 1.64 | SOUNDSTAGES/PRODUCTION OFFICES |
| 17 | 1.49 | 1.49 | MILLS |
| 18 | 1.90 | 1.37 | ELECTRICAL SUBSTATION |
| 19 | .97 | 0.80 | DEBRIS BASIN |
| 20 | 2.34 | 2.17 | DEBRIS BASIN |
| TOTAL | 44.28 | 39.13 | |

## LEGEND

| | |
|---|---|
| | CENTER LINE |
| | TRACT BOUNDARY LINE |
| | PROPOSED LOT LINE |
| | EXISTING PARCEL LINE |
| | DAYLIGHT LINE |
| | PROPOSED TOP OF SLOPE |
| | PROPOSED TOE OF SLOPE |
| 1450 | PROPOSED CONTOUR LINE |
| | EASEMENT LINE |
| OHP | EXISTING LADWP POWER LINE |
| SD | EXISTING STORM DRAIN LINE |
| | PROPOSED RETAINING WALL |
| | EXISTING FEMA ZONE A |
| | PROPOSED LA CO. 50 YEAR FLOOD PLAIN |
| | PROPOSED SLOPE AREA |
| | PROPOSED SLOPE STABILIZATION AND CREEK ACCESS ROAD |
| | EXISTING AND PROPOSED EMERGENCY ACCESS |
| | PRIVATE DRIVEWAY/FIRE LANE. PROPOSED VARIABLE WIDTH EASEMENT FOR FIRE ACCESS (28' MIN. WIDTH AROUND BUILDINGS HIGHER THAN 35' AND MIN. 32' TURNING RADIUS), INGRESS AND EGRESS, PUBLIC UTILITIES, DRAINAGE & MAINTENANCE PURPOSES |
| | PROPOSED VARIABLE WIDTH EASEMENT FOR DRAINAGE PURPOSES |
| 1440.5 | PROPOSED BUILDING PAD ELEVATION |

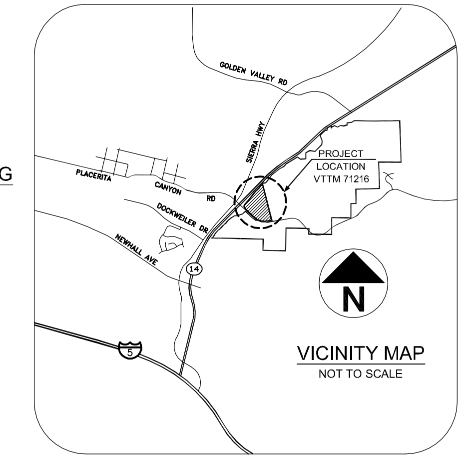
## SITE ADDRESS

19802 PLACERITA CANYON ROAD
NEWHALL, CALIFORNIA 91321

## EARTHWORK / GRADING

RAW QUANTITIES

CUT: 700,000 CY
FILL: 200,000 CY
EXPORT: 500,000 CY




VICINITY MAP
NOT TO SCALE

## SHEET INDEX


T-1 VESTING TENTATIVE TRACT MAP NO. 71216
T-2 OPTION BUILD OUT MAP
T-3 ON-SITE UTILITIES MAP AND STREET AND WALL SECTIONS
T-4 TYPICAL STREET AND WALL SECTIONS
T-5 OFF-SITE UTILITIES MAP
T-6 PHASING MAP


## OWNER/APPLICANT

GOLDEN OAK RANCH PROPERTIES
19802 PLACERITA CANYON ROAD
NEWHALL, CALIFORNIA 91321
CONTACT: DEANNA DETCHEMENDY
PHONE: (818) 560-8952

## AGENT

KATHLEEN O'PREY TRUMAN, TRUMAN & ELLIOTT LLP
626 WILSHIRE BLVD. SUITE 550
LOS ANGELES, CA 90017
PHONE: (213) 629-5300
FAX: (213) 629-1212

## LAND SURVEYOR/ MAP PREPARED BY:

DAVID EVANS AND ASSOCIATES, INC.
4200 CONCOURS, SUITE 200
ONTARIO, CALIFORNIA 91764
(909) 481-5750

## UTILITY PURVEYORS FOR TRACT MAP

| | |
|---|---|
| GAS | SOUTHERN CALIFORNIA GAS COMPANY |
| SEWER | SANTA CLARITA VALLEY SANITATION DISTRICT |
| WATER | NEWHALL COUNTY WATER DISTRICT |
| ELECTRIC | SOUTHERN CALIFORNIA EDISON |
| TELEPHONE | AT&T |
| CABLE | TIME WARNER |

## EXISTING USE

VACANT, OUTDOOR PARKING, MOTION PICTURE/TELEVISION FILMING AND AGRICULTURAL USES

## PROJECT DATA

TOTAL PROJECT LAND AREA: 1,928,670 SF (44.28 AC)

| | |
|---|---|
| SOUNDSTAGES | 12 |
| PRODUCTION OFFICES | 6 |
| MILLS | 6 |
| WRITERS/PRODUCERS BUNGALOWS | 6 |
| COMMISSARY | 1 |
| ADMINISTRATION BUILDING | 1 |
| CENTRAL UTILITY PLANT | 1 |
| WAREHOUSE | 1 |
| ELECTRICAL SUBSTATION | 1 |

## DRAINAGE NOTE

THE ONSITE RUNOFF WILL BE DRAINED TOWARDS UNDERGROUND DETENTION SYSTEMS. THE PERFORATED UNDERGROUND DETENTION SYSTEMS WILL DETAIN THE PEAK FLOWS AND INFILTRATE THE FIRST FLUSH BEFORE IT REACHES PLACERITA CREEK OR THE GROUNDWATER BASIN.

THE OFFSITE RUNOFF WILL BE PICKED UP BY A SEPARATE STORM DRAIN SYSTEM AND DRAIN DIRECTLY INTO PLACERITA CREEK.

## GENERAL NOTES

1. OWNER/SUBDIVIDER SHALL COMPLY WITH ALL REQUIREMENTS OF THE COUNTY OF LOS ANGELES SUBDIVISION CODE, TITLE 21.
2. OWNER/SUBDIVIDER SHALL COMPLY WITH ALL REQUIREMENTS OF THE COUNTY OF LOS ANGELES DEPARTMENT OF PUBLIC WORKS.
3. NO COMMON AREA SHALL BE DEDICATED.
4. PERMISSION IS REQUESTED TO VACATE DELDEN ROAD.
5. MAP BASED ON RECORDED DATA PREPARED BY DAVID EVANS & ASSOCIATES DATED JUNE 2009.
6. PROJECT IS IN FEMA 100-YEAR FLOOD ZONE AND LOS ANGELES COUNTY'S 50-YEAR CAPITAL FLOOD ZONE.
7. EXISTING MAINTENANCE ROAD IN FAVOR OF LADWP SHALL BE VACATED AND INSTEAD AN EASEMENT IN FAVOR OF LADWP WILL BE GRANTED OVER LOT 1, THE PRIVATE DRIVEWAY SYSTEM.
8. LOTS 15, 16, AND 17 MAY BE MERGED INTO ONE LOT WITH OPTION BUILD OUT.
9. LADWP TRANSMISSION CORRIDOR IS OWNED BY LADWP. OWNER/APPLICANT HAS AN ACCESS EASEMENT OVER THE LADWP TRANSMISSION CORRIDOR.
10. PERMISSION IS REQUESTED TO WAIVE STREET FRONTAGE
11. PERMISSION REQUESTED FOR ALLOWANCE OF 5-FOOT DEVIATION FOR ELEVATION OF PADS IN LOTS.
12. PERMISSION IS REQUESTED TO RECORD MULTIPLE MAPS.
13. PERMISSION IS REQUESTED TO SATISFY LANDSCAPING REQUIREMENT OF 10% OVER ENTIRE TRACT MAP RATHER THAN ON LOT-BY-LOT BASIS.
14. THE OWNER/APPLICANT SHALL OBTAIN WRITTEN AUTHORIZATION FROM LADWP PRIOR TO ISSUANCE OF GRADING PERMITS FOR USE OF TRANSMISSION LINE ROW FOR PARKING LOT AND GRADING CONSTRUCTION.
15. DRIVEWAY ACCESS FROM PLACERITA CANYON RD. MAY REQUIRE MINOR ADJUSTMENT TO THE SATISFACTION OF CALTRANS, LADWP, PUBLIC WORKS, AND REGIONAL PLANNING.
16. THE PROPOSED BRIDGE OVER PLACERITA CREEK REQUIRES AN ACCESS EASEMENT OVER LOT 14.

## LAND USE & ZONING

EXISTING LAND USE: AGRICULTURAL — PROPOSED ZONING: C-M-DP
PROPOSED LAND USE: COMMERCIAL — TOTAL NUMBER OF LOTS: 20
EXISTING ZONING: A-2-1

## ASSESSORS PARCEL NUMBERS

2848-009-037, PORTION OF 2848-009-038, 2848-019-008, 2848-019-009, 2848-019-010, 2848-019-011, 2848-019-012, 2848-019-013

MAJOR LAND DIVISION
VESTING TENTATIVE TRACT MAP
NO. 71216
LOCATED IN THE UNINCORPORATED TERRITORY OF
THE COUNTY OF LOS ANGELES, STATE OF CALIFORNIA

OWNER
GOLDEN OAK RANCH PROPERTIES
19802 PLACERITA CANYON ROAD
NEWHALL, CALIFORNIA 91321

REGISTERED PROFESSIONAL ENGINEER
JEFFREY KARL RUPP
NO. 42868
Exp. 3/31/2012
CIVIL
STATE OF CALIFORNIA

PROFESSIONAL LAND SURVEYOR
ROBERT D. VASQUEZ
Exp.12/31/10
No. 7300
STATE OF CALIFORNIA

DAVID EVANS AND ASSOCIATES INC.
4200 Concours, Suite 200
Ontario California 91764
Phone: 909.481.5750

REVISIONS: APPD.

DATE: PREPARED: Oct 16, 2010

SCALE: 1"=100'

PROJECT NUMBER: MATE0000-0002

DRAWING FILE: ECTM001MATE00000002.dwg

SHEET NO. T-1

# MAJOR LAND DIVISION
# VESTING TENTATIVE TRACT MAP NO. 71216
# SITE PLAN OPTION B

## LEGAL DESCRIPTION

PARCEL E:
THAT PORTION OF LOT 1 AND THE SOUTH HALF OF THE NORTHEAST QUARTER OF SECTION 6 IN TOWNSHIP 3 NORTH, RANGE 15 WEST, SAN BERNARDINO MERIDIAN, IN THE COUNTY OF LOS ANGELES, STATE OF CALIFORNIA, ACCORDING TO THE OFFICIAL PLAT OF SAID LAND FILED IN THE DISTRICT LAND OFFICE JANUARY 25, 1875, WITHIN THE FOLLOWING DESCRIBED BOUNDARY:

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SOUTH 47 47' 00" WEST 125.32 FEET, SOUTH 46 20' 05" EAST, 24 FEET AND SOUTH 54 58' 30" WEST, 85.84 FEET TO THE MOST SOUTHERLY CORNER OF SAID LAND, BEING A POINT IN THE WEST LINE OF SAID LOT 8, DISTANT THEREON NORTH 0 28' 13" WEST 413.41 FEET FROM SAID SOUTHERLY LINE OF SAID SECTION; THENCE ALONG SAID WEST LINE SOUTH 0 28' 13" EAST 413.41 FEET TO SAID SOUTHERLY LINE; THENCE ALONG SAID SOUTHERLY LINE, NORTH 87 24' 21" EAST 257.21 FEET TO THE TRUE POINT OF BEGINNING.

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THAT PORTION OF LOT 1 AND THE SOUTH HALF OF THE NORTHEAST QUARTER OF SECTION 6 IN TOWNSHIP 3 NORTH, RANGE 15 WEST, SAN BERNARDINO MERIDIAN, IN THE COUNTY OF LOS ANGELES, STATE OF CALIFORNIA, ACCORDING TO THE OFFICIAL PLAT OF SAID LAND FILED IN THE DISTRICT LAND OFFICE JANUARY 25, 1875, WITHIN THE FOLLOWING DESCRIBED BOUNDARY:

BEGINNING AT THE NORTHEAST CORNER OF SAID SECTION 6; THEN SOUTH ALONG THE EAST LINE OF SAID SECTION TO THE EAST QUARTER CORNER; THEN WEST 1115.60 FEET ALONG THE SOUTH LINE OF THE NORTHEAST QUARTER OF SAID SECTION; THEN NORTH PARALLEL TO THE EAST LINE OF SAID SECTION TO THE NORTHERLY LINE OF SAID SECTION; THENCE EASTERLY ALONG THE NORTHERLY LINE OF SAID SECTION TO THE POINT OF BEGINNING.

ALSO EXCEPT THEREFROM, THE SURFACE AND THAT PORTION OF THE SUBSURFACE LYING ABOVE A DEPTH OF 100 FEET MEASURED VERTICALLY DOWNWARD FROM SAID SURFACE, OF THAT PORTION OF THE SOUTHEAST QUARTER OF THE NORTHWEST QUARTER OF SAID SECTION 6, QUITCLAIMED AND SURRENDERED TO THE COUNTY OF LOS ANGELES BY PARCEL 33.6 OF THAT CERTAIN DOCUMENT DATED MAY 22, 1970 AND RECORDED ON NOVEMBER 24, 1970 AS INSTRUMENT NO. 3334 IN BOOK D4898, PAGE 203, OFFICIAL RECORDS IN THE OFFICE OF THE COUNTY RECORDER OF SAID COUNTY.

ALSO EXCEPT THEREFROM THOSE PORTIONS LYING WITHIN THE LINES OF THE 205 FOOT WIDE AND 120 FOOT WIDE STRIPS OF LAND AS DESCRIBED IN PARCEL NOS. 20-D, 20-E, 20-F, AND 20-G OF THE DEED TO THE CITY OF LOS ANGELES, RECORDED ON DECEMBER 30, 1970 AS INSTRUMENT NO. 46 IN BOOK D4929, PAGE 135, OFFICIAL RECORDS.

ALSO EXCEPT THEREFROM THOSE PORTIONS OF SAID LAND DESCRIBED IN THAT CERTAIN DEED TO THE STATE OF CALIFORNIA, RECORDED APRIL 5, 1976, AS INSTRUMENT NO. 41, OFFICIAL RECORDS.

ALSO EXCEPT THEREFROM THOSE PORTIONS OF SAID LAND, DESCRIBED IN THAT CERTAIN DEED TO THE CITY OF LOS ANGELES, RECORDED MAY 18, 1981, AS INSTRUMENT NO. 81-490750, OFFICIAL RECORDS.

ALSO EXCEPT FROM THE REMAINDER THEREOF, THAT PORTION WHICH LIES NORTHWESTERLY OF THAT PORTION OF THE BOUNDARY OF THE ANTELOPE VALLEY FREEWAY DESCRIBED IN PARCEL 1 (C 990-32, -33, PORTIONS OF C 990, C 990-1, -2, -3, -21 AND -22) IN THE DEED TO THE STATE OF CALIFORNIA BY DOCUMENT RECORDED APRIL 5, 1976 AS INSTRUMENT NO. 41, AS HAVING LENGTHS OF 1919.41 FEET, 700.39 FEET, AND 34.26 FEET.

## EASEMENTS

(1) AN EASEMENT FOR USE AS A PUBLIC HIGHWAY AND INCIDENTAL PURPOSES, RECORDED IN BOOK 18596, PAGE 127 OF OFFICIAL RECORDS
IN FAVOR OF: THE COUNTY OF LOS ANGELES, STATE OF CALIFORNIA; TO BE VACATED AND ABANDONED WITH APPROVAL OF TRACT MAP.
AFFECTS: PORTIONS OF PARCELS E & K (PLOTTED HEREON)

(2) AN EASEMENT FOR ELECTRIC LINE AND INCIDENTAL PURPOSES, RECORDED JULY 31, 1952 AS INSTRUMENT No. 2163 IN BOOK 39504, PAGE 49 OF OFFICIAL RECORDS.
IN FAVOR OF: SOUTHERN CALIFORNIA EDISON COMPANY, A CORPORATION; TO BE ABANDONED AND RELOCATED WITH APPROVAL OF TRACT MAP.
AFFECTS: PORTIONS OF PARCELS K (NOT PLOTTABLE FROM RECORD)

(3) AN EASEMENT FOR PUBLIC HIGHWAY, SLOPE AND INCIDENTAL PURPOSES, RECORDED MARCH 14, 1955 AS INSTRUMENT No. 3835 OF OFFICIAL RECORDS.
IN FAVOR OF: COUNTY OF LOS ANGELES; TO REMAIN.
AFFECTS: PORTIONS OF PARCELS E & K (PLOTTED HEREON)

(4) ABUTTER'S RIGHTS OF INGRESS AND EGRESS TO OR FROM THE FREEWAY HAVE BEEN RELINQUISHED IN THE DOCUMENT RECORDED MARCH 6, 1974 AS INSTRUMENT No. 3561 OF OFFICIAL RECORDS; TO REMAIN. (PLOTTED HEREON)

(5) AN EASEMENT FOR AERIAL AND UNDERGROUND ELECTRICAL LINES AND COMMUNICATION LINES AND INCIDENTAL PURPOSES, RECORDED MARCH 6, 1974 AS INSTRUMENT No. 3561 OF OFFICIAL RECORDS.
IN FAVOR OF: SOUTHERN CALIFORNIA EDISON COMPANY, A CALIFORNIA CORPORATION, ITS SUCCESSORS AND ASSIGNS; TO BE ABANDONED AND RELOCATED WITH APPROVAL OF TRACT MAP.
AFFECTS: PORTIONS OF PARCEL H (PLOTTED HEREON)

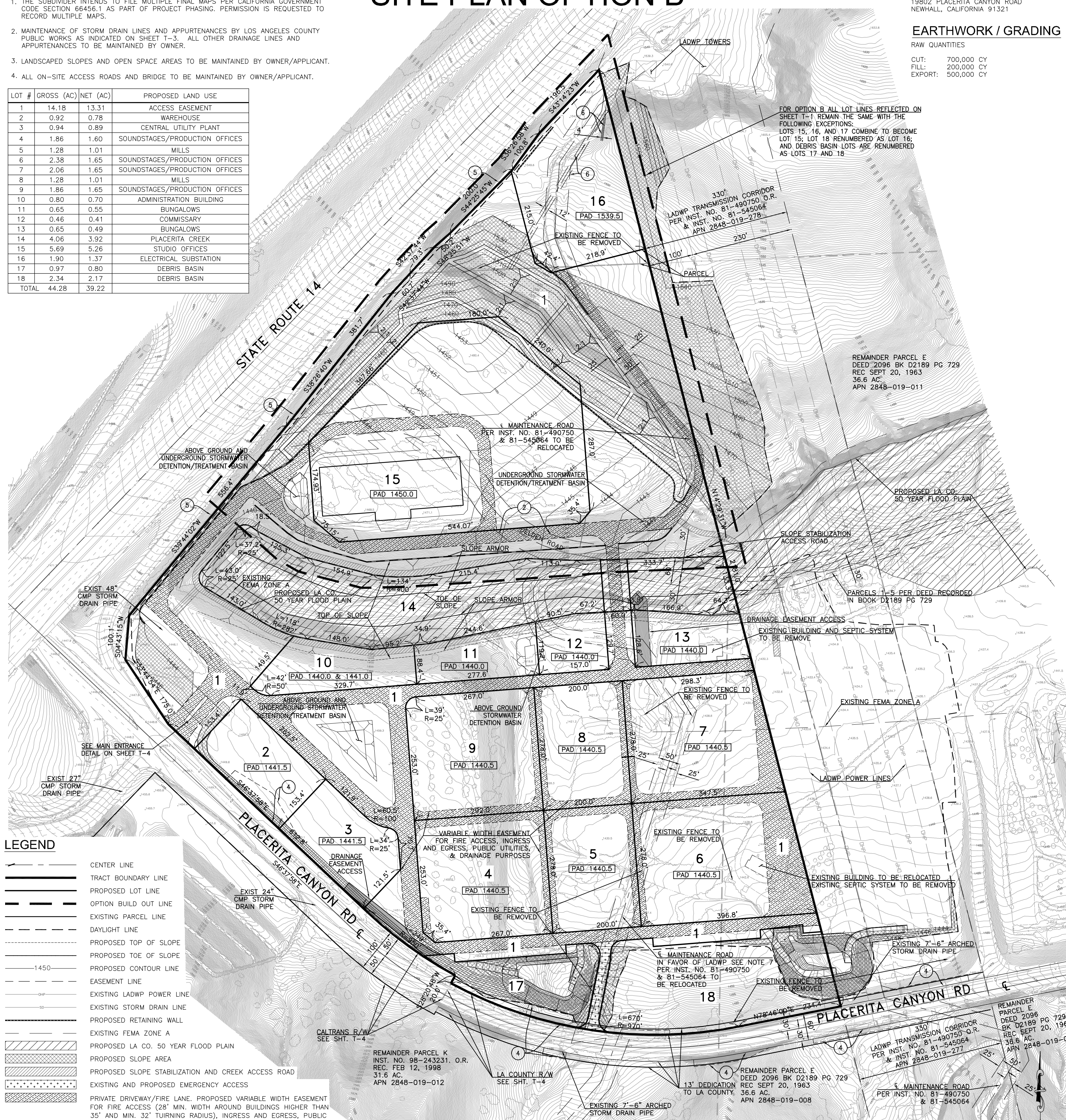
NOTE:
1. ONSITE GRADED ROADS DO NOT SHOW UP ON ANY RECORDED DOCUMENTS AS EASEMENTS.
2. (#) DENOTES EASEMENT PLOTTED HEREON

DWG: P:\M\MATE00000002\0400CAD\EC\DWG\Sheet\ECTM005MATE00000002.dwg BY: jjv Oct 16, 2010 - 10:25:07am

## NOTES

1. THE SUBDIVIDER INTENDS TO FILE MULTIPLE FINAL MAPS PER CALIFORNIA GOVERNMENT CODE SECTION 66456.1 AS PART OF PROJECT PHASING. PERMISSION IS REQUESTED TO RECORD MULTIPLE MAPS.
2. MAINTENANCE OF STORM DRAIN LINES AND APPURTENANCES BY LOS ANGELES COUNTY PUBLIC WORKS AS INDICATED ON SHEET T-3. ALL OTHER DRAINAGE LINES AND APPURTENANCES TO BE MAINTAINED BY OWNER.
3. LANDSCAPED SLOPES AND OPEN SPACE AREAS TO BE MAINTAINED BY OWNER/APPLICANT.
4. ALL ON-SITE ACCESS ROADS AND BRIDGE TO BE MAINTAINED BY OWNER/APPLICANT.

| LOT # | GROSS (AC) | NET (AC) | PROPOSED LAND USE |
|---|---|---|---|
| 1 | 14.18 | 13.31 | ACCESS EASEMENT |
| 2 | 0.92 | 0.78 | WAREHOUSE |
| 3 | 0.94 | 0.89 | CENTRAL UTILITY PLANT |
| 4 | 1.86 | 1.60 | SOUNDSTAGES/PRODUCTION OFFICES |
| 5 | 1.28 | 1.01 | MILLS |
| 6 | 2.38 | 1.65 | SOUNDSTAGES/PRODUCTION OFFICES |
| 7 | 2.06 | 1.65 | SOUNDSTAGES/PRODUCTION OFFICES |
| 8 | 1.28 | 1.01 | MILLS |
| 9 | 1.86 | 1.65 | SOUNDSTAGES/PRODUCTION OFFICES |
| 10 | 0.80 | 0.70 | ADMINISTRATION BUILDING |
| 11 | 0.65 | 0.55 | BUNGALOWS |
| 12 | 0.46 | 0.41 | COMMISSARY |
| 13 | 0.65 | 0.49 | BUNGALOWS |
| 14 | 4.06 | 3.92 | PLACERITA CREEK |
| 15 | 5.69 | 5.26 | STUDIO OFFICES |
| 16 | 1.90 | 1.37 | ELECTRICAL SUBSTATION |
| 17 | 0.97 | 0.80 | DEBRIS BASIN |
| 18 | 2.34 | 2.17 | DEBRIS BASIN |
| TOTAL | 44.28 | 39.22 | |




## LEGEND

- CENTER LINE
- TRACT BOUNDARY LINE
- PROPOSED LOT LINE
- OPTION BUILD OUT LINE
- EXISTING PARCEL LINE
- DAYLIGHT LINE
- PROPOSED TOP OF SLOPE
- PROPOSED TOE OF SLOPE
- 1450 — PROPOSED CONTOUR LINE
- EASEMENT LINE
- OHP — EXISTING LADWP POWER LINE
- SD — EXISTING STORM DRAIN LINE
- PROPOSED RETAINING WALL
- EXISTING FEMA ZONE A
- PROPOSED LA CO. 50 YEAR FLOOD PLAIN
- PROPOSED SLOPE AREA
- PROPOSED SLOPE STABILIZATION AND CREEK ACCESS ROAD
- EXISTING AND PROPOSED EMERGENCY ACCESS
- PRIVATE DRIVEWAY/FIRE LANE. PROPOSED VARIABLE WIDTH EASEMENT FOR FIRE ACCESS (28' MIN. WIDTH AROUND BUILDINGS HIGHER THAN 35' AND MIN. 32' TUIRNING RADIUS), INGRESS AND EGRESS, PUBLIC UTILITIES, DRAINAGE & MAINTENANCE PURPOSES
- PROPOSED VARIABLE WIDTH EASEMENT FOR DRAINAGE PURPOSES
- 1440.5 — PROPOSED BUILDING PAD ELEVATION

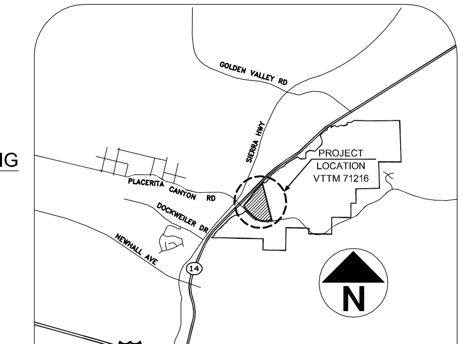
## SITE ADDRESS

19802 PLACERITA CANYON ROAD
NEWHALL, CALIFORNIA 91321

## EARTHWORK / GRADING

RAW QUANTITIES

CUT: 700,000 CY
FILL: 200,000 CY
EXPORT: 500,000 CY



VICINITY MAP
NOT TO SCALE

## SHEET INDEX


T-1 VESTING TENTATIVE TRACT MAP NO. 71216
T-2 OPTION BUILD OUT MAP
T-3 ON-SITE UTILITIES MAP AND STREET AND WALL SECTIONS
T-4 TYPICAL STREET AND WALL SECTIONS
T-5 OFF-SITE UTILITIES MAP
T-6 PHASING MAP


## OWNER/APPLICANT


GOLDEN OAK RANCH PROPERTIES
19802 PLACERITA CANYON ROAD
NEWHALL, CALIFORNIA 91321
CONTACT: DEANNA DETCHEMENDY
PHONE: (818) 560-8952


## AGENT


KATHLEEN O'PREY TRUMAN, TRUMAN & ELLIOTT LLP
626 WILSHIRE BLVD. SUITE 550
LOS ANGELES, CA 90017
PHONE: (213) 629-5300
FAX: (213) 629-1212


## LAND SURVEYOR/ MAP PREPARED BY:


DAVID EVANS AND ASSOCIATES, INC.
4200 CONCOURS, SUITE 200
ONTARIO, CALIFORNIA 91764
(909) 481-5750


## UTILITY PURVEYORS FOR TRACT MAP

| | |
|---|---|
| GAS | SOUTHERN CALIFORNIA GAS COMPANY |
| SEWER | SANTA CLARITA VALLEY SANITATION DISTRICT |
| WATER | NEWHALL COUNTY WATER DISTRICT |
| ELECTRIC | SOUTHERN CALIFORNIA EDISON |
| TELEPHONE | AT&T |
| CABLE | TIME WARNER |

## EXISTING USE

VACANT, OUTDOOR PARKING, MOTION PICTURE/TELEVISION FILMING AND AGRICULTURAL USES

## PROJECT DATA

TOTAL PROJECT LAND AREA: 1,928,670 SF (44.28 AC)

| | |
|---|---|
| SOUNDSTAGES | 8 |
| PRODUCTION OFFICES | 4 |
| MILLS | 4 |
| WRITERS/PRODUCERS BUNGALOWS | 6 |
| COMMISSARY | 1 |
| STUDIO OFFICE | 1 |
| ADMINISTRATION BUILDING | 1 |
| CENTRAL UTILITY PLANT | 1 |
| WAREHOUSE | 1 |
| ELECTRICAL SUBSTATION | 1 |

## DRAINAGE NOTE

THE ONSITE RUNOFF WILL BE DRAINED TOWARDS UNDERGROUND DETENTION SYSTEMS. THE PERFORATED UNDERGROUND DETENTION SYSTEMS WILL DETAIN THE PEAK FLOWS AND INFILTRATE THE FIRST FLUSH BEFORE IT REACHES PLACERITA CREEK OR THE GROUNDWATER BASIN.

THE OFFSITE RUNOFF WILL BE PICKED UP BY A SEPARATE STORM DRAIN SYSTEM AND DRAIN DIRECTLY INTO PLACERITA CREEK.

## GENERAL NOTES

1. OWNER/SUBDIVIDER SHALL COMPLY WITH ALL REQUIREMENTS OF THE COUNTY OF LOS ANGELES SUBDIVISION CODE, TITLE 21.
2. OWNER/SUBDIVIDER SHALL COMPLY WITH ALL REQUIREMENTS OF THE COUNTY OF LOS ANGELES DEPARTMENT OF PUBLIC WORKS.
3. NO COMMON AREA SHALL BE DEDICATED.
4. PERMISSION IS REQUESTED TO VACATE DELDEN ROAD
5. MAP BASED ON RECORDED DATA PREPARED BY DAVID EVANS & ASSOCIATES DATED JUNE 2009.
6. PROJECT IS IN FEMA 100-YEAR FLOOD ZONE AND LOS ANGELES COUNTY'S 50-YEAR CAPITAL FLOOD ZONE
7. EXISTING MAINTENANCE ROAD IN FAVOR OF LADWP SHALL BE VACATED AND INSTEAD AN EASEMENT IN FAVOR OF LADWP WILL BE GRANTED OVER LOT 1, THE PRIVATE DRIVEWAY SYSTEM.
8. LADWP TRANSMISSION CORRIDOR IS OWNED BY LADWP. OWNER/APPLICANT HAS AN ACCESS EASEMENT OVER THE LADWP TRANSMISSION CORRIDOR.
9. PERMISSION IS REQUESTED TO WAIVE STREET FRONTAGE
10. ALLOWANCE OF 5-FOOT DEVIATION FOR ELEVATION OF PADS IN LOTS.
11. PERMISSION IS REQUESTED TO RECORD MULTIPLE MAPS.
12. THE OWNER/APPLICANT SHALL OBTAIN WRITTEN AUTHORIZATION FROM LADWP PRIOR TO ISSUANCE OF GRADING PERMITS FOR USE OF TRANSMISSION LINE ROW FOR PARKING LOT AND GRADING CONSTRUCTION.
15. DRIVEWAY ACCESS FROM PLACERITA CANYON RD. MAY REQUIRE MINOR ADJUSTMENT TO THE SATISFACTION OF CALTRANS, LADWP, PUBLIC WORKS, AND REGIONAL PLANNING.
16. THE PROPOSED BRIDGE OVER PLACERITA CREEK REQUIRES AN ACCESS EASEMENT OVER LOT 14.

## LAND USE & ZONING

EXISTING LAND USE: AGRICULTURAL
PROPOSED LAND USE: COMMERCIAL
EXISTING ZONING: A-2-1
PROPOSED ZONING: C-M-DP
TOTAL NUMBER OF LOTS: 18

## ASSESSORS PARCEL NUMBERS

2848-009-037, PORTION OF 2848-009-038, 2848-019-008, 2848-019-009, 2848-019-010, 2848-019-011, 2848-019-012, 2848-019-013

MAJOR LAND DIVISION
VESTING TENTATIVE TRACT MAP
NO. 71216
LOCATED IN THE UNINCORPORATED TERRITORY OF THE COUNTY OF LOS ANGELES, STATE OF CALIFORNIA

OWNER
GOLDEN OAK RANCH PROPERTIES
19802 PLACERITA CANYON ROAD
NEWHALL, CALIFORNIA 91321

REGISTERED PROFESSIONAL ENGINEER
JEFFREY KARL RUPP
NO. 42868
Exp. 3/31/2012
CIVIL
STATE OF CALIFORNIA

PROFESSIONAL LAND SURVEYOR
ROBERT D. VASQUEZ
Exp. 12/31/10
No. 7300
STATE OF CALIFORNIA

DAVID EVANS AND ASSOCIATES INC.
4200 Concours, Suite 200
Ontario California 91764
Phone: 909.481.5750

| REVISIONS: | APPD. |
|---|---|
| | |

DATE: PREPARED: Oct 16, 2010

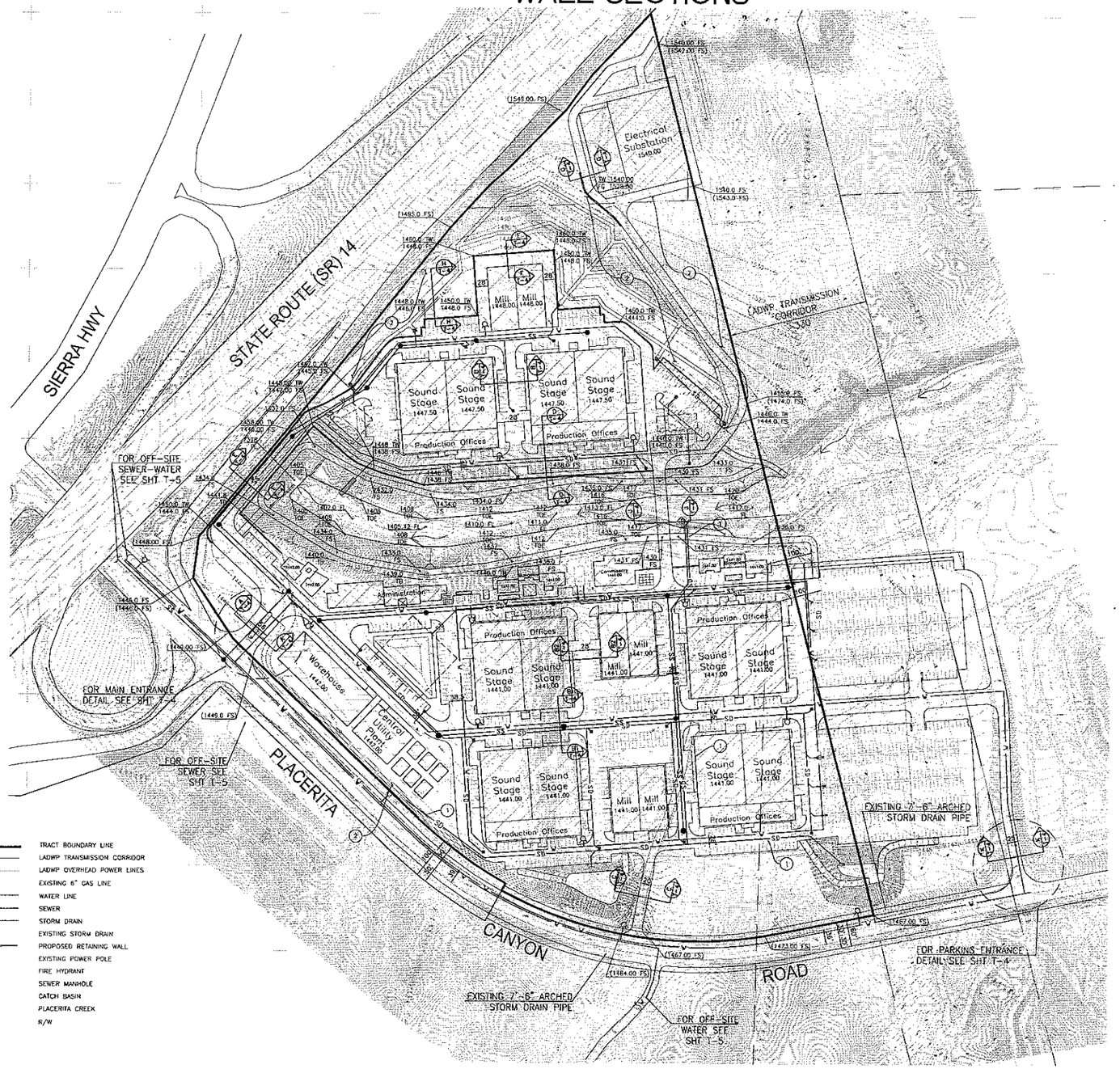
SCALE: 1"=100'

PROJECT NUMBER: MATE0000-0002

DRAWING FILE: ECTM005MATE00000002.dwg

SHEET NO.
T-2

# MAJOR LAND DIVISION
# VESTING TENTATIVE TRACT MAP NO. 71216
# ON-SITE UTILITIES MAP AND STREET AND WALL SECTIONS




## BENCH MARK

NAME: 2928
ELEVATION: 1471.277 FEET NAVD 88
AGENCY: COUNTY OF LOS ANGELES
DESCRIPTION: A CS MON 150MM UP, 7.5M S/O C/L PLACERITA CYN RD & 644M E/O SIERRA HWY 1M S/O PP#13829950E & 40M W/O MILE MARK #2.57. STAMPED "BM 203-17 1985"

## NOTE

1. MAINTENANCE OF STORM DRAIN LINES AND APPURTENANCES BY LOS ANGELES COUNTY PUBLIC WORKS AS INDICATED ON PLAN. ALL OTHER DRAINAGE LINES AND APPURTENANCES TO BE MAINTAINED BY OWNER.
2. LANDSCAPED SLOPES AND OPEN SPACE AREAS TO BE MAINTAINED BY OWNER/APPLICANT.
3. ALL ON-SITE ACCESS ROADS AND BRIDGE TO BE MAINTAINED BY OWNER/APPLICANT.

## EARTHWORK/GRADING

RAW QUANTITIES

CUT: 700,000 CY
FILL: 200,000 CY
EXPORT: 500,000 CY

## LEGEND

- TRACT BOUNDARY LINE
- LADWP TRANSMISSION CORRIDOR
- LADWP OVERHEAD POWER LINES
- EXISTING 6" GAS LINE
- W — WATER LINE
- SS — SEWER
- SD — STORM DRAIN
- EXISTING STORM DRAIN
- PROPOSED RETAINING WALL
- EXISTING POWER POLE
- FIRE HYDRANT
- SEWER MANHOLE
- CATCH BASIN
- PLACERITA CREEK
- RIGHT OF WAY — R/W

0 50 100 200
SCALE: 1"=100'

MAJOR LAND DIVISION
VESTING TENTATIVE TRACT MAP
NO. 71216
LOCATED IN THE UNINCORPORATED TERRITORY OF THE COUNTY OF LOS ANGELES, STATE OF CALIFORNIA

OWNER
GOLDEN OAK RANCH PROPERTIES
18802 PLACERITA CANYON ROAD
NEWHALL, CALIFORNIA 91321

JEFFREY KARL RUFF
NO. 42958
Exp. 3/31/2012
CIVIL
STATE OF CALIFORNIA

Exp. 12/31/10
No. 7302
STATE OF CALIFORNIA

DAVID EVANS AND ASSOCIATES INC.
4200 Concours, Suite 200
Ontario, CA 91764-7615
Phone: 909.481.5750

| REVISIONS: | APPD. |
|---|---|
| | |

DATE: PREPARED: Oct 16, 2010

SCALE: 1"=100'

PROJECT NUMBER: MATE0000-0002

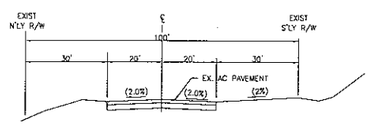
DRAWING FILE: ECTM003MATE0000002.dwg

SHEET NO. T-3

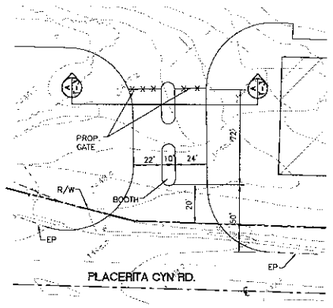
DWG: P:\N\MATE0000002\CAD\ECTM\ECTM003\MATE0000002.dwg BY: JJV Oct 16, 2010 - 10:09PM

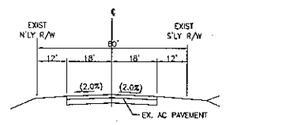
# MAJOR LAND DIVISION
# VESTING TENTATIVE TRACT MAP NO. 71216
# TYPICAL STREET AND WALL SECTIONS

## TYPICAL STREET SECTIONS

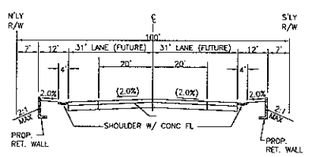



TYPICAL STREET SECTION (100' R/W)
EXISTING
FROM SR-14 NB OFF-RAMP TO 860' EAST ALONG PLACERITA CYN RD.
PLACERITA CANYON ROAD
RURAL SECONDARY HWY
N.T.S.

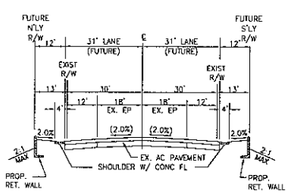


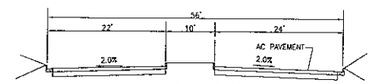

TYPICAL STREET SECTION (60' R/W)
EXISTING
FROM 860' EAST OF SR-14 NB OFF RAMP TO 1300' EAST ALONG PLACERITA CYN RD.
PLACERITA CANYON ROAD
RURAL SECONDARY HWY
N.T.S.




TYPICAL STREET SECTION (100' R/W)
PROPOSED
FROM SR-14 NB OFF-RAMP TO 860' EAST ALONG PLACERITA CYN RD.
PLACERITA CANYON ROAD
RURAL SECONDARY HWY
N.T.S.

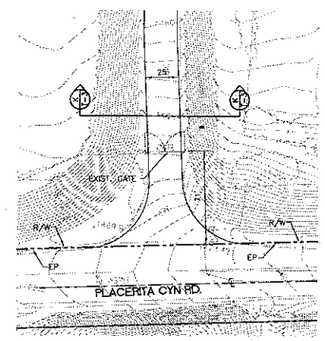



TYPICAL STREET SECTION (60' R/W)
PROPOSED
FROM 860' EAST OF SR-14 NB OFF RAMP TO 1300' EAST ALONG PLACERITA CYN RD.
PLACERITA CANYON ROAD
RURAL SECONDARY HWY
N.T.S.

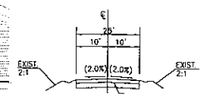



MAIN ENTRANCE ROAD
SECTION A-A (A/T-3)
N.T.S.

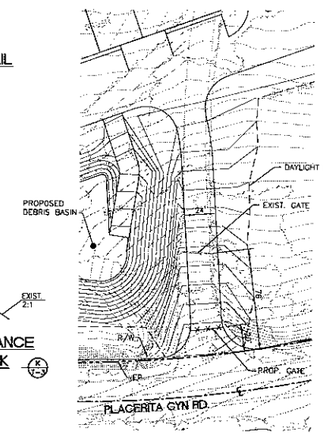
MAIN ENTRANCE DETAIL
N.T.S.



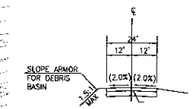

PARKING ENTRANCE DETAIL
N.T.S.



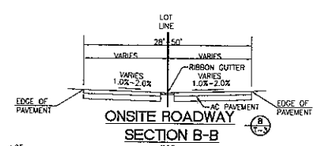

PARKING ENTRANCE
SECTION K-K (K/T-3)
N.T.S.



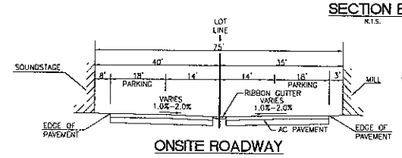

EMERGENCY ACCESS DETAIL
N.T.S.



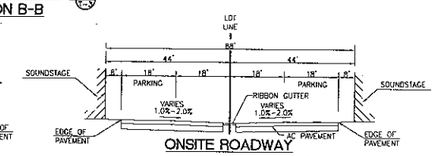

EMERGENCY ACCESS
SECTION C-C (C/T-3)
N.T.S.



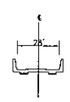

ONSITE ROADWAY
SECTION B-B (B/T-3)
N.T.S.




ONSITE ROADWAY
SECTION B2-B2 (B2/T-3)
N.T.S.

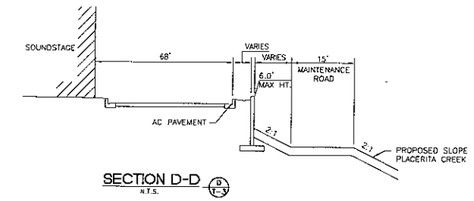



ONSITE ROADWAY
SECTION B1-B1 (B1/T-3)
N.T.S.

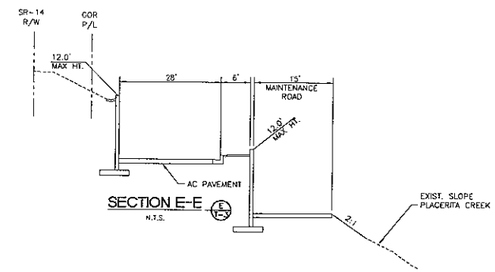



BRIDGE CROSSING
SECTION J-J (J/T-3)
N.T.S.

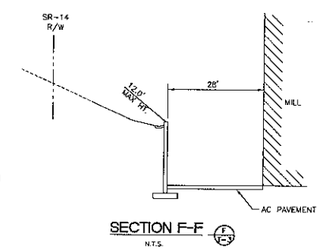
## TYPICAL WALL SECTIONS




SECTION D-D (D/T-3)
N.T.S.




SECTION E-E (E/T-3)
N.T.S.

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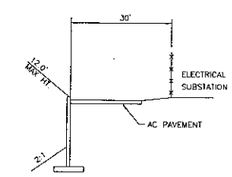


SECTION G-G (G/T-3)
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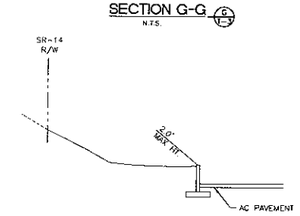
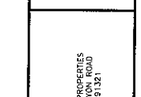
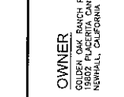



SECTION H-H (H/T-3)
N.T.S.

MAJOR LAND DIVISION
VESTING TENTATIVE TRACT MAP
NO. 71216
LOCATED IN THE UNINCORPORATED TERRITORY OF THE COUNTY OF LOS ANGELES, STATE OF CALIFORNIA

OWNER
GOLDEN OAK RANCH PROPERTIES
19812 PLACERITA CANYON ROAD
NEWHALL, CALIFORNIA 91321




DAVID EVANS and ASSOCIATES INC.
4200 Concours, Suite 200
Ontario, CA 91764
Phone: 909-481-5750

| REVISIONS: | APPD. |
|---|---|
| | |

DATE: PREPARED: Oct 16, 2010

SCALE: 1"=100'

PROJECT NUMBER: MAYC0000-0002

DRAWING FILE: ECTHOD\MAYC0002-sec1.dwg

SHEET NO.

T-4

# MAJOR LAND DIVISION
# VESTING TENTATIVE TRACT MAP NO. 71216
# OFF-SITE UTILITIES MAP

## OFF-SITE SEWER AND WATER OPTIONS

SANITARY SEWER

OAK ORCHARD GRAVITY ALIGNMENT

ON-SITE SEWER WILL FLOW TO A PROPOSED OFF-SITE GRAVITY SEWER MAIN THAT WOULD RUN WESTERLY ALONG PLACERITA CANYON ROAD TO THE WEST SIDE OF AES PACIFIC INC. PROPERTY, NORTH ALONG A PROPOSED EASEMENT TO PLACERITOS BLVD., WEST ON PLACERITOS BLVD. TO GOLDEN OAK LANE, NORTH ON GOLDEN OAK LANE TO OAK ORCHARD ROAD, WEST ON OAK ORCHARD ROAD TO QUIGLEY CANYON ROAD, SOUTH ON QUIGLEY CANYON ROAD TO REJOIN PLACERITOS BLVD. AND THEN WEST ON PLACERITOS BLVD. TO JOIN EXISTING LOCAL SEWER SYSTEM AT MEADVIEW AVE.

WATER

NEWHALL COUNTY WATER DISTRICT – OPTION A

A PROPOSED WATER MAIN WOULD BE CONSTRUCTED FROM THE EXISTING WATER MAIN AT OAKHURST DR. AND DOCKWEILER DR. THE WATER MAIN WOULD GO EASTERLY ALONG DOCKWEILER DR. TO SIERRA HWY., THEN NORTHERLY ALONG SIERRA HWY. TO PLACERITA CYN. RD., AND THEN EASTERLY ALONG PLACERITA CYN. RD. TO A PROPOSED WATER TANK RESERVOIR TO BE CONSTRUCTED ON GOLDEN OAK RANCH ON THE HILLTOP SOUTH OF THE TRACT MAP THAT WOULD SUPPLY THE PROPOSED PROJECT. A PROPOSED BOOSTER PUMP TO BE CONSTRUCTED ON NOWD PROPERTY NEAR EXISTING WATER TANKS NORTH OF DEPUTY JAKE DR. WOULD SUPPLY THE PROPOSED WATER TANK RESERVOIR.

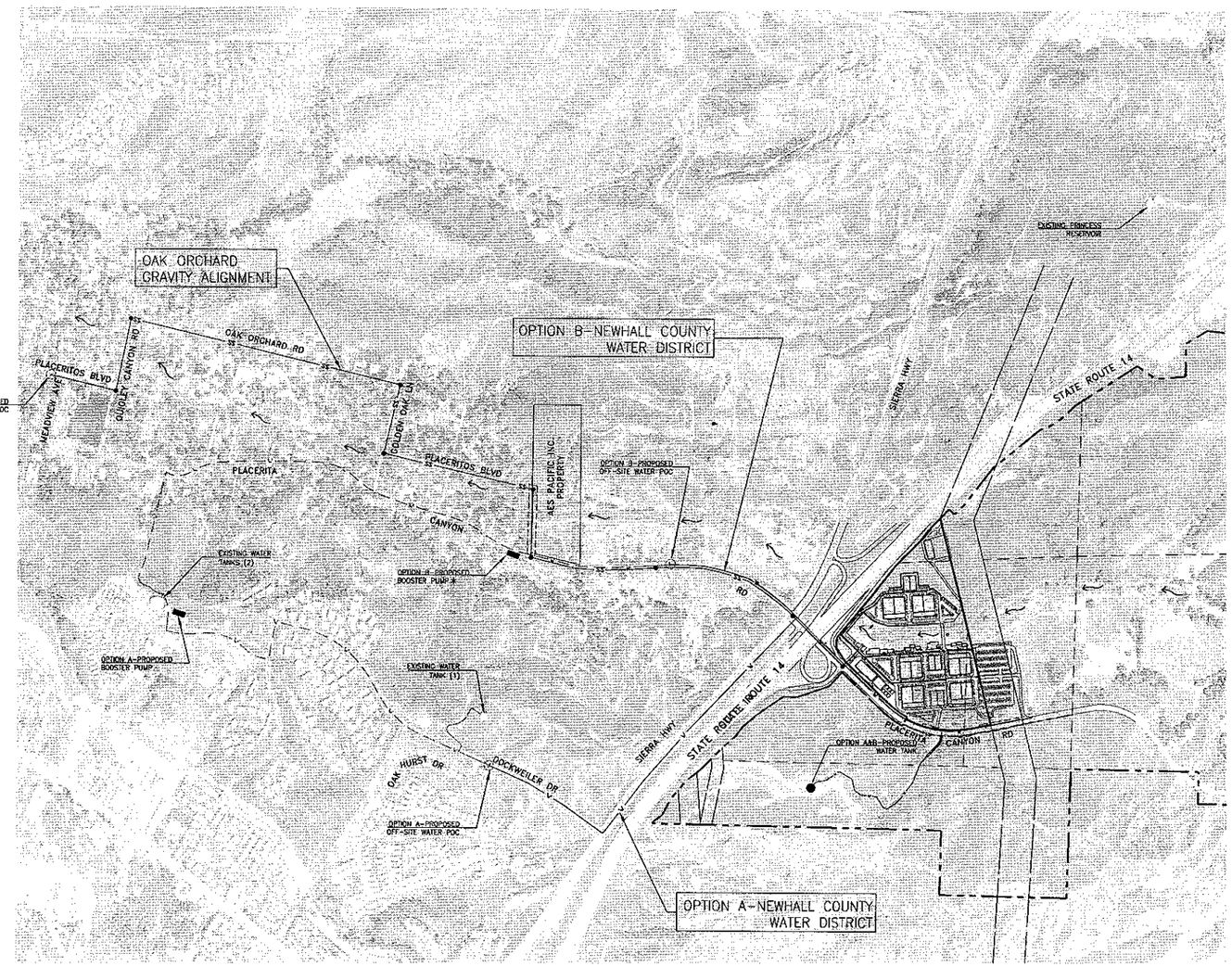
NEWHALL COUNTY WATER DISTRICT – OPTION B

A PROPOSED WATER MAIN WOULD EXTEND THE EXISTING WATER MAIN AT PLACERITA CANYON ROAD WEST OF SIERRA HIGHWAY AND GO TO A PROPOSED BOOSTER PUMP STATION ON A PROPOSED EASEMENT NEAR THE POC. THE WATER MAIN WOULD THEN GO EASTERLY ALONG PLACERITA CYN. RD. TO A PROPOSED WATER TANK RESERVOIR TO BE CONSTRUCTED ON GOLDEN OAK RANCH ON THE HILLTOP SOUTH OF THE TRACT MAP THAT WOULD SUPPLY THE PROPOSED PROJECT.

* EXACT LOCATION OF BOOSTER PUMP STATION ALONG PLACERITA CANYON ROAD TO BE DETERMINED

## LEGEND

- GOLDEN OAK RANCH PROPERTY LINE
- VTM 71216 BOUNDARY LINE
- LADWP TRANSMISSION CORRIDOR
- PROPOSED RETAINING WALL
- W — PROPOSED WATER LINE
- FM — PROPOSED SEWER FORCE MAIN
- SS — PROPOSED SEWER
- PROPOSED MANHOLE
- PROPOSED CONNECTIONS
- PLACERITA CREEK
- PUMP STATION
- POC — PROPOSED WATER TANK
- POC — POINT OF CONNECTION




MAJOR LAND DIVISION
VESTING TENTATIVE TRACT MAP
NO. 71216
LOCATED IN THE UNINCORPORATED TERRITORY OF THE COUNTY OF LOS ANGELES, STATE OF CALIFORNIA

OWNER
GOLDEN OAK RANCH PROPERTIES
19802 PLACERITA CANYON ROAD
NEWHALL, CALIFORNIA 91321

REGISTERED PROFESSIONAL ENGINEER JEFFREY KARL RUPP NO. 42868 Exp. 3/31/2007 CIVIL STATE OF CALIFORNIA

PROFESSIONAL LAND SURVEYOR CHARLES W. VASSER Exp. 12/31/10 No. 7305 STATE OF CALIFORNIA

DAVID EVANS AND ASSOCIATES INC.
4200 Concours, Suite 200
Ontario California 91764
Phone: 909-481-5750

| REVISIONS: | APPD. |
|---|---|
| | |

DATE: PREPARED: Oct 16, 2003

SCALE: 1" = 500'

PROJECT NUMBER: MATE0000-0002

DRAWING FILE: EC1M004MATE00000002.dwg

SHEET NO. T-5

NAD: P:\MUNI\MATE0000\0002\DAVIDEVANS\EC1\SVS\Sheet1\EC1M004MATE00000002.dwg By: Jy Oct 16, 2003 - 11:04:42am

# MAJOR LAND DIVISION
# VESTING TENTATIVE TRACT MAP NO 71216
# PHASING MAP

## LEGEND

| | | |
|---|---|---|
| TR 71216-1 PHASE I | – LOTS 1, 19, 20 | = 17.50 AC |
| TR 71216-2 PHASE II | – LOTS 3, 7 THRU 9, 18 | = 8.04 AC |
| TR 71216-3 PHASE III | – LOTS 4 THRU 6 | = 5.51 AC |
| TR 71216-4 PHASE IV | – LOT 10 | = 0.80 AC |
| TR 71216-5 PHASE V | – LOT 2 | = 0.92 AC |
| TR 71216-6 PHASE VI | – LOTS 15 THRU 17 | = 5.85 AC |
| TR 71216-7 PHASE VII | – LOTS 11 THRU 14 | = 5.66 AC |
| | TOTAL | = 44.28 AC |

VTTM 71216 BOUNDARY LINE

PHASING LIMIT LINE

PROPOSED LOT LINE

MAJOR LAND DIVISION
VESTING TENTATIVE TRACT MAP
NO. 71216
LOCATED IN THE UNINCORPORATED TERRITORY OF
THE COUNTY OF LOS ANGELES, STATE OF CALIFORNIA

OWNER
GOLDEN OAK RANCH PROPERTIES
19000 PLACERITA CANYON ROAD
NEWHALL, CALIFORNIA 91321

JEFFREY KARL RUPP
NO. 42668
Exp. 3/31/2012
CIVIL
STATE OF CALIFORNIA

PROFESSIONAL LAND SURVEYOR
Exp.12/31/10
No. 7362
STATE OF CALIFORNIA

DAVID EVANS AND ASSOCIATES INC.
4200 Concours, Suite 200
Ontario, California 91764
Phone: 909.481.5750

REVISIONS: APPD.

DATE PREPARED:
Oct 16, 2010

SCALE: 1"=100'

PROJECT NUMBER:
MATE0000-0002

DRAWING FILE:
CC71006MATE0000002.dwg

SHEET NO.
T-6

# Appendix K.5

## Dry Utilities Report

# DRY UTILITIES

The proposed project is within the service boundaries of Edison International (Southern California Edison Company) for electricity and Southern California Gas Company (SCGC) for natural gas, AT&T for telephone, and Time Warner for cable services.

## ELECTRICAL

Not a part of this study. To be performed by others.

## GAS

The proposed project would generate a demand for natural gas and would require the extension of natural gas lines into the project site. The primary use of natural gas by the project would be for combustion to produce space heating, water heating, and other miscellaneous heating and air conditioning uses.

### a. Existing Conditions

There is an existing 6-inch gas main located along Placerita Canyon Road, adjacent to the study area. The gas main is owned and operated by Southern California Gas Company. This line is part of a medium pressure gas distribution system that is part of the immediate area.

The substructure map (see attached Figure 1) shows the general alignment of the gas main. The substructure map was obtained from the Los Angeles County Department of Public Works. The Southern California Gas Company does not supply atlas maps of their existing lines until construction maps are submitted to the Gas Company for review.

### b. Proposed Conditions

The projected natural gas demand for the new facility is approximately 26,800 cubic feet per hour (cfh). Based on this demand, the Gas Company has indicated that the existing medium-pressure gas line will have the capacity to provide this demand. See attached copy of Will Serve letter dated June 6, 2007.

## TELEPHONE

### a. Existing Conditions

AT&T currently provides local and long distance telephone services in the project vicinity. There is an existing telephone cable located on Placerita Canyon Road.

The substructure map (see attached Figure 1) shows the general alignment of the telephone indicated as Pacific Telephone which is presently owned and operated by AT&T.

### b. Proposed Conditions

AT&T has stated that they will require detailed site improvement plans before it can provide atlas maps and service costs up to the Point of Entry.

## CABLE

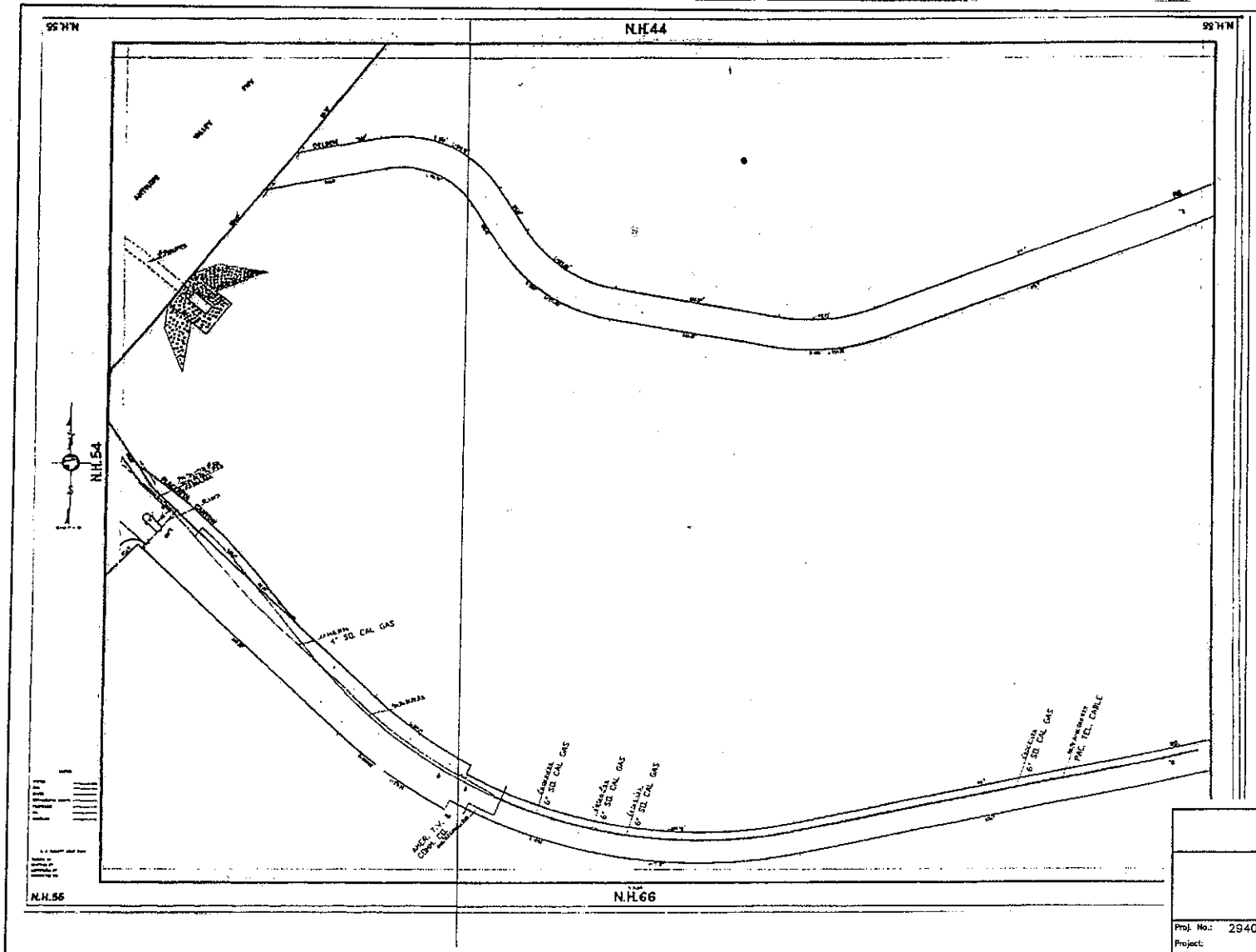
### a. Existing Conditions

Time Warner has existing overhead cable/communication service (Node CX031) that runs along the existing Southern California Edison power poles (see attached Figure 2).

This cable/communication service line is a fiber optic line and currently provides service to the Golden Oak Ranch office facilities.

### b. Proposed Conditions

The existing overhead Time Warner cable lines will be placed in an underground duct bank to be designed during the preparation of construction documents and plans.




# FIGURE 1

EXISTING UTILITIES

| | |
|---|---|
| Proj. No.: 29405054.00002 | Date: JUNE 29, 2007 |
| Project: DISNEY SOUNDSTAGE INITIATIVE/UTILITIES STUDY | Figure: C6 |

SOURCE: LOS ANGELES COUNTY DEPARTMENT OF PUBLIC WORKS.

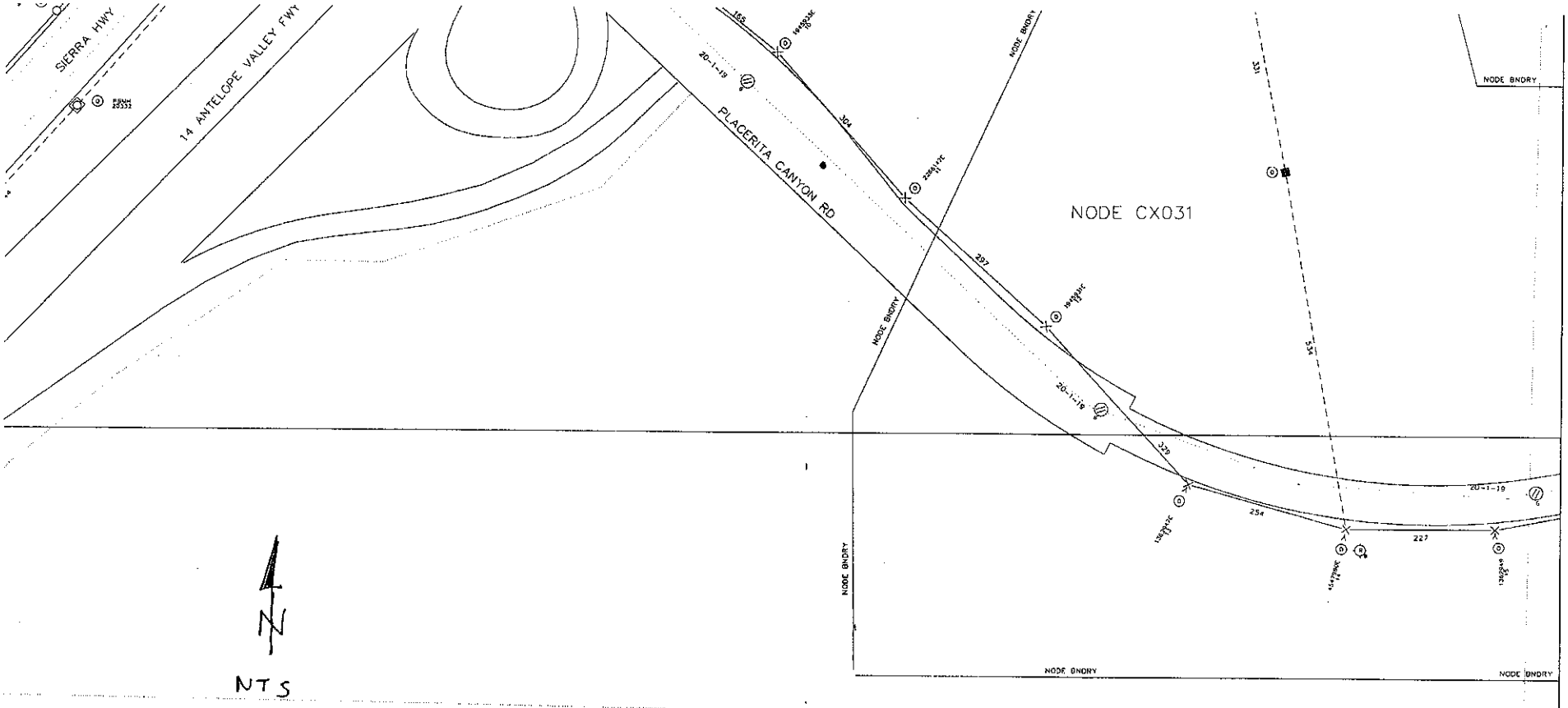



FIGURE 2

TIME-WARNER
O/H CABLE (ALONG
SCE POLES)

Southern California
Gas Company
PO Box 2300
Chatsworth, CA 91313-2300

The
Gas
Company

A Sempra Energy utility™

June 6, 2007

Lee Holguin
URS Corp
915 Wilshire Blvd. #700
Los Angeles, CA 90017-3437

**Subject:** **Will Serve Letter for:**
**Potential delivery of 26,800 CFH for an unspecified development at an undisclosed location along Placerita Canyon Road within 2 miles east of the Antelope Valley Freeway (SR 14).**

This letter is not to be interpreted as a contractual commitment to serve this proposed project, but only as an information service. Its intent is to notify you that Southern California Gas Company has adequate natural gas supply and facilities in the area where this project is proposed.

**Natural gas service can be provided to the proposed project from an existing medium pressure gas distribution system in the area. Requests for more specific information regarding pressure or location of facilities should be directed to John Kirk at 213-244-2914.**

Service would be in accordance with our policies and extension rules on file with the California Public Utilities Commission at the time contractual arrangements are made. The availability of natural gas service is based upon conditions of gas supply and regulatory policies. As a public utility, Southern California Gas Company is under the jurisdiction of the California Public Utilities Commission. Our ability to serve can also be affected by actions of federal regulatory agencies. Should these agencies take any action which affects gas supply or the condition under which service is available, gas service will be provided in accordance with the revised conditions.

This letter is also provided without considering any conditions or non-utility laws and regulations (such as environmental regulations), which could affect construction of a main and/or service extension, i.e., if hazardous wastes were encountered in the process of installing the line. The regulations can only be determined around the time contractual arrangements are made and construction has begun.

Sincerely,

Jack Russo

Jack Russo
Planning Associate
818-701-3228 Fax 818-701-3380

cc: John Kirk

(a)

# Appendix L.1

## Environmental Records Search I

## ENVIRONMENTAL RESEARCH

DEA performed a record search of existing and past land uses on the site and within 1 mile of the site to identify hazardous material uses or concerns that may affect future development. The record search included a database review by Environmental First Search of various government databases for hazardous material users and generators on and near the site; historical aerial photographs and historical topographic maps. DEA also did a record search on the EPA's Envirofacts database and California DTSC's Envirostor database on their agency websites.

### Environmental First Search (EFS)

The following government databases were reviewed by EFS for hazardous material users and generators:

***United States Environmental Protection Agency databases -***

- National Priority List (NPL or Superfund)
- National Priority List subset of deleted sites from NPL (NPL Delisted)
- Comprehensive Environmental Response Compensation and Liability Information System (CERCLIS)
- CERCLIS Archived Sites (NFRAP)
- Resource Conservation and Recovery Information System Sites (RCRA COR ACT)
- Resource Conservation and Recovery Information System Treatment, Storage, and Disposal Facilities (RCRA TSD)
- Resource Conservation and Recovery Information System Generators (RCRA GEN)
- Resource Conservation and Recovery Information System Sites (RCRA NLR)
- Brownfield Management System (Federal IC / EC)
- Emergency Response Notification System (ERNS)
- Indian Lands of the United States (Tribal Lands)

***State of California databases -***

- Site Mitigation and Brownfields Reuse Program Database or CalSites (State/Tribal Sites)
- California Regional Water Quality Control Boards Spill Sites (State Spills 90)
- California Solid Waste Information System (State/Tribal SWL)
- State Water Resources Control Board Leaking Underground Storage Tanks (State/Tribal LUST)
- State Water Resources Control Board Underground Storage Tanks/Aboveground Storage Tanks Listing (State/Tribal UST/AST)
- California EPA's Department of Toxic Substances Control Board Deed-Restricted Sites Listing (State/Tribal IC)
- California EPA's Department of Toxic Substances Control Board Voluntary Cleanup Program Properties (State/Tribal VCP)
- California EPA's Department of Toxic Substances Control Board Site Mitigation and Brownfields Reuse Program Database (State/Tribal Brownfields)
- San Diego County HE17 Permits and San Bernardino County Hazardous Materials Permits (State Permits)
- National Clandestine Laboratory Register and California Site Mitigation and Brownfields Reuse Program Database (State Other)

The project site is listed in the State Water Resources Control Board's Underground Storage Tanks and Aboveground Storage Tanks Listing as a hazardous material user or generator. The Chevron Newhall

Oilfield had an underground storage tank for diesel fuel that was installed on the site in 1984 and removed in 1994. This tank is no longer present on the site. There are no other sites or uses within 1 mile of the site that are included in the various government databases.

The site is within the 91321 zip code and in this zip code area, there are 12 sites listed in government databases, with 8 of the sites under the Emergency Response Notification System (ERNS) and 4 sites are listed under the California Regional Water Quality Control Boards Spill Sites (State Spills 90) as occurring on Placerita Canyon Road.

Two spills occurred at the Placerita oilfield, generally located along and west of the SR-14 Freeway. (The western portion of the site is underlain by the Placerita oilfield, but there are no oil wells that have been drilled on the site.) The Los Angeles Regional Water Quality Control Board (RWQCB) has the spills listed in its Cleanup Program, with one spill requiring no further action and the other spill still having the case open. Two other spills at the Pfaheler/Schisler Oil Lease are also in the RWQCB's Cleanup Program, with the Site Assessments for Total Petroleum Hydrocarbons (TPH) ongoing. None of these spills occurred near the site and are not expected to have affected site conditions.

Five of the ERNS listings are located on Placerita Canyon Road, Sierra Highway, and Placerita Oilfield but no other details are available. One listing was a spill of sodium hydrochloride from an overturned truck near the intersection of Placerita Canyon Road and Sierra Highway. Another was an accidental release of crude oil at 20885 Placerita Canyon Road in 1991, but the valve has since been fixed. Another was a pump line leak in 1992 that led to the release of hydrochloric acid at Placerita Road. None of these listings occurred near the site and are not expected to have affected site conditions.

Appendix A includes the EFS list.

## Historical Topographic Maps

Historic topographic maps for the site and the surrounding area were reviewed to determine past land use on the site.

- The 1900 topographic map shows an existing roadway through the site, with an unnamed road extending northeasterly at the western boundary of the site. The site is undeveloped, with some scattered structures along the east-west road.

- The 1945 topographic map shows the same roadways, with a drainage channel running parallel and north of the east-west roadway and another channel parallel and east of the northeasterly roadway. An existing roadway is also shown along the alignment of Sierra Highway. The site remains undeveloped, with more scattered structures along the east-west road.

- The 1960 topographic map shows the some roadways and drainage channels on the site, with Sierra Highway constructed to the west of the site and Placerita Canyon Road along the southern boundary. The site remains undeveloped but the southern and western sections have been cleared. A number of structures are present on Placerita Canyon Road west of Sierra Highway, with other developments along Sierra Highway to the southwest.

- The 1974 topographic map shows Placerita Canyon Road and the east-west drainage channel, with Sierra Highway and SR-14 constructed to the west of the site. The northeasterly is gone, as is the east-west roadway through the site. The site remains undeveloped and largely cleared. More structures are present on Placerita Canyon Road west of Sierra Highway, with other developments along SR-14 to the southwest and northeast.

- The 1988 topographic map shows the same features as the 1974 map, expect for a roadway extending north from Placerita Canyon Road at the eastern boundary of the site and turning east along the south side of the drainage channel. The site is largely cleared.

- The 1995 topographic map shows the same features as the 1988 map, expect for the power transmission lines along the eastern boundary of the site. The site remains undeveloped. More developments are present west of the site and to the northeast.

No environmental concerns at the site are shown in these maps.

### Historical Aerial Photographs

Historic aerial photographs of the site and the surrounding area were reviewed to determine past land use on the site.

- The 1928 photograph shows the site and the surrounding area as largely undeveloped, with Placerita Canyon Road along the southern boundary and a northeasterly road. The site is within the valley area between hills to the north and south, and does not support extensive vegetation.

- The 1947 photograph shows Sierra Highway to the west of the site, with more roads in the area. A more defined drainage channel runs through the site, with trees along the channel segment to the east, and agricultural land to the east and west of the site. A graded area appears to the northeast of the site.

- The 1952 photograph shows the same features on the site, with more development west of the site and Sierra Highway. Agricultural land and some structures are present east of the site.

- The 1968 photograph shows some roadways on the site, with Sierra Highway constructed to the west of the site and Placerita Canyon Road along the southern boundary. Agricultural land and some structures to the east of the site and developments to the west remain the same.

- The 1976 photograph shows the SR-14 Freeway has been constructed and the site has been graded/filled, except for the drainage channel. Surrounding uses remain the same.

- The 1989 photograph shows the same features on the site, with Sierra Highway widened and more intensive development to the west of with Sierra Highway.

- The 1994 photograph shows not show any major changes over the 1989 photograph.

- The 2002 photograph shows the same features on the site, with more intensive development to the west of with Sierra Highway.

No environmental concerns at the site are shown in these photographs.

### Envirofacts

The US EPA's Envirofacts is a compilation of several EPA databases that provide information about environmental activities that may affect air, water, and land anywhere in the United States, such as hazardous waste facilities, toxic and air releases, Superfund sites, and water discharge permits. It includes sites listed under the Envirofacts AIRS Facility Subsystem (EF AIRS/AFS), Brownfields

Management System (BMS), Biennial Reporting (BR), Comprehensive Environmental Response, Compensation & Liability Information System (CERCLIS), Facility Registry System (FRS), RadNet, formerly Environmental Radiation Ambient Monitoring System, Grants Information & Control System (GICS), Information Collection Rule (ICR), Locational Reference Tables (LRT), Permit Compliance System (PCS), Resource Conservation and Recovery Act Information (RCRAInfo), Safe Drinking Water Information System (SDWIS), Toxics Release Inventory (TRI), and National Priorities List (NPL).

A record search of the Envirofacts database shows that the nearest facility to the project site is JMT Oil, located northwest of the site (20521 Sally Road), across the SR-14 Freeway. This facility is a hazardous waste transporter, under the RCRA program. AES Placerita is located west of the site at 20885 Placerita Canyon Road. This facility is a small generator of hazardous waste, located approximately ¾ mile west of the site. Berry Petroleum is located northwest of the site at 25121 North Sierra Highway. This facility is also a small generator of hazardous waste.

The Yours, Mine and Ours Disney Ranch at 19802 Placerita Canyon Road (4 miles to the east) is identified as a hazardous waste generator, under the RCRA program. Also other facilities are located farther from the site, mainly to the west of the SR-14 Freeway.

None of these nearby sites are expected to have affected environmental conditions at the project site due to their distance and location in relation to the site.

**Envirostor**

The California Department of Toxic Substances Control maintains a database of clean-up sites and hazardous waste facilities in the State. This database includes sites listed in the federal Superfund Sites (NPL), State Response sites, voluntary cleanup sites, school cleanup sites, corrective actions sites, and permitted hazardous waste facilities.

A record search of the Envirostor database shows that there are no listed clean-up sites and hazardous waste facilities on or near the site. The nearest site is Special Devices, Inc. at 16830 Placerita Canyon Road, approximately 3.0 miles east of the site. This is a hazardous waste facility that ceased operation in the mid-1990's and is now vacant. It is subject to corrective action (site clean-up) by the DTSC and USFS.

This facility is not expected to have affected conditions at the project site due to its distance and downstream location in relation to the site.

LINK TO THIS MAP

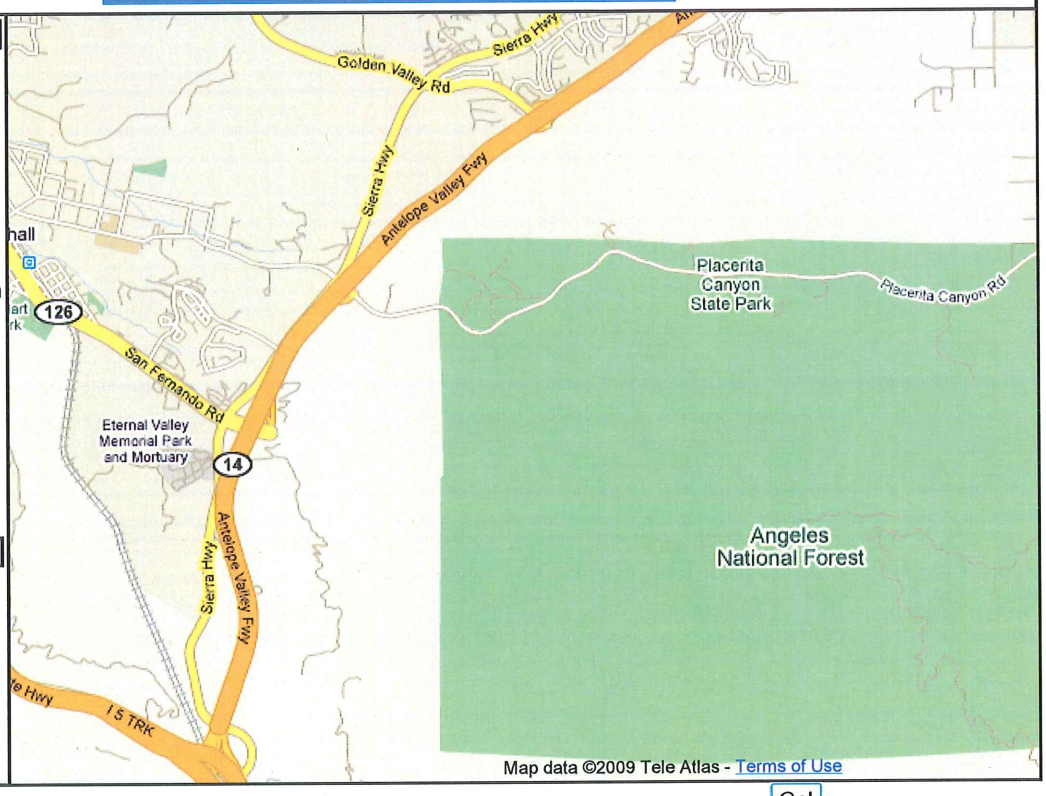
ENVIROSTOR

**LAYERS**

- [x] Federal Superfund
- [x] State Response
- [x] Voluntary Cleanup
- [x] School Cleanup
- [ ] Evaluation
- [ ] School Investigation
- [ ] Military Evaluation
- [ ] Corrective Action
- [x] Haz Waste Permit
- [ ] GeoTracker LUFT
- [ ] GeoTracker SLIC

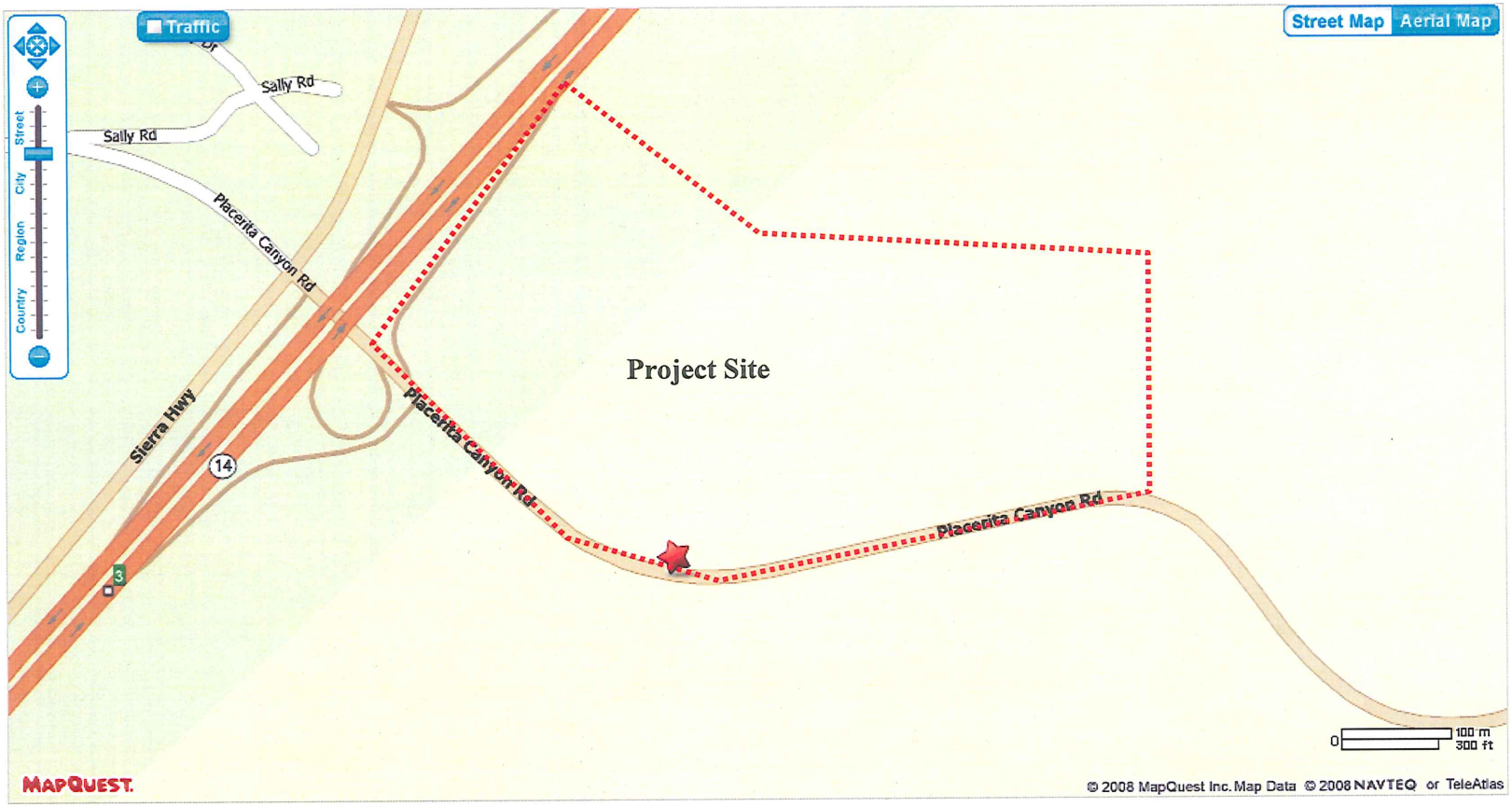
**MAP SIZE**

640x480




MAP AN ADDRESS: Go!

www.ScvWhatsItWorth.com
homegain.com
FavoriteAgent.com
freevalenciaareahomeinfo.com




Book Your Travel Plans
Coffee

# Track Info Services, LLC

Historical Aerial Photo

Site: Placerita Canyon Road, Newhall, CA 91321

Photo Year: 2002

Job Number: MATE0001

Original Scale of Photo: 1:40,000

Approximate Scale of This Image: 1 in equals 750 ft

Coverage Area Approximately 1/2 Mile Radius from Subject Site

≈ 750 ft

*Copyright: Track Info Services, LLC*

DEPARTMENT OF TOXIC SUBSTANCES CONTROL

ENVIROSTOR

## SPECIAL DEVICES INC - (MAP)

16830 W PLACERITA CYN RD
NEWHALL, CA 913210000
LOS ANGELES COUNTY
**SITE TYPE:** CORRECTIVE ACTION
**ACRES:** 0 ACRES
**APN:** NONE SPECIFIED
**NATIONAL PRIORITIES LIST:** NO
**CLEANUP OVERSIGHT AGENCIES:**
DTSC - SITE CLEANUP PROGRAM

| | |
|---|---|
| **PROJECT MANAGER:** | KEN PAYNE |
| **SUPERVISOR:** | ROBERT CRANDALL |
| **OFFICE:** | SACRAMENTO |
| **ENVIROSTOR ID:** | 80001467 |
| **SITE CODE:** | 301146 |
| **ASSEMBLY DISTRICT:** | 38 |
| **SENATE DISTRICT:** | 38 |
| **SPECIAL PROGRAM:** | |
| **FUNDING:** | |

COMMUNITY INVOLVEMENT

### Cleanup Status

**ACTIVE AS OF 1/1/2008**

### Regulatory Profile

VIEW DETAILED AREA / SUB-AREA REPORT

**PAST USE(S) THAT CAUSED CONTAMINATION**
NONE SPECIFIED

**POTENTIAL CONTAMINANTS OF CONCERN**
NONE SPECIFIED

**POTENTIAL MEDIA AFFECTED**
NONE SPECIFIED

### Site History

Special Devices Inc. operated a hazardous waste facility at 16830 West Placerita Canyon Road in Newhall, Los Angeles County. The facility has ceased operation since mid 1990 and is currently vacant.
Thomas Trienen is the owner of the land and SDI has already been moved to 14370 White Sage Road, in Moorpark.
SDI and DTSC have been working on the corrective action and Level 1, 3 and US Forestry Service Land have been granted a No Further Action, while Levels 2, 4, 5, 6 and 7 are under investigation.

### Completed Cleanup Activities

| AREA | EVENT DESCRIPTION | DATE | INSTRUMENT | COMMENTS |
|---|---|---|---|---|
| LEVEL 6 | RCRA FACILITY INVESTIGATION WORKPLAN APPROVED (141KB) | 10/11/2006 | CONSENT ORDER | RFI WORKPLAN |
| LEVEL 5 | RCRA FACILITY INVESTIGATION WORKPLAN APPROVED (139KB) | 10/6/2006 | CONSENT ORDER | RFI WORKPLAN |
| LEVEL 7 | RCRA FACILITY INVESTIGATION WORKPLAN APPROVED (141KB) | 10/5/2006 | CONSENT ORDER | RFI WORKPLAN |
| LEVEL 4 | RCRA FACILITY INVESTIGATION WORKPLAN APPROVED (143KB) | 10/4/2006 | CONSENT ORDER | RFI WORKPLAN |
| LEVEL 7 | RCRA FACILITY INVESTIGATION WORKPLAN RECEIVED | 6/9/2006 | CONSENT ORDER | |
| LEVEL 6 | RCRA FACILITY INVESTIGATION WORKPLAN RECEIVED | 6/8/2006 | CONSENT ORDER | |
| LEVEL 5 | RCRA FACILITY INVESTIGATION WORKPLAN RECEIVED | 6/7/2006 | CONSENT ORDER | |
| LEVEL 4 | RCRA FACILITY INVESTIGATION WORKPLAN RECEIVED | 6/6/2006 | CONSENT ORDER | |
| US FORESTRY | RCRA FACILITY INVESTIGATION REPORT APPROVED | 3/17/2006 | CONSENT ORDER | |
| LEVEL 3 | RCRA FACILITY INVESTIGATION REPORT APPROVED | 3/16/2006 | CONSENT ORDER | |
| LEVEL 2 | RCRA FACILITY INVESTIGATION WORKPLAN APPROVED | 12/7/2005 | CONSENT ORDER | |
| LEVEL 2 | RCRA FACILITY INVESTIGATION WORKPLAN RECEIVED | 11/29/2005 | CONSENT ORDER | |
| LEVEL 2 | RCRA FACILITY INVESTIGATION WORKPLAN RECEIVED | 11/30/2004 | CONSENT ORDER | |
| LEVEL 1 | RCRA FACILITY INVESTIGATION REPORT APPROVED | 10/27/2004 | CONSENT ORDER | |
| US FORESTRY | RCRA FACILITY INVESTIGATION REPORT RECEIVED | 9/10/2004 | CONSENT ORDER | |
| LEVEL 3 | RCRA FACILITY INVESTIGATION REPORT RECEIVED | 9/9/2004 | CONSENT ORDER | |
| LEVEL 1 | RCRA FACILITY INVESTIGATION REPORT RECEIVED | 9/8/2004 | CONSENT ORDER | |
| LEVEL 3 | RCRA FACILITY INVESTIGATION WORKPLAN APPROVED | 6/14/2004 | CONSENT ORDER | |
| LEVEL 1 | RCRA FACILITY INVESTIGATION WORKPLAN APPROVED | 6/14/2004 | CONSENT ORDER | |
| US FORESTRY | RCRA FACILITY INVESTIGATION WORKPLAN APPROVED | 6/14/2004 | CONSENT ORDER | |
| LEVEL 3 | RCRA FACILITY INVESTIGATION WORKPLAN RECEIVED | 9/30/2003 | CONSENT ORDER | |
| LEVEL 1 | RCRA FACILITY INVESTIGATION WORKPLAN RECEIVED | 9/30/2003 | CONSENT ORDER | |
| US FORESTRY | RCRA FACILITY INVESTIGATION WORKPLAN RECEIVED | 9/30/2003 | CONSENT ORDER | |
| ENTIRE FACILITY | STABILIZATION CONSTRUCTION COMPLETED | 6/24/2003 | CONSENT ORDER | |
| ENTIRE FACILITY | STABILIZATION MEASURES IMPLEMENTED-OTHER | 3/25/2003 | CONSENT ORDER | |

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0.90625 seconds

# Track Info Services, LLC

Historical Topographic Map

Site: Placerita Canyon Road, Newhall, CA 91321

Quadrangle Year: 1900

Building

Topo Contour 6000

Depression

Quarry or Open Pit Mine

Railroad

Tanks

Primary Highway

Trail

0 1/4 1/2 3/4 1 mile

Job Number: MATE0001

Original Scale of Full Topo: 1:62,500

Quadrangle Name: San Fernando, CA

(West: Santa Susana, CA, 1903)

*Copyright: Track Info Services, LLC*

# Track Info Services, LLC

Historical Topographic Map

Site: Placerita Canyon Road, Newhall, CA 91321

Quadrangle Year: 1945

Building

Topo Contour 6000

Depression

Quarry or Open Pit Mine

Railroad

Tanks

Primary Highway

Trail

0 1/4 1/2 3/4 1 mile

Job Number: MATE0001

Original Scale of Full Topo: 1:62,500

Quadrangle Name: San Fernando, CA

(West: Santa Susana, CA, 1943)

*Copyright: Track Info Services, LLC*

# Track Info Services, LLC

Historical Topographic Map

Site: Placerita Canyon Road, Newhall, CA 91321

Quadrangle Year: 1960

Building

Topo Contour

Depression

Quarry or Open Pit Mine

Railroad

Tanks

Primary Highway

Trail

0 1/4 1/2 3/4 1 mile

Job Number: MATE0001

Original Scale of Full Topo: 1:24,000

Quadrangle Name: Mint Canyon, CA

(South: San Fernando, CA, 1953; South West: Oat Mountain, CA, 1952; West: Newhall, CA, 1952)

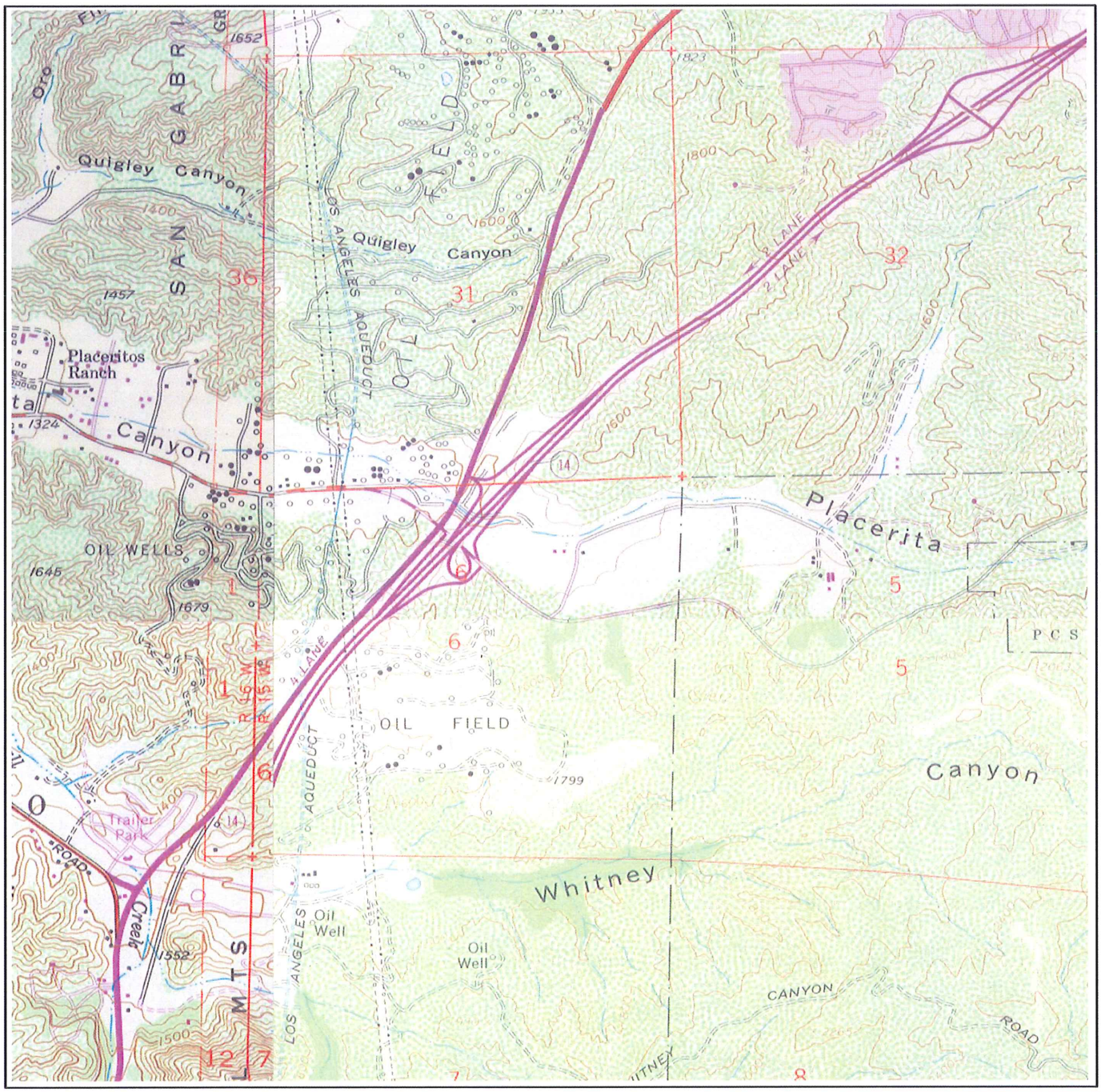
*Copyright: Track Info Services, LLC*

# Track Info Services, LLC

Historical Topographic Map

Site: Placerita Canyon Road, Newhall, CA 91321

Quadrangle Year: 1974




Building

Topo Contour

Depression

Quarry or Open Pit Mine

Railroad

Tanks

Primary Highway

Trail

0 1/4 1/2 3/4 1 mile

Job Number: MATE0001

Original Scale of Full Topo: 1:24,000

Quadrangle Name: Mint Canyon, CA

(South: San Fernando, CA, 1972; South West: Oat Mountain, CA, 1969; West: Newhall, CA, 1969)

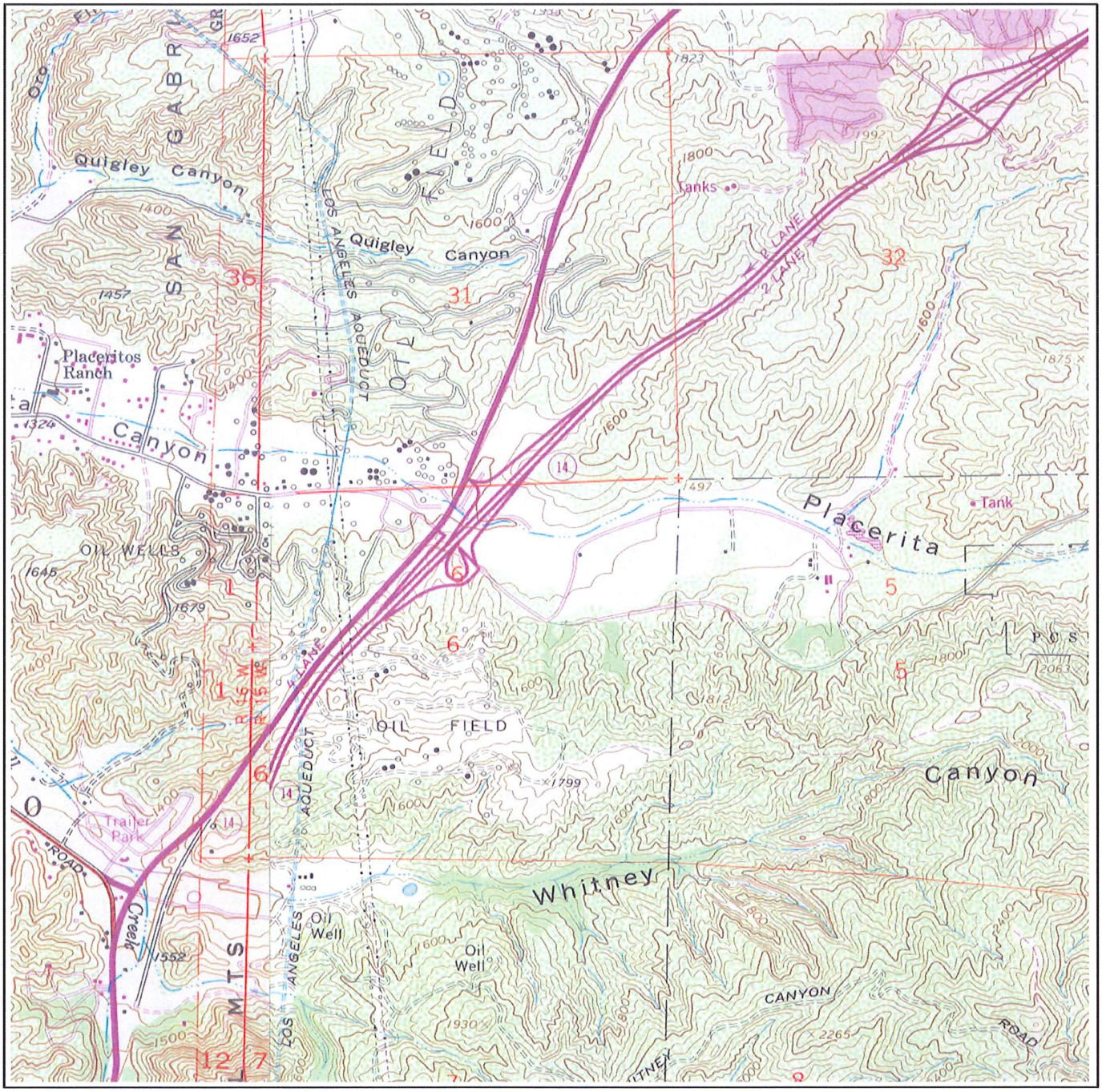
*Copyright: Track Info Services, LLC*

# Track Info Services, LLC

Historical Topographic Map

Site: Placerita Canyon Road, Newhall, CA 91321

Quadrangle Year: 1988




Building

Topo Contour

Depression

Quarry or Open Pit Mine

Railroad

Tanks

Primary Highway

Trail

0 1/4 1/2 3/4 1 mile

Job Number: MATE0001

Original Scale of Full Topo: 1:24,000

Quadrangle Name: Mint Canyon, CA

(South: San Fernando, CA, 1988; South West: Oat Mountain, CA, 1969; West: Newhall, CA, 1988)

*Copyright: Track Info Services, LLC*

# Track Info Services, LLC

Historical Topographic Map

Site: Placerita Canyon Road, Newhall, CA 91321

Quadrangle Year: 1995

| | | | |
|---|---|---|---|
| Building | | Railroad | |
| Topo Contour | 6000 | Tanks | |
| Depression | | Primary Highway | |
| Quarry or Open Pit Mine | | Trail | |

0 1/4 1/2 3/4 1 mile

Job Number: MATE0001

Original Scale of Full Topo: 1:24,000

Quadrangle Name: Mint Canyon, CA

(South: San Fernando, CA, 1995; South West: Oat Mountain, CA, 1969; West: Newhall, CA, 1995)

*Copyright: Track Info Services, LLC*

# Track Info Services, LLC

Historical Aerial Photo

Site: Placerita Canyon Road, Newhall, CA 91321

Photo Year: 1928

Job Number: MATE0001

Original Scale of Photo: 1:18,000

Approximate Scale of This Image: 1 in equals 750 ft

Coverage Area Approximately 1/2 Mile Radius from Subject Site

≈ 750 ft

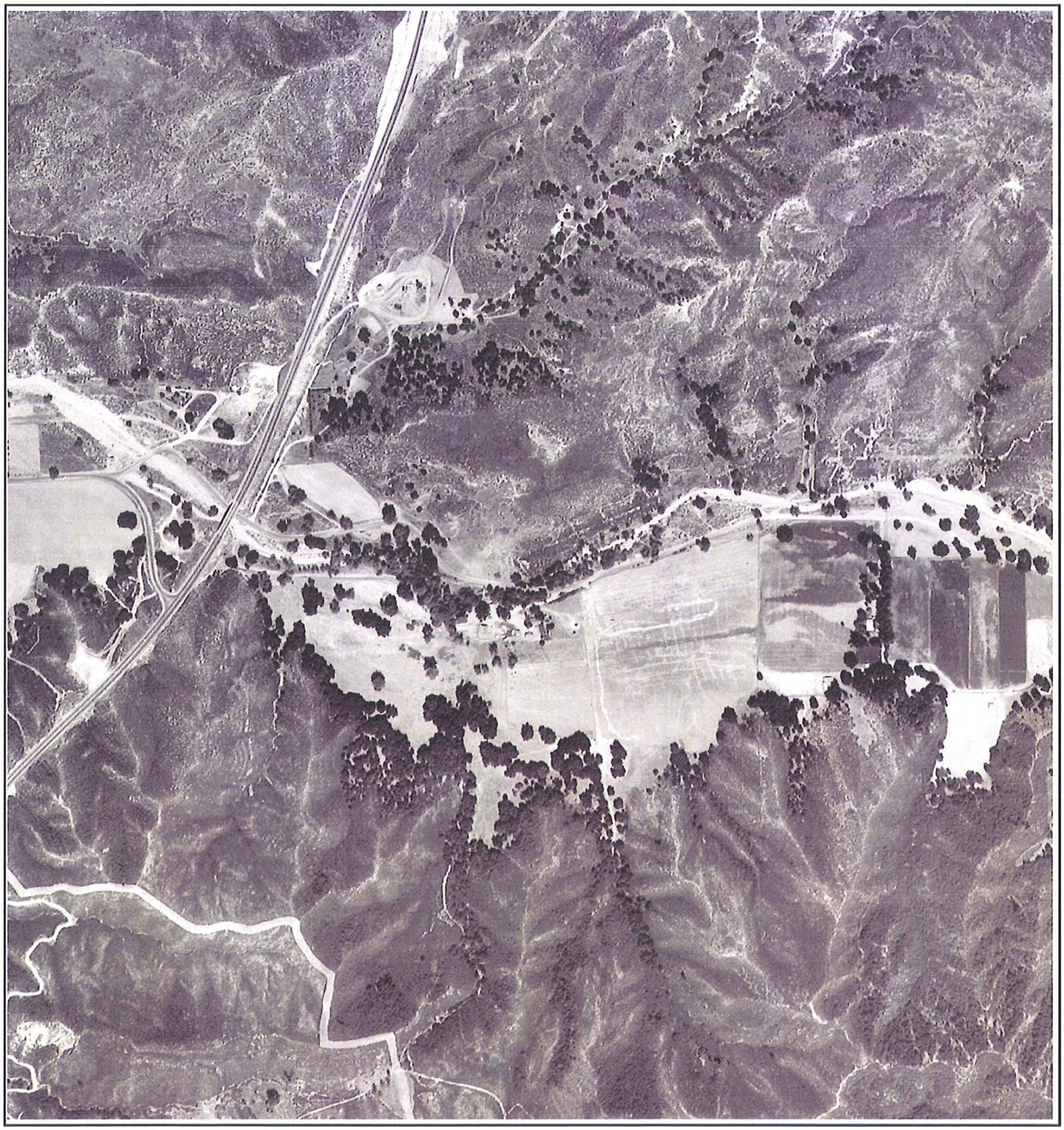
*Copyright: Track Info Services, LLC*

# Track Info Services, LLC

Historical Aerial Photo

Site: Placerita Canyon Road, Newhall, CA 91321

Photo Year: 1947



Job Number: MATE0001

Original Scale of Photo: 1:24,000

Approximate Scale of This Image: 1 in equals 750 ft

Coverage Area Approximately 1/2 Mile Radius from Subject Site

≈ 750 ft

*Copyright: Track Info Services, LLC*

# Track Info Services, LLC

Historical Aerial Photo

Site: Placerita Canyon Road, Newhall, CA 91321

Photo Year: 1952

Job Number: MATE0001

Original Scale of Photo: 1:20,000

Approximate Scale of This Image: 1 in equals 750 ft

Coverage Area Approximately 1/2 Mile Radius from Subject Site

≈ 750 ft

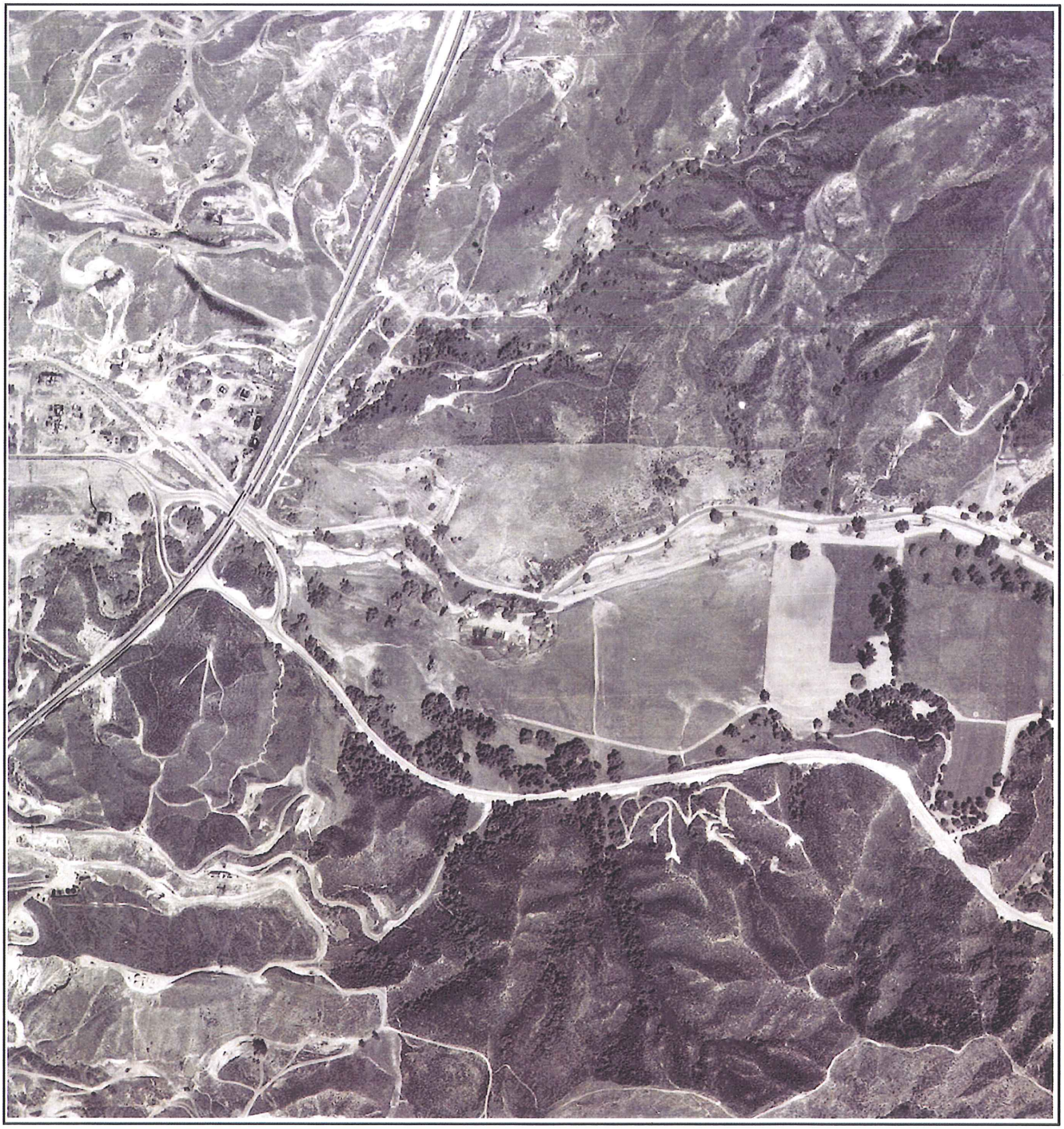
*Copyright: Track Info Services, LLC*

# Track Info Services, LLC

Historical Aerial Photo

Site: Placerita Canyon Road, Newhall, CA 91321

Photo Year: 1968



Job Number: MATE0001

Original Scale of Photo: 1:28,800

Approximate Scale of This Image: 1 in equals 750 ft

Coverage Area Approximately 1/2 Mile Radius from Subject Site

≈ 750 ft

*Copyright: Track Info Services, LLC*

# Track Info Services, LLC

Historical Aerial Photo

Site: Placerita Canyon Road, Newhall, CA 91321

Photo Year: 1976

Job Number: MATE0001

Original Scale of Photo: 1:24,000

Approximate Scale of This Image: 1 in equals 750 ft

Coverage Area Approximately 1/2 Mile Radius from Subject Site

≈ 750 ft

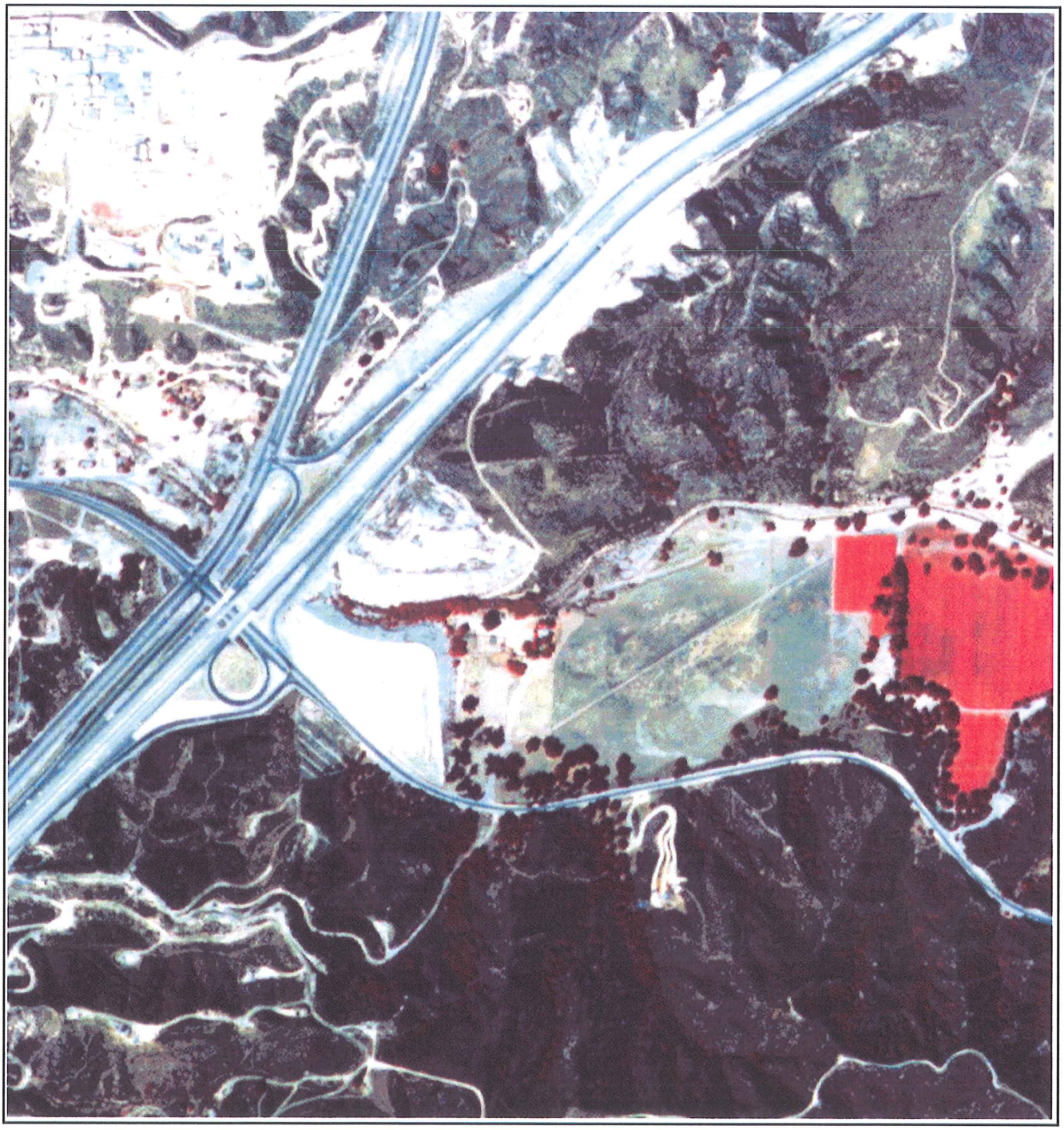
*Copyright: Track Info Services, LLC*

# Track Info Services, LLC

Historical Aerial Photo

Site: Placerita Canyon Road, Newhall, CA 91321

Photo Year: 1989



Job Number: MATE0001

Original Scale of Photo: 1:40,000

Approximate Scale of This Image: 1 in equals 750 ft

Coverage Area Approximately 1/2 Mile Radius from Subject Site

≈ 750 ft

*Copyright: Track Info Services, LLC*

# Track Info Services, LLC

Historical Aerial Photo

Site: Placerita Canyon Road, Newhall, CA 91321

Photo Year: 1994

Job Number: MATE0001

Original Scale of Photo: 1:40,000

Approximate Scale of This Image: 1 in equals 750 ft

Coverage Area Approximately 1/2 Mile Radius from Subject Site

≈ 750 ft

*Copyright: Track Info Services, LLC*

search=Beginning+With&cas_num=&page_no=1&output_sql_switch=FALSE&report=1&database_type=ENVIROFACTS

Envirofacts Data Warehouse

Last updated on Monday, March 30th, 2009.

You are here: EPA Home Envirofacts Multisystem Query Results

# Query Results

Report an Error

**ZIP Code:** 91321
**County Name:** los angeles
**State Abbreviation:** ca

## LIST OF EPA-REGULATED FACILITIES IN ENVIROFACTS

To see a report on a facility click on the underlined Facility Name. Click on the underlined "View Facility Information" link to view EPA Facility information for the facility.

Go To Bottom Of The Page

| FACILITY NAME/ADDRESS | FACILITY INFORMATION | Permitted Discharges to Water? | Toxic Releases Reported? | Hazardous Waste Handler? | Active or Archived Superfund Report? | Air Releases Reported? |
|---|---|---|---|---|---|---|
| A V EQUIPMENT RENTAL 24933 N SAN FERNANDO RD NEWHALL, CA 91321 | View Facility Information | NO | NO | **YES** | NO | NO |
| A&H RADIATOR SERVICE 24605 SAN FERNANDO NEWHALL, CA 91321 | View Facility Information | NO | NO | **YES** | NO | NO |
| AES PLACERITA 20885 PLACERITA CANYON ROAD NEWHALL, CA 91321 | View Facility Information | NO | NO | **YES** | NO | **YES** |
| ALL VALLEY EQUIPMENT 23986 PINE ST NEWHALL, CA 91321 | View Facility Information | NO | NO | **YES** | NO | NO |
| ALLARDS CLEANERS 24335 SAN FERNANDO RD NEWHALL, CA 91321 | View Facility Information | NO | NO | **YES** | NO | NO |
| ARCO FACILITY NO 06152 | | | | | | |

| | | | | | | |
|---|---|---|---|---|---|---|
| 24018 LYONS AVE NEWHALL, CA 91321 | View Facility Information | NO | NO | **YES** | NO | NO |
| AUTO SERVICE PLUS 24522 SAN FERNANDO RD NEWHALL, CA 91321 | View Facility Information | NO | NO | **YES** | NO | NO |
| BERRY PETROLEUM 25121 NORTH SIERRA HIGHWAY NEWHALL, CA 91321 | View Facility Information | NO | NO | **YES** | NO | **YES** |
| BILLOS FREEWAY EXXON 24518 W LYONS AVE NEWHALL, CA 91321 | View Facility Information | NO | NO | **YES** | NO | NO |
| BUSY BEE DRY CLEANERS 25235 WILEY CYN RD NEWHALL, CA 913210000 | View Facility Information | NO | NO | **YES** | NO | NO |
| CANYON MOTORS 24116 SAN FERNANDO RD NEWHALL, CA 91321 | View Facility Information | NO | NO | **YES** | NO | NO |
| CANYON PONTIAC BUICK 24640 N WILEY CYN RD NEWHALL, CA 91321 | View Facility Information | NO | NO | **YES** | NO | NO |
| CARRIAGE CLEANERS 24140 LYONS AVE NEWHALL, CA 91321 | View Facility Information | NO | NO | **YES** | NO | NO |
| CHEVRON STATION NO 93787 24137 LYONS AVE NEWHALL, CA 913212443 | View Facility Information | NO | NO | **YES** | NO | NO |
| D&D AUTO BODY 24860 SAN FERNANDO RD NEWHALL, CA | View Facility Information | NO | NO | **YES** | NO | NO |

| | | | | | | |
|---|---|---|---|---|---|---|
| 91321 | | | | | | |
| DELUX CLEANERS 23566 LYONS AVE NEWHALL, CA 91321 | View Facility Information | NO | NO | **YES** | NO | NO |
| DRY CLEAN USA 23426 LYONS AVE NEWHALL, CA 91321 | View Facility Information | NO | NO | **YES** | NO | NO |
| ENVIRONMENTAL CLEAN SOLUTIONS INC 24953 SAN FERNANDO RD NEWHALL, CA 91321 | View Facility Information | NO | NO | **YES** | NO | NO |
| GERMAN AUTOHAUS 22510 9TH ST NEWHALL, CA 91321 | View Facility Information | NO | NO | **YES** | NO | NO |
| GOODYEAR TIRE CENTER 23440 LYONS AVE NEWHALL, CA 91321 | View Facility Information | NO | NO | **YES** | NO | NO |
| HENRY MAYO NEWHALL MEMORIAL HOSPITAL 23928 LYONS AVE STE 106 NEWHALL, CA 91321 | View Facility Information | NO | NO | **YES** | NO | NO |
| HEY INSTANT PRINTING 25239 N WILEY CYN RD NEWHALL, CA 91321 | View Facility Information | NO | NO | **YES** | NO | NO |
| HUGHES AIRCRAFT COMPANY SCG 16842 W PLACERITA CANYON RD NEWHALL, CA 91321 | View Facility Information | NO | NO | **YES** | NO | NO |
| J M G MOTOR SPORTS 24601 ARCH ST NEWHALL, CA 91321 | View Facility Information | NO | NO | **YES** | NO | NO |
| | | | | | | |

| | | | | | | |
|---|---|---|---|---|---|---|
| JIMS SPECIALITY SALES 24242 SAN FERNANDO RD NEWHALL, CA 91321 | View Facility Information | NO | NO | **YES** | NO | NO |
| JMT OIL INC 20521 SALLY RD NEWHALL, CA 91321 | View Facility Information | NO | NO | **YES** | NO | NO |
| JONES CARBURETOR SERVICE 24622 N PINE ST NEWHALL, CA 91321 | View Facility Information | NO | NO | **YES** | NO | NO |
| JULIUS LEVAY AUTO PAINTING 24622 PINE ST NEWHALL, CA 91321 | View Facility Information | NO | NO | **YES** | NO | NO |
| M&B AUTOMOTIVE 24963 SAN FERNANDO RD NEWHALL, CA 91321 | View Facility Information | NO | NO | **YES** | NO | NO |
| MALAMS AUTO 24622 N PINE D THRU F NEWHALL, CA 91321 | View Facility Information | NO | NO | **YES** | NO | NO |
| MARCO HEATING AIR CONDITIONING INC FRIENDLY VALLEY TRACK NEWHALL, CA 91321 | View Facility Information | NO | NO | **YES** | NO | NO |
| MILES CHEMICAL CO 24876 N APPLE ST STE F NEWHALL, CA 91321 | View Facility Information | NO | NO | **YES** | NO | NO |
| MINNIE MAX CLEANERS 23214 LYONS AVE NEWHALL, CA 91321 | View Facility Information | NO | NO | **YES** | NO | NO |
| NEWHALL CARBURETOR 24343 RAILROAD | View Facility Information | NO | NO | **YES** | NO | NO |

| | | | | | | |
|---|---|---|---|---|---|---|
| NEWHALL, CA 91321 | | | | | | |
| NEWHALL CLEANERS 22944 LYONS AVE NEWHALL, CA 91321 | View Facility Information | NO | NO | **YES** | NO | NO |
| NEWHALL CO WATER DIST 23780 N PINE ST SANTA CLARITA, CA 91321 | View Facility Information | NO | NO | **YES** | NO | NO |
| NEWHALL HARDWARE 24322 SAN FERNANDO RD NEWHALL, CA 91321 | View Facility Information | NO | NO | **YES** | NO | NO |
| NEWHALL KAWASAKI 24364 SAN FERNANDO NEWHALL, CA 91321 | View Facility Information | NO | NO | **YES** | NO | NO |
| NEWHALL REFINING CO INCORPORATED 22674 N. CLAMPITT RD. NEWHALL, CA 913210938 | View Facility Information | NO | **YES** | **YES** | NO | NO |
| OLD GUN SHOP THE 24257 SAN FERNANDO RD NEWHALL, CA 91321 | View Facility Information | NO | NO | **YES** | NO | NO |
| ORYX RANCH SF LEASE RANCHO SAN FRAN. L. A. COUNTY NEWHALL, CA 91321 | View Facility Information | NO | NO | **YES** | NO | NO |
| PACIFIC BELL 24705 NEWHALL AVE NEWHALL, CA 91321 | View Facility Information | NO | NO | **YES** | NO | NO |
| PERRY AUTO 24355 RAILROAD AVE NEWHALL, CA | View Facility Information | NO | NO | **YES** | NO | NO |

| | | | | | | |
|---|---|---|---|---|---|---|
| 91321 | | | | | | |
| RICARDOS AUTO UPHOLSTERY 22510 9TH ST NEWHALL, CA 91321 | View Facility Information | NO | NO | **YES** | NO | NO |
| RON HORNADAY 24135 RAILROAD NEWHALL, CA 91321 | View Facility Information | NO | NO | **YES** | NO | NO |
| RUSSEL DUNN AUTOMOTIVE 24848 SAN FERNANDO RD NEWHALL, CA 91321 | View Facility Information | NO | NO | **YES** | NO | NO |
| SAME DAY PAINT & BODY CENTERS 23951 SAN FERNANDO RD NEWHALL, CA 91321 | View Facility Information | NO | NO | **YES** | NO | NO |
| SANTA CLARITA GREENWASTE FIRE PINE ST/SAN FERNANDO RD NEWHALL, CA 91321 | View Facility Information | NO | NO | NO | **YES** | NO |
| SHELL OIL CO 25340 N CHIQUELLA NEWHALL, CA 91321 | View Facility Information | NO | NO | **YES** | NO | NO |
| SHELL SERVICE STATION 24062 LYONS AVE NEWHALL, CA 913212446 | View Facility Information | NO | NO | **YES** | NO | NO |
| SHELL SERVICE STATION 24440 W LYON AVE SANTA CLARITA, CA 913212347 | View Facility Information | NO | NO | **YES** | NO | NO |
| SOUTHERN CALIFORNIA GAS CO CANYON RD ON SIERRA HWY NEWHALL, CA 913210000 | View Facility Information | NO | NO | **YES** | NO | NO |
| SPECIAL | | | | | | |

| | | | | | | |
|---|---|---|---|---|---|---|
| DEVICES, INC 16830 W PLACERITA CYN RD NEWHALL, CA 91321 | View Facility Information | NO | NO | **YES** | NO | NO |
| STEWARTS CLASSIC CARS 24254 SAN FERNANDO RD NEWHALL, CA 91321 | View Facility Information | NO | NO | **YES** | NO | NO |
| SUN EXPLORATION & PRODUCTION CO FERGUSON LOS ANGELES COUNTY NEWHALL, CA 91321 | View Facility Information | NO | NO | **YES** | NO | NO |
| SUN EXPLORATION & RPODUCTION CO NEWHALL CORP-WOLFSON L.A. CO. NEWHALL, CA 91321 | View Facility Information | NO | NO | **YES** | NO | NO |
| SUN GAS / NEWHALL GAS 26835 PICO CANYON ROAD NEWHALL, CA 91321 | View Facility Information | NO | NO | **YES** | NO | NO |
| TEXACO TRADING AND TRANSPORTATION INCORPORATION 26187 NEWHALL AVENUE NEWHALL, CA 91321 | View Facility Information | NO | NO | **YES** | NO | NO |
| TRANSTECHNLGY CRP SPACE ORD SYS DIV 16830 PLACERITA CANYON ROAD NEWHALL, CA 91321 | View Facility Information | NO | NO | **YES** | NO | NO |
| TROYS AUTO SVS & RPR 24144 SAN FERNANDO RD NEWHALL, CA 91321 | View Facility Information | NO | NO | **YES** | NO | NO |

| | | | | | | |
|---|---|---|---|---|---|---|
| VALENCIA OAKS RANCH 24945 THE OLD RD NEWHALL, CA 91321 | View Facility Information | NO | NO | **YES** | NO | NO |
| VINTAGE PRODUCTION CALIFORNIA LLC 6833 PICO CANYON ROAD NEWHALL, CA 91321 | View Facility Information | NO | NO | NO | NO | **YES** |
| WAYMAN CLEANERS 23120 LYONS AVE NEWHALL, CA 91321 | View Facility Information | NO | NO | **YES** | NO | NO |
| WEST COAST CLASSIC CAR SALES 23953 SAN FERNANDO RD NEWHALL, CA 91321 | View Facility Information | NO | NO | **YES** | NO | NO |
| WILCOX LANDSCAPE NURSERY 24868 APPLE ST NEWHALL, CA 91321 | View Facility Information | NO | NO | **YES** | NO | NO |
| WM S HART USD WM S HART HS 24825 NEWHALL AVE NEWHALL, CA 91321 | View Facility Information | NO | NO | **YES** | NO | NO |
| YOURS MINE AND OURS DISNEY RANCH 19802 PLACERITA CANYON RD NEWHALL, CA 91321 | View Facility Information | NO | NO | **YES** | NO | NO |

Go To Top Of The Page

**Total Number of Facilities Displayed:** 67

# Appendix L.2

## Environmental Records Search II

## ENVIRONMENTAL RESEARCH

DEA performed a record search of existing and past land uses on the site and within 1 mile of the site to identify hazardous material uses or concerns that may affect future development. The record search included a database review by Environmental First Search of various government databases for hazardous material users and generators on and near the site; historical aerial photographs and historical topographic maps. DEA also did a record search on the EPA's Envirofacts database and California DTSC's Envirostor database on their agency websites.

### Environmental First Search (EFS)

The following government databases were reviewed by EFS for hazardous material users and generators:

***United States Environmental Protection Agency databases -***

- National Priority List (NPL or Superfund)
- National Priority List subset of deleted sites from NPL (NPL Delisted)
- Comprehensive Environmental Response Compensation and Liability Information System (CERCLIS)
- CERCLIS Archived Sites (NFRAP)
- Resource Conservation and Recovery Information System Sites (RCRA COR ACT)
- Resource Conservation and Recovery Information System Treatment, Storage, and Disposal Facilities (RCRA TSD)
- Resource Conservation and Recovery Information System Generators (RCRA GEN)
- Resource Conservation and Recovery Information System Sites (RCRA NLR)
- Brownfield Management System (Federal IC / EC)
- Emergency Response Notification System (ERNS)
- Indian Lands of the United States (Tribal Lands)

***State of California databases -***

- Site Mitigation and Brownfields Reuse Program Database or CalSites (State/Tribal Sites)
- California Regional Water Quality Control Boards Spill Sites (State Spills 90)
- California Solid Waste Information System (State/Tribal SWL)
- State Water Resources Control Board Leaking Underground Storage Tanks (State/Tribal LUST)
- State Water Resources Control Board Underground Storage Tanks/Aboveground Storage Tanks Listing (State/Tribal UST/AST)
- California EPA's Department of Toxic Substances Control Board Deed-Restricted Sites Listing (State/Tribal IC)
- California EPA's Department of Toxic Substances Control Board Voluntary Cleanup Program Properties (State/Tribal VCP)
- California EPA's Department of Toxic Substances Control Board Site Mitigation and Brownfields Reuse Program Database (State/Tribal Brownfields)
- San Diego County HE17 Permits and San Bernardino County Hazardous Materials Permits (State Permits)
- National Clandestine Laboratory Register and California Site Mitigation and Brownfields Reuse Program Database (State Other)

The project site is listed in the State Water Resources Control Board's Underground Storage Tanks and Aboveground Storage Tanks Listing as a hazardous material user or generator. The Chevron Newhall

Oilfield had an underground storage tank for diesel fuel that was installed on the site in 1984 and removed in 1994. This tank is no longer present on the site. There are no other sites or uses within 1 mile of the site that are included in the various government databases.

The site is within the 91321 zip code and in this zip code area, there are 12 sites listed in government databases, with 8 of the sites under the Emergency Response Notification System (ERNS) and 4 sites are listed under the California Regional Water Quality Control Boards Spill Sites (State Spills 90) as occurring on Placerita Canyon Road.

Two spills occurred at the Placerita oilfield, generally located along and west of the SR-14 Freeway. (The western portion of the site is underlain by the Placerita oilfield, but there are no oil wells that have been drilled on the site.) The Los Angeles Regional Water Quality Control Board (RWQCB) has the spills listed in its Cleanup Program, with one spill requiring no further action and the other spill still having the case open. Two other spills at the Pfaheler/Schisler Oil Lease are also in the RWQCB's Cleanup Program, with the Site Assessments for Total Petroleum Hydrocarbons (TPH) ongoing. None of these spills occurred near the site and are not expected to have affected site conditions.

Five of the ERNS listings are located on Placerita Canyon Road, Sierra Highway, and Placerita Oilfield but no other details are available. One listing was a spill of sodium hydrochloride from an overturned truck near the intersection of Placerita Canyon Road and Sierra Highway. Another was an accidental release of crude oil at 20885 Placerita Canyon Road in 1991, but the valve has since been fixed. Another was a pump line leak in 1992 that led to the release of hydrochloric acid at Placerita Road. None of these listings occurred near the site and are not expected to have affected site conditions.

Appendix A includes the EFS list.

## Historical Topographic Maps

Historic topographic maps for the site and the surrounding area were reviewed to determine past land use on the site.

- The 1900 topographic map shows an existing roadway through the site, with an unnamed road extending northeasterly at the western boundary of the site. The site is undeveloped, with some scattered structures along the east-west road.

- The 1945 topographic map shows the same roadways, with a drainage channel running parallel and north of the east-west roadway and another channel parallel and east of the northeasterly roadway. An existing roadway is also shown along the alignment of Sierra Highway. The site remains undeveloped, with more scattered structures along the east-west road.

- The 1960 topographic map shows the some roadways and drainage channels on the site, with Sierra Highway constructed to the west of the site and Placerita Canyon Road along the southern boundary. The site remains undeveloped but the southern and western sections have been cleared. A number of structures are present on Placerita Canyon Road west of Sierra Highway, with other developments along Sierra Highway to the southwest.

- The 1974 topographic map shows Placerita Canyon Road and the east-west drainage channel, with Sierra Highway and SR-14 constructed to the west of the site. The northeasterly is gone, as is the east-west roadway through the site. The site remains undeveloped and largely cleared. More structures are present on Placerita Canyon Road west of Sierra Highway, with other developments along SR-14 to the southwest and northeast.

- The 1988 topographic map shows the same features as the 1974 map, expect for a roadway extending north from Placerita Canyon Road at the eastern boundary of the site and turning east along the south side of the drainage channel. The site is largely cleared.

- The 1995 topographic map shows the same features as the 1988 map, expect for the power transmission lines along the eastern boundary of the site. The site remains undeveloped. More developments are present west of the site and to the northeast.

No environmental concerns at the site are shown in these maps.

## Historical Aerial Photographs

Historic aerial photographs of the site and the surrounding area were reviewed to determine past land use on the site.

- The 1928 photograph shows the site and the surrounding area as largely undeveloped, with Placerita Canyon Road along the southern boundary and a northeasterly road. The site is within the valley area between hills to the north and south, and does not support extensive vegetation.

- The 1947 photograph shows Sierra Highway to the west of the site, with more roads in the area. A more defined drainage channel runs through the site, with trees along the channel segment to the east, and agricultural land to the east and west of the site. A graded area appears to the northeast of the site.

- The 1952 photograph shows the same features on the site, with more development west of the site and Sierra Highway. Agricultural land and some structures are present east of the site.

- The 1968 photograph shows some roadways on the site, with Sierra Highway constructed to the west of the site and Placerita Canyon Road along the southern boundary. Agricultural land and some structures to the east of the site and developments to the west remain the same.

- The 1976 photograph shows the SR-14 Freeway has been constructed and the site has been graded/filled, except for the drainage channel. Surrounding uses remain the same.

- The 1989 photograph shows the same features on the site, with Sierra Highway widened and more intensive development to the west of with Sierra Highway.

- The 1994 photograph shows not show any major changes over the 1989 photograph.

- The 2002 photograph shows the same features on the site, with more intensive development to the west of with Sierra Highway.

No environmental concerns at the site are shown in these photographs.

## Envirofacts

The US EPA's Envirofacts is a compilation of several EPA databases that provide information about environmental activities that may affect air, water, and land anywhere in the United States, such as hazardous waste facilities, toxic and air releases, Superfund sites, and water discharge permits. It includes sites listed under the Envirofacts AIRS Facility Subsystem (EF AIRS/AFS), Brownfields

Management System (BMS), Biennial Reporting (BR), Comprehensive Environmental Response, Compensation & Liability Information System (CERCLIS), Facility Registry System (FRS), RadNet, formerly Environmental Radiation Ambient Monitoring System, Grants Information & Control System (GICS), Information Collection Rule (ICR), Locational Reference Tables (LRT), Permit Compliance System (PCS), Resource Conservation and Recovery Act Information (RCRAInfo), Safe Drinking Water Information System (SDWIS), Toxics Release Inventory (TRI), and National Priorities List (NPL).

A record search of the Envirofacts database shows that the nearest facility to the project site is JMT Oil, located northwest of the site (20521 Sally Road), across the SR-14 Freeway. This facility is a hazardous waste transporter, under the RCRA program. AES Placerita is located west of the site at 20885 Placerita Canyon Road. This facility is a small generator of hazardous waste, located approximately ¾ mile west of the site. Berry Petroleum is located northwest of the site at 25121 North Sierra Highway. This facility is also a small generator of hazardous waste.

The Yours, Mine and Ours Disney Ranch at 19802 Placerita Canyon Road (4 miles to the east) is identified as a hazardous waste generator, under the RCRA program. Also other facilities are located farther from the site, mainly to the west of the SR-14 Freeway.

None of these nearby sites are expected to have affected environmental conditions at the project site due to their distance and location in relation to the site.

## Envirostor

The California Department of Toxic Substances Control maintains a database of clean-up sites and hazardous waste facilities in the State. This database includes sites listed in the federal Superfund Sites (NPL), State Response sites, voluntary cleanup sites, school cleanup sites, corrective actions sites, and permitted hazardous waste facilities.

A record search of the Envirostor database shows that there are no listed clean-up sites and hazardous waste facilities on or near the site. The nearest site is Special Devices, Inc. at 16830 Placerita Canyon Road, approximately 3.0 miles east of the site. This is a hazardous waste facility that ceased operation in the mid-1990's and is now vacant. It is subject to corrective action (site clean-up) by the DTSC and USFS.

This facility is not expected to have affected conditions at the project site due to its distance and downstream location in relation to the site.

TRACK ➤ INFO SERVICES, LLC

# Environmental FirstSearch™ Report

Target Property: GDZ Map

**PLACERITA CANYON ROAD**

**NEWHALL CA 91321**

Job Number: MATE0001

**PREPARED FOR:**

David Evans and Associtaes

4200 Concours Suite 200

Ontario, CA 91764

03-23-09

*Tel: (866) 664-9981* *Fax: (818) 249-4227*

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# *Environmental FirstSearch*
# *Search Summary Report*

**Target Site:** PLACERITA CANYON ROAD
NEWHALL CA 91321

## FirstSearch Summary

| Database | Sel | Updated | Radius | Site | 1/8 | 1/4 | 1/2 | 1/2> | ZIP | TOTALS |
|---|---|---|---|---|---|---|---|---|---|---|
| NPL | Y | 01-12-09 | 1.00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| NPL Delisted | Y | 01-12-09 | 0.50 | 0 | 0 | 0 | 0 | - | 0 | 0 |
| CERCLIS | Y | 01-09-09 | 0.50 | 0 | 0 | 0 | 0 | - | 0 | 0 |
| NFRAP | Y | 01-09-09 | 0.50 | 0 | 0 | 0 | 0 | - | 0 | 0 |
| RCRA COR ACT | Y | 11-13-08 | 1.00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| RCRA TSD | Y | 11-13-08 | 0.50 | 0 | 0 | 0 | 0 | - | 0 | 0 |
| RCRA GEN | Y | 11-13-08 | 0.25 | 0 | 0 | 0 | - | - | 0 | 0 |
| RCRA NLR | Y | 09-08-08 | 0.12 | 0 | 0 | - | - | - | 0 | 0 |
| Federal IC / EC | Y | 02-02-09 | 0.25 | 0 | 0 | 0 | - | - | 0 | 0 |
| ERNS | Y | 03-03-09 | 0.12 | 0 | 0 | - | - | - | 8 | 8 |
| Tribal Lands | Y | 12-01-05 | 1.00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| State/Tribal Sites | Y | 01-16-09 | 1.00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| State Spills 90 | Y | 01-05-09 | 0.12 | 0 | 0 | - | - | - | 4 | 4 |
| State/Tribal SWL | Y | 01-05-09 | 0.50 | 0 | 0 | 0 | 0 | - | 0 | 0 |
| State/Tribal LUST | Y | 01-05-09 | 0.50 | 0 | 0 | 0 | 0 | - | 0 | 0 |
| State/Tribal UST/AST | Y | 11-04-08 | 0.25 | 0 | 1 | 0 | - | - | 0 | 1 |
| State/Tribal EC | Y | NA | 0.25 | 0 | 0 | 0 | - | - | 0 | 0 |
| State/Tribal IC | Y | 09-03-08 | 0.25 | 0 | 0 | 0 | - | - | 0 | 0 |
| State/Tribal VCP | Y | 01-16-09 | 0.50 | 0 | 0 | 0 | 0 | - | 0 | 0 |
| State/Tribal Brownfields | Y | 08-08-07 | 0.50 | 0 | 0 | 0 | 0 | - | 0 | 0 |
| State Permits | Y | 04-16-08 | 0.25 | 0 | 0 | 0 | - | - | 0 | 0 |
| State Other | Y | 01-16-09 | 0.25 | 0 | 0 | 0 | - | - | 0 | 0 |
| - TOTALS - | | | | 0 | 1 | 0 | 0 | 0 | 12 | 13 |

### Notice of Disclaimer

Due to the limitations, constraints, inaccuracies and incompleteness of government information and computer mapping data currently available to TRACK Info Services, certain conventions have been utilized in preparing the locations of all federal, state and local agency sites residing in TRACK Info Services's databases. All EPA NPL and state landfill sites are depicted by a rectangle approximating their location and size. The boundaries of the rectangles represent the eastern and western most longitudes; the northern and southern most latitudes. As such, the mapped areas may exceed the actual areas and do not represent the actual boundaries of these properties. All other sites are depicted by a point representing their approximate address location and make no attempt to represent the actual areas of the associated property. Actual boundaries and locations of individual properties can be found in the files residing at the agency responsible for such information.

### Waiver of Liability

Although TRACK Info Services uses its best efforts to research the actual location of each site, TRACK Info Services does not and can not warrant the accuracy of these sites with regard to exact location and size. All authorized users of TRACK Info Services's services proceeding are signifying an understanding of TRACK Info Services's searching and mapping conventions, and agree to waive any and all liability claims associated with search and map results showing incomplete and or inaccurate site locations.

# *Environmental FirstSearch*
# *Site Information Report*

| | | | |
|---|---|---|---|
| **Request Date:** | 03-23-09 | **Search Type:** | AREA |
| **Requestor Name:** | David Evans Assoc - Josephine | | 0.11 sq mile(s) |
| **Standard:** | ASTM-05 | **Job Number:** | MATE0001 |
| | | **Filtered Report** | |

**Target Site:** PLACERITA CANYON ROAD
NEWHALL CA 91321

## *Demographics*

| | | | | | |
|---|---|---|---|---|---|
| **Sites:** | 13 | **Non-Geocoded:** | 12 | **Population:** | NA |
| **Radon:** | -0.8 PCI/L | | | | |

## *Site Location*

| | **Degrees (Decimal)** | **Degrees (Min/Sec)** | | **UTMs** |
|---|---|---|---|---|
| **Longitude:** | -118.488537 | -118:29:19 | **Easting:** | 363140.548 |
| **Latitude:** | 34.378353 | 34:22:42 | **Northing:** | 3804916.626 |
| | | | **Zone:** | 11 |

## *Comment*

**Comment:**

## *Additional Requests/Services*

**Adjacent ZIP Codes:** 0 Mile(s)

| ZIP Code | City Name | ST | Dist/Dir | Sel |
|---|---|---|---|---|

**Services:**

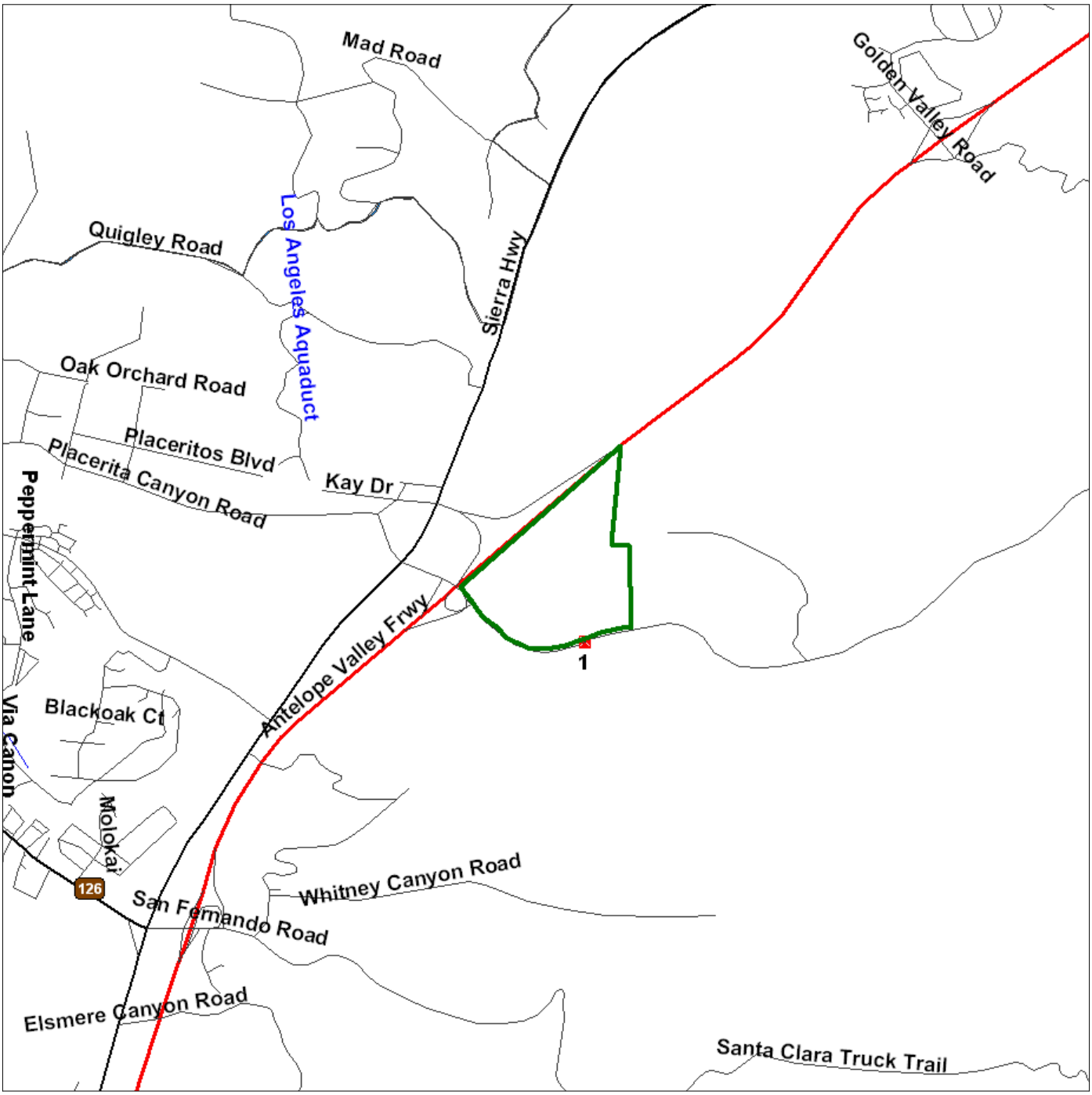
| | Requested? | Date |
|---|---|---|
| Sanborns | No | |
| Aerial Photographs | Yes | 03-23-09 |
| Historical Topos | Yes | 03-23-09 |
| City Directories | No | |
| Title Search/Env Liens | No | |
| Municipal Reports | No | |
| Online Topos | No | |

# Environmental FirstSearch

1 Mile Radius from Area

Single Map:

## PLACERITA CANYON ROAD, NEWHALL CA 91321




*Source: U.S. Census TIGER Files*

Area Polygon .....

Identified Site, Multiple Sites, Receptor .....

NPL, DELNPL, Brownfield, Solid Waste Landfill (SWL), Hazardous Waste

Triballand.....

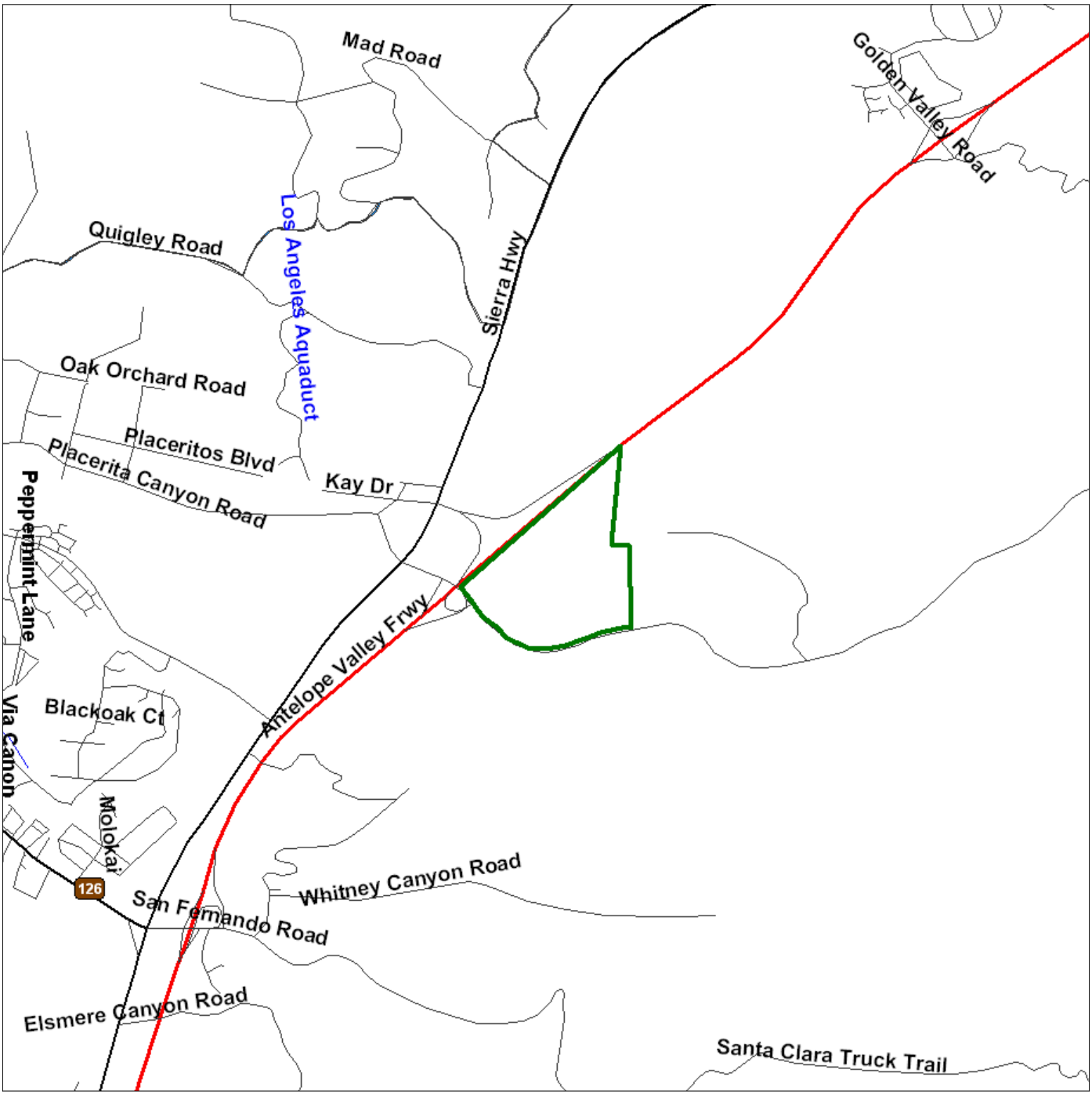
Railroads .....

# Environmental FirstSearch

1 Mile Radius from Area

ASTM-05: NPL, RCRACOR, STATE

## PLACERITA CANYON ROAD, NEWHALL CA 91321




*Source: U.S. Census TIGER Files*

Area Polygon .....

Identified Site, Multiple Sites, Receptor .....

NPL, DELNPL, Brownfield, Solid Waste Landfill (SWL), Hazardous Waste

Triballand.....

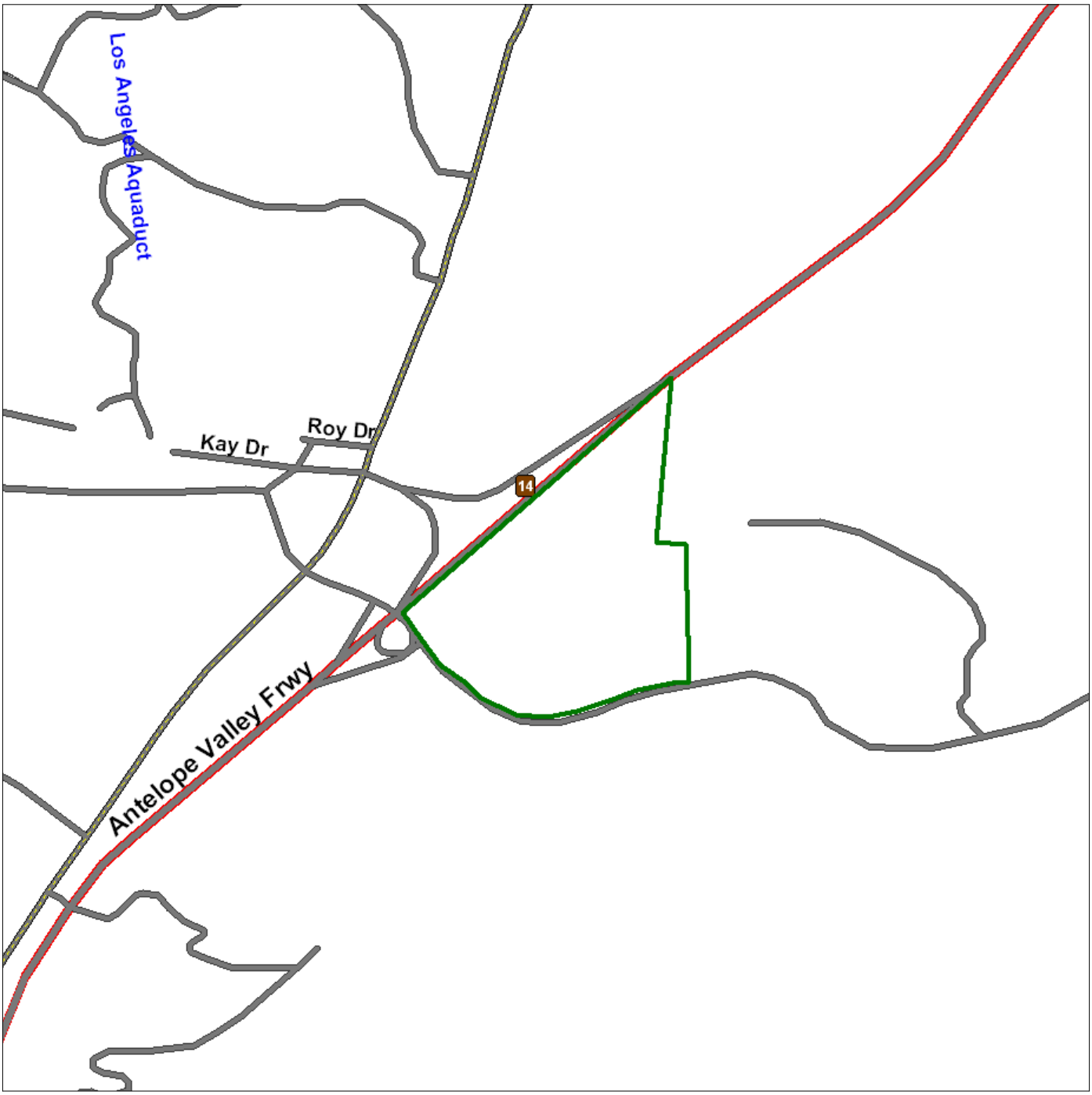
Railroads .....

# Environmental FirstSearch

.5 Mile Radius from Area

ASTM-05: Multiple Databases

## PLACERITA CANYON ROAD, NEWHALL CA 91321




*Source: U.S. Census TIGER Files*

Area Polygon .....

Identified Site, Multiple Sites, Receptor .....

NPL, DELNPL, Brownfield, Solid Waste Landfill (SWL), Hazardous Waste

Triballand.....

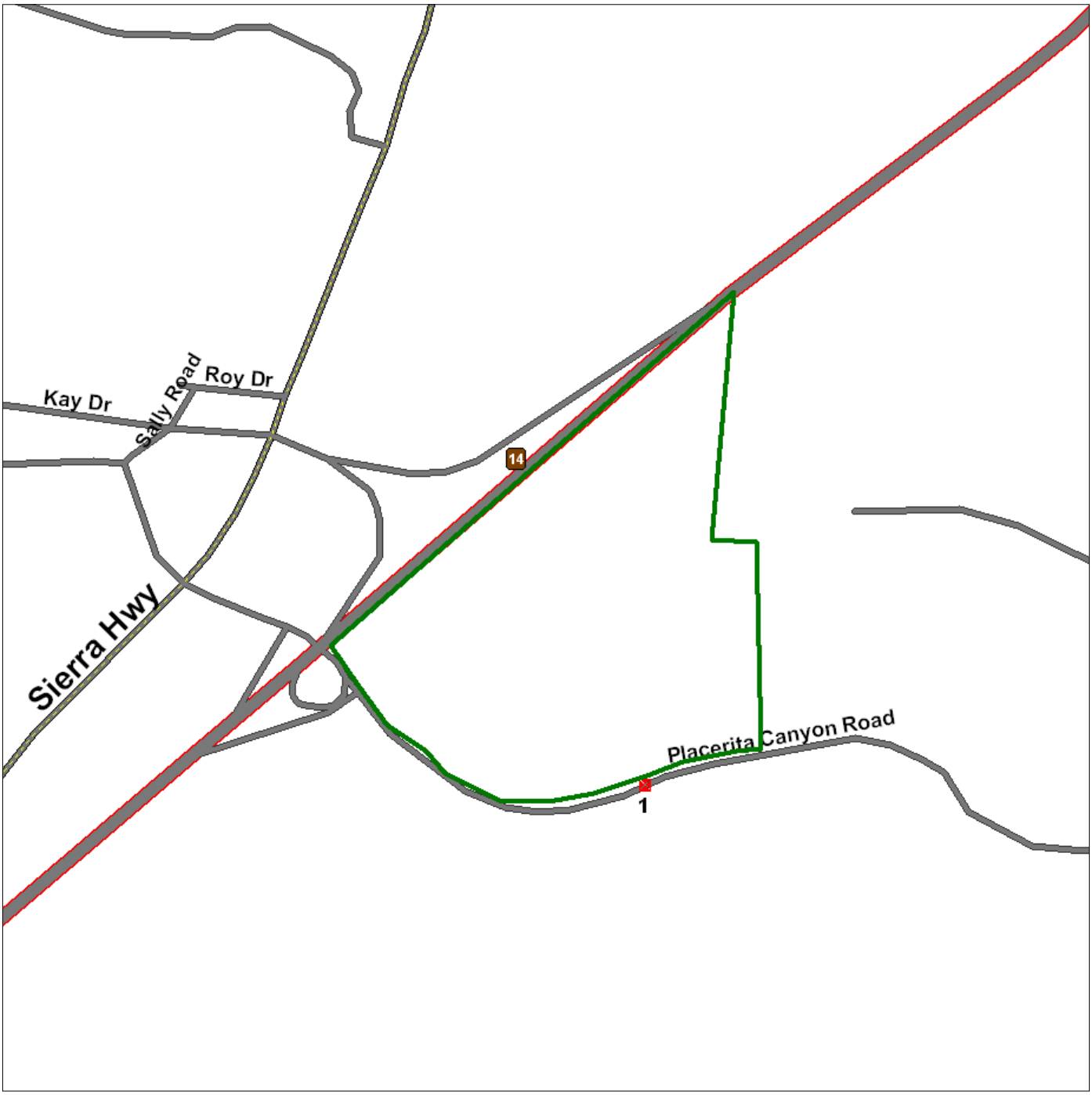
Railroads .....

# Environmental FirstSearch

.25 Mile Radius from Area

ASTM-05: RCRAGEN, UST, PERMITS, OTHER

## PLACERITA CANYON ROAD, NEWHALL CA 91321




*Source: U.S. Census TIGER Files*

Area Polygon .....

Identified Site, Multiple Sites, Receptor .....

NPL, DELNPL, Brownfield, Solid Waste Landfill (SWL), Hazardous Waste

Triballand.....

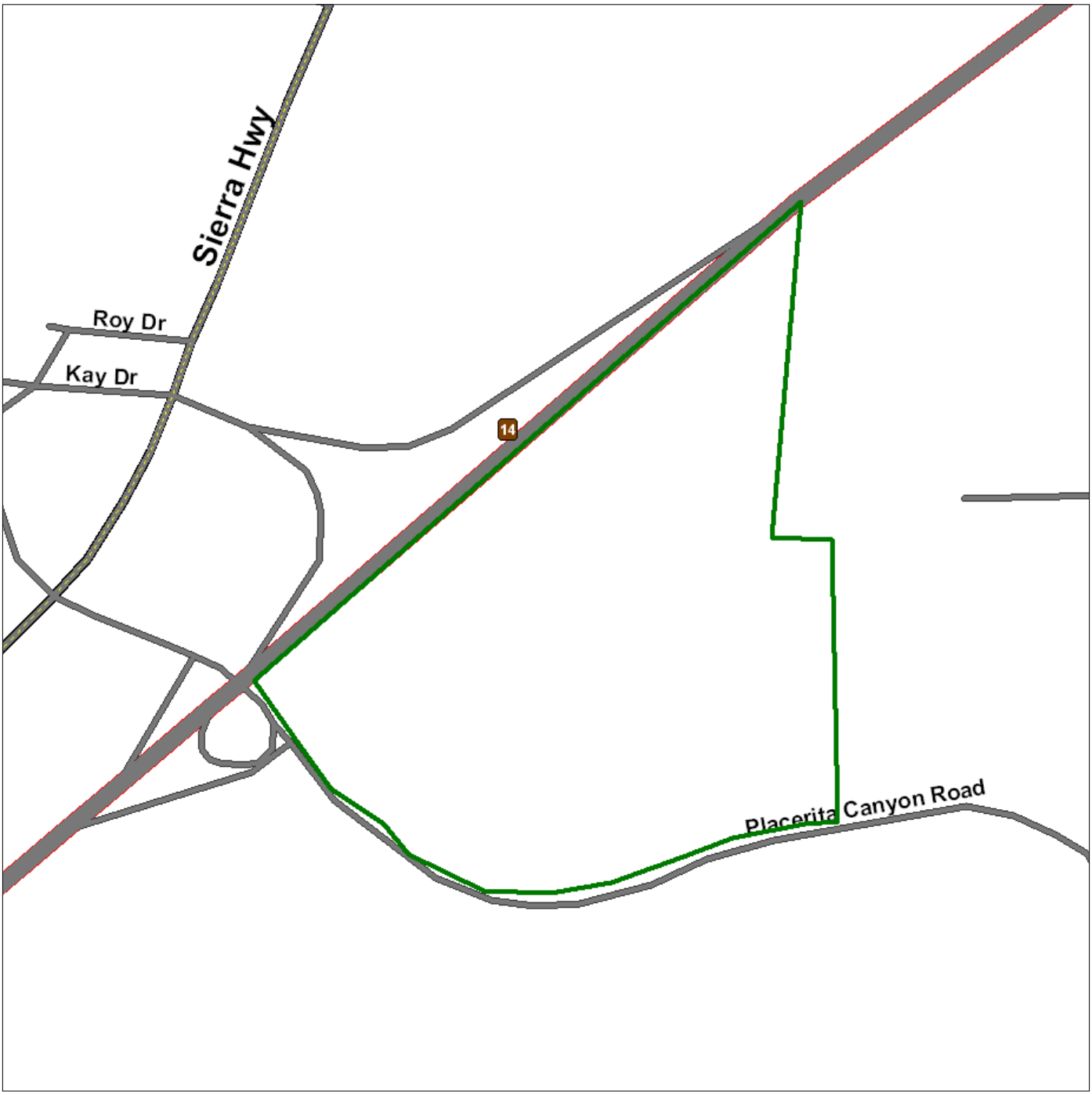
Railroads .....

# Environmental FirstSearch

.12 Mile Radius from Area

ASTM-05: SPILLS90, ERNS, RCRANLR

## PLACERITA CANYON ROAD, NEWHALL CA 91321




*Source: U.S. Census TIGER Files*

Area Polygon .....

Identified Site, Multiple Sites, Receptor .....

NPL, DELNPL, Brownfield, Solid Waste Landfill (SWL), Hazardous Waste

Triballand.....

Railroads .....

# *Environmental FirstSearch*
# *Sites Summary Report*

**Target Property:** PLACERITA CANYON ROAD
NEWHALL CA 91321

**JOB:** MATE0001

**TOTAL:** 13 **GEOCODED:** 1 **NON GEOCODED:** 12 **SELECTED:** 13

| Page No. | ID | DB Type | Site Name/ID/Status | Address | Dist/Dir | Map ID |
|---|---|---|---|---|---|---|
| *1* | *1* | *UST* | *CHEVRON NEWHALL OILFIELD*<br>*LACO016446/NOT REPORTED* | *20165 W PLACERITA CANYON RD*<br>*SANTA CLARITA CA 91321* | *0.01 SE* | *1* |

# *Environmental FirstSearch*
# *Sites Summary Report*

**Target Property:** PLACERITA CANYON ROAD
NEWHALL CA 91321

**JOB:** MATE0001

**TOTAL:** 13 **GEOCODED:** 1 **NON GEOCODED:** 12 **SELECTED:** 13

| Page No. | ID | DB Type | Site Name/ID/Status | Address | Dist/Dir | Map ID |
|---|---|---|---|---|---|---|
| *3* | *13* | *SPILLS* | *PLACERITA OIL FIELD*<br>*G_SLT43208206/OPEN* | *PLACERITA CANYON RD*<br>*NEWHALL CA 91321* | *NON GC* | |
| *4* | *12* | *SPILLS* | *PLACERITA OIL FIELD*<br>*SLC40312/NO FURTHER ACTION RE* | *PLACERITA CANYON ROAD*<br>*NEWHALL CA 91321* | *NON GC* | |
| *4* | *11* | *SPILLS* | *PFAHELER/SCHISLER OIL LEASE*<br>*G_SLT43687685/OPEN - SITE ASSESSME* | *PLACERITA CANYON RD*<br>*SANTA CLARITA CA 91321* | *NON GC* | |
| *5* | *10* | *SPILLS* | *PFAHELER/SCHISLER OIL LEASE*<br>*SLC41054/SITE ASSESSMENT* | *PLACERITA CANYON ROAD*<br>*SANTA CLARITA CA 91321* | *NON GC* | |
| *5* | *9* | *ERNS* | *103916/UNKNOWN* | *20823 PLACERITA 805 254 383*<br>*NEWHALL CA* | *NON GC* | |
| *5* | *8* | *ERNS* | *UNK*<br>*16582/UNKNOWN* | *SIERRA HWY/N OF:PLACERITA C*<br>*NEWHALL CA* | *NON GC* | |
| *6* | *7* | *ERNS* | *TENNECO (MIKE STAHL)*<br>*13274/UNKNOWN* | *S30,T4N,R15W/PLACERITA CANY*<br>*NEWHALL CA* | *NON GC* | |
| *6* | *6* | *ERNS* | *SAN BON CONSTRUCTION INC*<br>*57062/UNKNOWN* | *PLACERITA CANYON+SIERRA HWY*<br>*NEWHALL CA* | *NON GC* | |
| *7* | *5* | *ERNS* | *HILLSIDE OIL PARTNERS INC.*<br>*202762/FIXED FACILITY* | *SIERRA HWY and PLACERITA CA*<br>*NEWHALL CA 91321* | *NON GC* | |
| *9* | *4* | *ERNS* | *A.E.S. CO.*<br>*298555/FIXED FACILITY* | *PLACERITA RD*<br>*NEWHALL CA* | *NON GC* | |
| *10* | *3* | *ERNS* | *(RP) TENNACO(MIKE STAHL)*<br>*12655/UNKNOWN* | *GPM PRODUCTION FACILITY/PLA*<br>*NEWHALL CA* | *NON GC* | |
| *10* | *2* | *ERNS* | *(RP) MOBIL OIL*<br>*13345/UNKNOWN* | *PLACERITA CANYON/S31,T4N,R1*<br>*NEWHALL CA* | *NON GC* | |

# *Environmental FirstSearch*
# *Site Detail Report*

**Target Property:** PLACERITA CANYON ROAD
NEWHALL CA 91321

**JOB:** MATE0001

UST

**SEARCH ID:** 1 **DIST/DIR:** 0.01 SE **MAP ID:** 1

| | | | |
|---|---|---|---|
| **NAME:** | CHEVRON NEWHALL OILFIELD | **REV:** | 04/03/08 |
| **ADDRESS:** | 20165 W PLACERITA CANYON RD | **ID1:** | LACO016446 |
| | SANTA CLARITA CA 91321 | **ID2:** | THOMAS GUIDE: 4641F2 |
| | LOS ANGELES | **STATUS:** | NOT REPORTED |
| **CONTACT:** | TULLEY, TOM | **PHONE:** | 3106947722 |

**According to the Los Angeles County Department of Public Works the following information is current as of 04/03/08**

**GENERAL INFORMATION REGARDING SITE**

| | |
|---|---|
| **Tax Accessors Parcel /s:** | / / |
| **File Number:** | *021747* |
| **File Name:** | *CHEVRON NEWHALL OILFIELD* |
| **Property Owner Name and Type:** | *CHEVRON REAL ESTATE MGT CO / CORPORATION* |
| **Property Owner Address:** | *225 BUSH ST SAN FRANCISCA, CA 941047137* |
| **Tank Owner Name and Type:** | *CHEVRON REAL ESTATE MGT CO / CORPORATION* |
| **Tank Owner Address:** | *225 BUSH ST SAN FRANCISCO, CA 941047137* |
| **Tank Owner Phone:** | *415/8945461* |

**PERMIT INFORMATION**

| | |
|---|---|
| **Permit Number and Category:** | *000095879 / TANK* |
| **Permit Type and Date:** | *UST INTERIM PERMIT / 19940512* |
| **Permit Expiration Date:** | *19990512* |
| **Permit Status:** | *REM* |
| **Fee Exempt:** | *No* |
| **Penalty Date/s:** | / |
| **Suspension Date and Reason:** | / |

**SPECIFIC TANK INFORMATION FOR TANK NUMBER:** *00001*

| | |
|---|---|
| **Unique Tank Number:** | *000029740* |
| **Status:** | *Removed* |
| **Installation Date:** | *19840101* |
| **Owner Number:** | *1* |
| **Capacity:** | *0000000500* |
| **Content:** | |
| **J Fuel Type:** | *DIESEL* |
| **CAS Number:** | |
| **Product or Waste in Tank (?):** | *PRODUCT* |

**TANK CLOSING and REMOVAL INFORMATION (if applicable) FOR TANK :** *00001*

| | |
|---|---|
| **Application Closing Number:** | *000095878* |
| **Date Tank Closed:** | *19940524* |
| **Last Used Date:** | *19940524* |
| **Remaining Quantity:** | *0000000000* |
| **Inert Fill:** | *NO* |
| **Removal Application Number:** | *000095878* |

**TANK and PIPING MATERIALS (if applicable) FOR TANK :** *00001*

| | |
|---|---|
| **Manufacturer:** | *UNK* |
| **Construction Type Description:** | |
| **Construction Material Description:** | |
| **Construction Lining Description:** | |
| **Piping Type Description:** | |
| **Piping Construction Description:** | |
| **Piping Material Description:** | |
| **Piping Leak Detection Description:** | |
| **Leak Detection System 1:** | |
| **Leak Detection System 2:** | |
| **Last Update:** | *19940817* |

***- Continued on next page -***

# *Environmental FirstSearch*
# *Site Detail Report*

**Target Property:** PLACERITA CANYON ROAD
NEWHALL CA 91321

**JOB:** MATE0001

UST

**SEARCH ID:** 1 **DIST/DIR:** 0.01 SE **MAP ID:** 1

| | | | |
|---|---|---|---|
| **NAME:** | CHEVRON NEWHALL OILFIELD | **REV:** | 04/03/08 |
| **ADDRESS:** | 20165 W PLACERITA CANYON RD | **ID1:** | LACO016446 |
| | SANTA CLARITA CA 91321 | **ID2:** | THOMAS GUIDE: 4641F2 |
| | LOS ANGELES | **STATUS:** | NOT REPORTED |
| **CONTACT:** | TULLEY, TOM | **PHONE:** | 3106947722 |

**Last Operator:** *E218376*

# *Environmental FirstSearch*
# *Site Detail Report*

**Target Property:** PLACERITA CANYON ROAD
NEWHALL CA 91321

**JOB:** MATE0001

## SPILLS

**SEARCH ID:** 13 **DIST/DIR:** NON GC **MAP ID:**

**NAME:** PLACERITA OIL FIELD
**ADDRESS:** PLACERITA CANYON RD
NEWHALL CA 91321
**CONTACT:**

**REV:** 01/05/09
**ID1:** G_SLT43208206
**ID2:**
**STATUS:** OPEN
**PHONE:**

**RELEASE DATA FROM THE CALIFORNIA STATE WATER RESOURCES CONTROL BOARD GEOTRACKER SLIC DATABASE**

*Please note that some SLIC data previously provided by the State Water Resources Control Board via the Regional Boards is not currently provided by the agency in the new GEOTRACKER format. To ensure that our data is as complete as possible we have retained the original Regional Boards SLIC records as well as loaded all GEOTRACKER SLIC listings. GEOTRACKER records are distinguished by an initial G at the start of the ID.*

**LEAD AGENCY:** *LOS ANGELES RWQCB (REGION 4)*
**REGIONAL BOARD CASE NUMBER:** *0312*
**LOCAL AGENCY:**
**LOCAL CASE NUMBER:**
**CASE TYPE:** *Cleanup Program Site*
**STATUS:** *Open*
**STATUS DATE:**
**POTENTIAL CONTAMINANTS OF CONCERN:**
**POTENTIAL MEDIA AFFECTED:**
**SITE HISTORY (blank if not reported):**

**CONTACT TYPE:** *Regional Board Caseworker*
**CONTACT NAME:** *MANJULIKA CHAKRABARTI*
**ORGANIZATION NAME:** *LOS ANGELES RWQCB (REGION 4)*
**CONTACT ADDRESS:** *320 W. 4TH ST., SUITE 200*
**CONTACT CITY:** *LOS ANGELES*
**CONTACT EMAIL:**
**CONTACT PHONE NUMBER:**

# *Environmental FirstSearch*
# *Site Detail Report*

**Target Property:** PLACERITA CANYON ROAD
NEWHALL CA 91321

**JOB:** MATE0001

## SPILLS

**SEARCH ID:** 12 **DIST/DIR:** NON GC **MAP ID:**

**NAME:** PLACERITA OIL FIELD
**ADDRESS:** PLACERITA CANYON ROAD
NEWHALL CA 91321
**CONTACT:**

**REV:** 01/03/02
**ID1:** SLC40312
**ID2:**
**STATUS:** NO FURTHER ACTION REQUIRED
**PHONE:**

**Staff:** *MC*
**Status:** *NO FURTHER ACTION REQUIRED*
**Substance:** *TPH*

## SPILLS

**SEARCH ID:** 11 **DIST/DIR:** NON GC **MAP ID:**

**NAME:** PFAHELER/SCHISLER OIL LEASE
**ADDRESS:** PLACERITA CANYON RD
SANTA CLARITA CA 91321
**CONTACT:**

**REV:** 01/05/09
**ID1:** G_SLT43687685
**ID2:**
**STATUS:** OPEN - SITE ASSESSMENT
**PHONE:**

**RELEASE DATA FROM THE CALIFORNIA STATE WATER RESOURCES CONTROL BOARD GEOTRACKER SLIC DATABASE**

*Please note that some SLIC data previously provided by the State Water Resources Control Board via the Regional Boards is not currently provided by the agency in the new GEOTRACKER format. To ensure that our data is as complete as possible we have retained the original Regional Boards SLIC records as well as loaded all GEOTRACKER SLIC listings. GEOTRACKER records are distinguished by an initial G at the start of the ID.*

**LEAD AGENCY:** *LOS ANGELES RWQCB (REGION 4)*
**REGIONAL BOARD CASE NUMBER:** *1054*
**LOCAL AGENCY:**
**LOCAL CASE NUMBER:**
**CASE TYPE:** *Cleanup Program Site*
**STATUS:** *Open - Site Assessment*
**STATUS DATE:** *2001-05-17*
**POTENTIAL CONTAMINANTS OF CONCERN:**
**POTENTIAL MEDIA AFFECTED:**
**SITE HISTORY (blank if not reported):**

# *Environmental FirstSearch*
# *Site Detail Report*

**Target Property:** PLACERITA CANYON ROAD
NEWHALL CA 91321

**JOB:** MATE0001

## SPILLS

**SEARCH ID:** 10 **DIST/DIR:** NON GC **MAP ID:**

**NAME:** PFAHELER/SCHISLER OIL LEASE
**ADDRESS:** PLACERITA CANYON ROAD
SANTA CLARITA CA 91321
**CONTACT:**

**REV:** 01/03/02
**ID1:** SLC41054
**ID2:**
**STATUS:** SITE ASSESSMENT
**PHONE:**

**Staff:**
**Status:** *SITE ASSESSMENT*
**Substance:** *TPH*

## ERNS

**SEARCH ID:** 9 **DIST/DIR:** NON GC **MAP ID:**

**NAME:**
**ADDRESS:** 20823 PLACERITA 805 254 3835 REFINERY BEHIND CATHY
NEWHALL CA
LOS ANGELES
**CONTACT:**

**REV:** 01-04-01
**ID1:** 103916
**ID2:**
**STATUS:** UNKNOWN
**PHONE:**

**THERE ARE NO DETAILS AVAILABLE FOR THIS SITE**

## ERNS

**SEARCH ID:** 8 **DIST/DIR:** NON GC **MAP ID:**

**NAME:** UNK
**ADDRESS:** SIERRA HWY/N OF:PLACERITA CANYON RD.
NEWHALL CA
LOS ANGELES
**CONTACT:**

**REV:** 01-04-01
**ID1:** 16582
**ID2:**
**STATUS:** UNKNOWN
**PHONE:**

**THERE ARE NO DETAILS AVAILABLE FOR THIS SITE**

# *Environmental FirstSearch*
# *Site Detail Report*

**Target Property:** PLACERITA CANYON ROAD
NEWHALL CA 91321

**JOB:** MATE0001

## ERNS

**SEARCH ID:** 7 **DIST/DIR:** NON GC **MAP ID:**

**NAME:** TENNECO (MIKE STAHL)
**ADDRESS:** S30,T4N,R15W/PLACERITA CANYON OILFIELD
NEWHALL CA
LOS ANGELES
**CONTACT:**

**REV:** 01-04-01
**ID1:** 13274
**ID2:**
**STATUS:** UNKNOWN
**PHONE:**

**THERE ARE NO DETAILS AVAILABLE FOR THIS SITE**

## ERNS

**SEARCH ID:** 6 **DIST/DIR:** NON GC **MAP ID:**

**NAME:** SAN BON CONSTRUCTION INC
**ADDRESS:** PLACERITA CANYON+SIERRA HWY
NEWHALL CA
Los Angeles
**CONTACT:**

**REV:** 01-20-98
**ID1:** 57062
**ID2:**
**STATUS:** UNKNOWN
**PHONE:**

**CERCLIS (Y/N):**

**MAT:** SODIUM HYDROXIDE **QUANT:** 0 UNKNOWN

**LOCATION:** PLACERITA CANYON+SIERRA HWY
**CITY:** GLENDORA CA 91740 **REPORTED:** 01/28/88

**SOURCE:** UNKNOWN **MEDIUM:** LAND;WATER
**CAUSE:** ACCIDENT OV-TYRNED TRUCK/FLO TO HWY+STORM DRAIN. ACCIDENT OV-TURNED TRUCK/FLO UNKNOWN
TO HWY+LAND+STORM DRAIN.

**ACT:** CONTAINERIZED CHEMICAL DISPOSAL=CONTRACTOR FOR C/U BY FD.
**BY:**

**Target Property:** PLACERITA CANYON ROAD
NEWHALL CA 91321

**JOB:** MATE0001

ERNS

**SEARCH ID:** 5 **DIST/DIR:** NON GC **MAP ID:**

**NAME:** HILLSIDE OIL PARTNERS INC.
**ADDRESS:** SIERRA HWY and PLACERITA CANYON
NEWHALL CA 91321
LOS ANGELES
**CONTACT:**

**REV:** 1/16/91
**ID1:** 202762
**ID2:**
**STATUS:** FIXED FACILITY
**PHONE:**

**SPILL INFORMATION**
**DATE OF SPILL:** 1/16/1991 **TIME OF SPILL:** 2120

**PRODUCT RELEASED (1):** CRUDE OIL
**QUANTITY (1):** 3000
**UNITS (1):** BBL

**PRODUCT RELEASED (2):**
**QUANTITY (2):**
**UNITS (2):**

**PRODUCT RELEASED (3):**
**QUANTITY (3):**
**UNITS (3):**

**MEDIUM/MEDIA AFFECTED**
**AIR:** NO **GROUNDWATER:** NO
**LAND:** YES **FIXED FACILITY:** NO
**WATER:** NO **OTHER:** NO
**WATERBODY AFFECTED BY RELEASE:** NONE

**SPILL INFORMATION**
**DATE OF SPILL:** 1/16/1991 **TIME OF SPILL:** 2120

**PRODUCT RELEASED (1):** CRUDE OIL
**QUANTITY (1):** 3000
**UNITS (1):** BBL

**PRODUCT RELEASED (2):**
**QUANTITY (2):**
**UNITS (2):**

**PRODUCT RELEASED (3):**
**QUANTITY (3):**
**UNITS (3):**

**MEDIUM/MEDIA AFFECTED**
**AIR:** NO **GROUNDWATER:** NO
**LAND:** YES **FIXED FACILITY:** NO
**WATER:** NO **OTHER:** NO
**WATERBODY AFFECTED BY RELEASE:** NONE

**CAUSE OF RELEASE**
**DUMPING:** NO **EQUIPMENT FAILURE:** NO
**NATURAL PHENOMENON:** NO **OPERATOR ERROR:** NO
**OTHER CAUSE:** YES **TRANSP. ACCIDENT:** NO
**UNKNOWN:** NO

**ACTIONS TAKEN:** CONTAINED ON RP S PROPERTY / CLEANUP BY RP
**RELEASE DETECTION:** THREE 1000 BBL TANKS VALVE LEFT OPEN ON TANK - SUSPECT VANDALISM

***- Continued on next page -***

# *Environmental FirstSearch*
# *Site Detail Report*

**Target Property:** PLACERITA CANYON ROAD
NEWHALL CA 91321

**JOB:** MATE0001

## ERNS

**SEARCH ID:** 5 **DIST/DIR:** NON GC **MAP ID:**

**NAME:** HILLSIDE OIL PARTNERS INC.
**ADDRESS:** SIERRA HWY and PLACERITA CANYON
NEWHALL CA 91321
LOS ANGELES
**CONTACT:**

**REV:** 1/16/91
**ID1:** 202762
**ID2:**
**STATUS:** FIXED FACILITY
**PHONE:**

**MISC. NOTES:** OTHER AGENCIES NOTIFIED: RWQCB/SFMPL/LANDS/DOG

**DISCHARGER INFORMATION**

**DISCHARGER ID:** 202762
**TYPE OF DISCHARGER:** PRIVATE CITIZEN
**NAME OF DISCHARGER:** HILLSIDE OIL PARTNERS INC.
**ADDRESS:** 20885 PLACERITA CANYON
NEWHALL CA 91321-

**DUN and BRADSTREET :**

**CAUSE OF RELEASE**

| | | | |
|---|---|---|---|
| **DUMPING:** | NO | **EQUIPMENT FAILURE:** | NO |
| **NATURAL PHENOMENON:** | NO | **OPERATOR ERROR:** | NO |
| **OTHER CAUSE:** | YES | **TRANSP. ACCIDENT:** | NO |
| **UNKNOWN:** | NO | | |

**ACTIONS TAKEN:** CONTAINED ON RP S PROPERTY / CLEANUP BY RP
**RELEASE DETECTION:** THREE 1000 BBL TANKS VALVE LEFT OPEN ON TANK - SUSPECT VANDALISM
**MISC. NOTES:** OTHER AGENCIES NOTIFIED: RWQCB/SFMPL/LANDS/DOG

**DISCHARGER INFORMATION**

**DISCHARGER ID:** 202762
**TYPE OF DISCHARGER:** PRIVATE CITIZEN
**NAME OF DISCHARGER:** HILLSIDE OIL PARTNERS INC.
**ADDRESS:** 20885 PLACERITA CANYON
NEWHALL CA 91321-

**DUN and BRADSTREET :**

# *Environmental FirstSearch*
# *Site Detail Report*

**Target Property:** PLACERITA CANYON ROAD
NEWHALL CA 91321

**JOB:** MATE0001

## ERNS

**SEARCH ID:** 4 **DIST/DIR:** NON GC **MAP ID:**

**NAME:** A.E.S. CO.
**ADDRESS:** PLACERITA RD
NEWHALL CA
LOS ANGELES
**CONTACT:**

**REV:** 12/25/1992
**ID1:** 298555
**ID2:**
**STATUS:** FIXED FACILITY
**PHONE:**

**SPILL INFORMATION**

**DATE OF SPILL:** 12/25/1992 **TIME OF SPILL:** 1914

**PRODUCT RELEASED (1):** HYDROCHLORIC ACID (30%)
**QUANTITY (1):** 0
**UNITS (1):** UNK

**PRODUCT RELEASED (2):**
**QUANTITY (2):**
**UNITS (2):**

**PRODUCT RELEASED (3):**
**QUANTITY (3):**
**UNITS (3):**

**MEDIUM/MEDIA AFFECTED**

**AIR:** NO **GROUNDWATER:** NO
**LAND:** NO **FIXED FACILITY:** NO
**WATER:** YES **OTHER:** NO
**WATERBODY AFFECTED BY RELEASE:**

**CAUSE OF RELEASE**

**DUMPING:** NO **EQUIPMENT FAILURE:** NO
**NATURAL PHENOMENON:** NO **OPERATOR ERROR:** NO
**OTHER CAUSE:** NO **TRANSP. ACCIDENT:** NO
**UNKNOWN:** YES

**ACTIONS TAKEN:** NO WATERWAYS AFFECTED, CLEANUP BY CODOH
**RELEASE DETECTION:** PUMP LINE LEAK
**MISC. NOTES:**

**DISCHARGER INFORMATION**

**DISCHARGER ID:** 298555 **DUN and BRADSTREET :**
**TYPE OF DISCHARGER:** PRIVATE ENTERPRISE
**NAME OF DISCHARGER:** A.E.S. CO.
**ADDRESS:** PLACERITA RD
NEWHALL CA

# *Environmental FirstSearch*
# *Site Detail Report*

**Target Property:** PLACERITA CANYON ROAD
NEWHALL CA 91321

**JOB:** MATE0001

## ERNS

**SEARCH ID:** 3 **DIST/DIR:** NON GC **MAP ID:**

| | | | |
|---|---|---|---|
| **NAME:** | (RP) TENNACO(MIKE STAHL) | **REV:** | 01-04-01 |
| **ADDRESS:** | GPM PRODUCTION FACILITY/PLACERITA FLD | **ID1:** | 12655 |
| | NEWHALL CA | **ID2:** | |
| | LOS ANGELES | **STATUS:** | UNKNOWN |
| **CONTACT:** | | **PHONE:** | |

**THERE ARE NO DETAILS AVAILABLE FOR THIS SITE**

## ERNS

**SEARCH ID:** 2 **DIST/DIR:** NON GC **MAP ID:**

| | | | |
|---|---|---|---|
| **NAME:** | (RP) MOBIL OIL | **REV:** | 01-04-01 |
| **ADDRESS:** | PLACERITA CANYON/S31,T4N,R15W(TENACO) | **ID1:** | 13345 |
| | NEWHALL CA | **ID2:** | |
| | LOS ANGELES | **STATUS:** | UNKNOWN |
| **CONTACT:** | | **PHONE:** | |

**THERE ARE NO DETAILS AVAILABLE FOR THIS SITE**

# Environmental FirstSearch Descriptions

**NPL:** ***EPA*** NATIONAL PRIORITY LIST - The National Priorities List is a list of the worst hazardous waste sites that have been identified by Superfund. Sites are only put on the list after they have been scored using the Hazard Ranking System (HRS), and have been subjected to public comment. Any site on the NPL is eligible for cleanup using Superfund Trust money.
A Superfund site is any land in the United States that has been contaminated by hazardous waste and identified by the Environmental Protection Agency (EPA) as a candidate for cleanup because it poses a risk to human health and/or the environment.
FINAL - Currently on the Final NPL
PROPOSED - Proposed for NPL

**NPL DELISTED:** ***EPA*** NATIONAL PRIORITY LIST Subset - Database of delisted NPL sites. 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.
DELISTED - Deleted from the Final NPL

**CERCLIS:** ***EPA*** COMPREHENSIVE ENVIRONMENTAL RESPONSE COMPENSATION AND LIABILITY INFORMATION SYSTEM (CERCLIS)- CERCLIS is a database of potential and confirmed hazardous waste sites at which the EPA Superfund program has some involvement. It contains sites that are either proposed to be or are on the National Priorities List (NPL) as well as sites that are in the screening and assessment phase for possible inclusion on the NPL.
PART OF NPL- Site is part of NPL site
DELETED - Deleted from the Final NPL
FINAL - Currently on the Final NPL
NOT PROPOSED - Not on the NPL
NOT VALID - Not Valid Site or Incident
PROPOSED - Proposed for NPL
REMOVED - Removed from Proposed NPL
SCAN PLAN - Pre-proposal Site
WITHDRAWN - Withdrawn

**NFRAP:** ***EPA*** COMPREHENSIVE ENVIRONMENTAL RESPONSE COMPENSATION AND LIABILITY INFORMATION SYSTEM ARCHIVED SITES - database of Archive designated CERCLA sites that, to the best of EPA's knowledge, assessment has been completed and has determined no further steps will be taken to list this site on the National Priorities List (NPL). 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.
NFRAP – No Further Remedial Action Plan
P - Site is part of NPL site
D - Deleted from the Final NPL
F - Currently on the Final NPL
N - Not on the NPL
O - Not Valid Site or Incident
P - Proposed for NPL
R - Removed from Proposed NPL
S - Pre-proposal Site
W – Withdrawn

**RCRA COR ACT:** ***EPA*** RESOURCE CONSERVATION AND RECOVERY INFORMATION SYSTEM SITES - Database of hazardous waste information contained in the Resource Conservation and Recovery Act Information (RCRAInfo), a national program management and inventory system about hazardous waste handlers. In general, all generators, transporters, treaters, storers, and disposers of hazardous waste are required to provide information about their activities to state environmental agencies. These agencies, in turn pass on the information to regional and national EPA offices. This regulation is governed by the Resource Conservation and Recovery Act (RCRA), as amended by the Hazardous and Solid Waste Amendments of 1984.
RCRAInfo facilities that have reported violations and subject to corrective actions.

**RCRA TSD:** ***EPA*** RESOURCE CONSERVATION AND RECOVERY INFORMATION SYSTEM

TREATMENT, STORAGE, and DISPOSAL FACILITIES. - Database of hazardous waste information contained in the Resource Conservation and Recovery Act Information (RCRAInfo), a national program management and inventory system about hazardous waste handlers. In general, all generators, transporters, treaters, storers, and disposers of hazardous waste are required to provide information about their activities to state environmental agencies. These agencies, in turn pass on the information to regional and national EPA offices. This regulation is governed by the Resource Conservation and Recovery Act (RCRA), as amended by the Hazardous and Solid Waste Amendments of 1984.
Facilities that treat, store, dispose, or incinerate hazardous waste.

**RCRA GEN:** ***EPA*** RESOURCE CONSERVATION AND RECOVERY INFORMATION SYSTEM GENERATORS - Database of hazardous waste information contained in the Resource Conservation and Recovery Act Information (RCRAInfo), a national program management and inventory system about hazardous waste handlers. In general, all generators, transporters, treaters, storers, and disposers of hazardous waste are required to provide information about their activities to state environmental agencies. These agencies, in turn pass on the information to regional and national EPA offices. This regulation is governed by the Resource Conservation and Recovery Act (RCRA), as amended by the Hazardous and Solid Waste Amendments of 1984.
Facilities that generate or transport hazardous waste or meet other RCRA requirements.
LGN - Large Quantity Generators
SGN - Small Quantity Generators
VGN – Conditionally Exempt Generator.
Included are RAATS (RCRA Administrative Action Tracking System) and CMEL (Compliance Monitoring & Enforcement List) facilities.

**RCRA NLR:** ***EPA*** RESOURCE CONSERVATION AND RECOVERY INFORMATION SYSTEM SITES - Database of hazardous waste information contained in the Resource Conservation and Recovery Act Information (RCRAInfo), a national program management and inventory system about hazardous waste handlers. In general, all generators, transporters, treaters, storers, and disposers of hazardous waste are required to provide information about their activities to state environmental agencies. These agencies, in turn pass on the information to regional and national EPA offices. This regulation is governed by the Resource Conservation and Recovery Act (RCRA), as amended by the Hazardous and Solid Waste Amendments of 1984.
Facilities not currently classified by the EPA but are still included in the RCRAInfo database. Reasons for non classification:
Failure to report in a timely matter.
No longer in business.
No longer in business at the listed address.
No longer generating hazardous waste materials in quantities which require reporting.

**Federal IC / EC:** ***EPA*** BROWNFIELD MANAGEMENT SYSTEM (BMS) - database designed to assist EPA in collecting, tracking, and updating information, as well as reporting on the major activities and accomplishments of the various Brownfield grant Programs.
FEDERAL ENGINEERING AND INSTITUTIONAL CONTROLS- Superfund sites that have either an engineering or an institutional control. The data includes the control and the media contaminated.

**ERNS:** ***EPA/NRC*** EMERGENCY RESPONSE NOTIFICATION SYSTEM (ERNS) - Database of incidents reported to the National Response Center. These incidents include chemical spills, accidents involving chemicals (such as fires or explosions), oil spills, transportation accidents that involve oil or chemicals, releases of radioactive materials, sightings of oil sheens on bodies of water, terrorist incidents involving chemicals, incidents where illegally dumped chemicals have been found, and drills intended to prepare responders to handle these kinds of incidents. Data since January 2001 has been received from the National Response System database as the EPA no longer maintains this data.

**Tribal Lands:** ***DOI/BIA*** INDIAN LANDS OF THE UNITED STATES - Database of areas with boundaries established by treaty, statute, and (or) executive or court order, recognized by the Federal Government as territory in which American Indian tribes have primary governmental authority. The Indian Lands of the United States map layer shows areas of 640 acres or more, administered by the Bureau of Indian Affairs. Included are Federally-administered lands within a reservation which may or may not be considered part of the reservation.

**State/Tribal Sites:** ***CA EPA*** SMBRPD / CAL SITES- The California Department of Toxic Substances Control (DTSC) has developed an electronic database system with information about sites that are known to be contaminated with hazardous substances as well as information on uncharacterized properties where further studies may reveal problems. The Site Mitigation and Brownfields Reuse Program Database (SMBRPD), also known as CalSites, is used primarily by DTSC's staff as an informational tool to evaluate and track activities at

properties that may have been affected by the release of hazardous substances.
The SMBRPD displays information in six categories. The categories are:
1. CalSites Properties (CS)
2. School Property Evaluation Program Properties (SCH)
3. Voluntary Cleanup Program Properties (VCP)
4. Unconfirmed Properties Needing Further Evaluation (RFE)
Please Note: FirstSearch Reports list the above sites as DB Type (STATE).
5. Unconfirmed Properties Referred to Another Local or State Agency (REF)
6. Properties where a No Further Action Determination has been made (NFA)
Please Note: FirstSearch Reports list the above sites as DB Type (OTHER).
Each Category contains information on properties based upon the type of work taking place at the site. For example, the CalSites database is now one of the six categories within SMPBRD and contains only confirmed sites considered as posing the greatest threat to the public and/or the potential public school sites will be found within the School Property Evaluation Program, and those properties undergoing voluntary investigation and/or cleanup are in the Voluntary Cleanup Program.
CORTESE LIST-Pursuant to Government Code Section 65962.5, the Hazardous Waste and Substances Sites List has been compiled by Cal/EPA, Hazardous Materials Data Management Program. The CAL EPA Dept. of Toxic Substances Control compiles information from subsets of the following databases to make up the CORTESE list:
1. The Dept. of Toxic Substances Control; contaminated or potentially contaminated hazardous waste sites listed in the CAL Sites database. Formerly known as ASPIS are included (CALSITES formerly known as ASPIS).
2. The California State Water Resources Control Board; listing of Leaking Underground Storage Tanks are included (LTANK)
3. The California Integrated Waste Management Board; Sanitary Landfills which have evidence of groundwater contamination or known migration of hazardous materials (formerly WB-LF, now AB 3750).
Note: Track Info Services collects each of the above data sets individually and lists them separately in the following First Search categories in order to provide more current and comprehensive information: CALSITES: SPL, LTANK: LUST, WB-LF: SWL

**State Spills 90:** ***CA EPA*** SLIC REGIONS 1 - 9- The California Regional Water Quality Control Boards maintain report of sites that have records of spills, leaks, investigation, and cleanups.

**State/Tribal SWL:** ***CA IWMB/SWRCB/COUNTY*** SWIS SOLID WASTE INFORMATION SYSTEM-The California Integrated Waste Management Board maintains a database on solid waste facilities, operations, and disposal sites throughout the state of California. The types of facilities found in this database include landfills, transfer stations, material recovery facilities, composting sites, transformation facilities, waste tire sites, and closed disposal sites. For more information on individual sites call the number listed in the source field..
Please Note: This database contains poor site location information for many sites in the First Search reports; therefore, it may not be possible to locate or plot some sites in First Search reports.
WMUDS-The State Water Resources Control Board maintained the Waste Management Unit Database System (WMUDS). It is no longer updated. It tracked management units for several regulatory programs related to waste management and its potential impact on groundwater. Two of these programs (SWAT & TPCA) are no longer on-going regulatory programs as described below. Chapter 15 (SC15) is still an on-going regulatory program and information is updated periodically but not to the WMUDS database. The WMUDS System contains information from the following agency databases: Facility, Waste Management Unit (WMU), Waste Discharger System (WDS), SWAT, Chapter 15, TPCA, RCRA, Inspections, Violations, and Enforcement's.
Note: This database contains poor site location information for many sites in the First Search reports; therefore, it may not be possible to locate or plot some sites in First Search reports.
ORANGE COUNTY LANDFILLS LIST- A list maintained by the Orange County Health Department.

**State/Tribal LUST:** ***CA SWRCB/COUNTY*** LUSTIS- The State Water Resources Control Board maintains a database of sites with confirmed or unconfirmed leaking underground storage tanks. Information for this database is collected from the states regional boards quarterly and integrated with this database.
SAN DIEGO COUNTY LEAKING TANKS- The San Diego County Department of Environmental Health maintains a database of sites with confirmed or unconfirmed leaking underground storage tanks within its HE17/58 database. For more information on a specific file call the HazMat Duty Specialist at phone number listed in the source information field.

**State/Tribal UST/AST:** ***CA EPA/COUNTY/CITY*** ABOVEGROUND STORAGE TANKS LISTING-The Above Ground Petroleum Storage Act became State Law effective January 1, 1990. In general, the law requires owners or operators of AST's with petroleum products to file a storage statement and pay a fee by July 1, 1990 and every two years thereafter, take specific action to prevent spills, and in certain instances implement a

groundwater monitoring program. This law does not apply to that portion of a tank facility associated with the production oil and regulated by the State Division of Oil and Gas of the Dept. of Conservation.
SWEEPS / FIDS STATE REGISTERED UNDEGROUND STORAGE TANKS- Until 1994 the State Water Resources Control Board maintained a database of registered underground storage tanks statewide referred to as the SWEEPS System. The SWEEPS UST information was integrated with the CAL EPA's Facility Index System database (FIDS) which is a master index of information from numerous California agency environmental databases. That was last updated in 1994. Track Info Services included the UST information from the FIDS database in its First Search reports for historical purposes to help its clients identify where tanks may possibly have existed. For more information on specific sites from individual paper files archived at the State Water Resources Control Board call the number listed with the source information.
INDIAN LANDS UNDERGROUND STORAGE TANKS LIST- A listing of underground storage tanks currently on Indian Lands under federal jurisdiction. California Indian Land USTS are administered by US EPA Region 9.
CUPA DATABASES & SOURCES- Definition of a CUPA: A Certified Unified Program Agency (CUPA) is a local agency that has been certified by the CAL EPA to implement six state environmental programs within the local agency's jurisdiction. These can be a county, city, or JPA (Joint Powers Authority). This program was established under the amendments to the California Health and Safety Code made by SB 1082 in 1994.
A Participating Agency (PA) is a local agency that has been designated by the local CUPA to administer one or more Unified Programs within their jurisdiction on behalf of the CUPA. A Designated Agency (DA) is an agency that has not been certified by the CUPA but is the responsible local agency that would implement the six unified programs until they are certified.
Please Note: Track Info Services, LLC collects and maintains information regarding Underground Storage Tanks from majority of the CUPAS and Participating Agencies in the State of California. These agencies typically do not maintain nor release such information on a uniform or consistent schedule; therefor, currency of the data may vary. Please look at the details on a specific site with a UST record in the First Search Report to determine the actual currency date of the record as provided by the relevant agency. Numerous efforts are made on a regular basis to obtain updated records.

**State/Tribal IC:** ***CA EPA*** DEED-RESTRICTED SITES LISTING- The California EPA's Department of Toxic Substances Control Board 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.

**State/Tribal VCP:** ***CA EPA*** SMBRPD / CAL SITES- The California Department of Toxic Substances Control (DTSC) has developed an electronic database system with information about sites that are known to be contaminated with hazardous substances as well as information on uncharacterized properties where further studies may reveal problems. The Site Mitigation and Brownfields Reuse Program Database (SMBRPD), also known as CalSites, is used primarily by DTSC's staff as an informational tool to evaluate and track activities at properties that may have been affected by the release of hazardous substances.
The SMBRPD displays information in six categories. The categories are:
1. CalSites Properties (CS)
2. School Property Evaluation Program Properties (SCH)
3. Voluntary Cleanup Program Properties (VCP)
4. Unconfirmed Properties Needing Further Evaluation (RFE)
5. Unconfirmed Properties Referred to Another Local or State Agency (REF)
6. Properties where a No Further Action Determination has been made (NFA)
Please Note: FirstSearch Reports list the above sites as DB Type VC. Each Category contains information on properties based upon the type of work taking place at the site. The VC category contains only those properties undergoing voluntary investigation and/or cleanup and which are listed in the Voluntary Cleanup Program.

**RADON:** ***NTIS*** NATIONAL RADON DATABASE - EPA radon data from 1990-1991 national radon project collected for a variety of zip codes across the United States.

**State Permits:** ***CA COUNTY*** SAN DIEGO COUNTY HE17 PERMITS- The HE17/58 database tracks establishments issued permits and the status of their permits in relation to compliance with federal, state, and local regulations that the County oversees. It tracks if a site is a hazardous waste generator, TSD, gas station, has underground tanks, violations, or unauthorized releases. For more information on a specific file call the HazMat Duty Specialist at the phone number listed in the source information field.
SAN BERNARDINO COUNTY HAZARDOUS MATERIALS PERMITS- Handlers and Generators Permit Information Maintained by the Hazardous Materials Division.

**State Other:** ***CA EPA/COUNTY*** SMBRPD / CAL SITES- The California Department of Toxic Substances

Control (DTSC) has developed an electronic database system with information about sites that are known to be contaminated with hazardous substances as well as information on uncharacterized properties where further studies may reveal problems. The Site Mitigation and Brownfields Reuse Program Database (SMBRPD), also known as CalSites, is used primarily by DTSC's staff as an informational tool to evaluate and track activities at properties that may have been affected by the release of hazardous substances.
The SMBRPD displays information in six categories. The categories are:
1. CalSites Properties (CS)
2. School Property Evaluation Program Properties (SCH)
3. Voluntary Cleanup Program Properties (VCP)
4. Unconfirmed Properties Needing Further Evaluation (RFE)
Please Note: FirstSearch Reports list the above sites as DB Type (STATE).
5. Unconfirmed Properties Referred to Another Local or State Agency (REF)
6. Properties where a No Further Action Determination has been made (NFA)
Please Note: FirstSearch Reports list the above sites as DB Type (OTHER).
Each Category contains information on properties based upon the type of work taking place at the site. For example, the CalSites database is now one of the six categories within SMPBRD and contains only confirmed sites considered as posing the greatest threat to the public and/or the potential public school sites will be found within the School Property Evaluation Program, and those properties undergoing voluntary investigation and/or cleanup are in the Voluntary Cleanup Program.
LA COUNTY SITE MITIGATION COMPLAINT CONTROL LOG- The County of Los Angeles Public Health Investigation Compliant Control Log.
ORANGE COUNTY INDUSTRIAL SITE CLEANUPS- List maintained by the Orange County Environmental Health Agency.
RIVERSIDE COUNTY WASTE GENERATORS-A list of facilities in Riverside County which generate hazardous waste.
SACRAMENTO COUNTY MASTER HAZMAT LIST-Master list of facilities within Sacramento County with potentially hazardous materials.
SACRAMENTO COUNTY TOXIC SITE CLEANUPS-A list of sites where unauthorized releases of potentially hazardous materials have occurred.

**State Other:** ***US DOJ*** NATIONAL CLANDESTINE LABORATORY REGISTER - Database of 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 U.S. Department of Justice ("the Department"), and the Department has not verified the entry and does not guarantee its accuracy. All sites that are included in this data set will have an id that starts with NCLR.

# Appendix L.3

## Soil Sampling Analytical Report

**Calscience Environmental Laboratories, Inc.**

September 22, 2008

Roy Patterson
URS Corporation
915 Wilshire Blvd., Suite 700
Los Angeles, CA 90017-3437

Subject: **Calscience Work Order No.: 08-09-1156**
**Client Reference: GOR**

Dear Client:

Enclosed is an analytical report for the above-referenced project. The samples included in this report were received 9/12/2008 and analyzed in accordance with the attached chain-of-custody.

Unless otherwise noted, all analytical testing was accomplished in accordance with the guidelines established in our Quality Systems Manual, applicable standard operating procedures, and other related documentation. The original report of subcontracted analysis, if any, is provided herein, and follows the standard Calscience data package. The results in this analytical report are limited to the samples tested and any reproduction thereof must be made in its entirety.

If you have any questions regarding this report, please do not hesitate to contact the undersigned.

Sincerely,

Vikas Patel

Calscience Environmental
Laboratories, Inc.
Vikas Patel
Project Manager

Calscience Environmental Laboratories, Inc.

# Analytical Report

URS Corporation
915 Wilshire Blvd., Suite 700
Los Angeles, CA 90017-3437

Date Received: 09/12/08
Work Order No: 08-09-1156
Preparation: EPA 3050B / EPA 7471A Total
Method: EPA 6010B / EPA 7471A
Units: mg/kg

Project: GOR



| Client Sample Number | Lab Sample Number | Date /Time Collected | Matrix | Instrument | Date Prepared | Date/Time Analyzed | QC Batch ID |
|---|---|---|---|---|---|---|---|
| **HSA-1, 32** | **08-09-1156-1-A** | **09/11/08 10:37** | **Solid** | **ICP 5300** | **09/15/08** | **09/16/08 17:13** | **080915L03** |

Comment(s): -Mercury was analyzed on 9/15/2008 7:03:12 PM with batch 080915L05

| Parameter | Result | RL | DF | Qual | Parameter | Result | RL | DF | Qual |
|---|---|---|---|---|---|---|---|---|---|
| Antimony | ND | 0.750 | 1 | | Mercury | ND | 0.0835 | 1 | |
| Arsenic | 1.67 | 0.750 | 1 | | Molybdenum | 2.06 | 0.250 | 1 | |
| Barium | 120 | 0.500 | 1 | | Nickel | 10.0 | 0.250 | 1 | |
| Beryllium | ND | 0.250 | 1 | | Selenium | ND | 0.750 | 1 | |
| Cadmium | ND | 0.500 | 1 | | Silver | ND | 0.250 | 1 | |
| Chromium | 10.6 | 0.250 | 1 | | Thallium | ND | 0.750 | 1 | |
| Cobalt | 9.80 | 0.250 | 1 | | Vanadium | 14.5 | 0.250 | 1 | |
| Copper | 15.5 | 0.500 | 1 | | Zinc | 42.0 | 1.00 | 1 | |
| Lead | 1.85 | 0.500 | 1 | | | | | | |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| **HSA-2, 29** | **08-09-1156-2-A** | **09/11/08 14:34** | **Solid** | **ICP 5300** | **09/15/08** | **09/16/08 17:06** | **080915L03** |

Comment(s): -Mercury was analyzed on 9/15/2008 7:05:22 PM with batch 080915L05

| Parameter | Result | RL | DF | Qual | Parameter | Result | RL | DF | Qual |
|---|---|---|---|---|---|---|---|---|---|
| Antimony | ND | 0.750 | 1 | | Mercury | ND | 0.0835 | 1 | |
| Arsenic | 0.980 | 0.750 | 1 | | Molybdenum | 0.774 | 0.250 | 1 | |
| Barium | 119 | 0.500 | 1 | | Nickel | 13.1 | 0.250 | 1 | |
| Beryllium | ND | 0.250 | 1 | | Selenium | ND | 0.750 | 1 | |
| Cadmium | ND | 0.500 | 1 | | Silver | ND | 0.250 | 1 | |
| Chromium | 13.1 | 0.250 | 1 | | Thallium | ND | 0.750 | 1 | |
| Cobalt | 13.7 | 0.250 | 1 | | Vanadium | 13.5 | 0.250 | 1 | |
| Copper | 23.6 | 0.500 | 1 | | Zinc | 51.2 | 1.00 | 1 | |
| Lead | 3.25 | 0.500 | 1 | | | | | | |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| **Method Blank** | **099-04-007-5,778** | **N/A** | **Solid** | **Mercury** | **09/15/08** | **09/15/08 18:52** | **080915L05** |

| Parameter | Result | RL | DF | Qual |
|---|---|---|---|---|
| Mercury | ND | 0.0835 | 1 | |

RL - Reporting Limit , DF - Dilution Factor , Qual - Qualifiers

Calscience Environmental Laboratories, Inc.

# Analytical Report

| | | | |
|---|---|---|---|
| URS Corporation | | Date Received: | 09/12/08 |
| 915 Wilshire Blvd., Suite 700 | | Work Order No: | 08-09-1156 |
| Los Angeles, CA 90017-3437 | | Preparation: | EPA 3050B / EPA 7471A Total |
| | | Method: | EPA 6010B / EPA 7471A |
| | | Units: | mg/kg |
| Project: GOR | | | Page 2 of 2 |

| Client Sample Number | Lab Sample Number | Date /Time Collected | Matrix | Instrument | Date Prepared | Date/Time Analyzed | QC Batch ID |
|---|---|---|---|---|---|---|---|
| **Method Blank** | **097-01-002-11,495** | **N/A** | **Solid** | **ICP 5300** | **09/15/08** | **09/15/08 22:50** | **080915L03** |

| Parameter | Result | RL | DF | Qual | Parameter | Result | RL | DF | Qual |
|---|---|---|---|---|---|---|---|---|---|
| Antimony | ND | 0.750 | 1 | | Lead | ND | 0.500 | 1 | |
| Arsenic | ND | 0.750 | 1 | | Molybdenum | ND | 0.250 | 1 | |
| Barium | ND | 0.500 | 1 | | Nickel | ND | 0.250 | 1 | |
| Beryllium | ND | 0.250 | 1 | | Selenium | ND | 0.750 | 1 | |
| Cadmium | ND | 0.500 | 1 | | Silver | ND | 0.250 | 1 | |
| Chromium | ND | 0.250 | 1 | | Thallium | ND | 0.750 | 1 | |
| Cobalt | ND | 0.250 | 1 | | Vanadium | ND | 0.250 | 1 | |
| Copper | ND | 0.500 | 1 | | Zinc | ND | 1.00 | 1 | |

RL - Reporting Limit , DF - Dilution Factor , Qual - Qualifiers

Calscience Environmental Laboratories, Inc.

# Analytical Report

| | | | |
|---|---|---|---|
| URS Corporation | | Date Received: | 09/12/08 |
| 915 Wilshire Blvd., Suite 700 | | Work Order No: | 08-09-1156 |
| Los Angeles, CA 90017-3437 | | Preparation: | Extraction |
| | | Method: | EPA 418.1M |

Project: GOR



| Client Sample Number | Lab Sample Number | Date/Time Collected | Matrix | Instrument | Date Prepared | Date/Time Analyzed | QC Batch ID |
|---|---|---|---|---|---|---|---|
| **HSA-1, 32** | **08-09-1156-1-B** | **09/11/08 10:37** | **Solid** | **IR #1** | **09/16/08** | **09/16/08 13:24** | **080916L01** |

| Parameter | Result | RL | DF | Qual | Units |
|---|---|---|---|---|---|
| TRPH | 14 | 10 | 1 | | mg/kg |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| **HSA-2, 29** | **08-09-1156-2-B** | **09/11/08 14:34** | **Solid** | **IR #1** | **09/16/08** | **09/16/08 13:24** | **080916L01** |

| Parameter | Result | RL | DF | Qual | Units |
|---|---|---|---|---|---|
| TRPH | 58 | 10 | 1 | | mg/kg |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| **Method Blank** | **099-07-015-1,433** | **N/A** | **Solid** | **IR #1** | **09/16/08** | **09/16/08 13:24** | **080916L01** |

| Parameter | Result | RL | DF | Qual | Units |
|---|---|---|---|---|---|
| TRPH | ND | 10 | 1 | | mg/kg |

RL - Reporting Limit , DF - Dilution Factor , Qual - Qualifiers

**Calscience Environmental Laboratories, Inc.**

# Analytical Report

| | | | |
|---|---|---|---|
| URS Corporation | | Date Received: | 09/12/08 |
| 915 Wilshire Blvd., Suite 700 | | Work Order No: | 08-09-1156 |
| Los Angeles, CA 90017-3437 | | Preparation: | EPA 3550B |
| | | Method: | EPA 8015B (M) |
| | | Units: | mg/kg |

Project: GOR



| Client Sample Number | Lab Sample Number | Date/Time Collected | Matrix | Instrument | Date Prepared | Date/Time Analyzed | QC Batch ID |
|---|---|---|---|---|---|---|---|
| **HSA-1, 32** | **08-09-1156-1-B** | **09/11/08 10:37** | **Solid** | **GC 46** | **09/19/08** | **09/19/08 17:49** | **080919B01** |

| Parameter | Result | RL | DF | Qual | Parameter | Result | RL | DF | Qual |
|---|---|---|---|---|---|---|---|---|---|
| C6 | ND | | 1 | | C21-C22 | 0.20 | | 1 | |
| C7 | ND | | 1 | | C23-C24 | ND | | 1 | |
| C8 | ND | | 1 | | C25-C28 | 0.29 | | 1 | |
| C9-C10 | ND | | 1 | | C29-C32 | 1.2 | | 1 | |
| C11-C12 | ND | | 1 | | C33-C36 | 2.8 | | 1 | |
| C13-C14 | ND | | 1 | | C37-C40 | 0.082 | | 1 | |
| C15-C16 | 0.78 | | 1 | | C41-C44 | ND | | 1 | |
| C17-C18 | 2.9 | | 1 | | C6-C44 Total | 9.2 | 5.0 | 1 | |
| C19-C20 | 0.96 | | 1 | | | | | | |

| Surrogates: | REC (%) | Control Limits | Qual |
|---|---|---|---|
| Decachlorobiphenyl | 110 | 61-145 | |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| **Method Blank** | **099-12-275-2,165** | **N/A** | **Solid** | **GC 46** | **09/19/08** | **09/19/08 10:22** | **080919B01** |

| Parameter | Result | RL | DF | Qual |
|---|---|---|---|---|
| TPH as Diesel | ND | 5.0 | 1 | |

| Surrogates: | REC (%) | Control Limits | Qual |
|---|---|---|---|
| Decachlorobiphenyl | 118 | 61-145 | |

RL - Reporting Limit , DF - Dilution Factor , Qual - Qualifiers

**Calscience Environmental Laboratories, Inc.**

# Analytical Report

| | | | |
|---|---|---|---|
| URS Corporation | | Date Received: | 09/12/08 |
| 915 Wilshire Blvd., Suite 700 | | Work Order No: | 08-09-1156 |
| Los Angeles, CA 90017-3437 | | Preparation: | EPA 3550B |
| | | Method: | EPA 8015B (M) |
| | | Units: | mg/kg |

Project: GOR



| Client Sample Number | Lab Sample Number | Date/Time Collected | Matrix | Instrument | Date Prepared | Date/Time Analyzed | QC Batch ID |
|---|---|---|---|---|---|---|---|
| **HSA-2, 29** | **08-09-1156-2-B** | **09/11/08 14:34** | **Solid** | **GC 46** | **09/19/08** | **09/19/08 18:05** | **080919B01** |

| Parameter | Result | RL | DF | Qual | Parameter | Result | RL | DF | Qual |
|---|---|---|---|---|---|---|---|---|---|
| C6 | ND | | 1 | | C21-C22 | 14 | | 1 | |
| C7 | ND | | 1 | | C23-C24 | 15 | | 1 | |
| C8 | ND | | 1 | | C25-C28 | 28 | | 1 | |
| C9-C10 | ND | | 1 | | C29-C32 | 28 | | 1 | |
| C11-C12 | ND | | 1 | | C33-C36 | 15 | | 1 | |
| C13-C14 | 0.74 | | 1 | | C37-C40 | 11 | | 1 | |
| C15-C16 | 3.5 | | 1 | | C41-C44 | 4.9 | | 1 | |
| C17-C18 | 11 | | 1 | | C6-C44 Total | 150 | 5.0 | 1 | |
| C19-C20 | 17 | | 1 | | | | | | |

| Surrogates: | REC (%) | Control Limits | Qual |
|---|---|---|---|
| Decachlorobiphenyl | 108 | 61-145 | |

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| **Method Blank** | **099-12-275-2,165** | **N/A** | **Solid** | **GC 46** | **09/19/08** | **09/19/08 10:22** | **080919B01** |

| Parameter | Result | RL | DF | Qual |
|---|---|---|---|---|
| TPH as Diesel | ND | 5.0 | 1 | |

| Surrogates: | REC (%) | Control Limits | Qual |
|---|---|---|---|
| Decachlorobiphenyl | 118 | 61-145 | |

RL - Reporting Limit , DF - Dilution Factor , Qual - Qualifiers

**Calscience Environmental Laboratories, Inc.**

# Analytical Report

| | | | |
|---|---|---|---|
| URS Corporation | | Date Received: | 09/12/08 |
| 915 Wilshire Blvd., Suite 700 | | Work Order No: | 08-09-1156 |
| Los Angeles, CA 90017-3437 | | Preparation: | EPA 3545 |
| | | Method: | EPA 8270C |
| | | Units: | mg/kg |
| Project: GOR | | | Page 1 of 3 |

| Client Sample Number | Lab Sample Number | Date/Time Collected | Matrix | Instrument | Date Prepared | Date/Time Analyzed | QC Batch ID |
|---|---|---|---|---|---|---|---|
| **HSA-1, 32** | **08-09-1156-1-A** | **09/11/08 10:37** | **Solid** | **GC/MS TT** | **09/12/08** | **09/16/08 16:55** | **080912L15** |

| Parameter | Result | RL | DF | Qual | Parameter | Result | RL | DF | Qual |
|---|---|---|---|---|---|---|---|---|---|
| N-Nitrosodimethylamine | ND | 0.50 | 1 | | 2,4-Dinitrophenol | ND | 2.5 | 1 | |
| Aniline | ND | 0.50 | 1 | | 4-Nitrophenol | ND | 0.50 | 1 | |
| Phenol | ND | 0.50 | 1 | | Dibenzofuran | ND | 0.50 | 1 | |
| Bis(2-Chloroethyl) Ether | ND | 2.5 | 1 | | 2,4-Dinitrotoluene | ND | 0.50 | 1 | |
| 2-Chlorophenol | ND | 0.50 | 1 | | 2,6-Dinitrotoluene | ND | 0.50 | 1 | |
| 1,3-Dichlorobenzene | ND | 0.50 | 1 | | Diethyl Phthalate | ND | 0.50 | 1 | |
| 1,4-Dichlorobenzene | ND | 0.50 | 1 | | 4-Chlorophenyl-Phenyl Ether | ND | 0.50 | 1 | |
| Benzyl Alcohol | ND | 0.50 | 1 | | Fluorene | ND | 0.50 | 1 | |
| 1,2-Dichlorobenzene | ND | 0.50 | 1 | | 4-Nitroaniline | ND | 0.50 | 1 | |
| 2-Methylphenol | ND | 0.50 | 1 | | Azobenzene | ND | 0.50 | 1 | |
| Bis(2-Chloroisopropyl) Ether | ND | 0.50 | 1 | | 4,6-Dinitro-2-Methylphenol | ND | 2.5 | 1 | |
| 3/4-Methylphenol | ND | 0.50 | 1 | | N-Nitrosodiphenylamine | ND | 0.50 | 1 | |
| N-Nitroso-di-n-propylamine | ND | 0.50 | 1 | | 2,4,6-Trichlorophenol | ND | 0.50 | 1 | |
| Hexachloroethane | ND | 0.50 | 1 | | 4-Bromophenyl-Phenyl Ether | ND | 0.50 | 1 | |
| Nitrobenzene | ND | 2.5 | 1 | | Hexachlorobenzene | ND | 0.50 | 1 | |
| Isophorone | ND | 0.50 | 1 | | Pentachlorophenol | ND | 2.5 | 1 | |
| 2-Nitrophenol | ND | 0.50 | 1 | | Phenanthrene | ND | 0.50 | 1 | |
| 2,4-Dimethylphenol | ND | 0.50 | 1 | | Anthracene | ND | 0.50 | 1 | |
| Benzoic Acid | ND | 2.5 | 1 | | Di-n-Butyl Phthalate | ND | 0.50 | 1 | |
| Bis(2-Chloroethoxy) Methane | ND | 0.50 | 1 | | Fluoranthene | ND | 0.50 | 1 | |
| 2,4-Dichlorophenol | ND | 0.50 | 1 | | Benzidine | ND | 10 | 1 | |
| 1,2,4-Trichlorobenzene | ND | 0.50 | 1 | | Pyrene | ND | 0.50 | 1 | |
| Naphthalene | ND | 0.50 | 1 | | Pyridine | ND | 0.50 | 1 | |
| 4-Chloroaniline | ND | 0.50 | 1 | | Butyl Benzyl Phthalate | ND | 0.50 | 1 | |
| Hexachloro-1,3-Butadiene | ND | 0.50 | 1 | | 3,3'-Dichlorobenzidine | ND | 10 | 1 | |
| 4-Chloro-3-Methylphenol | ND | 0.50 | 1 | | Benzo (a) Anthracene | ND | 0.50 | 1 | |
| 2-Methylnaphthalene | ND | 0.50 | 1 | | Bis(2-Ethylhexyl) Phthalate | ND | 0.50 | 1 | |
| 1-Methylnaphthalene | ND | 0.50 | 1 | | Chrysene | ND | 0.50 | 1 | |
| Hexachlorocyclopentadiene | ND | 2.5 | 1 | | Di-n-Octyl Phthalate | ND | 0.50 | 1 | |
| 2,4,5-Trichlorophenol | ND | 0.50 | 1 | | Benzo (k) Fluoranthene | ND | 0.50 | 1 | |
| 2-Chloronaphthalene | ND | 0.50 | 1 | | Benzo (b) Fluoranthene | ND | 0.50 | 1 | |
| 2-Nitroaniline | ND | 0.50 | 1 | | Benzo (a) Pyrene | ND | 0.50 | 1 | |
| Dimethyl Phthalate | ND | 0.50 | 1 | | Indeno (1,2,3-c,d) Pyrene | ND | 0.50 | 1 | |
| Acenaphthylene | ND | 0.50 | 1 | | Dibenz (a,h) Anthracene | ND | 0.50 | 1 | |
| 3-Nitroaniline | ND | 0.50 | 1 | | Benzo (g,h,i) Perylene | ND | 0.50 | 1 | |
| Acenaphthene | ND | 0.50 | 1 | | | | | | |

| Surrogates: | REC (%) | Control Limits | Qual | Surrogates: | REC (%) | Control Limits | Qual |
|---|---|---|---|---|---|---|---|
| 2-Fluorophenol | 95 | 42-120 | | Phenol-d6 | 95 | 46-118 | |
| Nitrobenzene-d5 | 95 | 42-150 | | 2-Fluorobiphenyl | 88 | 38-134 | |
| 2,4,6-Tribromophenol | 93 | 36-132 | | p-Terphenyl-d14 | 114 | 35-167 | |

RL - Reporting Limit , DF - Dilution Factor , Qual - Qualifiers

Calscience Environmental Laboratories, Inc.

# Analytical Report

| | | | |
|---|---|---|---|
| URS Corporation | | Date Received: | 09/12/08 |
| 915 Wilshire Blvd., Suite 700 | | Work Order No: | 08-09-1156 |
| Los Angeles, CA 90017-3437 | | Preparation: | EPA 3545 |
| | | Method: | EPA 8270C |
| | | Units: | mg/kg |
| Project: GOR | | | Page 2 of 3 |

| Client Sample Number | Lab Sample Number | Date/Time Collected | Matrix | Instrument | Date Prepared | Date/Time Analyzed | QC Batch ID |
|---|---|---|---|---|---|---|---|
| **HSA-2, 29** | **08-09-1156-2-A** | **09/11/08 14:34** | **Solid** | **GC/MS TT** | **09/12/08** | **09/16/08 12:20** | **080912L15** |

| Parameter | Result | RL | DF | Qual | Parameter | Result | RL | DF | Qual |
|---|---|---|---|---|---|---|---|---|---|
| N-Nitrosodimethylamine | ND | 0.50 | 1 | | 2,4-Dinitrophenol | ND | 2.5 | 1 | |
| Aniline | ND | 0.50 | 1 | | 4-Nitrophenol | ND | 0.50 | 1 | |
| Phenol | ND | 0.50 | 1 | | Dibenzofuran | ND | 0.50 | 1 | |
| Bis(2-Chloroethyl) Ether | ND | 2.5 | 1 | | 2,4-Dinitrotoluene | ND | 0.50 | 1 | |
| 2-Chlorophenol | ND | 0.50 | 1 | | 2,6-Dinitrotoluene | ND | 0.50 | 1 | |
| 1,3-Dichlorobenzene | ND | 0.50 | 1 | | Diethyl Phthalate | ND | 0.50 | 1 | |
| 1,4-Dichlorobenzene | ND | 0.50 | 1 | | 4-Chlorophenyl-Phenyl Ether | ND | 0.50 | 1 | |
| Benzyl Alcohol | ND | 0.50 | 1 | | Fluorene | ND | 0.50 | 1 | |
| 1,2-Dichlorobenzene | ND | 0.50 | 1 | | 4-Nitroaniline | ND | 0.50 | 1 | |
| 2-Methylphenol | ND | 0.50 | 1 | | Azobenzene | ND | 0.50 | 1 | |
| Bis(2-Chloroisopropyl) Ether | ND | 0.50 | 1 | | 4,6-Dinitro-2-Methylphenol | ND | 2.5 | 1 | |
| 3/4-Methylphenol | ND | 0.50 | 1 | | N-Nitrosodiphenylamine | ND | 0.50 | 1 | |
| N-Nitroso-di-n-propylamine | ND | 0.50 | 1 | | 2,4,6-Trichlorophenol | ND | 0.50 | 1 | |
| Hexachloroethane | ND | 0.50 | 1 | | 4-Bromophenyl-Phenyl Ether | ND | 0.50 | 1 | |
| Nitrobenzene | ND | 2.5 | 1 | | Hexachlorobenzene | ND | 0.50 | 1 | |
| Isophorone | ND | 0.50 | 1 | | Pentachlorophenol | ND | 2.5 | 1 | |
| 2-Nitrophenol | ND | 0.50 | 1 | | Phenanthrene | ND | 0.50 | 1 | |
| 2,4-Dimethylphenol | ND | 0.50 | 1 | | Anthracene | ND | 0.50 | 1 | |
| Benzoic Acid | ND | 2.5 | 1 | | Di-n-Butyl Phthalate | ND | 0.50 | 1 | |
| Bis(2-Chloroethoxy) Methane | ND | 0.50 | 1 | | Fluoranthene | ND | 0.50 | 1 | |
| 2,4-Dichlorophenol | ND | 0.50 | 1 | | Benzidine | ND | 10 | 1 | |
| 1,2,4-Trichlorobenzene | ND | 0.50 | 1 | | Pyrene | ND | 0.50 | 1 | |
| Naphthalene | ND | 0.50 | 1 | | Pyridine | ND | 0.50 | 1 | |
| 4-Chloroaniline | ND | 0.50 | 1 | | Butyl Benzyl Phthalate | ND | 0.50 | 1 | |
| Hexachloro-1,3-Butadiene | ND | 0.50 | 1 | | 3,3'-Dichlorobenzidine | ND | 10 | 1 | |
| 4-Chloro-3-Methylphenol | ND | 0.50 | 1 | | Benzo (a) Anthracene | ND | 0.50 | 1 | |
| 2-Methylnaphthalene | ND | 0.50 | 1 | | Bis(2-Ethylhexyl) Phthalate | ND | 0.50 | 1 | |
| 1-Methylnaphthalene | ND | 0.50 | 1 | | Chrysene | ND | 0.50 | 1 | |
| Hexachlorocyclopentadiene | ND | 2.5 | 1 | | Di-n-Octyl Phthalate | ND | 0.50 | 1 | |
| 2,4,5-Trichlorophenol | ND | 0.50 | 1 | | Benzo (k) Fluoranthene | ND | 0.50 | 1 | |
| 2-Chloronaphthalene | ND | 0.50 | 1 | | Benzo (b) Fluoranthene | ND | 0.50 | 1 | |
| 2-Nitroaniline | ND | 0.50 | 1 | | Benzo (a) Pyrene | ND | 0.50 | 1 | |
| Dimethyl Phthalate | ND | 0.50 | 1 | | Indeno (1,2,3-c,d) Pyrene | ND | 0.50 | 1 | |
| Acenaphthylene | ND | 0.50 | 1 | | Dibenz (a,h) Anthracene | ND | 0.50 | 1 | |
| 3-Nitroaniline | ND | 0.50 | 1 | | Benzo (g,h,i) Perylene | ND | 0.50 | 1 | |
| Acenaphthene | ND | 0.50 | 1 | | | | | | |

| Surrogates: | REC (%) | Control Limits | Qual | Surrogates: | REC (%) | Control Limits | Qual |
|---|---|---|---|---|---|---|---|
| 2-Fluorophenol | 91 | 42-120 | | Phenol-d6 | 91 | 46-118 | |
| Nitrobenzene-d5 | 89 | 42-150 | | 2-Fluorobiphenyl | 79 | 38-134 | |
| 2,4,6-Tribromophenol | 89 | 36-132 | | p-Terphenyl-d14 | 101 | 35-167 | |

RL - Reporting Limit , DF - Dilution Factor , Qual - Qualifiers

Calscience Environmental Laboratories, Inc.

# Analytical Report

| | | | |
|---|---|---|---|
| URS Corporation | | Date Received: | 09/12/08 |
| 915 Wilshire Blvd., Suite 700 | | Work Order No: | 08-09-1156 |
| Los Angeles, CA 90017-3437 | | Preparation: | EPA 3545 |
| | | Method: | EPA 8270C |
| | | Units: | mg/kg |
| Project: GOR | | | Page 3 of 3 |

| Client Sample Number | Lab Sample Number | Date/Time Collected | Matrix | Instrument | Date Prepared | Date/Time Analyzed | QC Batch ID |
|---|---|---|---|---|---|---|---|
| **Method Blank** | **099-12-549-608** | **N/A** | **Solid** | **GC/MS TT** | **09/12/08** | **09/16/08 11:52** | **080912L15** |

| Parameter | Result | RL | DF | Qual | Parameter | Result | RL | DF | Qual |
|---|---|---|---|---|---|---|---|---|---|
| N-Nitrosodimethylamine | ND | 0.50 | 1 | | 2,4-Dinitrophenol | ND | 2.5 | 1 | |
| Aniline | ND | 0.50 | 1 | | 4-Nitrophenol | ND | 0.50 | 1 | |
| Phenol | ND | 0.50 | 1 | | Dibenzofuran | ND | 0.50 | 1 | |
| Bis(2-Chloroethyl) Ether | ND | 2.5 | 1 | | 2,4-Dinitrotoluene | ND | 0.50 | 1 | |
| 2-Chlorophenol | ND | 0.50 | 1 | | 2,6-Dinitrotoluene | ND | 0.50 | 1 | |
| 1,3-Dichlorobenzene | ND | 0.50 | 1 | | Diethyl Phthalate | ND | 0.50 | 1 | |
| 1,4-Dichlorobenzene | ND | 0.50 | 1 | | 4-Chlorophenyl-Phenyl Ether | ND | 0.50 | 1 | |
| Benzyl Alcohol | ND | 0.50 | 1 | | Fluorene | ND | 0.50 | 1 | |
| 1,2-Dichlorobenzene | ND | 0.50 | 1 | | 4-Nitroaniline | ND | 0.50 | 1 | |
| 2-Methylphenol | ND | 0.50 | 1 | | Azobenzene | ND | 0.50 | 1 | |
| Bis(2-Chloroisopropyl) Ether | ND | 0.50 | 1 | | 4,6-Dinitro-2-Methylphenol | ND | 2.5 | 1 | |
| 3/4-Methylphenol | ND | 0.50 | 1 | | N-Nitrosodiphenylamine | ND | 0.50 | 1 | |
| N-Nitroso-di-n-propylamine | ND | 0.50 | 1 | | 2,4,6-Trichlorophenol | ND | 0.50 | 1 | |
| Hexachloroethane | ND | 0.50 | 1 | | 4-Bromophenyl-Phenyl Ether | ND | 0.50 | 1 | |
| Nitrobenzene | ND | 2.5 | 1 | | Hexachlorobenzene | ND | 0.50 | 1 | |
| Isophorone | ND | 0.50 | 1 | | Pentachlorophenol | ND | 2.5 | 1 | |
| 2-Nitrophenol | ND | 0.50 | 1 | | Phenanthrene | ND | 0.50 | 1 | |
| 2,4-Dimethylphenol | ND | 0.50 | 1 | | Anthracene | ND | 0.50 | 1 | |
| Benzoic Acid | ND | 2.5 | 1 | | Di-n-Butyl Phthalate | ND | 0.50 | 1 | |
| Bis(2-Chloroethoxy) Methane | ND | 0.50 | 1 | | Fluoranthene | ND | 0.50 | 1 | |
| 2,4-Dichlorophenol | ND | 0.50 | 1 | | Benzidine | ND | 10 | 1 | |
| 1,2,4-Trichlorobenzene | ND | 0.50 | 1 | | Pyrene | ND | 0.50 | 1 | |
| Naphthalene | ND | 0.50 | 1 | | Pyridine | ND | 0.50 | 1 | |
| 4-Chloroaniline | ND | 0.50 | 1 | | Butyl Benzyl Phthalate | ND | 0.50 | 1 | |
| Hexachloro-1,3-Butadiene | ND | 0.50 | 1 | | 3,3'-Dichlorobenzidine | ND | 10 | 1 | |
| 4-Chloro-3-Methylphenol | ND | 0.50 | 1 | | Benzo (a) Anthracene | ND | 0.50 | 1 | |
| 2-Methylnaphthalene | ND | 0.50 | 1 | | Bis(2-Ethylhexyl) Phthalate | ND | 0.50 | 1 | |
| 1-Methylnaphthalene | ND | 0.50 | 1 | | Chrysene | ND | 0.50 | 1 | |
| Hexachlorocyclopentadiene | ND | 2.5 | 1 | | Di-n-Octyl Phthalate | ND | 0.50 | 1 | |
| 2,4,5-Trichlorophenol | ND | 0.50 | 1 | | Benzo (k) Fluoranthene | ND | 0.50 | 1 | |
| 2-Chloronaphthalene | ND | 0.50 | 1 | | Benzo (b) Fluoranthene | ND | 0.50 | 1 | |
| 2-Nitroaniline | ND | 0.50 | 1 | | Benzo (a) Pyrene | ND | 0.50 | 1 | |
| Dimethyl Phthalate | ND | 0.50 | 1 | | Indeno (1,2,3-c,d) Pyrene | ND | 0.50 | 1 | |
| Acenaphthylene | ND | 0.50 | 1 | | Dibenz (a,h) Anthracene | ND | 0.50 | 1 | |
| 3-Nitroaniline | ND | 0.50 | 1 | | Benzo (g,h,i) Perylene | ND | 0.50 | 1 | |
| Acenaphthene | ND | 0.50 | 1 | | | | | | |

| Surrogates: | REC (%) | Control Limits | Qual | Surrogates: | REC (%) | Control Limits | Qual |
|---|---|---|---|---|---|---|---|
| 2-Fluorophenol | 100 | 42-120 | | Phenol-d6 | 101 | 46-118 | |
| Nitrobenzene-d5 | 89 | 42-150 | | 2-Fluorobiphenyl | 79 | 38-134 | |
| 2,4,6-Tribromophenol | 87 | 36-132 | | p-Terphenyl-d14 | 90 | 35-167 | |

RL - Reporting Limit , DF - Dilution Factor , Qual - Qualifiers

Calscience Environmental Laboratories, Inc.

# Analytical Report

| | | | |
|---|---|---|---|
| URS Corporation | | Date Received: | 09/12/08 |
| 915 Wilshire Blvd., Suite 700 | | Work Order No: | 08-09-1156 |
| Los Angeles, CA 90017-3437 | | Preparation: | EPA 5035 |
| | | Method: | EPA 8260B |
| | | Units: | ug/kg |
| Project: GOR | | | Page 1 of 3 |

| Client Sample Number | Lab Sample Number | Date/Time Collected | Matrix | Instrument | Date Prepared | Date/Time Analyzed | QC Batch ID |
|---|---|---|---|---|---|---|---|
| **HSA-1, 32** | **08-09-1156-1-E** | **09/11/08 10:37** | **Solid** | **GC/MS QQ** | **09/12/08** | **09/17/08 19:35** | **080917L01** |

| Parameter | Result | RL | DF | Qual | Parameter | Result | RL | DF | Qual |
|---|---|---|---|---|---|---|---|---|---|
| Acetone | 74 | 40 | 0.804 | | 1,3-Dichloropropane | ND | 0.80 | 0.804 | |
| Benzene | ND | 0.80 | 0.804 | | 2,2-Dichloropropane | ND | 4.0 | 0.804 | |
| Bromobenzene | ND | 0.80 | 0.804 | | 1,1-Dichloropropene | ND | 1.6 | 0.804 | |
| Bromochloromethane | ND | 1.6 | 0.804 | | c-1,3-Dichloropropene | ND | 0.80 | 0.804 | |
| Bromodichloromethane | ND | 0.80 | 0.804 | | t-1,3-Dichloropropene | ND | 1.6 | 0.804 | |
| Bromoform | ND | 4.0 | 0.804 | | Ethylbenzene | ND | 0.80 | 0.804 | |
| Bromomethane | ND | 16 | 0.804 | | 2-Hexanone | ND | 16 | 0.804 | |
| 2-Butanone | ND | 16 | 0.804 | | Isopropylbenzene | ND | 0.80 | 0.804 | |
| n-Butylbenzene | ND | 0.80 | 0.804 | | p-Isopropyltoluene | ND | 0.80 | 0.804 | |
| sec-Butylbenzene | ND | 0.80 | 0.804 | | Methylene Chloride | ND | 8.0 | 0.804 | |
| tert-Butylbenzene | ND | 0.80 | 0.804 | | 4-Methyl-2-Pentanone | ND | 16 | 0.804 | |
| Carbon Disulfide | ND | 8.0 | 0.804 | | Naphthalene | ND | 8.0 | 0.804 | |
| Carbon Tetrachloride | ND | 0.80 | 0.804 | | n-Propylbenzene | ND | 0.80 | 0.804 | |
| Chlorobenzene | ND | 0.80 | 0.804 | | Styrene | ND | 0.80 | 0.804 | |
| Chloroethane | ND | 1.6 | 0.804 | | 1,1,1,2-Tetrachloroethane | ND | 0.80 | 0.804 | |
| Chloroform | ND | 0.80 | 0.804 | | 1,1,2,2-Tetrachloroethane | ND | 1.6 | 0.804 | |
| Chloromethane | ND | 16 | 0.804 | | Tetrachloroethene | ND | 0.80 | 0.804 | |
| 2-Chlorotoluene | ND | 0.80 | 0.804 | | Toluene | ND | 0.80 | 0.804 | |
| 4-Chlorotoluene | ND | 0.80 | 0.804 | | 1,2,3-Trichlorobenzene | ND | 1.6 | 0.804 | |
| Dibromochloromethane | ND | 1.6 | 0.804 | | 1,2,4-Trichlorobenzene | ND | 1.6 | 0.804 | |
| 1,2-Dibromo-3-Chloropropane | ND | 4.0 | 0.804 | | 1,1,1-Trichloroethane | ND | 0.80 | 0.804 | |
| 1,2-Dibromoethane | ND | 0.80 | 0.804 | | 1,1,2-Trichloroethane | ND | 0.80 | 0.804 | |
| Dibromomethane | ND | 0.80 | 0.804 | | 1,1,2-Trichloro-1,2,2-Trifluoroethane | ND | 8.0 | 0.804 | |
| 1,2-Dichlorobenzene | ND | 0.80 | 0.804 | | Trichloroethene | ND | 1.6 | 0.804 | |
| 1,3-Dichlorobenzene | ND | 0.80 | 0.804 | | Trichlorofluoromethane | ND | 8.0 | 0.804 | |
| 1,4-Dichlorobenzene | ND | 0.80 | 0.804 | | 1,2,3-Trichloropropane | ND | 1.6 | 0.804 | |
| Dichlorodifluoromethane | ND | 1.6 | 0.804 | | 1,2,4-Trimethylbenzene | ND | 1.6 | 0.804 | |
| 1,1-Dichloroethane | ND | 0.80 | 0.804 | | 1,3,5-Trimethylbenzene | ND | 1.6 | 0.804 | |
| 1,2-Dichloroethane | ND | 0.80 | 0.804 | | Vinyl Acetate | ND | 8.0 | 0.804 | |
| 1,1-Dichloroethene | ND | 0.80 | 0.804 | | Vinyl Chloride | ND | 0.80 | 0.804 | |
| c-1,2-Dichloroethene | ND | 0.80 | 0.804 | | p/m-Xylene | ND | 1.6 | 0.804 | |
| t-1,2-Dichloroethene | ND | 0.80 | 0.804 | | o-Xylene | ND | 0.80 | 0.804 | |
| 1,2-Dichloropropane | ND | 0.80 | 0.804 | | Methyl-t-Butyl Ether (MTBE) | ND | 1.6 | 0.804 | |

| Surrogates: | REC (%) | Control Limits | Qual | Surrogates: | REC (%) | Control Limits | Qual |
|---|---|---|---|---|---|---|---|
| Dibromofluoromethane | 116 | 71-137 | | 1,2-Dichloroethane-d4 | 118 | 58-160 | |
| 1,4-Bromofluorobenzene | 97 | 66-126 | | Toluene-d8 | 101 | 87-111 | |

RL - Reporting Limit , DF - Dilution Factor , Qual - Qualifiers

Calscience Environmental Laboratories, Inc.

# Analytical Report

| | | | |
|---|---|---|---|
| URS Corporation | | Date Received: | 09/12/08 |
| 915 Wilshire Blvd., Suite 700 | | Work Order No: | 08-09-1156 |
| Los Angeles, CA 90017-3437 | | Preparation: | EPA 5035 |
| | | Method: | EPA 8260B |
| | | Units: | ug/kg |
| Project: GOR | | | Page 2 of 3 |

| Client Sample Number | Lab Sample Number | Date/Time Collected | Matrix | Instrument | Date Prepared | Date/Time Analyzed | QC Batch ID |
|---|---|---|---|---|---|---|---|
| **HSA-2, 29** | **08-09-1156-2-E** | **09/11/08 14:34** | **Solid** | **GC/MS QQ** | **09/12/08** | **09/17/08 19:58** | **080917L01** |

| Parameter | Result | RL | DF | Qual | Parameter | Result | RL | DF | Qual |
|---|---|---|---|---|---|---|---|---|---|
| Acetone | ND | 48 | 0.952 | | 1,3-Dichloropropane | ND | 0.95 | 0.952 | |
| Benzene | ND | 0.95 | 0.952 | | 2,2-Dichloropropane | ND | 4.8 | 0.952 | |
| Bromobenzene | ND | 0.95 | 0.952 | | 1,1-Dichloropropene | ND | 1.9 | 0.952 | |
| Bromochloromethane | ND | 1.9 | 0.952 | | c-1,3-Dichloropropene | ND | 0.95 | 0.952 | |
| Bromodichloromethane | ND | 0.95 | 0.952 | | t-1,3-Dichloropropene | ND | 1.9 | 0.952 | |
| Bromoform | ND | 4.8 | 0.952 | | Ethylbenzene | ND | 0.95 | 0.952 | |
| Bromomethane | ND | 19 | 0.952 | | 2-Hexanone | ND | 19 | 0.952 | |
| 2-Butanone | ND | 19 | 0.952 | | Isopropylbenzene | ND | 0.95 | 0.952 | |
| n-Butylbenzene | ND | 0.95 | 0.952 | | p-Isopropyltoluene | ND | 0.95 | 0.952 | |
| sec-Butylbenzene | ND | 0.95 | 0.952 | | Methylene Chloride | ND | 9.5 | 0.952 | |
| tert-Butylbenzene | ND | 0.95 | 0.952 | | 4-Methyl-2-Pentanone | ND | 19 | 0.952 | |
| Carbon Disulfide | ND | 9.5 | 0.952 | | Naphthalene | ND | 9.5 | 0.952 | |
| Carbon Tetrachloride | ND | 0.95 | 0.952 | | n-Propylbenzene | ND | 0.95 | 0.952 | |
| Chlorobenzene | ND | 0.95 | 0.952 | | Styrene | ND | 0.95 | 0.952 | |
| Chloroethane | ND | 1.9 | 0.952 | | 1,1,1,2-Tetrachloroethane | ND | 0.95 | 0.952 | |
| Chloroform | ND | 0.95 | 0.952 | | 1,1,2,2-Tetrachloroethane | ND | 1.9 | 0.952 | |
| Chloromethane | ND | 19 | 0.952 | | Tetrachloroethene | ND | 0.95 | 0.952 | |
| 2-Chlorotoluene | ND | 0.95 | 0.952 | | Toluene | ND | 0.95 | 0.952 | |
| 4-Chlorotoluene | ND | 0.95 | 0.952 | | 1,2,3-Trichlorobenzene | ND | 1.9 | 0.952 | |
| Dibromochloromethane | ND | 1.9 | 0.952 | | 1,2,4-Trichlorobenzene | ND | 1.9 | 0.952 | |
| 1,2-Dibromo-3-Chloropropane | ND | 4.8 | 0.952 | | 1,1,1-Trichloroethane | ND | 0.95 | 0.952 | |
| 1,2-Dibromoethane | ND | 0.95 | 0.952 | | 1,1,2-Trichloroethane | ND | 0.95 | 0.952 | |
| Dibromomethane | ND | 0.95 | 0.952 | | 1,1,2-Trichloro-1,2,2-Trifluoroethane | ND | 9.5 | 0.952 | |
| 1,2-Dichlorobenzene | ND | 0.95 | 0.952 | | Trichloroethene | ND | 1.9 | 0.952 | |
| 1,3-Dichlorobenzene | ND | 0.95 | 0.952 | | Trichlorofluoromethane | ND | 9.5 | 0.952 | |
| 1,4-Dichlorobenzene | ND | 0.95 | 0.952 | | 1,2,3-Trichloropropane | ND | 1.9 | 0.952 | |
| Dichlorodifluoromethane | ND | 1.9 | 0.952 | | 1,2,4-Trimethylbenzene | ND | 1.9 | 0.952 | |
| 1,1-Dichloroethane | ND | 0.95 | 0.952 | | 1,3,5-Trimethylbenzene | ND | 1.9 | 0.952 | |
| 1,2-Dichloroethane | ND | 0.95 | 0.952 | | Vinyl Acetate | ND | 9.5 | 0.952 | |
| 1,1-Dichloroethene | ND | 0.95 | 0.952 | | Vinyl Chloride | ND | 0.95 | 0.952 | |
| c-1,2-Dichloroethene | ND | 0.95 | 0.952 | | p/m-Xylene | ND | 1.9 | 0.952 | |
| t-1,2-Dichloroethene | ND | 0.95 | 0.952 | | o-Xylene | ND | 0.95 | 0.952 | |
| 1,2-Dichloropropane | ND | 0.95 | 0.952 | | Methyl-t-Butyl Ether (MTBE) | ND | 1.9 | 0.952 | |

| Surrogates: | REC (%) | Control Limits | Qual | Surrogates: | REC (%) | Control Limits | Qual |
|---|---|---|---|---|---|---|---|
| Dibromofluoromethane | 111 | 71-137 | | 1,2-Dichloroethane-d4 | 113 | 58-160 | |
| 1,4-Bromofluorobenzene | 100 | 66-126 | | Toluene-d8 | 102 | 87-111 | |

RL - Reporting Limit , DF - Dilution Factor , Qual - Qualifiers

Calscience Environmental Laboratories, Inc.

# Analytical Report

| | | | |
|---|---|---|---|
| URS Corporation | | Date Received: | 09/12/08 |
| 915 Wilshire Blvd., Suite 700 | | Work Order No: | 08-09-1156 |
| Los Angeles, CA 90017-3437 | | Preparation: | EPA 5035 |
| | | Method: | EPA 8260B |
| | | Units: | ug/kg |
| Project: GOR | | | Page 3 of 3 |

| Client Sample Number | Lab Sample Number | Date/Time Collected | Matrix | Instrument | Date Prepared | Date/Time Analyzed | QC Batch ID |
|---|---|---|---|---|---|---|---|
| **Method Blank** | **095-01-025-16,765** | **N/A** | **Solid** | **GC/MS QQ** | **09/17/08** | **09/17/08 16:27** | **080917L01** |

| Parameter | Result | RL | DF | Qual | Parameter | Result | RL | DF | Qual |
|---|---|---|---|---|---|---|---|---|---|
| Acetone | ND | 50 | 1 | | 1,3-Dichloropropane | ND | 1.0 | 1 | |
| Benzene | ND | 1.0 | 1 | | 2,2-Dichloropropane | ND | 5.0 | 1 | |
| Bromobenzene | ND | 1.0 | 1 | | 1,1-Dichloropropene | ND | 2.0 | 1 | |
| Bromochloromethane | ND | 2.0 | 1 | | c-1,3-Dichloropropene | ND | 1.0 | 1 | |
| Bromodichloromethane | ND | 1.0 | 1 | | t-1,3-Dichloropropene | ND | 2.0 | 1 | |
| Bromoform | ND | 5.0 | 1 | | Ethylbenzene | ND | 1.0 | 1 | |
| Bromomethane | ND | 20 | 1 | | 2-Hexanone | ND | 20 | 1 | |
| 2-Butanone | ND | 20 | 1 | | Isopropylbenzene | ND | 1.0 | 1 | |
| n-Butylbenzene | ND | 1.0 | 1 | | p-Isopropyltoluene | ND | 1.0 | 1 | |
| sec-Butylbenzene | ND | 1.0 | 1 | | Methylene Chloride | ND | 10 | 1 | |
| tert-Butylbenzene | ND | 1.0 | 1 | | 4-Methyl-2-Pentanone | ND | 20 | 1 | |
| Carbon Disulfide | ND | 10 | 1 | | Naphthalene | ND | 10 | 1 | |
| Carbon Tetrachloride | ND | 1.0 | 1 | | n-Propylbenzene | ND | 1.0 | 1 | |
| Chlorobenzene | ND | 1.0 | 1 | | Styrene | ND | 1.0 | 1 | |
| Chloroethane | ND | 2.0 | 1 | | 1,1,1,2-Tetrachloroethane | ND | 1.0 | 1 | |
| Chloroform | ND | 1.0 | 1 | | 1,1,2,2-Tetrachloroethane | ND | 2.0 | 1 | |
| Chloromethane | ND | 20 | 1 | | Tetrachloroethene | ND | 1.0 | 1 | |
| 2-Chlorotoluene | ND | 1.0 | 1 | | Toluene | ND | 1.0 | 1 | |
| 4-Chlorotoluene | ND | 1.0 | 1 | | 1,2,3-Trichlorobenzene | ND | 2.0 | 1 | |
| Dibromochloromethane | ND | 2.0 | 1 | | 1,2,4-Trichlorobenzene | ND | 2.0 | 1 | |
| 1,2-Dibromo-3-Chloropropane | ND | 5.0 | 1 | | 1,1,1-Trichloroethane | ND | 1.0 | 1 | |
| 1,2-Dibromoethane | ND | 1.0 | 1 | | 1,1,2-Trichloroethane | ND | 1.0 | 1 | |
| Dibromomethane | ND | 1.0 | 1 | | 1,1,2-Trichloro-1,2,2-Trifluoroethane | ND | 10 | 1 | |
| 1,2-Dichlorobenzene | ND | 1.0 | 1 | | Trichloroethene | ND | 2.0 | 1 | |
| 1,3-Dichlorobenzene | ND | 1.0 | 1 | | Trichlorofluoromethane | ND | 10 | 1 | |
| 1,4-Dichlorobenzene | ND | 1.0 | 1 | | 1,2,3-Trichloropropane | ND | 2.0 | 1 | |
| Dichlorodifluoromethane | ND | 2.0 | 1 | | 1,2,4-Trimethylbenzene | ND | 2.0 | 1 | |
| 1,1-Dichloroethane | ND | 1.0 | 1 | | 1,3,5-Trimethylbenzene | ND | 2.0 | 1 | |
| 1,2-Dichloroethane | ND | 1.0 | 1 | | Vinyl Acetate | ND | 10 | 1 | |
| 1,1-Dichloroethene | ND | 1.0 | 1 | | Vinyl Chloride | ND | 1.0 | 1 | |
| c-1,2-Dichloroethene | ND | 1.0 | 1 | | p/m-Xylene | ND | 2.0 | 1 | |
| t-1,2-Dichloroethene | ND | 1.0 | 1 | | o-Xylene | ND | 1.0 | 1 | |
| 1,2-Dichloropropane | ND | 1.0 | 1 | | Methyl-t-Butyl Ether (MTBE) | ND | 2.0 | 1 | |

| Surrogates: | REC (%) | Control Limits | Qual | Surrogates: | REC (%) | Control Limits | Qual |
|---|---|---|---|---|---|---|---|
| Dibromofluoromethane | 116 | 71-137 | | 1,2-Dichloroethane-d4 | 114 | 58-160 | |
| 1,4-Bromofluorobenzene | 95 | 66-126 | | Toluene-d8 | 103 | 87-111 | |

RL - Reporting Limit , DF - Dilution Factor , Qual - Qualifiers

Calscience Environmental Laboratories, Inc.

# Quality Control - Spike/Spike Duplicate

URS Corporation
915 Wilshire Blvd., Suite 700
Los Angeles, CA 90017-3437

Date Received: 09/12/08
Work Order No: 08-09-1156
Preparation: EPA 3050B
Method: EPA 6010B

Project GOR

| Quality Control Sample ID | Matrix | Instrument | Date Prepared | Date Analyzed | MS/MSD Batch Number |
|---|---|---|---|---|---|
| **HSA-2, 29** | **Solid** | **ICP 5300** | **09/15/08** | **09/16/08** | **080915S03** |

| Parameter | MS %REC | MSD %REC | %REC CL | RPD | RPD CL | Qualifiers |
|---|---|---|---|---|---|---|
| Antimony | 11 | 15 | 50-115 | 26 | 0-20 | 3,4 |
| Arsenic | 101 | 109 | 75-125 | 7 | 0-20 | |
| Barium | 4X | 4X | 75-125 | 4X | 0-20 | Q |
| Beryllium | 98 | 100 | 75-125 | 3 | 0-20 | |
| Cadmium | 96 | 95 | 75-125 | 1 | 0-20 | |
| Chromium | 93 | 102 | 75-125 | 7 | 0-20 | |
| Cobalt | 92 | 91 | 75-125 | 1 | 0-20 | |
| Copper | 105 | 125 | 75-125 | 10 | 0-20 | |
| Lead | 87 | 86 | 75-125 | 2 | 0-20 | |
| Molybdenum | 77 | 75 | 75-125 | 3 | 0-20 | |
| Nickel | 92 | 96 | 75-125 | 3 | 0-20 | |
| Selenium | 87 | 90 | 75-125 | 3 | 0-20 | |
| Silver | 77 | 78 | 75-125 | 0 | 0-20 | |
| Thallium | 85 | 82 | 75-125 | 3 | 0-20 | |
| Vanadium | 97 | 101 | 75-125 | 3 | 0-20 | |
| Zinc | 91 | 111 | 75-125 | 7 | 0-20 | |

RPD - Relative Percent Difference , CL - Control Limit

Calscience Environmental Laboratories, Inc.

# Quality Control - PDS / PDSD

URS Corporation
915 Wilshire Blvd., Suite 700
Los Angeles, CA 90017-3437

Date Received 09/12/08
Work Order No: 08-09-1156
Preparation: EPA 3050B
Method: EPA 6010B

Project: GOR

| Quality Control Sample ID | Matrix | Instrument | Date Prepared | Date Analyzed | PDS/PDSD Batch Number |
|---|---|---|---|---|---|
| **HSA-2, 29** | **Solid** | **ICP 5300** | **09/15/08** | **09/17/08** | **080915S03** |

| Parameter | PDS %REC | PDSD %REC | %REC CL | RPD | RPD CL | Qualifiers |
|---|---|---|---|---|---|---|
| Antimony | 95 | 92 | 75-125 | 3 | 0-20 | |
| Arsenic | 108 | 109 | 75-125 | 1 | 0-20 | |
| Barium | 4X | 4X | 75-125 | 4X | 0-20 | Q |
| Beryllium | 94 | 93 | 75-125 | 0 | 0-20 | |
| Cadmium | 96 | 96 | 75-125 | 0 | 0-20 | |
| Chromium | 94 | 94 | 75-125 | 0 | 0-20 | |
| Cobalt | 95 | 94 | 75-125 | 0 | 0-20 | |
| Copper | 97 | 97 | 75-125 | 0 | 0-20 | |
| Lead | 92 | 89 | 75-125 | 3 | 0-20 | |
| Molybdenum | 91 | 91 | 75-125 | 1 | 0-20 | |
| Nickel | 89 | 87 | 75-125 | 1 | 0-20 | |
| Selenium | 93 | 88 | 75-125 | 6 | 0-20 | |
| Silver | 90 | 91 | 75-125 | 1 | 0-20 | |
| Thallium | 87 | 88 | 75-125 | 0 | 0-20 | |
| Vanadium | 105 | 104 | 75-125 | 0 | 0-20 | |
| Zinc | 83 | 80 | 75-125 | 1 | 0-20 | |

RPD - Relative Percent Difference , CL - Control Limit

Calscience Environmental Laboratories, Inc.

# Quality Control - Spike/Spike Duplicate

URS Corporation
915 Wilshire Blvd., Suite 700
Los Angeles, CA 90017-3437

| | |
|---|---|
| Date Received: | 09/12/08 |
| Work Order No: | 08-09-1156 |
| Preparation: | Extraction |
| Method: | EPA 418.1M |

Project GOR

| Quality Control Sample ID | Matrix | Instrument | Date Prepared | Date Analyzed | MS/MSD Batch Number |
|---|---|---|---|---|---|
| **08-09-1063-1** | **Solid** | **IR #1** | **09/16/08** | **09/16/08** | **080916S01** |

| Parameter | MS %REC | MSD %REC | %REC CL | RPD | RPD CL | Qualifiers |
|---|---|---|---|---|---|---|
| TRPH | 87 | 84 | 55-135 | 4 | 0-30 | |

RPD - Relative Percent Difference , CL - Control Limit

Calscience Environmental Laboratories, Inc.

# Quality Control - Spike/Spike Duplicate

URS Corporation
915 Wilshire Blvd., Suite 700
Los Angeles, CA 90017-3437

| | |
|---|---|
| Date Received: | 09/12/08 |
| Work Order No: | 08-09-1156 |
| Preparation: | EPA 3550B |
| Method: | EPA 8015B (M) |

Project GOR

| Quality Control Sample ID | Matrix | Instrument | Date Prepared | Date Analyzed | MS/MSD Batch Number |
|---|---|---|---|---|---|
| **08-09-1183-2** | **Solid** | **GC 46** | **09/19/08** | **09/19/08** | **080919S01** |

| Parameter | MS %REC | MSD %REC | %REC CL | RPD | RPD CL | Qualifiers |
|---|---|---|---|---|---|---|
| TPH as Diesel | 89 | 93 | 64-130 | 4 | 0-15 | |

RPD - Relative Percent Difference , CL - Control Limit

Calscience Environmental Laboratories, Inc.

# Quality Control - Spike/Spike Duplicate

URS Corporation
915 Wilshire Blvd., Suite 700
Los Angeles, CA 90017-3437

| | |
|---|---|
| Date Received: | 09/12/08 |
| Work Order No: | 08-09-1156 |
| Preparation: | EPA 7471A Total |
| Method: | EPA 7471A |

Project GOR

| Quality Control Sample ID | Matrix | Instrument | Date Prepared | Date Analyzed | MS/MSD Batch Number |
|---|---|---|---|---|---|
| **HSA-2, 29** | **Solid** | **Mercury** | **09/15/08** | **09/15/08** | **080915S05** |

| Parameter | MS %REC | MSD %REC | %REC CL | RPD | RPD CL | Qualifiers |
|---|---|---|---|---|---|---|
| Mercury | 100 | 101 | 84-138 | 1 | 0-7 | |

RPD - Relative Percent Difference , CL - Control Limit

Calscience Environmental Laboratories, Inc.

# Quality Control - Spike/Spike Duplicate

URS Corporation
915 Wilshire Blvd., Suite 700
Los Angeles, CA 90017-3437

Date Received: 09/12/08
Work Order No: 08-09-1156
Preparation: EPA 3545
Method: EPA 8270C

Project GOR

| Quality Control Sample ID | Matrix | Instrument | Date Prepared | Date Analyzed | MS/MSD Batch Number |
|---|---|---|---|---|---|
| **HSA-2, 29** | **Solid** | **GC/MS TT** | **09/12/08** | **09/16/08** | **080912S15** |

| Parameter | MS %REC | MSD %REC | %REC CL | RPD | RPD CL | Qualifiers |
|---|---|---|---|---|---|---|
| Phenol | 92 | 72 | 57-123 | 24 | 0-16 | 4 |
| 2-Chlorophenol | 92 | 72 | 57-111 | 24 | 0-17 | 4 |
| 1,4-Dichlorobenzene | 86 | 67 | 49-127 | 25 | 0-20 | 4 |
| N-Nitroso-di-n-propylamine | 95 | 74 | 54-144 | 24 | 0-17 | 4 |
| 1,2,4-Trichlorobenzene | 83 | 64 | 42-132 | 25 | 0-20 | 4 |
| Naphthalene | 88 | 70 | 50-150 | 23 | 0-20 | 4 |
| 4-Chloro-3-Methylphenol | 93 | 73 | 50-128 | 23 | 0-17 | 4 |
| Dimethyl Phthalate | 84 | 68 | 50-150 | 21 | 0-20 | 4 |
| Acenaphthylene | 90 | 72 | 50-150 | 22 | 0-20 | 4 |
| Acenaphthene | 87 | 70 | 49-133 | 22 | 0-18 | 4 |
| 4-Nitrophenol | 93 | 75 | 30-144 | 22 | 0-21 | 4 |
| 2,4-Dinitrotoluene | 92 | 73 | 50-128 | 23 | 0-18 | 4 |
| Fluorene | 91 | 73 | 50-150 | 22 | 0-20 | 4 |
| Pentachlorophenol | 80 | 64 | 29-113 | 22 | 0-22 | |
| Pyrene | 97 | 79 | 47-149 | 20 | 0-20 | |
| Butyl Benzyl Phthalate | 103 | 85 | 50-150 | 19 | 0-20 | |

RPD - Relative Percent Difference , CL - Control Limit

Calscience Environmental Laboratories, Inc.

# Quality Control - LCS/LCS Duplicate

URS Corporation
915 Wilshire Blvd., Suite 700
Los Angeles, CA 90017-3437

Date Received: N/A
Work Order No: 08-09-1156
Preparation: EPA 3050B
Method: EPA 6010B

Project: GOR

| Quality Control Sample ID | Matrix | Instrument | Date Prepared | Date Analyzed | LCS/LCSD Batch Number |
|---|---|---|---|---|---|
| **097-01-002-11,495** | **Solid** | **ICP 5300** | **09/15/08** | **09/15/08** | **080915L03** |

| Parameter | LCS %REC | LCSD %REC | %REC CL | ME_CL | RPD | RPD CL | Qualifiers |
|---|---|---|---|---|---|---|---|
| Antimony | 104 | 91 | 80-120 | 73-127 | 12 | 0-20 | |
| Arsenic | 102 | 101 | 80-120 | 73-127 | 1 | 0-20 | |
| Barium | 108 | 107 | 80-120 | 73-127 | 1 | 0-20 | |
| Beryllium | 101 | 99 | 80-120 | 73-127 | 1 | 0-20 | |
| Cadmium | 109 | 104 | 80-120 | 73-127 | 4 | 0-20 | |
| Chromium | 103 | 97 | 80-120 | 73-127 | 6 | 0-20 | |
| Cobalt | 110 | 104 | 80-120 | 73-127 | 5 | 0-20 | |
| Copper | 106 | 103 | 80-120 | 73-127 | 3 | 0-20 | |
| Lead | 108 | 101 | 80-120 | 73-127 | 7 | 0-20 | |
| Molybdenum | 106 | 101 | 80-120 | 73-127 | 5 | 0-20 | |
| Nickel | 110 | 104 | 80-120 | 73-127 | 5 | 0-20 | |
| Selenium | 98 | 92 | 80-120 | 73-127 | 6 | 0-20 | |
| Silver | 103 | 95 | 80-120 | 73-127 | 9 | 0-20 | |
| Thallium | 104 | 103 | 80-120 | 73-127 | 2 | 0-20 | |
| Vanadium | 103 | 100 | 80-120 | 73-127 | 2 | 0-20 | |
| Zinc | 105 | 105 | 80-120 | 73-127 | 0 | 0-20 | |

Total number of LCS compounds : 16
Total number of ME compounds : 0
Total number of ME compounds allowed : 1
LCS ME CL validation result : Pass

RPD - Relative Percent Difference , CL - Control Limit

Calscience Environmental Laboratories, Inc.

# Quality Control - LCS/LCS Duplicate

| | | | |
|---|---|---|---|
| URS Corporation | | Date Received: | N/A |
| 915 Wilshire Blvd., Suite 700 | | Work Order No: | 08-09-1156 |
| Los Angeles, CA 90017-3437 | | Preparation: | Extraction |
| | | Method: | EPA 418.1M |

Project: GOR

| Quality Control Sample ID | Matrix | Instrument | Date Prepared | Date Analyzed | LCS/LCSD Batch Number |
|---|---|---|---|---|---|
| **099-07-015-1,433** | **Solid** | **IR #1** | **09/16/08** | **09/16/08** | **080916L01** |

| Parameter | LCS %REC | LCSD %REC | %REC CL | RPD | RPD CL | Qualifiers |
|---|---|---|---|---|---|---|
| TRPH | 98 | 99 | 70-130 | 1 | 0-30 | |

RPD - Relative Percent Difference , CL - Control Limit

Calscience Environmental Laboratories, Inc.

# Quality Control - LCS/LCS Duplicate

| | | | |
|---|---|---|---|
| URS Corporation | | Date Received: | N/A |
| 915 Wilshire Blvd., Suite 700 | | Work Order No: | 08-09-1156 |
| Los Angeles, CA 90017-3437 | | Preparation: | EPA 3550B |
| | | Method: | EPA 8015B (M) |

Project: GOR

| Quality Control Sample ID | Matrix | Instrument | Date Prepared | Date Analyzed | LCS/LCSD Batch Number |
|---|---|---|---|---|---|
| **099-12-275-2,165** | **Solid** | **GC 46** | **09/19/08** | **09/19/08** | **080919B01** |

| Parameter | LCS %REC | LCSD %REC | %REC CL | RPD | RPD CL | Qualifiers |
|---|---|---|---|---|---|---|
| TPH as Diesel | 98 | 97 | 75-123 | 1 | 0-12 | |

RPD - Relative Percent Difference , CL - Control Limit

Calscience Environmental Laboratories, Inc.

# Quality Control - LCS/LCS Duplicate

| | | | |
|---|---|---|---|
| URS Corporation | | Date Received: | N/A |
| 915 Wilshire Blvd., Suite 700 | | Work Order No: | 08-09-1156 |
| Los Angeles, CA 90017-3437 | | Preparation: | EPA 7471A Total |
| | | Method: | EPA 7471A |

Project: GOR

| Quality Control Sample ID | Matrix | Instrument | Date Prepared | Date Analyzed | LCS/LCSD Batch Number |
|---|---|---|---|---|---|
| **099-04-007-5,778** | **Solid** | **Mercury** | **09/15/08** | **09/15/08** | **080915L05** |

| Parameter | LCS %REC | LCSD %REC | %REC CL | RPD | RPD CL | Qualifiers |
|---|---|---|---|---|---|---|
| Mercury | 102 | 101 | 87-117 | 1 | 0-3 | |

RPD - Relative Percent Difference , CL - Control Limit

Calscience Environmental Laboratories, Inc.

# Quality Control - LCS/LCS Duplicate

URS Corporation
915 Wilshire Blvd., Suite 700
Los Angeles, CA 90017-3437

Date Received: N/A
Work Order No: 08-09-1156
Preparation: EPA 3545
Method: EPA 8270C

Project: GOR

| Quality Control Sample ID | Matrix | Instrument | Date Prepared | Date Analyzed | LCS/LCSD Batch Number |
|---|---|---|---|---|---|
| **099-12-549-608** | **Solid** | **GC/MS TT** | **09/12/08** | **09/16/08** | **080912L15** |

| Parameter | LCS %REC | LCSD %REC | %REC CL | ME_CL | RPD | RPD CL | Qualifiers |
|---|---|---|---|---|---|---|---|
| Phenol | 85 | 85 | 59-125 | 48-136 | 0 | 0-15 | |
| 2-Chlorophenol | 85 | 84 | 60-114 | 51-123 | 1 | 0-15 | |
| 1,4-Dichlorobenzene | 82 | 83 | 61-121 | 51-131 | 1 | 0-21 | |
| N-Nitroso-di-n-propylamine | 83 | 82 | 64-136 | 52-148 | 1 | 0-15 | |
| 1,2,4-Trichlorobenzene | 78 | 79 | 58-118 | 48-128 | 1 | 0-18 | |
| Naphthalene | 82 | 83 | 21-133 | 2-152 | 1 | 0-20 | |
| 4-Chloro-3-Methylphenol | 81 | 79 | 61-121 | 51-131 | 2 | 0-14 | |
| Dimethyl Phthalate | 79 | 78 | 0-112 | 0-131 | 2 | 0-20 | |
| Acenaphthylene | 79 | 78 | 33-145 | 14-164 | 1 | 0-20 | |
| Acenaphthene | 80 | 80 | 59-125 | 48-136 | 0 | 0-15 | |
| 4-Nitrophenol | 91 | 82 | 38-152 | 19-171 | 9 | 0-31 | |
| 2,4-Dinitrotoluene | 89 | 84 | 51-141 | 36-156 | 5 | 0-16 | |
| Fluorene | 85 | 83 | 59-121 | 49-131 | 2 | 0-20 | |
| Pentachlorophenol | 73 | 72 | 38-116 | 25-129 | 2 | 0-20 | |
| Pyrene | 87 | 90 | 51-141 | 36-156 | 4 | 0-14 | |
| Butyl Benzyl Phthalate | 96 | 98 | 0-152 | 0-177 | 2 | 0-20 | |

Total number of LCS compounds : 16
Total number of ME compounds : 0
Total number of ME compounds allowed : 1
LCS ME CL validation result : Pass

RPD - Relative Percent Difference , CL - Control Limit

Calscience Environmental Laboratories, Inc.

# Quality Control - LCS/LCS Duplicate

| | | | |
|---|---|---|---|
| URS Corporation | | Date Received: | N/A |
| 915 Wilshire Blvd., Suite 700 | | Work Order No: | 08-09-1156 |
| Los Angeles, CA 90017-3437 | | Preparation: | EPA 5035 |
| | | Method: | EPA 8260B |

Project: GOR

| Quality Control Sample ID | Matrix | Instrument | Date Prepared | Date Analyzed | LCS/LCSD Batch Number |
|---|---|---|---|---|---|
| **095-01-025-16,765** | **Solid** | **GC/MS QQ** | **09/17/08** | **09/17/08** | **080917L01** |

| Parameter | LCS %REC | LCSD %REC | %REC CL | ME_CL | RPD | RPD CL | Qualifiers |
|---|---|---|---|---|---|---|---|
| Benzene | 102 | 103 | 85-115 | 80-120 | 2 | 0-11 | |
| Carbon Tetrachloride | 113 | 114 | 68-134 | 57-145 | 1 | 0-14 | |
| Chlorobenzene | 103 | 103 | 83-119 | 77-125 | 0 | 0-9 | |
| 1,2-Dibromoethane | 101 | 99 | 80-120 | 73-127 | 2 | 0-20 | |
| 1,2-Dichlorobenzene | 101 | 102 | 57-135 | 44-148 | 1 | 0-10 | |
| 1,1-Dichloroethene | 116 | 117 | 72-120 | 64-128 | 1 | 0-10 | |
| Ethylbenzene | 103 | 105 | 80-120 | 73-127 | 1 | 0-20 | |
| Toluene | 101 | 105 | 67-127 | 57-137 | 3 | 0-10 | |
| Trichloroethene | 98 | 100 | 88-112 | 84-116 | 2 | 0-9 | |
| Vinyl Chloride | 113 | 113 | 57-129 | 45-141 | 0 | 0-16 | |
| Methyl-t-Butyl Ether (MTBE) | 109 | 106 | 76-124 | 68-132 | 3 | 0-12 | |
| Tert-Butyl Alcohol (TBA) | 85 | 83 | 31-145 | 12-164 | 3 | 0-23 | |
| Diisopropyl Ether (DIPE) | 108 | 106 | 74-128 | 65-137 | 2 | 0-10 | |
| Ethyl-t-Butyl Ether (ETBE) | 106 | 103 | 77-125 | 69-133 | 2 | 0-9 | |
| Tert-Amyl-Methyl Ether (TAME) | 95 | 96 | 81-123 | 74-130 | 1 | 0-10 | |
| Ethanol | 118 | 115 | 44-152 | 26-170 | 2 | 0-24 | |

Total number of LCS compounds : 16
Total number of ME compounds : 0
Total number of ME compounds allowed : 1
LCS ME CL validation result : Pass

RPD - Relative Percent Difference , CL - Control Limit

Calscience Environmental Laboratories, Inc.

## Glossary of Terms and Qualifiers

Work Order Number: 08-09-1156

| Qualifier | Definition |
|---|---|
| * | See applicable analysis comment. |
| 1 | Surrogate compound recovery was out of control due to a required sample dilution, therefore, the sample data was reported without further clarification. |
| 2 | Surrogate compound recovery was out of control due to matrix interference. The associated method blank surrogate spike compound was in control and, therefore, the sample data was reported without further clarification. |
| 3 | Recovery of the Matrix Spike (MS) or Matrix Spike Duplicate (MSD) compound was out of control due to matrix interference. The associated LCS and/or LCSD was in control and, therefore, the sample data was reported without further clarification. |
| 4 | The MS/MSD RPD was out of control due to matrix interference. The LCS/LCSD RPD was in control and, therefore, the sample data was reported without further clarification. |
| 5 | The PDS/PDSD associated with this batch of samples was out of control due to a matrix interference effect. The associated batch LCS/LCSD was in control and, hence, the associated sample data was reported with no further corrective action required. |
| A | Result is the average of all dilutions, as defined by the method. |
| B | Analyte was present in the associated method blank. |
| C | Analyte presence was not confirmed on primary column. |
| E | Concentration exceeds the calibration range. |
| H | Sample received and/or analyzed past the recommended holding time. |
| J | Analyte was detected at a concentration below the reporting limit and above the laboratory method detection limit. Reported value is estimated. |
| ME | LCS Recovery Percentage is within LCS ME Control Limit range. |
| N | Nontarget Analyte. |
| ND | Parameter not detected at the indicated reporting limit. |
| Q | Spike recovery and RPD control limits do not apply resulting from the parameter concentration in the sample exceeding the spike concentration by a factor of four or greater. |
| U | Undetected at the laboratory method detection limit. |
| X | % Recovery and/or RPD out-of-range. |
| Z | Analyte presence was not confirmed by second column or GC/MS analysis. |

# Calscience Environmental Laboratories, Inc.

☐ SoCal Laboratory
7440 Lincoln Way
Garden Grove, CA 92841-1427
(714) 895-5494

☐ NorCal Service Center
5063 Commercial Circle, Suite H
Concord, CA 94520-8577
(925) 689-9022

1156

## CHAIN OF CUSTODY RECORD

Date 9/11/08

Page 1 of 1

LABORATORY CLIENT: URS Corporation

ADDRESS: 915 Wilshire Blvd Suite 700

CITY: Los Angeles STATE: CA ZIP: 90017

TEL: 213-996-2200 E-MAIL: Roy_Patterson@urscorp.com

CLIENT PROJECT NAME / NUMBER: GOR

PROJECT CONTACT: Roy Patterson

SAMPLER(S): (PRINT) Christiane Ortega, Mike Synder

COELT LOG CODE

P.O. NO.:

LAB USE ONLY

COOLER RECEIPT TEMP: °C

TURNAROUND TIME: ☐ SAME DAY ☐ 24 HR ☐ 48 HR ☐ 72 HR ☒ STANDARD

SPECIAL REQUIREMENTS (ADDITIONAL COSTS MAY APPLY): ☐ RWQCB REPORTING FORMS ☐ COELT EDF ☐

SPECIAL INSTRUCTIONS:

* 2 sleeves
3 encores
for each sample

## REQUESTED ANALYSES

| LAB USE ONLY | SAMPLE ID | FIELD POINT NAME (FOR COELT EDF) | SAMPLING DATE | SAMPLING TIME | MATRIX | NO. OF CONT. | TPH (g) | TPH (d) or (C6-C36) or (C6-C44) | TPH (Carbon Chain) 8015M | BTEX / MTBE (8260B) or (___) | VOCs (8260B) | Oxygenates (8260B) | Encore Prep (5035) | SVOCs (8270C) | Pesticides (8081A) | PCBs (8082) | PNAs (8310) or (8270C) | T22 Metals (6010B/747X) 7471 | Cr(VI) [7196A or 7199 or 218.6] | VOCs (TO-14A) or (TO-15) | TPH (g) [TO-3]+ ___ | TRPH (418.1) | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | ~~HSA-1,5~~ | | ~~9/11/08~~ | ~~7:38~~ | ~~Soil~~ | ~~2 sleeves 3 encores~~ | | | ~~X~~ | | ~~X~~ | | ~~X~~ | ~~X~~ | | | | ~~X~~ | | | | ~~X~~ | | |
| | HSA-1,32 | | 9/11/08 | 10:37 | Soil | 2 sleeves 3 encores | | | X | | X | | X | X | | | | X | | | | X | | |
| | HSA-2,29 | | 9/11/08 | 14:34 | Soil | 2 sleeves 3 encores | | | X | | X | | X | X | | | | X | | | | X | | |

| Relinquished by: (Signature) | Received by: (Signature/Affiliation) | Date: | Time: |
|---|---|---|---|
| Mike Synder | Watson CEL | 9-12-08 | 0836 |
| Relinquished by: (Signature) | Received by: (Signature/Affiliation) | Date: | Time: |
| Relinquished by: (Signature) | Received by: (Signature/Affiliation) | Date: | Time: |

DISTRIBUTION: White with final report, Green and Yellow to Client.
Please note that pages 1 and 2 of 2 of our T/Cs are printed on the reverse side of the Green and Yellow copies respectively.

05/01/07 Revision

Q&Q Graphic 714-898-9702

Calscience Environmental Laboratories, Inc.

WORK ORDER #: 08 - 0 9 - 1 1 5 6

Cooler 1 of 1

# SAMPLE RECEIPT FORM

CLIENT: WRS DATE: 9-12-08

**TEMPERATURE – SAMPLES RECEIVED BY:**

**CALSCIENCE COURIER:**

_____ Chilled, cooler with temperature blank provided.
_____ Chilled, cooler without temperature blank.
_____ Chilled and placed in cooler with wet ice.
_____ Ambient and placed in cooler with wet ice.
_____ Ambient temperature (For Air & Filter only).

___ ___.___ °C Temperature blank.

**LABORATORY (Other than Calscience Courier):**

___ ___.___ °C Temperature blank.
___ 3.6 °C IR thermometer.
_____ Ambient temperature (For Air & Filter only).

Initial: WB

**CUSTODY SEAL INTACT:**

Sample(s): _____ Cooler: _____ No (Not Intact) : _____ Not Present: ✓

Initial: WB

**SAMPLE CONDITION:**

| | Yes | No | N/A |
|---|---|---|---|
| Chain-Of-Custody document(s) received with samples | ✓ | | |
| Sampler's name indicated on COC | ✓ | | |
| Sample container label(s) consistent with custody papers | ✓ | | |
| Sample container(s) intact and good condition | ✓ | | |
| Correct containers and volume for analyses requested | ✓ | | |
| Proper preservation noted on sample label(s) | | | ✓ |
| VOA vial(s) free of headspace. | | | ✓ |
| Tedlar bag(s) free of condensation | | | ✓ |

Initial: WB

**COMMENTS:**

# Appendix M

## Sunnyvale Analysis

# APPENDIX M

# ANALYSIS IN RESPONSE TO OPINION IN *SUNNYVALE WEST NEIGHBORHOOD ASSOCIATION V. CITY OF SUNNYVALE CITY COUNCIL*

## 1. INTRODUCTION

The Disney | ABC Studios at the Ranch Draft EIR analyzes the Project's environmental impacts according to the methodologies required by local and regional agencies governing the Project. For example, the analysis of significant air quality impacts is consistent with the methodology of the South Coast Air Quality Management District (SCAQMD), including the required methodologies in its *CEQA Air Quality Handbook*. The SCAQMD also has prepared supplemental guidance and recommendations on its website while the *CEQA Air Quality Handbook* is updated, and these recommendations likewise have been followed in this Draft EIR. For some environmental impact areas, including parts of the air quality, noise, and traffic analyses, the Draft EIR evaluates the Project's impacts against a future baseline condition at project buildout. Use of future baseline conditions is consistent with required agency methodologies and is consistent with the methodology the County of Los Angeles historically has used in its EIRs to analyze impacts related to air quality, noise, and traffic, and a number of other impact areas.

In December 2010, the California Court of Appeal for the Sixth District issued an opinion in the case *Sunnyvale West Neighborhood Association v. City of Sunnyvale City Council* (2010) 190 Cal.App.4th 1351 (referred to herein as *Sunnyvale*), pertaining to the environmental baselines used in an EIR for a long-range transportation improvement project. The *Sunnyvale* decision interprets CEQA to require analysis of project-specific impacts based upon adding a project's impacts to existing conditions. Though the circumstances here are very different and the Sixth District does not include the County of Los Angeles, additional analysis is set forth in this appendix to ensure a conservative approach in light of this recent decision. The *Sunnyvale* opinion is not binding on County of Los Angeles EIRs and *Sunnyvale* may be further appealed to the California Supreme Court, where it may be reversed or overruled.

The following analysis is provided for air quality, noise, and traffic where the Draft EIR analyzed the Project's impacts against future buildout conditions, in order to provide a supplemental analysis which also evaluates the Project's impacts against an existing baseline condition prior to the Project's approval.

## 2. AIR QUALITY

An analysis of existing conditions (2010) without the Project versus with the Project was performed assuming emission factors for Project buildout based on 2010 conditions. As summarized below, this analysis would result in a new significant regional operational emissions impact with respect to $NO_X$, in addition to those impacts disclosed in the analysis presented in Section V.E.1, Air Quality, of the Draft EIR for the Project at buildout (assumed to be 2015 for purposes of a worst-case air quality analysis). A summary of the results are provided below.

(1) Construction

*(a) Regional Air Quality Impacts*

Daily regional emissions during construction were forecasted by assuming a conservative start date (i.e., assuming all construction occurs at the earliest feasible date) and applying the mobile source and fugitive dust emissions factors derived from the SCAQMD recommended Urban Emissions (URBEMIS) model. The calculations reflect the types and quantities of construction equipment that would be used within the Development Area to remove existing structures and vegetation, grade the site, construct the proposed buildings, structures, and related improvements, and plant new landscaping. Construction tasks were aggregated to reflect overlapping tasks and identify the maximum construction emissions occurring over the course of Project construction. The calculations also reflect maximum overlapping activity associated with off-site utility and roadway improvements within the Off-Site Infrastructure Improvement Areas. The regional construction analysis is generally consistent with Sunnyvale as it assumes the earliest possible construction schedule and does not account for future improvements in construction equipment emission factors as a result of more stringent regulations in the future. Maximum construction emissions occur within the first year of construction during grading activities. In addition, Mitigation Measure E.1-6 requires use of Tier 3 or Tier 4 equipment for off-road construction equipment equal to or greater than 50 horsepower, that will be used an aggregate of 40 or more hours during any portion of the construction project. Tier 3 and Tier 4 engine emissions specifications are independent of the construction analysis year. Therefore, no additional analysis of regional construction emissions are necessary as the regional construction impacts presented in Section V.E.1, Air Quality, of the Draft EIR represent the maximum potential for air quality impacts.

*(b) Local Air Quality Impacts*

Conservative estimates of maximum on-site daily emissions for CO, $NO_X$, $PM_{10}$ and $PM_{2.5}$ were compiled for each phase of construction and considered the potential for overlapping activities associated with the Development Area and off-site utility and roadway improvements. The localized effects from the on-site portion of daily emissions (i.e.,

off-road equipment and dust-generating activities) were evaluated at sensitive receptor locations potentially impacted by the Project according to the SCAQMD's localized significance threshold (LST) methodology, which utilizes on-site mass emissions rate look up tables and Project-specific modeling, where appropriate. LSTs represent the maximum emissions from a project that are not expected to cause or contribute to an exceedance of the most stringent applicable federal or state ambient air quality standard and are developed based on the ambient concentrations of that pollutant for each source receptor area (SRA) and distance to the nearest sensitive receptor. The most recent ambient air quality monitoring data (2007-2009) for the Project vicinity, presented in Table V.E.1-2 of Section V.E.1, Air Quality, of the Draft EIR, was used to establish the background ambient pollutant concentrations. Although the trend shown in Table V.E.1-2 demonstrates that ambient air quality is improving in the area, the localized construction analysis presented in Section V.E.1, Air Quality, of the Draft EIR conservatively did not apply a reduction in background pollutant concentrations for subsequent years. By doing so, the allowable pollutant increment that would not exceed an ambient air quality standard is smaller. This approach is considered consistent with the recommendations in the *Sunnyvale* case. No additional analysis of localized construction impacts is necessary as localized construction impacts presented in Section V.E.1, Air Quality, of the Draft EIR represent the maximum potential for air quality impacts.

(2) Operation

*(a) Regional Air Quality Impacts*

The analysis of daily operational emissions from the Project has been prepared utilizing the URBEMIS 2007 computer model recommended by the SCAQMD. The URBEMIS 2007 air quality model is a land use-based model that generates air emissions based on the type and density of the proposed land uses and is influenced by other factors such as analysis year, trip generation rates, proximity to mass transit, and the extent of pedestrian-friendly amenities. The results of these calculations for the existing conditions analysis year (2010) and associated SCAQMD thresholds are presented in Table 1 on page 4 for regional emissions resulting from existing conditions (2010) with Project, assuming 2010 emission factors for Project buildout. As shown in Table 1, the net operational emissions associated with Project buildout (2010) would increase in comparison to the Project buildout (2015) emissions provided in Section V.E.1, Air Quality, of the Draft EIR. This increase is exclusively a function of the change in default URBEMIS 2007 emission factors from 2015 to 2010 (i.e., the vehicular fleet mix is cleaner in subsequent years as a result of newer, cleaner vehicles). As with the Project buildout (2015) analysis year, the existing plus Project (2010) analysis would not exceed the established SCAQMD threshold levels for VOC, CO, $SO_X$, $PM_{10}$, and $PM_{2.5}$. However, the existing plus Project (2010) analysis would exceed the established SCAQMD threshold for

**Table 1**
**Unmitigated Regional Operational Emissions (2010) (pounds per day)**

| Emission Source | VOC | $NO_X$ | CO | $SO_X$ | $PM_{10}$ | $PM_{2.5}$ |
|---|---|---|---|---|---|---|
| **Project Use Emissions (Soundstage Option)** | | | | | | |
| Mobile | 30 | 45 | 328 | <1 | 55 | 11 |
| Area | 5 | 4 | 9 | <1 | <1 | <1 |
| Stationary | <1 | 14 | 2 | 1 | <1 | <1 |
| Miscellaneous | <1 | 2 | 2 | <1 | <1 | <1 |
| *Total* | 35 | 65 | 342 | 2 | 57 | 12 |
| **SCAQMD Significance Threshold** | 55 | 55 | 550 | 150 | 150 | 55 |
| **Over/(Under)** | (20) | 10 | (208) | (148) | (93) | (43) |
| **Exceed Threshold?** | **No** | **Yes** | **No** | **No** | **No** | **No** |
| **Comparison to 2015 No Project Versus 2015 With Project (DEIR Table V.E.1-5)** | | | | | | |
| Year 2010 Soundstage Option | 35 | 65 | 342 | 2 | 57 | 12 |
| Year 2015 Soundstage Option | 26 | 50 | 241 | 2 | 57 | 12 |
| Difference (2010–2015) | 9 | 15 | 101 | <1 | <1 | <1 |
| **Change in Significance Conclusion** | **No** | **Yes** | **No** | **No** | **No** | **No** |
| **Project Use Emissions (Studio Office Option)** | | | | | | |
| Mobile | 32 | 48 | 356 | <1 | 60 | 12 |
| Area | 5 | 4 | 9 | <1 | <1 | <1 |
| Stationary | <1 | 15 | 3 | 2 | <1 | <1 |
| Miscellaneous | <1 | 2 | 2 | <1 | <1 | <1 |
| *Total* | 37 | 70 | 370 | 2 | 62 | 13 |
| **SCAQMD Significance Threshold** | 55 | 55 | 550 | 150 | 150 | 55 |
| **Over/(Under)** | (18) | 15 | (180) | (148) | (88) | (42) |
| **Exceed Threshold?** | **No** | **Yes** | **No** | **No** | **No** | **No** |
| **Comparison to 2015 No Project Versus 2015 With Project (DEIR Table V.E.1-5)** | | | | | | |
| Year 2010 Office Option | 37 | 70 | 370 | 2 | 62 | 13 |
| Year 2015 Office Option | 27 | 53 | 260 | 2 | 62 | 13 |
| Difference (2010–2015) | 10 | 17 | 110 | <1 | <1 | <1 |
| **Change in Significance Conclusion** | **No** | **Yes** | **No** | **No** | **No** | **No** |

*Note: Numbers may not add up exactly due to rounding.*

*Source: Matrix Environmental, 2011.*

$NO_X$ under either the Soundstage Option or the Studio Office Option. Therefore, impacts associated with regional operational emissions for existing plus Project (2010) would be significant and unavoidable. It should be noted, however, that the Project involves a number of Project Design Features and mitigation measures that would serve to reduce this impact, and this impact is solely the result of calculating emissions associated with the Project's future uses using existing (2010) emission factors.

*(b) Local Air Quality Impacts*

The SCAQMD recommends an evaluation of potential localized CO impacts when a project causes the level of service (LOS) at a study intersection to worsen from C to D, or if the project increases the volume-to-capacity (V/C) ratio at any intersection rated D or worse by two percent or more. As detailed in the *Sunnyvale Analysis for the Disney | ABC Studios at The Ranch* prepared by Gibson Transportation Consulting Inc., provided later in this appendix, Project traffic volumes would meet these criteria at two of the analyzed intersections based on Existing Plus Project (2010) conditions.

CO concentration levels were forecasted for 2010 at the intersections failing the screening criteria using the CALINE4 dispersion model developed by the California Department of Transportation (CalTrans). CO concentrations were modeled under the Existing and Existing Plus Project conditions. As shown in Table 2 on page 6, Project-generated traffic volumes are forecasted to have a negligible effect on the projected 1-hour and 8-hour CO concentrations at the intersections analyzed. Although the calculated CO concentrations are greater in 2010 in comparison to 2015, the increase is a function of higher emission factors for 2010. Since a significant impact would not occur at the intersections recommended for analysis per SCAQMD guidance, no significant impacts would be expected to occur at any other analyzed roadway intersection as a result of Project-generated traffic volumes. Thus, the Project would not cause any new or exacerbate any existing CO hotspots, and, as a result, impacts related to localized mobile source CO emissions would be less than significant based on 2010 conditions.

## 3. NOISE

An analysis of potential impacts on the existing noise environment resulting from the Project was performed in response to the *Sunnyvale* case. As summarized below, this analysis does not result in any new significant impacts beyond those disclosed in the analysis presented in Section V.C, Noise, of the Draft EIR (referred to herein as the base Project analysis). A summary of the results based on the *Sunnyvale* analysis is provided below.

(1) Construction

Project construction noise and vibration impacts, analyzed in Section V.C, Noise, were evaluated based on existing ambient noise conditions. As described therein, the Project would generate on-site noise and vibration from construction activities, as well as off-site noise from construction vehicles traveling to and from the Project site. Although the Project construction buildout year is 2020, noise impacts were evaluated based on existing noise conditions in order to provide a conservative analysis, as ambient noise levels the Project vicinity may increase due to general growth in the area through 2020. As this

**Table 2**
**Local Area Carbon Monoxide Dispersion Analysis (2010)**

| Intersection | Peak Period[a] | Maximum 1-Hour 2010 Base Concentration (ppm)[b] | Maximum 1-Hour 2010 w/ Project Concentration (ppm)[c] | Significant 1-Hour Impact? (>20 ppm)[d] | Maximum 8-Hour 2010 Base Concentration (ppm)[e] | Maximum 8-Hour 2010 w/ Project Concentration (ppm)[f] | Significant 8-Hour Impact? (>9.0 ppm)[d] |
|---|---|---|---|---|---|---|---|
| ***Soundstage Scenario*** | | | | | | | |
| Sierra Highway and Placerita Canyon Road | A.M. | 6.2 | 6.2 | No | 3.2 | 3.2 | No |
| | P.M. | 6.4 | 6.5 | No | 3.3 | 3.4 | No |
| Sierra Highway and SR-14 Southbound Ramp | A.M. | 6.5 | 6.5 | No | 3.2 | 3.2 | No |
| | P.M. | 6.3 | 6.5 | No | 3.2 | 3.3 | No |
| ***Office Scenario*** | | | | | | | |
| Sierra Highway and Placerita Canyon Road | A.M. | 6.2 | 6.2 | No | 3.2 | 3.2 | No |
| | P.M. | 6.4 | 6.5 | No | 3.3 | 3.4 | No |
| Sierra Highway and SR-14 Southbound Ramp | A.M. | 6.5 | 6.5 | No | 3.2 | 3.2 | No |
| | P.M. | 6.3 | 6.5 | No | 3.2 | 3.3 | No |

*ppm = parts per million*

[a] *Peak-hour traffic volumes are based on the Sunnyvale Analysis for the Disney ABC Studios at The Ranch by Gibson Transportation Consulting, Inc., April 2011.*

[b] *SCAQMD 2010 1-hour ambient background concentration (5.1 ppm) + 2010 Base (related projects traffic CO 1-hour contribution).*

[c] *SCAQMD 2010 1-hour ambient background concentration (5.1 ppm) + 2010 with Project traffic CO 1-hour contribution.*

[d] *The most restrictive standard for 1-hour CO concentrations is 20 ppm and for 8-hour concentrations is 9.0 ppm.*

[e] *SCAQMD 2010 8-hour ambient background concentration (2.6 ppm) + 2010 Base (related projects traffic CO 8-hour contribution).*

[f] *SCAQMD 2010 8-hour ambient background concentration (2.6 ppm) + 2010 with Project traffic CO 8-hour contribution.*

*Source: Matrix Environmental, 2011.*

approach is consistent with the recommendations in the *Sunnyvale* case, no further analysis is required.

(2) Operation

*(a) On-Site Noise Sources*

As presented in Section V.C, Noise, noise impacts due to the operation of on-site noise sources (i.e., the proposed electrical substation, building mechanical equipment, soundstages and mills, parking facilities, and loading dock/trash compactors) were also evaluated against existing ambient noise conditions and/or the County's current noise regulations, as appropriate. The noise analysis for the Project's on-site noise sources is consistent with the recommendations in the *Sunnyvale* case. Therefore, no further analysis is required.

*(b) Off-Site Mobile Noise Sources*

Off-site traffic noise impacts, analyzed in Section V.C, Noise, were based on the incremental increase in traffic noise levels attributable to "Future With Project" conditions as compared to "Future Without Project" conditions in 2020. In accordance with *Sunnyvale*, additional analysis has been conducted to determine the potential noise impacts based on the increase in noise levels due to Project-related traffic volumes (at buildout) compared with the existing traffic noise conditions. Table 3 and Table 4 on page 8 provide the off-site traffic noise impacts as analyzed against existing conditions for the Soundstage Option and Studio Office Option, respectively. As indicated therein, the "Existing Plus Project" conditions, as compared with existing conditions, would generate a maximum noise increase of 2.1 and 2.2 dBA (CNEL) along Placerita Canyon Road between the SR-14 and the Project entrance roadway, under the Soundstages Option and Studio Office Option, respectively. These estimated traffic noise increases are 0.4 dBA (CNEL) higher than the results of the base Project analysis (see Table V.C-15 in Section V.C, Noise, of the Draft EIR). However, these noise impacts would nonetheless be below the 3 dBA (CNEL) and 5 dBA (CNEL) significance thresholds, similar to the base Project. In addition, the maximum increase in traffic noise levels at all other analyzed roadway segments would be less than 1.0 dBA (CNEL), similar to the base Project analysis. Therefore, noise impacts due to Project-related off-site roadway traffic, as analyzed using the holding in the *Sunnyvale* case, would be less than significant, similar to those analyzed in the Draft EIR.

**Table 3**
**Off-Site Roadway Traffic Noise Impacts—Soundstages Option (*Sunnyvale* Analysis)**

| Roadway Segments | Adjacent Land Uses | Calculated Traffic Noise Levels, CNEL[a] | | Increase in Noise Levels due to Project, (CNEL) |
|---|---|---|---|---|
| | | Existing | Existing + Project | |
| **Sierra Highway** | | | | |
| North of Placerita Canyon Road | Residential | 71.0 | 71.1 | 0.1 |
| South of Placerita Canyon Road | Mobile Home Park | 70.5 | 70.5 | 0.0 |
| **Placerita Canyon Road** | | | | |
| West of Sierra Highway | Residential | 55.8 | 56.3 | 0.5 |
| Between SR-14 and Project Entrance Road | — | 63.4 | 65.5 | 2.1 |
| East of Project Entrance Road | Residential/Park | 63.5 | 63.5 | 0.0 |

[a] *Calculated noise level at 25 feet from roadway traffic.*

*Source: AES, 2011.*

**Table 4**
**Off-Site Roadway Traffic Noise Impacts—Office Studio Option (*Sunnyvale* Analysis)**

| Roadway Segments | Adjacent Land Uses | Calculated Traffic Noise Levels, CNEL[a] | | Increase in Noise Levels due to Project, (CNEL) |
|---|---|---|---|---|
| | | Existing | Existing + Project | |
| **Sierra Highway** | | | | |
| North of Placerita Canyon Road | Residential | 71.0 | 71.1 | 0.1 |
| South of Placerita Canyon Road | Mobile Home Park | 70.5 | 70.5 | 0.0 |
| **Placerita Canyon Road** | | | | |
| West of Sierra Highway | Residential | 55.8 | 56.4 | 0.6 |
| Between SR-14 and Project Entrance Road | — | 63.4 | 65.6 | 2.2 |
| East of Project Entrance Road | Residential/Park | 63.5 | 63.5 | 0.0 |

[a] *Calculated noise level at 25 feet from roadway traffic.*

*Source: AES, 2011.*

## 4. TRAFFIC, ACCESS AND PARKING

The analysis presented below measures the Project's traffic impacts on the existing (2010) environment in response to the *Sunnyvale* case and demonstrates that additional

significant traffic impacts beyond those already identified in the Traffic Study would not result.

(1) Traffic Projections

To assess Project impacts with respect to existing (2010) conditions, the Project-only traffic volumes for the Soundstage and Studio Office Options (illustrated in Figures 10 and 11, respectively, of the Transportation Study for Disney I ABC Studios at The Ranch (Traffic Study) prepared by Gibson Transportation Consulting, Inc. in May 2010 and included in Appendix I of the Draft EIR) were added to the existing traffic volumes (illustrated in Figure 4 of the Traffic Study). The resulting Existing Plus Project traffic volumes for the Soundstage and Studio Office Options are illustrated in Figure 1 on page 10 and Figure 2 on page 11, respectively.

(2) Intersection Traffic Operations and Significant Impacts

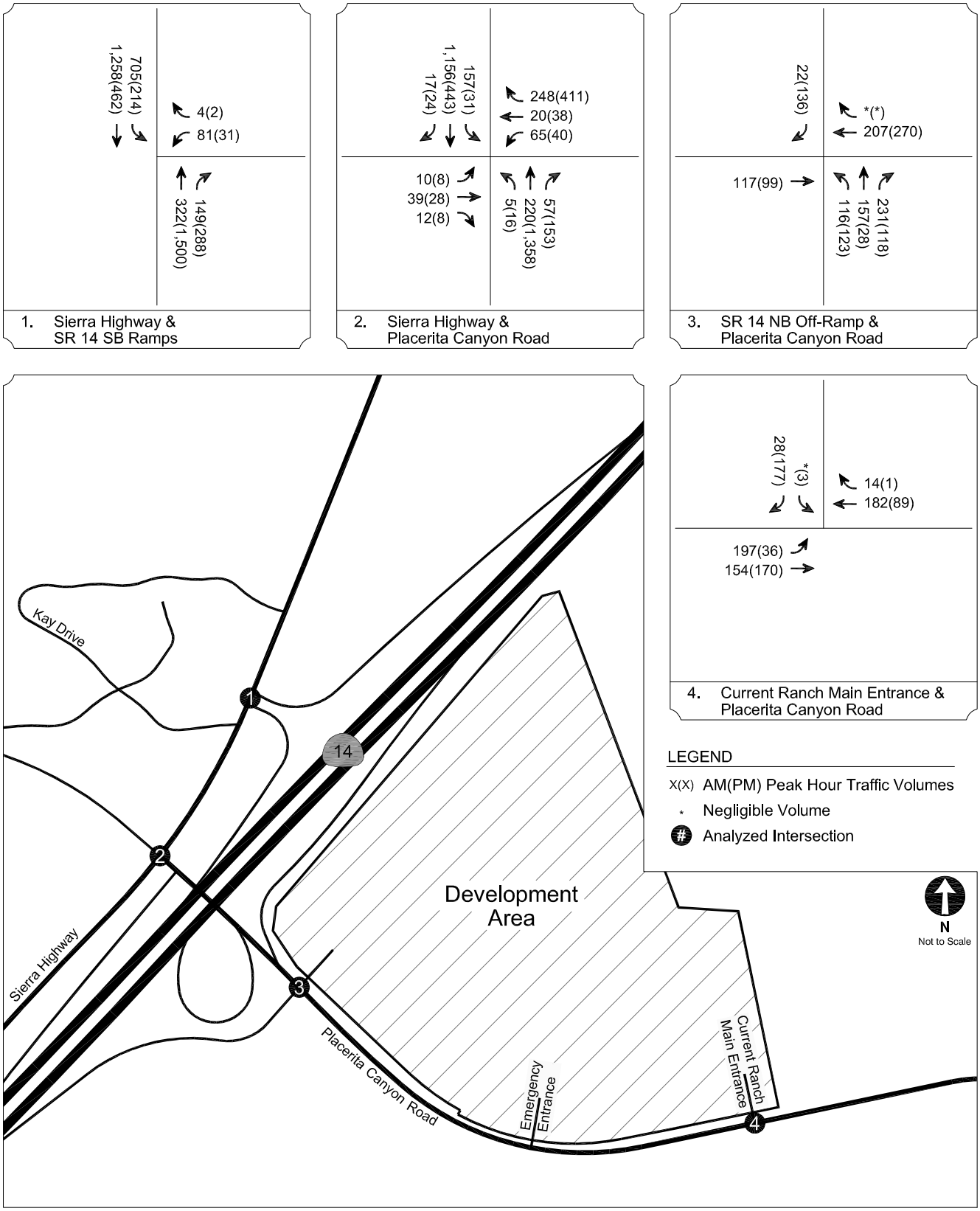
In accordance with Los Angeles County Department of Public Works (LACDPW) policy, the traffic volumes presented in Figure 1 and Figure 2 were analyzed using the Intersection Capacity Utilization (ICU) methodology described in Chapter 2 of the Traffic Study. The intersection level of service (LOS) definitions are the same as those presented in Table 4 of the Traffic Study.

*(a) Significant Impact Criteria*

The Project's traffic impacts per the *Sunnyvale* case have been evaluated using the LACDPW traffic impact criteria described in Chapters 1 and 3 of the Traffic Study. As set forth therein, LACDPW has established threshold criteria to determine whether the traffic impacts of a proposed project on study intersections would be significant. LACDPW standards indicate a project is considered to have a significant traffic impact on a study intersection if the increase in the volume-to-capacity (V/C) ratio attributable to the project exceeds a specific standard depending on the final intersection LOS.

LACDPW has developed a sliding scale in which the minimum allowable increase in the V/C ratio decreases as the V/C ratio increases:

| **Intersection Conditions without Project Traffic** | | **Project-Related Increase in V/C Ratio** |
|---|---|---|
| **LOS** | **V/C** | |
| A, B | 0.00–0.70 | Causing V/C to 0.75 or worse |
| C | 0.71–0.80 | Equal to or greater than 0.04 |
| D | 0.81–0.90 | Equal to or greater than 0.02 |
| E, F | > 0.91 | Equal to or greater than 0.01 |




Source: Gibson Trasportation Consulting, Inc. 2011

Disney | ABC Studios at The Ranch

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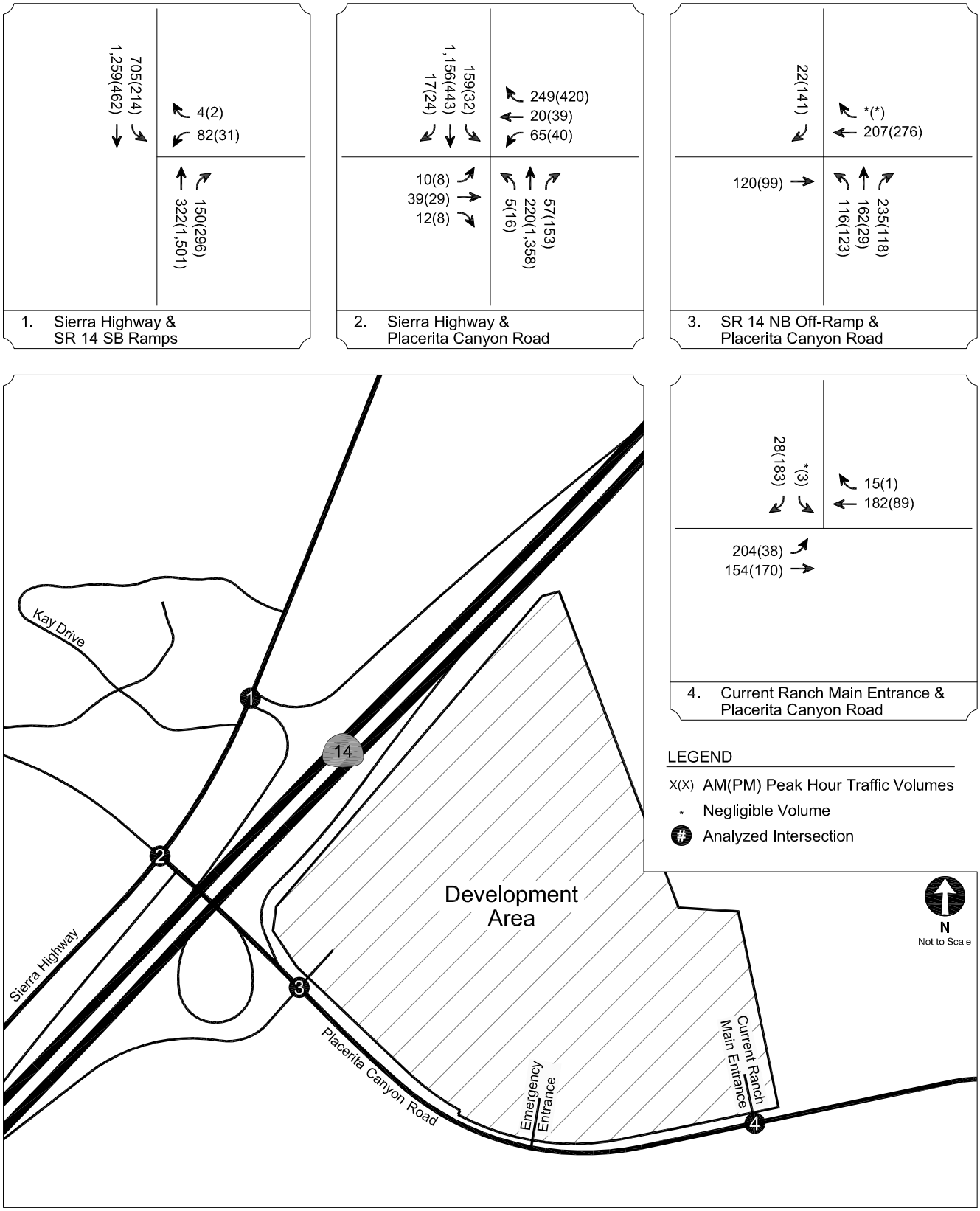
**Figure 1**
Existing Plus Project Conditions (2010)
Intersection Peak-Hour Traffic Volumes
- Soundstage Option




Source: Gibson Trasportation Consulting, Inc. 2011

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**Figure 2**
Existing Plus Project Conditions (2010)
Intersection Peak-Hour Traffic Volumes
- Studio Office Option

Using these criteria, for example, a project would not have a significant impact at an intersection if it is operating at LOS C before the addition of project traffic and the incremental change in the V/C ratio is less than 0.040. If the intersection, however, is operating at a LOS F before the addition of project traffic and the incremental change in the V/C ratio is 0.010 or greater, the project would be considered to have a significant impact. A project is not considered to have a significant impact if the intersection is projected to operate at LOS A or B after the addition of project traffic, regardless of the volume of traffic added to the intersection or the incremental change in the V/C ratio.

*(b) Existing Plus Project Conditions*

The Existing Plus Project intersection operating conditions for typical weekday morning and afternoon peak hours are shown in Table 5 on page 13 and Table 6 on page 14 for the Soundstage and Studio Office Options, respectively. Detailed LOS worksheets are provided in Attachment A.

As shown in Table 5 and Table 6, under the Existing Plus Project Conditions, two intersections (Intersections 3 and 4) are projected to operate at LOS A during both peak hours, one intersection (Intersection 1) is projected to operate at LOS C during the morning peak hour and LOS D during the afternoon peak hour, and one intersection (Intersection 2) is projected to operate at LOS B during the morning peak hour and LOS D during the afternoon peak hour.

Table 5 and Table 6 also provide a summary of the significant impact analysis based on the criteria established by LACDPW under the Soundstage and Studio Office Options, respectively. As shown, under both options, the Project is expected to result in a significant impact at two intersections (Intersections 1 and 2) during the afternoon peak hour, before mitigation. The following table summarizes a comparison of the analysis presented herein per *Sunnyvale* and that presented in the Draft EIR (see the discussion of Existing plus Ambient Growth plus Project conditions in Chapter 3 of the Traffic Study, also presented in Section V.J, Traffic, Access, and Parking, of the Draft EIR):

| **Intersection Impact Summary Before Mitigation** | | | | |
|---|---|---|---|---|
| | **Existing Plus Ambient Growth Plus Project** | | **Existing Plus Project** | |
| | **A.M. Peak** | **P.M. Peak** | **A.M. Peak** | **P.M. Peak** |
| Impacted Intersections | 1 | 2 | 0 | 2 |
| Total Individual Impacted Intersections | 2 | | 2 | |

**Table 5**
**Existing Plus Project Conditions (Year 2010)**
**Intersection Peak-Hour Levels of Service—Soundstages Option**

| No. | Intersection | Peak Hour | Existing | | Existing Plus Project | | | |
|---|---|---|---|---|---|---|---|---|
| | | | V/C | LOS | V/C | LOS | Change in V/C | Significant Impact? |
| 1.[a] | Sierra Highway & SR 14 SB Ramps | A.M. | 0.704 | C | 0.738 | C | 0.034 | No |
| | | P.M. | 0.728 | C | 0.812 | D | 0.084 | Yes |
| 2. | Sierra Highway & Placerita Canyon Road | A.M. | 0.605 | B | 0.631 | B | 0.026 | No |
| | | P.M. | 0.687 | B | 0.853 | D | 0.166 | Yes |
| 3.[b] | SR 14 NB Off-Ramp & Placerita Canyon Road | A.M. | 0.229 | A | 0.323 | A | 0.094 | No |
| | | P.M. | 0.210 | A | 0.343 | A | 0.133 | No |
| 4.[a] | Current Ranch Main Entrance & Placerita Canyon Road | A.M. | 0.226 | A | 0.363 | A | 0.137 | No |
| | | P.M. | 0.217 | A | 0.341 | A | 0.124 | No |

[a] *Intersection is controlled by stop signs on minor approach.*

[b] *Intersection is signalized as Project design feature.*

*Source: Gibson Transportation Consulting, Inc., 2011.*

**Table 6**
**Existing Plus Project Conditions (Year 2010)**
**Intersection Peak-Hour Levels of Service—Studio Office Option**

| No. | Intersection | Peak Hour | Existing | | Existing Plus Project | | | |
|---|---|---|---|---|---|---|---|---|
| | | | V/C | LOS | V/C | LOS | Change in V/C | Significant Impact? |
| 1.[a] | Sierra Highway & SR 14 SB Ramps | A.M. | 0.704 | C | 0.739 | C | 0.035 | No |
| | | P.M. | 0.728 | C | 0.815 | D | 0.087 | Yes |
| 2. | Sierra Highway & Placerita Canyon Road | A.M. | 0.605 | B | 0.632 | B | 0.027 | No |
| | | P.M. | 0.687 | B | 0.860 | D | 0.173 | Yes |
| 3.[b] | SR 14 NB Off-Ramp & Placerita Canyon Road | A.M. | 0.229 | A | 0.325 | A | 0.096 | No |
| | | P.M. | 0.210 | A | 0.348 | A | 0.138 | No |
| 4.[a] | Current Ranch Main Entrance & Placerita Canyon Road | A.M. | 0.226 | A | 0.368 | A | 0.142 | No |
| | | P.M. | 0.217 | A | 0.346 | A | 0.129 | No |

[a] *Intersection is controlled by stop signs on minor approach.*

[b] *Intersection is signalized as Project design feature.*

*Source: Gibson Transportation Consulting, Inc., 2011.*

As shown in the table above, under the Existing Plus Project scenario, the Project is not expected to result in any additional and/or different significant intersection impacts before mitigation than those presented in the Traffic Study.

*(c) Existing Plus Project With Mitigation Conditions*

The Existing Plus Project with Mitigation scenario includes the transportation mitigation measures presented in Chapter 3 of the Traffic Study (also presented in Section V.J, Traffic, Access, and Parking, of the Draft EIR). The Existing Plus Project with Mitigation intersection operating conditions for typical weekday morning and afternoon peak hours are shown in Table 7 on page 16 and Table 8 on page 17 for the Soundstage and Studio Office Options, respectively.

As shown in Table 7, under the Existing Plus Project with Mitigation Conditions, two intersections (Intersections 3 and 4) are projected to operate at LOS A during both peak hours, one intersection (Intersection 1) is projected to operate at LOS B during the morning peak hour and LOS C during the afternoon peak hour, and one intersection (Intersection 2) is projected to operate at LOS A during the morning peak hour and LOS B during the afternoon peak hour.

Table 7 and Table 8 also summarize the intersection operations with the proposed mitigation measures in place for the Soundstage and Studio Office Options, respectively. As shown, under the Existing Plus Project with Mitigation Conditions, all analyzed intersections are projected to operate at LOS C or better and the proposed improvement measures would mitigate both significantly impacted intersections to a less than significant level based on the criteria set forth by LACDPW. Additionally, two analyzed intersections (Intersections 1 and 2) are projected to operate at a lower V/C following the development of the Project and implementation of the Project's mitigation measures than those projected under existing conditions. Detailed LOS worksheets are provided in Attachment A.

The analysis summarized above demonstrates the Project is not expected to result in any new residual significant and unavoidable impacts at the analyzed intersections based on the methodology recommended in the *Sunnyvale* case.

(3) Congestion Management Program Analysis

This section presents the results of the Project's traffic impacts on the existing (2010) environment using the procedures outlined by the 2004 Congestion Management Program for Los Angeles County (Metro, July 2004).

**Table 7**
**Existing Plus Project With Mitigation Conditions (Year 2010)**
**Intersection Peak-Hour Levels of Service—Soundstages Option**

| No. | Intersection | Peak Hour | Existing | | Existing Plus Project | | | | Existing Plus Project with Mitigation | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | V/C | LOS | V/C | LOS | Change in V/C | Significant Impact? | V/C | LOS | Change in V/C | Significant Impact? |
| 1.[a] | Sierra Highway & | A.M. | 0.704 | C | 0.738 | C | 0.034 | No | 0.692 | B | -0.012 | No |
| | SR 14 SB Ramps | P.M. | 0.728 | C | 0.812 | D | 0.084 | Yes | 0.722 | C | -0.006 | No |
| 2. | Sierra Highway & | A.M. | 0.605 | B | 0.631 | B | 0.026 | No | 0.526 | A | -0.079 | No |
| | Placerita Canyon Road | P.M. | 0.687 | B | 0.853 | D | 0.166 | Yes | 0.628 | B | -0.059 | No |
| 3.[b] | SR 14 NB Off-Ramp & | A.M. | 0.229 | A | 0.323 | A | 0.094 | No | 0.323 | A | 0.094 | No |
| | Placerita Canyon Road | P.M. | 0.210 | A | 0.343 | A | 0.133 | No | 0.343 | A | 0.133 | No |
| 4.[a] | Current Ranch Main Entrance & | A.M. | 0.226 | A | 0.363 | A | 0.137 | No | 0.363 | A | 0.137 | No |
| | Placerita Canyon Road | P.M. | 0.217 | A | 0.341 | A | 0.124 | No | 0.317 | A | 0.100 | No |

[a] *Intersection is signalized as part of Project mitigations.*

[b] *Intersection is signalized as Project design feature.*

*Source: Gibson Transportation Consulting, Inc., 2011.*

**Table 8**
**Existing Plus Project With Mitigation Conditions (Year 2010)**
**Intersection Peak-Hour Levels of Service—Studio Office Option**

| No. | Intersection | Peak Hour | Existing | | Existing Plus Project | | | | Existing Plus Project with Mitigation | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | V/C | LOS | V/C | LOS | Change in V/C | Significant Impact? | V/C | LOS | Change in V/C | Significant Impact? |
| 1.[a] | Sierra Highway & | A.M. | 0.704 | C | 0.739 | C | 0.035 | No | 0.693 | B | -0.011 | No |
| | SR 14 SB Ramps | P.M. | 0.728 | C | 0.815 | D | 0.087 | Yes | 0.722 | C | -0.006 | No |
| 2. | Sierra Highway & | A.M. | 0.605 | B | 0.632 | B | 0.027 | No | 0.526 | A | -0.079 | No |
| | Placerita Canyon Road | P.M. | 0.687 | B | 0.860 | D | 0.173 | Yes | 0.629 | B | -0.058 | No |
| 3.[b] | SR 14 NB Off-Ramp & | A.M. | 0.229 | A | 0.325 | A | 0.096 | No | 0.325 | A | 0.096 | No |
| | Placerita Canyon Road | P.M. | 0.210 | A | 0.348 | A | 0.138 | No | 0.348 | A | 0.138 | No |
| 4.[a] | Current Ranch Main Entrance & | A.M. | 0.226 | A | 0.368 | A | 0.142 | No | 0.368 | A | 0.142 | No |
| | Placerita Canyon Road | P.M. | 0.217 | A | 0.346 | A | 0.129 | No | 0.321 | A | 0.104 | No |

[a] *Intersection is signalized as part of Project mitigations.*

[b] *Intersection is signalized as Project design feature.*

*Source: Gibson Transportation Consulting, Inc., 2011.*

*(a) Significant Traffic Impact Criteria*

As noted in Chapter 5 of the Traffic Study, according to the Congestion Management Program (CMP) guidelines, a regionally significant project-related impact would occur if the CMP facility is projected to operate at LOS F (V/C > 1.00) and if project traffic causes an incremental change in the V/C ratio of 0.02 or greater. The proposed development would not be considered to have a regionally significant impact, regardless of the increase in V/C ratio, if the analyzed facility is projected to operate at LOS E or better after the addition of project traffic.

*(b) Arterial Monitoring Stations*

As noted in Chapter 5 of the Traffic Study, the designated CMP arterial monitoring station closest to the Project site is the intersection of Sierra Highway and Placerita Canyon Road. Given the distance of the next closest CMP arterial monitoring stations and the fact that most Project-related traffic is expected to utilize State Route (SR) 14, the Project is not expected to add 50 or more trips during either the morning or afternoon weekday peak hours through those stations. Therefore, similar to the analysis presented in Chapter 5 of the Traffic Study, this memorandum focuses on the intersection of Sierra Highway and Placerita Canyon Road. Table 9 on page 19 summarizes the results of the analysis conducted for the CMP arterial monitoring station of Sierra Highway and Placerita Canyon Road. As shown, the Project is not expected to result in a significant impact at the station both before and after the proposed mitigation measures are in place. Detailed LOS worksheets are provided in Attachment A.

*(c) Freeway Segments*

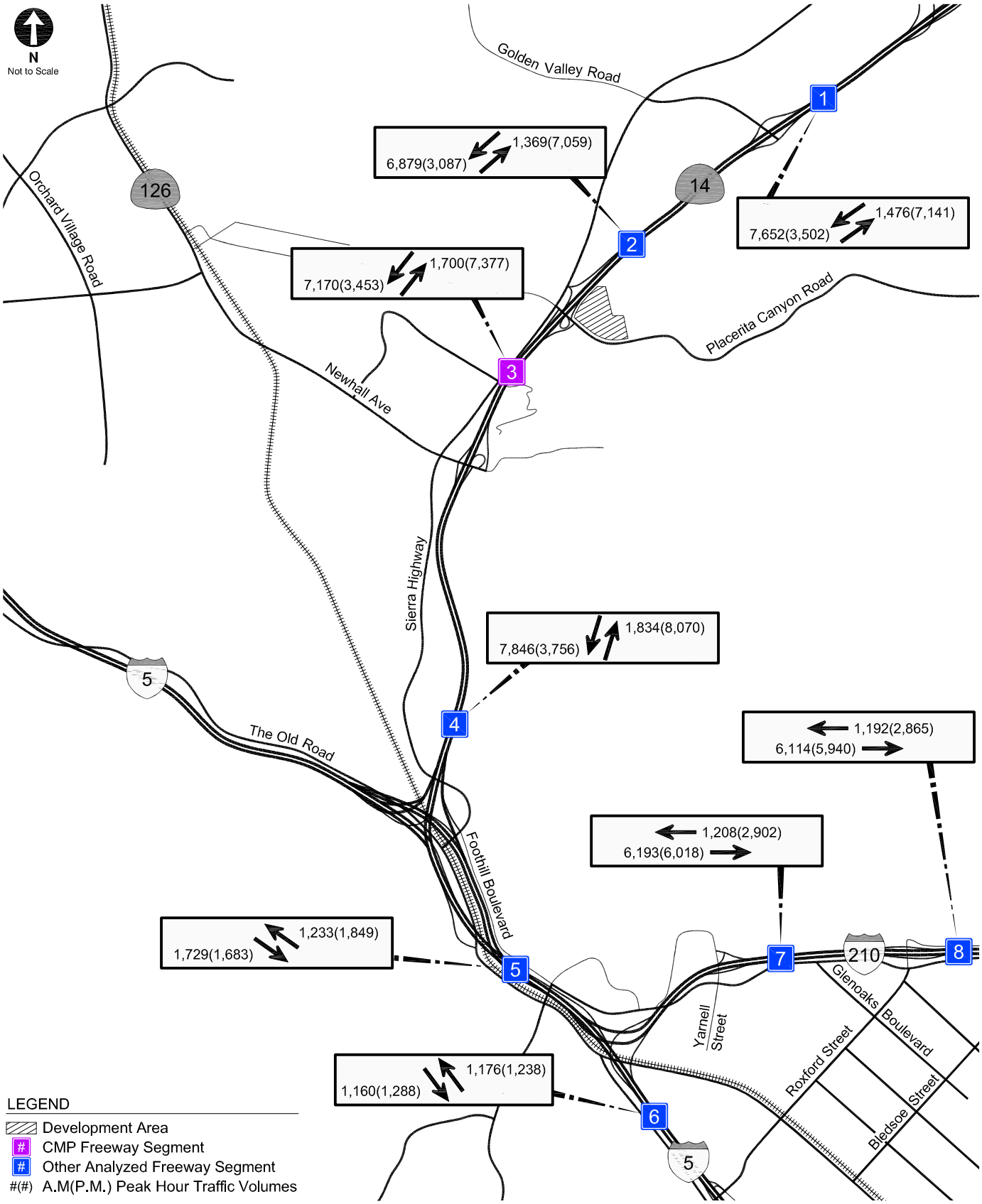
Similar to the analysis presented in Chapter 5 of the Traffic Study, in accordance with CMP guidelines, the lane capacities are assumed to be 2,000 vehicles per hour (vph) per freeway mainline lane and 1,000 vph for high-occupancy vehicle (HOV) and auxiliary lanes. The LOS definitions for freeway segments are same as those presented in Table 20 of the Traffic Study.

The Existing Plus Project freeway traffic volumes were developed by adding the Project-only traffic volumes to the existing volumes illustrated in Figure 25 of the Traffic Study. The resulting Existing Plus Project traffic volumes are illustrated in Figure 3 on page 20, and the freeway operating conditions are shown in Table 10 on page 21 and Table 11 on page 22 for the weekday morning and afternoon peak hours, respectively, for the Soundstage Option. For the Studio Office Option, the resulting Existing Plus Project traffic volumes are illustrated in Figure 4 on page 23, and the freeway operating conditions are shown in Table 12 on page 24 and Table 13 on page 25 for the weekday morning and afternoon peak hours, respectively.

**Table 9**
**CMP Arterial Monitoring Stations Analysis (Year 2010)**

| No. | Intersection | Peak Hour | Existing | | Existing Plus Project Conditions | | | | Existing Plus Project with Mitigation Conditions | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | V/C | LOS | V/C | LOS | Change in V/C | Significant Impact? | V/C | LOS | Change in V/C | Significant Impact? |
| **Soundstages Option** | | | | | | | | | | | | |
| 2. | Sierra Highway & Placerita Canyon Road | A.M. | 0.605 | B | 0.631 | B | 0.026 | No | 0.526 | A | -0.079 | No |
| | | P.M. | 0.687 | B | 0.853 | D | 0.166 | No | 0.628 | B | -0.059 | No |
| **Studio Office Option** | | | | | | | | | | | | |
| 2. | Sierra Highway & Placerita Canyon Road | A.M. | 0.605 | B | 0.632 | B | 0.027 | No | 0.526 | A | -0.079 | No |
| | | P.M. | 0.687 | B | 0.860 | D | 0.173 | No | 0.629 | B | -0.058 | No |

*Source: Gibson Transportation Consulting, Inc., 2011.*




Source: Gibson Trasportation Consulting, Inc. 2011

Disney | ABC Studios at The Ranch

matrix environmental

**Figure 3**
Existing Plus Project Conditions (2010)
Freeway Segment Peak-Hour Traffic Volumes
- Soundstage Option

**Table 10**
**Existing Plus Project Conditions (Year 2010)—Soundstages Option**
**Freeway Segment A.M. Peak-Hour Levels of Service**

| No. | Freeway Segment | Direction | Number of Lanes[a] | Capacity | Existing | | | Existing Plus Project | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | Volume | V/C | LOS | Volume | V/C | LOS | Increase in V/C | Significant Impact? |
| 1. | SR 14 | NB | 4 | 8,000 | 1,471 | 0.18 | A | 1,476 | 0.19 | A | 0.001 | No |
| | north of Golden Valley Road Interchange | SB | 4 | 8,000 | 7,617 | 0.95 | E | 7,652 | 0.96 | E | 0.005 | No |
| 2. | SR 14 | NB | 4 | 8,000 | 1,364 | 0.17 | A | 1,369 | 0.17 | A | 0.000 | No |
| | north of Placerita Canyon Road Interchange | SB | 4 | 8,000 | 6,844 | 0.86 | D | 6,879 | 0.86 | D | 0.004 | No |
| 3.[b] | SR 14 | NB | 4 | 8,000 | 1,422 | 0.18 | A | 1,700 | 0.21 | A | 0.035 | No |
| | north of Newhall Avenue Interchange | SB | 4 | 8,000 | 7,132 | 0.89 | D | 7,170 | 0.90 | D | 0.004 | No |
| 4. | SR 14 | NB | 6 | 12,000 | 1,556 | 0.13 | A | 1,834 | 0.15 | A | 0.023 | No |
| | north of I-5 Interchange | SB | 5 | 10,000 | 7,808 | 0.78 | D | 7,846 | 0.79 | D | 0.004 | No |
| 5. | I-5 | NB | 5 | 10,000 | 955 | 0.10 | A | 1,233 | 0.12 | A | 0.027 | No |
| | south of SR 14 Interchange | SB | 4 | 8,000 | 1,691 | 0.21 | A | 1,729 | 0.22 | A | 0.005 | No |
| 6. | I-5 | NB | 5 | 10,000 | 981 | 0.10 | A | 1,176 | 0.12 | A | 0.020 | No |
| | south of I-210 Interchange | SB | 6 | 12,000 | 1,133 | 0.09 | A | 1,160 | 0.10 | A | 0.003 | No |
| 7. | I-210 | EB | 3 | 6,000 | 6,110 | 1.02 | F(0) | 6,193 | 1.03 | F(0) | 0.014 | No |
| | east of Yarnell Street Interchange | WB | 3 | 6,000 | 1,197 | 0.20 | A | 1,208 | 0.20 | A | 0.001 | No |
| 8.[b] | I-210 | EB | 3 | 6,000 | 6,031 | 1.01 | F(0) | 6,114 | 1.02 | F(0) | 0.014 | No |
| | east of Roxford Street Interchange | WB | 3 | 6,000 | 1,181 | 0.20 | A | 1,192 | 0.20 | A | 0.002 | No |

[a] *The lane capacities are assumed to be 2,000 vph for through lanes and 1,000 vph for high-occupancy vehicle (HOV) and auxiliary lanes. HOV and auxiliary lanes are thus represented as 1/2 of a lane.*

[b] *CMP Freeway Monitoring Location.*

*Source: Gibson Transportation Consulting, Inc., 2011.*

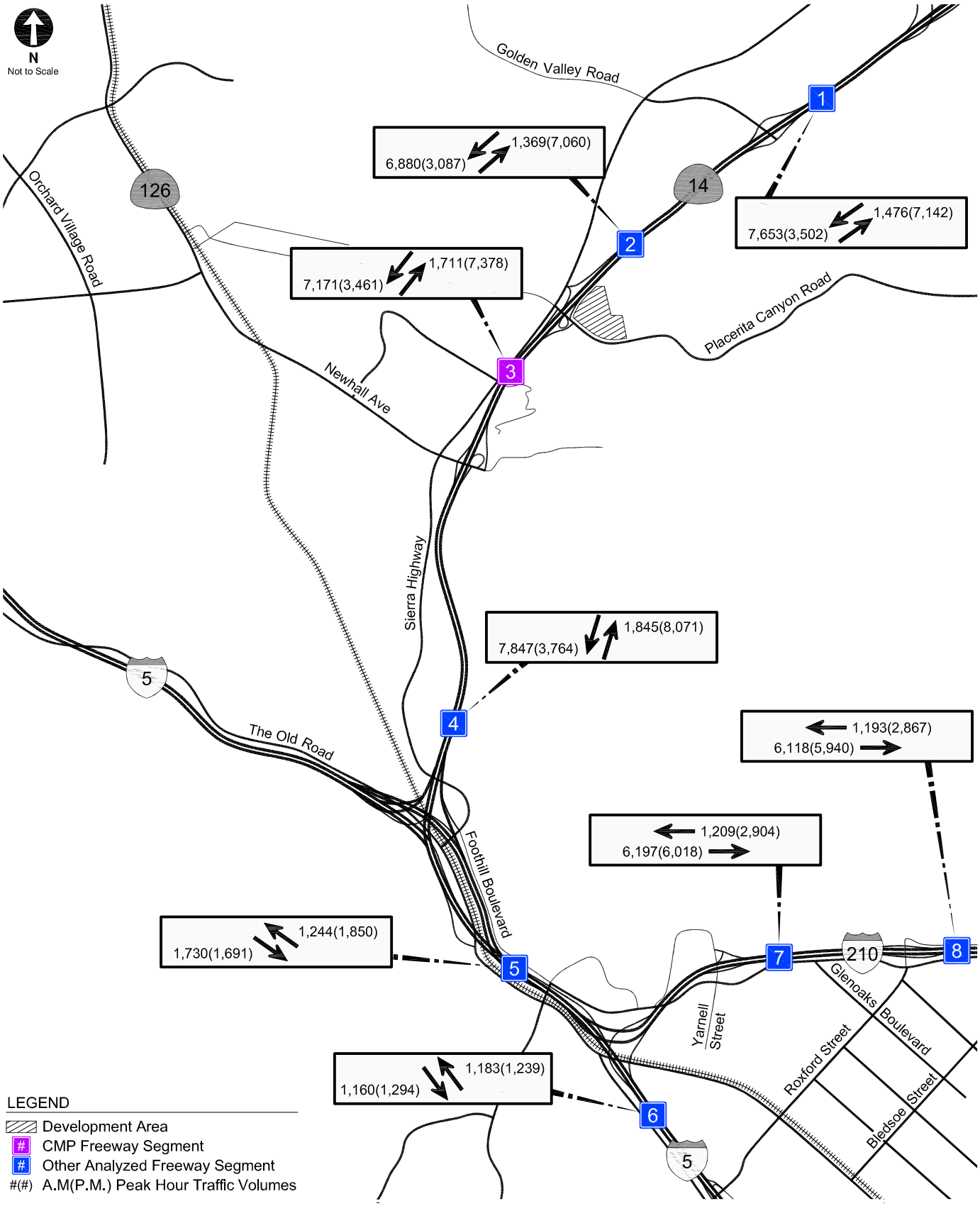
**Table 11**
**Existing Plus Project Conditions (Year 2010)—Soundstages Option**
**Freeway Segment P.M. Peak-Hour Levels of Service**

| No. | Freeway Segment | Direction | Number of Lanes[a] | Capacity | Existing | | | Existing Plus Project | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | Volume | V/C | LOS | Volume | V/C | LOS | Increase in V/C | Significant Impact? |
| 1. | SR 14 | NB | 4 | 8,000 | 7,111 | 0.89 | D | 7,141 | 0.89 | D | 0.004 | No |
| | north of Golden Valley Road Interchange | SB | 4 | 8,000 | 3,496 | 0.44 | B | 3,502 | 0.44 | B | 0.001 | No |
| 2. | SR 14 | NB | 4 | 8,000 | 7,029 | 0.88 | D | 7,059 | 0.88 | D | 0.003 | No |
| | north of Placerita Canyon Road Interchange | SB | 4 | 8,000 | 3,081 | 0.39 | B | 3,087 | 0.39 | B | 0.001 | No |
| 3.[b] | SR 14 | NB | 4 | 8,000 | 7,327 | 0.92 | D | 7,377 | 0.92 | D | 0.006 | No |
| | north of Newhall Avenue Interchange | SB | 4 | 8,000 | 3,211 | 0.40 | B | 3,453 | 0.43 | B | 0.031 | No |
| 4. | SR 14 | NB | 6 | 12,000 | 8,020 | 0.67 | C | 8,070 | 0.67 | C | 0.005 | No |
| | north of I-5 Interchange | SB | 5 | 10,000 | 3,514 | 0.35 | B | 3,756 | 0.38 | B | 0.025 | No |
| 5. | I-5 | NB | 5 | 10,000 | 1,799 | 0.18 | A | 1,849 | 0.19 | A | 0.005 | No |
| | south of SR 14 Interchange | SB | 4 | 8,000 | 1,441 | 0.18 | A | 1,683 | 0.21 | A | 0.030 | No |
| 6. | I-5 | NB | 5 | 10,000 | 1,203 | 0.12 | A | 1,238 | 0.12 | A | 0.004 | No |
| | south of I-210 Interchange | SB | 6 | 12,000 | 1,119 | 0.09 | A | 1,288 | 0.11 | A | 0.014 | No |
| 7. | I-210 | EB | 3 | 6,000 | 6,003 | 1.00 | F(0) | 6,018 | 1.00 | F(0) | 0.002 | No |
| | east of Yarnell Street Interchange | WB | 3 | 6,000 | 2,829 | 0.47 | B | 2,902 | 0.48 | B | 0.012 | No |
| 8.[b] | I-210 | EB | 3 | 6,000 | 5,925 | 0.99 | E | 5,940 | 0.99 | E | 0.002 | No |
| | east of Roxford Street Interchange | WB | 3 | 6,000 | 2,792 | 0.47 | B | 2,865 | 0.48 | B | 0.013 | No |

[a] *The lane capacities are assumed to be 2,000 vph for through lanes and 1,000 vph for high-occupancy vehicle (HOV) and auxiliary lanes. HOV and auxiliary lanes are thus represented as 1/2 of a lane.*

[b] *CMP Freeway Monitoring Location.*

*Source: Gibson Transportation Consulting, Inc., 2011.*




Source: Gibson Trasportation Consulting, Inc. 2011

Disney | ABC Studios at The Ranch

matrix environmental

**Figure 4**
Existing Plus Project Conditions (2010)
Freeway Segment Peak-Hour Traffic Volume
- Studio Office Option

**Table 12**
**Existing Plus Project Conditions (Year 2010)—Studio Office Option**
**Freeway Segment A.M. Peak-Hour Levels of Service**

| No. | Freeway Segment | Direction | Number of Lanes[a] | Capacity | Existing | | | Existing Plus Project | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | Volume | V/C | LOS | Volume | V/C | LOS | Increase in V/C | Significant Impact? |
| 1. | SR 14 | NB | 4 | 8,000 | 1,471 | 0.18 | A | 1,476 | 0.19 | A | 0.001 | No |
| | north of Golden Valley Road Interchange | SB | 4 | 8,000 | 7,617 | 0.95 | E | 7,653 | 0.96 | E | 0.005 | No |
| 2. | SR 14 | NB | 4 | 8,000 | 1,364 | 0.17 | A | 1,369 | 0.17 | A | 0.000 | No |
| | north of Placerita Canyon Road Interchange | SB | 4 | 8,000 | 6,844 | 0.86 | D | 6,880 | 0.86 | D | 0.004 | No |
| 3.[b] | SR 14 | NB | 4 | 8,000 | 1,422 | 0.18 | A | 1,711 | 0.21 | A | 0.036 | No |
| | north of Newhall Avenue Interchange | SB | 4 | 8,000 | 7,132 | 0.89 | D | 7,171 | 0.90 | D | 0.004 | No |
| 4. | SR 14 | NB | 6 | 12,000 | 1,556 | 0.13 | A | 1,845 | 0.15 | A | 0.024 | No |
| | north of I-5 Interchange | SB | 5 | 10,000 | 7,808 | 0.78 | D | 7,847 | 0.79 | D | 0.004 | No |
| 5. | I-5 | NB | 5 | 10,000 | 955 | 0.10 | A | 1,244 | 0.12 | A | 0.028 | No |
| | south of SR 14 Interchange | SB | 4 | 8,000 | 1,691 | 0.21 | A | 1,730 | 0.22 | A | 0.005 | No |
| 6. | I-5 | NB | 5 | 10,000 | 981 | 0.10 | A | 1,183 | 0.12 | A | 0.020 | No |
| | south of I-210 Interchange | SB | 6 | 12,000 | 1,133 | 0.09 | A | 1,160 | 0.10 | A | 0.003 | No |
| 7. | I-210 | EB | 3 | 6,000 | 6,110 | 1.02 | F(0) | 6,197 | 1.03 | F(0) | 0.015 | No |
| | east of Yarnell Street Interchange | WB | 3 | 6,000 | 1,197 | 0.20 | A | 1,209 | 0.20 | A | 0.002 | No |
| 8.[b] | I-210 | EB | 3 | 6,000 | 6,031 | 1.01 | F(0) | 6,118 | 1.02 | F(0) | 0.015 | No |
| | east of Roxford Street Interchange | WB | 3 | 6,000 | 1,181 | 0.20 | A | 1,193 | 0.20 | A | 0.002 | No |

[a] *The lane capacities are assumed to be 2,000 vph for through lanes and 1,000 vph for high-occupancy vehicle (HOV) and auxiliary lanes. HOV and auxiliary lanes are thus represented as 1/2 of a lane.*

[b] *CMP Freeway Monitoring Location.*

*Source: Gibson Transportation Consulting, Inc., 2011.*

**Table 13**
**Existing Plus Project Conditions (Year 2010)—Studio Office Option**
**Freeway Segment P.M. Peak-Hour Levels of Service**

| No. | Freeway Segment | Direction | Number of Lanes[a] | Capacity | Existing | | | Existing Plus Project | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | Volume | V/C | LOS | Volume | V/C | LOS | Increase in V/C | Significant Impact? |
| 1. | SR 14 | NB | 4 | 8,000 | 7,111 | 0.89 | D | 7,142 | 0.89 | D | 0.004 | No |
| | north of Golden Valley Road Interchange | SB | 4 | 8,000 | 3,496 | 0.44 | B | 3,502 | 0.44 | B | 0.001 | No |
| 2. | SR 14 | NB | 4 | 8,000 | 7,029 | 0.88 | D | 7,060 | 0.88 | D | 0.004 | No |
| | north of Placerita Canyon Road Interchange | SB | 4 | 8,000 | 3,081 | 0.39 | B | 3,087 | 0.39 | B | 0.001 | No |
| 3.[b] | SR 14 | NB | 4 | 8,000 | 7,327 | 0.92 | D | 7,378 | 0.92 | D | 0.006 | No |
| | north of Newhall Avenue Interchange | SB | 4 | 8,000 | 3,211 | 0.40 | B | 3,461 | 0.43 | B | 0.032 | No |
| 4. | SR 14 | NB | 6 | 12,000 | 8,020 | 0.67 | C | 8,071 | 0.67 | C | 0.005 | No |
| | north of I-5 Interchange | SB | 5 | 10,000 | 3,514 | 0.35 | B | 3,764 | 0.38 | B | 0.025 | No |
| 5. | I-5 | NB | 5 | 10,000 | 1,799 | 0.18 | A | 1,850 | 0.19 | A | 0.005 | No |
| | south of SR 14 Interchange | SB | 4 | 8,000 | 1,441 | 0.18 | A | 1,691 | 0.21 | A | 0.031 | No |
| 6. | I-5 | NB | 5 | 10,000 | 1,203 | 0.12 | A | 1,239 | 0.12 | A | 0.004 | No |
| | south of I-210 Interchange | SB | 6 | 12,000 | 1,119 | 0.09 | A | 1,294 | 0.11 | A | 0.015 | No |
| 7. | I-210 | EB | 3 | 6,000 | 6,003 | 1.00 | F(0) | 6,018 | 1.00 | F(0) | 0.002 | No |
| | east of Yarnell Street Interchange | WB | 3 | 6,000 | 2,829 | 0.47 | B | 2,904 | 0.48 | B | 0.012 | No |
| 8.[b] | I-210 | EB | 3 | 6,000 | 5,925 | 0.99 | E | 5,940 | 0.99 | E | 0.002 | No |
| | east of Roxford Street Interchange | WB | 3 | 6,000 | 2,792 | 0.47 | B | 2,867 | 0.48 | B | 0.013 | No |

[a] *The lane capacities are assumed to be 2,000 vph for through lanes and 1,000 vph for high-occupancy vehicle (HOV) and auxiliary lanes. HOV and auxiliary lanes are thus represented as 1/2 of a lane.*

[b] *CMP Freeway Monitoring Location.*

*Source: Gibson Transportation Consulting, Inc., 2011.*

Table 10 through Table 13 also summarize the incremental increase in the V/C ratio at the eight analyzed freeway segments that can be attributed to the Project under the Existing Plus Project Conditions. According to the CMP significant traffic impact criteria noted above, similar to the analysis presented in Chapter 5 of the Traffic Study (also presented in Section V.J, Traffic, Access, and Parking, of the Draft EIR), the Project is not expected to result in a significant impact at any of the analyzed segments under either option.

(4) Caltrans Analysis

This section presents the results of the Project's traffic impacts on the existing (2010) environment based on guidelines established by Caltrans. As mentioned in Chapter 7 of the Traffic Study, a total of four intersections were analyzed as part of this study. Of the four study intersections, three intersections fall under Caltrans jurisdiction:

1. Sierra Highway and SR-14 southbound ramps
2. Sierra Highway and Placerita Canyon Road
3. SR-14 northbound off-ramp and Placerita Canyon Road

These intersections were analyzed using the 2000 Highway Capacity Manual (Transportation Research Board, 2000) ("2000 HCM") methodology described in Tables 31 and 32 of the Traffic Study.

*(a) Intersection Analysis*

Table 14 on page 27 summarizes the results of the LOS analysis conducted using the 2000 HCM methodology at the three intersections under Caltrans jurisdiction. As shown, all of the intersections are projected to operate at LOS C or better, during both peak hours, under the Existing Plus Project with Mitigation Conditions: one intersection (Intersection 2) is projected to operate at LOS A during both peak hours, one intersection (Intersection 1) is projected to operate at LOS B during the morning peak hour and at LOS A during the afternoon peak hour, and one intersection (Intersection 3) is projected to operate at LOS B during the morning peak hour and at LOS C during the afternoon peak hour. Detailed LOS worksheets are provided in Attachment B.

As shown in Table 14, two intersections (Intersections 1 and 2) are projected to operate at a lower delay following the development of the Project and implementation of the Project's mitigation measures than those projected under existing conditions.

**Table 14**
**Caltrans Locations—2000 HCM Analysis**

| SOUNDSTAGES OPTION | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | | | Existing Conditions | | Existing Plus Project Conditions | | Existing Plus Project with Mitigation Conditions | |
| No. | Intersection | Peak Hour | Delay | LOS | Delay | LOS | Delay | LOS |
| 1.[a, b] | Sierra Highway & SR 14 SB Ramps | A.M. | * | F | * | F | 10.8 | B |
| | | P.M. | * | F | * | F | 7.6 | A |
| 2. | Sierra Highway & Placerita Canyon Road | A.M. | 14.6 | B | 16.7 | B | 9.4 | A |
| | | P.M. | 9.0 | A | 18.9 | B | 4.9 | A |
| 3.[b, c] | SR 14 NB Off-Ramp & Placerita Canyon Road | A.M. | 9.4 | A | 15.6 | B | 15.6 | B |
| | | P.M. | 9.5 | A | 24.3 | C | 24.3 | C |

| STUDIO OFFICE OPTION | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | | | Existing Conditions | | Existing Plus Project Conditions | | Existing Plus Project with Mitigation Conditions | |
| No. | Intersection | Peak Hour | Delay | LOS | Delay | LOS | Delay | LOS |
| 1.[a, b] | Sierra Highway & SR 14 SB Ramps | A.M. | * | F | * | F | 10.9 | B |
| | | P.M. | * | F | * | F | 7.6 | A |
| 2. | Sierra Highway & Placerita Canyon Road | A.M. | 14.6 | B | 16.8 | B | 9.5 | A |
| | | P.M. | 9.0 | A | 19.3 | B | 5.0 | A |
| 3.[b, c] | SR 14 NB Off-Ramp & Placerita Canyon Road | A.M. | 9.4 | A | 15.6 | B | 15.6 | B |
| | | P.M. | 9.5 | A | 24.3 | C | 24.3 | C |

**Denotes oversaturated conditions. Delay cannot be calculated.*

[a] *Intersection is signalized as part of Project mitigation.*

[b] *Intersection is controlled by stop signs on minor approach.*

[c] *Intersection is signalized as part of Project design feature.*

*Source: Gibson Transportation Consulting, Inc., 2011.*

### *(b) Ramp Analysis*

Two of the three intersections (Intersections 1 and 3) under Caltrans jurisdiction are also freeway ramp locations. Similar to the analysis presented in Chapter 7 of the Traffic Study, these ramp locations were tested for adequate storage capacity and queuing based on Caltrans' policy.

*(i) On-Ramps*

Based on on-ramp metering, Caltrans has established a maximum capacity of 900 vehicles per hour per lane (vphpl) for on-ramps. An on-ramp is considered to be "over-saturated" or failing if the existing or future peak-hour traffic on the ramp exceeds 900 vphpl. Analysis of the on-ramps for the Existing Plus Project Conditions is provided in Table 15 on page 29. Since the number of lanes on the SR-14 southbound on-ramp and the traffic volumes accessing the on-ramp would not be affected by the Project mitigation measures, the result for the Existing Plus Project with Mitigation Conditions would be the same as that for the Existing Plus Project Conditions.

As shown Table 15, the on-ramp would not exceed the Caltrans standard under the Existing Plus Project Conditions under either Project Option.

*(ii) Off-Ramps*

For off-ramps, Caltrans defines a ramp as "failing"' if the peak-hour traffic queue length (95th percentile as determined by 2000 HCM methodology) on the ramp exceeds the storage length and results in queues backing into the mainline freeway. Analysis of the off-ramps for the Existing Plus Project Conditions is provided in Table 16 on page 30. Failing ramp conditions were determined for two levels: Level (1) if the queue exceeded the storage length of any individual approach lane (e.g., left-turn lane on the ramp) at the junction of the ramp with the surface street intersection (identified as "Lane"); and/or Level (2) if the queue was large enough to result in backing up into the freeway mainline (identified as "Yes").

As shown Table 16, none of the off-ramps exceed the Caltrans standard under the Existing Plus Project and Existing Plus Project with Mitigation Conditions.

**Table 15**
**On-Ramps Evaluation**

| SOUNDSTAGES OPTION | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | | | | | Existing Conditions | | Existing Plus Project Conditions | |
| No. | Intersection | Ramp Description | Number of Lanes | Peak Hour | Vehicles per Hour | Exceeds Capacity ? | Vehicles per Hour | Exceeds Capacity ? |
| 1. | Sierra Highway & SR 14 SB Ramps | SR 14 Southbound On-Ramp from Sierra Highway | 2 | A.M. | 816 | No | 854 | No |
| | | | | P.M. | 260 | No | 502 | No |

| STUDIO OFFICE OPTION | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | | | | | Existing Conditions | | Existing Plus Project Conditions | |
| No. | Intersection | Ramp Description | Number of Lanes | Peak Hour | Vehicles per Hour | Exceeds Capacity ? | Vehicles per Hour | Exceeds Capacity ? |
| 1. | Sierra Highway & SR 14 SB Ramps | SR 14 Southbound On-Ramp from Sierra Highway | 2 | A.M. | 816 | No | 855 | No |
| | | | | P.M. | 260 | No | 510 | No |

*Source: Gibson Transportation Consulting, Inc., 2011.*

**Table 16**
**Off-Ramps Evaluation**

| SOUNDSTAGES OPTION | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | Existing Conditions | | Existing Plus Project Conditions | | Existing Plus Project with Mitigation Conditions | |
| No. | Intersection | Ramp Description | Vehicle Storage Capacity (Car Lengths) | Peak Hour | 95th Percentile Vehicle Queue Length | Exceeds Capacity? | 95th Percentile Vehicle Queue Length | Exceeds Capacity? | 95th Percentile Vehicle Queue Length | Exceeds Capacity? |
| 1. | Sierra Highway & SR 14 SB Ramps | SR 14 Southbound Off-Ramp to Sierra Highway | | | | | | | | |
| | | Left-Turn Lane | 52 | A.M. | 7 | No | 12 | No | 7 | No |
| | | | 52 | P.M. | 3 | No | — | — | 4 | No |
| | | Right-Turn Lane | 52 | A.M. | 0 | No | 0 | No | 1 | No |
| | | | 52 | P.M. | 0 | No | 0 | No | 1 | No |
| | | Ramp | 18 | A.M. | 0 | No | 0 | No | 0 | No |
| | | | 18 | P.M. | 0 | No | 0 | No | 0 | No |
| 3. | SR 14 NB Off-Ramp & Placerita Canyon Road | SR 14 Northbound Off-Ramp to Placerita Canyon Road | | | | | | | | |
| | | Left-Turn Lane | 29 | A.M. | 1 | No | 3 | No | 3 | No |
| | | | 29 | P.M. | 1 | No | 4 | No | 4 | No |
| | | Shared Left-Through Lane | 29 | A.M. | — | — | 4 | No | 4 | No |
| | | | 29 | P.M. | — | — | 4 | No | 4 | No |
| | | Right-Turn Lane | 29 | A.M. | 1 | No | 6 | No | 6 | No |
| | | | 29 | P.M. | 1 | No | 6 | No | 6 | No |
| | | Ramp | 23 | A.M. | 0 | No | 0 | No | 0 | No |
| | | | 23 | P.M. | 0 | No | 0 | No | 0 | No |

**Table 16 (Continued)**
**Off-Ramps Evaluation**

| STUDIO OFFICE OPTION | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | Existing Conditions | | Existing Plus Project Conditions | | Existing Plus Project with Mitigation Conditions | |
| No. | Intersection | Ramp Description | Vehicle Storage Capacity (Car Lengths) | Peak Hour | 95th Percentile Vehicle Queue Length | Exceeds Capacity? | 95th Percentile Vehicle Queue Length | Exceeds Capacity? | 95th Percentile Vehicle Queue Length | Exceeds Capacity? |
| 1. | Sierra Highway & SR 14 SB Ramps | SR 14 Southbound Off-Ramp to Sierra Highway | | | | | | | | |
| | | Left-Turn Lane | 52 | A.M. | 7 | No | 12 | No | 7 | No |
| | | | 52 | P.M. | 3 | No | — | — | 4 | No |
| | | Right-Turn Lane | 52 | A.M. | 0 | No | 0 | No | 1 | No |
| | | | 52 | P.M. | 0 | No | 0 | No | 1 | No |
| | | Ramp | 18 | A.M. | 0 | No | 0 | No | 0 | No |
| | | | 18 | P.M. | 0 | No | 0 | No | 0 | No |
| 3. | SR 14 NB Off-Ramp & Placerita Canyon Road | SR 14 Northbound Off-Ramp to Placerita Canyon Road | | | | | | | | |
| | | Left-Turn Lane | 29 | A.M. | 1 | No | 3 | No | 3 | No |
| | | | 29 | P.M. | 1 | No | 4 | No | 4 | No |
| | | Shared Left-Through Lane | 29 | A.M. | — | — | 4 | No | 4 | No |
| | | | 29 | P.M. | — | — | 4 | No | 4 | No |
| | | Right-Turn Lane | 29 | A.M. | 1 | No | 6 | No | 6 | No |
| | | | 29 | P.M. | 1 | No | 6 | No | 6 | No |
| | | Ramp | 23 | A.M. | 0 | No | 0 | No | 0 | No |
| | | | 23 | P.M. | 0 | No | 0 | No | 0 | No |

*Source: Gibson Transportation Consulting, Inc., 2011.*

## Golden Oaks Ranch - Office Option
### Regional Operational Emissions
### June 2011

| | Volatile Organic Compounds (VOCs) | Nitrogen Oxides (NOx) | Carbon Monoxide (CO) | Sulfur Oxides (SOx) | Particulate Matter <10 Microns (PM10) | Particulate Matter <2.5 Microns (PM2.5) |
|---|---|---|---|---|---|---|
| **Future Emissions (Project Buildout)** | | | | | | |
| Regional Mobile Emissions (Car/Truck Trips) [1] | 32 | 48 | 356 | <1 | 60 | 12 |
| Stationary Emissions (On-site Natural Gas Usage, Painting, Consumer Products) [2] | 5 | 4 | 9 | <1 | <1 | <1 |
| Electricity Consumption (Powerplant emissions) [3] | <1 | 15 | 3 | 2 | <1 | <1 |
| Charbroiler + Emergency Generator | <1 | 2 | 3 | <1 | <1 | <1 |
| Total | 37 | 70 | 370 | 2 | 62 | 13 |
| | | | | | | |
| **Incremental Increase** | | | | | | |
| Incremental Difference (Increase/Decrease) | 37 | 70 | 370 | 2 | 62 | 13 |
| SCAQMD Regional Operational Threshold | 55 | 55 | 550 | 150 | 150 | 55 |
| **Exceed Threshold?** | **No** | **Yes** | **No** | **No** | **No** | **No** |

[1] Emissions from vehicle trips to and from project site. Based on ITE trip generation and EMFAC2007. See attached URBEMIS2007 outputs for details

[2] Emissions from on-site uses such as architectural coatings (painting), natural gas combustion (water heaters, cooking), consumer products and landscaping emissions

[3] Includes emissions as a result of electricity generation for use at the project site. Based on SCAQMD electricity generation factors (Appendix A9-C11 CEQA Handbook). See attached electricity usage worksheet.

## Golden Oaks Ranch - Office Option
### Electricity Usage Emissions
### June 2011

| Future Buidout Emissions | | | | | | Emission Rate (lbs/day) | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | VOC | NOx | CO | SOx | PM10 | PM2.5 |
| **Future Buildout Land Uses** | **Amount** | **Units** | **SCAQMD Electricity Usage Factor (kWh/Sq. Ft./Year)** | **Project Electricity Usage (MWh/Day)** | **Emission Rate (lbs/Mwh) --->** | **0.01** | **1.15** | **0.2** | **0.12** | **0.04** | **0.04** |
| Office | 255.00 | KSF | 12.95 | 9.0 | | 0 | 10 | 2 | 1 | 0 | 0 |
| Retail | 18.00 | KSF | 13.55 | 0.7 | | 0 | 1 | 0 | 0 | 0 | 0 |
| Warehouse | 293.70 | KSF | 4.35 | 3.5 | | 0 | 4 | 1 | 0 | 0 | 0 |
| **Total Future Buildout Emissions** | | | | | | **0** | **15** | **3** | **2** | **1** | **1** |

a Electricity Usage Rates from Table A9-11-A, CEQA Air Quality Handbook, SCAQMD, 1993.

b Emission Factors from Table A9-11-B, CEQA Air Quality Handbook, SCAQMD, 1993.

c Natural Gas Usage Rates from Table A9-12-A, CEQA Air Quality Handbook, SCAQMD, 1993.

d Emission Factors from URBEMIS2002 Version 8.7 (US EPA 1995)

e The emission factors for NOx in lbs per million cuft of natural gas are 100 for nonresidential uses and 94 for residential uses.

## Golden Oaks Ranch - Office Option
### Natural Gas Usage Emissions
### June 2011

| Future Buidout Emissions | | | | | | Emission Rate (lbs/day)[a] | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | VOC | NOx | CO | SOx | PM10 | PM2.5 |
| **Future Buildout Land Uses** | **Amount** | **Units** | **SCAQMD Natural Gas Usage Rate (cu. Ft/sq. ft/month)** | **Project Natural Gas Usage (cu. Ft/day)** | **Emission Rate (lbs/MMSCF) --->** | **7.26** | **100/94[b]** | **40** | **0** | **0.18** | **0.18** |
| Office | 255.00 | KSF | 2 | 17000.0 | | 0.12 | 1.70 | 0.68 | 0.00 | 0.00 | 0.00 |
| Retail | 18.00 | KSF | 2.9 | 1740.0 | | 0.01 | 0.17 | 0.07 | 0.00 | 0.00 | 0.00 |
| Warehouse | 293.70 | KSF | 2 | 19580.0 | | 0.14 | 1.96 | 0.78 | 0.00 | 0.00 | 0.00 |
| **Total Future Buildout Emissions** | | | | | | **0** | **4** | **2** | **0** | **0** | **0** |

a Natural Gas Usage Rates from Table A9-12-A, CEQA Air Quality Handbook, SCAQMD, 1993.

b 100 lbs/MSCF = non-residential emission factor. 94 lbs/MSC = residential emission factor.

## Golden Oaks Ranch - Office Option
**Charbroiler Emissions**
**June 2011**

| | Hamburger | Steak | Chicken | Seafood | Total | Controlled | # of Restaurants |
|---|---|---|---|---|---|---|---|
| Pounds of Meat Cooked per Week | 270 | 180 | 471 | 143 | 1064 | | 1 |
| **Emission Factors (lb/lb of meat)** | | | | | | | |
| PM10 | 0.065 | 0.034 | 0.021 | 0.007 | | | |
| PM2.5 | 0.064 | 0.034 | 0.010 | 0.006 | | | |
| CO | 0.027 | 0.010 | 0.010 | 0.006 | | | |
| VOC | 0.008 | 0.002 | 0.004 | 0.001 | | | |
| Emission Rate (lbs/day) | | | | | | | |
| PM10 | 2.523 | 0.885 | 1.413 | 0.135 | 4.95 | 0.84 | 0.84 |
| PM2.5 | 2.461 | 0.864 | 0.659 | 0.131 | 4.12 | 0.70 | 0.70 |
| CO | 1.057 | 0.256 | 0.651 | 0.131 | 2.09 | 2.09 | 2.09 |
| VOC | 0.304 | 0.044 | 0.245 | 0.016 | 0.61 | 0.09 | 0.09 |
| **NOx Calculations** | | | | | | | |
| Heating Value (Btu/scf) | 1020 | 1020 | 1020 | 1020 | | | |
| NOx Emission Rate (lbs/scf) | 0.0001 | 0.0001 | 0.0001 | 0.0001 | | | |
| Emission Rate (lbs/day) | 0.063 | 0.063 | 0.063 | 0.063 | 0.25 | 0.25 | 0.25 |

Source:
EPA, Technical Memorandum--Methods for Developing a National Emission Inventory for Commerical Cooking Processes, December 22, 2003.
SCAQMD Rule 1138 reduces VOC emissions by 86% and PM emissions by 83%.

# Golden Oaks Ranch - Office Option
## Back-Up Diesel Generator Usage
## June 2011

| Number of Generators | Horespower | Hours per Year |
|---|---|---|
| 1 | 500 | 50 |

| Pollutant | Emission Factor (lbs/hp-h | Emissions (lbs/Yr) | Emissions (lbs/Day) |
|---|---|---|---|
| NOx | 0.0310 | 775.0 | 2.1 |
| CO | 0.0067 | 167.0 | 0.5 |
| SOx | 0.0021 | 51.3 | 0.1 |
| VOC | 0.0025 | 62.9 | 0.2 |
| PM10 | 0.0022 | 55.0 | 0.2 |
| PM2.5 | 0.0020 | 49.0 | 0.1 |
| CO2 | 1.1500 | 28750.0 | 78.8 |

**Notes:**
Operation of proposed generators would typically include hourly test once per month or a total annual usage of 50 hours.

**Source:**
http://www.epa.gov/ttn/chief/ap42/ch03/final/c03s03.pdf

## Golden Oaks Ranch - Soundstage Option
### Regional Operational Emissions
### June 2011

| | Volatile Organic Compounds (VOCs) | Nitrogen Oxides (NOx) | Carbon Monoxide (CO) | Sulfur Oxides (SOx) | Particulate Matter <10 Microns (PM10) | Particulate Matter <2.5 Microns (PM2.5) |
|---|---|---|---|---|---|---|
| **Future Emissions (Project Buildout)** | | | | | | |
| Regional Mobile Emissions (Car/Truck Trips) [1] | 30 | 45 | 328 | <1 | 55 | 11 |
| Stationary Emissions (On-site Natural Gas Usage, Painting, Consumer Products) [2] | 5 | 4 | 9 | <1 | <1 | <1 |
| Electricity Consumption (Powerplant emissions) [3] | <1 | 14 | 2 | 1 | <1 | <1 |
| Charbroiler + Emergency Generator | <1 | 2 | 3 | <1 | <1 | <1 |
| Total | 35 | 65 | 342 | 2 | 57 | 12 |
| | | | | | | |
| **Incremental Increase** | | | | | | |
| Incremental Difference (Increase/Decrease) | 35 | 65 | 342 | 2 | 57 | 12 |
| SCAQMD Regional Operational Threshold | 55 | 55 | 550 | 150 | 150 | 55 |
| **Exceed Threshold?** | **No** | **Yes** | **No** | **No** | **No** | **No** |

[1] Emissions from vehicle trips to and from project site. Based on ITE trip generation and EMFAC2007. See attached URBEMIS2007 outputs for details

[2] Emissions from on-site uses such as architectural coatings (painting), natural gas combustion (water heaters, cooking), consumer products and landscaping emissions

[3] Includes emissions as a result of electricity generation for use at the project site. Based on SCAQMD electricity generation factors (Appendix A9-C11 CEQA Handbook). See attached electricity usage worksheet.

## Golden Oaks Ranch - Soundstage Option
### Electricity Usage Emissions
### June 2011

| Future Buidout Emissions | | | | | | Emission Rate (lbs/day) | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | VOC | NOx | CO | SOx | PM10 | PM2.5 |
| **Future Buildout Land Uses** | **Amount** | **Units** | **SCAQMD Electricity Usage Factor (kWh/Sq. Ft./Year)** | **Project Electricity Usage (MWh/Day)** | **Emission Rate (lbs/Mwh) --->** | **0.01** | **1.15** | **0.2** | **0.12** | **0.04** | **0.04** |
| Office | 198.75 | KSF | 12.95 | 7.1 | | 0 | 8 | 1 | 1 | 0 | 0 |
| Retail | 18.00 | KSF | 13.55 | 0.7 | | 0 | 1 | 0 | 0 | 0 | 0 |
| Warehouse | 395.90 | KSF | 4.35 | 4.7 | | 0 | 5 | 1 | 1 | 0 | 0 |
| **Total Future Buildout Emissions** | | | | | | **0** | **14** | **2** | **1** | **0** | **0** |

a Electricity Usage Rates from Table A9-11-A, CEQA Air Quality Handbook, SCAQMD, 1993.

b Emission Factors from Table A9-11-B, CEQA Air Quality Handbook, SCAQMD, 1993.

c Natural Gas Usage Rates from Table A9-12-A, CEQA Air Quality Handbook, SCAQMD, 1993.

d Emission Factors from URBEMIS2002 Version 8.7 (US EPA 1995)

e The emission factors for NOx in lbs per million cuft of natural gas are 100 for nonresidential uses and 94 for residential uses.

## Golden Oaks Ranch - Soundstage Option
### Natural Gas Usage Emissions
### June 2011

| Future Buidout Emissions | | | | | | Emission Rate (lbs/day)[a] | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | VOC | NOx | CO | SOx | PM10 | PM2.5 |
| **Future Buildout Land Uses** | **Amount** | **Units** | **SCAQMD Natural Gas Usage Rate (cu. Ft/sq. ft/month)** | **Project Natural Gas Usage (cu. Ft/day)** | **Emission Rate (lbs/MMSCF) --->** | **7.26** | **100/94[b]** | **40** | **0** | **0.18** | **0.18** |
| Office | 198.75 | KSF | 2 | 13250.0 | | 0.10 | 1.33 | 0.53 | 0.00 | 0.00 | 0.00 |
| Retail | 18.00 | KSF | 2.9 | 1740.0 | | 0.01 | 0.17 | 0.07 | 0.00 | 0.00 | 0.00 |
| Warehouse | 395.90 | KSF | 2 | 26393.3 | | 0.19 | 2.64 | 1.06 | 0.00 | 0.00 | 0.00 |
| Residential (Multi-Family DU) | 6.00 | DU | 4011.5 | 802.3 | | 0 | 0 | 0 | 0 | 0 | 0 |
| **Total Future Buildout Emissions** | | | | | | **0** | **4** | **2** | **0** | **0** | **0** |

a Natural Gas Usage Rates from Table A9-12-A, CEQA Air Quality Handbook, SCAQMD, 1993.

b 100 lbs/MSCF = non-residential emission factor. 94 lbs/MSC = residential emission factor.

## Golden Oaks Ranch - Soundstage Option
**Charbroiler Emissions**
**June 2011**

| | Hamburger | Steak | Chicken | Seafood | Total | Controlled | # of Restaurants |
|---|---|---|---|---|---|---|---|
| Pounds of Meat Cooked per Week | 270 | 180 | 471 | 143 | 1064 | | 1 |
| **Emission Factors (lb/lb of meat)** | | | | | | | |
| PM10 | 0.065 | 0.034 | 0.021 | 0.007 | | | |
| PM2.5 | 0.064 | 0.034 | 0.010 | 0.006 | | | |
| CO | 0.027 | 0.010 | 0.010 | 0.006 | | | |
| VOC | 0.008 | 0.002 | 0.004 | 0.001 | | | |
| Emission Rate (lbs/day) | | | | | | | |
| PM10 | 2.523 | 0.885 | 1.413 | 0.135 | 4.95 | 0.84 | 0.84 |
| PM2.5 | 2.461 | 0.864 | 0.659 | 0.131 | 4.12 | 0.70 | 0.70 |
| CO | 1.057 | 0.256 | 0.651 | 0.131 | 2.09 | 2.09 | 2.09 |
| VOC | 0.304 | 0.044 | 0.245 | 0.016 | 0.61 | 0.09 | 0.09 |
| **NOx Calculations** | | | | | | | |
| Heating Value (Btu/scf) | 1020 | 1020 | 1020 | 1020 | | | |
| NOx Emission Rate (lbs/scf) | 0.0001 | 0.0001 | 0.0001 | 0.0001 | | | |
| Emission Rate (lbs/day) | 0.063 | 0.063 | 0.063 | 0.063 | 0.25 | 0.25 | 0.25 |

Source:
EPA, Technical Memorandum--Methods for Developing a National Emission Inventory for Commerical Cooking Processes, December 22, 2003.
SCAQMD Rule 1138 reduces VOC emissions by 86% and PM emissions by 83%.

# Golden Oaks Ranch - Soundstage Option

## Back-Up Diesel Generator Usage

## June 2011

| Number of Generators | Horespower | Hours per Year |
|---|---|---|
| 1 | 500 | 50 |

| Pollutant | Emission Factor (lbs/hp-h | Emissions (lbs/Yr) | Emissions (lbs/Day) |
|---|---|---|---|
| NOx | 0.0310 | 775.0 | 2.1 |
| CO | 0.0067 | 167.0 | 0.5 |
| SOx | 0.0021 | 51.3 | 0.1 |
| VOC | 0.0025 | 62.9 | 0.2 |
| PM10 | 0.0022 | 55.0 | 0.2 |
| PM2.5 | 0.0020 | 49.0 | 0.1 |
| CO2 | 1.1500 | 28750.0 | 78.8 |

**Notes:**

Operation of proposed generators would typically include hourly test once per month or a total annual usage of 50 hours.

**Source:**

http://www.epa.gov/ttn/chief/ap42/ch03/final/c03s03.pdf

**6/6/2011 9:29:30 AM**

Urbemis 2007 Version 9.2.4

Combined Winter Emissions Reports (Pounds/Day)

File Name: S:\Active Projects\Golden Oak Ranch\Technical Reports & Technical Issues\Air Quality & GHG\Sunnyvale\Analysis\URBEMIS\Office\Ops 2010 Office Option.urb924

Project Name: Disney Golden Oak Ranch-Operations Office Option 2010

Project Location: Los Angeles County

On-Road Vehicle Emissions Based on: Version  : Emfac2007 V2.3 Nov 1 2006

Off-Road Vehicle Emissions Based on: OFFROAD2007

Area Source Unmitigated Detail Report:

AREA SOURCE EMISSION ESTIMATES Winter Pounds Per Day, Unmitigated

| Source | ROG | NOx | CO | SO2 | PM10 | PM2.5 | CO2 |
|---|---|---|---|---|---|---|---|
| Natural Gas | | | | | | | |
| Hearth | | | | | | | |
| Landscaping - No Winter Emissions | | | | | | | |
| Consumer Products | 0.31 | | | | | | |
| Architectural Coatings | 3.33 | | | | | | |
| TOTALS (lbs/day, unmitigated) | 3.64 | | | | | | |

Area Source Changes to Defaults

**6/6/2011 9:29:30 AM**

Operational Unmitigated Detail Report:

OPERATIONAL EMISSION ESTIMATES Winter Pounds Per Day, Unmitigated

| Source | ROG | NOX | CO | SO2 | PM10 | PM25 | CO2 |
|---|---|---|---|---|---|---|---|
| Apartments low rise | 0.18 | 0.25 | 1.82 | 0.00 | 0.31 | 0.06 | 170.45 |
| Strip mall | 0.06 | 0.00 | 0.02 | 0.00 | 0.00 | 0.00 | 1.50 |
| General office building | 23.52 | 36.04 | 254.04 | 0.23 | 44.94 | 8.75 | 24,246.77 |
| Warehouse | 5.18 | 7.93 | 55.11 | 0.05 | 9.83 | 1.91 | 5,280.81 |
| General light industry | 3.27 | 4.00 | 28.34 | 0.03 | 5.00 | 0.97 | 2,701.14 |
| TOTALS (lbs/day, unmitigated) | 32.21 | 48.22 | 339.33 | 0.31 | 60.08 | 11.69 | 32,400.67 |

Operational Settings:

Does not include correction for passby trips

Does not include double counting adjustment for internal trips

Analysis Year: 2010  Temperature (F): 60  Season: Winter

Emfac: Version  : Emfac2007 V2.3 Nov 1 2006

Summary of Land Uses

| Land Use Type | Acreage | Trip Rate | Unit Type | No. Units | Total Trips | Total VMT |
|---|---|---|---|---|---|---|
| Apartments low rise | 0.38 | 3.00 | dwelling units | 6.00 | 18.00 | 181.85 |
| Strip mall | | 0.01 | 1000 sq ft | 18.00 | 0.18 | 1.62 |
| General office building | | 10.02 | 1000 sq ft | 255.00 | 2,555.10 | 26,004.53 |
| Warehouse | | 9.19 | 1000 sq ft | 69.00 | 634.11 | 5,689.87 |
| General light industry | | 1.20 | 1000 sq ft | 224.70 | 269.64 | 2,891.89 |
| | | | | | 3,477.03 | 34,769.76 |

**6/6/2011 9:29:30 AM**

Vehicle Fleet Mix

| Vehicle Type | Percent Type | Non-Catalyst | Catalyst | Diesel |
|---|---|---|---|---|
| Light Auto | 53.6 | 1.1 | 98.7 | 0.2 |
| Light Truck < 3750 lbs | 6.8 | 2.9 | 94.2 | 2.9 |
| Light Truck 3751-5750 lbs | 22.8 | 0.4 | 99.6 | 0.0 |
| Med Truck 5751-8500 lbs | 10.0 | 1.0 | 99.0 | 0.0 |
| Lite-Heavy Truck 8501-10,000 lbs | 1.5 | 0.0 | 86.7 | 13.3 |
| Lite-Heavy Truck 10,001-14,000 lbs | 0.5 | 0.0 | 60.0 | 40.0 |
| Med-Heavy Truck 14,001-33,000 lbs | 0.9 | 0.0 | 22.2 | 77.8 |
| Heavy-Heavy Truck 33,001-60,000 lbs | 0.5 | 0.0 | 0.0 | 100.0 |
| Other Bus | 0.1 | 0.0 | 0.0 | 100.0 |
| Urban Bus | 0.1 | 0.0 | 0.0 | 100.0 |
| Motorcycle | 2.3 | 69.6 | 30.4 | 0.0 |
| School Bus | 0.1 | 0.0 | 0.0 | 100.0 |
| Motor Home | 0.8 | 0.0 | 87.5 | 12.5 |

Travel Conditions

| | Residential | | | Commercial | | |
|---|---|---|---|---|---|---|
| | Home-Work | Home-Shop | Home-Other | Commute | Non-Work | Customer |
| Urban Trip Length (miles) | 12.7 | 7.0 | 9.5 | 13.3 | 7.4 | 8.9 |
| Rural Trip Length (miles) | 17.6 | 12.1 | 14.9 | 15.4 | 9.6 | 12.6 |
| Trip speeds (mph) | 30.0 | 30.0 | 30.0 | 30.0 | 30.0 | 30.0 |
| % of Trips - Residential | 32.9 | 18.0 | 49.1 | | | |

**6/6/2011 9:29:30 AM**

Travel Conditions

| | Residential | | | Commercial | | |
|---|---|---|---|---|---|---|
| | Home-Work | Home-Shop | Home-Other | Commute | Non-Work | Customer |
| % of Trips - Commercial (by land use) | | | | | | |
| Strip mall | | | | 2.0 | 1.0 | 97.0 |
| General office building | | | | 35.0 | 17.5 | 47.5 |
| Warehouse | | | | 2.0 | 1.0 | 97.0 |
| General light industry | | | | 50.0 | 25.0 | 25.0 |

**6/6/2011 9:29:40 AM**

Urbemis 2007 Version 9.2.4

Combined Summer Emissions Reports (Pounds/Day)

File Name: S:\Active Projects\Golden Oak Ranch\Technical Reports & Technical Issues\Air Quality & GHG\Sunnyvale\Analysis\URBEMIS\Office\Ops 2010 Office Option.urb924

Project Name: Disney Golden Oak Ranch-Operations Office Option 2010

Project Location: Los Angeles County

On-Road Vehicle Emissions Based on: Version  : Emfac2007 V2.3 Nov 1 2006

Off-Road Vehicle Emissions Based on: OFFROAD2007

Area Source Unmitigated Detail Report:

AREA SOURCE EMISSION ESTIMATES Summer Pounds Per Day, Unmitigated

| Source | ROG | NOx | CO | SO2 | PM10 | PM2.5 | CO2 |
|---|---|---|---|---|---|---|---|
| Natural Gas | | | | | | | |
| Hearth | | | | | | | |
| Landscape | 0.61 | 0.10 | 7.73 | 0.00 | 0.03 | 0.03 | 14.04 |
| Consumer Products | 0.31 | | | | | | |
| Architectural Coatings | 3.33 | | | | | | |
| TOTALS (lbs/day, unmitigated) | 4.25 | 0.10 | 7.73 | 0.00 | 0.03 | 0.03 | 14.04 |

Area Source Changes to Defaults

**6/6/2011 9:29:40 AM**

Operational Unmitigated Detail Report:

OPERATIONAL EMISSION ESTIMATES Summer Pounds Per Day, Unmitigated

| Source | ROG | NOX | CO | SO2 | PM10 | PM25 | CO2 |
|---|---|---|---|---|---|---|---|
| Apartments low rise | 0.19 | 0.21 | 1.91 | 0.00 | 0.31 | 0.06 | 188.09 |
| Strip mall | 0.14 | 0.00 | 0.02 | 0.00 | 0.00 | 0.00 | 1.66 |
| General office building | 21.66 | 29.88 | 266.59 | 0.27 | 44.94 | 8.75 | 26,768.79 |
| Warehouse | 4.82 | 6.58 | 57.27 | 0.06 | 9.83 | 1.91 | 5,832.64 |
| General light industry | 3.88 | 3.31 | 29.85 | 0.03 | 5.00 | 0.97 | 2,981.61 |
| TOTALS (lbs/day, unmitigated) | 30.69 | 39.98 | 355.64 | 0.36 | 60.08 | 11.69 | 35,772.79 |

Operational Settings:

Does not include correction for passby trips

Does not include double counting adjustment for internal trips

Analysis Year: 2010  Temperature (F): 80  Season: Summer

Emfac: Version  : Emfac2007 V2.3 Nov 1 2006

Summary of Land Uses

| Land Use Type | Acreage | Trip Rate | Unit Type | No. Units | Total Trips | Total VMT |
|---|---|---|---|---|---|---|
| Apartments low rise | 0.38 | 3.00 | dwelling units | 6.00 | 18.00 | 181.85 |
| Strip mall | | 0.01 | 1000 sq ft | 18.00 | 0.18 | 1.62 |
| General office building | | 10.02 | 1000 sq ft | 255.00 | 2,555.10 | 26,004.53 |
| Warehouse | | 9.19 | 1000 sq ft | 69.00 | 634.11 | 5,689.87 |
| General light industry | | 1.20 | 1000 sq ft | 224.70 | 269.64 | 2,891.89 |
| | | | | | 3,477.03 | 34,769.76 |

**6/6/2011 9:29:40 AM**

Vehicle Fleet Mix

| Vehicle Type | Percent Type | Non-Catalyst | Catalyst | Diesel |
|---|---|---|---|---|
| Light Auto | 53.6 | 1.1 | 98.7 | 0.2 |
| Light Truck < 3750 lbs | 6.8 | 2.9 | 94.2 | 2.9 |
| Light Truck 3751-5750 lbs | 22.8 | 0.4 | 99.6 | 0.0 |
| Med Truck 5751-8500 lbs | 10.0 | 1.0 | 99.0 | 0.0 |
| Lite-Heavy Truck 8501-10,000 lbs | 1.5 | 0.0 | 86.7 | 13.3 |
| Lite-Heavy Truck 10,001-14,000 lbs | 0.5 | 0.0 | 60.0 | 40.0 |
| Med-Heavy Truck 14,001-33,000 lbs | 0.9 | 0.0 | 22.2 | 77.8 |
| Heavy-Heavy Truck 33,001-60,000 lbs | 0.5 | 0.0 | 0.0 | 100.0 |
| Other Bus | 0.1 | 0.0 | 0.0 | 100.0 |
| Urban Bus | 0.1 | 0.0 | 0.0 | 100.0 |
| Motorcycle | 2.3 | 69.6 | 30.4 | 0.0 |
| School Bus | 0.1 | 0.0 | 0.0 | 100.0 |
| Motor Home | 0.8 | 0.0 | 87.5 | 12.5 |

Travel Conditions

| | Residential | | | Commercial | | |
|---|---|---|---|---|---|---|
| | Home-Work | Home-Shop | Home-Other | Commute | Non-Work | Customer |
| Urban Trip Length (miles) | 12.7 | 7.0 | 9.5 | 13.3 | 7.4 | 8.9 |
| Rural Trip Length (miles) | 17.6 | 12.1 | 14.9 | 15.4 | 9.6 | 12.6 |
| Trip speeds (mph) | 30.0 | 30.0 | 30.0 | 30.0 | 30.0 | 30.0 |
| % of Trips - Residential | 32.9 | 18.0 | 49.1 | | | |

**6/6/2011 9:29:40 AM**

Travel Conditions

| | Residential | | | Commercial | | |
|---|---|---|---|---|---|---|
| | Home-Work | Home-Shop | Home-Other | Commute | Non-Work | Customer |
| % of Trips - Commercial (by land use) | | | | | | |
| Strip mall | | | | 2.0 | 1.0 | 97.0 |
| General office building | | | | 35.0 | 17.5 | 47.5 |
| Warehouse | | | | 2.0 | 1.0 | 97.0 |
| General light industry | | | | 50.0 | 25.0 | 25.0 |

**6/6/2011 9:36:57 AM**

Urbemis 2007 Version 9.2.4

Combined Winter Emissions Reports (Pounds/Day)

File Name: S:\Active Projects\Golden Oak Ranch\Technical Reports & Technical Issues\Air Quality & GHG\Sunnyvale\Analysis\URBEMIS\Soundstage\Ops 2010 Soundstage Option.urb924

Project Name: Disney Golden Oak Ranch-Operations Soundstage Option 2010

Project Location: Los Angeles County

On-Road Vehicle Emissions Based on: Version  : Emfac2007 V2.3 Nov 1 2006

Off-Road Vehicle Emissions Based on: OFFROAD2007

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 | | | | | | | |
| Hearth | | | | | | | |
| Landscaping - No Winter Emissions | | | | | | | |
| Consumer Products | 0.31 | | | | | | |
| Architectural Coatings | 3.60 | | | | | | |
| TOTALS (lbs/day, mitigated) | 3.91 | | | | | | |

Area Source Changes to Defaults

**6/6/2011 9:36:57 AM**

Operational Mitigated Detail Report:

OPERATIONAL EMISSION ESTIMATES Winter Pounds Per Day, Mitigated

| Source | ROG | NOX | CO | SO2 | PM10 | PM25 | CO2 |
|---|---|---|---|---|---|---|---|
| Apartments low rise | 0.17 | 0.24 | 1.70 | 0.00 | 0.29 | 0.06 | 159.58 |
| Strip mall | 0.06 | 0.00 | 0.02 | 0.00 | 0.00 | 0.00 | 1.47 |
| General office building | 18.06 | 27.67 | 194.97 | 0.17 | 34.49 | 6.72 | 18,606.82 |
| Warehouse | 7.00 | 10.73 | 74.55 | 0.07 | 13.30 | 2.59 | 7,143.77 |
| General light industry | 4.73 | 5.89 | 41.75 | 0.04 | 7.36 | 1.43 | 3,977.69 |
| TOTALS (lbs/day, mitigated) | 30.02 | 44.53 | 312.99 | 0.28 | 55.44 | 10.80 | 29,889.33 |

Operational Settings:

Does not include correction for passby trips

Does not include double counting adjustment for internal trips

Analysis Year: 2010  Temperature (F): 60  Season: Winter

Emfac: Version  : Emfac2007 V2.3 Nov 1 2006

Summary of Land Uses

| Land Use Type | Acreage | Trip Rate | Unit Type | No. Units | Total Trips | Total VMT |
|---|---|---|---|---|---|---|
| Apartments low rise | 0.38 | 3.00 | dwelling units | 6.00 | 18.00 | 181.85 |
| Strip mall | | 0.01 | 1000 sq ft | 18.00 | 0.18 | 1.62 |
| General office building | | 10.16 | 1000 sq ft | 198.75 | 2,019.30 | 20,551.43 |
| Warehouse | | 9.52 | 1000 sq ft | 92.00 | 875.84 | 7,858.91 |
| General light industry | | 1.35 | 1000 sq ft | 303.90 | 410.26 | 4,400.09 |
| | | | | | 3,323.58 | 32,993.90 |

**6/6/2011 9:36:57 AM**

Vehicle Fleet Mix

| Vehicle Type | Percent Type | Non-Catalyst | Catalyst | Diesel |
|---|---|---|---|---|
| Light Auto | 53.6 | 1.1 | 98.7 | 0.2 |
| Light Truck < 3750 lbs | 6.8 | 2.9 | 94.2 | 2.9 |
| Light Truck 3751-5750 lbs | 22.8 | 0.4 | 99.6 | 0.0 |
| Med Truck 5751-8500 lbs | 10.0 | 1.0 | 99.0 | 0.0 |
| Lite-Heavy Truck 8501-10,000 lbs | 1.5 | 0.0 | 86.7 | 13.3 |
| Lite-Heavy Truck 10,001-14,000 lbs | 0.5 | 0.0 | 60.0 | 40.0 |
| Med-Heavy Truck 14,001-33,000 lbs | 0.9 | 0.0 | 22.2 | 77.8 |
| Heavy-Heavy Truck 33,001-60,000 lbs | 0.5 | 0.0 | 0.0 | 100.0 |
| Other Bus | 0.1 | 0.0 | 0.0 | 100.0 |
| Urban Bus | 0.1 | 0.0 | 0.0 | 100.0 |
| Motorcycle | 2.3 | 69.6 | 30.4 | 0.0 |
| School Bus | 0.1 | 0.0 | 0.0 | 100.0 |
| Motor Home | 0.8 | 0.0 | 87.5 | 12.5 |

Travel Conditions

| | Residential | | | Commercial | | |
|---|---|---|---|---|---|---|
| | Home-Work | Home-Shop | Home-Other | Commute | Non-Work | Customer |
| Urban Trip Length (miles) | 12.7 | 7.0 | 9.5 | 13.3 | 7.4 | 8.9 |
| Rural Trip Length (miles) | 17.6 | 12.1 | 14.9 | 15.4 | 9.6 | 12.6 |
| Trip speeds (mph) | 30.0 | 30.0 | 30.0 | 30.0 | 30.0 | 30.0 |
| % of Trips - Residential | 32.9 | 18.0 | 49.1 | | | |

**6/6/2011 9:36:57 AM**

Travel Conditions

| | Residential | | | Commercial | | |
|---|---|---|---|---|---|---|
| | Home-Work | Home-Shop | Home-Other | Commute | Non-Work | Customer |
| % of Trips - Commercial (by land use) | | | | | | |
| Strip mall | | | | 2.0 | 1.0 | 97.0 |
| General office building | | | | 35.0 | 17.5 | 47.5 |
| Warehouse | | | | 2.0 | 1.0 | 97.0 |
| General light industry | | | | 50.0 | 25.0 | 25.0 |

**6/6/2011 9:36:49 AM**

Urbemis 2007 Version 9.2.4

Combined Summer Emissions Reports (Pounds/Day)

File Name: S:\Active Projects\Golden Oak Ranch\Technical Reports & Technical Issues\Air Quality & GHG\Sunnyvale\Analysis\URBEMIS\Soundstage\Ops 2010 Soundstage Option.urb924

Project Name: Disney Golden Oak Ranch-Operations Soundstage Option 2010

Project Location: Los Angeles County

On-Road Vehicle Emissions Based on: Version  : Emfac2007 V2.3 Nov 1 2006

Off-Road Vehicle Emissions Based on: OFFROAD2007

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 | | | | | | | |
| Hearth | | | | | | | |
| Landscape | 0.61 | 0.10 | 7.73 | 0.00 | 0.03 | 0.03 | 14.04 |
| Consumer Products | 0.31 | | | | | | |
| Architectural Coatings | 3.60 | | | | | | |
| TOTALS (lbs/day, mitigated) | 4.52 | 0.10 | 7.73 | 0.00 | 0.03 | 0.03 | 14.04 |

Area Source Changes to Defaults

**6/6/2011 9:36:49 AM**

Operational Mitigated Detail Report:

OPERATIONAL EMISSION ESTIMATES Summer Pounds Per Day, Mitigated

| Source | ROG | NOX | CO | SO2 | PM10 | PM25 | CO2 |
|---|---|---|---|---|---|---|---|
| Apartments low rise | 0.18 | 0.20 | 1.79 | 0.00 | 0.29 | 0.06 | 176.09 |
| Strip mall | 0.14 | 0.00 | 0.02 | 0.00 | 0.00 | 0.00 | 1.62 |
| General office building | 16.65 | 22.94 | 204.58 | 0.21 | 34.49 | 6.72 | 20,542.25 |
| Warehouse | 6.51 | 8.91 | 77.48 | 0.08 | 13.30 | 2.59 | 7,890.27 |
| General light industry | 5.51 | 4.88 | 43.96 | 0.05 | 7.36 | 1.43 | 4,390.70 |
| TOTALS (lbs/day, mitigated) | 28.99 | 36.93 | 327.83 | 0.34 | 55.44 | 10.80 | 33,000.93 |

Operational Settings:

Does not include correction for passby trips

Does not include double counting adjustment for internal trips

Analysis Year: 2010  Temperature (F): 80  Season: Summer

Emfac: Version  : Emfac2007 V2.3 Nov 1 2006

Summary of Land Uses

| Land Use Type | Acreage | Trip Rate | Unit Type | No. Units | Total Trips | Total VMT |
|---|---|---|---|---|---|---|
| Apartments low rise | 0.38 | 3.00 | dwelling units | 6.00 | 18.00 | 181.85 |
| Strip mall | | 0.01 | 1000 sq ft | 18.00 | 0.18 | 1.62 |
| General office building | | 10.16 | 1000 sq ft | 198.75 | 2,019.30 | 20,551.43 |
| Warehouse | | 9.52 | 1000 sq ft | 92.00 | 875.84 | 7,858.91 |
| General light industry | | 1.35 | 1000 sq ft | 303.90 | 410.26 | 4,400.09 |
| | | | | | 3,323.58 | 32,993.90 |

**6/6/2011 9:36:49 AM**

Vehicle Fleet Mix

| Vehicle Type | Percent Type | Non-Catalyst | Catalyst | Diesel |
|---|---|---|---|---|
| Light Auto | 53.6 | 1.1 | 98.7 | 0.2 |
| Light Truck < 3750 lbs | 6.8 | 2.9 | 94.2 | 2.9 |
| Light Truck 3751-5750 lbs | 22.8 | 0.4 | 99.6 | 0.0 |
| Med Truck 5751-8500 lbs | 10.0 | 1.0 | 99.0 | 0.0 |
| Lite-Heavy Truck 8501-10,000 lbs | 1.5 | 0.0 | 86.7 | 13.3 |
| Lite-Heavy Truck 10,001-14,000 lbs | 0.5 | 0.0 | 60.0 | 40.0 |
| Med-Heavy Truck 14,001-33,000 lbs | 0.9 | 0.0 | 22.2 | 77.8 |
| Heavy-Heavy Truck 33,001-60,000 lbs | 0.5 | 0.0 | 0.0 | 100.0 |
| Other Bus | 0.1 | 0.0 | 0.0 | 100.0 |
| Urban Bus | 0.1 | 0.0 | 0.0 | 100.0 |
| Motorcycle | 2.3 | 69.6 | 30.4 | 0.0 |
| School Bus | 0.1 | 0.0 | 0.0 | 100.0 |
| Motor Home | 0.8 | 0.0 | 87.5 | 12.5 |

Travel Conditions

| | Residential | | | Commercial | | |
|---|---|---|---|---|---|---|
| | Home-Work | Home-Shop | Home-Other | Commute | Non-Work | Customer |
| Urban Trip Length (miles) | 12.7 | 7.0 | 9.5 | 13.3 | 7.4 | 8.9 |
| Rural Trip Length (miles) | 17.6 | 12.1 | 14.9 | 15.4 | 9.6 | 12.6 |
| Trip speeds (mph) | 30.0 | 30.0 | 30.0 | 30.0 | 30.0 | 30.0 |
| % of Trips - Residential | 32.9 | 18.0 | 49.1 | | | |

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Travel Conditions

| | Residential | | | Commercial | | |
|---|---|---|---|---|---|---|
| | Home-Work | Home-Shop | Home-Other | Commute | Non-Work | Customer |
| % of Trips - Commercial (by land use) | | | | | | |
| Strip mall | | | | 2.0 | 1.0 | 97.0 |
| General office building | | | | 35.0 | 17.5 | 47.5 |
| Warehouse | | | | 2.0 | 1.0 | 97.0 |
| General light industry | | | | 50.0 | 25.0 | 25.0 |

## Golden Oak Ranch - Office

CALINE4 Modeling Results and Estimated Local 1-Hour Carbon Monoxide Concentrations (ppm)

Projected Background 1-Hour CO Concentrations (ppm) [a]

Monitoring Station: Santa Clarita

| Year | 1-Hr Concentration |
|---|---|
| 2010 | 5.1 |

| Intersection and Receptor Locations | Future Without Project | | Future With Project | | |
|---|---|---|---|---|---|
| | Traffic CO Contribution [b] | Estimated Local CO Concentration [c] | Traffic CO Contribution [b] | Estimated Local CO Concentration [c] | Exceedance of Significance Threshold [d] |
| SIERRA HIGHWAY AND PLACERTIA CANYON ROAD | | | | | |
| NE | 0.6 | 5.7 | 0.7 | 5.8 | NO |
| SE | 0.8 | 5.9 | 0.8 | 5.9 | NO |
| SW | 1.0 | 6.1 | 1.1 | 6.2 | NO |
| NW | 1.1 | 6.2 | 1.1 | 6.2 | NO |
| SIERRA HIGHWAY AND PLACERTIA CANYON ROAD | | | | | |
| NE | 1.3 | 6.4 | 1.4 | 6.5 | NO |
| SE | 1.2 | 6.3 | 1.4 | 6.5 | NO |
| SW | 0.7 | 5.8 | 0.7 | 5.8 | NO |
| NW | 0.8 | 5.9 | 1.0 | 6.1 | NO |
| SIERRA HIGHWAY AND SR14 SB RAMPS | | | | | |
| NE | 0.8 | 5.9 | 0.8 | 5.9 | NO |
| SE | 0.8 | 5.9 | 0.8 | 5.9 | NO |
| SW | 1.3 | 6.4 | 1.3 | 6.4 | NO |
| NW | 1.4 | 6.5 | 1.4 | 6.5 | NO |
| SIERRA HIGHWAY AND SR14 SB RAMPS | | | | | |
| NE | 1.2 | 6.3 | 1.4 | 6.5 | NO |
| SE | 1.2 | 6.3 | 1.4 | 6.5 | NO |
| SW | 0.8 | 5.9 | 0.7 | 5.8 | NO |
| NW | 0.7 | 5.8 | 0.8 | 5.9 | NO |

a Based on guidance provided by the AQMD Air Quality Analysis Guidance Handbook.

b The 1-hour traffic contribution (ppm) is determined by inputing total traffic volumes into the CALINE4 model.

c The estimated local concentration is the traffic contribution + the background concentration.

d The California Ambient Air Quality Standard for 1-hour CO concentrations is 20 ppm.

## Golden Oak Ranch - Office

CALINE4 Modeling Results and Estimated Local 8-Hour Carbon Monoxide Concentrations (ppm)

Projected Background 8-Hour CO Concentrations (ppm) [a]

Monitoring Station: Santa Clarita

| Year | 8-Hr Concentration |
|---|---|
| 2010 | 2.6 |

Average Persistence Factor = 0.70

| Intersection and Receptor Locations | Future Without Project | | Future With Project | | |
|---|---|---|---|---|---|
| | Traffic CO Contribution [b] | Estimated Local CO Concentration [c] | Traffic CO Contribution [b] | Estimated Local CO Concentration [c] | Exceedance of Significance Threshold [d] |
| SIERRA HIGHWAY AND PLACERTIA CANYON ROAD | | | | | |
| NE | 0.4 | 3.0 | 0.4 | 3.0 | NO |
| SE | 0.4 | 3.0 | 0.5 | 3.1 | NO |
| SW | 0.6 | 3.2 | 0.6 | 3.2 | NO |
| NW | 0.5 | 3.1 | 0.5 | 3.1 | NO |
| SIERRA HIGHWAY AND PLACERTIA CANYON ROAD | | | | | |
| NE | 0.7 | 3.3 | 0.8 | 3.4 | NO |
| SE | 0.6 | 3.2 | 0.6 | 3.2 | NO |
| SW | 0.4 | 3.0 | 0.4 | 3.0 | NO |
| NW | 0.4 | 3.0 | 0.6 | 3.2 | NO |
| SIERRA HIGHWAY AND SR14 SB RAMPS | | | | | |
| NE | 0.4 | 3.0 | 0.4 | 3.0 | NO |
| SE | 0.5 | 3.1 | 0.5 | 3.1 | NO |
| SW | 0.6 | 3.2 | 0.6 | 3.2 | NO |
| NW | 0.6 | 3.2 | 0.6 | 3.2 | NO |
| SIERRA HIGHWAY AND SR14 SB RAMPS | | | | | |
| NE | 0.6 | 3.2 | 0.7 | 3.3 | NO |
| SE | 0.6 | 3.2 | 0.7 | 3.3 | NO |
| SW | 0.4 | 3.0 | 0.4 | 3.0 | NO |
| NW | 0.4 | 3.0 | 0.4 | 3.0 | NO |

a Based on guidance provided by the AQMD Air Quality Analysis Guidance Handbook.

b The persistence factor is calculated as recommended in Table B.15 in the Transportation Project-Level Carbon Monoxide Protocol (Institute of Transportation Studies, UC Davis, Revised 1997). This is a generalized persistence factor likely to provide a conservative estimate in most situations.

c The estimated local concentration is the traffic contribution + the background concentration.

d The California Ambient Air Quality Standard for 8-hour CO concentrations is 9 ppm.

## Golden Oak Ranch - Soundstage

CALINE4 Modeling Results and Estimated Local 1-Hour Carbon Monoxide Concentrations (ppm)

Projected Background 1-Hour CO Concentrations (ppm) [a]

Monitoring Station: Santa Clarita

| Year | 1-Hr Concentration |
|---|---|
| 2010 | 5.1 |

| Intersection and Receptor Locations | Future Without Project | | Future With Project | | |
|---|---|---|---|---|---|
| | Traffic CO Contribution [b] | Estimated Local CO Concentration [c] | Traffic CO Contribution [b] | Estimated Local CO Concentration [c] | Exceedance of Significance Threshold [d] |
| SIERRA HIGHWAY AND PLACERTIA CANYON ROAD | | | | | |
| NE | 0.6 | 5.7 | 0.7 | 5.8 | NO |
| SE | 0.8 | 5.9 | 0.8 | 5.9 | NO |
| SW | 1.0 | 6.1 | 1.1 | 6.2 | NO |
| NW | 1.1 | 6.2 | 1.1 | 6.2 | NO |
| SIERRA HIGHWAY AND PLACERTIA CANYON ROAD | | | | | |
| NE | 1.3 | 6.4 | 1.4 | 6.5 | NO |
| SE | 1.2 | 6.3 | 1.4 | 6.5 | NO |
| SW | 0.7 | 5.8 | 0.7 | 5.8 | NO |
| NW | 0.8 | 5.9 | 1.0 | 6.1 | NO |
| SIERRA HIGHWAY AND SR14 SB RAMPS | | | | | |
| NE | 0.8 | 5.9 | 0.8 | 5.9 | NO |
| SE | 0.8 | 5.9 | 0.8 | 5.9 | NO |
| SW | 1.3 | 6.4 | 1.3 | 6.4 | NO |
| NW | 1.4 | 6.5 | 1.4 | 6.5 | NO |
| SIERRA HIGHWAY AND SR14 SB RAMPS | | | | | |
| NE | 1.2 | 6.3 | 1.4 | 6.5 | NO |
| SE | 1.2 | 6.3 | 1.4 | 6.5 | NO |
| SW | 0.8 | 5.9 | 0.7 | 5.8 | NO |
| NW | 0.7 | 5.8 | 0.8 | 5.9 | NO |

a Based on guidance provided by the AOMD Air Quality Analysis Guidance Handbook.

b The 1-hour traffic contribution (ppm) is determined by inputing total traffic volumes into the CALINE4 model.

c The estimated local concentration is the traffic contribution + the background concentration.

d The California Ambient Air Quality Standard for 1-hour CO concentrations is 20 ppm.

## Golden Oak Ranch - Soundstage

CALINE4 Modeling Results and Estimated Local 8-Hour Carbon Monoxide Concentrations (ppm)

Projected Background 8-Hour CO Concentrations (ppm) [a]

Monitoring Station: Santa Clarita

| Year | 8-Hr Concentration |
|---|---|
| 2010 | 2.6 |

Average Persistence Factor = 0.70

| Intersection and Receptor Locations | Future Without Project | | Future With Project | | |
|---|---|---|---|---|---|
| | Traffic CO Contribution [b] | Estimated Local CO Concentration [c] | Traffic CO Contribution [b] | Estimated Local CO Concentration [c] | Exceedance of Significance Threshold [d] |
| SIERRA HIGHWAY AND PLACERTIA CANYON ROAD | | | | | |
| NE | 0.4 | 3.0 | 0.4 | 3.0 | NO |
| SE | 0.4 | 3.0 | 0.5 | 3.1 | NO |
| SW | 0.6 | 3.2 | 0.6 | 3.2 | NO |
| NW | 0.5 | 3.1 | 0.5 | 3.1 | NO |
| SIERRA HIGHWAY AND PLACERTIA CANYON ROAD | | | | | |
| NE | 0.7 | 3.3 | 0.8 | 3.4 | NO |
| SE | 0.6 | 3.2 | 0.6 | 3.2 | NO |
| SW | 0.4 | 3.0 | 0.4 | 3.0 | NO |
| NW | 0.4 | 3.0 | 0.6 | 3.2 | NO |
| SIERRA HIGHWAY AND SR14 SB RAMPS | | | | | |
| NE | 0.4 | 3.0 | 0.4 | 3.0 | NO |
| SE | 0.5 | 3.1 | 0.5 | 3.1 | NO |
| SW | 0.6 | 3.2 | 0.6 | 3.2 | NO |
| NW | 0.6 | 3.2 | 0.6 | 3.2 | NO |
| SIERRA HIGHWAY AND SR14 SB RAMPS | | | | | |
| NE | 0.6 | 3.2 | 0.7 | 3.3 | NO |
| SE | 0.6 | 3.2 | 0.7 | 3.3 | NO |
| SW | 0.4 | 3.0 | 0.4 | 3.0 | NO |
| NW | 0.4 | 3.0 | 0.4 | 3.0 | NO |

a Based on guidance provided by the AQMD Air Quality Analysis Guidance Handbook.

b The persistence factor is calculated as recommended in Table B.15 in the Transportation Project-Level Carbon Monoxide Protocol (Institute of Transportation Studies, UC Davis, Revised 1997). This is a generalized persistence factor likely to provide a conservative estimate in most situations.

c The estimated local concentration is the traffic contribution + the background concentration.

d The California Ambient Air Quality Standard for 8-hour CO concentrations is 9 ppm.

CALINE4: CALIFORNIA LINE SOURCE DISPERSION MODEL
JUNE 1989 VERSION
PAGE 1

JOB: SIERRA HIGHWAY AND PLACERTIA CANYON ROAD AM NP
RUN: Hour 1 (WORST CASE ANGLE)
POLLUTANT: Carbon Monoxide

I. SITE VARIABLES

U= .5 M/S Z0= 100. CM ALT= 0. (M)
BRG= WORST CASE VD= .0 CM/S
CLAS= 7 (G) VS= .0 CM/S
MIXH= 1000. M AMB= .0 PPM
SIGTH= 5. DEGREES TEMP= 15.6 DEGREE (C)

II. LINK VARIABLES

| LINK DESCRIPTION | LINK COORDINATES (M) X1 | Y1 | X2 | Y2 | TYPE | VPH | EF (G/MI) | H (M) | W (M) |
|---|---|---|---|---|---|---|---|---|---|
| A. NF | 7 | -450 | 7 | -150 | AG | 282 | 3.0 | .0 | 15.0 |
| B. NA | 7 | -150 | 7 | 0 | AG | 277 | 4.1 | .0 | 13.5 |
| C. ND | 7 | 0 | 7 | 150 | AG | 437 | 3.2 | .0 | 9.9 |
| D. NE | 7 | 150 | 7 | 450 | AG | 437 | 3.0 | .0 | 15.0 |
| E. SF | -7 | 450 | -7 | 150 | AG | 1278 | 3.0 | .0 | 15.0 |
| F. SA | -7 | 150 | -7 | 0 | AG | 1173 | 4.3 | .0 | 13.5 |
| G. SD | -7 | 0 | -7 | -150 | AG | 1233 | 3.3 | .0 | 9.9 |
| H. SE | -7 | -150 | -7 | -450 | AG | 1233 | 3.0 | .0 | 15.0 |
| I. WF | 450 | 7 | 150 | 7 | AG | 290 | 3.0 | .0 | 15.0 |
| J. WA | 150 | 7 | 0 | 7 | AG | 225 | 6.7 | .0 | 13.5 |
| K. WD | 0 | 7 | -150 | 7 | AG | 40 | 4.4 | .0 | 9.9 |
| L. WE | -150 | 7 | -450 | 7 | AG | 40 | 3.0 | .0 | 15.0 |
| M. EF | -450 | -7 | -150 | -7 | AG | 47 | 3.0 | .0 | 15.0 |
| N. EA | -150 | -7 | 0 | -7 | AG | 37 | 6.7 | .0 | 13.5 |
| O. ED | 0 | -7 | 150 | -7 | AG | 187 | 4.4 | .0 | 9.9 |
| P. EE | 150 | -7 | 450 | -7 | AG | 187 | 3.0 | .0 | 15.0 |
| Q. NL | 0 | 0 | 5 | -150 | AG | 5 | 4.1 | .0 | 9.9 |
| R. SL | 0 | 0 | -5 | 150 | AG | 105 | 4.1 | .0 | 9.9 |
| S. WL | 0 | 0 | 150 | 5 | AG | 65 | 6.7 | .0 | 9.9 |
| T. EL | 0 | 0 | -150 | -5 | AG | 10 | 6.7 | .0 | 9.9 |

III. RECEPTOR LOCATIONS

| RECEPTOR | COORDINATES (M) X | Y | Z |
|---|---|---|---|
| 1. NE3 | 14 | 14 | 1.8 |
| 2. SE3 | 14 | -14 | 1.8 |
| 3. SW3 | -14 | -14 | 1.8 |
| 4. NW3 | -14 | 14 | 1.8 |
| 5. NE7 | 18 | 18 | 1.8 |
| 6. SE7 | 18 | -18 | 1.8 |
| 7. SW7 | -18 | -18 | 1.8 |
| 8. NW7 | -18 | 18 | 1.8 |

IV. MODEL RESULTS (WORST CASE WIND ANGLE )

| RECEPTOR | BRG (DEG) | PRED CONC (PPM) | CONC/LINK (PPM) A | B | C | D | E | F | G | H |
|---|---|---|---|---|---|---|---|---|---|---|
| 1. NE3 | 186. | .6 | .0 | .2 | .0 | .0 | .0 | .0 | .0 | .2 |
| 2. SE3 | 352. | .8 | .0 | .0 | .2 | .0 | .1 | .2 | .0 | .0 |
| 3. SW3 | 5. | 1.0 | .0 | .0 | .0 | .0 | .1 | .7 | .0 | .0 |
| 4. NW3 | 5. | 1.1 | .0 | .0 | .0 | .0 | .1 | .8 | .0 | .0 |
| 5. NE7 | 187. | .5 | .0 | .1 | .0 | .0 | .0 | .0 | .0 | .2 |
| 6. SE7 | 352. | .6 | .0 | .0 | .2 | .0 | .1 | .1 | .0 | .0 |
| 7. SW7 | 6. | .8 | .0 | .0 | .0 | .0 | .1 | .5 | .0 | .0 |
| 8. NW7 | 7. | .7 | .0 | .0 | .0 | .0 | .1 | .5 | .0 | .0 |

IV. MODEL RESULTS (WORST CASE WIND ANGLE) (CONT.)

| RECEPTOR | CONC/LINK (PPM) I | J | K | L | M | N | O | P | Q | R | S | T |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1. NE3 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 |
| 2. SE3 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 |
| 3. SW3 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 |
| 4. NW3 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 |
| 5. NE7 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 |
| 6. SE7 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 |
| 7. SW7 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 |
| 8. NW7 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 |

CALINE4: CALIFORNIA LINE SOURCE DISPERSION MODEL
JUNE 1989 VERSION
PAGE 1

JOB: SIERRA HIGHWAY AND PLACERTIA CANYON ROAD AM WP (OFFICE)
RUN: Hour 1 (WORST CASE ANGLE)
POLLUTANT: Carbon Monoxide

I. SITE VARIABLES

U= .5 M/S Z0= 100. CM ALT= 0. (M)
BRG= WORST CASE VD= .0 CM/S
CLAS= 7 (G) VS= .0 CM/S
MIXH= 1000. M AMB= .0 PPM
SIGTH= 5. DEGREES TEMP= 15.6 DEGREE (C)

II. LINK VARIABLES

| LINK DESCRIPTION | LINK COORDINATES (M) X1 | Y1 | X2 | Y2 | TYPE | VPH | EF (G/MI) | H (M) | W (M) |
|---|---|---|---|---|---|---|---|---|---|
| A. NF | 7 | -450 | 7 | -150 | AG | 282 | 3.0 | .0 | 15.0 |
| B. NA | 7 | -150 | 7 | 0 | AG | 277 | 4.1 | .0 | 13.5 |
| C. ND | 7 | 0 | 7 | 150 | AG | 479 | 3.2 | .0 | 9.9 |
| D. NE | 7 | 150 | 7 | 450 | AG | 479 | 3.0 | .0 | 15.0 |
| E. SF | -7 | 450 | -7 | 150 | AG | 1332 | 3.0 | .0 | 15.0 |
| F. SA | -7 | 150 | -7 | 0 | AG | 1173 | 4.3 | .0 | 13.5 |
| G. SD | -7 | 0 | -7 | -150 | AG | 1233 | 3.3 | .0 | 9.9 |
| H. SE | -7 | -150 | -7 | -450 | AG | 1233 | 3.0 | .0 | 15.0 |
| I. WF | 450 | 7 | 150 | 7 | AG | 334 | 3.0 | .0 | 15.0 |
| J. WA | 150 | 7 | 0 | 7 | AG | 269 | 6.5 | .0 | 13.5 |
| K. WD | 0 | 7 | -150 | 7 | AG | 42 | 4.0 | .0 | 9.9 |
| L. WE | -150 | 7 | -450 | 7 | AG | 42 | 3.0 | .0 | 15.0 |
| M. EF | -450 | -7 | -150 | -7 | AG | 61 | 3.0 | .0 | 15.0 |
| N. EA | -150 | -7 | 0 | -7 | AG | 51 | 6.5 | .0 | 13.5 |
| O. ED | 0 | -7 | 150 | -7 | AG | 255 | 4.0 | .0 | 9.9 |
| P. EE | 150 | -7 | 450 | -7 | AG | 255 | 3.0 | .0 | 15.0 |
| Q. NL | 0 | 0 | 5 | -150 | AG | 5 | 4.1 | .0 | 9.9 |
| R. SL | 0 | 0 | -5 | 150 | AG | 159 | 4.1 | .0 | 9.9 |
| S. WL | 0 | 0 | 150 | 5 | AG | 65 | 6.5 | .0 | 9.9 |
| T. EL | 0 | 0 | -150 | -5 | AG | 10 | 6.5 | .0 | 9.9 |

III. RECEPTOR LOCATIONS

| RECEPTOR | COORDINATES (M) X | Y | Z |
|---|---|---|---|
| 1. NE3 | 14 | 14 | 1.8 |
| 2. SE3 | 14 | -14 | 1.8 |
| 3. SW3 | -14 | -14 | 1.8 |
| 4. NW3 | -14 | 14 | 1.8 |
| 5. NE7 | 18 | 18 | 1.8 |
| 6. SE7 | 18 | -18 | 1.8 |
| 7. SW7 | -18 | -18 | 1.8 |
| 8. NW7 | -18 | 18 | 1.8 |

IV. MODEL RESULTS (WORST CASE WIND ANGLE )

| RECEPTOR | BRG (DEG) | PRED CONC (PPM) | CONC/LINK (PPM) A | B | C | D | E | F | G | H |
|---|---|---|---|---|---|---|---|---|---|---|
| 1. NE3 | 186. | .7 | .0 | .2 | .0 | .0 | .0 | .0 | .0 | .2 |
| 2. SE3 | 352. | .8 | .0 | .0 | .2 | .0 | .1 | .2 | .0 | .0 |
| 3. SW3 | 5. | 1.1 | .0 | .0 | .0 | .0 | .1 | .7 | .0 | .0 |
| 4. NW3 | 5. | 1.1 | .0 | .0 | .0 | .1 | .2 | .8 | .0 | .0 |
| 5. NE7 | 187. | .6 | .0 | .1 | .0 | .0 | .0 | .0 | .0 | .2 |
| 6. SE7 | 350. | .7 | .0 | .0 | .2 | .0 | .0 | .2 | .0 | .0 |
| 7. SW7 | 6. | .8 | .0 | .0 | .0 | .0 | .1 | .5 | .0 | .0 |
| 8. NW7 | 97. | .7 | .0 | .0 | .0 | .0 | .0 | .3 | .0 | .0 |

IV. MODEL RESULTS (WORST CASE WIND ANGLE) (CONT.)

| RECEPTOR | CONC/LINK (PPM) I | J | K | L | M | N | O | P | Q | R | S | T |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1. NE3 | .0 | .1 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 |
| 2. SE3 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 |
| 3. SW3 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 |
| 4. NW3 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 |
| 5. NE7 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 |
| 6. SE7 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 |
| 7. SW7 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 |
| 8. NW7 | .0 | .2 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 |

CALINE4: CALIFORNIA LINE SOURCE DISPERSION MODEL
JUNE 1989 VERSION
PAGE 1

JOB: SIERRA HIGHWAY AND PLACERTIA CANYON ROAD AM WP (SOUNDSTAGE)
RUN: Hour 1 (WORST CASE ANGLE)
POLLUTANT: Carbon Monoxide

I. SITE VARIABLES

U= .5 M/S Z0= 100. CM ALT= 0. (M)
BRG= WORST CASE VD= .0 CM/S
CLAS= 7 (G) VS= .0 CM/S
MIXH= 1000. M AMB= .0 PPM
SIGTH= 5. DEGREES TEMP= 15.6 DEGREE (C)

II. LINK VARIABLES

| LINK DESCRIPTION | LINK COORDINATES (M) X1 | Y1 | X2 | Y2 | TYPE | VPH | EF (G/MI) | H (M) | W (M) |
|---|---|---|---|---|---|---|---|---|---|
| A. NF | 7 | -450 | 7 | -150 | AG | 282 | 3.0 | .0 | 15.0 |
| B. NA | 7 | -150 | 7 | 0 | AG | 277 | 4.1 | .0 | 13.5 |
| C. ND | 7 | 0 | 7 | 150 | AG | 478 | 3.2 | .0 | 9.9 |
| D. NE | 7 | 150 | 7 | 450 | AG | 478 | 3.0 | .0 | 15.0 |
| E. SF | -7 | 450 | -7 | 150 | AG | 1330 | 3.0 | .0 | 15.0 |
| F. SA | -7 | 150 | -7 | 0 | AG | 1173 | 4.3 | .0 | 13.5 |
| G. SD | -7 | 0 | -7 | -150 | AG | 1233 | 3.3 | .0 | 9.9 |
| H. SE | -7 | -150 | -7 | -450 | AG | 1233 | 3.0 | .0 | 15.0 |
| I. WF | 450 | 7 | 150 | 7 | AG | 333 | 3.0 | .0 | 15.0 |
| J. WA | 150 | 7 | 0 | 7 | AG | 268 | 6.5 | .0 | 13.5 |
| K. WD | 0 | 7 | -150 | 7 | AG | 42 | 4.0 | .0 | 9.9 |
| L. WE | -150 | 7 | -450 | 7 | AG | 42 | 3.0 | .0 | 15.0 |
| M. EF | -450 | -7 | -150 | -7 | AG | 61 | 3.0 | .0 | 15.0 |
| N. EA | -150 | -7 | 0 | -7 | AG | 51 | 6.5 | .0 | 13.5 |
| O. ED | 0 | -7 | 150 | -7 | AG | 253 | 4.0 | .0 | 9.9 |
| P. EE | 150 | -7 | 450 | -7 | AG | 253 | 3.0 | .0 | 15.0 |
| Q. NL | 0 | 0 | 5 | -150 | AG | 5 | 4.1 | .0 | 9.9 |
| R. SL | 0 | 0 | -5 | 150 | AG | 157 | 4.1 | .0 | 9.9 |
| S. WL | 0 | 0 | 150 | 5 | AG | 65 | 6.5 | .0 | 9.9 |
| T. EL | 0 | 0 | -150 | -5 | AG | 10 | 6.5 | .0 | 9.9 |

III. RECEPTOR LOCATIONS

| RECEPTOR | COORDINATES (M) X | Y | Z |
|---|---|---|---|
| 1. NE3 | 14 | 14 | 1.8 |
| 2. SE3 | 14 | -14 | 1.8 |
| 3. SW3 | -14 | -14 | 1.8 |
| 4. NW3 | -14 | 14 | 1.8 |
| 5. NE7 | 18 | 18 | 1.8 |
| 6. SE7 | 18 | -18 | 1.8 |
| 7. SW7 | -18 | -18 | 1.8 |
| 8. NW7 | -18 | 18 | 1.8 |

IV. MODEL RESULTS (WORST CASE WIND ANGLE )

| RECEPTOR | BRG (DEG) | PRED CONC (PPM) | CONC/LINK (PPM) A | B | C | D | E | F | G | H |
|---|---|---|---|---|---|---|---|---|---|---|
| 1. NE3 | 186. | .7 | .0 | .2 | .0 | .0 | .0 | .0 | .0 | .2 |
| 2. SE3 | 352. | .8 | .0 | .0 | .2 | .0 | .1 | .2 | .0 | .0 |
| 3. SW3 | 5. | 1.1 | .0 | .0 | .0 | .0 | .1 | .7 | .0 | .0 |
| 4. NW3 | 5. | 1.1 | .0 | .0 | .0 | .1 | .2 | .8 | .0 | .0 |
| 5. NE7 | 187. | .6 | .0 | .1 | .0 | .0 | .0 | .0 | .0 | .2 |
| 6. SE7 | 350. | .7 | .0 | .0 | .2 | .0 | .0 | .2 | .0 | .0 |
| 7. SW7 | 6. | .8 | .0 | .0 | .0 | .0 | .1 | .5 | .0 | .0 |
| 8. NW7 | 97. | .7 | .0 | .0 | .0 | .0 | .0 | .3 | .0 | .0 |

IV. MODEL RESULTS (WORST CASE WIND ANGLE) (CONT.)

| RECEPTOR | CONC/LINK (PPM) I | J | K | L | M | N | O | P | Q | R | S | T |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1. NE3 | .0 | .1 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 |
| 2. SE3 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 |
| 3. SW3 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 |
| 4. NW3 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 |
| 5. NE7 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 |
| 6. SE7 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 |
| 7. SW7 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 |
| 8. NW7 | .0 | .2 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 |

CALINE4: CALIFORNIA LINE SOURCE DISPERSION MODEL
JUNE 1989 VERSION
PAGE 1

JOB: SIERRA HIGHWAY AND PLACERTIA CANYON ROAD PM NP
RUN: Hour 1 (WORST CASE ANGLE)
POLLUTANT: Carbon Monoxide

I. SITE VARIABLES

U= .5 M/S Z0= 100. CM ALT= 0. (M)
BRG= WORST CASE VD= .0 CM/S
CLAS= 7 (G) VS= .0 CM/S
MIXH= 1000. M AMB= .0 PPM
SIGTH= 5. DEGREES TEMP= 15.6 DEGREE (C)

II. LINK VARIABLES

| LINK DESCRIPTION | LINK COORDINATES (M) X1 | Y1 | X2 | Y2 | TYPE | VPH | EF (G/MI) | H (M) | W (M) |
|---|---|---|---|---|---|---|---|---|---|
| A. NF | 7 | -450 | 7 | -150 | AG | 1527 | 3.0 | .0 | 15.0 |
| B. NA | 7 | -150 | 7 | 0 | AG | 1511 | 4.4 | .0 | 13.5 |
| C. ND | 7 | 0 | 7 | 150 | AG | 1520 | 3.4 | .0 | 9.9 |
| D. NE | 7 | 150 | 7 | 450 | AG | 1520 | 3.0 | .0 | 15.0 |
| E. SF | -7 | 450 | -7 | 150 | AG | 489 | 3.0 | .0 | 15.0 |
| F. SA | -7 | 150 | -7 | 0 | AG | 467 | 4.1 | .0 | 13.5 |
| G. SD | -7 | 0 | -7 | -150 | AG | 491 | 3.2 | .0 | 9.9 |
| H. SE | -7 | -150 | -7 | -450 | AG | 491 | 3.0 | .0 | 15.0 |
| I. WF | 450 | 7 | 150 | 7 | AG | 220 | 3.0 | .0 | 15.0 |
| J. WA | 150 | 7 | 0 | 7 | AG | 180 | 6.9 | .0 | 13.5 |
| K. WD | 0 | 7 | -150 | 7 | AG | 66 | 6.5 | .0 | 9.9 |
| L. WE | -150 | 7 | -450 | 7 | AG | 66 | 3.0 | .0 | 15.0 |
| M. EF | -450 | -7 | -150 | -7 | AG | 42 | 3.0 | .0 | 15.0 |
| N. EA | -150 | -7 | 0 | -7 | AG | 34 | 6.9 | .0 | 13.5 |
| O. ED | 0 | -7 | 150 | -7 | AG | 201 | 6.5 | .0 | 9.9 |
| P. EE | 150 | -7 | 450 | -7 | AG | 201 | 3.0 | .0 | 15.0 |
| Q. NL | 0 | 0 | 5 | -150 | AG | 16 | 4.1 | .0 | 9.9 |
| R. SL | 0 | 0 | -5 | 150 | AG | 22 | 4.1 | .0 | 9.9 |
| S. WL | 0 | 0 | 150 | 5 | AG | 40 | 6.9 | .0 | 9.9 |
| T. EL | 0 | 0 | -150 | -5 | AG | 8 | 6.9 | .0 | 9.9 |

III. RECEPTOR LOCATIONS

| RECEPTOR | COORDINATES (M) X | Y | Z |
|---|---|---|---|
| 1. NE3 | 14 | 14 | 1.8 |
| 2. SE3 | 14 | -14 | 1.8 |
| 3. SW3 | -14 | -14 | 1.8 |
| 4. NW3 | -14 | 14 | 1.8 |
| 5. NE7 | 18 | 18 | 1.8 |
| 6. SE7 | 18 | -18 | 1.8 |
| 7. SW7 | -18 | -18 | 1.8 |
| 8. NW7 | -18 | 18 | 1.8 |

IV. MODEL RESULTS (WORST CASE WIND ANGLE )

| RECEPTOR | BRG (DEG) | PRED CONC (PPM) | CONC/LINK (PPM) A | B | C | D | E | F | G | H |
|---|---|---|---|---|---|---|---|---|---|---|
| 1. NE3 | 184. | 1.3 | .2 | .9 | .0 | .0 | .0 | .0 | .0 | .0 |
| 2. SE3 | 354. | 1.2 | .0 | .2 | .7 | .0 | .0 | .0 | .0 | .0 |
| 3. SW3 | 82. | .7 | .0 | .2 | .0 | .0 | .0 | .0 | .0 | .0 |
| 4. NW3 | 172. | .8 | .1 | .3 | .0 | .0 | .0 | .0 | .2 | .0 |
| 5. NE7 | 186. | 1.0 | .1 | .6 | .0 | .0 | .0 | .0 | .0 | .0 |
| 6. SE7 | 354. | .8 | .0 | .0 | .4 | .1 | .0 | .0 | .0 | .0 |
| 7. SW7 | 80. | .6 | .0 | .2 | .0 | .0 | .0 | .0 | .0 | .0 |
| 8. NW7 | 172. | .6 | .2 | .2 | .0 | .0 | .0 | .0 | .2 | .0 |

IV. MODEL RESULTS (WORST CASE WIND ANGLE) (CONT.)

| RECEPTOR | CONC/LINK (PPM) I | J | K | L | M | N | O | P | Q | R | S | T |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1. NE3 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 |
| 2. SE3 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 |
| 3. SW3 | .0 | .0 | .0 | .0 | .0 | .0 | .2 | .0 | .0 | .0 | .0 | .0 |
| 4. NW3 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 |
| 5. NE7 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 |
| 6. SE7 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 |
| 7. SW7 | .0 | .0 | .0 | .0 | .0 | .0 | .2 | .0 | .0 | .0 | .0 | .0 |
| 8. NW7 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 |

CALINE4: CALIFORNIA LINE SOURCE DISPERSION MODEL
JUNE 1989 VERSION
PAGE 1

JOB: SIERRA HIGHWAY AND PLACERTIA CANYON ROAD PM WP (OFFICE)
RUN: Hour 1 (WORST CASE ANGLE)
POLLUTANT: Carbon Monoxide

I. SITE VARIABLES

U= .5 M/S Z0= 100. CM ALT= 0. (M)
BRG= WORST CASE VD= .0 CM/S
CLAS= 7 (G) VS= .0 CM/S
MIXH= 1000. M AMB= .0 PPM
SIGTH= 5. DEGREES TEMP= 15.6 DEGREE (C)

II. LINK VARIABLES

| LINK DESCRIPTION | LINK COORDINATES (M) X1 | Y1 | X2 | Y2 | TYPE | VPH | EF (G/MI) | H (M) | W (M) |
|---|---|---|---|---|---|---|---|---|---|
| A. NF | 7 | -450 | 7 | -150 | AG | 1527 | 3.0 | .0 | 15.0 |
| B. NA | 7 | -150 | 7 | 0 | AG | 1511 | 4.4 | .0 | 13.5 |
| C. ND | 7 | 0 | 7 | 150 | AG | 1786 | 3.5 | .0 | 9.9 |
| D. NE | 7 | 150 | 7 | 450 | AG | 1786 | 3.0 | .0 | 15.0 |
| E. SF | -7 | 450 | -7 | 150 | AG | 499 | 3.0 | .0 | 15.0 |
| F. SA | -7 | 150 | -7 | 0 | AG | 467 | 4.1 | .0 | 13.5 |
| G. SD | -7 | 0 | -7 | -150 | AG | 491 | 3.2 | .0 | 9.9 |
| H. SE | -7 | -150 | -7 | -450 | AG | 491 | 3.0 | .0 | 15.0 |
| I. WF | 450 | 7 | 150 | 7 | AG | 499 | 3.0 | .0 | 15.0 |
| J. WA | 150 | 7 | 0 | 7 | AG | 459 | 6.5 | .0 | 13.5 |
| K. WD | 0 | 7 | -150 | 7 | AG | 79 | 3.9 | .0 | 9.9 |
| L. WE | -150 | 7 | -450 | 7 | AG | 79 | 3.0 | .0 | 15.0 |
| M. EF | -450 | -7 | -150 | -7 | AG | 45 | 3.0 | .0 | 15.0 |
| N. EA | -150 | -7 | 0 | -7 | AG | 37 | 6.5 | .0 | 13.5 |
| O. ED | 0 | -7 | 150 | -7 | AG | 214 | 3.9 | .0 | 9.9 |
| P. EE | 150 | -7 | 450 | -7 | AG | 214 | 3.0 | .0 | 15.0 |
| Q. NL | 0 | 0 | 5 | -150 | AG | 16 | 4.1 | .0 | 9.9 |
| R. SL | 0 | 0 | -5 | 150 | AG | 32 | 4.1 | .0 | 9.9 |
| S. WL | 0 | 0 | 150 | 5 | AG | 40 | 6.5 | .0 | 9.9 |
| T. EL | 0 | 0 | -150 | -5 | AG | 8 | 6.5 | .0 | 9.9 |

III. RECEPTOR LOCATIONS

| RECEPTOR | COORDINATES (M) X | Y | Z |
|---|---|---|---|
| 1. NE3 | 14 | 14 | 1.8 |
| 2. SE3 | 14 | -14 | 1.8 |
| 3. SW3 | -14 | -14 | 1.8 |
| 4. NW3 | -14 | 14 | 1.8 |
| 5. NE7 | 18 | 18 | 1.8 |
| 6. SE7 | 18 | -18 | 1.8 |
| 7. SW7 | -18 | -18 | 1.8 |
| 8. NW7 | -18 | 18 | 1.8 |

IV. MODEL RESULTS (WORST CASE WIND ANGLE )

| RECEPTOR | BRG (DEG) | PRED CONC (PPM) | CONC/LINK (PPM) A | B | C | D | E | F | G | H |
|---|---|---|---|---|---|---|---|---|---|---|
| 1. NE3 | 184. | 1.4 | .2 | .9 | .0 | .0 | .0 | .0 | .0 | .0 |
| 2. SE3 | 354. | 1.4 | .0 | .2 | .8 | .0 | .0 | .0 | .0 | .0 |
| 3. SW3 | 81. | .7 | .0 | .2 | .0 | .0 | .0 | .0 | .0 | .0 |
| 4. NW3 | 95. | 1.0 | .0 | .0 | .2 | .0 | .0 | .1 | .0 | .0 |
| 5. NE7 | 186. | 1.1 | .1 | .6 | .0 | .0 | .0 | .0 | .0 | .0 |
| 6. SE7 | 354. | .9 | .0 | .0 | .5 | .1 | .0 | .0 | .0 | .0 |
| 7. SW7 | 78. | .6 | .0 | .2 | .0 | .0 | .0 | .0 | .0 | .0 |
| 8. NW7 | 97. | .8 | .0 | .0 | .2 | .0 | .0 | .1 | .0 | .0 |

IV. MODEL RESULTS (WORST CASE WIND ANGLE) (CONT.)

| RECEPTOR | CONC/LINK (PPM) I | J | K | L | M | N | O | P | Q | R | S | T |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1. NE3 | .0 | .2 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 |
| 2. SE3 | .0 | .1 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 |
| 3. SW3 | .0 | .2 | .0 | .0 | .0 | .0 | .1 | .0 | .0 | .0 | .0 | .0 |
| 4. NW3 | .0 | .5 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 |
| 5. NE7 | .0 | .2 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 |
| 6. SE7 | .0 | .1 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 |
| 7. SW7 | .0 | .2 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 |
| 8. NW7 | .0 | .3 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 |

CALINE4: CALIFORNIA LINE SOURCE DISPERSION MODEL
JUNE 1989 VERSION
PAGE 1

JOB: SIERRA HIGHWAY AND PLACERTIA CANYON ROAD PM WP (SOUNDSTAGE)
RUN: Hour 1 (WORST CASE ANGLE)
POLLUTANT: Carbon Monoxide

I. SITE VARIABLES

U= .5 M/S Z0= 100. CM ALT= 0. (M)
BRG= WORST CASE VD= .0 CM/S
CLAS= 7 (G) VS= .0 CM/S
MIXH= 1000. M AMB= .0 PPM
SIGTH= 5. DEGREES TEMP= 15.6 DEGREE (C)

II. LINK VARIABLES

| LINK DESCRIPTION | LINK COORDINATES (M) X1 | Y1 | X2 | Y2 | TYPE | VPH | EF (G/MI) | H (M) | W (M) |
|---|---|---|---|---|---|---|---|---|---|
| A. NF | 7 | -450 | 7 | -150 | AG | 1527 | 3.0 | .0 | 15.0 |
| B. NA | 7 | -150 | 7 | 0 | AG | 1511 | 4.4 | .0 | 13.5 |
| C. ND | 7 | 0 | 7 | 150 | AG | 1777 | 3.5 | .0 | 9.9 |
| D. NE | 7 | 150 | 7 | 450 | AG | 1777 | 3.0 | .0 | 15.0 |
| E. SF | -7 | 450 | -7 | 150 | AG | 498 | 3.0 | .0 | 15.0 |
| F. SA | -7 | 150 | -7 | 0 | AG | 467 | 4.1 | .0 | 13.5 |
| G. SD | -7 | 0 | -7 | -150 | AG | 491 | 3.2 | .0 | 9.9 |
| H. SE | -7 | -150 | -7 | -450 | AG | 491 | 3.0 | .0 | 15.0 |
| I. WF | 450 | 7 | 150 | 7 | AG | 489 | 3.0 | .0 | 15.0 |
| J. WA | 150 | 7 | 0 | 7 | AG | 449 | 6.5 | .0 | 13.5 |
| K. WD | 0 | 7 | -150 | 7 | AG | 78 | 3.9 | .0 | 9.9 |
| L. WE | -150 | 7 | -450 | 7 | AG | 78 | 3.0 | .0 | 15.0 |
| M. EF | -450 | -7 | -150 | -7 | AG | 44 | 3.0 | .0 | 15.0 |
| N. EA | -150 | -7 | 0 | -7 | AG | 36 | 6.5 | .0 | 13.5 |
| O. ED | 0 | -7 | 150 | -7 | AG | 212 | 3.9 | .0 | 9.9 |
| P. EE | 150 | -7 | 450 | -7 | AG | 212 | 3.0 | .0 | 15.0 |
| Q. NL | 0 | 0 | 5 | -150 | AG | 16 | 4.1 | .0 | 9.9 |
| R. SL | 0 | 0 | -5 | 150 | AG | 31 | 4.1 | .0 | 9.9 |
| S. WL | 0 | 0 | 150 | 5 | AG | 40 | 6.5 | .0 | 9.9 |
| T. EL | 0 | 0 | -150 | -5 | AG | 8 | 6.5 | .0 | 9.9 |

III. RECEPTOR LOCATIONS

| RECEPTOR | COORDINATES (M) X | Y | Z |
|---|---|---|---|
| 1. NE3 | 14 | 14 | 1.8 |
| 2. SE3 | 14 | -14 | 1.8 |
| 3. SW3 | -14 | -14 | 1.8 |
| 4. NW3 | -14 | 14 | 1.8 |
| 5. NE7 | 18 | 18 | 1.8 |
| 6. SE7 | 18 | -18 | 1.8 |
| 7. SW7 | -18 | -18 | 1.8 |
| 8. NW7 | -18 | 18 | 1.8 |

IV. MODEL RESULTS (WORST CASE WIND ANGLE )

| RECEPTOR | BRG (DEG) | PRED CONC (PPM) | CONC/LINK (PPM) A | B | C | D | E | F | G | H |
|---|---|---|---|---|---|---|---|---|---|---|
| 1. NE3 | 184. | 1.4 | .2 | .9 | .0 | .0 | .0 | .0 | .0 | .0 |
| 2. SE3 | 354. | 1.4 | .0 | .2 | .8 | .0 | .0 | .0 | .0 | .0 |
| 3. SW3 | 81. | .7 | .0 | .2 | .0 | .0 | .0 | .0 | .0 | .0 |
| 4. NW3 | 95. | 1.0 | .0 | .0 | .2 | .0 | .0 | .1 | .0 | .0 |
| 5. NE7 | 186. | 1.1 | .1 | .6 | .0 | .0 | .0 | .0 | .0 | .0 |
| 6. SE7 | 354. | .9 | .0 | .0 | .5 | .1 | .0 | .0 | .0 | .0 |
| 7. SW7 | 78. | .6 | .0 | .2 | .0 | .0 | .0 | .0 | .0 | .0 |
| 8. NW7 | 97. | .8 | .0 | .0 | .2 | .0 | .0 | .1 | .0 | .0 |

IV. MODEL RESULTS (WORST CASE WIND ANGLE) (CONT.)

| RECEPTOR | CONC/LINK (PPM) I | J | K | L | M | N | O | P | Q | R | S | T |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1. NE3 | .0 | .2 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 |
| 2. SE3 | .0 | .1 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 |
| 3. SW3 | .0 | .2 | .0 | .0 | .0 | .0 | .1 | .0 | .0 | .0 | .0 | .0 |
| 4. NW3 | .0 | .5 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 |
| 5. NE7 | .0 | .2 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 |
| 6. SE7 | .0 | .1 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 |
| 7. SW7 | .0 | .2 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 |
| 8. NW7 | .0 | .3 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 |

CALINE4: CALIFORNIA LINE SOURCE DISPERSION MODEL
JUNE 1989 VERSION
PAGE 1

JOB: SIERRA HIGHWAY AND SR14 SB RAMPS AM NP
RUN: Hour 1 (WORST CASE ANGLE)
POLLUTANT: Carbon Monoxide

I. SITE VARIABLES

U= .5 M/S Z0= 100. CM ALT= 0. (M)
BRG= WORST CASE VD= .0 CM/S
CLAS= 7 (G) VS= .0 CM/S
MIXH= 1000. M AMB= .0 PPM
SIGTH= 5. DEGREES TEMP= 15.6 DEGREE (C)

II. LINK VARIABLES

| LINK DESCRIPTION | LINK COORDINATES (M) X1 | Y1 | X2 | Y2 | TYPE | VPH | EF (G/MI) | H (M) | W (M) |
|---|---|---|---|---|---|---|---|---|---|
| A. NF | 7 | -450 | 7 | -150 | AG | 431 | 3.0 | .0 | 15.0 |
| B. NA | 7 | -150 | 7 | 0 | AG | 431 | 4.1 | .0 | 9.9 |
| C. ND | 7 | 0 | 7 | 150 | AG | 324 | 3.2 | .0 | 9.9 |
| D. NE | 7 | 150 | 7 | 450 | AG | 324 | 3.0 | .0 | 15.0 |
| E. SF | -7 | 450 | -7 | 150 | AG | 1946 | 3.0 | .0 | 15.0 |
| F. SA | -7 | 150 | -7 | 0 | AG | 1241 | 4.3 | .0 | 13.5 |
| G. SD | -7 | 0 | -7 | -150 | AG | 1287 | 3.3 | .0 | 9.9 |
| H. SE | -7 | -150 | -7 | -450 | AG | 1287 | 3.0 | .0 | 15.0 |
| I. WF | 0 | 540 | 0 | 570 | AG | 50 | 3.0 | .0 | 10.5 |
| J. WA | 0 | 540 | 0 | 570 | AG | 4 | 6.9 | .0 | 9.9 |
| K. WD | 0 | 5 | -150 | 5 | AG | 0 | 6.9 | .0 | 9.9 |
| L. WE | -150 | 5 | -450 | 5 | AG | 0 | 3.0 | .0 | 10.5 |
| M. EF | -450 | -5 | -150 | -5 | AG | 0 | 3.0 | .0 | 10.5 |
| N. EA | -150 | -5 | 0 | -5 | AG | 0 | 6.9 | .0 | 9.9 |
| O. ED | 0 | 540 | 0 | 570 | AG | 816 | 6.9 | .0 | 9.9 |
| P. EE | 0 | 540 | 0 | 570 | AG | 816 | 3.0 | .0 | 10.5 |
| Q. NL | 0 | -570 | 0 | -540 | AG | 0 | 4.1 | .0 | 9.9 |
| R. SL | 0 | 0 | -5 | 150 | AG | 705 | 4.9 | .0 | 9.9 |
| S. WL | 0 | -570 | 0 | -540 | AG | 46 | 6.9 | .0 | 9.9 |
| T. EL | 0 | 0 | -150 | -5 | AG | 0 | 6.9 | .0 | 9.9 |

III. RECEPTOR LOCATIONS

| RECEPTOR | COORDINATES (M) X | Y | Z |
|---|---|---|---|
| 1. NE3 | 14 | 10 | 1.8 |
| 2. SE3 | 14 | -10 | 1.8 |
| 3. SW3 | -14 | -10 | 1.8 |
| 4. NW3 | -14 | 10 | 1.8 |
| 5. NE7 | 18 | 14 | 1.8 |
| 6. SE7 | 18 | -14 | 1.8 |
| 7. SW7 | -18 | -14 | 1.8 |
| 8. NW7 | -18 | 14 | 1.8 |

IV. MODEL RESULTS (WORST CASE WIND ANGLE )

| RECEPTOR | BRG (DEG) | PRED CONC (PPM) | CONC/LINK (PPM) A | B | C | D | E | F | G | H |
|---|---|---|---|---|---|---|---|---|---|---|
| 1. NE3 | 349. | .8 | .0 | .0 | .2 | .0 | .0 | .3 | .0 | .0 |
| 2. SE3 | 351. | .8 | .0 | .0 | .2 | .0 | .1 | .3 | .0 | .0 |
| 3. SW3 | 5. | 1.3 | .0 | .0 | .0 | .0 | .2 | .8 | .0 | .0 |
| 4. NW3 | 5. | 1.4 | .0 | .0 | .0 | .0 | .2 | .9 | .0 | .0 |
| 5. NE7 | 347. | .6 | .0 | .0 | .1 | .0 | .0 | .2 | .0 | .0 |
| 6. SE7 | 349. | .7 | .0 | .0 | .1 | .0 | .0 | .2 | .0 | .0 |
| 7. SW7 | 7. | .9 | .0 | .0 | .0 | .0 | .0 | .5 | .0 | .0 |
| 8. NW7 | 8. | .9 | .0 | .0 | .0 | .0 | .0 | .5 | .0 | .0 |

IV. MODEL RESULTS (WORST CASE WIND ANGLE) (CONT.)

| RECEPTOR | CONC/LINK (PPM) I | J | K | L | M | N | O | P | Q | R | S | T |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1. NE3 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .3 | .0 | .0 |
| 2. SE3 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .3 | .0 | .0 |
| 3. SW3 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .2 | .0 | .0 |
| 4. NW3 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .2 | .0 | .0 |
| 5. NE7 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .2 | .0 | .0 |
| 6. SE7 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .2 | .0 | .0 |
| 7. SW7 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .2 | .0 | .0 |
| 8. NW7 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .2 | .0 | .0 |

CALINE4: CALIFORNIA LINE SOURCE DISPERSION MODEL
JUNE 1989 VERSION
PAGE 1

JOB: SIERRA HIGHWAY AND SR14 SB RAMPS AM WP (OFFICE)
RUN: Hour 1 (WORST CASE ANGLE)
POLLUTANT: Carbon Monoxide

I. SITE VARIABLES

U= .5 M/S Z0= 100. CM ALT= 0. (M)
BRG= WORST CASE VD= .0 CM/S
CLAS= 7 (G) VS= .0 CM/S
MIXH= 1000. M AMB= .0 PPM
SIGTH= 5. DEGREES TEMP= 15.6 DEGREE (C)

II. LINK VARIABLES

| LINK DESCRIPTION | LINK COORDINATES (M) X1 | Y1 | X2 | Y2 | TYPE | VPH | EF (G/MI) | H (M) | W (M) |
|---|---|---|---|---|---|---|---|---|---|
| A. NF | 7 | -450 | 7 | -150 | AG | 472 | 3.0 | .0 | 15.0 |
| B. NA | 7 | -150 | 7 | 0 | AG | 472 | 4.1 | .0 | 9.9 |
| C. ND | 7 | 0 | 7 | 150 | AG | 326 | 3.2 | .0 | 9.9 |
| D. NE | 7 | 150 | 7 | 450 | AG | 326 | 3.0 | .0 | 15.0 |
| E. SF | -7 | 450 | -7 | 150 | AG | 1964 | 3.0 | .0 | 15.0 |
| F. SA | -7 | 150 | -7 | 0 | AG | 1259 | 4.3 | .0 | 13.5 |
| G. SD | -7 | 0 | -7 | -150 | AG | 1341 | 3.4 | .0 | 9.9 |
| H. SE | -7 | -150 | -7 | -450 | AG | 1341 | 3.0 | .0 | 15.0 |
| I. WF | 0 | 540 | 0 | 570 | AG | 86 | 3.0 | .0 | 10.5 |
| J. WA | 0 | 540 | 0 | 570 | AG | 4 | 6.9 | .0 | 9.9 |
| K. WD | 0 | 5 | -150 | 5 | AG | 0 | 6.9 | .0 | 9.9 |
| L. WE | -150 | 5 | -450 | 5 | AG | 0 | 3.0 | .0 | 10.5 |
| M. EF | -450 | -5 | -150 | -5 | AG | 0 | 3.0 | .0 | 10.5 |
| N. EA | -150 | -5 | 0 | -5 | AG | 0 | 6.9 | .0 | 9.9 |
| O. ED | 0 | 540 | 0 | 570 | AG | 855 | 6.9 | .0 | 9.9 |
| P. EE | 0 | 540 | 0 | 570 | AG | 855 | 3.0 | .0 | 10.5 |
| Q. NL | 0 | -570 | 0 | -540 | AG | 0 | 4.1 | .0 | 9.9 |
| R. SL | 0 | 0 | -5 | 150 | AG | 705 | 4.9 | .0 | 9.9 |
| S. WL | 0 | -570 | 0 | -540 | AG | 82 | 6.9 | .0 | 9.9 |
| T. EL | 0 | 0 | -150 | -5 | AG | 0 | 6.9 | .0 | 9.9 |

III. RECEPTOR LOCATIONS

| RECEPTOR | COORDINATES (M) X | Y | Z |
|---|---|---|---|
| 1. NE3 | 14 | 10 | 1.8 |
| 2. SE3 | 14 | -10 | 1.8 |
| 3. SW3 | -14 | -10 | 1.8 |
| 4. NW3 | -14 | 10 | 1.8 |
| 5. NE7 | 18 | 14 | 1.8 |
| 6. SE7 | 18 | -14 | 1.8 |
| 7. SW7 | -18 | -14 | 1.8 |
| 8. NW7 | -18 | 14 | 1.8 |

IV. MODEL RESULTS (WORST CASE WIND ANGLE )

| RECEPTOR | BRG (DEG) | PRED CONC (PPM) | CONC/LINK (PPM) A | B | C | D | E | F | G | H |
|---|---|---|---|---|---|---|---|---|---|---|
| 1. NE3 | 349. | .8 | .0 | .0 | .2 | .0 | .0 | .3 | .0 | .0 |
| 2. SE3 | 351. | .8 | .0 | .0 | .2 | .0 | .1 | .3 | .0 | .0 |
| 3. SW3 | 5. | 1.3 | .0 | .0 | .0 | .0 | .2 | .8 | .0 | .0 |
| 4. NW3 | 5. | 1.4 | .0 | .0 | .0 | .0 | .2 | .9 | .0 | .0 |
| 5. NE7 | 347. | .6 | .0 | .0 | .1 | .0 | .0 | .2 | .0 | .0 |
| 6. SE7 | 349. | .7 | .0 | .0 | .1 | .0 | .0 | .3 | .0 | .0 |
| 7. SW7 | 6. | .9 | .0 | .0 | .0 | .0 | .1 | .5 | .0 | .0 |
| 8. NW7 | 7. | .9 | .0 | .0 | .0 | .0 | .1 | .5 | .0 | .0 |

IV. MODEL RESULTS (WORST CASE WIND ANGLE) (CONT.)

| RECEPTOR | CONC/LINK (PPM) I | J | K | L | M | N | O | P | Q | R | S | T |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1. NE3 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .3 | .0 | .0 |
| 2. SE3 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .3 | .0 | .0 |
| 3. SW3 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .2 | .0 | .0 |
| 4. NW3 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .2 | .0 | .0 |
| 5. NE7 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .2 | .0 | .0 |
| 6. SE7 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .2 | .0 | .0 |
| 7. SW7 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .2 | .0 | .0 |
| 8. NW7 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .2 | .0 | .0 |

CALINE4: CALIFORNIA LINE SOURCE DISPERSION MODEL
JUNE 1989 VERSION
PAGE 1

JOB: SIERRA HIGHWAY AND SR14 SB RAMPS AM WP (SOUNDSTAGE)
RUN: Hour 1 (WORST CASE ANGLE)
POLLUTANT: Carbon Monoxide

I. SITE VARIABLES

U= .5 M/S Z0= 100. CM ALT= 0. (M)
BRG= WORST CASE VD= .0 CM/S
CLAS= 7 (G) VS= .0 CM/S
MIXH= 1000. M AMB= .0 PPM
SIGTH= 5. DEGREES TEMP= 15.6 DEGREE (C)

II. LINK VARIABLES

| LINK DESCRIPTION | LINK COORDINATES (M) X1 | Y1 | X2 | Y2 | TYPE | VPH | EF (G/MI) | H (M) | W (M) |
|---|---|---|---|---|---|---|---|---|---|
| A. NF | 7 | -450 | 7 | -150 | AG | 471 | 3.0 | .0 | 15.0 |
| B. NA | 7 | -150 | 7 | 0 | AG | 471 | 4.1 | .0 | 9.9 |
| C. ND | 7 | 0 | 7 | 150 | AG | 326 | 3.2 | .0 | 9.9 |
| D. NE | 7 | 150 | 7 | 450 | AG | 326 | 3.0 | .0 | 15.0 |
| E. SF | -7 | 450 | -7 | 150 | AG | 1963 | 3.0 | .0 | 15.0 |
| F. SA | -7 | 150 | -7 | 0 | AG | 1258 | 4.3 | .0 | 13.5 |
| G. SD | -7 | 0 | -7 | -150 | AG | 1339 | 3.4 | .0 | 9.9 |
| H. SE | -7 | -150 | -7 | -450 | AG | 1339 | 3.0 | .0 | 15.0 |
| I. WF | 0 | 540 | 0 | 570 | AG | 85 | 3.0 | .0 | 10.5 |
| J. WA | 0 | 540 | 0 | 570 | AG | 4 | 6.9 | .0 | 9.9 |
| K. WD | 0 | 5 | -150 | 5 | AG | 0 | 6.9 | .0 | 9.9 |
| L. WE | -150 | 5 | -450 | 5 | AG | 0 | 3.0 | .0 | 10.5 |
| M. EF | -450 | -5 | -150 | -5 | AG | 0 | 3.0 | .0 | 10.5 |
| N. EA | -150 | -5 | 0 | -5 | AG | 0 | 6.9 | .0 | 9.9 |
| O. ED | 0 | 540 | 0 | 570 | AG | 854 | 6.9 | .0 | 9.9 |
| P. EE | 0 | 540 | 0 | 570 | AG | 854 | 3.0 | .0 | 10.5 |
| Q. NL | 0 | -570 | 0 | -540 | AG | 0 | 4.1 | .0 | 9.9 |
| R. SL | 0 | 0 | -5 | 150 | AG | 705 | 4.9 | .0 | 9.9 |
| S. WL | 0 | -570 | 0 | -540 | AG | 81 | 6.9 | .0 | 9.9 |
| T. EL | 0 | 0 | -150 | -5 | AG | 0 | 6.9 | .0 | 9.9 |

III. RECEPTOR LOCATIONS

| RECEPTOR | COORDINATES (M) X | Y | Z |
|---|---|---|---|
| 1. NE3 | 14 | 10 | 1.8 |
| 2. SE3 | 14 | -10 | 1.8 |
| 3. SW3 | -14 | -10 | 1.8 |
| 4. NW3 | -14 | 10 | 1.8 |
| 5. NE7 | 18 | 14 | 1.8 |
| 6. SE7 | 18 | -14 | 1.8 |
| 7. SW7 | -18 | -14 | 1.8 |
| 8. NW7 | -18 | 14 | 1.8 |

IV. MODEL RESULTS (WORST CASE WIND ANGLE )

| RECEPTOR | BRG (DEG) | PRED CONC (PPM) | CONC/LINK (PPM) A | B | C | D | E | F | G | H |
|---|---|---|---|---|---|---|---|---|---|---|
| 1. NE3 | 349. | .8 | .0 | .0 | .2 | .0 | .0 | .3 | .0 | .0 |
| 2. SE3 | 351. | .8 | .0 | .0 | .2 | .0 | .1 | .3 | .0 | .0 |
| 3. SW3 | 5. | 1.3 | .0 | .0 | .0 | .0 | .2 | .8 | .0 | .0 |
| 4. NW3 | 5. | 1.4 | .0 | .0 | .0 | .0 | .2 | .9 | .0 | .0 |
| 5. NE7 | 347. | .6 | .0 | .0 | .1 | .0 | .0 | .2 | .0 | .0 |
| 6. SE7 | 349. | .7 | .0 | .0 | .1 | .0 | .0 | .3 | .0 | .0 |
| 7. SW7 | 6. | .9 | .0 | .0 | .0 | .0 | .1 | .5 | .0 | .0 |
| 8. NW7 | 7. | .9 | .0 | .0 | .0 | .0 | .1 | .5 | .0 | .0 |

IV. MODEL RESULTS (WORST CASE WIND ANGLE) (CONT.)

| RECEPTOR | CONC/LINK (PPM) I | J | K | L | M | N | O | P | Q | R | S | T |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1. NE3 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .3 | .0 | .0 |
| 2. SE3 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .3 | .0 | .0 |
| 3. SW3 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .2 | .0 | .0 |
| 4. NW3 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .2 | .0 | .0 |
| 5. NE7 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .2 | .0 | .0 |
| 6. SE7 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .2 | .0 | .0 |
| 7. SW7 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .2 | .0 | .0 |
| 8. NW7 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .2 | .0 | .0 |

CALINE4: CALIFORNIA LINE SOURCE DISPERSION MODEL
JUNE 1989 VERSION
PAGE 1

JOB: SIERRA HIGHWAY AND SR14 SB RAMPS PM NP
RUN: Hour 1 (WORST CASE ANGLE)
POLLUTANT: Carbon Monoxide

I. SITE VARIABLES

U= .5 M/S Z0= 100. CM ALT= 0. (M)
BRG= WORST CASE VD= .0 CM/S
CLAS= 7 (G) VS= .0 CM/S
MIXH= 1000. M AMB= .0 PPM
SIGTH= 5. DEGREES TEMP= 15.6 DEGREE (C)

II. LINK VARIABLES

| LINK DESCRIPTION | LINK COORDINATES (M) X1 | Y1 | X2 | Y2 | TYPE | VPH | EF (G/MI) | H (M) | W (M) |
|---|---|---|---|---|---|---|---|---|---|
| A. NF | 7 | -450 | 7 | -150 | AG | 1531 | 3.0 | .0 | 15.0 |
| B. NA | 7 | -150 | 7 | 0 | AG | 1531 | 5.1 | .0 | 9.9 |
| C. ND | 7 | 0 | 7 | 150 | AG | 1487 | 3.4 | .0 | 9.9 |
| D. NE | 7 | 150 | 7 | 450 | AG | 1487 | 3.0 | .0 | 15.0 |
| E. SF | -7 | 450 | -7 | 150 | AG | 673 | 3.0 | .0 | 15.0 |
| F. SA | -7 | 150 | -7 | 0 | AG | 459 | 4.1 | .0 | 13.5 |
| G. SD | -7 | 0 | -7 | -150 | AG | 484 | 3.2 | .0 | 9.9 |
| H. SE | -7 | -150 | -7 | -450 | AG | 484 | 3.0 | .0 | 15.0 |
| I. WF | 0 | 540 | 0 | 570 | AG | 27 | 3.0 | .0 | 10.5 |
| J. WA | 0 | 540 | 0 | 570 | AG | 2 | 6.9 | .0 | 9.9 |
| K. WD | 0 | 5 | -150 | 5 | AG | 0 | 6.9 | .0 | 9.9 |
| L. WE | -150 | 5 | -450 | 5 | AG | 0 | 3.0 | .0 | 10.5 |
| M. EF | -450 | -5 | -150 | -5 | AG | 0 | 3.0 | .0 | 10.5 |
| N. EA | -150 | -5 | 0 | -5 | AG | 0 | 6.9 | .0 | 9.9 |
| O. ED | 0 | 540 | 0 | 570 | AG | 260 | 6.9 | .0 | 9.9 |
| P. EE | 0 | 540 | 0 | 570 | AG | 260 | 3.0 | .0 | 10.5 |
| Q. NL | 0 | -570 | 0 | -540 | AG | 0 | 4.1 | .0 | 9.9 |
| R. SL | 0 | 0 | -5 | 150 | AG | 214 | 4.1 | .0 | 9.9 |
| S. WL | 0 | -570 | 0 | -540 | AG | 25 | 6.9 | .0 | 9.9 |
| T. EL | 0 | 0 | -150 | -5 | AG | 0 | 6.9 | .0 | 9.9 |

III. RECEPTOR LOCATIONS

| RECEPTOR | COORDINATES (M) X | Y | Z |
|---|---|---|---|
| 1. NE3 | 14 | 10 | 1.8 |
| 2. SE3 | 14 | -10 | 1.8 |
| 3. SW3 | -14 | -10 | 1.8 |
| 4. NW3 | -14 | 10 | 1.8 |
| 5. NE7 | 18 | 14 | 1.8 |
| 6. SE7 | 18 | -14 | 1.8 |
| 7. SW7 | -18 | -14 | 1.8 |
| 8. NW7 | -18 | 14 | 1.8 |

IV. MODEL RESULTS (WORST CASE WIND ANGLE )

| RECEPTOR | BRG (DEG) | PRED CONC (PPM) | CONC/LINK (PPM) A | B | C | D | E | F | G | H |
|---|---|---|---|---|---|---|---|---|---|---|
| 1. NE3 | 186. | 1.2 | .0 | 1.0 | .0 | .0 | .0 | .0 | .0 | .0 |
| 2. SE3 | 186. | 1.2 | .1 | 1.0 | .0 | .0 | .0 | .0 | .0 | .1 |
| 3. SW3 | 5. | .8 | .0 | .0 | .0 | .2 | .0 | .3 | .0 | .0 |
| 4. NW3 | 171. | .7 | .0 | .3 | .0 | .0 | .0 | .0 | .2 | .0 |
| 5. NE7 | 187. | .8 | .0 | .7 | .0 | .0 | .0 | .0 | .0 | .0 |
| 6. SE7 | 187. | .8 | .1 | .6 | .0 | .0 | .0 | .0 | .0 | .0 |
| 7. SW7 | 7. | .6 | .0 | .0 | .0 | .2 | .0 | .2 | .0 | .0 |
| 8. NW7 | 169. | .6 | .0 | .3 | .0 | .0 | .0 | .0 | .2 | .0 |

IV. MODEL RESULTS (WORST CASE WIND ANGLE) (CONT.)

| RECEPTOR | CONC/LINK (PPM) I | J | K | L | M | N | O | P | Q | R | S | T |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1. NE3 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 |
| 2. SE3 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 |
| 3. SW3 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 |
| 4. NW3 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 |
| 5. NE7 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 |
| 6. SE7 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 |
| 7. SW7 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 |
| 8. NW7 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 |

CALINE4: CALIFORNIA LINE SOURCE DISPERSION MODEL
JUNE 1989 VERSION
PAGE 1

JOB: SIERRA HIGHWAY AND SR14 SB RAMPS PM WP (OFFICE)
RUN: Hour 1 (WORST CASE ANGLE)
POLLUTANT: Carbon Monoxide

I. SITE VARIABLES

U= .5 M/S Z0= 100. CM ALT= 0. (M)
BRG= WORST CASE VD= .0 CM/S
CLAS= 7 (G) VS= .0 CM/S
MIXH= 1000. M AMB= .0 PPM
SIGTH= 5. DEGREES TEMP= 15.6 DEGREE (C)

II. LINK VARIABLES

| LINK DESCRIPTION | LINK COORDINATES (M) X1 | Y1 | X2 | Y2 | TYPE | VPH | EF (G/MI) | H (M) | W (M) |
|---|---|---|---|---|---|---|---|---|---|
| A. NF | 7 | -450 | 7 | -150 | AG | 1797 | 3.0 | .0 | 15.0 |
| B. NA | 7 | -150 | 7 | 0 | AG | 1797 | 5.5 | .0 | 9.9 |
| C. ND | 7 | 0 | 7 | 150 | AG | 1503 | 3.4 | .0 | 9.9 |
| D. NE | 7 | 150 | 7 | 450 | AG | 1503 | 3.0 | .0 | 15.0 |
| E. SF | -7 | 450 | -7 | 150 | AG | 676 | 3.0 | .0 | 15.0 |
| F. SA | -7 | 150 | -7 | 0 | AG | 462 | 4.1 | .0 | 13.5 |
| G. SD | -7 | 0 | -7 | -150 | AG | 493 | 3.2 | .0 | 9.9 |
| H. SE | -7 | -150 | -7 | -450 | AG | 493 | 3.0 | .0 | 15.0 |
| I. WF | 0 | 540 | 0 | 570 | AG | 33 | 3.0 | .0 | 10.5 |
| J. WA | 0 | 540 | 0 | 570 | AG | 2 | 6.9 | .0 | 9.9 |
| K. WD | 0 | 5 | -150 | 5 | AG | 0 | 6.9 | .0 | 9.9 |
| L. WE | -150 | 5 | -450 | 5 | AG | 0 | 3.0 | .0 | 10.5 |
| M. EF | -450 | -5 | -150 | -5 | AG | 0 | 3.0 | .0 | 10.5 |
| N. EA | -150 | -5 | 0 | -5 | AG | 0 | 6.9 | .0 | 9.9 |
| O. ED | 0 | 540 | 0 | 570 | AG | 510 | 6.9 | .0 | 9.9 |
| P. EE | 0 | 540 | 0 | 570 | AG | 510 | 3.0 | .0 | 10.5 |
| Q. NL | 0 | -570 | 0 | -540 | AG | 0 | 4.1 | .0 | 9.9 |
| R. SL | 0 | 0 | -5 | 150 | AG | 214 | 4.1 | .0 | 9.9 |
| S. WL | 0 | -570 | 0 | -540 | AG | 31 | 6.9 | .0 | 9.9 |
| T. EL | 0 | 0 | -150 | -5 | AG | 0 | 6.9 | .0 | 9.9 |

III. RECEPTOR LOCATIONS

| RECEPTOR | COORDINATES (M) X | Y | Z |
|---|---|---|---|
| 1. NE3 | 14 | 10 | 1.8 |
| 2. SE3 | 14 | -10 | 1.8 |
| 3. SW3 | -14 | -10 | 1.8 |
| 4. NW3 | -14 | 10 | 1.8 |
| 5. NE7 | 18 | 14 | 1.8 |
| 6. SE7 | 18 | -14 | 1.8 |
| 7. SW7 | -18 | -14 | 1.8 |
| 8. NW7 | -18 | 14 | 1.8 |

IV. MODEL RESULTS (WORST CASE WIND ANGLE )

| RECEPTOR | BRG (DEG) | PRED CONC (PPM) | CONC/LINK (PPM) A | B | C | D | E | F | G | H |
|---|---|---|---|---|---|---|---|---|---|---|
| 1. NE3 | 186. | 1.4 | .0 | 1.2 | .0 | .0 | .0 | .0 | .0 | .0 |
| 2. SE3 | 186. | 1.4 | .1 | 1.2 | .0 | .0 | .0 | .0 | .0 | .1 |
| 3. SW3 | 169. | .7 | .0 | .4 | .0 | .0 | .0 | .0 | .2 | .0 |
| 4. NW3 | 170. | .8 | .0 | .5 | .0 | .0 | .0 | .0 | .2 | .0 |
| 5. NE7 | 187. | 1.0 | .0 | .8 | .0 | .0 | .0 | .0 | .0 | .0 |
| 6. SE7 | 188. | 1.0 | .0 | .8 | .0 | .0 | .0 | .0 | .0 | .0 |
| 7. SW7 | 7. | .6 | .0 | .0 | .0 | .2 | .0 | .2 | .0 | .0 |
| 8. NW7 | 168. | .6 | .0 | .4 | .0 | .0 | .0 | .0 | .2 | .0 |

IV. MODEL RESULTS (WORST CASE WIND ANGLE) (CONT.)

| RECEPTOR | CONC/LINK (PPM) I | J | K | L | M | N | O | P | Q | R | S | T |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1. NE3 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 |
| 2. SE3 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 |
| 3. SW3 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 |
| 4. NW3 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 |
| 5. NE7 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 |
| 6. SE7 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 |
| 7. SW7 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 |
| 8. NW7 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 |

CALINE4: CALIFORNIA LINE SOURCE DISPERSION MODEL
JUNE 1989 VERSION
PAGE 1

JOB: SIERRA HIGHWAY AND SR14 SB RAMPS PM WP (SOUNDSTAGE)
RUN: Hour 1 (WORST CASE ANGLE)
POLLUTANT: Carbon Monoxide

I. SITE VARIABLES

U= .5 M/S Z0= 100. CM ALT= 0. (M)
BRG= WORST CASE VD= .0 CM/S
CLAS= 7 (G) VS= .0 CM/S
MIXH= 1000. M AMB= .0 PPM
SIGTH= 5. DEGREES TEMP= 15.6 DEGREE (C)

II. LINK VARIABLES

| LINK DESCRIPTION | LINK COORDINATES (M) X1 | Y1 | X2 | Y2 | TYPE | VPH | EF (G/MI) | H (M) | W (M) |
|---|---|---|---|---|---|---|---|---|---|
| A. NF | 7 | -450 | 7 | -150 | AG | 1788 | 3.0 | .0 | 15.0 |
| B. NA | 7 | -150 | 7 | 0 | AG | 1788 | 5.5 | .0 | 9.9 |
| C. ND | 7 | 0 | 7 | 150 | AG | 1502 | 3.4 | .0 | 9.9 |
| D. NE | 7 | 150 | 7 | 450 | AG | 1502 | 3.0 | .0 | 15.0 |
| E. SF | -7 | 450 | -7 | 150 | AG | 676 | 3.0 | .0 | 15.0 |
| F. SA | -7 | 150 | -7 | 0 | AG | 462 | 4.1 | .0 | 13.5 |
| G. SD | -7 | 0 | -7 | -150 | AG | 493 | 3.2 | .0 | 9.9 |
| H. SE | -7 | -150 | -7 | -450 | AG | 493 | 3.0 | .0 | 15.0 |
| I. WF | 0 | 540 | 0 | 570 | AG | 33 | 3.0 | .0 | 10.5 |
| J. WA | 0 | 540 | 0 | 570 | AG | 2 | 6.9 | .0 | 9.9 |
| K. WD | 0 | 5 | -150 | 5 | AG | 0 | 6.9 | .0 | 9.9 |
| L. WE | -150 | 5 | -450 | 5 | AG | 0 | 3.0 | .0 | 10.5 |
| M. EF | -450 | -5 | -150 | -5 | AG | 0 | 3.0 | .0 | 10.5 |
| N. EA | -150 | -5 | 0 | -5 | AG | 0 | 6.9 | .0 | 9.9 |
| O. ED | 0 | 540 | 0 | 570 | AG | 502 | 6.9 | .0 | 9.9 |
| P. EE | 0 | 540 | 0 | 570 | AG | 502 | 3.0 | .0 | 10.5 |
| Q. NL | 0 | -570 | 0 | -540 | AG | 0 | 4.1 | .0 | 9.9 |
| R. SL | 0 | 0 | -5 | 150 | AG | 214 | 4.1 | .0 | 9.9 |
| S. WL | 0 | -570 | 0 | -540 | AG | 31 | 6.9 | .0 | 9.9 |
| T. EL | 0 | 0 | -150 | -5 | AG | 0 | 6.9 | .0 | 9.9 |

III. RECEPTOR LOCATIONS

| RECEPTOR | COORDINATES (M) X | Y | Z |
|---|---|---|---|
| 1. NE3 | 14 | 10 | 1.8 |
| 2. SE3 | 14 | -10 | 1.8 |
| 3. SW3 | -14 | -10 | 1.8 |
| 4. NW3 | -14 | 10 | 1.8 |
| 5. NE7 | 18 | 14 | 1.8 |
| 6. SE7 | 18 | -14 | 1.8 |
| 7. SW7 | -18 | -14 | 1.8 |
| 8. NW7 | -18 | 14 | 1.8 |

IV. MODEL RESULTS (WORST CASE WIND ANGLE )

| RECEPTOR | BRG (DEG) | PRED CONC (PPM) | CONC/LINK (PPM) A | B | C | D | E | F | G | H |
|---|---|---|---|---|---|---|---|---|---|---|
| 1. NE3 | 186. | 1.4 | .0 | 1.2 | .0 | .0 | .0 | .0 | .0 | .0 |
| 2. SE3 | 186. | 1.4 | .1 | 1.2 | .0 | .0 | .0 | .0 | .0 | .1 |
| 3. SW3 | 169. | .7 | .0 | .4 | .0 | .0 | .0 | .0 | .2 | .0 |
| 4. NW3 | 170. | .8 | .0 | .4 | .0 | .0 | .0 | .0 | .2 | .0 |
| 5. NE7 | 187. | 1.0 | .0 | .8 | .0 | .0 | .0 | .0 | .0 | .0 |
| 6. SE7 | 188. | 1.0 | .0 | .8 | .0 | .0 | .0 | .0 | .0 | .0 |
| 7. SW7 | 7. | .6 | .0 | .0 | .0 | .2 | .0 | .2 | .0 | .0 |
| 8. NW7 | 168. | .6 | .0 | .4 | .0 | .0 | .0 | .0 | .2 | .0 |

IV. MODEL RESULTS (WORST CASE WIND ANGLE) (CONT.)

| RECEPTOR | CONC/LINK (PPM) I | J | K | L | M | N | O | P | Q | R | S | T |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1. NE3 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 |
| 2. SE3 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 |
| 3. SW3 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 |
| 4. NW3 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 |
| 5. NE7 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 |
| 6. SE7 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 |
| 7. SW7 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 |
| 8. NW7 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 |

Title : Los Angeles County Avg Annual CYr 2010 Default Title
Version : Emfac2007 V2.3 Nov 1 2006
Run Date : 2011/06/06 11:50:00
Scen Year: 2010 -- All model years in the range 1966 to 2010 selected
Season : Annual
Area : Los Angeles
**********
Year: 2010 -- Model Years 1966 to 2010 Inclusive -- Annual
Emfac2007 Emission Factors: V2.3 Nov 1 2006

County Average Los Angeles County Average

Table 1: Running Exhaust Emissions (grams/mile)

Pollutant Name: Carbon Monoxide Temperature: 60F Relative Humidity: 50%

| Speed MPH | LDA | LDT1 | LDT2 | MDV | LHD1 | LHD2 | MHD | HHD | OBUS | UBUS | MCY | SBUS | MH | ALL |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 3 | 4.485 | 8.892 | 5.865 | 8.09 | 19.604 | 10.856 | 13.57 | 29.103 | 10.176 | 29.814 | 35.261 | 23.119 | 60.828 | 6.87 |
| 4 | 4.328 | 8.476 | 5.672 | 7.753 | 19.604 | 10.856 | 13.57 | 29.103 | 10.176 | 29.814 | 35.261 | 23.119 | 60.828 | 6.681 |
| 5 | 4.181 | 8.094 | 5.49 | 7.441 | 19.604 | 10.856 | 13.57 | 29.103 | 10.176 | 29.814 | 35.261 | 23.119 | 60.828 | 6.505 |
| 6 | 4.044 | 7.738 | 5.32 | 7.151 | 17.994 | 9.974 | 12.5 | 27.171 | 9.359 | 27.211 | 33.828 | 21.272 | 55.823 | 6.214 |
| 7 | 3.915 | 7.409 | 5.159 | 6.883 | 16.552 | 9.183 | 11.537 | 25.373 | 8.625 | 24.894 | 32.517 | 19.613 | 51.343 | 5.946 |
| 8 | 3.794 | 7.106 | 5.007 | 6.633 | 15.26 | 8.472 | 10.67 | 23.7 | 7.966 | 22.826 | 31.317 | 18.122 | 47.326 | 5.698 |
| 9 | 3.68 | 6.825 | 4.864 | 6.401 | 14.099 | 7.834 | 9.888 | 22.142 | 7.373 | 20.979 | 30.22 | 16.778 | 43.72 | 5.468 |
| 10 | 3.573 | 6.565 | 4.729 | 6.185 | 13.055 | 7.259 | 9.182 | 20.692 | 6.838 | 19.327 | 29.217 | 15.567 | 40.477 | 5.254 |
| 11 | 3.472 | 6.323 | 4.6 | 5.982 | 12.115 | 6.741 | 8.544 | 19.344 | 6.355 | 17.845 | 28.301 | 14.473 | 37.557 | 5.056 |
| 12 | 3.377 | 6.099 | 4.479 | 5.793 | 11.267 | 6.274 | 7.967 | 18.091 | 5.919 | 16.516 | 27.466 | 13.484 | 34.925 | 4.872 |
| 13 | 3.287 | 5.89 | 4.363 | 5.616 | 10.502 | 5.851 | 7.443 | 16.93 | 5.525 | 15.321 | 26.707 | 12.589 | 32.548 | 4.7 |
| 14 | 3.202 | 5.695 | 4.254 | 5.45 | 9.81 | 5.469 | 6.968 | 15.854 | 5.167 | 14.246 | 26.017 | 11.778 | 30.4 | 4.54 |
| 15 | 3.121 | 5.514 | 4.149 | 5.294 | 9.183 | 5.122 | 6.537 | 14.861 | 4.843 | 13.276 | 25.393 | 11.041 | 28.456 | 4.39 |
| 16 | 3.045 | 5.344 | 4.05 | 5.148 | 8.616 | 4.808 | 6.144 | 13.947 | 4.548 | 12.402 | 24.83 | 10.373 | 26.695 | 4.251 |
| 17 | 2.972 | 5.186 | 3.956 | 5.01 | 8.101 | 4.523 | 5.787 | 13.109 | 4.281 | 11.611 | 24.326 | 9.765 | 25.098 | 4.12 |
| 18 | 2.903 | 5.038 | 3.865 | 4.88 | 7.634 | 4.264 | 5.462 | 12.344 | 4.038 | 10.897 | 23.876 | 9.211 | 23.649 | 3.999 |
| 19 | 2.838 | 4.899 | 3.779 | 4.758 | 7.209 | 4.028 | 5.165 | 11.629 | 3.816 | 10.249 | 23.478 | 8.707 | 22.332 | 3.884 |
| 20 | 2.775 | 4.77 | 3.697 | 4.642 | 6.823 | 3.814 | 4.894 | 11.176 | 3.614 | 9.663 | 23.13 | 8.248 | 21.136 | 3.782 |
| 21 | 2.716 | 4.648 | 3.619 | 4.534 | 6.472 | 3.618 | 4.647 | 10.748 | 3.43 | 9.131 | 22.83 | 7.829 | 20.047 | 3.686 |
| 22 | 2.659 | 4.534 | 3.544 | 4.431 | 6.153 | 3.44 | 4.421 | 10.343 | 3.262 | 8.648 | 22.576 | 7.447 | 19.056 | 3.595 |
| 23 | 2.605 | 4.427 | 3.472 | 4.334 | 5.862 | 3.278 | 4.215 | 9.959 | 3.109 | 8.21 | 22.367 | 7.098 | 18.154 | 3.51 |
| 24 | 2.553 | 4.327 | 3.403 | 4.242 | 5.597 | 3.13 | 4.026 | 9.596 | 2.969 | 7.812 | 22.201 | 6.779 | 17.333 | 3.43 |
| 25 | 2.504 | 4.233 | 3.338 | 4.155 | 5.355 | 2.996 | 3.854 | 9.253 | 2.842 | 7.45 | 22.078 | 6.488 | 16.585 | 3.354 |
| 26 | 2.457 | 4.145 | 3.275 | 4.073 | 5.136 | 2.873 | 3.696 | 8.927 | 2.726 | 7.122 | 21.997 | 6.223 | 15.904 | 3.282 |
| 27 | 2.412 | 4.062 | 3.215 | 3.996 | 4.936 | 2.761 | 3.552 | 8.619 | 2.619 | 6.823 | 21.958 | 5.98 | 15.285 | 3.215 |
| 28 | 2.369 | 3.985 | 3.157 | 3.922 | 4.754 | 2.659 | 3.421 | 8.328 | 2.523 | 6.553 | 21.961 | 5.759 | 14.723 | 3.151 |
| 29 | 2.328 | 3.913 | 3.102 | 3.853 | 4.589 | 2.567 | 3.301 | 8.052 | 2.435 | 6.307 | 22.005 | 5.558 | 14.212 | 3.091 |
| 30 | 2.289 | 3.845 | 3.049 | 3.788 | 4.439 | 2.483 | 3.192 | 7.792 | 2.354 | 6.084 | 22.092 | 5.375 | 13.749 | 3.035 |
| 31 | 2.252 | 3.782 | 2.999 | 3.726 | 4.304 | 2.407 | 3.092 | 7.546 | 2.282 | 5.883 | 22.223 | 5.208 | 13.331 | 2.981 |
| 32 | 2.216 | 3.724 | 2.95 | 3.668 | 4.182 | 2.338 | 3.002 | 7.314 | 2.216 | 5.702 | 22.397 | 5.058 | 12.953 | 2.932 |
| 33 | 2.182 | 3.669 | 2.904 | 3.614 | 4.072 | 2.276 | 2.92 | 7.095 | 2.157 | 5.539 | 22.617 | 4.921 | 12.615 | 2.885 |
| 34 | 2.15 | 3.619 | 2.86 | 3.562 | 3.974 | 2.22 | 2.846 | 6.89 | 2.103 | 5.392 | 22.884 | 4.799 | 12.312 | 2.841 |
| 35 | 2.119 | 3.573 | 2.818 | 3.514 | 3.887 | 2.171 | 2.779 | 6.698 | 2.055 | 5.262 | 23.199 | 4.689 | 12.042 | 2.8 |
| 36 | 2.09 | 3.53 | 2.778 | 3.47 | 3.81 | 2.127 | 2.72 | 6.518 | 2.013 | 5.147 | 23.566 | 4.591 | 11.805 | 2.762 |
| 37 | 2.062 | 3.492 | 2.739 | 3.428 | 3.743 | 2.088 | 2.667 | 6.35 | 1.975 | 5.046 | 23.987 | 4.504 | 11.597 | 2.726 |
| 38 | 2.036 | 3.457 | 2.703 | 3.389 | 3.685 | 2.055 | 2.621 | 6.195 | 1.942 | 4.958 | 24.463 | 4.428 | 11.419 | 2.694 |
| 39 | 2.011 | 3.426 | 2.668 | 3.354 | 3.636 | 2.026 | 2.581 | 6.051 | 1.914 | 4.882 | 25 | 4.363 | 11.268 | 2.664 |
| 40 | 1.988 | 3.398 | 2.635 | 3.321 | 3.595 | 2.003 | 2.546 | 5.919 | 1.89 | 4.819 | 25.601 | 4.307 | 11.143 | 2.636 |

# *ATTACHMENT A*

# *INTERSECTION LEVEL OF SERVICE WORKSHEETS*

***EXISTING PLUS PROJECT CONDITIONS***
***SOUNDSTAGES OPTION***

***(YEAR 2010)***

Disney Golden Oak
Existing plus Project Conditions - A.M. Peak Hour

Level Of Service Computation Report
ICU 2(Loss as Green Time %) Method (Base Volume Alternative)

Intersection #1 Sierra Highway & SR 14 SB Ramps

| | | | |
|---|---|---|---|
| Cycle (sec): | 100 | Critical Vol./Cap.(X): | 0.638 |
| Loss Time (sec): | 0 | Average Delay (sec/veh): | xxxxxx |
| Optimal Cycle: | 63 | Level Of Service: | B |

| Street Name: | Sierra Highway | | | | | | SR 14 SB Ramps | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 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 |
| 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 1 | 0 | 1 0 | 2 0 | 0 | 0 0 | 0 0 | 0 | 1 0 | 0 0 | 1 |
| Volume Module: | | | | | | | | | | | | |
| Base Vol: | 0 | 322 | 149 | 705 | 1258 | 0 | 0 | 0 | 0 | 81 | 0 | 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: | 0 | 322 | 149 | 705 | 1258 | 0 | 0 | 0 | 0 | 81 | 0 | 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: | 0 | 322 | 149 | 705 | 1258 | 0 | 0 | 0 | 0 | 81 | 0 | 4 |
| Reduct Vol: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Reduced Vol: | 0 | 322 | 149 | 705 | 1258 | 0 | 0 | 0 | 0 | 81 | 0 | 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: | 0 | 322 | 149 | 705 | 1258 | 0 | 0 | 0 | 0 | 81 | 0 | 4 |
| Saturation Flow Module: | | | | | | | | | | | | |
| Sat/Lane: | 1600 | 1600 | 1600 | 1600 | 1600 | 1600 | 1600 | 1600 | 1600 | 1600 | 1600 | 1600 |
| 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 | 1.37 | 0.63 | 1.00 | 2.00 | 0.00 | 0.00 | 0.00 | 0.00 | 1.00 | 0.00 | 1.00 |
| Final Sat.: | 0 | 2188 | 1012 | 1600 | 3200 | 0 | 0 | 0 | 0 | 1600 | 0 | 1600 |
| Capacity Analysis Module: | | | | | | | | | | | | |
| Vol/Sat: | 0.00 | 0.15 | 0.15 | 0.44 | 0.39 | 0.00 | 0.00 | 0.00 | 0.00 | 0.05 | 0.00 | 0.00 |
| Crit Moves: | | **** | | **** | | | | | | **** | | |

Disney Golden Oak
Existing plus Project Conditions - A.M. Peak Hour

Level Of Service Computation Report
ICU 2(Loss as Green Time %) Method (Base Volume Alternative)

Intersection #2 Sierra Highway & Placerita Canyon Road

| | | | |
|---|---|---|---|
| Cycle (sec): | 100 | Critical Vol./Cap.(X): | 0.531 |
| Loss Time (sec): | 0 | Average Delay (sec/veh): | xxxxxx |
| Optimal Cycle: | 49 | Level Of Service: | A |

| Street Name: | Sierra Highway | | | | | | Placerita Canyon Road | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 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 |
| 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 | 1 | 1 0 | 1 0 | 1 | 1 0 | 1 0 | 1 | 1 0 |
| Volume Module: | | | | | | | | | | | | |
| Base Vol: | 5 | 220 | 57 | 157 | 1156 | 17 | 10 | 39 | 12 | 65 | 20 | 248 |
| 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: | 5 | 220 | 57 | 157 | 1156 | 17 | 10 | 39 | 12 | 65 | 20 | 248 |
| 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: | 5 | 220 | 57 | 157 | 1156 | 17 | 10 | 39 | 12 | 65 | 20 | 248 |
| Reduct Vol: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Reduced Vol: | 5 | 220 | 57 | 157 | 1156 | 17 | 10 | 39 | 12 | 65 | 20 | 248 |
| 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: | 5 | 220 | 57 | 157 | 1156 | 17 | 10 | 39 | 12 | 65 | 20 | 248 |
| Saturation Flow Module: | | | | | | | | | | | | |
| Sat/Lane: | 1600 | 1600 | 1600 | 1600 | 1600 | 1600 | 1600 | 1600 | 1600 | 1600 | 1600 | 1600 |
| 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: | 1.00 | 1.59 | 0.41 | 1.00 | 1.97 | 0.03 | 1.00 | 1.53 | 0.47 | 1.00 | 1.00 | 1.00 |
| Final Sat.: | 1600 | 2542 | 658 | 1600 | 3154 | 46 | 1600 | 2447 | 753 | 1600 | 1600 | 1600 |
| Capacity Analysis Module: | | | | | | | | | | | | |
| Vol/Sat: | 0.00 | 0.09 | 0.09 | 0.10 | 0.37 | 0.37 | 0.01 | 0.02 | 0.02 | 0.04 | 0.01 | 0.16 |
| Crit Moves: | **** | | | | **** | | **** | | | | | **** |

Disney Golden Oak
Existing plus Project Conditions - A.M. Peak Hour

Level Of Service Computation Report
ICU 2(Loss as Green Time %) Method (Base Volume Alternative)

Intersection #3 SR 14 NB Off-Ramp & Placerita Canyon Road

| | | | |
|---|---|---|---|
| Cycle (sec): | 100 | Critical Vol./Cap.(X): | 0.223 |
| Loss Time (sec): | 0 | Average Delay (sec/veh): | xxxxxx |
| Optimal Cycle: | 24 | Level Of Service: | A |

| Street Name: | SR 14 NB Off-Ramp | | | | | | Placerita Canyon Road | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 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 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 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 1 | 0 0 | 1 | 0 0 | 0 0 | 1 | 0 0 | 2 0 | 0 | 0 0 | 1 1 | 0 |
| Volume Module: | | | | | | | | | | | | |
| Base Vol: | 116 | 157 | 231 | 0 | 0 | 22 | 0 | 117 | 0 | 0 | 207 | 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: | 116 | 157 | 231 | 0 | 0 | 22 | 0 | 117 | 0 | 0 | 207 | 0 |
| User Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| PHF Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| PHF Volume: | 116 | 157 | 231 | 0 | 0 | 22 | 0 | 117 | 0 | 0 | 207 | 0 |
| Reduct Vol: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Reduced Vol: | 116 | 157 | 231 | 0 | 0 | 22 | 0 | 117 | 0 | 0 | 207 | 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: | 116 | 157 | 231 | 0 | 0 | 22 | 0 | 117 | 0 | 0 | 207 | 0 |
| Saturation Flow Module: | | | | | | | | | | | | |
| Sat/Lane: | 1600 | 1600 | 1600 | 1600 | 1600 | 1600 | 1600 | 1600 | 1600 | 1600 | 1600 | 1600 |
| 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: | 1.00 | 1.00 | 1.00 | 0.00 | 0.00 | 1.00 | 0.00 | 2.00 | 0.00 | 0.00 | 2.00 | 0.00 |
| Final Sat.: | 1600 | 1600 | 1600 | 0 | 0 | 1600 | 0 | 3200 | 0 | 0 | 3200 | 0 |
| Capacity Analysis Module: | | | | | | | | | | | | |
| Vol/Sat: | 0.07 | 0.10 | 0.14 | 0.00 | 0.00 | 0.01 | 0.00 | 0.04 | 0.00 | 0.00 | 0.06 | 0.00 |
| Crit Moves: | | | **** | | | **** | **** | | | | **** | |

Disney Golden Oak
Existing plus Project Conditions - A.M. Peak Hour

Level Of Service Computation Report
ICU 2(Loss as Green Time %) Method (Base Volume Alternative)

Intersection #4 Current Ranch Main Entrance & Placerita Canyon Road

| | | | |
|---|---|---|---|
| Cycle (sec): | 100 | Critical Vol./Cap.(X): | 0.263 |
| Loss Time (sec): | 0 | Average Delay (sec/veh): | xxxxxx |
| Optimal Cycle: | 20 | Level Of Service: | A |

| Street Name: | Current Ranch Main Entrance | | | | | | Placerita Canyon Road | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 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 | | | Permitted | | | Permitted | | |
| Rights: | Include | | | Include | | | Include | | | Include | | |
| Min. Green: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 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 0 | 0 0 | 1 | 0 1 | 0 0 | 0 | 0 0 | 0 1 | 0 |
| Volume Module: | | | | | | | | | | | | |
| Base Vol: | 0 | 0 | 0 | 0 | 0 | 28 | 197 | 154 | 0 | 0 | 182 | 14 |
| 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 | 28 | 197 | 154 | 0 | 0 | 182 | 14 |
| 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 | 0 | 0 | 28 | 197 | 154 | 0 | 0 | 182 | 14 |
| Reduct Vol: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Reduced Vol: | 0 | 0 | 0 | 0 | 0 | 28 | 197 | 154 | 0 | 0 | 182 | 14 |
| 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 | 0 | 0 | 28 | 197 | 154 | 0 | 0 | 182 | 14 |
| Saturation Flow Module: | | | | | | | | | | | | |
| Sat/Lane: | 1600 | 1600 | 1600 | 1600 | 1600 | 1600 | 1600 | 1600 | 1600 | 1600 | 1600 | 1600 |
| 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 | 0.00 | 0.00 | 1.00 | 0.56 | 0.44 | 0.00 | 0.00 | 0.93 | 0.07 |
| Final Sat.: | 0 | 0 | 0 | 0 | 0 | 1600 | 898 | 702 | 0 | 0 | 1486 | 114 |
| Capacity Analysis Module: | | | | | | | | | | | | |
| Vol/Sat: | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.02 | 0.12 | 0.22 | 0.00 | 0.00 | 0.12 | 0.12 |
| Crit Moves: | | | | | | **** | **** | | | | **** | |

Disney Golden Oak
Existing plus Project Conditions - P.M. Peak Hour

Level Of Service Computation Report
ICU 2(Loss as Green Time %) Method (Base Volume Alternative)

Intersection #1 Sierra Highway & SR 14 SB Ramps

| | | | |
|---|---|---|---|
| Cycle (sec): | 100 | Critical Vol./Cap.(X): | 0.712 |
| Loss Time (sec): | 0 | Average Delay (sec/veh): | xxxxxx |
| Optimal Cycle: | 79 | Level Of Service: | C |

| Street Name: | Sierra Highway | | | | | | SR 14 SB Ramps | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 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 |
| 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 1 | 0 | 1 0 | 2 0 | 0 | 0 0 | 0 0 | 0 | 1 0 | 0 0 | 1 |
| Volume Module: | | | | | | | | | | | | |
| Base Vol: | 0 | 1500 | 288 | 214 | 462 | 0 | 0 | 0 | 0 | 31 | 0 | 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: | 0 | 1500 | 288 | 214 | 462 | 0 | 0 | 0 | 0 | 31 | 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: | 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 | 1500 | 288 | 214 | 462 | 0 | 0 | 0 | 0 | 31 | 0 | 2 |
| Reduct Vol: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Reduced Vol: | 0 | 1500 | 288 | 214 | 462 | 0 | 0 | 0 | 0 | 31 | 0 | 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: | 0 | 1500 | 288 | 214 | 462 | 0 | 0 | 0 | 0 | 31 | 0 | 2 |
| Saturation Flow Module: | | | | | | | | | | | | |
| Sat/Lane: | 1600 | 1600 | 1600 | 1600 | 1600 | 1600 | 1600 | 1600 | 1600 | 1600 | 1600 | 1600 |
| 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 | 1.68 | 0.32 | 1.00 | 2.00 | 0.00 | 0.00 | 0.00 | 0.00 | 1.00 | 0.00 | 1.00 |
| Final Sat.: | 0 | 2685 | 515 | 1600 | 3200 | 0 | 0 | 0 | 0 | 1600 | 0 | 1600 |
| Capacity Analysis Module: | | | | | | | | | | | | |
| Vol/Sat: | 0.00 | 0.56 | 0.56 | 0.13 | 0.14 | 0.00 | 0.00 | 0.00 | 0.00 | 0.02 | 0.00 | 0.00 |
| Crit Moves: | | **** | | **** | | | | | | **** | | |

Disney Golden Oak
Existing plus Project Conditions - P.M. Peak Hour

Level Of Service Computation Report
ICU 2(Loss as Green Time %) Method (Base Volume Alternative)

Intersection #2 Sierra Highway & Placerita Canyon Road

| | | | |
|---|---|---|---|
| Cycle (sec): | 100 | Critical Vol./Cap.(X): | 0.753 |
| Loss Time (sec): | 0 | Average Delay (sec/veh): | xxxxxx |
| Optimal Cycle: | 92 | Level Of Service: | C |

| Street Name: | Sierra Highway | | | | | | Placerita Canyon Road | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 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 |
| 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 | 1 | 1 0 | 1 0 | 1 | 1 0 | 1 0 | 1 | 1 0 |
| Volume Module: | | | | | | | | | | | | |
| Base Vol: | 16 | 1358 | 153 | 31 | 443 | 24 | 8 | 28 | 8 | 40 | 38 | 411 |
| 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: | 16 | 1358 | 153 | 31 | 443 | 24 | 8 | 28 | 8 | 40 | 38 | 411 |
| 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: | 16 | 1358 | 153 | 31 | 443 | 24 | 8 | 28 | 8 | 40 | 38 | 411 |
| Reduct Vol: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Reduced Vol: | 16 | 1358 | 153 | 31 | 443 | 24 | 8 | 28 | 8 | 40 | 38 | 411 |
| 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: | 16 | 1358 | 153 | 31 | 443 | 24 | 8 | 28 | 8 | 40 | 38 | 411 |
| Saturation Flow Module: | | | | | | | | | | | | |
| Sat/Lane: | 1600 | 1600 | 1600 | 1600 | 1600 | 1600 | 1600 | 1600 | 1600 | 1600 | 1600 | 1600 |
| 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: | 1.00 | 1.80 | 0.20 | 1.00 | 1.90 | 0.10 | 1.00 | 1.56 | 0.44 | 1.00 | 1.00 | 1.00 |
| Final Sat.: | 1600 | 2876 | 324 | 1600 | 3036 | 164 | 1600 | 2489 | 711 | 1600 | 1600 | 1600 |
| Capacity Analysis Module: | | | | | | | | | | | | |
| Vol/Sat: | 0.01 | 0.47 | 0.47 | 0.02 | 0.15 | 0.15 | 0.01 | 0.01 | 0.01 | 0.03 | 0.02 | 0.26 |
| Crit Moves: | | **** | | **** | | | **** | | | | | **** |

Disney Golden Oak
Existing plus Project Conditions - P.M. Peak Hour

Level Of Service Computation Report
ICU 2(Loss as Green Time %) Method (Base Volume Alternative)

Intersection #3 SR 14 NB Off-Ramp & Placerita Canyon Road

| | | | |
|---|---|---|---|
| Cycle (sec): | 100 | Critical Vol./Cap.(X): | 0.243 |
| Loss Time (sec): | 0 | Average Delay (sec/veh): | xxxxxx |
| Optimal Cycle: | 25 | Level Of Service: | A |

| Street Name: | SR 14 NB Off-Ramp | | | | | | Placerita Canyon Road | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 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 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 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 1 | 0 0 | 1 | 0 0 | 0 0 | 1 | 0 0 | 2 0 | 0 | 0 0 | 1 1 | 0 |
| Volume Module: | | | | | | | | | | | | |
| Base Vol: | 123 | 28 | 118 | 0 | 0 | 136 | 0 | 99 | 0 | 0 | 270 | 0 |
| Growth Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Initial Bse: | 123 | 28 | 118 | 0 | 0 | 136 | 0 | 99 | 0 | 0 | 270 | 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: | 123 | 28 | 118 | 0 | 0 | 136 | 0 | 99 | 0 | 0 | 270 | 0 |
| Reduct Vol: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Reduced Vol: | 123 | 28 | 118 | 0 | 0 | 136 | 0 | 99 | 0 | 0 | 270 | 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: | 123 | 28 | 118 | 0 | 0 | 136 | 0 | 99 | 0 | 0 | 270 | 0 |
| Saturation Flow Module: | | | | | | | | | | | | |
| Sat/Lane: | 1600 | 1600 | 1600 | 1600 | 1600 | 1600 | 1600 | 1600 | 1600 | 1600 | 1600 | 1600 |
| 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: | 1.63 | 0.37 | 1.00 | 0.00 | 0.00 | 1.00 | 0.00 | 2.00 | 0.00 | 0.00 | 2.00 | 0.00 |
| Final Sat.: | 2607 | 593 | 1600 | 0 | 0 | 1600 | 0 | 3200 | 0 | 0 | 3200 | 0 |
| Capacity Analysis Module: | | | | | | | | | | | | |
| Vol/Sat: | 0.05 | 0.05 | 0.07 | 0.00 | 0.00 | 0.09 | 0.00 | 0.03 | 0.00 | 0.00 | 0.08 | 0.00 |
| Crit Moves: | | | **** | | | **** | **** | | | | **** | |

Disney Golden Oak
Existing plus Project Conditions - P.M. Peak Hour

Level Of Service Computation Report
ICU 2(Loss as Green Time %) Method (Base Volume Alternative)

Intersection #4 Current Ranch Main Entrance & Placerita Canyon Road

| | | | |
|---|---|---|---|
| Cycle (sec): | 100 | Critical Vol./Cap.(X): | 0.241 |
| Loss Time (sec): | 0 | Average Delay (sec/veh): | xxxxxx |
| Optimal Cycle: | 19 | Level Of Service: | A |

| Street Name: | Current Ranch Main Entrance | | | | | | Placerita Canyon Road | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 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 | | | Permitted | | | Permitted | | |
| Rights: | Include | | | Include | | | Include | | | Include | | |
| Min. Green: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 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 0 | 1! 0 | 0 | 0 1 | 0 0 | 0 | 0 0 | 0 1 | 0 |
| Volume Module: | | | | | | | | | | | | |
| Base Vol: | 0 | 0 | 0 | 3 | 0 | 177 | 36 | 170 | 0 | 0 | 89 | 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: | 0 | 0 | 0 | 3 | 0 | 177 | 36 | 170 | 0 | 0 | 89 | 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: | 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 | 3 | 0 | 177 | 36 | 170 | 0 | 0 | 89 | 1 |
| Reduct Vol: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Reduced Vol: | 0 | 0 | 0 | 3 | 0 | 177 | 36 | 170 | 0 | 0 | 89 | 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: | 0 | 0 | 0 | 3 | 0 | 177 | 36 | 170 | 0 | 0 | 89 | 1 |
| Saturation Flow Module: | | | | | | | | | | | | |
| Sat/Lane: | 1600 | 1600 | 1600 | 1600 | 1600 | 1600 | 1600 | 1600 | 1600 | 1600 | 1600 | 1600 |
| 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 | 0.02 | 0.00 | 0.98 | 0.17 | 0.83 | 0.00 | 0.00 | 0.99 | 0.01 |
| Final Sat.: | 0 | 0 | 0 | 27 | 0 | 1573 | 280 | 1320 | 0 | 0 | 1582 | 18 |
| Capacity Analysis Module: | | | | | | | | | | | | |
| Vol/Sat: | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.11 | 0.02 | 0.13 | 0.00 | 0.00 | 0.06 | 0.06 |
| Crit Moves: | | | | | | **** | | **** | | **** | | |

***EXISTING PLUS PROJECT WITH MITIGATION CONDITIONS***
***SOUNDSTAGES OPTION***

***(YEAR 2010)***

Disney Golden Oak
Existing plus Project
with Mitigations Conditions - A.M. Peak Hour

Level Of Service Computation Report
ICU 2(Loss as Green Time %) Method (Base Volume Alternative)

Intersection #1 Sierra Highway & SR 14 SB Ramps

| | | | |
|---|---|---|---|
| Cycle (sec): | 100 | Critical Vol./Cap.(X): | 0.592 |
| Loss Time (sec): | 0 | Average Delay (sec/veh): | xxxxxx |
| Optimal Cycle: | 46 | Level Of Service: | A |

| Street Name: | Sierra Highway | | | | | | SR 14 SB Ramps | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 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: | Include | | | Include | | | Include | | | Include | | |
| Min. Green: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 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 | 2 0 | 1 | 1 0 | 2 0 | 0 | 0 0 | 0 0 | 0 | 1 0 | 0 0 | 1 |
| Volume Module: | | | | | | | | | | | | |
| Base Vol: | 0 | 322 | 149 | 705 | 1258 | 0 | 0 | 0 | 0 | 81 | 0 | 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: | 0 | 322 | 149 | 705 | 1258 | 0 | 0 | 0 | 0 | 81 | 0 | 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: | 0 | 322 | 149 | 705 | 1258 | 0 | 0 | 0 | 0 | 81 | 0 | 4 |
| Reduct Vol: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Reduced Vol: | 0 | 322 | 149 | 705 | 1258 | 0 | 0 | 0 | 0 | 81 | 0 | 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: | 0 | 322 | 149 | 705 | 1258 | 0 | 0 | 0 | 0 | 81 | 0 | 4 |
| Saturation Flow Module: | | | | | | | | | | | | |
| Sat/Lane: | 1600 | 1600 | 1600 | 1600 | 1600 | 1600 | 1600 | 1600 | 1600 | 1600 | 1600 | 1600 |
| 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 | 2.00 | 1.00 | 1.00 | 2.00 | 0.00 | 0.00 | 0.00 | 0.00 | 1.00 | 0.00 | 1.00 |
| Final Sat.: | 0 | 3200 | 1600 | 1600 | 3200 | 0 | 0 | 0 | 0 | 1600 | 0 | 1600 |
| Capacity Analysis Module: | | | | | | | | | | | | |
| Vol/Sat: | 0.00 | 0.10 | 0.09 | 0.44 | 0.39 | 0.00 | 0.00 | 0.00 | 0.00 | 0.05 | 0.00 | 0.00 |
| Crit Moves: | | **** | | **** | | | | | | **** | | |

Disney Golden Oak
Existing plus Project
with Mitigations Conditions - A.M. Peak Hour

Level Of Service Computation Report
ICU 2(Loss as Green Time %) Method (Base Volume Alternative)

Intersection #2 Sierra Highway & Placerita Canyon Road

| | | | |
|---|---|---|---|
| Cycle (sec): | 100 | Critical Vol./Cap.(X): | 0.426 |
| Loss Time (sec): | 0 | Average Delay (sec/veh): | xxxxxx |
| Optimal Cycle: | 40 | Level Of Service: | A |

| Street Name: | Sierra Highway | | | | | | Placerita Canyon Road | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 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 | | | Ignore | | |
| Min. Green: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 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 | 1 1 | 0 | 1 0 | 1 1 | 0 | 1 0 | 2 0 | 1 |
| Volume Module: | | | | | | | | | | | | |
| Base Vol: | 5 | 220 | 57 | 157 | 1156 | 17 | 10 | 39 | 12 | 65 | 20 | 248 |
| 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: | 5 | 220 | 57 | 157 | 1156 | 17 | 10 | 39 | 12 | 65 | 20 | 248 |
| User Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 0.00 |
| PHF Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 0.00 |
| PHF Volume: | 5 | 220 | 57 | 157 | 1156 | 17 | 10 | 39 | 12 | 65 | 20 | 0 |
| Reduct Vol: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Reduced Vol: | 5 | 220 | 57 | 157 | 1156 | 17 | 10 | 39 | 12 | 65 | 20 | 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 | 0.00 |
| MLF Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 0.00 |
| FinalVolume: | 5 | 220 | 57 | 157 | 1156 | 17 | 10 | 39 | 12 | 65 | 20 | 0 |
| Saturation Flow Module: | | | | | | | | | | | | |
| Sat/Lane: | 1600 | 1600 | 1600 | 1600 | 1600 | 1600 | 1600 | 1600 | 1600 | 1600 | 1600 | 1600 |
| 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: | 1.00 | 1.59 | 0.41 | 1.00 | 1.97 | 0.03 | 1.00 | 1.53 | 0.47 | 1.00 | 2.00 | 1.00 |
| Final Sat.: | 1600 | 2542 | 658 | 1600 | 3154 | 46 | 1600 | 2447 | 753 | 1600 | 3200 | 1600 |
| Capacity Analysis Module: | | | | | | | | | | | | |
| Vol/Sat: | 0.00 | 0.09 | 0.09 | 0.10 | 0.37 | 0.37 | 0.01 | 0.02 | 0.02 | 0.04 | 0.01 | 0.00 |
| Crit Moves: | **** | | | | **** | | | **** | | **** | | |

Disney Golden Oak
Existing plus Project
with Mitigations Conditions - P.M. Peak Hour

Level Of Service Computation Report
ICU 2(Loss as Green Time %) Method (Base Volume Alternative)

Intersection #1 Sierra Highway & SR 14 SB Ramps

| | | | |
|---|---|---|---|
| Cycle (sec): | 100 | Critical Vol./Cap.(X): | 0.622 |
| Loss Time (sec): | 0 | Average Delay (sec/veh): | xxxxxx |
| Optimal Cycle: | 49 | Level Of Service: | B |

| Street Name: | Sierra Highway | | | | | | SR 14 SB Ramps | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 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: | Include | | | Include | | | Include | | | Include | | |
| Min. Green: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 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 | 2 0 | 1 | 1 0 | 2 0 | 0 | 0 0 | 0 0 | 0 | 1 0 | 0 0 | 1 |
| Volume Module: | | | | | | | | | | | | |
| Base Vol: | 0 | 1500 | 288 | 214 | 462 | 0 | 0 | 0 | 0 | 31 | 0 | 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: | 0 | 1500 | 288 | 214 | 462 | 0 | 0 | 0 | 0 | 31 | 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: | 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 | 1500 | 288 | 214 | 462 | 0 | 0 | 0 | 0 | 31 | 0 | 2 |
| Reduct Vol: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Reduced Vol: | 0 | 1500 | 288 | 214 | 462 | 0 | 0 | 0 | 0 | 31 | 0 | 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: | 0 | 1500 | 288 | 214 | 462 | 0 | 0 | 0 | 0 | 31 | 0 | 2 |
| Saturation Flow Module: | | | | | | | | | | | | |
| Sat/Lane: | 1600 | 1600 | 1600 | 1600 | 1600 | 1600 | 1600 | 1600 | 1600 | 1600 | 1600 | 1600 |
| 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 | 2.00 | 1.00 | 1.00 | 2.00 | 0.00 | 0.00 | 0.00 | 0.00 | 1.00 | 0.00 | 1.00 |
| Final Sat.: | 0 | 3200 | 1600 | 1600 | 3200 | 0 | 0 | 0 | 0 | 1600 | 0 | 1600 |
| Capacity Analysis Module: | | | | | | | | | | | | |
| Vol/Sat: | 0.00 | 0.47 | 0.18 | 0.13 | 0.14 | 0.00 | 0.00 | 0.00 | 0.00 | 0.02 | 0.00 | 0.00 |
| Crit Moves: | | **** | | **** | | | | | | **** | | |

Disney Golden Oak
Existing plus Project
with Mitigations Conditions - P.M. Peak Hour

Level Of Service Computation Report
ICU 2(Loss as Green Time %) Method (Base Volume Alternative)

Intersection #2 Sierra Highway & Placerita Canyon Road

| | | | |
|---|---|---|---|
| Cycle (sec): | 100 | Critical Vol./Cap.(X): | 0.528 |
| Loss Time (sec): | 0 | Average Delay (sec/veh): | xxxxxx |
| Optimal Cycle: | 48 | Level Of Service: | A |

| Street Name: | Sierra Highway | | | | | | Placerita Canyon Road | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 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 | | | Ignore | | |
| Min. Green: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 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 | 1 1 | 0 | 1 0 | 1 1 | 0 | 1 0 | 2 0 | 1 |
| Volume Module: | | | | | | | | | | | | |
| Base Vol: | 16 | 1358 | 153 | 31 | 443 | 24 | 8 | 28 | 8 | 40 | 38 | 411 |
| 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: | 16 | 1358 | 153 | 31 | 443 | 24 | 8 | 28 | 8 | 40 | 38 | 411 |
| User Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 0.00 |
| PHF Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 0.00 |
| PHF Volume: | 16 | 1358 | 153 | 31 | 443 | 24 | 8 | 28 | 8 | 40 | 38 | 0 |
| Reduct Vol: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Reduced Vol: | 16 | 1358 | 153 | 31 | 443 | 24 | 8 | 28 | 8 | 40 | 38 | 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 | 0.00 |
| MLF Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 0.00 |
| FinalVolume: | 16 | 1358 | 153 | 31 | 443 | 24 | 8 | 28 | 8 | 40 | 38 | 0 |
| Saturation Flow Module: | | | | | | | | | | | | |
| Sat/Lane: | 1600 | 1600 | 1600 | 1600 | 1600 | 1600 | 1600 | 1600 | 1600 | 1600 | 1600 | 1600 |
| 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: | 1.00 | 1.80 | 0.20 | 1.00 | 1.90 | 0.10 | 1.00 | 1.56 | 0.44 | 1.00 | 2.00 | 1.00 |
| Final Sat.: | 1600 | 2876 | 324 | 1600 | 3036 | 164 | 1600 | 2489 | 711 | 1600 | 3200 | 1600 |
| Capacity Analysis Module: | | | | | | | | | | | | |
| Vol/Sat: | 0.01 | 0.47 | 0.47 | 0.02 | 0.15 | 0.15 | 0.01 | 0.01 | 0.01 | 0.03 | 0.01 | 0.00 |
| Crit Moves: | | **** | | **** | | | | **** | | **** | | |

***EXISTING PLUS PROJECT CONDITIONS***
***STUDIO OFFICE OPTION***

***(YEAR 2010)***

Disney Golden Oak
Existing plus Project Conditions - A.M. Peak Hour
Option 2

Level Of Service Computation Report
ICU 2(Loss as Green Time %) Method (Base Volume Alternative)

Intersection #1 Sierra Highway & SR 14 SB Ramps

| | | | |
|---|---|---|---|
| Cycle (sec): | 100 | Critical Vol./Cap.(X): | 0.639 |
| Loss Time (sec): | 0 | Average Delay (sec/veh): | xxxxxx |
| Optimal Cycle: | 63 | Level Of Service: | B |

| Street Name: | Sierra Highway | | | | | | SR 14 SB Ramps | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 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 |
| 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 1 | 0 | 1 0 | 2 0 | 0 | 0 0 | 0 0 | 0 | 1 0 | 0 0 | 1 |
| Volume Module: | | | | | | | | | | | | |
| Base Vol: | 0 | 322 | 150 | 705 | 1259 | 0 | 0 | 0 | 0 | 82 | 0 | 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: | 0 | 322 | 150 | 705 | 1259 | 0 | 0 | 0 | 0 | 82 | 0 | 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: | 0 | 322 | 150 | 705 | 1259 | 0 | 0 | 0 | 0 | 82 | 0 | 4 |
| Reduct Vol: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Reduced Vol: | 0 | 322 | 150 | 705 | 1259 | 0 | 0 | 0 | 0 | 82 | 0 | 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: | 0 | 322 | 150 | 705 | 1259 | 0 | 0 | 0 | 0 | 82 | 0 | 4 |
| Saturation Flow Module: | | | | | | | | | | | | |
| Sat/Lane: | 1600 | 1600 | 1600 | 1600 | 1600 | 1600 | 1600 | 1600 | 1600 | 1600 | 1600 | 1600 |
| 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 | 1.36 | 0.64 | 1.00 | 2.00 | 0.00 | 0.00 | 0.00 | 0.00 | 1.00 | 0.00 | 1.00 |
| Final Sat.: | 0 | 2183 | 1017 | 1600 | 3200 | 0 | 0 | 0 | 0 | 1600 | 0 | 1600 |
| Capacity Analysis Module: | | | | | | | | | | | | |
| Vol/Sat: | 0.00 | 0.15 | 0.15 | 0.44 | 0.39 | 0.00 | 0.00 | 0.00 | 0.00 | 0.05 | 0.00 | 0.00 |
| Crit Moves: | | **** | | **** | | | | | | **** | | |

Disney Golden Oak
Existing plus Project Conditions - A.M. Peak Hour
Option 2

Level Of Service Computation Report
ICU 2(Loss as Green Time %) Method (Base Volume Alternative)

Intersection #2 Sierra Highway & Placerita Canyon Road

| | | | |
|---|---|---|---|
| Cycle (sec): | 100 | Critical Vol./Cap.(X): | 0.532 |
| Loss Time (sec): | 0 | Average Delay (sec/veh): | xxxxxx |
| Optimal Cycle: | 49 | Level Of Service: | A |

| Street Name: | Sierra Highway | | | | | | Placerita Canyon Road | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 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 |
| 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 | 1 | 1 0 | 1 0 | 1 | 1 0 | 1 0 | 1 | 1 0 |
| Volume Module: | | | | | | | | | | | | |
| Base Vol: | 5 | 220 | 57 | 159 | 1156 | 17 | 10 | 39 | 12 | 65 | 20 | 249 |
| 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: | 5 | 220 | 57 | 159 | 1156 | 17 | 10 | 39 | 12 | 65 | 20 | 249 |
| 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: | 5 | 220 | 57 | 159 | 1156 | 17 | 10 | 39 | 12 | 65 | 20 | 249 |
| Reduct Vol: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Reduced Vol: | 5 | 220 | 57 | 159 | 1156 | 17 | 10 | 39 | 12 | 65 | 20 | 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: | 5 | 220 | 57 | 159 | 1156 | 17 | 10 | 39 | 12 | 65 | 20 | 249 |
| Saturation Flow Module: | | | | | | | | | | | | |
| Sat/Lane: | 1600 | 1600 | 1600 | 1600 | 1600 | 1600 | 1600 | 1600 | 1600 | 1600 | 1600 | 1600 |
| 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: | 1.00 | 1.59 | 0.41 | 1.00 | 1.97 | 0.03 | 1.00 | 1.53 | 0.47 | 1.00 | 1.00 | 1.00 |
| Final Sat.: | 1600 | 2542 | 658 | 1600 | 3154 | 46 | 1600 | 2447 | 753 | 1600 | 1600 | 1600 |
| Capacity Analysis Module: | | | | | | | | | | | | |
| Vol/Sat: | 0.00 | 0.09 | 0.09 | 0.10 | 0.37 | 0.37 | 0.01 | 0.02 | 0.02 | 0.04 | 0.01 | 0.16 |
| Crit Moves: | **** | | | | **** | | **** | | | | | **** |

Disney Golden Oak
Existing plus Project Conditions - A.M. Peak Hour
Option 2

Level Of Service Computation Report
ICU 2(Loss as Green Time %) Method (Base Volume Alternative)

Intersection #3 SR 14 NB Off-Ramp & Placerita Canyon Road

| | | | |
|---|---|---|---|
| Cycle (sec): | 100 | Critical Vol./Cap.(X): | 0.225 |
| Loss Time (sec): | 0 | Average Delay (sec/veh): | xxxxxx |
| Optimal Cycle: | 24 | Level Of Service: | A |

| Street Name: | SR 14 NB Off-Ramp | | | | | | Placerita Canyon Road | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 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 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 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 1 | 0 0 | 1 | 0 0 | 0 0 | 1 | 0 0 | 2 0 | 0 | 0 0 | 1 1 | 0 |
| Volume Module: | | | | | | | | | | | | |
| Base Vol: | 116 | 162 | 235 | 0 | 0 | 22 | 0 | 120 | 0 | 0 | 207 | 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: | 116 | 162 | 235 | 0 | 0 | 22 | 0 | 120 | 0 | 0 | 207 | 0 |
| User Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| PHF Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| PHF Volume: | 116 | 162 | 235 | 0 | 0 | 22 | 0 | 120 | 0 | 0 | 207 | 0 |
| Reduct Vol: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Reduced Vol: | 116 | 162 | 235 | 0 | 0 | 22 | 0 | 120 | 0 | 0 | 207 | 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: | 116 | 162 | 235 | 0 | 0 | 22 | 0 | 120 | 0 | 0 | 207 | 0 |
| Saturation Flow Module: | | | | | | | | | | | | |
| Sat/Lane: | 1600 | 1600 | 1600 | 1600 | 1600 | 1600 | 1600 | 1600 | 1600 | 1600 | 1600 | 1600 |
| 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: | 1.00 | 1.00 | 1.00 | 0.00 | 0.00 | 1.00 | 0.00 | 2.00 | 0.00 | 0.00 | 2.00 | 0.00 |
| Final Sat.: | 1600 | 1600 | 1600 | 0 | 0 | 1600 | 0 | 3200 | 0 | 0 | 3200 | 0 |
| Capacity Analysis Module: | | | | | | | | | | | | |
| Vol/Sat: | 0.07 | 0.10 | 0.15 | 0.00 | 0.00 | 0.01 | 0.00 | 0.04 | 0.00 | 0.00 | 0.06 | 0.00 |
| Crit Moves: | | | **** | | | **** | **** | | | | **** | |

Disney Golden Oak
Existing plus Project Conditions - A.M. Peak Hour
Option 2

Level Of Service Computation Report
ICU 2(Loss as Green Time %) Method (Base Volume Alternative)

Intersection #4 Current Ranch Main Entrance & Placerita Canyon Road

| | | | |
|---|---|---|---|
| Cycle (sec): | 100 | Critical Vol./Cap.(X): | 0.268 |
| Loss Time (sec): | 0 | Average Delay (sec/veh): | xxxxxx |
| Optimal Cycle: | 20 | Level Of Service: | A |

| Street Name: | Current Ranch Main Entrance | | | | | | Placerita Canyon Road | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 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 | | | Permitted | | | Permitted | | |
| Rights: | Include | | | Include | | | Include | | | Include | | |
| Min. Green: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 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 0 | 0 0 | 1 | 0 1 | 0 0 | 0 | 0 0 | 0 1 | 0 |
| Volume Module: | | | | | | | | | | | | |
| Base Vol: | 0 | 0 | 0 | 0 | 0 | 28 | 204 | 154 | 0 | 0 | 182 | 15 |
| 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 | 28 | 204 | 154 | 0 | 0 | 182 | 15 |
| 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 | 0 | 0 | 28 | 204 | 154 | 0 | 0 | 182 | 15 |
| Reduct Vol: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Reduced Vol: | 0 | 0 | 0 | 0 | 0 | 28 | 204 | 154 | 0 | 0 | 182 | 15 |
| 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 | 0 | 0 | 28 | 204 | 154 | 0 | 0 | 182 | 15 |
| Saturation Flow Module: | | | | | | | | | | | | |
| Sat/Lane: | 1600 | 1600 | 1600 | 1600 | 1600 | 1600 | 1600 | 1600 | 1600 | 1600 | 1600 | 1600 |
| 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 | 0.00 | 0.00 | 1.00 | 0.57 | 0.43 | 0.00 | 0.00 | 0.92 | 0.08 |
| Final Sat.: | 0 | 0 | 0 | 0 | 0 | 1600 | 912 | 688 | 0 | 0 | 1478 | 122 |
| Capacity Analysis Module: | | | | | | | | | | | | |
| Vol/Sat: | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.02 | 0.13 | 0.22 | 0.00 | 0.00 | 0.12 | 0.12 |
| Crit Moves: | | | | | | **** | **** | | | | **** | |

Disney Golden Oak
Existing plus Project Conditions - P.M. Peak Hour
Option 2

Level Of Service Computation Report
ICU 2(Loss as Green Time %) Method (Base Volume Alternative)

Intersection #1 Sierra Highway & SR 14 SB Ramps

| | | | |
|---|---|---|---|
| Cycle (sec): | 100 | Critical Vol./Cap.(X): | 0.715 |
| Loss Time (sec): | 0 | Average Delay (sec/veh): | xxxxxx |
| Optimal Cycle: | 80 | Level Of Service: | C |

| Street Name: | Sierra Highway | | | | | | SR 14 SB Ramps | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 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 |
| 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 1 | 0 | 1 0 | 2 0 | 0 | 0 0 | 0 0 | 0 | 1 0 | 0 0 | 1 |
| Volume Module: | | | | | | | | | | | | |
| Base Vol: | 0 | 1501 | 296 | 214 | 462 | 0 | 0 | 0 | 0 | 31 | 0 | 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: | 0 | 1501 | 296 | 214 | 462 | 0 | 0 | 0 | 0 | 31 | 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: | 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 | 1501 | 296 | 214 | 462 | 0 | 0 | 0 | 0 | 31 | 0 | 2 |
| Reduct Vol: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Reduced Vol: | 0 | 1501 | 296 | 214 | 462 | 0 | 0 | 0 | 0 | 31 | 0 | 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: | 0 | 1501 | 296 | 214 | 462 | 0 | 0 | 0 | 0 | 31 | 0 | 2 |
| Saturation Flow Module: | | | | | | | | | | | | |
| Sat/Lane: | 1600 | 1600 | 1600 | 1600 | 1600 | 1600 | 1600 | 1600 | 1600 | 1600 | 1600 | 1600 |
| 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 | 1.67 | 0.33 | 1.00 | 2.00 | 0.00 | 0.00 | 0.00 | 0.00 | 1.00 | 0.00 | 1.00 |
| Final Sat.: | 0 | 2673 | 527 | 1600 | 3200 | 0 | 0 | 0 | 0 | 1600 | 0 | 1600 |
| Capacity Analysis Module: | | | | | | | | | | | | |
| Vol/Sat: | 0.00 | 0.56 | 0.56 | 0.13 | 0.14 | 0.00 | 0.00 | 0.00 | 0.00 | 0.02 | 0.00 | 0.00 |
| Crit Moves: | | **** | | **** | | | | | | **** | | |

Disney Golden Oak
Existing plus Project Conditions - P.M. Peak Hour
Option 2

Level Of Service Computation Report
ICU 2(Loss as Green Time %) Method (Base Volume Alternative)

Intersection #2 Sierra Highway & Placerita Canyon Road

| | | | |
|---|---|---|---|
| Cycle (sec): | 100 | Critical Vol./Cap.(X): | 0.760 |
| Loss Time (sec): | 0 | Average Delay (sec/veh): | xxxxxx |
| Optimal Cycle: | 95 | Level Of Service: | C |

| Street Name: | Sierra Highway | | | | | | Placerita Canyon Road | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 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 |
| 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 | 1 1 | 0 | 1 0 | 1 1 | 0 | 1 0 | 1 1 | 0 |
| Volume Module: | | | | | | | | | | | | |
| Base Vol: | 16 | 1358 | 153 | 32 | 443 | 24 | 8 | 29 | 8 | 40 | 39 | 420 |
| 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: | 16 | 1358 | 153 | 32 | 443 | 24 | 8 | 29 | 8 | 40 | 39 | 420 |
| 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: | 16 | 1358 | 153 | 32 | 443 | 24 | 8 | 29 | 8 | 40 | 39 | 420 |
| Reduct Vol: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Reduced Vol: | 16 | 1358 | 153 | 32 | 443 | 24 | 8 | 29 | 8 | 40 | 39 | 420 |
| 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: | 16 | 1358 | 153 | 32 | 443 | 24 | 8 | 29 | 8 | 40 | 39 | 420 |
| Saturation Flow Module: | | | | | | | | | | | | |
| Sat/Lane: | 1600 | 1600 | 1600 | 1600 | 1600 | 1600 | 1600 | 1600 | 1600 | 1600 | 1600 | 1600 |
| 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: | 1.00 | 1.80 | 0.20 | 1.00 | 1.90 | 0.10 | 1.00 | 1.57 | 0.43 | 1.00 | 1.00 | 1.00 |
| Final Sat.: | 1600 | 2876 | 324 | 1600 | 3036 | 164 | 1600 | 2508 | 692 | 1600 | 1600 | 1600 |
| Capacity Analysis Module: | | | | | | | | | | | | |
| Vol/Sat: | 0.01 | 0.47 | 0.47 | 0.02 | 0.15 | 0.15 | 0.01 | 0.01 | 0.01 | 0.03 | 0.02 | 0.26 |
| Crit Moves: | | **** | | **** | | | **** | | | | | **** |

Disney Golden Oak
Existing plus Project Conditions - P.M. Peak Hour
Option 2

Level Of Service Computation Report
ICU 2(Loss as Green Time %) Method (Base Volume Alternative)

Intersection #3 SR 14 NB Off-Ramp & Placerita Canyon Road

| | | | |
|---|---|---|---|
| Cycle (sec): | 100 | Critical Vol./Cap.(X): | 0.248 |
| Loss Time (sec): | 0 | Average Delay (sec/veh): | xxxxxx |
| Optimal Cycle: | 25 | Level Of Service: | A |

| Street Name: | SR 14 NB Off-Ramp | | | | | | Placerita Canyon Road | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 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 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 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 1 | 0 0 | 1 | 0 0 | 0 0 | 1 | 0 0 | 2 0 | 0 | 0 0 | 1 1 | 0 |
| Volume Module: | | | | | | | | | | | | |
| Base Vol: | 123 | 29 | 118 | 0 | 0 | 141 | 0 | 99 | 0 | 0 | 276 | 0 |
| Growth Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Initial Bse: | 123 | 29 | 118 | 0 | 0 | 141 | 0 | 99 | 0 | 0 | 276 | 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: | 123 | 29 | 118 | 0 | 0 | 141 | 0 | 99 | 0 | 0 | 276 | 0 |
| Reduct Vol: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Reduced Vol: | 123 | 29 | 118 | 0 | 0 | 141 | 0 | 99 | 0 | 0 | 276 | 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: | 123 | 29 | 118 | 0 | 0 | 141 | 0 | 99 | 0 | 0 | 276 | 0 |
| Saturation Flow Module: | | | | | | | | | | | | |
| Sat/Lane: | 1600 | 1600 | 1600 | 1600 | 1600 | 1600 | 1600 | 1600 | 1600 | 1600 | 1600 | 1600 |
| 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: | 1.62 | 0.38 | 1.00 | 0.00 | 0.00 | 1.00 | 0.00 | 2.00 | 0.00 | 0.00 | 2.00 | 0.00 |
| Final Sat.: | 2589 | 611 | 1600 | 0 | 0 | 1600 | 0 | 3200 | 0 | 0 | 3200 | 0 |
| Capacity Analysis Module: | | | | | | | | | | | | |
| Vol/Sat: | 0.05 | 0.05 | 0.07 | 0.00 | 0.00 | 0.09 | 0.00 | 0.03 | 0.00 | 0.00 | 0.09 | 0.00 |
| Crit Moves: | | | **** | | | **** | **** | | | | **** | |

Disney Golden Oak
Existing plus Project Conditions - P.M. Peak Hour
Option 2

Level Of Service Computation Report
ICU 2(Loss as Green Time %) Method (Base Volume Alternative)

Intersection #4 Current Ranch Main Entrance & Placerita Canyon Road

| | | | |
|---|---|---|---|
| Cycle (sec): | 100 | Critical Vol./Cap.(X): | 0.246 |
| Loss Time (sec): | 0 | Average Delay (sec/veh): | xxxxxx |
| Optimal Cycle: | 19 | Level Of Service: | A |

| Street Name: | Current Ranch Main Entrance | | | | | | Placerita Canyon Road | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 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 | | | Permitted | | | Permitted | | |
| Rights: | Include | | | Include | | | Include | | | Include | | |
| Min. Green: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 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 0 | 1! 0 | 0 | 0 1 | 0 0 | 0 | 0 0 | 0 1 | 0 |
| Volume Module: | | | | | | | | | | | | |
| Base Vol: | 0 | 0 | 0 | 3 | 0 | 183 | 38 | 170 | 0 | 0 | 89 | 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: | 0 | 0 | 0 | 3 | 0 | 183 | 38 | 170 | 0 | 0 | 89 | 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: | 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 | 3 | 0 | 183 | 38 | 170 | 0 | 0 | 89 | 1 |
| Reduct Vol: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Reduced Vol: | 0 | 0 | 0 | 3 | 0 | 183 | 38 | 170 | 0 | 0 | 89 | 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: | 0 | 0 | 0 | 3 | 0 | 183 | 38 | 170 | 0 | 0 | 89 | 1 |
| Saturation Flow Module: | | | | | | | | | | | | |
| Sat/Lane: | 1600 | 1600 | 1600 | 1600 | 1600 | 1600 | 1600 | 1600 | 1600 | 1600 | 1600 | 1600 |
| 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 | 0.02 | 0.00 | 0.98 | 0.18 | 0.82 | 0.00 | 0.00 | 0.99 | 0.01 |
| Final Sat.: | 0 | 0 | 0 | 26 | 0 | 1574 | 292 | 1308 | 0 | 0 | 1582 | 18 |
| Capacity Analysis Module: | | | | | | | | | | | | |
| Vol/Sat: | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.12 | 0.02 | 0.13 | 0.00 | 0.00 | 0.06 | 0.06 |
| Crit Moves: | | | | | | **** | | **** | | **** | | |

***EXISTING PLUS PROJECT WITH MITIGATION CONDITIONS***
***STUDIO OFFICE OPTION***

***(YEAR 2010)***

Disney Golden Oak
Existing plus Project
with Mitigations Conditions - A.M. Peak Hour Option 2

Level Of Service Computation Report
ICU 2(Loss as Green Time %) Method (Base Volume Alternative)

Intersection #1 Sierra Highway & SR 14 SB Ramps

| | | | |
|---|---|---|---|
| Cycle (sec): | 100 | Critical Vol./Cap.(X): | 0.593 |
| Loss Time (sec): | 0 | Average Delay (sec/veh): | xxxxxx |
| Optimal Cycle: | 46 | Level Of Service: | A |

| Street Name: | Sierra Highway | | | | | | SR 14 SB Ramps | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 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: | Include | | | Include | | | Include | | | Include | | |
| Min. Green: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 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 | 2 0 | 1 | 1 0 | 2 0 | 0 | 0 0 | 0 0 | 0 | 1 0 | 0 0 | 1 |
| Volume Module: | | | | | | | | | | | | |
| Base Vol: | 0 | 322 | 150 | 705 | 1259 | 0 | 0 | 0 | 0 | 82 | 0 | 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: | 0 | 322 | 150 | 705 | 1259 | 0 | 0 | 0 | 0 | 82 | 0 | 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: | 0 | 322 | 150 | 705 | 1259 | 0 | 0 | 0 | 0 | 82 | 0 | 4 |
| Reduct Vol: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Reduced Vol: | 0 | 322 | 150 | 705 | 1259 | 0 | 0 | 0 | 0 | 82 | 0 | 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: | 0 | 322 | 150 | 705 | 1259 | 0 | 0 | 0 | 0 | 82 | 0 | 4 |
| Saturation Flow Module: | | | | | | | | | | | | |
| Sat/Lane: | 1600 | 1600 | 1600 | 1600 | 1600 | 1600 | 1600 | 1600 | 1600 | 1600 | 1600 | 1600 |
| 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 | 2.00 | 1.00 | 1.00 | 2.00 | 0.00 | 0.00 | 0.00 | 0.00 | 1.00 | 0.00 | 1.00 |
| Final Sat.: | 0 | 3200 | 1600 | 1600 | 3200 | 0 | 0 | 0 | 0 | 1600 | 0 | 1600 |
| Capacity Analysis Module: | | | | | | | | | | | | |
| Vol/Sat: | 0.00 | 0.10 | 0.09 | 0.44 | 0.39 | 0.00 | 0.00 | 0.00 | 0.00 | 0.05 | 0.00 | 0.00 |
| Crit Moves: | | **** | | **** | | | | | | **** | | |

Disney Golden Oak
Existing plus Project
with Mitigations Conditions - A.M. Peak Hour Option 2

Level Of Service Computation Report
ICU 2(Loss as Green Time %) Method (Base Volume Alternative)

Intersection #2 Sierra Highway & Placerita Canyon Road

| | | | |
|---|---|---|---|
| Cycle (sec): | 100 | Critical Vol./Cap.(X): | 0.426 |
| Loss Time (sec): | 0 | Average Delay (sec/veh): | xxxxxx |
| Optimal Cycle: | 40 | Level Of Service: | A |

| Street Name: | Sierra Highway | | | | | | Placerita Canyon Road | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 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 | | | Ignore | | |
| Min. Green: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 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 | 1 1 | 0 | 1 0 | 1 1 | 0 | 1 0 | 2 0 | 1 |
| Volume Module: | | | | | | | | | | | | |
| Base Vol: | 5 | 220 | 57 | 159 | 1156 | 17 | 10 | 39 | 12 | 65 | 20 | 249 |
| 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: | 5 | 220 | 57 | 159 | 1156 | 17 | 10 | 39 | 12 | 65 | 20 | 249 |
| User Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 0.00 |
| PHF Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 0.00 |
| PHF Volume: | 5 | 220 | 57 | 159 | 1156 | 17 | 10 | 39 | 12 | 65 | 20 | 0 |
| Reduct Vol: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Reduced Vol: | 5 | 220 | 57 | 159 | 1156 | 17 | 10 | 39 | 12 | 65 | 20 | 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 | 0.00 |
| MLF Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 0.00 |
| FinalVolume: | 5 | 220 | 57 | 159 | 1156 | 17 | 10 | 39 | 12 | 65 | 20 | 0 |
| Saturation Flow Module: | | | | | | | | | | | | |
| Sat/Lane: | 1600 | 1600 | 1600 | 1600 | 1600 | 1600 | 1600 | 1600 | 1600 | 1600 | 1600 | 1600 |
| 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: | 1.00 | 1.59 | 0.41 | 1.00 | 1.97 | 0.03 | 1.00 | 1.53 | 0.47 | 1.00 | 2.00 | 1.00 |
| Final Sat.: | 1600 | 2542 | 658 | 1600 | 3154 | 46 | 1600 | 2447 | 753 | 1600 | 3200 | 1600 |
| Capacity Analysis Module: | | | | | | | | | | | | |
| Vol/Sat: | 0.00 | 0.09 | 0.09 | 0.10 | 0.37 | 0.37 | 0.01 | 0.02 | 0.02 | 0.04 | 0.01 | 0.00 |
| Crit Moves: | **** | | | | **** | | | **** | | **** | | |

Disney Golden Oak
Existing plus Project
with Mitigations Conditions - P.M. Peak Hour Option 2

Level Of Service Computation Report
ICU 2(Loss as Green Time %) Method (Base Volume Alternative)

Intersection #1 Sierra Highway & SR 14 SB Ramps

| | | | |
|---|---|---|---|
| Cycle (sec): | 100 | Critical Vol./Cap.(X): | 0.622 |
| Loss Time (sec): | 0 | Average Delay (sec/veh): | xxxxxx |
| Optimal Cycle: | 49 | Level Of Service: | B |

| Street Name: | Sierra Highway | | | | | | SR 14 SB Ramps | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 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: | Include | | | Include | | | Include | | | Include | | |
| Min. Green: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 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 | 2 0 | 1 | 1 0 | 2 0 | 0 | 0 0 | 0 0 | 0 | 1 0 | 0 0 | 1 |
| Volume Module: | | | | | | | | | | | | |
| Base Vol: | 0 | 1501 | 296 | 214 | 462 | 0 | 0 | 0 | 0 | 31 | 0 | 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: | 0 | 1501 | 296 | 214 | 462 | 0 | 0 | 0 | 0 | 31 | 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: | 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 | 1501 | 296 | 214 | 462 | 0 | 0 | 0 | 0 | 31 | 0 | 2 |
| Reduct Vol: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Reduced Vol: | 0 | 1501 | 296 | 214 | 462 | 0 | 0 | 0 | 0 | 31 | 0 | 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: | 0 | 1501 | 296 | 214 | 462 | 0 | 0 | 0 | 0 | 31 | 0 | 2 |
| Saturation Flow Module: | | | | | | | | | | | | |
| Sat/Lane: | 1600 | 1600 | 1600 | 1600 | 1600 | 1600 | 1600 | 1600 | 1600 | 1600 | 1600 | 1600 |
| 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 | 2.00 | 1.00 | 1.00 | 2.00 | 0.00 | 0.00 | 0.00 | 0.00 | 1.00 | 0.00 | 1.00 |
| Final Sat.: | 0 | 3200 | 1600 | 1600 | 3200 | 0 | 0 | 0 | 0 | 1600 | 0 | 1600 |
| Capacity Analysis Module: | | | | | | | | | | | | |
| Vol/Sat: | 0.00 | 0.47 | 0.19 | 0.13 | 0.14 | 0.00 | 0.00 | 0.00 | 0.00 | 0.02 | 0.00 | 0.00 |
| Crit Moves: | | **** | | **** | | | | | | **** | | |

Disney Golden Oak
Existing plus Project
with Mitigations Conditions - P.M. Peak Hour Option 2

Level Of Service Computation Report
ICU 2(Loss as Green Time %) Method (Base Volume Alternative)

Intersection #2 Sierra Highway & Placerita Canyon Road

| | | | |
|---|---|---|---|
| Cycle (sec): | 100 | Critical Vol./Cap.(X): | 0.529 |
| Loss Time (sec): | 0 | Average Delay (sec/veh): | xxxxxx |
| Optimal Cycle: | 48 | Level Of Service: | A |

| Street Name: | Sierra Highway | | | | | | Placerita Canyon Road | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 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 | | | Ignore | | |
| Min. Green: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 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 | 1 1 | 0 | 1 0 | 1 1 | 0 | 1 0 | 2 0 | 1 |
| Volume Module: | | | | | | | | | | | | |
| Base Vol: | 16 | 1358 | 153 | 32 | 443 | 24 | 8 | 29 | 8 | 40 | 39 | 420 |
| 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: | 16 | 1358 | 153 | 32 | 443 | 24 | 8 | 29 | 8 | 40 | 39 | 420 |
| User Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 0.00 |
| PHF Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 0.00 |
| PHF Volume: | 16 | 1358 | 153 | 32 | 443 | 24 | 8 | 29 | 8 | 40 | 39 | 0 |
| Reduct Vol: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Reduced Vol: | 16 | 1358 | 153 | 32 | 443 | 24 | 8 | 29 | 8 | 40 | 39 | 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 | 0.00 |
| MLF Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 0.00 |
| FinalVolume: | 16 | 1358 | 153 | 32 | 443 | 24 | 8 | 29 | 8 | 40 | 39 | 0 |
| Saturation Flow Module: | | | | | | | | | | | | |
| Sat/Lane: | 1600 | 1600 | 1600 | 1600 | 1600 | 1600 | 1600 | 1600 | 1600 | 1600 | 1600 | 1600 |
| 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: | 1.00 | 1.80 | 0.20 | 1.00 | 1.90 | 0.10 | 1.00 | 1.57 | 0.43 | 1.00 | 2.00 | 1.00 |
| Final Sat.: | 1600 | 2876 | 324 | 1600 | 3036 | 164 | 1600 | 2508 | 692 | 1600 | 3200 | 1600 |
| Capacity Analysis Module: | | | | | | | | | | | | |
| Vol/Sat: | 0.01 | 0.47 | 0.47 | 0.02 | 0.15 | 0.15 | 0.01 | 0.01 | 0.01 | 0.03 | 0.01 | 0.00 |
| Crit Moves: | | **** | | **** | | | | **** | | **** | | |

# *ATTACHMENT B*

## *CALTRANS ANALYSIS*
## *LEVEL OF SERVICE WORKSHEETS*

***EXISTING PLUS PROJECT CONDITIONS***
***SOUNDSTAGES OPTION***

***(YEAR 2010)***

Disney Golden Oak
Future with Project Conditions - A.M. Peak Hour

Level Of Service Computation Report
2000 HCM Unsignalized Method (Base Volume Alternative)

Intersection #1 Sierra Highway & SR 14 SB Ramps

Average Delay (sec/veh): 96.9  Worst Case Level Of Service: F[2757.3]

| Street Name: | Sierra Highway | | | | | | | | SR 14 SB 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 | 1 | 1 | 0 | 1 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 1 |
| Volume Module: | | | | | | | | | | | | | | | | | | | | |
| Base Vol: | 0 | 322 | | 149 | | 705 | 1258 | | 0 | | 0 | | 0 | | 0 | 81 | | 0 | | 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: | 0 | 322 | | 149 | | 705 | 1258 | | 0 | | 0 | | 0 | | 0 | 81 | | 0 | | 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: | 0 | 322 | | 149 | | 705 | 1258 | | 0 | | 0 | | 0 | | 0 | 81 | | 0 | | 4 |
| Reduct Vol: | 0 | 0 | | 0 | | 0 | 0 | | 0 | | 0 | | 0 | | 0 | 0 | | 0 | | 0 |
| FinalVolume: | 0 | 322 | | 149 | | 705 | 1258 | | 0 | | 0 | | 0 | | 0 | 81 | | 0 | | 4 |
| Critical Gap Module: | | | | | | | | | | | | | | | | | | | | |
| Critical Gp: | xxxxx | xxxx | | xxxxx | | 4.1 | xxxx | | xxxxx | | xxxxx | xxxx | | xxxxx | | 6.8 | xxxx | | 6.9 | |
| FollowUpTim: | xxxxx | xxxx | | xxxxx | | 2.2 | xxxx | | xxxxx | | xxxxx | xxxx | | xxxxx | | 3.5 | xxxx | | 3.3 | |
| Capacity Module: | | | | | | | | | | | | | | | | | | | | |
| Cnflict Vol: | xxxx | xxxx | | xxxxx | | 471 | xxxx | | xxxxx | | xxxx | xxxx | | xxxxx | | 2436 | xxxx | | 236 | |
| Potent Cap.: | xxxx | xxxx | | xxxxx | | 1101 | xxxx | | xxxxx | | xxxx | xxxx | | xxxxx | | 27 | xxxx | | 772 | |
| Move Cap.: | xxxx | xxxx | | xxxxx | | 1101 | xxxx | | xxxxx | | xxxx | xxxx | | xxxxx | | 13 | xxxx | | 772 | |
| Volume/Cap: | xxxx | xxxx | | xxxx | | 0.64 | xxxx | | xxxx | | xxxx | xxxx | | xxxx | | 6.16 | xxxx | | 0.01 | |
| Level Of Service Module: | | | | | | | | | | | | | | | | | | | | |
| 2Way95thQ: | xxxx | xxxx | | xxxxx | | 4.9 | xxxx | | xxxxx | | xxxx | xxxx | | xxxxx | | 11.2 | xxxx | | 0.0 | |
| Control Del: | xxxxx | xxxx | | xxxxx | | 13.9 | xxxx | | xxxxx | | xxxxx | xxxx | | xxxxx | | 2893 | xxxx | | 9.7 | |
| LOS by Move: | * | * | | * | | B | * | | * | | * | * | | * | | F | * | | 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: | xxxxxx | | | | | xxxxxx | | | | | xxxxxx | | | | | 2757.3 | | | | |
| ApproachLOS: | * | | | | | * | | | | | * | | | | | F | | | | |

Note: Queue reported is the number of cars per lane.

Disney Golden Oak
Future with Project Conditions - A.M. Peak Hour

Level Of Service Detailed Computation Report
2000 HCM Unsignalized Method
Base Volume Alternative

Intersection #1 Sierra Highway & SR 14 SB Ramps

| Approach: | North Bound | South Bound | East Bound | West Bound |
|---|---|---|---|---|
| Movement: | L - T - R | L - T - R | L - T - R | L - T - R |
| HevVeh: | 0% | 0% | 0% | 0% |
| Grade: | 0% | 0% | 0% | 0% |
| Peds/Hour: | 0 | 0 | 0 | 0 |
| Pedestrian Walk Speed: 4.00 feet/sec | | | | |
| LaneWidth: | 12 feet | 12 feet | 12 feet | 12 feet |

Time Period: 0.25 hour

Disney Golden Oak
Future with Project Conditions - A.M. Peak Hour

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #2 Sierra Highway & Placerita Canyon Road

| | | | |
|---|---|---|---|
| Cycle (sec): | 100 | Critical Vol./Cap.(X): | 0.493 |
| Loss Time (sec): | 0 | Average Delay (sec/veh): | 16.7 |
| Optimal Cycle: | 45 | Level Of Service: | B |

| Street Name: | Sierra Highway | | | | | | Placerita Canyon Road | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 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 |
| 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 | 1 | 1 0 | 1 0 | 1 | 1 0 | 1 0 | 1 | 1 0 |
| Volume Module: | | | | | | | | | | | | |
| Base Vol: | 5 | 220 | 57 | 157 | 1156 | 17 | 10 | 39 | 12 | 65 | 20 | 248 |
| 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: | 5 | 220 | 57 | 157 | 1156 | 17 | 10 | 39 | 12 | 65 | 20 | 248 |
| 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: | 5 | 220 | 57 | 157 | 1156 | 17 | 10 | 39 | 12 | 65 | 20 | 248 |
| Reduct Vol: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Reduced Vol: | 5 | 220 | 57 | 157 | 1156 | 17 | 10 | 39 | 12 | 65 | 20 | 248 |
| 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: | 5 | 220 | 57 | 157 | 1156 | 17 | 10 | 39 | 12 | 65 | 20 | 248 |
| Saturation Flow Module: | | | | | | | | | | | | |
| Sat/Lane: | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Adjustment: | 0.95 | 0.92 | 0.92 | 0.95 | 0.95 | 0.95 | 0.95 | 0.92 | 0.92 | 0.95 | 0.82 | 0.82 |
| Lanes: | 1.00 | 1.59 | 0.41 | 1.00 | 1.97 | 0.03 | 1.00 | 1.53 | 0.47 | 1.00 | 1.00 | 1.00 |
| Final Sat.: | 1805 | 2778 | 720 | 1805 | 3551 | 52 | 1805 | 2664 | 820 | 1805 | 1554 | 1554 |
| Capacity Analysis Module: | | | | | | | | | | | | |
| Vol/Sat: | 0.00 | 0.08 | 0.08 | 0.09 | 0.33 | 0.33 | 0.01 | 0.01 | 0.01 | 0.04 | 0.01 | 0.16 |
| Crit Moves: | **** | | | | **** | | **** | | | | | **** |
| Green/Cycle: | 0.01 | 0.32 | 0.32 | 0.35 | 0.66 | 0.66 | 0.01 | 0.10 | 0.10 | 0.24 | 0.32 | 0.32 |
| Volume/Cap: | 0.49 | 0.25 | 0.25 | 0.25 | 0.49 | 0.49 | 0.49 | 0.15 | 0.15 | 0.15 | 0.04 | 0.49 |
| Delay/Veh: | 82.8 | 25.4 | 25.4 | 23.5 | 8.7 | 8.7 | 66.8 | 41.6 | 41.6 | 30.3 | 23.2 | 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: | 82.8 | 25.4 | 25.4 | 23.5 | 8.7 | 8.7 | 66.8 | 41.6 | 41.6 | 30.3 | 23.2 | 27.9 |
| LOS by Move: | F | C | C | C | A | A | E | D | D | C | C | C |
| HCM2kAvgQ: | 1 | 3 | 3 | 3 | 10 | 10 | 1 | 1 | 1 | 2 | 0 | 7 |

Note: Queue reported is the number of cars per lane.

Disney Golden Oak
Future with Project Conditions - A.M. Peak Hour

Level Of Service Detailed Computation Report
2000 HCM Operations Method
Base Volume Alternative

Intersection #2 Sierra Highway & Placerita Canyon Road

| Approach: | North Bound | | | South Bound | | | East Bound | | | West Bound | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Movement: | L - | T - | R | L - | T - | R | L - | T - | R | L - | T - | R |
| **HCM Ops Adjusted Lane Utilization Module:** | | | | | | | | | | | | |
| Lanes: | 1 0 | 1 1 | 0 | 1 0 | 1 1 | 0 | 1 0 | 1 1 | 0 | 1 0 | 1 1 | 0 |
| Lane Group: | L | RT | RT | L | RT | RT | L | RT | RT | L | RT | RT |
| #LnsInGrps: | 1 | 2 | 2 | 1 | 2 | 2 | 1 | 2 | 2 | 1 | 2 | 2 |
| **HCM Ops Input Saturation Adj Module:** | | | | | | | | | | | | |
| Lane Width: | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 |
| CrsswalkWid: | | 8 | | | 8 | | | 8 | | | 8 | |
| % Hev Veh: | | 0 | | | 0 | | | 0 | | | 0 | |
| Grade: | | 0% | | | 0% | | | 0% | | | 0% | |
| Parking/Hr: | | No | | | No | | | No | | | No | |
| Bus Stp/Hr: | | 0 | | | 0 | | | 0 | | | 0 | |
| Area Type: | < < < < < < < < < < < < < < < < Other > > > > > > > > > > > > > > > > > > | | | | | | | | | | | |
| Cnft Ped/Hr: | | 0 | | | 0 | | | 0 | | | 0 | |
| ExclusiveRT: | | Include | | | Include | | | Include | | | Include | |
| % RT Prtct: | | 0 | | | 0 | | | 0 | | | 0 | |
| **HCM Ops f(lt) Adj Case Module:** | | | | | | | | | | | | |
| f(lt) Case: | 1 | xxxx | xxxx | 1 | xxxx | xxxx | 1 | xxxx | xxxx | 1 | xxxx | xxxx |
| **HCM Ops Saturation Adj Module:** | | | | | | | | | | | | |
| Ln Wid Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Hev Veh Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Grade Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Parking Adj: | xxxx | 1.00 | 1.00 | xxxx | 1.00 | 1.00 | xxxx | 1.00 | 1.00 | xxxx | 1.00 | 1.00 |
| Bus Stp Adj: | xxxx | 1.00 | 1.00 | xxxx | 1.00 | 1.00 | xxxx | 1.00 | 1.00 | xxxx | 1.00 | 1.00 |
| Area Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| RT Adj: | xxxx | 0.97 | 0.97 | xxxx | 1.00 | 1.00 | xxxx | 0.97 | 0.97 | xxxx | 0.86 | 0.86 |
| LT Adj: | 0.95 | xxxx | xxxxx | 0.95 | xxxx | xxxxx | 0.95 | xxxx | xxxxx | 0.95 | xxxx | xxxxx |
| PedBike Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| HCM Sat Adj: | 0.95 | 0.97 | 0.97 | 0.95 | 1.00 | 1.00 | 0.95 | 0.97 | 0.97 | 0.95 | 0.86 | 0.86 |
| Usr Sat Adj: | 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 Sat Adj: | 1.00 | 0.95 | 0.95 | 1.00 | 0.95 | 0.95 | 1.00 | 0.95 | 0.95 | 1.00 | 0.95 | 0.95 |
| Fnl Sat Adj: | 0.95 | 0.92 | 0.92 | 0.95 | 0.95 | 0.95 | 0.95 | 0.92 | 0.92 | 0.95 | 0.82 | 0.82 |
| **Delay Adjustment Factor Module:** | | | | | | | | | | | | |
| Coordinated: | < < < < < < < < < < < < < < < < No > > > > > > > > > > > > > > > > > > | | | | | | | | | | | |
| Signal Type: | < < < < < < < < < < < < < Actuated > > > > > > > > > > > > > > > > | | | | | | | | | | | |
| DelAdjFctr: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |

Disney Golden Oak
Future with Project Conditions - A.M. Peak Hour

Level Of Service Detailed Computation Report (HCM2000 Queue Method)
2000 HCM Operations Method
Base Volume Alternative

Intersection #2 Sierra Highway & Placerita Canyon Road

| Approach: | North Bound | | | South Bound | | | East Bound | | | West Bound | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Movement: | L - | T - | R | L - | T - | R | L - | T - | R | L - | T - | R |
| Green/Cycle: | 0.01 | 0.32 | 0.32 | 0.35 | 0.66 | 0.66 | 0.01 | 0.10 | 0.10 | 0.24 | 0.32 | 0.32 |
| ArrivalType: | | 3 | | | 3 | | | 3 | | | 3 | |
| ProgFactor: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Q1: | 0.1 | 3.0 | 3.0 | 3.1 | 8.7 | 8.7 | 0.3 | 0.7 | 0.7 | 1.4 | 0.4 | 5.8 |
| UpstreamVC: | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| UpstreamAdj: | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| EarlyArrAdj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Q2: | 0.5 | 0.3 | 0.3 | 0.3 | 1.0 | 1.0 | 0.6 | 0.2 | 0.2 | 0.2 | 0.0 | 0.9 |
| HCM2KQueue: | 0.7 | 3.3 | 3.3 | 3.4 | 9.6 | 9.6 | 0.9 | 0.9 | 0.9 | 1.6 | 0.4 | 6.8 |
| 70th%Factor: | 1.20 | 1.19 | 1.19 | 1.19 | 1.18 | 1.18 | 1.20 | 1.20 | 1.20 | 1.20 | 1.20 | 1.18 |
| HCM2k70thQ: | 0.8 | 4.0 | 4.0 | 4.1 | 11.3 | 11.3 | 1.1 | 1.0 | 1.0 | 1.9 | 0.5 | 8.0 |
| 85th%Factor: | 1.59 | 1.57 | 1.57 | 1.57 | 1.52 | 1.52 | 1.59 | 1.59 | 1.59 | 1.58 | 1.60 | 1.54 |
| HCM2k85thQ: | 1.1 | 5.2 | 5.2 | 5.4 | 14.6 | 14.6 | 1.5 | 1.4 | 1.4 | 2.5 | 0.7 | 10.4 |
| 90th%Factor: | 1.79 | 1.74 | 1.74 | 1.74 | 1.65 | 1.65 | 1.78 | 1.78 | 1.78 | 1.77 | 1.79 | 1.68 |
| HCM2k90thQ: | 1.2 | 5.8 | 5.8 | 6.0 | 15.8 | 15.8 | 1.6 | 1.5 | 1.5 | 2.8 | 0.8 | 11.4 |
| 95th%Factor: | 2.08 | 2.00 | 2.00 | 2.00 | 1.85 | 1.85 | 2.07 | 2.07 | 2.07 | 2.05 | 2.09 | 1.91 |
| HCM2k95thQ: | 1.4 | 6.7 | 6.7 | 6.9 | 17.8 | 17.8 | 1.9 | 1.8 | 1.8 | 3.3 | 0.9 | 13.0 |
| 98th%Factor: | 2.65 | 2.47 | 2.47 | 2.47 | 2.18 | 2.18 | 2.63 | 2.64 | 2.64 | 2.58 | 2.67 | 2.29 |
| HCM2k98thQ: | 1.8 | 8.2 | 8.2 | 8.5 | 20.9 | 20.9 | 2.4 | 2.3 | 2.3 | 4.1 | 1.2 | 15.6 |

Disney Golden Oak
Future with Project Conditions - A.M. Peak Hour

Fuel Consumption and Emissions
2000 HCM Operations Method
Base Volume Alternative

Intersection #2 Sierra Highway & Placerita Canyon Road

| Approach: | North Bound | | | South Bound | | | East Bound | | | West Bound | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Movement: | L | T | R | L | T | R | L | T | R | L | T | R |
| Run Speed: | 30 MPH | | | 30 MPH | | | 30 MPH | | | 30 MPH | | |
| NumOfStops: | 1.2 | 40.8 | 10.6 | 28.0 | 146 | 2.1 | 2.5 | 8.9 | 2.8 | 12.8 | 3.4 | 49.9 |

Name: year 1995 composite fleet
Fuel Consumption: 47.256 pounds
7.656 gallons
Carbon Dioxide: 147.439 pounds
Carbon Monoxide: 11.060 pounds
Hydrocarbons: 1.853 pounds
Nitrogen Oxides: 0.546 pounds

Name: year 2000 composite fleet
Fuel Consumption: 47.256 pounds
7.656 gallons
Carbon Dioxide: 147.439 pounds
Carbon Monoxide: 11.060 pounds
Hydrocarbons: 1.853 pounds
Nitrogen Oxides: 0.546 pounds

DISCLAIMER
The fuel consumption and emissions measures should be used with caution and only for comparisons of different signal timings, geometric design alternatives or for general planning applications, as these calculations are applied to the analysis of a single intersection within the CCG and TRAFFIX. Network models are more appropriate since they can account for the influence of the adjacent control measures and other system elements.

Disney Golden Oak
Future with Project Conditions - A.M. Peak Hour

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #3 SR 14 NB Off-Ramp & Placerita Canyon Road

| | | | |
|---|---|---|---|
| Cycle (sec): | 100 | Critical Vol./Cap.(X): | 0.214 |
| Loss Time (sec): | 0 | Average Delay (sec/veh): | 15.6 |
| Optimal Cycle: | 24 | Level Of Service: | B |

| Street Name: | SR 14 NB Off-Ramp | | | | | | Placerita Canyon Road | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 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 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 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 1 | 0 0 | 1 | 0 0 | 0 0 | 1 | 0 0 | 2 0 | 0 | 0 0 | 1 1 | 0 |
| Volume Module: | | | | | | | | | | | | |
| Base Vol: | 116 | 157 | 231 | 0 | 0 | 22 | 0 | 117 | 0 | 0 | 207 | 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: | 116 | 157 | 231 | 0 | 0 | 22 | 0 | 117 | 0 | 0 | 207 | 0 |
| User Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| PHF Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| PHF Volume: | 116 | 157 | 231 | 0 | 0 | 22 | 0 | 117 | 0 | 0 | 207 | 0 |
| Reduct Vol: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Reduced Vol: | 116 | 157 | 231 | 0 | 0 | 22 | 0 | 117 | 0 | 0 | 207 | 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: | 116 | 157 | 231 | 0 | 0 | 22 | 0 | 117 | 0 | 0 | 207 | 0 |
| Saturation Flow Module: | | | | | | | | | | | | |
| Sat/Lane: | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Adjustment: | 0.98 | 0.98 | 0.85 | 1.00 | 1.00 | 0.87 | 1.00 | 0.95 | 1.00 | 1.00 | 0.95 | 0.95 |
| Lanes: | 1.00 | 1.00 | 1.00 | 0.00 | 0.00 | 1.00 | 0.00 | 2.00 | 0.00 | 0.00 | 2.00 | 0.00 |
| Final Sat.: | 1860 | 1860 | 1615 | 0 | 0 | 1644 | 0 | 3610 | 0 | 0 | 3610 | 0 |
| Capacity Analysis Module: | | | | | | | | | | | | |
| Vol/Sat: | 0.06 | 0.08 | 0.14 | 0.00 | 0.00 | 0.01 | 0.00 | 0.03 | 0.00 | 0.00 | 0.06 | 0.00 |
| Crit Moves: | | | **** | | | **** | | | | | **** | |
| Green/Cycle: | 0.67 | 0.67 | 0.67 | 0.00 | 0.00 | 0.06 | 0.00 | 0.27 | 0.00 | 0.00 | 0.27 | 0.00 |
| Volume/Cap: | 0.09 | 0.13 | 0.21 | 0.00 | 0.00 | 0.21 | 0.00 | 0.12 | 0.00 | 0.00 | 0.21 | 0.00 |
| Delay/Veh: | 5.9 | 6.0 | 6.5 | 0.0 | 0.0 | 45.6 | 0.0 | 27.7 | 0.0 | 0.0 | 28.5 | 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: | 5.9 | 6.0 | 6.5 | 0.0 | 0.0 | 45.6 | 0.0 | 27.7 | 0.0 | 0.0 | 28.5 | 0.0 |
| LOS by Move: | A | A | A | A | A | D | A | C | A | A | C | A |
| HCM2kAvgQ: | 1 | 2 | 3 | 0 | 0 | 1 | 0 | 1 | 0 | 0 | 3 | 0 |

Note: Queue reported is the number of cars per lane.

Disney Golden Oak
Future with Project Conditions - A.M. Peak Hour

Level Of Service Detailed Computation Report
2000 HCM Operations Method
Base Volume Alternative

Intersection #3 SR 14 NB Off-Ramp & Placerita Canyon Road

| Approach: | North Bound | | | | South Bound | | | | East Bound | | | | West Bound | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Movement: | L | - | T | - R | L | - | T | - R | L | - | T | - R | L | - | T | - R |
| HCM Ops Adjusted Lane Utilization Module: | | | | | | | | | | | | | | | | |
| Lanes: | 1 | 1 | 0 | 0 1 | 0 | 0 | 0 | 0 1 | 0 | 0 | 2 | 0 0 | 0 | 0 | 1 | 1 0 |
| Lane Group: | LT | | LT | R | xxxx | xxxx | | R | xxxx | | T | xxxx | xxxx | | RT | RT |
| #LnsInGrps: | 2 | | 2 | 1 | 0 | 0 | | 1 | 0 | | 2 | 0 | 0 | | 2 | 2 |
| HCM Ops Input Saturation Adj Module: | | | | | | | | | | | | | | | | |
| Lane Width: | 12 | | 12 | 12 | 12 | 12 | | 12 | 12 | | 12 | 12 | 12 | | 12 | 12 |
| CrsswalkWid: | | | 8 | | | 8 | | | | | 8 | | | | 8 | |
| % Hev Veh: | | | 0 | | | 0 | | | | | 0 | | | | 0 | |
| Grade: | | | 0% | | | 0% | | | | | 0% | | | | 0% | |
| Parking/Hr: | | | No | | | No | | | | | No | | | | No | |
| Bus Stp/Hr: | | | 0 | | | 0 | | | | | 0 | | | | 0 | |
| Area Type: | < < < < < < < < < < < < < < < < Other > > > > > > > > > > > > > > > > > > | | | | | | | | | | | | | | | |
| Cnft Ped/Hr: | | | 0 | | | 0 | | | | | 0 | | | | 0 | |
| ExclusiveRT: | | | Include | | | Include | | | | | Include | | | | Include | |
| % RT Prtct: | | | 0 | | | 0 | | | | | 0 | | | | 0 | |
| HCM Ops f(lt) Adj Case Module: | | | | | | | | | | | | | | | | |
| f(lt) Case: | 4 | | 4 | xxxx | xxxx | xxxx | | xxxx | xxxx | | xxxx | xxxx | xxxx | | xxxx | xxxx |
| HCM Ops Saturation Adj Module: | | | | | | | | | | | | | | | | |
| Ln Wid Adj: | 1.00 | 1.00 | | 1.00 | xxxx | xxxx | | 1.00 | xxxx | 1.00 | | xxxxx | xxxx | 1.00 | | xxxxx |
| Hev Veh Adj: | 1.00 | 1.00 | | 1.00 | xxxx | xxxx | | 1.00 | xxxx | 1.00 | | xxxxx | xxxx | 1.00 | | xxxxx |
| Grade Adj: | 1.00 | 1.00 | | 1.00 | xxxx | xxxx | | 1.00 | xxxx | 1.00 | | xxxxx | xxxx | 1.00 | | xxxxx |
| Parking Adj: | xxxx | xxxx | | 1.00 | xxxx | xxxx | | 1.00 | xxxx | 1.00 | | xxxxx | xxxx | 1.00 | | xxxxx |
| Bus Stp Adj: | xxxx | xxxx | | 1.00 | xxxx | xxxx | | 1.00 | xxxx | 1.00 | | xxxxx | xxxx | 1.00 | | xxxxx |
| Area Adj: | 1.00 | 1.00 | | 1.00 | xxxx | xxxx | | 1.00 | xxxx | 1.00 | | xxxxx | xxxx | 1.00 | | xxxxx |
| RT Adj: | xxxx | xxxx | | 0.85 | xxxx | xxxx | | 0.87 | xxxx | xxxx | | xxxxx | xxxx | xxxx | | xxxxx |
| LT Adj: | 0.98 | 0.98 | | xxxxx | xxxx | xxxx | | xxxxx | xxxx | xxxx | | xxxxx | xxxx | xxxx | | xxxxx |
| PedBike Adj: | 1.00 | 1.00 | | 1.00 | 1.00 | 1.00 | | 1.00 | 1.00 | 1.00 | | 1.00 | 1.00 | 1.00 | | 1.00 |
| HCM Sat Adj: | 0.98 | 0.98 | | 0.85 | 1.00 | 1.00 | | 0.87 | 1.00 | 1.00 | | 1.00 | 1.00 | 1.00 | | 1.00 |
| Usr Sat Adj: | 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 Sat Adj: | 1.00 | 1.00 | | 1.00 | 1.00 | 1.00 | | 1.00 | 1.00 | 0.95 | | 1.00 | 1.00 | 0.95 | | 0.95 |
| Fnl Sat Adj: | 0.98 | 0.98 | | 0.85 | 1.00 | 1.00 | | 0.87 | 1.00 | 0.95 | | 1.00 | 1.00 | 0.95 | | 0.95 |
| Delay Adjustment Factor Module: | | | | | | | | | | | | | | | | |
| Coordinated: | < < < < < < < < < < < < < < < < No > > > > > > > > > > > > > > > > > > | | | | | | | | | | | | | | | |
| Signal Type: | < < < < < < < < < < < < < Actuated > > > > > > > > > > > > > > > > | | | | | | | | | | | | | | | |
| DelAdjFctr: | 1.00 | 1.00 | | 1.00 | 0.00 | 0.00 | | 1.00 | 0.00 | 1.00 | | 0.00 | 0.00 | 1.00 | | 0.00 |

Disney Golden Oak
Future with Project Conditions - A.M. Peak Hour

Level Of Service Detailed Computation Report (HCM2000 Queue Method)
2000 HCM Operations Method
Base Volume Alternative

Intersection #3 SR 14 NB Off-Ramp & Placerita Canyon Road

| Approach: | North Bound | | | South Bound | | | East Bound | | | West Bound | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Movement: | L - | T - | R | L - | T - | R | L - | T - | R | L - | T - | R |
| Green/Cycle: | 0.67 | 0.67 | 0.67 | 0.00 | 0.00 | 0.06 | 0.00 | 0.27 | 0.00 | 0.00 | 0.27 | 0.00 |
| ArrivalType: | | 3 | | | 3 | | | 3 | | | 3 | |
| ProgFactor: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Q1: | 1.1 | 1.6 | 2.5 | 0.0 | 0.0 | 0.6 | 0.0 | 1.3 | 0.0 | 0.0 | 2.3 | 0.0 |
| UpstreamVC: | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| UpstreamAdj: | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| EarlyArrAdj: | 1.00 | 1.00 | 1.00 | 0.00 | 0.00 | 1.00 | 0.00 | 1.00 | 0.00 | 0.00 | 1.00 | 0.00 |
| Q2: | 0.1 | 0.1 | 0.3 | 0.0 | 0.0 | 0.3 | 0.0 | 0.1 | 0.0 | 0.0 | 0.3 | 0.0 |
| HCM2KQueue: | 1.2 | 1.7 | 2.7 | 0.0 | 0.0 | 0.8 | 0.0 | 1.4 | 0.0 | 0.0 | 2.6 | 0.0 |
| 70th%Factor: | 1.20 | 1.20 | 1.19 | 1.20 | 1.20 | 1.20 | 1.20 | 1.20 | 1.20 | 1.20 | 1.19 | 1.20 |
| HCM2k70thQ: | 1.5 | 2.1 | 3.3 | 0.0 | 0.0 | 1.0 | 0.0 | 1.7 | 0.0 | 0.0 | 3.1 | 0.0 |
| 85th%Factor: | 1.59 | 1.58 | 1.57 | 1.60 | 1.60 | 1.59 | 1.60 | 1.59 | 1.60 | 1.60 | 1.57 | 1.60 |
| HCM2k85thQ: | 2.0 | 2.7 | 4.3 | 0.0 | 0.0 | 1.3 | 0.0 | 2.3 | 0.0 | 0.0 | 4.1 | 0.0 |
| 90th%Factor: | 1.78 | 1.77 | 1.75 | 1.80 | 1.80 | 1.78 | 1.80 | 1.77 | 1.80 | 1.80 | 1.75 | 1.80 |
| HCM2k90thQ: | 2.2 | 3.0 | 4.8 | 0.0 | 0.0 | 1.5 | 0.0 | 2.5 | 0.0 | 0.0 | 4.6 | 0.0 |
| 95th%Factor: | 2.06 | 2.05 | 2.02 | 2.10 | 2.10 | 2.07 | 2.10 | 2.05 | 2.10 | 2.10 | 2.02 | 2.10 |
| HCM2k95thQ: | 2.6 | 3.5 | 5.5 | 0.0 | 0.0 | 1.8 | 0.0 | 2.9 | 0.0 | 0.0 | 5.3 | 0.0 |
| 98th%Factor: | 2.61 | 2.58 | 2.51 | 2.70 | 2.70 | 2.64 | 2.70 | 2.60 | 2.70 | 2.70 | 2.52 | 2.70 |
| HCM2k98thQ: | 3.2 | 4.4 | 6.9 | 0.0 | 0.0 | 2.2 | 0.0 | 3.7 | 0.0 | 0.0 | 6.6 | 0.0 |

Disney Golden Oak
Future with Project Conditions - A.M. Peak Hour

Fuel Consumption and Emissions
2000 HCM Operations Method
Base Volume Alternative

Intersection #3 SR 14 NB Off-Ramp & Placerita Canyon Road

| Approach: | North Bound | | | South Bound | | | East Bound | | | West Bound | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Movement: | L | T | R | L | T | R | L | T | R | L | T | R |
| Run Speed: | 30 MPH | | | 30 MPH | | | 30 MPH | | | 30 MPH | | |
| NumOfStops: | 10.2 | 14.2 | 22.3 | 0.0 | 0.0 | 5.2 | 0.0 | 22.1 | 0.0 | 0.0 | 40.2 | 0.0 |

Name: year 1995 composite fleet
Fuel Consumption: 19.156 pounds
3.103 gallons
Carbon Dioxide: 59.768 pounds
Carbon Monoxide: 4.452 pounds
Hydrocarbons: 0.741 pounds
Nitrogen Oxides: 0.218 pounds

Name: year 2000 composite fleet
Fuel Consumption: 19.156 pounds
3.103 gallons
Carbon Dioxide: 59.768 pounds
Carbon Monoxide: 4.452 pounds
Hydrocarbons: 0.741 pounds
Nitrogen Oxides: 0.218 pounds

DISCLAIMER
The fuel consumption and emissions measures should be used with caution and only for comparisons of different signal timings, geometric design alternatives or for general planning applications, as these calculations are applied to the analysis of a single intersection within the CCG and TRAFFIX. Network models are more appropriate since they can account for the influence of the adjacent control measures and other system elements.

Disney Golden Oak
Future with Project Conditions - P.M. Peak Hour

Level Of Service Computation Report
2000 HCM Unsignalized Method (Base Volume Alternative)

Intersection #1 Sierra Highway & SR 14 SB Ramps

Average Delay (sec/veh): 13.2  Worst Case Level Of Service: F[802.0]

| Street Name: | Sierra Highway | | | | | | | | SR 14 SB 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 | 1 1 | 0 | | 1 0 | 2 0 | 0 | | 0 0 | 0 0 | 0 | | 1 0 | 0 0 | 1 | |
| Volume Module: | | | | | | | | | | | | | | | | |
| Base Vol: | 0 | 1500 | 288 | | 214 | 462 | 0 | | 0 | 0 | 0 | | 31 | 0 | 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: | 0 | 1500 | 288 | | 214 | 462 | 0 | | 0 | 0 | 0 | | 31 | 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: | 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 | 1500 | 288 | | 214 | 462 | 0 | | 0 | 0 | 0 | | 31 | 0 | 2 | |
| Reduct Vol: | 0 | 0 | 0 | | 0 | 0 | 0 | | 0 | 0 | 0 | | 0 | 0 | 0 | |
| FinalVolume: | 0 | 1500 | 288 | | 214 | 462 | 0 | | 0 | 0 | 0 | | 31 | 0 | 2 | |
| Critical Gap Module: | | | | | | | | | | | | | | | | |
| Critical Gp: | xxxxx | xxxx | xxxxx | | 4.1 | xxxx | xxxxx | | xxxxx | xxxx | xxxxx | | 6.8 | xxxx | 6.9 | |
| FollowUpTim: | xxxxx | xxxx | xxxxx | | 2.2 | xxxx | xxxxx | | xxxxx | xxxx | xxxxx | | 3.5 | xxxx | 3.3 | |
| Capacity Module: | | | | | | | | | | | | | | | | |
| Cnflict Vol: | xxxx | xxxx | xxxxx | | 1788 | xxxx | xxxxx | | xxxx | xxxx | xxxxx | | 2303 | xxxx | 894 | |
| Potent Cap.: | xxxx | xxxx | xxxxx | | 351 | xxxx | xxxxx | | xxxx | xxxx | xxxxx | | 33 | xxxx | 288 | |
| Move Cap.: | xxxx | xxxx | xxxxx | | 351 | xxxx | xxxxx | | xxxx | xxxx | xxxxx | | 17 | xxxx | 288 | |
| Volume/Cap: | xxxx | xxxx | xxxx | | 0.61 | xxxx | xxxx | | xxxx | xxxx | xxxx | | 1.81 | xxxx | 0.01 | |
| Level Of Service Module: | | | | | | | | | | | | | | | | |
| 2Way95thQ: | xxxx | xxxx | xxxxx | | 3.8 | xxxx | xxxxx | | xxxx | xxxx | xxxxx | | 4.4 | xxxx | 0.0 | |
| Control Del: | xxxxx | xxxx | xxxxx | | 30.0 | xxxx | xxxxx | | xxxxx | xxxx | xxxxx | | 852.6 | xxxx | 17.6 | |
| LOS by Move: | * | * | * | | D | * | * | | * | * | * | | F | * | C | |
| 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 | | | | 802.0 | | | |
| ApproachLOS: | * | | | | * | | | | * | | | | F | | | |

Note: Queue reported is the number of cars per lane.

Disney Golden Oak
Future with Project Conditions - P.M. Peak Hour

Level Of Service Detailed Computation Report
2000 HCM Unsignalized Method
Base Volume Alternative

Intersection #1 Sierra Highway & SR 14 SB Ramps

| Approach: | North Bound | South Bound | East Bound | West Bound |
|---|---|---|---|---|
| Movement: | L - T - R | L - T - R | L - T - R | L - T - R |
| HevVeh: | 0% | 0% | 0% | 0% |
| Grade: | 0% | 0% | 0% | 0% |
| Peds/Hour: | 0 | 0 | 0 | 0 |
| LaneWidth: | 12 feet | 12 feet | 12 feet | 12 feet |

Pedestrian Walk Speed: 4.00 feet/sec
Time Period: 0.25 hour

Disney Golden Oak
Future with Project Conditions - P.M. Peak Hour

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #2 Sierra Highway & Placerita Canyon Road

| | | | |
|---|---|---|---|
| Cycle (sec): | 100 | Critical Vol./Cap.(X): | 0.710 |
| Loss Time (sec): | 0 | Average Delay (sec/veh): | 18.9 |
| Optimal Cycle: | 79 | Level Of Service: | B |

| Street Name: | Sierra Highway | | | | | | Placerita Canyon Road | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 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 |
| 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 | 1 | 1 0 | 1 0 | 1 | 1 0 | 1 0 | 1 | 1 0 |
| Volume Module: | | | | | | | | | | | | |
| Base Vol: | 16 | 1358 | 153 | 31 | 443 | 24 | 8 | 28 | 8 | 40 | 38 | 411 |
| 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: | 16 | 1358 | 153 | 31 | 443 | 24 | 8 | 28 | 8 | 40 | 38 | 411 |
| 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: | 16 | 1358 | 153 | 31 | 443 | 24 | 8 | 28 | 8 | 40 | 38 | 411 |
| Reduct Vol: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Reduced Vol: | 16 | 1358 | 153 | 31 | 443 | 24 | 8 | 28 | 8 | 40 | 38 | 411 |
| 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: | 16 | 1358 | 153 | 31 | 443 | 24 | 8 | 28 | 8 | 40 | 38 | 411 |
| Saturation Flow Module: | | | | | | | | | | | | |
| Sat/Lane: | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Adjustment: | 0.95 | 0.94 | 0.94 | 0.95 | 0.94 | 0.94 | 0.95 | 0.92 | 0.92 | 0.95 | 0.82 | 0.82 |
| Lanes: | 1.00 | 1.80 | 0.20 | 1.00 | 1.90 | 0.10 | 1.00 | 1.56 | 0.44 | 1.00 | 1.00 | 1.00 |
| Final Sat.: | 1805 | 3196 | 360 | 1805 | 3397 | 184 | 1805 | 2715 | 776 | 1805 | 1558 | 1558 |
| Capacity Analysis Module: | | | | | | | | | | | | |
| Vol/Sat: | 0.01 | 0.42 | 0.42 | 0.02 | 0.13 | 0.13 | 0.00 | 0.01 | 0.01 | 0.02 | 0.02 | 0.26 |
| Crit Moves: | | **** | | **** | | | **** | | | | | **** |
| Green/Cycle: | 0.04 | 0.60 | 0.60 | 0.02 | 0.58 | 0.58 | 0.01 | 0.12 | 0.12 | 0.26 | 0.37 | 0.37 |
| Volume/Cap: | 0.22 | 0.71 | 0.71 | 0.71 | 0.22 | 0.22 | 0.71 | 0.09 | 0.09 | 0.09 | 0.07 | 0.71 |
| Delay/Veh: | 48.1 | 15.2 | 15.2 | 90.8 | 10.1 | 10.1 | 164.9 | 39.2 | 39.2 | 28.3 | 20.3 | 30.6 |
| 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: | 48.1 | 15.2 | 15.2 | 90.8 | 10.1 | 10.1 | 164.9 | 39.2 | 39.2 | 28.3 | 20.3 | 30.6 |
| LOS by Move: | D | B | B | F | B | B | F | D | D | C | C | C |
| HCM2kAvgQ: | 1 | 18 | 18 | 2 | 4 | 4 | 1 | 1 | 1 | 1 | 1 | 12 |

Note: Queue reported is the number of cars per lane.

Disney Golden Oak
Future with Project Conditions - P.M. Peak Hour

Level Of Service Detailed Computation Report
2000 HCM Operations Method
Base Volume Alternative

Intersection #2 Sierra Highway & Placerita Canyon Road

| Approach: | North Bound | | | | South Bound | | | | East Bound | | | | West Bound | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Movement: | L | - T | - | R | L | - T | - | R | L | - T | - | R | L | - T | - | R |
| HCM Ops Adjusted Lane Utilization Module: | | | | | | | | | | | | | | | | |
| Lanes: | 1 | 0 1 | 1 | 0 | 1 | 0 1 | 1 | 0 | 1 | 0 1 | 1 | 0 | 1 | 0 1 | 1 | 0 |
| Lane Group: | L | RT | | RT | L | RT | | RT | L | RT | | RT | L | RT | | RT |
| #LnsInGrps: | 1 | 2 | | 2 | 1 | 2 | | 2 | 1 | 2 | | 2 | 1 | 2 | | 2 |
| HCM Ops Input Saturation Adj Module: | | | | | | | | | | | | | | | | |
| Lane Width: | 12 | 12 | | 12 | 12 | 12 | | 12 | 12 | 12 | | 12 | 12 | 12 | | 12 |
| CrsswalkWid: | | 8 | | | | 8 | | | | 8 | | | | 8 | | |
| % Hev Veh: | | 0 | | | | 0 | | | | 0 | | | | 0 | | |
| Grade: | | 0% | | | | 0% | | | | 0% | | | | 0% | | |
| Parking/Hr: | | No | | | | No | | | | No | | | | No | | |
| Bus Stp/Hr: | | 0 | | | | 0 | | | | 0 | | | | 0 | | |
| Area Type: | < < < < < < < < < < < < < < < < Other > > > > > > > > > > > > > > > > > > | | | | | | | | | | | | | | | |
| Cnft Ped/Hr: | | 0 | | | | 0 | | | | 0 | | | | 0 | | |
| ExclusiveRT: | | Include | | | | Include | | | | Include | | | | Include | | |
| % RT Prtct: | | 0 | | | | 0 | | | | 0 | | | | 0 | | |
| HCM Ops f(lt) Adj Case Module: | | | | | | | | | | | | | | | | |
| f(lt) Case: | 1 | xxxx | xxxx | | 1 | xxxx | xxxx | | 1 | xxxx | xxxx | | 1 | xxxx | xxxx | |
| HCM Ops Saturation Adj Module: | | | | | | | | | | | | | | | | |
| Ln Wid Adj: | 1.00 | 1.00 | 1.00 | | 1.00 | 1.00 | 1.00 | | 1.00 | 1.00 | 1.00 | | 1.00 | 1.00 | 1.00 | |
| Hev Veh Adj: | 1.00 | 1.00 | 1.00 | | 1.00 | 1.00 | 1.00 | | 1.00 | 1.00 | 1.00 | | 1.00 | 1.00 | 1.00 | |
| Grade Adj: | 1.00 | 1.00 | 1.00 | | 1.00 | 1.00 | 1.00 | | 1.00 | 1.00 | 1.00 | | 1.00 | 1.00 | 1.00 | |
| Parking Adj: | xxxx | 1.00 | 1.00 | | xxxx | 1.00 | 1.00 | | xxxx | 1.00 | 1.00 | | xxxx | 1.00 | 1.00 | |
| Bus Stp Adj: | xxxx | 1.00 | 1.00 | | xxxx | 1.00 | 1.00 | | xxxx | 1.00 | 1.00 | | xxxx | 1.00 | 1.00 | |
| Area Adj: | 1.00 | 1.00 | 1.00 | | 1.00 | 1.00 | 1.00 | | 1.00 | 1.00 | 1.00 | | 1.00 | 1.00 | 1.00 | |
| RT Adj: | xxxx | 0.99 | 0.99 | | xxxx | 0.99 | 0.99 | | xxxx | 0.97 | 0.97 | | xxxx | 0.86 | 0.86 | |
| LT Adj: | 0.95 | xxxx | xxxxx | | 0.95 | xxxx | xxxxx | | 0.95 | xxxx | xxxxx | | 0.95 | xxxx | xxxxx | |
| PedBike Adj: | 1.00 | 1.00 | 1.00 | | 1.00 | 1.00 | 1.00 | | 1.00 | 1.00 | 1.00 | | 1.00 | 1.00 | 1.00 | |
| HCM Sat Adj: | 0.95 | 0.99 | 0.99 | | 0.95 | 0.99 | 0.99 | | 0.95 | 0.97 | 0.97 | | 0.95 | 0.86 | 0.86 | |
| Usr Sat Adj: | 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 Sat Adj: | 1.00 | 0.95 | 0.95 | | 1.00 | 0.95 | 0.95 | | 1.00 | 0.95 | 0.95 | | 1.00 | 0.95 | 0.95 | |
| Fnl Sat Adj: | 0.95 | 0.94 | 0.94 | | 0.95 | 0.94 | 0.94 | | 0.95 | 0.92 | 0.92 | | 0.95 | 0.82 | 0.82 | |
| Delay Adjustment Factor Module: | | | | | | | | | | | | | | | | |
| Coordinated: | < < < < < < < < < < < < < < < < No > > > > > > > > > > > > > > > > > > | | | | | | | | | | | | | | | |
| Signal Type: | < < < < < < < < < < < < < Actuated > > > > > > > > > > > > > > > > | | | | | | | | | | | | | | | |
| DelAdjFctr: | 1.00 | 1.00 | 1.00 | | 1.00 | 1.00 | 1.00 | | 1.00 | 1.00 | 1.00 | | 1.00 | 1.00 | 1.00 | |

Disney Golden Oak
Future with Project Conditions - P.M. Peak Hour

Level Of Service Detailed Computation Report (HCM2000 Queue Method)
2000 HCM Operations Method
Base Volume Alternative

Intersection #2 Sierra Highway & Placerita Canyon Road

| Approach: | North Bound | | | South Bound | | | East Bound | | | West Bound | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Movement: | L - | T - | R | L - | T - | R | L - | T - | R | L - | T - | R |
| Green/Cycle: | 0.04 | 0.60 | 0.60 | 0.02 | 0.58 | 0.58 | 0.01 | 0.12 | 0.12 | 0.26 | 0.37 | 0.37 |
| ArrivalType: | | 3 | | | 3 | | | 3 | | | 3 | |
| ProgFactor: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Q1: | 0.4 | 15.4 | 15.4 | 0.9 | 3.3 | 3.3 | 0.2 | 0.5 | 0.5 | 0.8 | 0.7 | 10.3 |
| UpstreamVC: | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| UpstreamAdj: | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| EarlyArrAdj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Q2: | 0.3 | 2.3 | 2.3 | 1.3 | 0.3 | 0.3 | 0.8 | 0.1 | 0.1 | 0.1 | 0.1 | 2.2 |
| HCM2KQueue: | 0.7 | 17.8 | 17.8 | 2.2 | 3.6 | 3.6 | 1.0 | 0.6 | 0.6 | 0.9 | 0.8 | 12.5 |
| 70th%Factor: | 1.20 | 1.16 | 1.16 | 1.19 | 1.19 | 1.19 | 1.20 | 1.20 | 1.20 | 1.20 | 1.20 | 1.17 |
| HCM2k70thQ: | 0.8 | 20.7 | 20.7 | 2.6 | 4.2 | 4.2 | 1.2 | 0.7 | 0.7 | 1.1 | 0.9 | 14.7 |
| 85th%Factor: | 1.59 | 1.47 | 1.47 | 1.58 | 1.57 | 1.57 | 1.59 | 1.59 | 1.59 | 1.59 | 1.59 | 1.50 |
| HCM2k85thQ: | 1.1 | 26.0 | 26.0 | 3.5 | 5.6 | 5.6 | 1.7 | 0.9 | 0.9 | 1.5 | 1.3 | 18.7 |
| 90th%Factor: | 1.79 | 1.56 | 1.56 | 1.76 | 1.73 | 1.73 | 1.78 | 1.79 | 1.79 | 1.78 | 1.78 | 1.61 |
| HCM2k90thQ: | 1.3 | 27.8 | 27.8 | 3.8 | 6.2 | 6.2 | 1.8 | 1.0 | 1.0 | 1.7 | 1.4 | 20.2 |
| 95th%Factor: | 2.08 | 1.72 | 1.72 | 2.03 | 1.99 | 1.99 | 2.07 | 2.08 | 2.08 | 2.07 | 2.07 | 1.80 |
| HCM2k95thQ: | 1.5 | 30.6 | 30.6 | 4.4 | 7.1 | 7.1 | 2.1 | 1.2 | 1.2 | 1.9 | 1.6 | 22.5 |
| 98th%Factor: | 2.65 | 1.96 | 1.96 | 2.55 | 2.46 | 2.46 | 2.62 | 2.66 | 2.66 | 2.63 | 2.64 | 2.08 |
| HCM2k98thQ: | 1.9 | 34.7 | 34.7 | 5.6 | 8.8 | 8.8 | 2.7 | 1.5 | 1.5 | 2.5 | 2.1 | 26.0 |

Disney Golden Oak
Future with Project Conditions - P.M. Peak Hour

Fuel Consumption and Emissions
2000 HCM Operations Method
Base Volume Alternative

Intersection #2 Sierra Highway & Placerita Canyon Road

| Approach: | North Bound | | | South Bound | | | East Bound | | | West Bound | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Movement: | L | T | R | L | T | R | L | T | R | L | T | R |
| Run Speed: | | 30 MPH | | | 30 MPH | | | 30 MPH | | | 30 MPH | |
| NumOfStops: | 3.9 | 237 | 26.7 | 7.7 | 53.1 | 2.9 | 2.0 | 6.2 | 1.8 | 7.6 | 6.1 | 87.7 |

Name: year 1995 composite fleet

| | | |
|---|---|---|
| Fuel Consumption: | 64.770 | pounds |
| | 10.493 | gallons |
| Carbon Dioxide: | 202.082 | pounds |
| Carbon Monoxide: | 15.346 | pounds |
| Hydrocarbons: | 2.619 | pounds |
| Nitrogen Oxides: | 0.753 | pounds |

Name: year 2000 composite fleet

| | | |
|---|---|---|
| Fuel Consumption: | 64.770 | pounds |
| | 10.493 | gallons |
| Carbon Dioxide: | 202.082 | pounds |
| Carbon Monoxide: | 15.346 | pounds |
| Hydrocarbons: | 2.619 | pounds |
| Nitrogen Oxides: | 0.753 | pounds |

DISCLAIMER
The fuel consumption and emissions measures should be used with caution and only for comparisons of different signal timings, geometric design alternatives or for general planning applications, as these calculations are applied to the analysis of a single intersection within the CCG and TRAFFIX. Network models are more appropriate since they can account for the influence of the adjacent control measures and other system elements.

Disney Golden Oak
Future with Project Conditions - P.M. Peak Hour

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #3 SR 14 NB Off-Ramp & Placerita Canyon Road

| | | | |
|---|---|---|---|
| Cycle (sec): | 100 | Critical Vol./Cap.(X): | 0.231 |
| Loss Time (sec): | 0 | Average Delay (sec/veh): | 24.3 |
| Optimal Cycle: | 24 | Level Of Service: | C |

| Street Name: | SR 14 NB Off-Ramp | | | | | | Placerita Canyon Road | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 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 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 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 1 | 0 0 | 1 | 0 0 | 0 0 | 1 | 0 0 | 2 0 | 0 | 0 0 | 1 1 | 0 |
| Volume Module: | | | | | | | | | | | | |
| Base Vol: | 123 | 28 | 118 | 0 | 0 | 136 | 0 | 99 | 0 | 0 | 270 | 0 |
| Growth Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Initial Bse: | 123 | 28 | 118 | 0 | 0 | 136 | 0 | 99 | 0 | 0 | 270 | 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: | 123 | 28 | 118 | 0 | 0 | 136 | 0 | 99 | 0 | 0 | 270 | 0 |
| Reduct Vol: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Reduced Vol: | 123 | 28 | 118 | 0 | 0 | 136 | 0 | 99 | 0 | 0 | 270 | 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: | 123 | 28 | 118 | 0 | 0 | 136 | 0 | 99 | 0 | 0 | 270 | 0 |
| Saturation Flow Module: | | | | | | | | | | | | |
| Sat/Lane: | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Adjustment: | 0.96 | 0.96 | 0.85 | 1.00 | 1.00 | 0.87 | 1.00 | 0.95 | 1.00 | 1.00 | 0.95 | 0.95 |
| Lanes: | 1.63 | 0.37 | 1.00 | 0.00 | 0.00 | 1.00 | 0.00 | 2.00 | 0.00 | 0.00 | 2.00 | 0.00 |
| Final Sat.: | 2975 | 677 | 1615 | 0 | 0 | 1644 | 0 | 3610 | 0 | 0 | 3610 | 0 |
| Capacity Analysis Module: | | | | | | | | | | | | |
| Vol/Sat: | 0.04 | 0.04 | 0.07 | 0.00 | 0.00 | 0.08 | 0.00 | 0.03 | 0.00 | 0.00 | 0.07 | 0.00 |
| Crit Moves: | | | **** | | | **** | | | | | **** | |
| Green/Cycle: | 0.32 | 0.32 | 0.32 | 0.00 | 0.00 | 0.36 | 0.00 | 0.32 | 0.00 | 0.00 | 0.32 | 0.00 |
| Volume/Cap: | 0.13 | 0.13 | 0.23 | 0.00 | 0.00 | 0.23 | 0.00 | 0.08 | 0.00 | 0.00 | 0.23 | 0.00 |
| Delay/Veh: | 24.4 | 24.4 | 25.4 | 0.0 | 0.0 | 22.6 | 0.0 | 23.5 | 0.0 | 0.0 | 24.8 | 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: | 24.4 | 24.4 | 25.4 | 0.0 | 0.0 | 22.6 | 0.0 | 23.5 | 0.0 | 0.0 | 24.8 | 0.0 |
| LOS by Move: | C | C | C | A | A | C | A | C | A | A | C | A |
| HCM2kAvgQ: | 2 | 2 | 3 | 0 | 0 | 3 | 0 | 1 | 0 | 0 | 3 | 0 |

Note: Queue reported is the number of cars per lane.

Disney Golden Oak
Future with Project Conditions - P.M. Peak Hour

Level Of Service Detailed Computation Report
2000 HCM Operations Method
Base Volume Alternative

**********
Intersection #3 SR 14 NB Off-Ramp & Placerita Canyon Road
**********

| Approach: | North Bound | | | | South Bound | | | | East Bound | | | | West Bound | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Movement: | L | - | T | - R | L | - | T | - R | L | - | T | - R | L | - | T | - R |
| HCM Ops Adjusted Lane Utilization Module: | | | | | | | | | | | | | | | | |
| Lanes: | 1 | 1 | 0 | 0 1 | 0 | 0 | 0 | 0 1 | 0 | 0 | 2 | 0 0 | 0 | 0 | 1 | 1 0 |
| Lane Group: | LT | | LT | R | xxxx | xxxx | | R | xxxx | | T | xxxx | xxxx | | RT | RT |
| #LnsInGrps: | 2 | | 2 | 1 | 0 | 0 | | 1 | 0 | | 2 | 0 | 0 | | 2 | 2 |
| HCM Ops Input Saturation Adj Module: | | | | | | | | | | | | | | | | |
| Lane Width: | 12 | | 12 | 12 | 12 | 12 | | 12 | 12 | | 12 | 12 | 12 | | 12 | 12 |
| CrsswalkWid: | | | 8 | | | 8 | | | | | 8 | | | | 8 | |
| % Hev Veh: | | | 0 | | | 0 | | | | | 0 | | | | 0 | |
| Grade: | | | 0% | | | 0% | | | | | 0% | | | | 0% | |
| Parking/Hr: | | | No | | | No | | | | | No | | | | No | |
| Bus Stp/Hr: | | | 0 | | | 0 | | | | | 0 | | | | 0 | |
| Area Type: | < < < < < < < < < < < < < < < < Other > > > > > > > > > > > > > > > > > > | | | | | | | | | | | | | | | |
| Cnft Ped/Hr: | | | 0 | | | 0 | | | | | 0 | | | | 0 | |
| ExclusiveRT: | | | Include | | | Include | | | | | Include | | | | Include | |
| % RT Prtct: | | | 0 | | | 0 | | | | | 0 | | | | 0 | |
| HCM Ops f(lt) Adj Case Module: | | | | | | | | | | | | | | | | |
| f(lt) Case: | 4 | | 4 | xxxx | xxxx | xxxx | | xxxx | xxxx | | xxxx | xxxx | xxxx | | xxxx | xxxx |
| HCM Ops Saturation Adj Module: | | | | | | | | | | | | | | | | |
| Ln Wid Adj: | 1.00 | 1.00 | | 1.00 | xxxx | xxxx | | 1.00 | xxxx | 1.00 | | xxxxx | xxxx | 1.00 | | xxxxx |
| Hev Veh Adj: | 1.00 | 1.00 | | 1.00 | xxxx | xxxx | | 1.00 | xxxx | 1.00 | | xxxxx | xxxx | 1.00 | | xxxxx |
| Grade Adj: | 1.00 | 1.00 | | 1.00 | xxxx | xxxx | | 1.00 | xxxx | 1.00 | | xxxxx | xxxx | 1.00 | | xxxxx |
| Parking Adj: | xxxx | xxxx | | 1.00 | xxxx | xxxx | | 1.00 | xxxx | 1.00 | | xxxxx | xxxx | 1.00 | | xxxxx |
| Bus Stp Adj: | xxxx | xxxx | | 1.00 | xxxx | xxxx | | 1.00 | xxxx | 1.00 | | xxxxx | xxxx | 1.00 | | xxxxx |
| Area Adj: | 1.00 | 1.00 | | 1.00 | xxxx | xxxx | | 1.00 | xxxx | 1.00 | | xxxxx | xxxx | 1.00 | | xxxxx |
| RT Adj: | xxxx | xxxx | | 0.85 | xxxx | xxxx | | 0.87 | xxxx | xxxx | | xxxxx | xxxx | xxxx | | xxxxx |
| LT Adj: | 0.96 | 0.96 | | xxxxx | xxxx | xxxx | | xxxxx | xxxx | xxxx | | xxxxx | xxxx | xxxx | | xxxxx |
| PedBike Adj: | 1.00 | 1.00 | | 1.00 | 1.00 | 1.00 | | 1.00 | 1.00 | 1.00 | | 1.00 | 1.00 | 1.00 | | 1.00 |
| HCM Sat Adj: | 0.96 | 0.96 | | 0.85 | 1.00 | 1.00 | | 0.87 | 1.00 | 1.00 | | 1.00 | 1.00 | 1.00 | | 1.00 |
| Usr Sat Adj: | 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 Sat Adj: | 1.00 | 1.00 | | 1.00 | 1.00 | 1.00 | | 1.00 | 1.00 | 0.95 | | 1.00 | 1.00 | 0.95 | | 0.95 |
| Fnl Sat Adj: | 0.96 | 0.96 | | 0.85 | 1.00 | 1.00 | | 0.87 | 1.00 | 0.95 | | 1.00 | 1.00 | 0.95 | | 0.95 |
| Delay Adjustment Factor Module: | | | | | | | | | | | | | | | | |
| Coordinated: | < < < < < < < < < < < < < < < < No > > > > > > > > > > > > > > > > > > | | | | | | | | | | | | | | | |
| Signal Type: | < < < < < < < < < < < < < Actuated > > > > > > > > > > > > > > > > | | | | | | | | | | | | | | | |
| DelAdjFctr: | 1.00 | 1.00 | | 1.00 | 0.00 | 0.00 | | 1.00 | 0.00 | 1.00 | | 0.00 | 0.00 | 1.00 | | 0.00 |

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Disney Golden Oak
Future with Project Conditions - P.M. Peak Hour

Level Of Service Detailed Computation Report (HCM2000 Queue Method)
2000 HCM Operations Method
Base Volume Alternative

Intersection #3 SR 14 NB Off-Ramp & Placerita Canyon Road

| Approach: | North Bound | | | South Bound | | | East Bound | | | West Bound | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Movement: | L - | T - | R | L - | T - | R | L - | T - | R | L - | T - | R |
| Green/Cycle: | 0.32 | 0.32 | 0.32 | 0.00 | 0.00 | 0.36 | 0.00 | 0.32 | 0.00 | 0.00 | 0.32 | 0.00 |
| ArrivalType: | | 3 | | | 3 | | | 3 | | | 3 | |
| ProgFactor: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Q1: | 1.5 | 1.5 | 2.4 | 0.0 | 0.0 | 2.6 | 0.0 | 1.0 | 0.0 | 0.0 | 2.9 | 0.0 |
| UpstreamVC: | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| UpstreamAdj: | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| EarlyArrAdj: | 1.00 | 1.00 | 1.00 | 0.00 | 0.00 | 1.00 | 0.00 | 1.00 | 0.00 | 0.00 | 1.00 | 0.00 |
| Q2: | 0.1 | 0.1 | 0.3 | 0.0 | 0.0 | 0.3 | 0.0 | 0.1 | 0.0 | 0.0 | 0.3 | 0.0 |
| HCM2KQueue: | 1.6 | 1.6 | 2.7 | 0.0 | 0.0 | 2.9 | 0.0 | 1.1 | 0.0 | 0.0 | 3.2 | 0.0 |
| 70th%Factor: | 1.20 | 1.20 | 1.19 | 1.20 | 1.20 | 1.19 | 1.20 | 1.20 | 1.20 | 1.20 | 1.19 | 1.20 |
| HCM2k70thQ: | 2.0 | 2.0 | 3.2 | 0.0 | 0.0 | 3.5 | 0.0 | 1.3 | 0.0 | 0.0 | 3.8 | 0.0 |
| 85th%Factor: | 1.58 | 1.58 | 1.57 | 1.60 | 1.60 | 1.57 | 1.60 | 1.59 | 1.60 | 1.60 | 1.57 | 1.60 |
| HCM2k85thQ: | 2.6 | 2.6 | 4.3 | 0.0 | 0.0 | 4.6 | 0.0 | 1.7 | 0.0 | 0.0 | 5.0 | 0.0 |
| 90th%Factor: | 1.77 | 1.77 | 1.75 | 1.80 | 1.80 | 1.75 | 1.80 | 1.78 | 1.80 | 1.80 | 1.74 | 1.80 |
| HCM2k90thQ: | 2.9 | 2.9 | 4.7 | 0.0 | 0.0 | 5.1 | 0.0 | 2.0 | 0.0 | 0.0 | 5.5 | 0.0 |
| 95th%Factor: | 2.05 | 2.05 | 2.02 | 2.10 | 2.10 | 2.01 | 2.10 | 2.06 | 2.10 | 2.10 | 2.00 | 2.10 |
| HCM2k95thQ: | 3.4 | 3.4 | 5.5 | 0.0 | 0.0 | 5.9 | 0.0 | 2.3 | 0.0 | 0.0 | 6.4 | 0.0 |
| 98th%Factor: | 2.58 | 2.58 | 2.51 | 2.70 | 2.70 | 2.50 | 2.70 | 2.62 | 2.70 | 2.70 | 2.48 | 2.70 |
| HCM2k98thQ: | 4.2 | 4.2 | 6.8 | 0.0 | 0.0 | 7.3 | 0.0 | 2.9 | 0.0 | 0.0 | 7.9 | 0.0 |

Disney Golden Oak
Future with Project Conditions - P.M. Peak Hour

Fuel Consumption and Emissions
2000 HCM Operations Method
Base Volume Alternative

Intersection #3 SR 14 NB Off-Ramp & Placerita Canyon Road

| Approach: | North Bound | | | South Bound | | | East Bound | | | West Bound | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Movement: | L | T | R | L | T | R | L | T | R | L | T | R |
| Run Speed: | 30 MPH | | | 30 MPH | | | 30 MPH | | | 30 MPH | | |
| NumOfStops: | 21.9 | 5.0 | 21.7 | 0.0 | 0.0 | 23.8 | 0.0 | 17.2 | 0.0 | 0.0 | 49.3 | 0.0 |

Name: year 1995 composite fleet

| | |
|---|---|
| Fuel Consumption: | 22.491 pounds |
| | 3.644 gallons |
| Carbon Dioxide: | 70.173 pounds |
| Carbon Monoxide: | 5.456 pounds |
| Hydrocarbons: | 0.973 pounds |
| Nitrogen Oxides: | 0.256 pounds |

Name: year 2000 composite fleet

| | |
|---|---|
| Fuel Consumption: | 22.491 pounds |
| | 3.644 gallons |
| Carbon Dioxide: | 70.173 pounds |
| Carbon Monoxide: | 5.456 pounds |
| Hydrocarbons: | 0.973 pounds |
| Nitrogen Oxides: | 0.256 pounds |

DISCLAIMER
The fuel consumption and emissions measures should be used with caution and only for comparisons of different signal timings, geometric design alternatives or for general planning applications, as these calculations are applied to the analysis of a single intersection within the CCG and TRAFFIX. Network models are more appropriate since they can account for the influence of the adjacent control measures and other system elements.

***EXISTING PLUS PROJECT WITH MITIGATION CONDITIONS***
***SOUNDSTAGES OPTION***

***(YEAR 2010)***

Disney Golden Oak
Future with Project with Mitigation - A.M. Peak Hour

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #1 Sierra Highway & SR 14 SB Ramps

| | | | |
|---|---|---|---|
| Cycle (sec): | 100 | Critical Vol./Cap.(X): | 0.525 |
| Loss Time (sec): | 0 | Average Delay (sec/veh): | 10.8 |
| Optimal Cycle: | 39 | Level Of Service: | B |

| Street Name: | Sierra Highway | | | | | | SR 14 SB Ramps | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 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: | Include | | | Include | | | Include | | | Include | | |
| Min. Green: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 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 | 2 0 | 1 | 1 0 | 2 0 | 0 | 0 0 | 0 0 | 0 | 1 0 | 0 0 | 1 |
| Volume Module: | | | | | | | | | | | | |
| Base Vol: | 0 | 322 | 149 | 705 | 1258 | 0 | 0 | 0 | 0 | 81 | 0 | 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: | 0 | 322 | 149 | 705 | 1258 | 0 | 0 | 0 | 0 | 81 | 0 | 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: | 0 | 322 | 149 | 705 | 1258 | 0 | 0 | 0 | 0 | 81 | 0 | 4 |
| Reduct Vol: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Reduced Vol: | 0 | 322 | 149 | 705 | 1258 | 0 | 0 | 0 | 0 | 81 | 0 | 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: | 0 | 322 | 149 | 705 | 1258 | 0 | 0 | 0 | 0 | 81 | 0 | 4 |
| Saturation Flow Module: | | | | | | | | | | | | |
| Sat/Lane: | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Adjustment: | 1.00 | 0.95 | 0.85 | 0.95 | 0.95 | 1.00 | 1.00 | 1.00 | 1.00 | 0.95 | 1.00 | 0.85 |
| Lanes: | 0.00 | 2.00 | 1.00 | 1.00 | 2.00 | 0.00 | 0.00 | 0.00 | 0.00 | 1.00 | 0.00 | 1.00 |
| Final Sat.: | 0 | 3610 | 1615 | 1805 | 3610 | 0 | 0 | 0 | 0 | 1805 | 0 | 1615 |
| Capacity Analysis Module: | | | | | | | | | | | | |
| Vol/Sat: | 0.00 | 0.09 | 0.09 | 0.39 | 0.35 | 0.00 | 0.00 | 0.00 | 0.00 | 0.04 | 0.00 | 0.00 |
| Crit Moves: | | **** | | **** | | | | | | **** | | |
| Green/Cycle: | 0.00 | 0.17 | 0.17 | 0.74 | 0.91 | 0.00 | 0.00 | 0.00 | 0.00 | 0.09 | 0.00 | 0.09 |
| Volume/Cap: | 0.00 | 0.52 | 0.54 | 0.52 | 0.38 | 0.00 | 0.00 | 0.00 | 0.00 | 0.52 | 0.00 | 0.03 |
| Delay/Veh: | 0.0 | 38.7 | 40.2 | 5.7 | 0.6 | 0.0 | 0.0 | 0.0 | 0.0 | 47.1 | 0.0 | 42.0 |
| 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 | 38.7 | 40.2 | 5.7 | 0.6 | 0.0 | 0.0 | 0.0 | 0.0 | 47.1 | 0.0 | 42.0 |
| LOS by Move: | A | D | D | A | A | A | A | A | A | D | A | D |
| HCM2kAvgQ: | 0 | 5 | 5 | 9 | 3 | 0 | 0 | 0 | 0 | 3 | 0 | 0 |

Note: Queue reported is the number of cars per lane.

Disney Golden Oak
Future with Project with Mitigation - A.M. Peak Hour

Level Of Service Detailed Computation Report
2000 HCM Operations Method
Base Volume Alternative

Intersection #1 Sierra Highway & SR 14 SB Ramps

```
Approach:      North Bound      South Bound       East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
HCM Ops Adjusted Lane Utilization Module:
Lanes:        0  0  2  0  1    1  0  2  0  0    0  0  0  0  0    1  0  0  0  1
Lane Group:  xxxx   T     R     L    T   xxxx  xxxx xxxx  xxxx    L  xxxx    R
#LnsInGrps:     0    2     1     1    2     0     0    0     0    1    0     1
------------|---------------||---------------||---------------||---------------|
HCM Ops Input Saturation Adj Module:
Lane Width:    12   12    12    12   12    12    12   12    12    12   12    12
CrsswalkWid:         8                8                8                8
% Hev Veh:           0                0                0                0
Grade:              0%               0%               0%               0%
Parking/Hr:         No               No               No               No
Bus Stp/Hr:          0                0                0                0
Area Type:    < < < < < < < < < < < < < < < Other  > > > > > > > > > > > > > > > >
Cnft Ped/Hr:         0                0                0                0
ExclusiveRT:     Include          Include          Include          Include
% RT Prtct:          0                0                0                0
------------|---------------||---------------||---------------||---------------|
HCM Ops f(lt) Adj Case Module:
f(lt) Case:  xxxx xxxx  xxxx     1 xxxx  xxxx  xxxx xxxx  xxxx     1 xxxx  xxxx
------------|---------------||---------------||---------------||---------------|
HCM Ops Saturation Adj Module:
Ln Wid Adj:  xxxx 1.00  1.00  1.00 1.00 xxxxx  xxxx xxxx xxxxx  1.00 xxxx  1.00
Hev Veh Adj: xxxx 1.00  1.00  1.00 1.00 xxxxx  xxxx xxxx xxxxx  1.00 xxxx  1.00
Grade Adj:   xxxx 1.00  1.00  1.00 1.00 xxxxx  xxxx xxxx xxxxx  1.00 xxxx  1.00
Parking Adj: xxxx xxxx  1.00  xxxx 1.00 xxxxx  xxxx xxxx xxxxx  xxxx xxxx  1.00
Bus Stp Adj: xxxx xxxx  1.00  xxxx 1.00 xxxxx  xxxx xxxx xxxxx  xxxx xxxx  1.00
Area Adj:    xxxx 1.00  1.00  1.00 1.00 xxxxx  xxxx xxxx xxxxx  1.00 xxxx  1.00
RT Adj:      xxxx xxxx  0.85  xxxx xxxx xxxxx  xxxx xxxx xxxxx  xxxx xxxx  0.85
LT Adj:      xxxx xxxx xxxxx  0.95 xxxx xxxxx  xxxx xxxx xxxxx  0.95 xxxx xxxxx
PedBike Adj: 1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
HCM Sat Adj: 1.00 1.00  0.85  0.95 1.00  1.00  1.00 1.00  1.00  0.95 1.00  0.85
Usr Sat Adj: 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 Sat Adj: 1.00 0.95  1.00  1.00 0.95  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Fnl Sat Adj: 1.00 0.95  0.85  0.95 0.95  1.00  1.00 1.00  1.00  0.95 1.00  0.85
------------|---------------||---------------||---------------||---------------|
Delay Adjustment Factor Module:
Coordinated:  < < < < < < < < < < < < < < <  No  > > > > > > > > > > > > > > > >
Signal Type:  < < < < < < < < < < < <     Actuated     > > > > > > > > > > > > >
DelAdjFctr:  0.00 1.00  1.00  1.00 1.00  0.00  0.00 0.00  0.00  1.00 0.00  1.00
```

Disney Golden Oak
Future with Project with Mitigation - A.M. Peak Hour

Level Of Service Detailed Computation Report (HCM2000 Queue Method)
2000 HCM Operations Method
Base Volume Alternative

Intersection #1 Sierra Highway & SR 14 SB Ramps

| Approach: | North Bound | | | South Bound | | | East Bound | | | West Bound | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Movement: | L | T | R | L | T | R | L | T | R | L | T | R |
| Green/Cycle: | 0.00 | 0.17 | 0.17 | 0.74 | 0.91 | 0.00 | 0.00 | 0.00 | 0.00 | 0.09 | 0.00 | 0.09 |
| ArrivalType: | | 3 | | | 3 | | | 3 | | | 3 | |
| ProgFactor: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Q1: | 0.0 | 4.3 | 3.8 | 8.2 | 2.4 | 0.0 | 0.0 | 0.0 | 0.0 | 2.2 | 0.0 | 0.1 |
| UpstreamVC: | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| UpstreamAdj: | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| EarlyArrAdj: | 0.00 | 1.00 | 1.00 | 1.00 | 1.00 | 0.00 | 0.00 | 0.00 | 0.00 | 1.00 | 0.00 | 1.00 |
| Q2: | 0.0 | 1.0 | 1.1 | 1.1 | 0.6 | 0.0 | 0.0 | 0.0 | 0.0 | 1.0 | 0.0 | 0.0 |
| HCM2KQueue: | 0.0 | 5.3 | 4.9 | 9.3 | 3.0 | 0.0 | 0.0 | 0.0 | 0.0 | 3.2 | 0.0 | 0.1 |
| 70th%Factor: | 1.20 | 1.19 | 1.19 | 1.18 | 1.19 | 1.20 | 1.20 | 1.20 | 1.20 | 1.19 | 1.20 | 1.20 |
| HCM2k70thQ: | 0.0 | 6.3 | 5.8 | 11.0 | 3.6 | 0.0 | 0.0 | 0.0 | 0.0 | 3.8 | 0.0 | 0.2 |
| 85th%Factor: | 1.60 | 1.55 | 1.55 | 1.52 | 1.57 | 1.60 | 1.60 | 1.60 | 1.60 | 1.57 | 1.60 | 1.60 |
| HCM2k85thQ: | 0.0 | 8.3 | 7.6 | 14.1 | 4.8 | 0.0 | 0.0 | 0.0 | 0.0 | 4.9 | 0.0 | 0.2 |
| 90th%Factor: | 1.80 | 1.71 | 1.71 | 1.65 | 1.74 | 1.80 | 1.80 | 1.80 | 1.80 | 1.74 | 1.80 | 1.80 |
| HCM2k90thQ: | 0.0 | 9.1 | 8.4 | 15.4 | 5.3 | 0.0 | 0.0 | 0.0 | 0.0 | 5.5 | 0.0 | 0.2 |
| 95th%Factor: | 2.10 | 1.95 | 1.96 | 1.86 | 2.01 | 2.10 | 2.10 | 2.10 | 2.10 | 2.00 | 2.10 | 2.10 |
| HCM2k95thQ: | 0.0 | 10.4 | 9.6 | 17.3 | 6.1 | 0.0 | 0.0 | 0.0 | 0.0 | 6.3 | 0.0 | 0.3 |
| 98th%Factor: | 2.70 | 2.36 | 2.39 | 2.19 | 2.49 | 2.70 | 2.70 | 2.70 | 2.70 | 2.48 | 2.70 | 2.69 |
| HCM2k98thQ: | 0.0 | 12.6 | 11.7 | 20.4 | 7.5 | 0.0 | 0.0 | 0.0 | 0.0 | 7.8 | 0.0 | 0.4 |

Disney Golden Oak
Future with Project with Mitigation - A.M. Peak Hour

Fuel Consumption and Emissions
2000 HCM Operations Method
Base Volume Alternative

Intersection #1 Sierra Highway & SR 14 SB Ramps

| Approach: | North Bound | | | South Bound | | | East Bound | | | West Bound | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Movement: | L | T | R | L | T | R | L | T | R | L | T | R |
| Run Speed: | 30 MPH | | | 30 MPH | | | 30 MPH | | | 30 MPH | | |
| NumOfStops: | 0.0 | 73.4 | 34.1 | 73.9 | 41.3 | 0.0 | 0.0 | 0.0 | 0.0 | 19.4 | 0.0 | 0.9 |

Name: year 1995 composite fleet
Fuel Consumption: 47.245 pounds
7.654 gallons
Carbon Dioxide: 147.404 pounds
Carbon Monoxide: 10.566 pounds
Hydrocarbons: 1.649 pounds
Nitrogen Oxides: 0.527 pounds

Name: year 2000 composite fleet
Fuel Consumption: 47.245 pounds
7.654 gallons
Carbon Dioxide: 147.404 pounds
Carbon Monoxide: 10.566 pounds
Hydrocarbons: 1.649 pounds
Nitrogen Oxides: 0.527 pounds

DISCLAIMER
The fuel consumption and emissions measures should be used with caution and only for comparisons of different signal timings, geometric design alternatives or for general planning applications, as these calculations are applied to the analysis of a single intersection within the CCG and TRAFFIX. Network models are more appropriate since they can account for the influence of the adjacent control measures and other system elements.

Disney Golden Oak
Future with Project with Mitigation - A.M. Peak Hour

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #2 Sierra Highway & Placerita Canyon Road

| | | | |
|---|---|---|---|
| Cycle (sec): | 100 | Critical Vol./Cap.(X): | 0.379 |
| Loss Time (sec): | 0 | Average Delay (sec/veh): | 9.4 |
| Optimal Cycle: | 37 | Level Of Service: | A |

| Street Name: | Sierra Highway | | | | | | Placerita Canyon Road | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 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 | | | Ignore | | |
| Min. Green: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 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 | 1 | 1 0 | 1 0 | 1 | 1 0 | 1 0 | 2 | 0 1 |
| Volume Module: | | | | | | | | | | | | |
| Base Vol: | 5 | 220 | 57 | 157 | 1156 | 17 | 10 | 39 | 12 | 65 | 20 | 248 |
| 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: | 5 | 220 | 57 | 157 | 1156 | 17 | 10 | 39 | 12 | 65 | 20 | 248 |
| User Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 0.00 |
| PHF Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 0.00 |
| PHF Volume: | 5 | 220 | 57 | 157 | 1156 | 17 | 10 | 39 | 12 | 65 | 20 | 0 |
| Reduct Vol: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Reduced Vol: | 5 | 220 | 57 | 157 | 1156 | 17 | 10 | 39 | 12 | 65 | 20 | 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 | 0.00 |
| MLF Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 0.00 |
| FinalVolume: | 5 | 220 | 57 | 157 | 1156 | 17 | 10 | 39 | 12 | 65 | 20 | 0 |
| Saturation Flow Module: | | | | | | | | | | | | |
| Sat/Lane: | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Adjustment: | 0.95 | 0.92 | 0.92 | 0.95 | 0.95 | 0.95 | 0.95 | 0.92 | 0.92 | 0.95 | 0.95 | 1.00 |
| Lanes: | 1.00 | 1.59 | 0.41 | 1.00 | 1.97 | 0.03 | 1.00 | 1.53 | 0.47 | 1.00 | 2.00 | 1.00 |
| Final Sat.: | 1805 | 2778 | 720 | 1805 | 3551 | 52 | 1805 | 2664 | 820 | 1805 | 3610 | 1900 |
| Capacity Analysis Module: | | | | | | | | | | | | |
| Vol/Sat: | 0.00 | 0.08 | 0.08 | 0.09 | 0.33 | 0.33 | 0.01 | 0.01 | 0.01 | 0.04 | 0.01 | 0.00 |
| Crit Moves: | **** | | | | **** | | | **** | | **** | | |
| Green/Cycle: | 0.01 | 0.41 | 0.41 | 0.45 | 0.86 | 0.86 | 0.07 | 0.04 | 0.04 | 0.10 | 0.07 | 0.00 |
| Volume/Cap: | 0.38 | 0.19 | 0.19 | 0.19 | 0.38 | 0.38 | 0.08 | 0.38 | 0.38 | 0.38 | 0.08 | 0.00 |
| Delay/Veh: | 66.7 | 18.8 | 18.8 | 16.5 | 1.6 | 1.6 | 44.1 | 48.7 | 48.7 | 43.9 | 43.9 | 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: | 66.7 | 18.8 | 18.8 | 16.5 | 1.6 | 1.6 | 44.1 | 48.7 | 48.7 | 43.9 | 43.9 | 0.0 |
| LOS by Move: | E | B | B | B | A | A | D | D | D | D | D | A |
| HCM2kAvgQ: | 1 | 3 | 3 | 3 | 4 | 4 | 0 | 1 | 1 | 2 | 0 | 0 |

Note: Queue reported is the number of cars per lane.

Disney Golden Oak
Future with Project with Mitigation - A.M. Peak Hour

Level Of Service Detailed Computation Report
2000 HCM Operations Method
Base Volume Alternative

Intersection #2 Sierra Highway & Placerita Canyon Road

```
Approach:      North Bound      South Bound       East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
HCM Ops Adjusted Lane Utilization Module:
Lanes:        1  0  1  1  0    1  0  1  1  0    1  0  1  1  0    1  0  2  0  1
Lane Group:    L   RT     RT    L   RT     RT    L   RT     RT    L    T     R
#LnsInGrps:     1    2     2     1    2     2     1    2     2     1    2     1
------------|---------------||---------------||---------------||---------------|
HCM Ops Input Saturation Adj Module:
Lane Width:    12   12    12    12   12    12    12   12    12    12   12    12
CrsswalkWid:         8                8                8                8
% Hev Veh:           0                0                0                0
Grade:              0%               0%               0%               0%
Parking/Hr:         No               No               No               No
Bus Stp/Hr:          0                0                0                0
Area Type:    < < < < < < < < < < < < < < < < Other  > > > > > > > > > > > > > > > >
Cnft Ped/Hr:         0                0                0                0
ExclusiveRT:     Include          Include          Include          Include
% RT Prtct:          0                0                0                0
------------|---------------||---------------||---------------||---------------|
HCM Ops f(lt) Adj Case Module:
f(lt) Case:     1 xxxx  xxxx     1 xxxx  xxxx     1 xxxx  xxxx     1 xxxx  xxxx
------------|---------------||---------------||---------------||---------------|
HCM Ops Saturation Adj Module:
Ln Wid Adj:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00 xxxxx
Hev Veh Adj: 1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00 xxxxx
Grade Adj:   1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00 xxxxx
Parking Adj: xxxx 1.00  1.00  xxxx 1.00  1.00  xxxx 1.00  1.00  xxxx xxxx xxxxx
Bus Stp Adj: xxxx 1.00  1.00  xxxx 1.00  1.00  xxxx 1.00  1.00  xxxx xxxx xxxxx
Area Adj:    1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00 xxxxx
RT Adj:      xxxx 0.97  0.97  xxxx 1.00  1.00  xxxx 0.97  0.97  xxxx xxxx xxxxx
LT Adj:      0.95 xxxx xxxxx  0.95 xxxx xxxxx  0.95 xxxx xxxxx  0.95 xxxx xxxxx
PedBike Adj: 1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
HCM Sat Adj: 0.95 0.97  0.97  0.95 1.00  1.00  0.95 0.97  0.97  0.95 1.00  1.00
Usr Sat Adj: 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 Sat Adj: 1.00 0.95  0.95  1.00 0.95  0.95  1.00 0.95  0.95  1.00 0.95  1.00
Fnl Sat Adj: 0.95 0.92  0.92  0.95 0.95  0.95  0.95 0.92  0.92  0.95 0.95  1.00
------------|---------------||---------------||---------------||---------------|
Delay Adjustment Factor Module:
Coordinated:  < < < < < < < < < < < < < < < <  No  > > > > > > > > > > > > > > > >
Signal Type:  < < < < < < < < < < < < <     Actuated     > > > > > > > > > > > > > >
DelAdjFctr:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  0.00
```

Disney Golden Oak
Future with Project with Mitigation - A.M. Peak Hour

Level Of Service Detailed Computation Report (HCM2000 Queue Method)
2000 HCM Operations Method
Base Volume Alternative

Intersection #2 Sierra Highway & Placerita Canyon Road

| Approach: | North Bound | | | South Bound | | | East Bound | | | West Bound | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Movement: | L - | T - | R | L - | T - | R | L - | T - | R | L - | T - | R |
| Green/Cycle: | 0.01 | 0.41 | 0.41 | 0.45 | 0.86 | 0.86 | 0.07 | 0.04 | 0.04 | 0.10 | 0.07 | 0.00 |
| ArrivalType: | | 3 | | | 3 | | | 3 | | | 3 | |
| ProgFactor: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Q1: | 0.1 | 2.6 | 2.6 | 2.6 | 3.6 | 3.6 | 0.3 | 0.7 | 0.7 | 1.7 | 0.3 | 0.0 |
| UpstreamVC: | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| UpstreamAdj: | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| EarlyArrAdj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 0.00 |
| Q2: | 0.4 | 0.2 | 0.2 | 0.2 | 0.6 | 0.6 | 0.1 | 0.6 | 0.6 | 0.6 | 0.1 | 0.0 |
| HCM2KQueue: | 0.6 | 2.8 | 2.8 | 2.8 | 4.2 | 4.2 | 0.4 | 1.3 | 1.3 | 2.3 | 0.4 | 0.0 |
| 70th%Factor: | 1.20 | 1.19 | 1.19 | 1.19 | 1.19 | 1.19 | 1.20 | 1.20 | 1.20 | 1.19 | 1.20 | 1.20 |
| HCM2k70thQ: | 0.7 | 3.4 | 3.4 | 3.4 | 5.0 | 5.0 | 0.4 | 1.5 | 1.5 | 2.7 | 0.4 | 0.0 |
| 85th%Factor: | 1.59 | 1.57 | 1.57 | 1.57 | 1.56 | 1.56 | 1.60 | 1.59 | 1.59 | 1.58 | 1.60 | 1.60 |
| HCM2k85thQ: | 0.9 | 4.4 | 4.4 | 4.5 | 6.5 | 6.5 | 0.6 | 2.0 | 2.0 | 3.6 | 0.6 | 0.0 |
| 90th%Factor: | 1.79 | 1.75 | 1.75 | 1.75 | 1.72 | 1.72 | 1.79 | 1.78 | 1.78 | 1.76 | 1.79 | 1.80 |
| HCM2k90thQ: | 1.0 | 4.9 | 4.9 | 5.0 | 7.2 | 7.2 | 0.6 | 2.3 | 2.3 | 4.0 | 0.7 | 0.0 |
| 95th%Factor: | 2.08 | 2.01 | 2.01 | 2.01 | 1.98 | 1.98 | 2.09 | 2.06 | 2.06 | 2.03 | 2.09 | 2.10 |
| HCM2k95thQ: | 1.2 | 5.7 | 5.7 | 5.7 | 8.3 | 8.3 | 0.7 | 2.6 | 2.6 | 4.6 | 0.8 | 0.0 |
| 98th%Factor: | 2.66 | 2.51 | 2.51 | 2.50 | 2.42 | 2.42 | 2.67 | 2.61 | 2.61 | 2.54 | 2.67 | 2.70 |
| HCM2k98thQ: | 1.5 | 7.1 | 7.1 | 7.1 | 10.2 | 10.2 | 0.9 | 3.3 | 3.3 | 5.8 | 1.0 | 0.0 |

Disney Golden Oak
Future with Project with Mitigation - A.M. Peak Hour

Fuel Consumption and Emissions
2000 HCM Operations Method
Base Volume Alternative

Intersection #2 Sierra Highway & Placerita Canyon Road

| Approach: | North Bound | | | South Bound | | | East Bound | | | West Bound | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Movement: | L | T | R | L | T | R | L | T | R | L | T | R |
| Run Speed: | 30 MPH | | | 30 MPH | | | 30 MPH | | | 30 MPH | | |
| NumOfStops: | 1.2 | 35.1 | 9.1 | 23.5 | 60.4 | 0.9 | 2.3 | 9.5 | 2.9 | 15.3 | 4.7 | 0.0 |

Name: year 1995 composite fleet
Fuel Consumption: 31.245 pounds
5.062 gallons
Carbon Dioxide: 97.484 pounds
Carbon Monoxide: 6.890 pounds
Hydrocarbons: 1.044 pounds
Nitrogen Oxides: 0.350 pounds

Name: year 2000 composite fleet
Fuel Consumption: 31.245 pounds
5.062 gallons
Carbon Dioxide: 97.484 pounds
Carbon Monoxide: 6.890 pounds
Hydrocarbons: 1.044 pounds
Nitrogen Oxides: 0.350 pounds

DISCLAIMER
The fuel consumption and emissions measures should be used with caution and only for comparisons of different signal timings, geometric design alternatives or for general planning applications, as these calculations are applied to the analysis of a single intersection within the CCG and TRAFFIX. Network models are more appropriate since they can account for the influence of the adjacent control measures and other system elements.

Disney Golden Oak
Future with Project with Mitigation - P.M. Peak Hour

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #1 Sierra Highway & SR 14 SB Ramps

| | | | |
|---|---|---|---|
| Cycle (sec): | 100 | Critical Vol./Cap.(X): | 0.551 |
| Loss Time (sec): | 0 | Average Delay (sec/veh): | 7.6 |
| Optimal Cycle: | 41 | Level Of Service: | A |

| Street Name: | Sierra Highway | | | | | | SR 14 SB Ramps | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 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: | Include | | | Include | | | Include | | | Include | | |
| Min. Green: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 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 | 2 0 | 1 | 1 0 | 2 0 | 0 | 0 0 | 0 0 | 0 | 1 0 | 0 0 | 1 |
| Volume Module: | | | | | | | | | | | | |
| Base Vol: | 0 | 1500 | 288 | 214 | 462 | 0 | 0 | 0 | 0 | 31 | 0 | 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: | 0 | 1500 | 288 | 214 | 462 | 0 | 0 | 0 | 0 | 31 | 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: | 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 | 1500 | 288 | 214 | 462 | 0 | 0 | 0 | 0 | 31 | 0 | 2 |
| Reduct Vol: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Reduced Vol: | 0 | 1500 | 288 | 214 | 462 | 0 | 0 | 0 | 0 | 31 | 0 | 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: | 0 | 1500 | 288 | 214 | 462 | 0 | 0 | 0 | 0 | 31 | 0 | 2 |
| Saturation Flow Module: | | | | | | | | | | | | |
| Sat/Lane: | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Adjustment: | 1.00 | 0.95 | 0.85 | 0.95 | 0.95 | 1.00 | 1.00 | 1.00 | 1.00 | 0.95 | 1.00 | 0.85 |
| Lanes: | 0.00 | 2.00 | 1.00 | 1.00 | 2.00 | 0.00 | 0.00 | 0.00 | 0.00 | 1.00 | 0.00 | 1.00 |
| Final Sat.: | 0 | 3610 | 1615 | 1805 | 3610 | 0 | 0 | 0 | 0 | 1805 | 0 | 1615 |
| Capacity Analysis Module: | | | | | | | | | | | | |
| Vol/Sat: | 0.00 | 0.42 | 0.18 | 0.12 | 0.13 | 0.00 | 0.00 | 0.00 | 0.00 | 0.02 | 0.00 | 0.00 |
| Crit Moves: | | **** | | **** | | | | | | **** | | |
| Green/Cycle: | 0.00 | 0.75 | 0.75 | 0.22 | 0.97 | 0.00 | 0.00 | 0.00 | 0.00 | 0.03 | 0.00 | 0.03 |
| Volume/Cap: | 0.00 | 0.55 | 0.24 | 0.55 | 0.13 | 0.00 | 0.00 | 0.00 | 0.00 | 0.55 | 0.00 | 0.04 |
| Delay/Veh: | 0.0 | 5.4 | 3.8 | 36.7 | 0.1 | 0.0 | 0.0 | 0.0 | 0.0 | 58.9 | 0.0 | 47.3 |
| 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 | 5.4 | 3.8 | 36.7 | 0.1 | 0.0 | 0.0 | 0.0 | 0.0 | 58.9 | 0.0 | 47.3 |
| LOS by Move: | A | A | A | D | A | A | A | A | A | E | A | D |
| HCM2kAvgQ: | 0 | 10 | 3 | 6 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 0 |

Note: Queue reported is the number of cars per lane.

Disney Golden Oak
Future with Project with Mitigation - P.M. Peak Hour

Level Of Service Detailed Computation Report
2000 HCM Operations Method
Base Volume Alternative

Intersection #1 Sierra Highway & SR 14 SB Ramps

```
Approach:      North Bound      South Bound       East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
HCM Ops Adjusted Lane Utilization Module:
Lanes:        0  0  2  0  1    1  0  2  0  0    0  0  0  0  0    1  0  0  0  1
Lane Group:  xxxx   T     R     L    T   xxxx  xxxx xxxx  xxxx    L  xxxx    R
#LnsInGrps:     0    2     1     1    2     0     0    0     0    1    0     1
------------|---------------||---------------||---------------||---------------|
HCM Ops Input Saturation Adj Module:
Lane Width:    12   12    12    12   12    12    12   12    12    12   12    12
CrsswalkWid:         8                8                8                8
% Hev Veh:           0                0                0                0
Grade:              0%               0%               0%               0%
Parking/Hr:         No               No               No               No
Bus Stp/Hr:          0                0                0                0
Area Type:    < < < < < < < < < < < < < < < Other  > > > > > > > > > > > > > > > >
Cnft Ped/Hr:         0                0                0                0
ExclusiveRT:     Include          Include          Include          Include
% RT Prtct:          0                0                0                0
------------|---------------||---------------||---------------||---------------|
HCM Ops f(lt) Adj Case Module:
f(lt) Case:  xxxx xxxx  xxxx     1 xxxx  xxxx  xxxx xxxx  xxxx     1 xxxx  xxxx
------------|---------------||---------------||---------------||---------------|
HCM Ops Saturation Adj Module:
Ln Wid Adj:  xxxx 1.00  1.00  1.00 1.00 xxxxx  xxxx xxxx xxxxx  1.00 xxxx  1.00
Hev Veh Adj: xxxx 1.00  1.00  1.00 1.00 xxxxx  xxxx xxxx xxxxx  1.00 xxxx  1.00
Grade Adj:   xxxx 1.00  1.00  1.00 1.00 xxxxx  xxxx xxxx xxxxx  1.00 xxxx  1.00
Parking Adj: xxxx xxxx  1.00  xxxx 1.00 xxxxx  xxxx xxxx xxxxx  xxxx xxxx  1.00
Bus Stp Adj: xxxx xxxx  1.00  xxxx 1.00 xxxxx  xxxx xxxx xxxxx  xxxx xxxx  1.00
Area Adj:    xxxx 1.00  1.00  1.00 1.00 xxxxx  xxxx xxxx xxxxx  1.00 xxxx  1.00
RT Adj:      xxxx xxxx  0.85  xxxx xxxx xxxxx  xxxx xxxx xxxxx  xxxx xxxx  0.85
LT Adj:      xxxx xxxx xxxxx  0.95 xxxx xxxxx  xxxx xxxx xxxxx  0.95 xxxx xxxxx
PedBike Adj: 1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
HCM Sat Adj: 1.00 1.00  0.85  0.95 1.00  1.00  1.00 1.00  1.00  0.95 1.00  0.85
Usr Sat Adj: 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 Sat Adj: 1.00 0.95  1.00  1.00 0.95  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Fnl Sat Adj: 1.00 0.95  0.85  0.95 0.95  1.00  1.00 1.00  1.00  0.95 1.00  0.85
------------|---------------||---------------||---------------||---------------|
Delay Adjustment Factor Module:
Coordinated:  < < < < < < < < < < < < < < <  No  > > > > > > > > > > > > > > > >
Signal Type:  < < < < < < < < < < < <     Actuated     > > > > > > > > > > > > >
DelAdjFctr:  0.00 1.00  1.00  1.00 1.00  0.00  0.00 0.00  0.00  1.00 0.00  1.00
```

Disney Golden Oak
Future with Project with Mitigation - P.M. Peak Hour

Level Of Service Detailed Computation Report (HCM2000 Queue Method)
2000 HCM Operations Method
Base Volume Alternative

Intersection #1 Sierra Highway & SR 14 SB Ramps

| Approach: | North Bound | | | South Bound | | | East Bound | | | West Bound | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Movement: | L | T | R | L | T | R | L | T | R | L | T | R |
| Green/Cycle: | 0.00 | 0.75 | 0.75 | 0.22 | 0.97 | 0.00 | 0.00 | 0.00 | 0.00 | 0.03 | 0.00 | 0.03 |
| ArrivalType: | | 3 | | | 3 | | | 3 | | | 3 | |
| ProgFactor: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Q1: | 0.0 | 9.2 | 2.4 | 5.3 | 0.2 | 0.0 | 0.0 | 0.0 | 0.0 | 0.8 | 0.0 | 0.1 |
| UpstreamVC: | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| UpstreamAdj: | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| EarlyArrAdj: | 0.00 | 1.00 | 1.00 | 1.00 | 1.00 | 0.00 | 0.00 | 0.00 | 0.00 | 1.00 | 0.00 | 1.00 |
| Q2: | 0.0 | 1.2 | 0.3 | 1.2 | 0.2 | 0.0 | 0.0 | 0.0 | 0.0 | 0.9 | 0.0 | 0.0 |
| HCM2KQueue: | 0.0 | 10.4 | 2.7 | 6.5 | 0.4 | 0.0 | 0.0 | 0.0 | 0.0 | 1.8 | 0.0 | 0.1 |
| 70th%Factor: | 1.20 | 1.18 | 1.19 | 1.19 | 1.20 | 1.20 | 1.20 | 1.20 | 1.20 | 1.20 | 1.20 | 1.20 |
| HCM2k70thQ: | 0.0 | 12.3 | 3.2 | 7.7 | 0.5 | 0.0 | 0.0 | 0.0 | 0.0 | 2.1 | 0.0 | 0.1 |
| 85th%Factor: | 1.60 | 1.51 | 1.57 | 1.54 | 1.60 | 1.60 | 1.60 | 1.60 | 1.60 | 1.58 | 1.60 | 1.60 |
| HCM2k85thQ: | 0.0 | 15.8 | 4.3 | 10.0 | 0.6 | 0.0 | 0.0 | 0.0 | 0.0 | 2.8 | 0.0 | 0.2 |
| 90th%Factor: | 1.80 | 1.64 | 1.75 | 1.69 | 1.79 | 1.80 | 1.80 | 1.80 | 1.80 | 1.77 | 1.80 | 1.80 |
| HCM2k90thQ: | 0.0 | 17.1 | 4.7 | 10.9 | 0.7 | 0.0 | 0.0 | 0.0 | 0.0 | 3.2 | 0.0 | 0.2 |
| 95th%Factor: | 2.10 | 1.84 | 2.02 | 1.92 | 2.09 | 2.10 | 2.10 | 2.10 | 2.10 | 2.04 | 2.10 | 2.10 |
| HCM2k95thQ: | 0.0 | 19.2 | 5.5 | 12.4 | 0.8 | 0.0 | 0.0 | 0.0 | 0.0 | 3.7 | 0.0 | 0.2 |
| 98th%Factor: | 2.70 | 2.15 | 2.51 | 2.31 | 2.67 | 2.70 | 2.70 | 2.70 | 2.70 | 2.57 | 2.70 | 2.69 |
| HCM2k98thQ: | 0.0 | 22.4 | 6.8 | 14.9 | 1.1 | 0.0 | 0.0 | 0.0 | 0.0 | 4.6 | 0.0 | 0.3 |

Disney Golden Oak
Future with Project with Mitigation - P.M. Peak Hour

Fuel Consumption and Emissions
2000 HCM Operations Method
Base Volume Alternative

Intersection #1 Sierra Highway & SR 14 SB Ramps

| Approach: | North Bound | | | South Bound | | | East Bound | | | West Bound | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Movement: | L | T | R | L | T | R | L | T | R | L | T | R |
| Run Speed: | 30 MPH | | | 30 MPH | | | 30 MPH | | | 30 MPH | | |
| NumOfStops: | 0.0 | 158 | 21.6 | 47.6 | 4.1 | 0.0 | 0.0 | 0.0 | 0.0 | 7.6 | 0.0 | 0.5 |

Name: year 1995 composite fleet
Fuel Consumption: 41.326 pounds
6.695 gallons
Carbon Dioxide: 128.936 pounds
Carbon Monoxide: 8.922 pounds
Hydrocarbons: 1.285 pounds
Nitrogen Oxides: 0.471 pounds

Name: year 2000 composite fleet
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Nitrogen Oxides: 0.471 pounds

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The fuel consumption and emissions measures should be used with caution and only for comparisons of different signal timings, geometric design alternatives or for general planning applications, as these calculations are applied to the analysis of a single intersection within the CCG and TRAFFIX. Network models are more appropriate since they can account for the influence of the adjacent control measures and other system elements.

Disney Golden Oak
Future with Project with Mitigation - P.M. Peak Hour

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #2 Sierra Highway & Placerita Canyon Road

| | | | |
|---|---|---|---|
| Cycle (sec): | 100 | Critical Vol./Cap.(X): | 0.475 |
| Loss Time (sec): | 0 | Average Delay (sec/veh): | 4.9 |
| Optimal Cycle: | 43 | Level Of Service: | A |

| Street Name: | Sierra Highway | | | | | | Placerita Canyon Road | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 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 | | | Ignore | | |
| Min. Green: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 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 | 1 | 1 0 | 1 0 | 1 | 1 0 | 1 0 | 2 | 0 1 |
| Volume Module: | | | | | | | | | | | | |
| Base Vol: | 16 | 1358 | 153 | 31 | 443 | 24 | 8 | 28 | 8 | 40 | 38 | 411 |
| 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: | 16 | 1358 | 153 | 31 | 443 | 24 | 8 | 28 | 8 | 40 | 38 | 411 |
| User Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 0.00 |
| PHF Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 0.00 |
| PHF Volume: | 16 | 1358 | 153 | 31 | 443 | 24 | 8 | 28 | 8 | 40 | 38 | 0 |
| Reduct Vol: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Reduced Vol: | 16 | 1358 | 153 | 31 | 443 | 24 | 8 | 28 | 8 | 40 | 38 | 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 | 0.00 |
| MLF Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 0.00 |
| FinalVolume: | 16 | 1358 | 153 | 31 | 443 | 24 | 8 | 28 | 8 | 40 | 38 | 0 |
| Saturation Flow Module: | | | | | | | | | | | | |
| Sat/Lane: | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Adjustment: | 0.95 | 0.94 | 0.94 | 0.95 | 0.94 | 0.94 | 0.95 | 0.92 | 0.92 | 0.95 | 0.95 | 1.00 |
| Lanes: | 1.00 | 1.80 | 0.20 | 1.00 | 1.90 | 0.10 | 1.00 | 1.56 | 0.44 | 1.00 | 2.00 | 1.00 |
| Final Sat.: | 1805 | 3196 | 360 | 1805 | 3397 | 184 | 1805 | 2715 | 776 | 1805 | 3610 | 1900 |
| Capacity Analysis Module: | | | | | | | | | | | | |
| Vol/Sat: | 0.01 | 0.42 | 0.42 | 0.02 | 0.13 | 0.13 | 0.00 | 0.01 | 0.01 | 0.02 | 0.01 | 0.00 |
| Crit Moves: | | **** | | **** | | | | **** | | **** | | |
| Green/Cycle: | 0.06 | 0.90 | 0.90 | 0.04 | 0.87 | 0.87 | 0.02 | 0.02 | 0.02 | 0.05 | 0.05 | 0.00 |
| Volume/Cap: | 0.15 | 0.47 | 0.47 | 0.47 | 0.15 | 0.15 | 0.22 | 0.47 | 0.47 | 0.47 | 0.22 | 0.00 |
| Delay/Veh: | 45.3 | 1.1 | 1.1 | 52.6 | 1.0 | 1.0 | 51.2 | 53.0 | 53.0 | 50.6 | 46.4 | 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: | 45.3 | 1.1 | 1.1 | 52.6 | 1.0 | 1.0 | 51.2 | 53.0 | 53.0 | 50.6 | 46.4 | 0.0 |
| LOS by Move: | D | A | A | D | A | A | D | D | D | D | D | A |
| HCM2kAvgQ: | 1 | 5 | 5 | 2 | 1 | 1 | 0 | 1 | 1 | 2 | 1 | 0 |

Note: Queue reported is the number of cars per lane.

Disney Golden Oak
Future with Project with Mitigation - P.M. Peak Hour

Level Of Service Detailed Computation Report
2000 HCM Operations Method
Base Volume Alternative

Intersection #2 Sierra Highway & Placerita Canyon Road

| Approach: | North Bound | | | | South Bound | | | | East Bound | | | | West Bound | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Movement: | L | - T | - | R | L | - T | - | R | L | - T | - | R | L | - T | - | R |
| HCM Ops Adjusted Lane Utilization Module: | | | | | | | | | | | | | | | | |
| Lanes: | 1 | 0 1 | 1 | 0 | 1 | 0 1 | 1 | 0 | 1 | 0 1 | 1 | 0 | 1 | 0 2 | 0 | 1 |
| Lane Group: | L | RT | | RT | L | RT | | RT | L | RT | | RT | L | T | | R |
| #LnsInGrps: | 1 | 2 | | 2 | 1 | 2 | | 2 | 1 | 2 | | 2 | 1 | 2 | | 1 |
| HCM Ops Input Saturation Adj Module: | | | | | | | | | | | | | | | | |
| Lane Width: | 12 | 12 | | 12 | 12 | 12 | | 12 | 12 | 12 | | 12 | 12 | 12 | | 12 |
| CrsswalkWid: | | 8 | | | | 8 | | | | 8 | | | | 8 | | |
| % Hev Veh: | | 0 | | | | 0 | | | | 0 | | | | 0 | | |
| Grade: | | 0% | | | | 0% | | | | 0% | | | | 0% | | |
| Parking/Hr: | | No | | | | No | | | | No | | | | No | | |
| Bus Stp/Hr: | | 0 | | | | 0 | | | | 0 | | | | 0 | | |
| Area Type: | < < < < < < < < < < < < < < < < Other > > > > > > > > > > > > > > > > > > | | | | | | | | | | | | | | | |
| Cnft Ped/Hr: | | 0 | | | | 0 | | | | 0 | | | | 0 | | |
| ExclusiveRT: | | Include | | | | Include | | | | Include | | | | Include | | |
| % RT Prtct: | | 0 | | | | 0 | | | | 0 | | | | 0 | | |
| HCM Ops f(lt) Adj Case Module: | | | | | | | | | | | | | | | | |
| f(lt) Case: | 1 | xxxx | xxxx | | 1 | xxxx | xxxx | | 1 | xxxx | xxxx | | 1 | xxxx | xxxx | |
| HCM Ops Saturation Adj Module: | | | | | | | | | | | | | | | | |
| Ln Wid Adj: | 1.00 | 1.00 | 1.00 | | 1.00 | 1.00 | 1.00 | | 1.00 | 1.00 | 1.00 | | 1.00 | 1.00 | xxxxx | |
| Hev Veh Adj: | 1.00 | 1.00 | 1.00 | | 1.00 | 1.00 | 1.00 | | 1.00 | 1.00 | 1.00 | | 1.00 | 1.00 | xxxxx | |
| Grade Adj: | 1.00 | 1.00 | 1.00 | | 1.00 | 1.00 | 1.00 | | 1.00 | 1.00 | 1.00 | | 1.00 | 1.00 | xxxxx | |
| Parking Adj: | xxxx | 1.00 | 1.00 | | xxxx | 1.00 | 1.00 | | xxxx | 1.00 | 1.00 | | xxxx | xxxx | xxxxx | |
| Bus Stp Adj: | xxxx | 1.00 | 1.00 | | xxxx | 1.00 | 1.00 | | xxxx | 1.00 | 1.00 | | xxxx | xxxx | xxxxx | |
| Area Adj: | 1.00 | 1.00 | 1.00 | | 1.00 | 1.00 | 1.00 | | 1.00 | 1.00 | 1.00 | | 1.00 | 1.00 | xxxxx | |
| RT Adj: | xxxx | 0.99 | 0.99 | | xxxx | 0.99 | 0.99 | | xxxx | 0.97 | 0.97 | | xxxx | xxxx | xxxxx | |
| LT Adj: | 0.95 | xxxx | xxxxx | | 0.95 | xxxx | xxxxx | | 0.95 | xxxx | xxxxx | | 0.95 | xxxx | xxxxx | |
| PedBike Adj: | 1.00 | 1.00 | 1.00 | | 1.00 | 1.00 | 1.00 | | 1.00 | 1.00 | 1.00 | | 1.00 | 1.00 | 1.00 | |
| HCM Sat Adj: | 0.95 | 0.99 | 0.99 | | 0.95 | 0.99 | 0.99 | | 0.95 | 0.97 | 0.97 | | 0.95 | 1.00 | 1.00 | |
| Usr Sat Adj: | 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 Sat Adj: | 1.00 | 0.95 | 0.95 | | 1.00 | 0.95 | 0.95 | | 1.00 | 0.95 | 0.95 | | 1.00 | 0.95 | 1.00 | |
| Fnl Sat Adj: | 0.95 | 0.94 | 0.94 | | 0.95 | 0.94 | 0.94 | | 0.95 | 0.92 | 0.92 | | 0.95 | 0.95 | 1.00 | |
| Delay Adjustment Factor Module: | | | | | | | | | | | | | | | | |
| Coordinated: | < < < < < < < < < < < < < < < < No > > > > > > > > > > > > > > > > > > | | | | | | | | | | | | | | | |
| Signal Type: | < < < < < < < < < < < < < Actuated > > > > > > > > > > > > > > > > | | | | | | | | | | | | | | | |
| DelAdjFctr: | 1.00 | 1.00 | 1.00 | | 1.00 | 1.00 | 1.00 | | 1.00 | 1.00 | 1.00 | | 1.00 | 1.00 | 0.00 | |

Disney Golden Oak
Future with Project with Mitigation - P.M. Peak Hour

Level Of Service Detailed Computation Report (HCM2000 Queue Method)
2000 HCM Operations Method
Base Volume Alternative

Intersection #2 Sierra Highway & Placerita Canyon Road

| Approach: | North Bound | | | South Bound | | | East Bound | | | West Bound | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Movement: | L - | T - | R | L - | T - | R | L - | T - | R | L - | T - | R |
| Green/Cycle: | 0.06 | 0.90 | 0.90 | 0.04 | 0.87 | 0.87 | 0.02 | 0.02 | 0.02 | 0.05 | 0.05 | 0.00 |
| ArrivalType: | | 3 | | | 3 | | | 3 | | | 3 | |
| ProgFactor: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Q1: | 0.4 | 4.0 | 4.0 | 0.8 | 1.0 | 1.0 | 0.2 | 0.5 | 0.5 | 1.1 | 0.5 | 0.0 |
| UpstreamVC: | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| UpstreamAdj: | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| EarlyArrAdj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 0.00 |
| Q2: | 0.2 | 0.9 | 0.9 | 0.8 | 0.2 | 0.2 | 0.3 | 0.7 | 0.7 | 0.8 | 0.3 | 0.0 |
| HCM2KQueue: | 0.6 | 4.9 | 4.9 | 1.6 | 1.2 | 1.2 | 0.5 | 1.2 | 1.2 | 1.9 | 0.8 | 0.0 |
| 70th%Factor: | 1.20 | 1.19 | 1.19 | 1.20 | 1.20 | 1.20 | 1.20 | 1.20 | 1.20 | 1.20 | 1.20 | 1.20 |
| HCM2k70thQ: | 0.7 | 5.8 | 5.8 | 1.9 | 1.4 | 1.4 | 0.6 | 1.5 | 1.5 | 2.2 | 1.0 | 0.0 |
| 85th%Factor: | 1.59 | 1.55 | 1.55 | 1.58 | 1.59 | 1.59 | 1.60 | 1.59 | 1.59 | 1.58 | 1.59 | 1.60 |
| HCM2k85thQ: | 0.9 | 7.6 | 7.6 | 2.6 | 1.9 | 1.9 | 0.8 | 2.0 | 2.0 | 3.0 | 1.3 | 0.0 |
| 90th%Factor: | 1.79 | 1.71 | 1.71 | 1.77 | 1.78 | 1.78 | 1.79 | 1.78 | 1.78 | 1.76 | 1.78 | 1.80 |
| HCM2k90thQ: | 1.1 | 8.4 | 8.4 | 2.8 | 2.1 | 2.1 | 0.9 | 2.2 | 2.2 | 3.3 | 1.4 | 0.0 |
| 95th%Factor: | 2.08 | 1.96 | 1.96 | 2.05 | 2.06 | 2.06 | 2.08 | 2.06 | 2.06 | 2.04 | 2.07 | 2.10 |
| HCM2k95thQ: | 1.2 | 9.6 | 9.6 | 3.3 | 2.4 | 2.4 | 1.0 | 2.5 | 2.5 | 3.8 | 1.7 | 0.0 |
| 98th%Factor: | 2.66 | 2.39 | 2.39 | 2.58 | 2.61 | 2.61 | 2.66 | 2.61 | 2.61 | 2.57 | 2.64 | 2.70 |
| HCM2k98thQ: | 1.6 | 11.7 | 11.7 | 4.2 | 3.1 | 3.1 | 1.3 | 3.2 | 3.2 | 4.8 | 2.1 | 0.0 |

Disney Golden Oak
Future with Project with Mitigation - P.M. Peak Hour

Fuel Consumption and Emissions
2000 HCM Operations Method
Base Volume Alternative

Intersection #2 Sierra Highway & Placerita Canyon Road

| Approach: | North Bound | | | South Bound | | | East Bound | | | West Bound | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Movement: | L | T | R | L | T | R | L | T | R | L | T | R |
| Run Speed: | | 30 MPH | | | 30 MPH | | | 30 MPH | | | 30 MPH | |
| NumOfStops: | 3.8 | 61.8 | 7.0 | 7.6 | 16.3 | 0.9 | 2.0 | 6.9 | 2.0 | 9.7 | 9.1 | 0.0 |

Name: year 1995 composite fleet
Fuel Consumption: 30.497 pounds
4.941 gallons
Carbon Dioxide: 95.152 pounds
Carbon Monoxide: 6.299 pounds
Hydrocarbons: 0.835 pounds
Nitrogen Oxides: 0.333 pounds

Name: year 2000 composite fleet
Fuel Consumption: 30.497 pounds
4.941 gallons
Carbon Dioxide: 95.152 pounds
Carbon Monoxide: 6.299 pounds
Hydrocarbons: 0.835 pounds
Nitrogen Oxides: 0.333 pounds

DISCLAIMER
The fuel consumption and emissions measures should be used with caution and only for comparisons of different signal timings, geometric design alternatives or for general planning applications, as these calculations are applied to the analysis of a single intersection within the CCG and TRAFFIX. Network models are more appropriate since they can account for the influence of the adjacent control measures and other system elements.

***EXISTING PLUS PROJECT CONDITIONS***
***STUDIO OFFICE OPTION***

***(YEAR 2010)***

Disney Golden Oak
Future with Project Conditions - A.M. Peak Hour Opt 2

Level Of Service Computation Report
2000 HCM Unsignalized Method (Base Volume Alternative)

Intersection #1 Sierra Highway & SR 14 SB Ramps

Average Delay (sec/veh): 99.3 Worst Case Level Of Service: F[2799.5]

| Street Name: | Sierra Highway | | | | | | | | | SR 14 SB 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 | 1 | 1 | 0 | 1 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 1 | |
| Volume Module: | | | | | | | | | | | | | | | | | | | | | |
| Base Vol: | 0 | 322 | | 150 | | 705 | 1259 | | 0 | | 0 | | 0 | | 0 | 82 | | 0 | | 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: | 0 | 322 | | 150 | | 705 | 1259 | | 0 | | 0 | | 0 | | 0 | 82 | | 0 | | 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: | 0 | 322 | | 150 | | 705 | 1259 | | 0 | | 0 | | 0 | | 0 | 82 | | 0 | | 4 | |
| Reduct Vol: | 0 | 0 | | 0 | | 0 | 0 | | 0 | | 0 | | 0 | | 0 | 0 | | 0 | | 0 | |
| FinalVolume: | 0 | 322 | | 150 | | 705 | 1259 | | 0 | | 0 | | 0 | | 0 | 82 | | 0 | | 4 | |
| Critical Gap Module: | | | | | | | | | | | | | | | | | | | | | |
| Critical Gp: | xxxxx | xxxx | | xxxxx | | 4.1 | xxxx | | xxxxx | | xxxxx | xxxx | | xxxxx | | 6.8 | xxxx | | 6.9 | | |
| FollowUpTim: | xxxxx | xxxx | | xxxxx | | 2.2 | xxxx | | xxxxx | | xxxxx | xxxx | | xxxxx | | 3.5 | xxxx | | 3.3 | | |
| Capacity Module: | | | | | | | | | | | | | | | | | | | | | |
| Cnflict Vol: | xxxx | xxxx | | xxxxx | | 472 | xxxx | | xxxxx | | xxxx | xxxx | | xxxxx | | 2437 | xxxx | | 236 | | |
| Potent Cap.: | xxxx | xxxx | | xxxxx | | 1100 | xxxx | | xxxxx | | xxxx | xxxx | | xxxxx | | 27 | xxxx | | 772 | | |
| Move Cap.: | xxxx | xxxx | | xxxxx | | 1100 | xxxx | | xxxxx | | xxxx | xxxx | | xxxxx | | 13 | xxxx | | 772 | | |
| Volume/Cap: | xxxx | xxxx | | xxxx | | 0.64 | xxxx | | xxxx | | xxxx | xxxx | | xxxx | | 6.26 | xxxx | | 0.01 | | |
| Level Of Service Module: | | | | | | | | | | | | | | | | | | | | | |
| 2Way95thQ: | xxxx | xxxx | | xxxxx | | 4.9 | xxxx | | xxxxx | | xxxx | xxxx | | xxxxx | | 11.3 | xxxx | | 0.0 | | |
| Control Del: | xxxxx | xxxx | | xxxxx | | 13.9 | xxxx | | xxxxx | | xxxxx | xxxx | | xxxxx | | 2936 | xxxx | | 9.7 | | |
| LOS by Move: | * | * | | * | | B | * | | * | | * | * | | * | | F | * | | 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: | xxxxxx | | | | | xxxxxx | | | | | xxxxxx | | | | | 2799.5 | | | | | |
| ApproachLOS: | * | | | | | * | | | | | * | | | | | F | | | | | |

Note: Queue reported is the number of cars per lane.

Disney Golden Oak
Future with Project Conditions - A.M. Peak Hour Opt 2

Level Of Service Detailed Computation Report
2000 HCM Unsignalized Method
Base Volume Alternative

Intersection #1 Sierra Highway & SR 14 SB Ramps

| Approach: | North Bound | South Bound | East Bound | West Bound |
|---|---|---|---|---|
| Movement: | L - T - R | L - T - R | L - T - R | L - T - R |
| HevVeh: | 0% | 0% | 0% | 0% |
| Grade: | 0% | 0% | 0% | 0% |
| Peds/Hour: | 0 | 0 | 0 | 0 |
| Pedestrian Walk Speed: 4.00 feet/sec | | | | |
| LaneWidth: | 12 feet | 12 feet | 12 feet | 12 feet |

Time Period: 0.25 hour

Disney Golden Oak
Future with Project Conditions - A.M. Peak Hour Opt 2

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #2 Sierra Highway & Placerita Canyon Road

| | | | |
|---|---|---|---|
| Cycle (sec): | 100 | Critical Vol./Cap.(X): | 0.494 |
| Loss Time (sec): | 0 | Average Delay (sec/veh): | 16.8 |
| Optimal Cycle: | 45 | Level Of Service: | B |

| Street Name: | Sierra Highway | | | | | | Placerita Canyon Road | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 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 |
| 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 | 1 | 1 0 | 1 0 | 1 | 1 0 | 1 0 | 1 | 1 0 |
| Volume Module: | | | | | | | | | | | | |
| Base Vol: | 5 | 220 | 57 | 159 | 1156 | 17 | 10 | 39 | 12 | 65 | 20 | 249 |
| 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: | 5 | 220 | 57 | 159 | 1156 | 17 | 10 | 39 | 12 | 65 | 20 | 249 |
| 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: | 5 | 220 | 57 | 159 | 1156 | 17 | 10 | 39 | 12 | 65 | 20 | 249 |
| Reduct Vol: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Reduced Vol: | 5 | 220 | 57 | 159 | 1156 | 17 | 10 | 39 | 12 | 65 | 20 | 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: | 5 | 220 | 57 | 159 | 1156 | 17 | 10 | 39 | 12 | 65 | 20 | 249 |
| Saturation Flow Module: | | | | | | | | | | | | |
| Sat/Lane: | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Adjustment: | 0.95 | 0.92 | 0.92 | 0.95 | 0.95 | 0.95 | 0.95 | 0.92 | 0.92 | 0.95 | 0.82 | 0.82 |
| Lanes: | 1.00 | 1.59 | 0.41 | 1.00 | 1.97 | 0.03 | 1.00 | 1.53 | 0.47 | 1.00 | 1.00 | 1.00 |
| Final Sat.: | 1805 | 2778 | 720 | 1805 | 3551 | 52 | 1805 | 2664 | 820 | 1805 | 1554 | 1554 |
| Capacity Analysis Module: | | | | | | | | | | | | |
| Vol/Sat: | 0.00 | 0.08 | 0.08 | 0.09 | 0.33 | 0.33 | 0.01 | 0.01 | 0.01 | 0.04 | 0.01 | 0.16 |
| Crit Moves: | **** | | | | **** | | **** | | | | | **** |
| Green/Cycle: | 0.01 | 0.31 | 0.31 | 0.35 | 0.66 | 0.66 | 0.01 | 0.10 | 0.10 | 0.24 | 0.32 | 0.32 |
| Volume/Cap: | 0.49 | 0.25 | 0.25 | 0.25 | 0.49 | 0.49 | 0.49 | 0.15 | 0.15 | 0.15 | 0.04 | 0.49 |
| Delay/Veh: | 82.9 | 25.6 | 25.6 | 23.4 | 8.8 | 8.8 | 66.9 | 41.6 | 41.6 | 30.2 | 23.1 | 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: | 82.9 | 25.6 | 25.6 | 23.4 | 8.8 | 8.8 | 66.9 | 41.6 | 41.6 | 30.2 | 23.1 | 27.9 |
| LOS by Move: | F | C | C | C | A | A | E | D | D | C | C | C |
| HCM2kAvgQ: | 1 | 3 | 3 | 3 | 10 | 10 | 1 | 1 | 1 | 2 | 0 | 7 |

Note: Queue reported is the number of cars per lane.

Disney Golden Oak
Future with Project Conditions - A.M. Peak Hour Opt 2

Level Of Service Detailed Computation Report
2000 HCM Operations Method
Base Volume Alternative

Intersection #2 Sierra Highway & Placerita Canyon Road

| Approach: | North Bound | | | | South Bound | | | | East Bound | | | | West Bound | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Movement: | L - | T - | R | | L - | T - | R | | L - | T - | R | | L - | T - | R | |
| HCM Ops Adjusted Lane Utilization Module: | | | | | | | | | | | | | | | | |
| Lanes: | 1 0 | 1 1 | 0 | | 1 0 | 1 1 | 0 | | 1 0 | 1 1 | 0 | | 1 0 | 1 1 | 0 | |
| Lane Group: | L | RT | RT | | L | RT | RT | | L | RT | RT | | L | RT | RT | |
| #LnsInGrps: | 1 | 2 | 2 | | 1 | 2 | 2 | | 1 | 2 | 2 | | 1 | 2 | 2 | |
| HCM Ops Input Saturation Adj Module: | | | | | | | | | | | | | | | | |
| Lane Width: | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 |
| CrsswalkWid: | | 8 | | | | 8 | | | | 8 | | | | 8 | | |
| % Hev Veh: | | 0 | | | | 0 | | | | 0 | | | | 0 | | |
| Grade: | | 0% | | | | 0% | | | | 0% | | | | 0% | | |
| Parking/Hr: | | No | | | | No | | | | No | | | | No | | |
| Bus Stp/Hr: | | 0 | | | | 0 | | | | 0 | | | | 0 | | |
| Area Type: | < < < < < < < < < < < < < < < < Other > > > > > > > > > > > > > > > > > > | | | | | | | | | | | | | | | |
| Cnft Ped/Hr: | | 0 | | | | 0 | | | | 0 | | | | 0 | | |
| ExclusiveRT: | | Include | | | | Include | | | | Include | | | | Include | | |
| % RT Prtct: | | 0 | | | | 0 | | | | 0 | | | | 0 | | |
| HCM Ops f(lt) Adj Case Module: | | | | | | | | | | | | | | | | |
| f(lt) Case: | 1 | xxxx | xxxx | | 1 | xxxx | xxxx | | 1 | xxxx | xxxx | | 1 | xxxx | xxxx | |
| HCM Ops Saturation Adj Module: | | | | | | | | | | | | | | | | |
| Ln Wid Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Hev Veh Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Grade Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Parking Adj: | xxxx | 1.00 | 1.00 | xxxx | 1.00 | 1.00 | xxxx | 1.00 | 1.00 | xxxx | 1.00 | 1.00 | xxxx | 1.00 | 1.00 | 1.00 |
| Bus Stp Adj: | xxxx | 1.00 | 1.00 | xxxx | 1.00 | 1.00 | xxxx | 1.00 | 1.00 | xxxx | 1.00 | 1.00 | xxxx | 1.00 | 1.00 | 1.00 |
| Area Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| RT Adj: | xxxx | 0.97 | 0.97 | xxxx | 1.00 | 1.00 | xxxx | 0.97 | 0.97 | xxxx | 0.86 | 0.86 | xxxx | 0.97 | 0.97 | xxxx |
| LT Adj: | 0.95 | xxxx | xxxxx | 0.95 | xxxx | xxxxx | 0.95 | xxxx | xxxxx | 0.95 | xxxx | xxxxx | 0.95 | xxxx | xxxxx | 0.95 |
| PedBike Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| HCM Sat Adj: | 0.95 | 0.97 | 0.97 | 0.95 | 1.00 | 1.00 | 0.95 | 0.97 | 0.97 | 0.95 | 0.86 | 0.86 | 0.95 | 0.97 | 0.97 | 0.95 |
| Usr Sat Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 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 Sat Adj: | 1.00 | 0.95 | 0.95 | 1.00 | 0.95 | 0.95 | 1.00 | 0.95 | 0.95 | 1.00 | 0.95 | 0.95 | 1.00 | 0.95 | 0.95 | 1.00 |
| Fnl Sat Adj: | 0.95 | 0.92 | 0.92 | 0.95 | 0.95 | 0.95 | 0.95 | 0.92 | 0.92 | 0.95 | 0.82 | 0.82 | 0.95 | 0.92 | 0.92 | 0.95 |
| Delay Adjustment Factor Module: | | | | | | | | | | | | | | | | |
| Coordinated: | < < < < < < < < < < < < < < < < No > > > > > > > > > > > > > > > > > > | | | | | | | | | | | | | | | |
| Signal Type: | < < < < < < < < < < < < < Actuated > > > > > > > > > > > > > > > > | | | | | | | | | | | | | | | |
| DelAdjFctr: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |

Disney Golden Oak
Future with Project Conditions - A.M. Peak Hour Opt 2

Level Of Service Detailed Computation Report (HCM2000 Queue Method)
2000 HCM Operations Method
Base Volume Alternative

Intersection #2 Sierra Highway & Placerita Canyon Road

| Approach: | North Bound | | | South Bound | | | East Bound | | | West Bound | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Movement: | L - | T - | R | L - | T - | R | L - | T - | R | L - | T - | R |
| Green/Cycle: | 0.01 | 0.31 | 0.31 | 0.35 | 0.66 | 0.66 | 0.01 | 0.10 | 0.10 | 0.24 | 0.32 | 0.32 |
| ArrivalType: | | 3 | | | 3 | | | 3 | | | 3 | |
| ProgFactor: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Q1: | 0.1 | 3.0 | 3.0 | 3.1 | 8.7 | 8.7 | 0.3 | 0.7 | 0.7 | 1.4 | 0.4 | 5.9 |
| UpstreamVC: | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| UpstreamAdj: | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| EarlyArrAdj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Q2: | 0.5 | 0.3 | 0.3 | 0.3 | 1.0 | 1.0 | 0.6 | 0.2 | 0.2 | 0.2 | 0.0 | 0.9 |
| HCM2KQueue: | 0.7 | 3.3 | 3.3 | 3.5 | 9.6 | 9.6 | 0.9 | 0.9 | 0.9 | 1.6 | 0.4 | 6.8 |
| 70th%Factor: | 1.20 | 1.19 | 1.19 | 1.19 | 1.18 | 1.18 | 1.20 | 1.20 | 1.20 | 1.20 | 1.20 | 1.18 |
| HCM2k70thQ: | 0.8 | 4.0 | 4.0 | 4.2 | 11.4 | 11.4 | 1.1 | 1.0 | 1.0 | 1.9 | 0.5 | 8.1 |
| 85th%Factor: | 1.59 | 1.57 | 1.57 | 1.57 | 1.52 | 1.52 | 1.59 | 1.59 | 1.59 | 1.58 | 1.60 | 1.54 |
| HCM2k85thQ: | 1.1 | 5.3 | 5.3 | 5.5 | 14.6 | 14.6 | 1.5 | 1.4 | 1.4 | 2.5 | 0.7 | 10.5 |
| 90th%Factor: | 1.79 | 1.74 | 1.74 | 1.74 | 1.65 | 1.65 | 1.78 | 1.78 | 1.78 | 1.77 | 1.79 | 1.68 |
| HCM2k90thQ: | 1.2 | 5.8 | 5.8 | 6.0 | 15.9 | 15.9 | 1.6 | 1.5 | 1.5 | 2.8 | 0.8 | 11.5 |
| 95th%Factor: | 2.08 | 2.00 | 2.00 | 1.99 | 1.85 | 1.85 | 2.07 | 2.07 | 2.07 | 2.05 | 2.09 | 1.91 |
| HCM2k95thQ: | 1.4 | 6.7 | 6.7 | 6.9 | 17.8 | 17.8 | 1.9 | 1.8 | 1.8 | 3.3 | 0.9 | 13.0 |
| 98th%Factor: | 2.65 | 2.47 | 2.47 | 2.46 | 2.18 | 2.18 | 2.63 | 2.64 | 2.64 | 2.58 | 2.67 | 2.29 |
| HCM2k98thQ: | 1.8 | 8.3 | 8.3 | 8.6 | 21.0 | 21.0 | 2.4 | 2.3 | 2.3 | 4.1 | 1.2 | 15.6 |

Disney Golden Oak
Future with Project Conditions - A.M. Peak Hour Opt 2

Fuel Consumption and Emissions
2000 HCM Operations Method
Base Volume Alternative

Intersection #2 Sierra Highway & Placerita Canyon Road

| Approach: | North Bound | | | South Bound | | | East Bound | | | West Bound | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Movement: | L - | T - | R | L - | T - | R | L - | T - | R | L - | T - | R |
| Run Speed: | 30 MPH | | | 30 MPH | | | 30 MPH | | | 30 MPH | | |
| NumOfStops: | 1.2 | 40.9 | 10.6 | 28.3 | 146 | 2.1 | 2.5 | 8.9 | 2.7 | 12.8 | 3.4 | 50.1 |

Name: year 1995 composite fleet
Fuel Consumption: 47.402 pounds
7.679 gallons
Carbon Dioxide: 147.893 pounds
Carbon Monoxide: 11.098 pounds
Hydrocarbons: 1.860 pounds
Nitrogen Oxides: 0.547 pounds

Name: year 2000 composite fleet
Fuel Consumption: 47.402 pounds
7.679 gallons
Carbon Dioxide: 147.893 pounds
Carbon Monoxide: 11.098 pounds
Hydrocarbons: 1.860 pounds
Nitrogen Oxides: 0.547 pounds

DISCLAIMER
The fuel consumption and emissions measures should be used with caution and only for comparisons of different signal timings, geometric design alternatives or for general planning applications, as these calculations are applied to the analysis of a single intersection within the CCG and TRAFFIX. Network models are more appropriate since they can account for the influence of the adjacent control measures and other system elements.

Disney Golden Oak
Future with Project Conditions - A.M. Peak Hour Opt 2

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #3 SR 14 NB Off-Ramp & Placerita Canyon Road

| | | | |
|---|---|---|---|
| Cycle (sec): | 100 | Critical Vol./Cap.(X): | 0.216 |
| Loss Time (sec): | 0 | Average Delay (sec/veh): | 15.6 |
| Optimal Cycle: | 24 | Level Of Service: | B |

| Street Name: | SR 14 NB Off-Ramp | | | | | | Placerita Canyon Road | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 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 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 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 1 | 0 0 | 1 | 0 0 | 0 0 | 1 | 0 0 | 2 0 | 0 | 0 0 | 1 1 | 0 |
| Volume Module: | | | | | | | | | | | | |
| Base Vol: | 116 | 162 | 235 | 0 | 0 | 22 | 0 | 120 | 0 | 0 | 207 | 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: | 116 | 162 | 235 | 0 | 0 | 22 | 0 | 120 | 0 | 0 | 207 | 0 |
| User Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| PHF Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| PHF Volume: | 116 | 162 | 235 | 0 | 0 | 22 | 0 | 120 | 0 | 0 | 207 | 0 |
| Reduct Vol: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Reduced Vol: | 116 | 162 | 235 | 0 | 0 | 22 | 0 | 120 | 0 | 0 | 207 | 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: | 116 | 162 | 235 | 0 | 0 | 22 | 0 | 120 | 0 | 0 | 207 | 0 |
| Saturation Flow Module: | | | | | | | | | | | | |
| Sat/Lane: | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Adjustment: | 0.98 | 0.98 | 0.85 | 1.00 | 1.00 | 0.87 | 1.00 | 0.95 | 1.00 | 1.00 | 0.95 | 0.95 |
| Lanes: | 1.00 | 1.00 | 1.00 | 0.00 | 0.00 | 1.00 | 0.00 | 2.00 | 0.00 | 0.00 | 2.00 | 0.00 |
| Final Sat.: | 1862 | 1862 | 1615 | 0 | 0 | 1644 | 0 | 3610 | 0 | 0 | 3610 | 0 |
| Capacity Analysis Module: | | | | | | | | | | | | |
| Vol/Sat: | 0.06 | 0.09 | 0.15 | 0.00 | 0.00 | 0.01 | 0.00 | 0.03 | 0.00 | 0.00 | 0.06 | 0.00 |
| Crit Moves: | | | **** | | | **** | | | | | **** | |
| Green/Cycle: | 0.67 | 0.67 | 0.67 | 0.00 | 0.00 | 0.06 | 0.00 | 0.27 | 0.00 | 0.00 | 0.27 | 0.00 |
| Volume/Cap: | 0.09 | 0.13 | 0.22 | 0.00 | 0.00 | 0.22 | 0.00 | 0.13 | 0.00 | 0.00 | 0.22 | 0.00 |
| Delay/Veh: | 5.7 | 5.9 | 6.4 | 0.0 | 0.0 | 45.7 | 0.0 | 28.0 | 0.0 | 0.0 | 28.8 | 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: | 5.7 | 5.9 | 6.4 | 0.0 | 0.0 | 45.7 | 0.0 | 28.0 | 0.0 | 0.0 | 28.8 | 0.0 |
| LOS by Move: | A | A | A | A | A | D | A | C | A | A | C | A |
| HCM2kAvgQ: | 1 | 2 | 3 | 0 | 0 | 1 | 0 | 1 | 0 | 0 | 3 | 0 |

Note: Queue reported is the number of cars per lane.

Disney Golden Oak
Future with Project Conditions - A.M. Peak Hour Opt 2

Level Of Service Detailed Computation Report
2000 HCM Operations Method
Base Volume Alternative

Intersection #3 SR 14 NB Off-Ramp & Placerita Canyon Road

| Approach: | North Bound | | | | South Bound | | | | East Bound | | | | West Bound | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Movement: | L | - | T | - R | L | - | T | - R | L | - | T | - R | L | - | T | - R |
| HCM Ops Adjusted Lane Utilization Module: | | | | | | | | | | | | | | | | |
| Lanes: | 1 | 1 | 0 | 0 1 | 0 | 0 | 0 | 0 1 | 0 | 0 | 2 | 0 0 | 0 | 0 | 1 | 1 0 |
| Lane Group: | LT | | LT | R | xxxx | xxxx | | R | xxxx | | T | xxxx | xxxx | | RT | RT |
| #LnsInGrps: | 2 | | 2 | 1 | 0 | 0 | | 1 | 0 | | 2 | 0 | 0 | | 2 | 2 |
| HCM Ops Input Saturation Adj Module: | | | | | | | | | | | | | | | | |
| Lane Width: | 12 | | 12 | 12 | 12 | 12 | | 12 | 12 | | 12 | 12 | 12 | | 12 | 12 |
| CrsswalkWid: | | | 8 | | | 8 | | | | | 8 | | | | 8 | |
| % Hev Veh: | | | 0 | | | 0 | | | | | 0 | | | | 0 | |
| Grade: | | | 0% | | | 0% | | | | | 0% | | | | 0% | |
| Parking/Hr: | | | No | | | No | | | | | No | | | | No | |
| Bus Stp/Hr: | | | 0 | | | 0 | | | | | 0 | | | | 0 | |
| Area Type: | < < < < < < < < < < < < < < < < Other > > > > > > > > > > > > > > > > > > | | | | | | | | | | | | | | | |
| Cnft Ped/Hr: | | | 0 | | | 0 | | | | | 0 | | | | 0 | |
| ExclusiveRT: | | | Include | | | Include | | | | | Include | | | | Include | |
| % RT Prtct: | | | 0 | | | 0 | | | | | 0 | | | | 0 | |
| HCM Ops f(lt) Adj Case Module: | | | | | | | | | | | | | | | | |
| f(lt) Case: | 4 | | 4 | xxxx | xxxx | xxxx | | xxxx | xxxx | | xxxx | xxxx | xxxx | | xxxx | xxxx |
| HCM Ops Saturation Adj Module: | | | | | | | | | | | | | | | | |
| Ln Wid Adj: | 1.00 | 1.00 | | 1.00 | xxxx | xxxx | | 1.00 | xxxx | 1.00 | | xxxxx | xxxx | 1.00 | | xxxxx |
| Hev Veh Adj: | 1.00 | 1.00 | | 1.00 | xxxx | xxxx | | 1.00 | xxxx | 1.00 | | xxxxx | xxxx | 1.00 | | xxxxx |
| Grade Adj: | 1.00 | 1.00 | | 1.00 | xxxx | xxxx | | 1.00 | xxxx | 1.00 | | xxxxx | xxxx | 1.00 | | xxxxx |
| Parking Adj: | xxxx | xxxx | | 1.00 | xxxx | xxxx | | 1.00 | xxxx | 1.00 | | xxxxx | xxxx | 1.00 | | xxxxx |
| Bus Stp Adj: | xxxx | xxxx | | 1.00 | xxxx | xxxx | | 1.00 | xxxx | 1.00 | | xxxxx | xxxx | 1.00 | | xxxxx |
| Area Adj: | 1.00 | 1.00 | | 1.00 | xxxx | xxxx | | 1.00 | xxxx | 1.00 | | xxxxx | xxxx | 1.00 | | xxxxx |
| RT Adj: | xxxx | xxxx | | 0.85 | xxxx | xxxx | | 0.87 | xxxx | xxxx | | xxxxx | xxxx | xxxx | | xxxxx |
| LT Adj: | 0.98 | 0.98 | | xxxxx | xxxx | xxxx | | xxxxx | xxxx | xxxx | | xxxxx | xxxx | xxxx | | xxxxx |
| PedBike Adj: | 1.00 | 1.00 | | 1.00 | 1.00 | 1.00 | | 1.00 | 1.00 | 1.00 | | 1.00 | 1.00 | 1.00 | | 1.00 |
| HCM Sat Adj: | 0.98 | 0.98 | | 0.85 | 1.00 | 1.00 | | 0.87 | 1.00 | 1.00 | | 1.00 | 1.00 | 1.00 | | 1.00 |
| Usr Sat Adj: | 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 Sat Adj: | 1.00 | 1.00 | | 1.00 | 1.00 | 1.00 | | 1.00 | 1.00 | 0.95 | | 1.00 | 1.00 | 0.95 | | 0.95 |
| Fnl Sat Adj: | 0.98 | 0.98 | | 0.85 | 1.00 | 1.00 | | 0.87 | 1.00 | 0.95 | | 1.00 | 1.00 | 0.95 | | 0.95 |
| Delay Adjustment Factor Module: | | | | | | | | | | | | | | | | |
| Coordinated: | < < < < < < < < < < < < < < < < No > > > > > > > > > > > > > > > > > > | | | | | | | | | | | | | | | |
| Signal Type: | < < < < < < < < < < < < < Actuated > > > > > > > > > > > > > > > > | | | | | | | | | | | | | | | |
| DelAdjFctr: | 1.00 | 1.00 | | 1.00 | 0.00 | 0.00 | | 1.00 | 0.00 | 1.00 | | 0.00 | 0.00 | 1.00 | | 0.00 |

Disney Golden Oak
Future with Project Conditions - A.M. Peak Hour Opt 2

Level Of Service Detailed Computation Report (HCM2000 Queue Method)
2000 HCM Operations Method
Base Volume Alternative

Intersection #3 SR 14 NB Off-Ramp & Placerita Canyon Road

| Approach: | North Bound | | | South Bound | | | East Bound | | | West Bound | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Movement: | L | T | R | L | T | R | L | T | R | L | T | R |
| Green/Cycle: | 0.67 | 0.67 | 0.67 | 0.00 | 0.00 | 0.06 | 0.00 | 0.27 | 0.00 | 0.00 | 0.27 | 0.00 |
| ArrivalType: | | 3 | | | 3 | | | 3 | | | 3 | |
| ProgFactor: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Q1: | 1.1 | 1.6 | 2.5 | 0.0 | 0.0 | 0.6 | 0.0 | 1.3 | 0.0 | 0.0 | 2.4 | 0.0 |
| UpstreamVC: | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| UpstreamAdj: | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| EarlyArrAdj: | 1.00 | 1.00 | 1.00 | 0.00 | 0.00 | 1.00 | 0.00 | 1.00 | 0.00 | 0.00 | 1.00 | 0.00 |
| Q2: | 0.1 | 0.1 | 0.3 | 0.0 | 0.0 | 0.3 | 0.0 | 0.1 | 0.0 | 0.0 | 0.3 | 0.0 |
| HCM2KQueue: | 1.2 | 1.8 | 2.8 | 0.0 | 0.0 | 0.8 | 0.0 | 1.5 | 0.0 | 0.0 | 2.6 | 0.0 |
| 70th%Factor: | 1.20 | 1.20 | 1.19 | 1.20 | 1.20 | 1.20 | 1.20 | 1.20 | 1.20 | 1.20 | 1.19 | 1.20 |
| HCM2k70thQ: | 1.5 | 2.1 | 3.3 | 0.0 | 0.0 | 1.0 | 0.0 | 1.8 | 0.0 | 0.0 | 3.1 | 0.0 |
| 85th%Factor: | 1.59 | 1.58 | 1.57 | 1.60 | 1.60 | 1.59 | 1.60 | 1.59 | 1.60 | 1.60 | 1.57 | 1.60 |
| HCM2k85thQ: | 1.9 | 2.8 | 4.4 | 0.0 | 0.0 | 1.4 | 0.0 | 2.3 | 0.0 | 0.0 | 4.1 | 0.0 |
| 90th%Factor: | 1.78 | 1.77 | 1.75 | 1.80 | 1.80 | 1.78 | 1.80 | 1.77 | 1.80 | 1.80 | 1.75 | 1.80 |
| HCM2k90thQ: | 2.2 | 3.1 | 4.8 | 0.0 | 0.0 | 1.5 | 0.0 | 2.6 | 0.0 | 0.0 | 4.6 | 0.0 |
| 95th%Factor: | 2.06 | 2.04 | 2.01 | 2.10 | 2.10 | 2.07 | 2.10 | 2.05 | 2.10 | 2.10 | 2.02 | 2.10 |
| HCM2k95thQ: | 2.5 | 3.6 | 5.6 | 0.0 | 0.0 | 1.8 | 0.0 | 3.0 | 0.0 | 0.0 | 5.3 | 0.0 |
| 98th%Factor: | 2.61 | 2.57 | 2.51 | 2.70 | 2.70 | 2.64 | 2.70 | 2.59 | 2.70 | 2.70 | 2.52 | 2.70 |
| HCM2k98thQ: | 3.2 | 4.5 | 7.0 | 0.0 | 0.0 | 2.2 | 0.0 | 3.8 | 0.0 | 0.0 | 6.6 | 0.0 |

Disney Golden Oak
Future with Project Conditions - A.M. Peak Hour Opt 2

Fuel Consumption and Emissions
2000 HCM Operations Method
Base Volume Alternative

Intersection #3 SR 14 NB Off-Ramp & Placerita Canyon Road

| Approach: | North Bound | | | South Bound | | | East Bound | | | West Bound | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Movement: | L | T | R | L | T | R | L | T | R | L | T | R |
| Run Speed: | 30 MPH | | | 30 MPH | | | 30 MPH | | | 30 MPH | | |
| NumOfStops: | 10.1 | 14.5 | 22.5 | 0.0 | 0.0 | 5.2 | 0.0 | 22.8 | 0.0 | 0.0 | 40.3 | 0.0 |

Name: year 1995 composite fleet

| | |
|---|---|
| Fuel Consumption: | 19.402 pounds |
| | 3.143 gallons |
| Carbon Dioxide: | 60.534 pounds |
| Carbon Monoxide: | 4.508 pounds |
| Hydrocarbons: | 0.750 pounds |
| Nitrogen Oxides: | 0.220 pounds |

Name: year 2000 composite fleet

| | |
|---|---|
| Fuel Consumption: | 19.402 pounds |
| | 3.143 gallons |
| Carbon Dioxide: | 60.534 pounds |
| Carbon Monoxide: | 4.508 pounds |
| Hydrocarbons: | 0.750 pounds |
| Nitrogen Oxides: | 0.220 pounds |

DISCLAIMER
The fuel consumption and emissions measures should be used with caution and only for comparisons of different signal timings, geometric design alternatives or for general planning applications, as these calculations are applied to the analysis of a single intersection within the CCG and TRAFFIX. Network models are more appropriate since they can account for the influence of the adjacent control measures and other system elements.

Disney Golden Oak
Future with Project Conditions - P.M. Peak Hour Opt 2

Level Of Service Computation Report
2000 HCM Unsignalized Method (Base Volume Alternative)

Intersection #1 Sierra Highway & SR 14 SB Ramps

Average Delay (sec/veh): 13.4 Worst Case Level Of Service: F[819.8]

| Street Name: | Sierra Highway | | | | | | | | | SR 14 SB 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 | 1 | 1 | 0 | 1 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 1 |
| Volume Module: | | | | | | | | | | | | | | | | | | | | |
| Base Vol: | 0 | 1501 | | 296 | | 214 | 462 | | 0 | | 0 | | 0 | | 0 | 31 | | 0 | | 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: | 0 | 1501 | | 296 | | 214 | 462 | | 0 | | 0 | | 0 | | 0 | 31 | | 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: | 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 | 1501 | | 296 | | 214 | 462 | | 0 | | 0 | | 0 | | 0 | 31 | | 0 | | 2 |
| Reduct Vol: | 0 | 0 | | 0 | | 0 | 0 | | 0 | | 0 | | 0 | | 0 | 0 | | 0 | | 0 |
| FinalVolume: | 0 | 1501 | | 296 | | 214 | 462 | | 0 | | 0 | | 0 | | 0 | 31 | | 0 | | 2 |
| Critical Gap Module: | | | | | | | | | | | | | | | | | | | | |
| Critical Gp: | xxxxx | xxxx | | xxxxx | | 4.1 | xxxx | | xxxxx | | xxxxx | | xxxx | | xxxxx | 6.8 | | xxxx | | 6.9 |
| FollowUpTim: | xxxxx | xxxx | | xxxxx | | 2.2 | xxxx | | xxxxx | | xxxxx | | xxxx | | xxxxx | 3.5 | | xxxx | | 3.3 |
| Capacity Module: | | | | | | | | | | | | | | | | | | | | |
| Cnflict Vol: | xxxx | xxxx | | xxxxx | | 1797 | xxxx | | xxxxx | | xxxx | | xxxx | | xxxxx | 2308 | | xxxx | | 899 |
| Potent Cap.: | xxxx | xxxx | | xxxxx | | 348 | xxxx | | xxxxx | | xxxx | | xxxx | | xxxxx | 33 | | xxxx | | 286 |
| Move Cap.: | xxxx | xxxx | | xxxxx | | 348 | xxxx | | xxxxx | | xxxx | | xxxx | | xxxxx | 17 | | xxxx | | 286 |
| Volume/Cap: | xxxx | xxxx | | xxxx | | 0.61 | xxxx | | xxxx | | xxxx | | xxxx | | xxxx | 1.84 | | xxxx | | 0.01 |
| Level Of Service Module: | | | | | | | | | | | | | | | | | | | | |
| 2Way95thQ: | xxxx | xxxx | | xxxxx | | 3.9 | xxxx | | xxxxx | | xxxx | | xxxx | | xxxxx | 4.4 | | xxxx | | 0.0 |
| Control Del: | xxxxx | xxxx | | xxxxx | | 30.5 | xxxx | | xxxxx | | xxxxx | | xxxx | | xxxxx | 871.6 | | xxxx | | 17.7 |
| LOS by Move: | * | * | | * | | D | * | | * | | * | | * | | * | F | | * | | C |
| 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 | | | | | 819.8 | | | | |
| ApproachLOS: | * | | | | | * | | | | | * | | | | | F | | | | |

Note: Queue reported is the number of cars per lane.

Disney Golden Oak
Future with Project Conditions - P.M. Peak Hour Opt 2

Level Of Service Detailed Computation Report
2000 HCM Unsignalized Method
Base Volume Alternative

Intersection #1 Sierra Highway & SR 14 SB Ramps

| Approach: | North Bound | South Bound | East Bound | West Bound |
|---|---|---|---|---|
| Movement: | L - T - R | L - T - R | L - T - R | L - T - R |
| HevVeh: | 0% | 0% | 0% | 0% |
| Grade: | 0% | 0% | 0% | 0% |
| Peds/Hour: | 0 | 0 | 0 | 0 |
| Pedestrian Walk Speed: 4.00 feet/sec | | | | |
| LaneWidth: | 12 feet | 12 feet | 12 feet | 12 feet |
| Time Period: 0.25 hour | | | | |

Disney Golden Oak
Future with Project Conditions - P.M. Peak Hour Opt 2

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #2 Sierra Highway & Placerita Canyon Road

| | | | |
|---|---|---|---|
| Cycle (sec): | 100 | Critical Vol./Cap.(X): | 0.717 |
| Loss Time (sec): | 0 | Average Delay (sec/veh): | 19.3 |
| Optimal Cycle: | 80 | Level Of Service: | B |

| Street Name: | Sierra Highway | | | | | | Placerita Canyon Road | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 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 |
| 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 | 1 | 1 0 | 1 0 | 1 | 1 0 | 1 0 | 1 | 1 0 |
| Volume Module: | | | | | | | | | | | | |
| Base Vol: | 16 | 1358 | 153 | 32 | 443 | 24 | 8 | 29 | 8 | 40 | 39 | 420 |
| 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: | 16 | 1358 | 153 | 32 | 443 | 24 | 8 | 29 | 8 | 40 | 39 | 420 |
| 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: | 16 | 1358 | 153 | 32 | 443 | 24 | 8 | 29 | 8 | 40 | 39 | 420 |
| Reduct Vol: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Reduced Vol: | 16 | 1358 | 153 | 32 | 443 | 24 | 8 | 29 | 8 | 40 | 39 | 420 |
| 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: | 16 | 1358 | 153 | 32 | 443 | 24 | 8 | 29 | 8 | 40 | 39 | 420 |
| Saturation Flow Module: | | | | | | | | | | | | |
| Sat/Lane: | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Adjustment: | 0.95 | 0.94 | 0.94 | 0.95 | 0.94 | 0.94 | 0.95 | 0.92 | 0.92 | 0.95 | 0.82 | 0.82 |
| Lanes: | 1.00 | 1.80 | 0.20 | 1.00 | 1.90 | 0.10 | 1.00 | 1.57 | 0.43 | 1.00 | 1.00 | 1.00 |
| Final Sat.: | 1805 | 3196 | 360 | 1805 | 3397 | 184 | 1805 | 2739 | 756 | 1805 | 1558 | 1558 |
| Capacity Analysis Module: | | | | | | | | | | | | |
| Vol/Sat: | 0.01 | 0.42 | 0.42 | 0.02 | 0.13 | 0.13 | 0.00 | 0.01 | 0.01 | 0.02 | 0.03 | 0.27 |
| Crit Moves: | | **** | | **** | | | **** | | | | | **** |
| Green/Cycle: | 0.04 | 0.59 | 0.59 | 0.02 | 0.58 | 0.58 | 0.01 | 0.12 | 0.12 | 0.26 | 0.38 | 0.38 |
| Volume/Cap: | 0.23 | 0.72 | 0.72 | 0.72 | 0.23 | 0.23 | 0.72 | 0.09 | 0.09 | 0.09 | 0.07 | 0.72 |
| Delay/Veh: | 48.2 | 15.6 | 15.6 | 91.4 | 10.3 | 10.3 | 168.5 | 38.9 | 38.9 | 28.2 | 20.0 | 30.5 |
| 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: | 48.2 | 15.6 | 15.6 | 91.4 | 10.3 | 10.3 | 168.5 | 38.9 | 38.9 | 28.2 | 20.0 | 30.5 |
| LOS by Move: | D | B | B | F | B | B | F | D | D | C | B | C |
| HCM2kAvgQ: | 1 | 18 | 18 | 2 | 4 | 4 | 1 | 1 | 1 | 1 | 1 | 13 |

Note: Queue reported is the number of cars per lane.

Disney Golden Oak
Future with Project Conditions - P.M. Peak Hour Opt 2

Level Of Service Detailed Computation Report
2000 HCM Operations Method
Base Volume Alternative

Intersection #2 Sierra Highway & Placerita Canyon Road

| Approach: | North Bound | | | | South Bound | | | | East Bound | | | | West Bound | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Movement: | L | - T | - | R | L | - T | - | R | L | - T | - | R | L | - T | - | R |
| HCM Ops Adjusted Lane Utilization Module: | | | | | | | | | | | | | | | | |
| Lanes: | 1 | 0 1 | 1 | 0 | 1 | 0 1 | 1 | 0 | 1 | 0 1 | 1 | 0 | 1 | 0 1 | 1 | 0 |
| Lane Group: | L | RT | | RT | L | RT | | RT | L | RT | | RT | L | RT | | RT |
| #LnsInGrps: | 1 | 2 | | 2 | 1 | 2 | | 2 | 1 | 2 | | 2 | 1 | 2 | | 2 |
| HCM Ops Input Saturation Adj Module: | | | | | | | | | | | | | | | | |
| Lane Width: | 12 | 12 | | 12 | 12 | 12 | | 12 | 12 | 12 | | 12 | 12 | 12 | | 12 |
| CrsswalkWid: | | 8 | | | | 8 | | | | 8 | | | | 8 | | |
| % Hev Veh: | | 0 | | | | 0 | | | | 0 | | | | 0 | | |
| Grade: | | 0% | | | | 0% | | | | 0% | | | | 0% | | |
| Parking/Hr: | | No | | | | No | | | | No | | | | No | | |
| Bus Stp/Hr: | | 0 | | | | 0 | | | | 0 | | | | 0 | | |
| Area Type: | < < < < < < < < < < < < < < < < Other > > > > > > > > > > > > > > > > > > | | | | | | | | | | | | | | | |
| Cnft Ped/Hr: | | 0 | | | | 0 | | | | 0 | | | | 0 | | |
| ExclusiveRT: | | Include | | | | Include | | | | Include | | | | Include | | |
| % RT Prtct: | | 0 | | | | 0 | | | | 0 | | | | 0 | | |
| HCM Ops f(lt) Adj Case Module: | | | | | | | | | | | | | | | | |
| f(lt) Case: | 1 | xxxx | xxxx | | 1 | xxxx | xxxx | | 1 | xxxx | xxxx | | 1 | xxxx | xxxx | |
| HCM Ops Saturation Adj Module: | | | | | | | | | | | | | | | | |
| Ln Wid Adj: | 1.00 | 1.00 | 1.00 | | 1.00 | 1.00 | 1.00 | | 1.00 | 1.00 | 1.00 | | 1.00 | 1.00 | 1.00 | |
| Hev Veh Adj: | 1.00 | 1.00 | 1.00 | | 1.00 | 1.00 | 1.00 | | 1.00 | 1.00 | 1.00 | | 1.00 | 1.00 | 1.00 | |
| Grade Adj: | 1.00 | 1.00 | 1.00 | | 1.00 | 1.00 | 1.00 | | 1.00 | 1.00 | 1.00 | | 1.00 | 1.00 | 1.00 | |
| Parking Adj: | xxxx | 1.00 | 1.00 | | xxxx | 1.00 | 1.00 | | xxxx | 1.00 | 1.00 | | xxxx | 1.00 | 1.00 | |
| Bus Stp Adj: | xxxx | 1.00 | 1.00 | | xxxx | 1.00 | 1.00 | | xxxx | 1.00 | 1.00 | | xxxx | 1.00 | 1.00 | |
| Area Adj: | 1.00 | 1.00 | 1.00 | | 1.00 | 1.00 | 1.00 | | 1.00 | 1.00 | 1.00 | | 1.00 | 1.00 | 1.00 | |
| RT Adj: | xxxx | 0.99 | 0.99 | | xxxx | 0.99 | 0.99 | | xxxx | 0.97 | 0.97 | | xxxx | 0.86 | 0.86 | |
| LT Adj: | 0.95 | xxxx | xxxxx | | 0.95 | xxxx | xxxxx | | 0.95 | xxxx | xxxxx | | 0.95 | xxxx | xxxxx | |
| PedBike Adj: | 1.00 | 1.00 | 1.00 | | 1.00 | 1.00 | 1.00 | | 1.00 | 1.00 | 1.00 | | 1.00 | 1.00 | 1.00 | |
| HCM Sat Adj: | 0.95 | 0.99 | 0.99 | | 0.95 | 0.99 | 0.99 | | 0.95 | 0.97 | 0.97 | | 0.95 | 0.86 | 0.86 | |
| Usr Sat Adj: | 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 Sat Adj: | 1.00 | 0.95 | 0.95 | | 1.00 | 0.95 | 0.95 | | 1.00 | 0.95 | 0.95 | | 1.00 | 0.95 | 0.95 | |
| Fnl Sat Adj: | 0.95 | 0.94 | 0.94 | | 0.95 | 0.94 | 0.94 | | 0.95 | 0.92 | 0.92 | | 0.95 | 0.82 | 0.82 | |
| Delay Adjustment Factor Module: | | | | | | | | | | | | | | | | |
| Coordinated: | < < < < < < < < < < < < < < < < No > > > > > > > > > > > > > > > > > > | | | | | | | | | | | | | | | |
| Signal Type: | < < < < < < < < < < < < < Actuated > > > > > > > > > > > > > > > > | | | | | | | | | | | | | | | |
| DelAdjFctr: | 1.00 | 1.00 | 1.00 | | 1.00 | 1.00 | 1.00 | | 1.00 | 1.00 | 1.00 | | 1.00 | 1.00 | 1.00 | |

Disney Golden Oak
Future with Project Conditions - P.M. Peak Hour Opt 2

Level Of Service Detailed Computation Report (HCM2000 Queue Method)
2000 HCM Operations Method
Base Volume Alternative

Intersection #2 Sierra Highway & Placerita Canyon Road

| Approach: | North Bound | | | South Bound | | | East Bound | | | West Bound | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Movement: | L - | T - | R | L - | T - | R | L - | T - | R | L - | T - | R |
| Green/Cycle: | 0.04 | 0.59 | 0.59 | 0.02 | 0.58 | 0.58 | 0.01 | 0.12 | 0.12 | 0.26 | 0.38 | 0.38 |
| ArrivalType: | | 3 | | | 3 | | | 3 | | | 3 | |
| ProgFactor: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Q1: | 0.4 | 15.6 | 15.6 | 0.9 | 3.3 | 3.3 | 0.2 | 0.5 | 0.5 | 0.8 | 0.7 | 10.5 |
| UpstreamVC: | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| UpstreamAdj: | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| EarlyArrAdj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Q2: | 0.3 | 2.4 | 2.4 | 1.4 | 0.3 | 0.3 | 0.8 | 0.1 | 0.1 | 0.1 | 0.1 | 2.3 |
| HCM2KQueue: | 0.7 | 18.0 | 18.0 | 2.2 | 3.6 | 3.6 | 1.0 | 0.6 | 0.6 | 0.9 | 0.8 | 12.8 |
| 70th%Factor: | 1.20 | 1.16 | 1.16 | 1.19 | 1.19 | 1.19 | 1.20 | 1.20 | 1.20 | 1.20 | 1.20 | 1.17 |
| HCM2k70thQ: | 0.9 | 21.0 | 21.0 | 2.7 | 4.3 | 4.3 | 1.2 | 0.7 | 0.7 | 1.1 | 1.0 | 15.0 |
| 85th%Factor: | 1.59 | 1.46 | 1.46 | 1.58 | 1.57 | 1.57 | 1.59 | 1.59 | 1.59 | 1.59 | 1.59 | 1.50 |
| HCM2k85thQ: | 1.1 | 26.4 | 26.4 | 3.5 | 5.6 | 5.6 | 1.7 | 0.9 | 0.9 | 1.5 | 1.3 | 19.1 |
| 90th%Factor: | 1.79 | 1.56 | 1.56 | 1.76 | 1.73 | 1.73 | 1.78 | 1.79 | 1.79 | 1.78 | 1.78 | 1.61 |
| HCM2k90thQ: | 1.3 | 28.2 | 28.2 | 3.9 | 6.2 | 6.2 | 1.9 | 1.0 | 1.0 | 1.7 | 1.4 | 20.6 |
| 95th%Factor: | 2.08 | 1.72 | 1.72 | 2.03 | 1.99 | 1.99 | 2.07 | 2.08 | 2.08 | 2.07 | 2.07 | 1.80 |
| HCM2k95thQ: | 1.5 | 31.0 | 31.0 | 4.6 | 7.2 | 7.2 | 2.2 | 1.2 | 1.2 | 1.9 | 1.7 | 22.9 |
| 98th%Factor: | 2.65 | 1.95 | 1.95 | 2.54 | 2.46 | 2.46 | 2.62 | 2.66 | 2.66 | 2.63 | 2.64 | 2.07 |
| HCM2k98thQ: | 1.9 | 35.1 | 35.1 | 5.7 | 8.9 | 8.9 | 2.7 | 1.5 | 1.5 | 2.5 | 2.1 | 26.5 |

Disney Golden Oak
Future with Project Conditions - P.M. Peak Hour Opt 2

Fuel Consumption and Emissions
2000 HCM Operations Method
Base Volume Alternative

Intersection #2 Sierra Highway & Placerita Canyon Road

| Approach: | North Bound | | | South Bound | | | East Bound | | | West Bound | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Movement: | L | T | R | L | T | R | L | T | R | L | T | R |
| Run Speed: | | 30 MPH | | | 30 MPH | | | 30 MPH | | | 30 MPH | |
| NumOfStops: | 3.9 | 240 | 27.1 | 7.9 | 53.7 | 2.9 | 2.0 | 6.4 | 1.8 | 7.6 | 6.2 | 89.7 |

Name: year 1995 composite fleet
Fuel Consumption: 65.784 pounds
10.657 gallons
Carbon Dioxide: 205.245 pounds
Carbon Monoxide: 15.615 pounds
Hydrocarbons: 2.674 pounds
Nitrogen Oxides: 0.765 pounds

Name: year 2000 composite fleet
Fuel Consumption: 65.784 pounds
10.657 gallons
Carbon Dioxide: 205.245 pounds
Carbon Monoxide: 15.615 pounds
Hydrocarbons: 2.674 pounds
Nitrogen Oxides: 0.765 pounds

DISCLAIMER
The fuel consumption and emissions measures should be used with caution and only for comparisons of different signal timings, geometric design alternatives or for general planning applications, as these calculations are applied to the analysis of a single intersection within the CCG and TRAFFIX. Network models are more appropriate since they can account for the influence of the adjacent control measures and other system elements.

Disney Golden Oak
Future with Project Conditions - P.M. Peak Hour Opt 2

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #3 SR 14 NB Off-Ramp & Placerita Canyon Road

| | | | |
|---|---|---|---|
| Cycle (sec): | 100 | Critical Vol./Cap.(X): | 0.235 |
| Loss Time (sec): | 0 | Average Delay (sec/veh): | 24.3 |
| Optimal Cycle: | 24 | Level Of Service: | C |

| Street Name: | SR 14 NB Off-Ramp | | | | | | Placerita Canyon Road | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 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 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 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 1 | 0 0 | 1 | 0 0 | 0 0 | 1 | 0 0 | 2 0 | 0 | 0 0 | 1 1 | 0 |
| Volume Module: | | | | | | | | | | | | |
| Base Vol: | 123 | 29 | 118 | 0 | 0 | 141 | 0 | 99 | 0 | 0 | 276 | 0 |
| Growth Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Initial Bse: | 123 | 29 | 118 | 0 | 0 | 141 | 0 | 99 | 0 | 0 | 276 | 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: | 123 | 29 | 118 | 0 | 0 | 141 | 0 | 99 | 0 | 0 | 276 | 0 |
| Reduct Vol: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Reduced Vol: | 123 | 29 | 118 | 0 | 0 | 141 | 0 | 99 | 0 | 0 | 276 | 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: | 123 | 29 | 118 | 0 | 0 | 141 | 0 | 99 | 0 | 0 | 276 | 0 |
| Saturation Flow Module: | | | | | | | | | | | | |
| Sat/Lane: | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Adjustment: | 0.96 | 0.96 | 0.85 | 1.00 | 1.00 | 0.87 | 1.00 | 0.95 | 1.00 | 1.00 | 0.95 | 0.95 |
| Lanes: | 1.62 | 0.38 | 1.00 | 0.00 | 0.00 | 1.00 | 0.00 | 2.00 | 0.00 | 0.00 | 2.00 | 0.00 |
| Final Sat.: | 2955 | 697 | 1615 | 0 | 0 | 1644 | 0 | 3610 | 0 | 0 | 3610 | 0 |
| Capacity Analysis Module: | | | | | | | | | | | | |
| Vol/Sat: | 0.04 | 0.04 | 0.07 | 0.00 | 0.00 | 0.09 | 0.00 | 0.03 | 0.00 | 0.00 | 0.08 | 0.00 |
| Crit Moves: | | | **** | | | **** | | | | | **** | |
| Green/Cycle: | 0.31 | 0.31 | 0.31 | 0.00 | 0.00 | 0.36 | 0.00 | 0.32 | 0.00 | 0.00 | 0.32 | 0.00 |
| Volume/Cap: | 0.13 | 0.13 | 0.24 | 0.00 | 0.00 | 0.24 | 0.00 | 0.08 | 0.00 | 0.00 | 0.24 | 0.00 |
| Delay/Veh: | 24.9 | 24.9 | 25.9 | 0.0 | 0.0 | 22.3 | 0.0 | 23.5 | 0.0 | 0.0 | 24.8 | 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: | 24.9 | 24.9 | 25.9 | 0.0 | 0.0 | 22.3 | 0.0 | 23.5 | 0.0 | 0.0 | 24.8 | 0.0 |
| LOS by Move: | C | C | C | A | A | C | A | C | A | A | C | A |
| HCM2kAvgQ: | 2 | 2 | 3 | 0 | 0 | 3 | 0 | 1 | 0 | 0 | 3 | 0 |

Note: Queue reported is the number of cars per lane.

Disney Golden Oak
Future with Project Conditions - P.M. Peak Hour Opt 2

Level Of Service Detailed Computation Report
2000 HCM Operations Method
Base Volume Alternative

Intersection #3 SR 14 NB Off-Ramp & Placerita Canyon Road

| Approach: | North Bound | | | | South Bound | | | | East Bound | | | | West Bound | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Movement: | L - | T - | R | | L - | T - | R | | L - | T - | R | | L - | T - | R | |
| HCM Ops Adjusted Lane Utilization Module: | | | | | | | | | | | | | | | | |
| Lanes: | 1 | 1 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 2 | 0 | 0 | 0 |
| Lane Group: | LT | LT | | | R | xxxx | xxxx | | R | xxxx | T | | xxxx | xxxx | RT | |
| #LnsInGrps: | 2 | 2 | | | 1 | 0 | 0 | | 1 | 0 | 2 | | 0 | 0 | 2 | |
| HCM Ops Input Saturation Adj Module: | | | | | | | | | | | | | | | | |
| Lane Width: | 12 | 12 | | | 12 | 12 | 12 | | 12 | 12 | | | 12 | 12 | | |
| CrsswalkWid: | | 8 | | | | 8 | | | | 8 | | | | 8 | | |
| % Hev Veh: | | 0 | | | | 0 | | | | 0 | | | | 0 | | |
| Grade: | | 0% | | | | 0% | | | | 0% | | | | 0% | | |
| Parking/Hr: | | No | | | | No | | | | No | | | | No | | |
| Bus Stp/Hr: | | 0 | | | | 0 | | | | 0 | | | | 0 | | |
| Area Type: | < < < < < < < < < < < < < < < < Other > > > > > > > > > > > > > > > > > > | | | | | | | | | | | | | | | |
| Cnft Ped/Hr: | | 0 | | | | 0 | | | | 0 | | | | 0 | | |
| ExclusiveRT: | | Include | | | | Include | | | | Include | | | | Include | | |
| % RT Prtct: | | 0 | | | | 0 | | | | 0 | | | | 0 | | |
| HCM Ops f(lt) Adj Case Module: | | | | | | | | | | | | | | | | |
| f(lt) Case: | 4 | 4 | xxxx | | xxxx | xxxx | xxxx | | xxxx | xxxx | xxxx | | xxxx | xxxx | xxxx | |
| HCM Ops Saturation Adj Module: | | | | | | | | | | | | | | | | |
| Ln Wid Adj: | 1.00 | 1.00 | 1.00 | | xxxx | xxxx | 1.00 | | xxxx | 1.00 | xxxxx | | xxxx | 1.00 | xxxxx | |
| Hev Veh Adj: | 1.00 | 1.00 | 1.00 | | xxxx | xxxx | 1.00 | | xxxx | 1.00 | xxxxx | | xxxx | 1.00 | xxxxx | |
| Grade Adj: | 1.00 | 1.00 | 1.00 | | xxxx | xxxx | 1.00 | | xxxx | 1.00 | xxxxx | | xxxx | 1.00 | xxxxx | |
| Parking Adj: | xxxx | xxxx | 1.00 | | xxxx | xxxx | 1.00 | | xxxx | 1.00 | xxxxx | | xxxx | 1.00 | xxxxx | |
| Bus Stp Adj: | xxxx | xxxx | 1.00 | | xxxx | xxxx | 1.00 | | xxxx | 1.00 | xxxxx | | xxxx | 1.00 | xxxxx | |
| Area Adj: | 1.00 | 1.00 | 1.00 | | xxxx | xxxx | 1.00 | | xxxx | 1.00 | xxxxx | | xxxx | 1.00 | xxxxx | |
| RT Adj: | xxxx | xxxx | 0.85 | | xxxx | xxxx | 0.87 | | xxxx | xxxx | xxxxx | | xxxx | xxxx | xxxxx | |
| LT Adj: | 0.96 | 0.96 | xxxxx | | xxxx | xxxx | xxxxx | | xxxx | xxxx | xxxxx | | xxxx | xxxx | xxxxx | |
| PedBike Adj: | 1.00 | 1.00 | 1.00 | | 1.00 | 1.00 | 1.00 | | 1.00 | 1.00 | 1.00 | | 1.00 | 1.00 | 1.00 | |
| HCM Sat Adj: | 0.96 | 0.96 | 0.85 | | 1.00 | 1.00 | 0.87 | | 1.00 | 1.00 | 1.00 | | 1.00 | 1.00 | 1.00 | |
| Usr Sat Adj: | 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 Sat Adj: | 1.00 | 1.00 | 1.00 | | 1.00 | 1.00 | 1.00 | | 1.00 | 0.95 | 1.00 | | 1.00 | 0.95 | 0.95 | |
| Fnl Sat Adj: | 0.96 | 0.96 | 0.85 | | 1.00 | 1.00 | 0.87 | | 1.00 | 0.95 | 1.00 | | 1.00 | 0.95 | 0.95 | |
| Delay Adjustment Factor Module: | | | | | | | | | | | | | | | | |
| Coordinated: | < < < < < < < < < < < < < < < < No > > > > > > > > > > > > > > > > > > | | | | | | | | | | | | | | | |
| Signal Type: | < < < < < < < < < < < < < Actuated > > > > > > > > > > > > > > > > | | | | | | | | | | | | | | | |
| DelAdjFctr: | 1.00 | 1.00 | 1.00 | | 0.00 | 0.00 | 1.00 | | 0.00 | 1.00 | 0.00 | | 0.00 | 1.00 | 0.00 | |

Disney Golden Oak
Future with Project Conditions - P.M. Peak Hour Opt 2

Level Of Service Detailed Computation Report (HCM2000 Queue Method)
2000 HCM Operations Method
Base Volume Alternative

Intersection #3 SR 14 NB Off-Ramp & Placerita Canyon Road

| Approach: | North Bound | | | South Bound | | | East Bound | | | West Bound | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Movement: | L - | T - | R | L - | T - | R | L - | T - | R | L - | T - | R |
| Green/Cycle: | 0.31 | 0.31 | 0.31 | 0.00 | 0.00 | 0.36 | 0.00 | 0.32 | 0.00 | 0.00 | 0.32 | 0.00 |
| ArrivalType: | | 3 | | | 3 | | | 3 | | | 3 | |
| ProgFactor: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Q1: | 1.5 | 1.5 | 2.4 | 0.0 | 0.0 | 2.7 | 0.0 | 1.0 | 0.0 | 0.0 | 2.9 | 0.0 |
| UpstreamVC: | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| UpstreamAdj: | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| EarlyArrAdj: | 1.00 | 1.00 | 1.00 | 0.00 | 0.00 | 1.00 | 0.00 | 1.00 | 0.00 | 0.00 | 1.00 | 0.00 |
| Q2: | 0.2 | 0.2 | 0.3 | 0.0 | 0.0 | 0.3 | 0.0 | 0.1 | 0.0 | 0.0 | 0.3 | 0.0 |
| HCM2KQueue: | 1.7 | 1.7 | 2.7 | 0.0 | 0.0 | 3.0 | 0.0 | 1.1 | 0.0 | 0.0 | 3.3 | 0.0 |
| 70th%Factor: | 1.20 | 1.20 | 1.19 | 1.20 | 1.20 | 1.19 | 1.20 | 1.20 | 1.20 | 1.20 | 1.19 | 1.20 |
| HCM2k70thQ: | 2.0 | 2.0 | 3.3 | 0.0 | 0.0 | 3.6 | 0.0 | 1.3 | 0.0 | 0.0 | 3.9 | 0.0 |
| 85th%Factor: | 1.58 | 1.58 | 1.57 | 1.60 | 1.60 | 1.57 | 1.60 | 1.59 | 1.60 | 1.60 | 1.57 | 1.60 |
| HCM2k85thQ: | 2.6 | 2.6 | 4.3 | 0.0 | 0.0 | 4.8 | 0.0 | 1.7 | 0.0 | 0.0 | 5.1 | 0.0 |
| 90th%Factor: | 1.77 | 1.77 | 1.75 | 1.80 | 1.80 | 1.74 | 1.80 | 1.78 | 1.80 | 1.80 | 1.74 | 1.80 |
| HCM2k90thQ: | 3.0 | 3.0 | 4.8 | 0.0 | 0.0 | 5.3 | 0.0 | 2.0 | 0.0 | 0.0 | 5.7 | 0.0 |
| 95th%Factor: | 2.05 | 2.05 | 2.02 | 2.10 | 2.10 | 2.01 | 2.10 | 2.06 | 2.10 | 2.10 | 2.00 | 2.10 |
| HCM2k95thQ: | 3.4 | 3.4 | 5.5 | 0.0 | 0.0 | 6.1 | 0.0 | 2.3 | 0.0 | 0.0 | 6.5 | 0.0 |
| 98th%Factor: | 2.58 | 2.58 | 2.51 | 2.70 | 2.70 | 2.49 | 2.70 | 2.62 | 2.70 | 2.70 | 2.48 | 2.70 |
| HCM2k98thQ: | 4.3 | 4.3 | 6.9 | 0.0 | 0.0 | 7.5 | 0.0 | 2.9 | 0.0 | 0.0 | 8.1 | 0.0 |

Disney Golden Oak
Future with Project Conditions - P.M. Peak Hour Opt 2

Fuel Consumption and Emissions
2000 HCM Operations Method
Base Volume Alternative

Intersection #3 SR 14 NB Off-Ramp & Placerita Canyon Road

| Approach: | North Bound | | | South Bound | | | East Bound | | | West Bound | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Movement: | L - | T - | R | L - | T - | R | L - | T - | R | L - | T - | R |
| Run Speed: | 30 MPH | | | 30 MPH | | | 30 MPH | | | 30 MPH | | |
| NumOfStops: | 22.1 | 5.2 | 21.9 | 0.0 | 0.0 | 24.5 | 0.0 | 17.2 | 0.0 | 0.0 | 50.4 | 0.0 |

Name: year 1995 composite fleet
Fuel Consumption: 22.895 pounds
3.709 gallons
Carbon Dioxide: 71.433 pounds
Carbon Monoxide: 5.556 pounds
Hydrocarbons: 0.992 pounds
Nitrogen Oxides: 0.260 pounds

Name: year 2000 composite fleet
Fuel Consumption: 22.895 pounds
3.709 gallons
Carbon Dioxide: 71.433 pounds
Carbon Monoxide: 5.556 pounds
Hydrocarbons: 0.992 pounds
Nitrogen Oxides: 0.260 pounds

DISCLAIMER
The fuel consumption and emissions measures should be used with caution and only for comparisons of different signal timings, geometric design alternatives or for general planning applications, as these calculations are applied to the analysis of a single intersection within the CCG and TRAFFIX. Network models are more appropriate since they can account for the influence of the adjacent control measures and other system elements.

***EXISTING PLUS PROJECT WITH MITIGATION CONDITIONS***
***STUDIO OFFICE OPTION***

***(YEAR 2010)***

Disney Golden Oak
Future with Project with Mitigation - A.M. Peak Hour Option 2

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #1 Sierra Highway & SR 14 SB Ramps

| | | | |
|---|---|---|---|
| Cycle (sec): | 100 | Critical Vol./Cap.(X): | 0.525 |
| Loss Time (sec): | 0 | Average Delay (sec/veh): | 10.9 |
| Optimal Cycle: | 39 | Level Of Service: | B |

| Street Name: | Sierra Highway | | | | | | SR 14 SB Ramps | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 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: | Include | | | Include | | | Include | | | Include | | |
| Min. Green: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 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 | 2 0 | 1 | 1 0 | 2 0 | 0 | 0 0 | 0 0 | 0 | 1 0 | 0 0 | 1 |
| Volume Module: | | | | | | | | | | | | |
| Base Vol: | 0 | 322 | 150 | 705 | 1259 | 0 | 0 | 0 | 0 | 82 | 0 | 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: | 0 | 322 | 150 | 705 | 1259 | 0 | 0 | 0 | 0 | 82 | 0 | 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: | 0 | 322 | 150 | 705 | 1259 | 0 | 0 | 0 | 0 | 82 | 0 | 4 |
| Reduct Vol: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Reduced Vol: | 0 | 322 | 150 | 705 | 1259 | 0 | 0 | 0 | 0 | 82 | 0 | 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: | 0 | 322 | 150 | 705 | 1259 | 0 | 0 | 0 | 0 | 82 | 0 | 4 |
| Saturation Flow Module: | | | | | | | | | | | | |
| Sat/Lane: | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Adjustment: | 1.00 | 0.95 | 0.85 | 0.95 | 0.95 | 1.00 | 1.00 | 1.00 | 1.00 | 0.95 | 1.00 | 0.85 |
| Lanes: | 0.00 | 2.00 | 1.00 | 1.00 | 2.00 | 0.00 | 0.00 | 0.00 | 0.00 | 1.00 | 0.00 | 1.00 |
| Final Sat.: | 0 | 3610 | 1615 | 1805 | 3610 | 0 | 0 | 0 | 0 | 1805 | 0 | 1615 |
| Capacity Analysis Module: | | | | | | | | | | | | |
| Vol/Sat: | 0.00 | 0.09 | 0.09 | 0.39 | 0.35 | 0.00 | 0.00 | 0.00 | 0.00 | 0.05 | 0.00 | 0.00 |
| Crit Moves: | | **** | | **** | | | | | | **** | | |
| Green/Cycle: | 0.00 | 0.17 | 0.17 | 0.74 | 0.91 | 0.00 | 0.00 | 0.00 | 0.00 | 0.09 | 0.00 | 0.09 |
| Volume/Cap: | 0.00 | 0.53 | 0.55 | 0.53 | 0.38 | 0.00 | 0.00 | 0.00 | 0.00 | 0.53 | 0.00 | 0.03 |
| Delay/Veh: | 0.0 | 38.7 | 40.3 | 5.8 | 0.6 | 0.0 | 0.0 | 0.0 | 0.0 | 47.0 | 0.0 | 41.9 |
| 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: | 0.0 | 38.7 | 40.3 | 5.8 | 0.6 | 0.0 | 0.0 | 0.0 | 0.0 | 47.0 | 0.0 | 41.9 |
| LOS by Move: | A | D | D | A | A | A | A | A | A | D | A | D |
| HCM2kAvgQ: | 0 | 5 | 5 | 9 | 3 | 0 | 0 | 0 | 0 | 3 | 0 | 0 |

Note: Queue reported is the number of cars per lane.

Disney Golden Oak
Future with Project with Mitigation - A.M. Peak Hour Option 2

Level Of Service Detailed Computation Report
2000 HCM Operations Method
Base Volume Alternative

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*******************************************************************************
Intersection #1 Sierra Highway & SR 14 SB Ramps
*******************************************************************************
Approach:      North Bound      South Bound       East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
HCM Ops Adjusted Lane Utilization Module:
Lanes:        0  0  2  0  1    1  0  2  0  0    0  0  0  0  0    1  0  0  0  1
Lane Group:  xxxx   T     R     L    T   xxxx  xxxx xxxx  xxxx    L  xxxx    R
#LnsInGrps:     0    2     1     1    2     0     0    0     0    1    0     1
------------|---------------||---------------||---------------||---------------|
HCM Ops Input Saturation Adj Module:
Lane Width:    12   12    12    12   12    12    12   12    12    12   12    12
CrsswalkWid:         8                8                8                8
% Hev Veh:           0                0                0                0
Grade:              0%               0%               0%               0%
Parking/Hr:         No               No               No               No
Bus Stp/Hr:          0                0                0                0
Area Type:    < < < < < < < < < < < < < < < Other  > > > > > > > > > > > > > > > >
Cnft Ped/Hr:         0                0                0                0
ExclusiveRT:     Include          Include          Include          Include
% RT Prtct:          0                0                0                0
------------|---------------||---------------||---------------||---------------|
HCM Ops f(lt) Adj Case Module:
f(lt) Case:  xxxx xxxx  xxxx     1 xxxx  xxxx  xxxx xxxx  xxxx     1 xxxx  xxxx
------------|---------------||---------------||---------------||---------------|
HCM Ops Saturation Adj Module:
Ln Wid Adj:  xxxx 1.00  1.00  1.00 1.00 xxxxx  xxxx xxxx xxxxx  1.00 xxxx  1.00
Hev Veh Adj: xxxx 1.00  1.00  1.00 1.00 xxxxx  xxxx xxxx xxxxx  1.00 xxxx  1.00
Grade Adj:   xxxx 1.00  1.00  1.00 1.00 xxxxx  xxxx xxxx xxxxx  1.00 xxxx  1.00
Parking Adj: xxxx xxxx  1.00  xxxx 1.00 xxxxx  xxxx xxxx xxxxx  xxxx xxxx  1.00
Bus Stp Adj: xxxx xxxx  1.00  xxxx 1.00 xxxxx  xxxx xxxx xxxxx  xxxx xxxx  1.00
Area Adj:    xxxx 1.00  1.00  1.00 1.00 xxxxx  xxxx xxxx xxxxx  1.00 xxxx  1.00
RT Adj:      xxxx xxxx  0.85  xxxx xxxx xxxxx  xxxx xxxx xxxxx  xxxx xxxx  0.85
LT Adj:      xxxx xxxx xxxxx  0.95 xxxx xxxxx  xxxx xxxx xxxxx  0.95 xxxx xxxxx
PedBike Adj: 1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
HCM Sat Adj: 1.00 1.00  0.85  0.95 1.00  1.00  1.00 1.00  1.00  0.95 1.00  0.85
Usr Sat Adj: 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 Sat Adj: 1.00 0.95  1.00  1.00 0.95  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Fnl Sat Adj: 1.00 0.95  0.85  0.95 0.95  1.00  1.00 1.00  1.00  0.95 1.00  0.85
------------|---------------||---------------||---------------||---------------|
Delay Adjustment Factor Module:
Coordinated:  < < < < < < < < < < < < < < <  No  > > > > > > > > > > > > > > > >
Signal Type:  < < < < < < < < < < < <     Actuated     > > > > > > > > > > > > >
DelAdjFctr:  0.00 1.00  1.00  1.00 1.00  0.00  0.00 0.00  0.00  1.00 0.00  1.00
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Disney Golden Oak
Future with Project with Mitigation - A.M. Peak Hour Option 2

Level Of Service Detailed Computation Report (HCM2000 Queue Method)
2000 HCM Operations Method
Base Volume Alternative

Intersection #1 Sierra Highway & SR 14 SB Ramps

| Approach: | North Bound | | | South Bound | | | East Bound | | | West Bound | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Movement: | L | T | R | L | T | R | L | T | R | L | T | R |
| Green/Cycle: | 0.00 | 0.17 | 0.17 | 0.74 | 0.91 | 0.00 | 0.00 | 0.00 | 0.00 | 0.09 | 0.00 | 0.09 |
| ArrivalType: | | 3 | | | 3 | | | 3 | | | 3 | |
| ProgFactor: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Q1: | 0.0 | 4.3 | 3.8 | 8.2 | 2.4 | 0.0 | 0.0 | 0.0 | 0.0 | 2.2 | 0.0 | 0.1 |
| UpstreamVC: | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| UpstreamAdj: | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| EarlyArrAdj: | 0.00 | 1.00 | 1.00 | 1.00 | 1.00 | 0.00 | 0.00 | 0.00 | 0.00 | 1.00 | 0.00 | 1.00 |
| Q2: | 0.0 | 1.0 | 1.1 | 1.1 | 0.6 | 0.0 | 0.0 | 0.0 | 0.0 | 1.0 | 0.0 | 0.0 |
| HCM2KQueue: | 0.0 | 5.3 | 4.9 | 9.3 | 3.1 | 0.0 | 0.0 | 0.0 | 0.0 | 3.2 | 0.0 | 0.1 |
| 70th%Factor: | 1.20 | 1.19 | 1.19 | 1.18 | 1.19 | 1.20 | 1.20 | 1.20 | 1.20 | 1.19 | 1.20 | 1.20 |
| HCM2k70thQ: | 0.0 | 6.3 | 5.9 | 11.0 | 3.6 | 0.0 | 0.0 | 0.0 | 0.0 | 3.8 | 0.0 | 0.2 |
| 85th%Factor: | 1.60 | 1.55 | 1.55 | 1.52 | 1.57 | 1.60 | 1.60 | 1.60 | 1.60 | 1.57 | 1.60 | 1.60 |
| HCM2k85thQ: | 0.0 | 8.3 | 7.7 | 14.2 | 4.8 | 0.0 | 0.0 | 0.0 | 0.0 | 5.0 | 0.0 | 0.2 |
| 90th%Factor: | 1.80 | 1.71 | 1.71 | 1.65 | 1.74 | 1.80 | 1.80 | 1.80 | 1.80 | 1.74 | 1.80 | 1.80 |
| HCM2k90thQ: | 0.0 | 9.1 | 8.5 | 15.4 | 5.3 | 0.0 | 0.0 | 0.0 | 0.0 | 5.5 | 0.0 | 0.2 |
| 95th%Factor: | 2.10 | 1.95 | 1.96 | 1.86 | 2.01 | 2.10 | 2.10 | 2.10 | 2.10 | 2.00 | 2.10 | 2.10 |
| HCM2k95thQ: | 0.0 | 10.4 | 9.7 | 17.3 | 6.1 | 0.0 | 0.0 | 0.0 | 0.0 | 6.4 | 0.0 | 0.3 |
| 98th%Factor: | 2.70 | 2.36 | 2.38 | 2.19 | 2.49 | 2.70 | 2.70 | 2.70 | 2.70 | 2.48 | 2.70 | 2.69 |
| HCM2k98thQ: | 0.0 | 12.6 | 11.8 | 20.4 | 7.6 | 0.0 | 0.0 | 0.0 | 0.0 | 7.9 | 0.0 | 0.4 |

Disney Golden Oak
Future with Project with Mitigation - A.M. Peak Hour Option 2

Fuel Consumption and Emissions
2000 HCM Operations Method
Base Volume Alternative

Intersection #1 Sierra Highway & SR 14 SB Ramps

| Approach: | North Bound | | | South Bound | | | East Bound | | | West Bound | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Movement: | L | T | R | L | T | R | L | T | R | L | T | R |
| Run Speed: | 30 MPH | | | 30 MPH | | | 30 MPH | | | 30 MPH | | |
| NumOfStops: | 0.0 | 73.4 | 34.3 | 74.1 | 41.8 | 0.0 | 0.0 | 0.0 | 0.0 | 19.6 | 0.0 | 0.9 |

Name: year 1995 composite fleet
Fuel Consumption: 47.395 pounds
7.678 gallons
Carbon Dioxide: 147.873 pounds
Carbon Monoxide: 10.604 pounds
Hydrocarbons: 1.657 pounds
Nitrogen Oxides: 0.528 pounds

Name: year 2000 composite fleet
Fuel Consumption: 47.395 pounds
7.678 gallons
Carbon Dioxide: 147.873 pounds
Carbon Monoxide: 10.604 pounds
Hydrocarbons: 1.657 pounds
Nitrogen Oxides: 0.528 pounds

DISCLAIMER
The fuel consumption and emissions measures should be used with caution and only for comparisons of different signal timings, geometric design alternatives or for general planning applications, as these calculations are applied to the analysis of a single intersection within the CCG and TRAFFIX. Network models are more appropriate since they can account for the influence of the adjacent control measures and other system elements.

Disney Golden Oak
Future with Project with Mitigation - A.M. Peak Hour Option 2

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #2 Sierra Highway & Placerita Canyon Road

| | | | |
|---|---|---|---|
| Cycle (sec): | 100 | Critical Vol./Cap.(X): | 0.379 |
| Loss Time (sec): | 0 | Average Delay (sec/veh): | 9.5 |
| Optimal Cycle: | 37 | Level Of Service: | A |

| Street Name: | Sierra Highway | | | | | | Placerita Canyon Road | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 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 | | | Ignore | | |
| Min. Green: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 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 | 1 | 1 0 | 1 0 | 1 | 1 0 | 1 0 | 2 | 0 1 |
| Volume Module: | | | | | | | | | | | | |
| Base Vol: | 5 | 220 | 57 | 159 | 1156 | 17 | 10 | 39 | 12 | 65 | 20 | 249 |
| 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: | 5 | 220 | 57 | 159 | 1156 | 17 | 10 | 39 | 12 | 65 | 20 | 249 |
| User Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 0.00 |
| PHF Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 0.00 |
| PHF Volume: | 5 | 220 | 57 | 159 | 1156 | 17 | 10 | 39 | 12 | 65 | 20 | 0 |
| Reduct Vol: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Reduced Vol: | 5 | 220 | 57 | 159 | 1156 | 17 | 10 | 39 | 12 | 65 | 20 | 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 | 0.00 |
| MLF Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 0.00 |
| FinalVolume: | 5 | 220 | 57 | 159 | 1156 | 17 | 10 | 39 | 12 | 65 | 20 | 0 |
| Saturation Flow Module: | | | | | | | | | | | | |
| Sat/Lane: | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Adjustment: | 0.95 | 0.92 | 0.92 | 0.95 | 0.95 | 0.95 | 0.95 | 0.92 | 0.92 | 0.95 | 0.95 | 1.00 |
| Lanes: | 1.00 | 1.59 | 0.41 | 1.00 | 1.97 | 0.03 | 1.00 | 1.53 | 0.47 | 1.00 | 2.00 | 1.00 |
| Final Sat.: | 1805 | 2778 | 720 | 1805 | 3551 | 52 | 1805 | 2664 | 820 | 1805 | 3610 | 1900 |
| Capacity Analysis Module: | | | | | | | | | | | | |
| Vol/Sat: | 0.00 | 0.08 | 0.08 | 0.09 | 0.33 | 0.33 | 0.01 | 0.01 | 0.01 | 0.04 | 0.01 | 0.00 |
| Crit Moves: | **** | | | | **** | | | **** | | **** | | |
| Green/Cycle: | 0.01 | 0.41 | 0.41 | 0.46 | 0.86 | 0.86 | 0.07 | 0.04 | 0.04 | 0.10 | 0.07 | 0.00 |
| Volume/Cap: | 0.38 | 0.19 | 0.19 | 0.19 | 0.38 | 0.38 | 0.08 | 0.38 | 0.38 | 0.38 | 0.08 | 0.00 |
| Delay/Veh: | 66.7 | 19.0 | 19.0 | 16.3 | 1.6 | 1.6 | 44.1 | 48.7 | 48.7 | 43.9 | 43.9 | 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: | 66.7 | 19.0 | 19.0 | 16.3 | 1.6 | 1.6 | 44.1 | 48.7 | 48.7 | 43.9 | 43.9 | 0.0 |
| LOS by Move: | E | B | B | B | A | A | D | D | D | D | D | A |
| HCM2kAvgQ: | 1 | 3 | 3 | 3 | 4 | 4 | 0 | 1 | 1 | 2 | 0 | 0 |

Note: Queue reported is the number of cars per lane.

Disney Golden Oak
Future with Project with Mitigation - A.M. Peak Hour Option 2

Level Of Service Detailed Computation Report
2000 HCM Operations Method
Base Volume Alternative

Intersection #2 Sierra Highway & Placerita Canyon Road

```
Approach:      North Bound      South Bound       East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
HCM Ops Adjusted Lane Utilization Module:
Lanes:        1  0  1  1  0    1  0  1  1  0    1  0  1  1  0    1  0  2  0  1
Lane Group:    L   RT     RT    L   RT     RT    L   RT     RT    L    T     R
#LnsInGrps:     1    2     2     1    2     2     1    2     2     1    2     1
------------|---------------||---------------||---------------||---------------|
HCM Ops Input Saturation Adj Module:
Lane Width:    12   12    12    12   12    12    12   12    12    12   12    12
CrsswalkWid:         8                8                8                8
% Hev Veh:           0                0                0                0
Grade:              0%               0%               0%               0%
Parking/Hr:         No               No               No               No
Bus Stp/Hr:          0                0                0                0
Area Type:    < < < < < < < < < < < < < < < Other  > > > > > > > > > > > > > > > >
Cnft Ped/Hr:         0                0                0                0
ExclusiveRT:     Include          Include          Include          Include
% RT Prtct:          0                0                0                0
------------|---------------||---------------||---------------||---------------|
HCM Ops f(lt) Adj Case Module:
f(lt) Case:     1 xxxx  xxxx     1 xxxx  xxxx     1 xxxx  xxxx     1 xxxx  xxxx
------------|---------------||---------------||---------------||---------------|
HCM Ops Saturation Adj Module:
Ln Wid Adj:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00 xxxxx
Hev Veh Adj: 1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00 xxxxx
Grade Adj:   1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00 xxxxx
Parking Adj: xxxx 1.00  1.00  xxxx 1.00  1.00  xxxx 1.00  1.00  xxxx xxxx xxxxx
Bus Stp Adj: xxxx 1.00  1.00  xxxx 1.00  1.00  xxxx 1.00  1.00  xxxx xxxx xxxxx
Area Adj:    1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00 xxxxx
RT Adj:      xxxx 0.97  0.97  xxxx 1.00  1.00  xxxx 0.97  0.97  xxxx xxxx xxxxx
LT Adj:      0.95 xxxx xxxxx  0.95 xxxx xxxxx  0.95 xxxx xxxxx  0.95 xxxx xxxxx
PedBike Adj: 1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
HCM Sat Adj: 0.95 0.97  0.97  0.95 1.00  1.00  0.95 0.97  0.97  0.95 1.00  1.00
Usr Sat Adj: 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 Sat Adj: 1.00 0.95  0.95  1.00 0.95  0.95  1.00 0.95  0.95  1.00 0.95  1.00
Fnl Sat Adj: 0.95 0.92  0.92  0.95 0.95  0.95  0.95 0.92  0.92  0.95 0.95  1.00
------------|---------------||---------------||---------------||---------------|
Delay Adjustment Factor Module:
Coordinated:  < < < < < < < < < < < < < < <  No  > > > > > > > > > > > > > > > >
Signal Type:  < < < < < < < < < < < <     Actuated     > > > > > > > > > > > > >
DelAdjFctr:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  0.00
```

Disney Golden Oak
Future with Project with Mitigation - A.M. Peak Hour Option 2

Level Of Service Detailed Computation Report (HCM2000 Queue Method)
2000 HCM Operations Method
Base Volume Alternative

Intersection #2 Sierra Highway & Placerita Canyon Road

| Approach: | North Bound | | | South Bound | | | East Bound | | | West Bound | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Movement: | L - | T - | R | L - | T - | R | L - | T - | R | L - | T - | R |
| Green/Cycle: | 0.01 | 0.41 | 0.41 | 0.46 | 0.86 | 0.86 | 0.07 | 0.04 | 0.04 | 0.10 | 0.07 | 0.00 |
| ArrivalType: | | 3 | | | 3 | | | 3 | | | 3 | |
| ProgFactor: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Q1: | 0.1 | 2.6 | 2.6 | 2.6 | 3.6 | 3.6 | 0.3 | 0.7 | 0.7 | 1.7 | 0.3 | 0.0 |
| UpstreamVC: | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| UpstreamAdj: | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| EarlyArrAdj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 0.00 |
| Q2: | 0.4 | 0.2 | 0.2 | 0.2 | 0.6 | 0.6 | 0.1 | 0.6 | 0.6 | 0.6 | 0.1 | 0.0 |
| HCM2KQueue: | 0.6 | 2.8 | 2.8 | 2.9 | 4.2 | 4.2 | 0.4 | 1.3 | 1.3 | 2.3 | 0.4 | 0.0 |
| 70th%Factor: | 1.20 | 1.19 | 1.19 | 1.19 | 1.19 | 1.19 | 1.20 | 1.20 | 1.20 | 1.19 | 1.20 | 1.20 |
| HCM2k70thQ: | 0.7 | 3.4 | 3.4 | 3.4 | 5.0 | 5.0 | 0.4 | 1.5 | 1.5 | 2.7 | 0.4 | 0.0 |
| 85th%Factor: | 1.59 | 1.57 | 1.57 | 1.57 | 1.56 | 1.56 | 1.60 | 1.59 | 1.59 | 1.58 | 1.60 | 1.60 |
| HCM2k85thQ: | 0.9 | 4.5 | 4.5 | 4.5 | 6.5 | 6.5 | 0.6 | 2.0 | 2.0 | 3.6 | 0.6 | 0.0 |
| 90th%Factor: | 1.79 | 1.75 | 1.75 | 1.75 | 1.72 | 1.72 | 1.79 | 1.78 | 1.78 | 1.76 | 1.79 | 1.80 |
| HCM2k90thQ: | 1.0 | 4.9 | 4.9 | 5.0 | 7.2 | 7.2 | 0.6 | 2.3 | 2.3 | 4.0 | 0.7 | 0.0 |
| 95th%Factor: | 2.08 | 2.01 | 2.01 | 2.01 | 1.98 | 1.98 | 2.09 | 2.06 | 2.06 | 2.03 | 2.09 | 2.10 |
| HCM2k95thQ: | 1.2 | 5.7 | 5.7 | 5.8 | 8.3 | 8.3 | 0.7 | 2.6 | 2.6 | 4.6 | 0.8 | 0.0 |
| 98th%Factor: | 2.66 | 2.50 | 2.50 | 2.50 | 2.42 | 2.42 | 2.67 | 2.61 | 2.61 | 2.54 | 2.67 | 2.70 |
| HCM2k98thQ: | 1.5 | 7.1 | 7.1 | 7.2 | 10.2 | 10.2 | 0.9 | 3.3 | 3.3 | 5.8 | 1.0 | 0.0 |

Disney Golden Oak
Future with Project with Mitigation - A.M. Peak Hour Option 2

Fuel Consumption and Emissions
2000 HCM Operations Method
Base Volume Alternative

Intersection #2 Sierra Highway & Placerita Canyon Road

| Approach: | North Bound | | | South Bound | | | East Bound | | | West Bound | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Movement: | L | T | R | L | T | R | L | T | R | L | T | R |
| Run Speed: | 30 MPH | | | 30 MPH | | | 30 MPH | | | 30 MPH | | |
| NumOfStops: | 1.2 | 35.2 | 9.1 | 23.7 | 60.4 | 0.9 | 2.3 | 9.5 | 2.9 | 15.3 | 4.7 | 0.0 |

Name: year 1995 composite fleet

| | | |
|---|---|---|
| Fuel Consumption: | 31.311 | pounds |
| | 5.072 | gallons |
| Carbon Dioxide: | 97.689 | pounds |
| Carbon Monoxide: | 6.906 | pounds |
| Hydrocarbons: | 1.047 | pounds |
| Nitrogen Oxides: | 0.351 | pounds |

Name: year 2000 composite fleet

| | | |
|---|---|---|
| Fuel Consumption: | 31.311 | pounds |
| | 5.072 | gallons |
| Carbon Dioxide: | 97.689 | pounds |
| Carbon Monoxide: | 6.906 | pounds |
| Hydrocarbons: | 1.047 | pounds |
| Nitrogen Oxides: | 0.351 | pounds |

DISCLAIMER
The fuel consumption and emissions measures should be used with caution and only for comparisons of different signal timings, geometric design alternatives or for general planning applications, as these calculations are applied to the analysis of a single intersection within the CCG and TRAFFIX. Network models are more appropriate since they can account for the influence of the adjacent control measures and other system elements.

Disney Golden Oak
Future with Project with Mitigation - P.M. Peak Hour Option 2

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #1 Sierra Highway & SR 14 SB Ramps

| | | | |
|---|---|---|---|
| Cycle (sec): | 100 | Critical Vol./Cap.(X): | 0.552 |
| Loss Time (sec): | 0 | Average Delay (sec/veh): | 7.6 |
| Optimal Cycle: | 41 | Level Of Service: | A |

| Street Name: | Sierra Highway | | | | | | SR 14 SB Ramps | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 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: | Include | | | Include | | | Include | | | Include | | |
| Min. Green: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 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 | 2 0 | 1 | 1 0 | 2 0 | 0 | 0 0 | 0 0 | 0 | 1 0 | 0 0 | 1 |
| Volume Module: | | | | | | | | | | | | |
| Base Vol: | 0 | 1501 | 296 | 214 | 462 | 0 | 0 | 0 | 0 | 31 | 0 | 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: | 0 | 1501 | 296 | 214 | 462 | 0 | 0 | 0 | 0 | 31 | 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: | 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 | 1501 | 296 | 214 | 462 | 0 | 0 | 0 | 0 | 31 | 0 | 2 |
| Reduct Vol: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Reduced Vol: | 0 | 1501 | 296 | 214 | 462 | 0 | 0 | 0 | 0 | 31 | 0 | 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: | 0 | 1501 | 296 | 214 | 462 | 0 | 0 | 0 | 0 | 31 | 0 | 2 |
| Saturation Flow Module: | | | | | | | | | | | | |
| Sat/Lane: | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Adjustment: | 1.00 | 0.95 | 0.85 | 0.95 | 0.95 | 1.00 | 1.00 | 1.00 | 1.00 | 0.95 | 1.00 | 0.85 |
| Lanes: | 0.00 | 2.00 | 1.00 | 1.00 | 2.00 | 0.00 | 0.00 | 0.00 | 0.00 | 1.00 | 0.00 | 1.00 |
| Final Sat.: | 0 | 3610 | 1615 | 1805 | 3610 | 0 | 0 | 0 | 0 | 1805 | 0 | 1615 |
| Capacity Analysis Module: | | | | | | | | | | | | |
| Vol/Sat: | 0.00 | 0.42 | 0.18 | 0.12 | 0.13 | 0.00 | 0.00 | 0.00 | 0.00 | 0.02 | 0.00 | 0.00 |
| Crit Moves: | | **** | | **** | | | | | | **** | | |
| Green/Cycle: | 0.00 | 0.75 | 0.75 | 0.22 | 0.97 | 0.00 | 0.00 | 0.00 | 0.00 | 0.03 | 0.00 | 0.03 |
| Volume/Cap: | 0.00 | 0.55 | 0.24 | 0.55 | 0.13 | 0.00 | 0.00 | 0.00 | 0.00 | 0.55 | 0.00 | 0.04 |
| Delay/Veh: | 0.0 | 5.4 | 3.8 | 36.7 | 0.1 | 0.0 | 0.0 | 0.0 | 0.0 | 59.1 | 0.0 | 47.3 |
| 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 | 5.4 | 3.8 | 36.7 | 0.1 | 0.0 | 0.0 | 0.0 | 0.0 | 59.1 | 0.0 | 47.3 |
| LOS by Move: | A | A | A | D | A | A | A | A | A | E | A | D |
| HCM2kAvgQ: | 0 | 10 | 3 | 6 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 0 |

Note: Queue reported is the number of cars per lane.

Disney Golden Oak
Future with Project with Mitigation - P.M. Peak Hour Option 2

Level Of Service Detailed Computation Report
2000 HCM Operations Method
Base Volume Alternative

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*******************************************************************************
Intersection #1 Sierra Highway & SR 14 SB Ramps
*******************************************************************************
Approach:      North Bound      South Bound       East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
HCM Ops Adjusted Lane Utilization Module:
Lanes:        0  0  2  0  1    1  0  2  0  0    0  0  0  0  0    1  0  0  0  1
Lane Group:  xxxx   T     R     L    T   xxxx  xxxx xxxx  xxxx    L  xxxx    R
#LnsInGrps:     0    2     1     1    2     0     0    0     0    1    0     1
------------|---------------||---------------||---------------||---------------|
HCM Ops Input Saturation Adj Module:
Lane Width:    12   12    12    12   12    12    12   12    12    12   12    12
CrsswalkWid:         8                8                8                8
% Hev Veh:           0                0                0                0
Grade:              0%               0%               0%               0%
Parking/Hr:         No               No               No               No
Bus Stp/Hr:          0                0                0                0
Area Type:    < < < < < < < < < < < < < < < < Other  > > > > > > > > > > > > > > > >
Cnft Ped/Hr:         0                0                0                0
ExclusiveRT:     Include          Include          Include          Include
% RT Prtct:          0                0                0                0
------------|---------------||---------------||---------------||---------------|
HCM Ops f(lt) Adj Case Module:
f(lt) Case:  xxxx xxxx  xxxx     1 xxxx  xxxx  xxxx xxxx  xxxx     1 xxxx  xxxx
------------|---------------||---------------||---------------||---------------|
HCM Ops Saturation Adj Module:
Ln Wid Adj:  xxxx 1.00  1.00  1.00 1.00 xxxxx  xxxx xxxx xxxxx  1.00 xxxx  1.00
Hev Veh Adj: xxxx 1.00  1.00  1.00 1.00 xxxxx  xxxx xxxx xxxxx  1.00 xxxx  1.00
Grade Adj:   xxxx 1.00  1.00  1.00 1.00 xxxxx  xxxx xxxx xxxxx  1.00 xxxx  1.00
Parking Adj: xxxx xxxx  1.00  xxxx 1.00 xxxxx  xxxx xxxx xxxxx  xxxx xxxx  1.00
Bus Stp Adj: xxxx xxxx  1.00  xxxx 1.00 xxxxx  xxxx xxxx xxxxx  xxxx xxxx  1.00
Area Adj:    xxxx 1.00  1.00  1.00 1.00 xxxxx  xxxx xxxx xxxxx  1.00 xxxx  1.00
RT Adj:      xxxx xxxx  0.85  xxxx xxxx xxxxx  xxxx xxxx xxxxx  xxxx xxxx  0.85
LT Adj:      xxxx xxxx xxxxx  0.95 xxxx xxxxx  xxxx xxxx xxxxx  0.95 xxxx xxxxx
PedBike Adj: 1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
HCM Sat Adj: 1.00 1.00  0.85  0.95 1.00  1.00  1.00 1.00  1.00  0.95 1.00  0.85
Usr Sat Adj: 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 Sat Adj: 1.00 0.95  1.00  1.00 0.95  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Fnl Sat Adj: 1.00 0.95  0.85  0.95 0.95  1.00  1.00 1.00  1.00  0.95 1.00  0.85
------------|---------------||---------------||---------------||---------------|
Delay Adjustment Factor Module:
Coordinated:  < < < < < < < < < < < < < < < <  No  > > > > > > > > > > > > > > > >
Signal Type:  < < < < < < < < < < < < <     Actuated     > > > > > > > > > > > > > >
DelAdjFctr:  0.00 1.00  1.00  1.00 1.00  0.00  0.00 0.00  0.00  1.00 0.00  1.00
*******************************************************************************
```

Disney Golden Oak
Future with Project with Mitigation - P.M. Peak Hour Option 2

Level Of Service Detailed Computation Report (HCM2000 Queue Method)
2000 HCM Operations Method
Base Volume Alternative

Intersection #1 Sierra Highway & SR 14 SB Ramps

| Approach: | North Bound | | | South Bound | | | East Bound | | | West Bound | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Movement: | L - | T - | R | L - | T - | R | L - | T - | R | L - | T - | R |
| Green/Cycle: | 0.00 | 0.75 | 0.75 | 0.22 | 0.97 | 0.00 | 0.00 | 0.00 | 0.00 | 0.03 | 0.00 | 0.03 |
| ArrivalType: | | 3 | | | 3 | | | 3 | | | 3 | |
| ProgFactor: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Q1: | 0.0 | 9.2 | 2.5 | 5.3 | 0.2 | 0.0 | 0.0 | 0.0 | 0.0 | 0.8 | 0.0 | 0.1 |
| UpstreamVC: | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| UpstreamAdj: | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| EarlyArrAdj: | 0.00 | 1.00 | 1.00 | 1.00 | 1.00 | 0.00 | 0.00 | 0.00 | 0.00 | 1.00 | 0.00 | 1.00 |
| Q2: | 0.0 | 1.2 | 0.3 | 1.2 | 0.2 | 0.0 | 0.0 | 0.0 | 0.0 | 0.9 | 0.0 | 0.0 |
| HCM2KQueue: | 0.0 | 10.5 | 2.8 | 6.5 | 0.4 | 0.0 | 0.0 | 0.0 | 0.0 | 1.8 | 0.0 | 0.1 |
| 70th%Factor: | 1.20 | 1.18 | 1.19 | 1.19 | 1.20 | 1.20 | 1.20 | 1.20 | 1.20 | 1.20 | 1.20 | 1.20 |
| HCM2k70thQ: | 0.0 | 12.3 | 3.3 | 7.7 | 0.5 | 0.0 | 0.0 | 0.0 | 0.0 | 2.1 | 0.0 | 0.1 |
| 85th%Factor: | 1.60 | 1.51 | 1.57 | 1.54 | 1.60 | 1.60 | 1.60 | 1.60 | 1.60 | 1.58 | 1.60 | 1.60 |
| HCM2k85thQ: | 0.0 | 15.8 | 4.4 | 10.0 | 0.6 | 0.0 | 0.0 | 0.0 | 0.0 | 2.8 | 0.0 | 0.2 |
| 90th%Factor: | 1.80 | 1.64 | 1.75 | 1.69 | 1.79 | 1.80 | 1.80 | 1.80 | 1.80 | 1.77 | 1.80 | 1.80 |
| HCM2k90thQ: | 0.0 | 17.1 | 4.9 | 10.9 | 0.7 | 0.0 | 0.0 | 0.0 | 0.0 | 3.2 | 0.0 | 0.2 |
| 95th%Factor: | 2.10 | 1.84 | 2.01 | 1.92 | 2.09 | 2.10 | 2.10 | 2.10 | 2.10 | 2.04 | 2.10 | 2.10 |
| HCM2k95thQ: | 0.0 | 19.2 | 5.6 | 12.4 | 0.8 | 0.0 | 0.0 | 0.0 | 0.0 | 3.7 | 0.0 | 0.2 |
| 98th%Factor: | 2.70 | 2.15 | 2.51 | 2.31 | 2.67 | 2.70 | 2.70 | 2.70 | 2.70 | 2.57 | 2.70 | 2.69 |
| HCM2k98thQ: | 0.0 | 22.5 | 7.0 | 14.9 | 1.0 | 0.0 | 0.0 | 0.0 | 0.0 | 4.6 | 0.0 | 0.3 |

Disney Golden Oak
Future with Project with Mitigation - P.M. Peak Hour Option 2

Fuel Consumption and Emissions
2000 HCM Operations Method
Base Volume Alternative

Intersection #1 Sierra Highway & SR 14 SB Ramps

| Approach: | North Bound | | | South Bound | | | East Bound | | | West Bound | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Movement: | L - | T - | R | L - | T - | R | L - | T - | R | L - | T - | R |
| Run Speed: | | 30 MPH | | | 30 MPH | | | 30 MPH | | | 30 MPH | |
| NumOfStops: | 0.0 | 158 | 22.3 | 47.6 | 4.1 | 0.0 | 0.0 | 0.0 | 0.0 | 7.6 | 0.0 | 0.5 |

Name: year 1995 composite fleet
Fuel Consumption: 41.462 pounds
6.717 gallons
Carbon Dioxide: 129.361 pounds
Carbon Monoxide: 8.951 pounds
Hydrocarbons: 1.289 pounds
Nitrogen Oxides: 0.473 pounds

Name: year 2000 composite fleet
Fuel Consumption: 41.462 pounds
6.717 gallons
Carbon Dioxide: 129.361 pounds
Carbon Monoxide: 8.951 pounds
Hydrocarbons: 1.289 pounds
Nitrogen Oxides: 0.473 pounds

DISCLAIMER
The fuel consumption and emissions measures should be used with caution and only for comparisons of different signal timings, geometric design alternatives or for general planning applications, as these calculations are applied to the analysis of a single intersection within the CCG and TRAFFIX. Network models are more appropriate since they can account for the influence of the adjacent control measures and other system elements.

Disney Golden Oak
Future with Project with Mitigation - P.M. Peak Hour Option 2

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #2 Sierra Highway & Placerita Canyon Road

| | | | |
|---|---|---|---|
| Cycle (sec): | 100 | Critical Vol./Cap.(X): | 0.475 |
| Loss Time (sec): | 0 | Average Delay (sec/veh): | 5.0 |
| Optimal Cycle: | 43 | Level Of Service: | A |

| Street Name: | Sierra Highway | | | | | | Placerita Canyon Road | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 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 | | | Ignore | | |
| Min. Green: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 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 | 1 | 1 0 | 1 0 | 1 | 1 0 | 1 0 | 2 | 0 1 |
| Volume Module: | | | | | | | | | | | | |
| Base Vol: | 16 | 1358 | 153 | 32 | 443 | 24 | 8 | 29 | 8 | 40 | 39 | 420 |
| 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: | 16 | 1358 | 153 | 32 | 443 | 24 | 8 | 29 | 8 | 40 | 39 | 420 |
| User Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 0.00 |
| PHF Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 0.00 |
| PHF Volume: | 16 | 1358 | 153 | 32 | 443 | 24 | 8 | 29 | 8 | 40 | 39 | 0 |
| Reduct Vol: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Reduced Vol: | 16 | 1358 | 153 | 32 | 443 | 24 | 8 | 29 | 8 | 40 | 39 | 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 | 0.00 |
| MLF Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 0.00 |
| FinalVolume: | 16 | 1358 | 153 | 32 | 443 | 24 | 8 | 29 | 8 | 40 | 39 | 0 |
| Saturation Flow Module: | | | | | | | | | | | | |
| Sat/Lane: | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Adjustment: | 0.95 | 0.94 | 0.94 | 0.95 | 0.94 | 0.94 | 0.95 | 0.92 | 0.92 | 0.95 | 0.95 | 1.00 |
| Lanes: | 1.00 | 1.80 | 0.20 | 1.00 | 1.90 | 0.10 | 1.00 | 1.57 | 0.43 | 1.00 | 2.00 | 1.00 |
| Final Sat.: | 1805 | 3196 | 360 | 1805 | 3397 | 184 | 1805 | 2739 | 756 | 1805 | 3610 | 1900 |
| Capacity Analysis Module: | | | | | | | | | | | | |
| Vol/Sat: | 0.01 | 0.42 | 0.42 | 0.02 | 0.13 | 0.13 | 0.00 | 0.01 | 0.01 | 0.02 | 0.01 | 0.00 |
| Crit Moves: | | **** | | **** | | | | **** | | **** | | |
| Green/Cycle: | 0.06 | 0.89 | 0.89 | 0.04 | 0.87 | 0.87 | 0.02 | 0.02 | 0.02 | 0.05 | 0.05 | 0.00 |
| Volume/Cap: | 0.15 | 0.48 | 0.48 | 0.48 | 0.15 | 0.15 | 0.22 | 0.48 | 0.48 | 0.48 | 0.22 | 0.00 |
| Delay/Veh: | 45.3 | 1.1 | 1.1 | 52.4 | 1.0 | 1.0 | 51.3 | 52.8 | 52.8 | 50.7 | 46.4 | 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: | 45.3 | 1.1 | 1.1 | 52.4 | 1.0 | 1.0 | 51.3 | 52.8 | 52.8 | 50.7 | 46.4 | 0.0 |
| LOS by Move: | D | A | A | D | A | A | D | D | D | D | D | A |
| HCM2kAvgQ: | 1 | 5 | 5 | 2 | 1 | 1 | 0 | 1 | 1 | 2 | 1 | 0 |

Note: Queue reported is the number of cars per lane.

Disney Golden Oak
Future with Project with Mitigation - P.M. Peak Hour Option 2

Level Of Service Detailed Computation Report
2000 HCM Operations Method
Base Volume Alternative

Intersection #2 Sierra Highway & Placerita Canyon Road

| Approach: | North Bound | | | | South Bound | | | | East Bound | | | | West Bound | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Movement: | L - | T - | R | | L - | T - | R | | L - | T - | R | | L - | T - | R | |
| HCM Ops Adjusted Lane Utilization Module: | | | | | | | | | | | | | | | | |
| Lanes: | 1 0 | 1 1 | 0 | | 1 0 | 1 1 | 0 | | 1 0 | 1 1 | 0 | | 1 0 | 2 0 | 1 | |
| Lane Group: | L | RT | RT | | L | RT | RT | | L | RT | RT | | L | T | R | |
| #LnsInGrps: | 1 | 2 | 2 | | 1 | 2 | 2 | | 1 | 2 | 2 | | 1 | 2 | 1 | |
| HCM Ops Input Saturation Adj Module: | | | | | | | | | | | | | | | | |
| Lane Width: | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 |
| CrsswalkWid: | | 8 | | | | 8 | | | | 8 | | | | 8 | | |
| % Hev Veh: | | 0 | | | | 0 | | | | 0 | | | | 0 | | |
| Grade: | | 0% | | | | 0% | | | | 0% | | | | 0% | | |
| Parking/Hr: | | No | | | | No | | | | No | | | | No | | |
| Bus Stp/Hr: | | 0 | | | | 0 | | | | 0 | | | | 0 | | |
| Area Type: | < < < < < < < < < < < < < < < < Other > > > > > > > > > > > > > > > > > > | | | | | | | | | | | | | | | |
| Cnft Ped/Hr: | | 0 | | | | 0 | | | | 0 | | | | 0 | | |
| ExclusiveRT: | | Include | | | | Include | | | | Include | | | | Include | | |
| % RT Prtct: | | 0 | | | | 0 | | | | 0 | | | | 0 | | |
| HCM Ops f(lt) Adj Case Module: | | | | | | | | | | | | | | | | |
| f(lt) Case: | 1 | xxxx | xxxx | | 1 | xxxx | xxxx | | 1 | xxxx | xxxx | | 1 | xxxx | xxxx | |
| HCM Ops Saturation Adj Module: | | | | | | | | | | | | | | | | |
| Ln Wid Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | xxxxx | | | | |
| Hev Veh Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | xxxxx | | | | |
| Grade Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | xxxxx | | | | |
| Parking Adj: | xxxx | 1.00 | 1.00 | xxxx | 1.00 | 1.00 | xxxx | 1.00 | 1.00 | xxxx | xxxx | xxxxx | | | | |
| Bus Stp Adj: | xxxx | 1.00 | 1.00 | xxxx | 1.00 | 1.00 | xxxx | 1.00 | 1.00 | xxxx | xxxx | xxxxx | | | | |
| Area Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | xxxxx | | | | |
| RT Adj: | xxxx | 0.99 | 0.99 | xxxx | 0.99 | 0.99 | xxxx | 0.97 | 0.97 | xxxx | xxxx | xxxxx | | | | |
| LT Adj: | 0.95 | xxxx | xxxxx | 0.95 | xxxx | xxxxx | 0.95 | xxxx | xxxxx | 0.95 | xxxx | xxxxx | | | | |
| PedBike Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | | | | |
| HCM Sat Adj: | 0.95 | 0.99 | 0.99 | 0.95 | 0.99 | 0.99 | 0.95 | 0.97 | 0.97 | 0.95 | 1.00 | 1.00 | | | | |
| Usr Sat Adj: | 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 Sat Adj: | 1.00 | 0.95 | 0.95 | 1.00 | 0.95 | 0.95 | 1.00 | 0.95 | 0.95 | 1.00 | 0.95 | 1.00 | | | | |
| Fnl Sat Adj: | 0.95 | 0.94 | 0.94 | 0.95 | 0.94 | 0.94 | 0.95 | 0.92 | 0.92 | 0.95 | 0.95 | 1.00 | | | | |
| Delay Adjustment Factor Module: | | | | | | | | | | | | | | | | |
| Coordinated: | < < < < < < < < < < < < < < < < No > > > > > > > > > > > > > > > > > > | | | | | | | | | | | | | | | |
| Signal Type: | < < < < < < < < < < < < < Actuated > > > > > > > > > > > > > > > > | | | | | | | | | | | | | | | |
| DelAdjFctr: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 0.00 | | | | |

Disney Golden Oak
Future with Project with Mitigation - P.M. Peak Hour Option 2

Level Of Service Detailed Computation Report (HCM2000 Queue Method)
2000 HCM Operations Method
Base Volume Alternative

Intersection #2 Sierra Highway & Placerita Canyon Road

| Approach: | North Bound | | | South Bound | | | East Bound | | | West Bound | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Movement: | L - | T - | R | L - | T - | R | L - | T - | R | L - | T - | R |
| Green/Cycle: | 0.06 | 0.89 | 0.89 | 0.04 | 0.87 | 0.87 | 0.02 | 0.02 | 0.02 | 0.05 | 0.05 | 0.00 |
| ArrivalType: | | 3 | | | 3 | | | 3 | | | 3 | |
| ProgFactor: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Q1: | 0.4 | 4.1 | 4.1 | 0.9 | 1.0 | 1.0 | 0.2 | 0.5 | 0.5 | 1.1 | 0.5 | 0.0 |
| UpstreamVC: | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| UpstreamAdj: | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| EarlyArrAdj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 0.00 |
| Q2: | 0.2 | 0.9 | 0.9 | 0.8 | 0.2 | 0.2 | 0.3 | 0.7 | 0.7 | 0.8 | 0.3 | 0.0 |
| HCM2KQueue: | 0.6 | 5.0 | 5.0 | 1.6 | 1.2 | 1.2 | 0.5 | 1.3 | 1.3 | 1.9 | 0.8 | 0.0 |
| 70th%Factor: | 1.20 | 1.19 | 1.19 | 1.20 | 1.20 | 1.20 | 1.20 | 1.20 | 1.20 | 1.20 | 1.20 | 1.20 |
| HCM2k70thQ: | 0.7 | 5.9 | 5.9 | 2.0 | 1.4 | 1.4 | 0.6 | 1.5 | 1.5 | 2.2 | 1.0 | 0.0 |
| 85th%Factor: | 1.59 | 1.55 | 1.55 | 1.58 | 1.59 | 1.59 | 1.60 | 1.59 | 1.59 | 1.58 | 1.59 | 1.60 |
| HCM2k85thQ: | 0.9 | 7.7 | 7.7 | 2.6 | 1.9 | 1.9 | 0.8 | 2.0 | 2.0 | 3.0 | 1.3 | 0.0 |
| 90th%Factor: | 1.79 | 1.71 | 1.71 | 1.77 | 1.78 | 1.78 | 1.79 | 1.78 | 1.78 | 1.76 | 1.78 | 1.80 |
| HCM2k90thQ: | 1.1 | 8.5 | 8.5 | 2.9 | 2.1 | 2.1 | 0.9 | 2.2 | 2.2 | 3.3 | 1.5 | 0.0 |
| 95th%Factor: | 2.08 | 1.96 | 1.96 | 2.05 | 2.06 | 2.06 | 2.08 | 2.06 | 2.06 | 2.04 | 2.07 | 2.10 |
| HCM2k95thQ: | 1.2 | 9.7 | 9.7 | 3.4 | 2.4 | 2.4 | 1.0 | 2.6 | 2.6 | 3.8 | 1.7 | 0.0 |
| 98th%Factor: | 2.66 | 2.38 | 2.38 | 2.58 | 2.61 | 2.61 | 2.66 | 2.61 | 2.61 | 2.57 | 2.64 | 2.70 |
| HCM2k98thQ: | 1.6 | 11.9 | 11.9 | 4.2 | 3.1 | 3.1 | 1.3 | 3.3 | 3.3 | 4.8 | 2.2 | 0.0 |

Disney Golden Oak
Future with Project with Mitigation - P.M. Peak Hour Option 2

Fuel Consumption and Emissions
2000 HCM Operations Method
Base Volume Alternative

Intersection #2 Sierra Highway & Placerita Canyon Road

| Approach: | North Bound | | | South Bound | | | East Bound | | | West Bound | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Movement: | L - | T - | R | L - | T - | R | L - | T - | R | L - | T - | R |
| Run Speed: | 30 MPH | | | 30 MPH | | | 30 MPH | | | 30 MPH | | |
| NumOfStops: | 3.8 | 62.7 | 7.1 | 7.8 | 16.3 | 0.9 | 2.0 | 7.2 | 2.0 | 9.7 | 9.4 | 0.0 |

Name: year 1995 composite fleet

| | | |
|---|---|---|
| Fuel Consumption: | 30.679 | pounds |
| | 4.970 | gallons |
| Carbon Dioxide: | 95.719 | pounds |
| Carbon Monoxide: | 6.346 | pounds |
| Hydrocarbons: | 0.844 | pounds |
| Nitrogen Oxides: | 0.335 | pounds |

Name: year 2000 composite fleet

| | | |
|---|---|---|
| Fuel Consumption: | 30.679 | pounds |
| | 4.970 | gallons |
| Carbon Dioxide: | 95.719 | pounds |
| Carbon Monoxide: | 6.346 | pounds |
| Hydrocarbons: | 0.844 | pounds |
| Nitrogen Oxides: | 0.335 | pounds |

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The fuel consumption and emissions measures should be used with caution and only for comparisons of different signal timings, geometric design alternatives or for general planning applications, as these calculations are applied to the analysis of a single intersection within the CCG and TRAFFIX. Network models are more appropriate since they can account for the influence of the adjacent control measures and other system elements.