

UPDATED FOCUSED SITE  
TRAFFIC IMPACT ANALYSIS  
**TTM No. 34760 RESIDENTIAL DEVELOPMENT**  
Corona, California  
May 30, 2008

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### APPENDIX

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## EXECUTIVE SUMMARY

- 1 The proposed Project, Tentative Tract Map No. 34760 Residential Development in the City of Corona/Riverside County, California, consists of the developing thirty-four (34) estate residential single-family detached dwelling units on approximately one-half-acre lots. In addition, 24.5 acres in Riverside County will be annexed into the City of Corona as part of the approval process for this development. Project access is proposed via the southerly extension of Malaga Street. The project site is a total of 64.3 acres of vacant land (39.8 acres in the City of Corona & 24.5 acres in the unincorporated area of Riverside County) located on the southerly terminus of Malaga Street. The proposed land uses on the site are consistent with the General Plan and the Project is anticipated to be completed by Year 2009
2. The proposed Project is expected to generate approximately 325 daily trips, with 25 trips (6 inbound, 19 outbound) produced in the AM peak hour and 35 trips (22 inbound, 13 outbound) produced in the PM peak hour
- 3 The Project study area covers three key study intersections in the Year 2009 analysis. The intersections are listed as follows.
  1. Mountain Gate Drive at Lincoln Drive/Upper Drive
  2. Malaga Street at Upper Drive
  3. Main Street at Upper Drive
4. In the Project horizon Year 2009, Project traffic combined with background traffic (existing plus ambient growth) does not significantly impact any of the three key study intersection per the impact criteria presented in the *City of Corona Traffic Impact Study Guidelines*
- 5 The Project access roadway is forecast to operate at acceptable LOS during the AM and PM peak hours. As such, motorists entering and exiting the Project site will be able to do so comfortably, safely, and without undue congestion. Access for the Project site will be provided via the southerly extension of Malaga Street and will be gate-controlled with a pass-by lane and turn-around area prior to the gate at the call-box. In addition, it is recommended that an all-way stop be installed at the intersection of Malaga Street and Shepard Crest Drive in order to calm northbound traffic traveling downhill away from the Project site and facilitate access onto Malaga Street for traffic on Shepard Crest Drive.
- 6 The internal circulation was evaluated in terms of vehicle-pedestrian conflicts. Based on our review of the preliminary site plan, the overall layout does not create any unsafe vehicle-pedestrian conflict points. The on-site circulation is very good based on our review of the proposed site plan, whereas the alignment and spacing of the driveways is adequate. The circulation throughout the residential area is adequate with sufficient sight distance at "A" Circle along Malaga Street based on the sight distance evaluation.

- 7 The maximum number of single-family dwelling units permitted under the Current City and County General Plans is 131 DU. Since the proposed Project consists of 34 DU and the current County General Plan designation will remain unchanged when the County land is annexed into the City of Corona, the proposed Project is forecast to generate significantly less traffic than the permitted density and therefore is in conformance with the City of Corona General as it relates to traffic impacts.



UPDATED FOCUSED SITE  
TRAFFIC IMPACT ANALYSIS

**TTM No. 34760 RESIDENTIAL DEVELOPMENT**

Corona, California  
May 30, 2008

## 1.0 INTRODUCTION

This focused site traffic impact analysis evaluates the potential traffic impacts of the proposed Tentative Tract Map (TTM) No. 34760 Residential Development (hereinafter referred to as Project), on the area traffic circulation. The proposed residential development project consists of developing thirty-four (34) estate residential single-family detached dwelling units on approximately one-half-acre lots. In addition, 24.5 acres in Riverside County will be annexed into the City of Corona as part of the approval process for this development. Project access is proposed via the southerly extension of Malaga Street. The project site is a total of 64.3 acres of vacant land (39.8 acres in the City of Corona & 24.5 acres in the unincorporated area of Riverside County) located on the southerly terminus of Malaga Street south of Upper Drive. The proposed land uses on the site are consistent with the General Plan and the Project is anticipated to be completed by Year 2009.

The Project site has been visited and an inventory of adjacent area roadways and intersections made. In support of detailed intersection capacity analyses, existing traffic count information has been compiled. The work program for this traffic study was developed in conjunction with the City of Corona Public Works Department staff. *Appendix A* contains a copy of the approved City of Corona Focused Site Traffic Impact Study Scoping Agreement.

This traffic report analyzes existing and future weekday AM and PM peak hour conditions for a near-term (Year 2009) traffic setting upon completion of the Project. Peak hour forecasts for the Year 2009 traffic condition have been projected by increasing existing traffic volumes by an annual growth rate of two percent per year. Please note that there are no cumulative projects within the immediate vicinity of the Project site that will contribute traffic through the study intersections.

### 1.1 Study Area

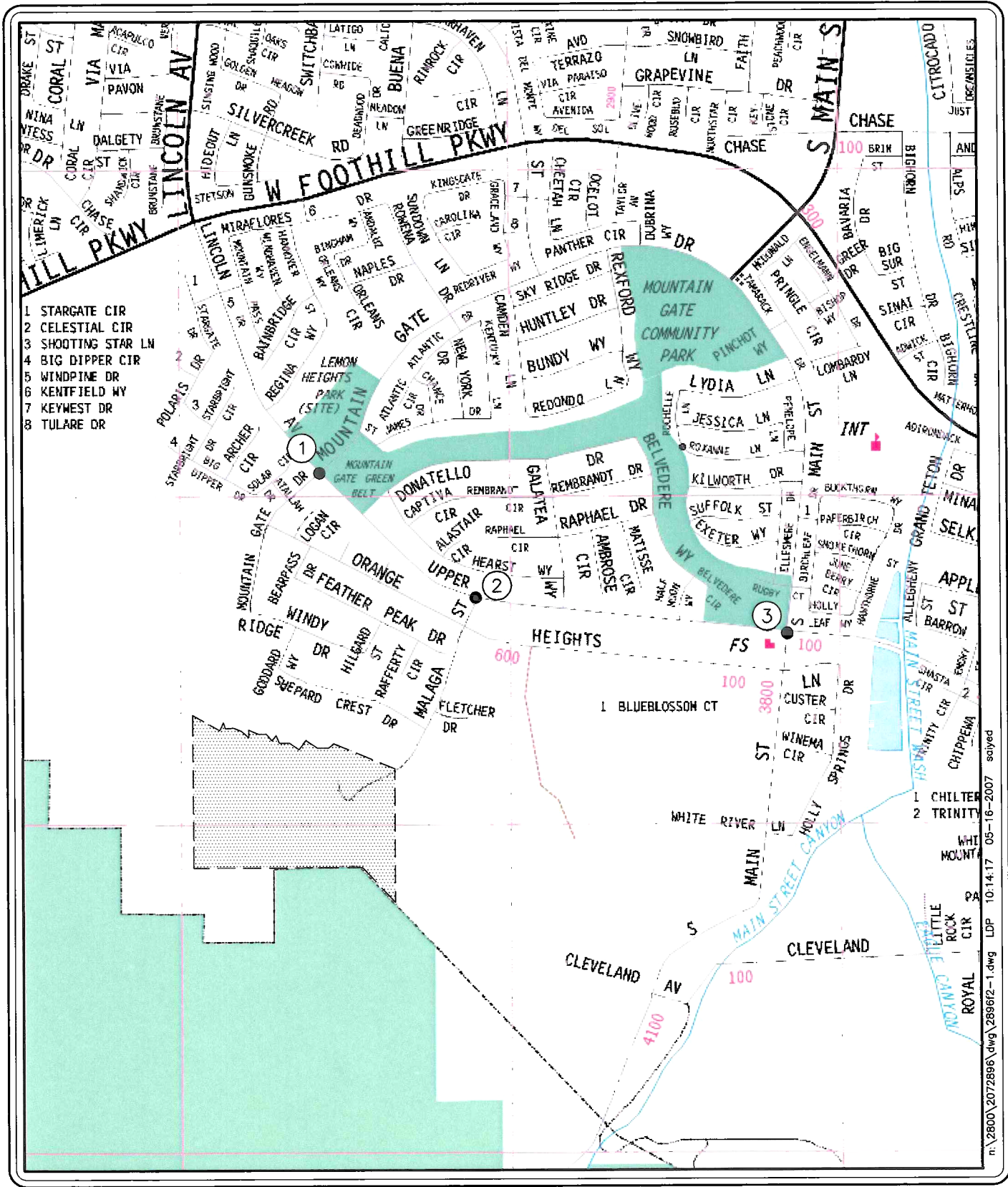
Three key intersections were designated for evaluation based on City of Corona focused site TIA criteria and discussions with City staff. The three key area intersections selected for evaluation in this report provide local access to the study area and are listed as follows.

- 1 Mountain Gate Drive at Lincoln Drive/Upper Drive
- 2 Malaga Street at Upper Drive
- 3 Main Street at Upper Drive

## 2.0 PROJECT DESCRIPTION AND LOCATION

The proposed Project site is generally located on the southerly terminus of Malaga Street south of Upper Drive. The project site is a total of 64.3 acres of vacant land (39.8 acres in the City of Corona & 24.5 acres in the unincorporated area of Riverside County). The proposed Project consists of developing thirty-four (34) estate residential single-family detached dwelling units on approximately one-half-acre lots. *Figure 2-1* presents a Vicinity Map, which illustrates the general location of the Project and depicts the surrounding street system. The Project is anticipated to be completed by Year 2009

*Figure 2-2* presents the site plan for the proposed Project, prepared by Armstrong & Brooks Consulting Engineers. As shown in *Figure 2-2*, access to the Project site will be provided via the southerly extension of Malaga Street and will be gate-controlled with a pass-by lane and turn-around area prior to the gate at the call-box.



- 1 STARGATE CIR
- 2 CELESTIAL CIR
- 3 SHOOTING STAR LN
- 4 BIG DIPPER CIR
- 5 WINDPINE DR
- 6 KENTFIELD WY
- 7 KEYWEST DR
- 8 TULARE DR

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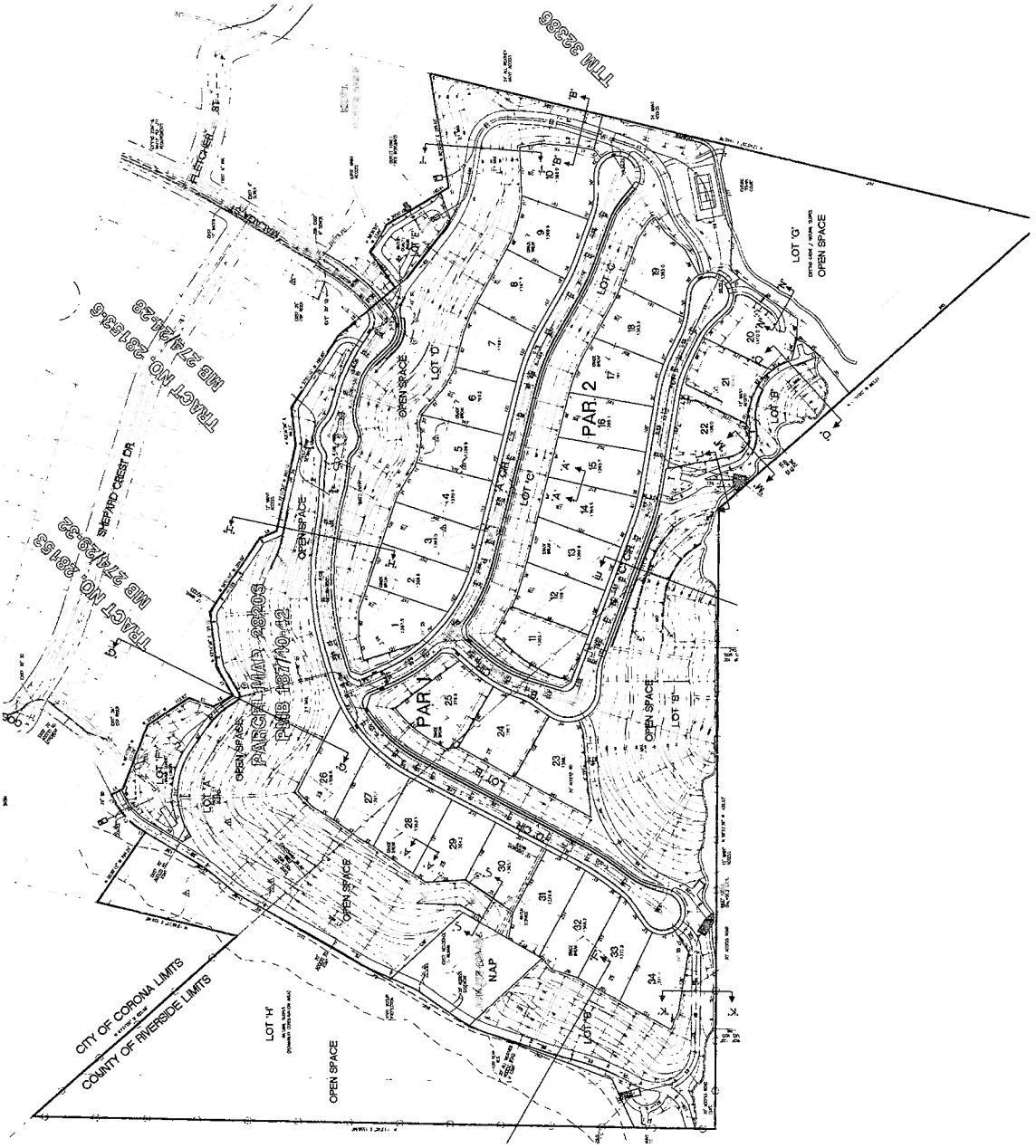
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KEY

- # = STUDY INTERSECTION
- = PROJECT SITE

# FIGURE 2-1

VICINITY MAP

TTM NO 34760 RESIDENTIAL DEVELOPMENT, CORONA



**FIGURE 2-2**  
**PROPOSED SITE PLAN**  
 TTM NO. 34760 RESIDENTIAL DEVELOPMENT, CORONA

SOURCE: ARMSTRONG & BROOKS CONSULTING ENGINEERS



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### 3.0 EXISTING CONDITIONS

The principal local network of streets serving the site consists of Lincoln Drive/Upper Drive, Mountain Gate Drive, Malaga Street and Main Street. The following discussion provides a brief synopsis of the key area streets.

#### 3.1 Existing Street Network

The **Riverside Freeway (SR-91)** and **Corona Freeway (I-15)** provide regional access to the Project site. The SR-91 is located north and the I-15 is located east of the Project site.

**Lincoln Drive/Upper Drive** is generally a northwest-southeast, four-lane divided roadway west of Malaga Street and an east-west, two-lane divided roadway east of Malaga Street. Northwest of Mountain Gate Drive it is called Lincoln Drive and is designated as a Major Arterial (4-Lane) in the City's Circulation Element. Southeast of Mountain Gate Drive it is called Upper Drive and is designated as a Collector in the City's Circulation Element. The roadway is located north of the Project site and it is divided by a two-way left-turn lane. The surrounding area is mainly residential. The speed limit on Lincoln Drive/Upper Drive is 45 mph. Parking is not permitted on either side of the roadway. The intersections of Lincoln Drive/Upper Drive at Mountain Gate Drive, Malaga Street and Main Street are stop-controlled.

**Mountain Gate Drive** is generally a northeast-southwest, two-lane divided roadway located north of the Project site. Mountain Gate Drive is divided by a two-way left-turn lane north of Lincoln Drive/Upper Drive and parking is not permitted on either side of the roadway. Mountain Gate Drive is a two-lane, undivided roadway south of Lincoln Drive/Upper Drive with parking on both sides of the roadway within this section. Mountain Gate Drive is designated as a Collector in the City's Circulation Element. The speed limit on Mountain Gate Drive is 40 mph. The surrounding area is mostly residential.

**Malaga Street** is a north-south, two-lane undivided roadway with one lane in each direction. Parking is permitted on both sides of the roadway. The Project access will be provided via Malaga Street. The surrounding area is mostly residential.

**Main Street** is designated as a Collector and is a north-south, two-lane divided roadway with one lane in each direction. Main Street is divided by a two-way left-turn lane. The surrounding area is mostly residential. The speed limit on Main Street is 40 mph. Parking is not permitted on either side of the roadway. Main Street is located east of the project site.

*Figure 3-1* presents an inventory of the existing roadway conditions for the intersections evaluated in this report. The number of travel lanes and intersection controls for the key area intersections are identified.

### 3.2 Existing Transit Services

The study area is served by "Corona Cruiser", a Fixed Route Service by the City of Corona. Corona Cruiser runs along pre-designated Blue Line fixed routes. The Blue Route offers commuter service to and from Vons/Walmart at Griffin Way to Mountain Gate Park during peak commuting hours with the Project vicinity

### 3.3 Existing Area Traffic Volumes

Existing AM and PM peak hour traffic volumes at the three key study intersections evaluated in this focused site TIA report were collected in May 2007 by Counts Unlimited Inc. *Appendix B* contains the detailed traffic count data. The three key study intersections were designated for evaluation based on the City of Corona TIA criteria, discussions with City staff, and knowledge of the area circulation system.

*Figures 3-2* and *3-3* present the existing AM peak hour and PM peak hour traffic volumes, respectively, for the three key study intersections.

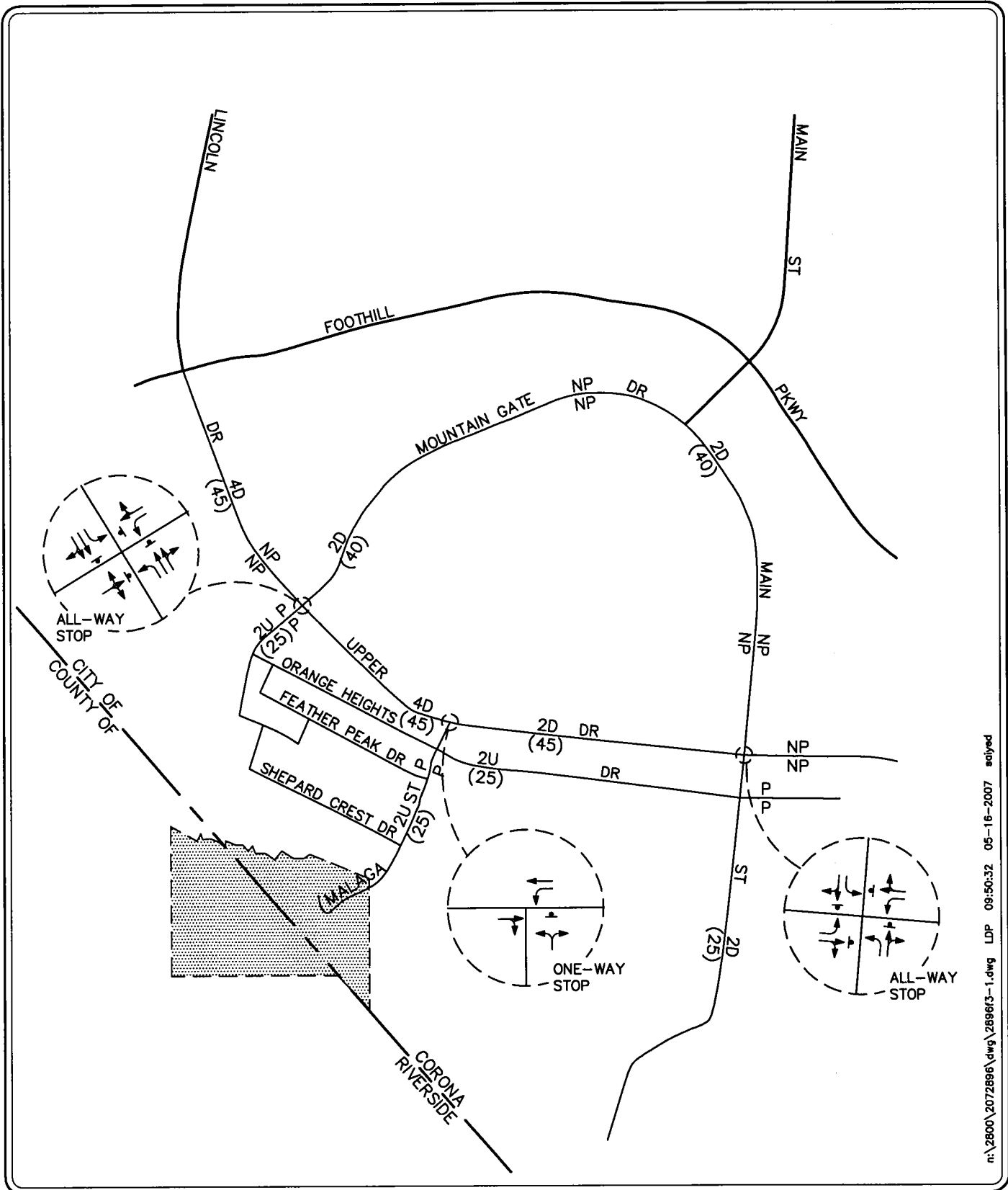
### 3.4 Existing Intersection Conditions

#### 3.4.1 Highway Capacity Manual (HCM) Method of Analysis (Unsignalized Intersections)

The 2000 HCM unsignalized methodology for stop-controlled intersections was utilized for the analysis of the unsignalized intersections. This methodology estimates the average control delay for each of the subject movements and determines the level of service for each movement. For all-way stop controlled intersections, the overall average control delay measured in seconds per vehicle, and level of service is then calculated for the entire intersection. For one-way and two-way stop-controlled (minor street stop-controlled) intersections, this methodology estimates the worst side street delay, measured in seconds per vehicle and determines the level of service for that approach. The HCM control delay value translates to a Level of Service (LOS) estimate, which is a relative measure of the intersection performance. The six qualitative categories of Level of Service have been defined along with the corresponding HCM control delay value range, as shown in *Table 3-1*

### 3.5 Existing Level of Service Results

*Table 3-2* summarizes the existing peak hour service level calculations for the three study intersections based on existing traffic volumes and current street geometry. Review of *Table 3-2* indicates that all of the three intersections currently operate at acceptable LOS B or better during the AM and PM peak hours.



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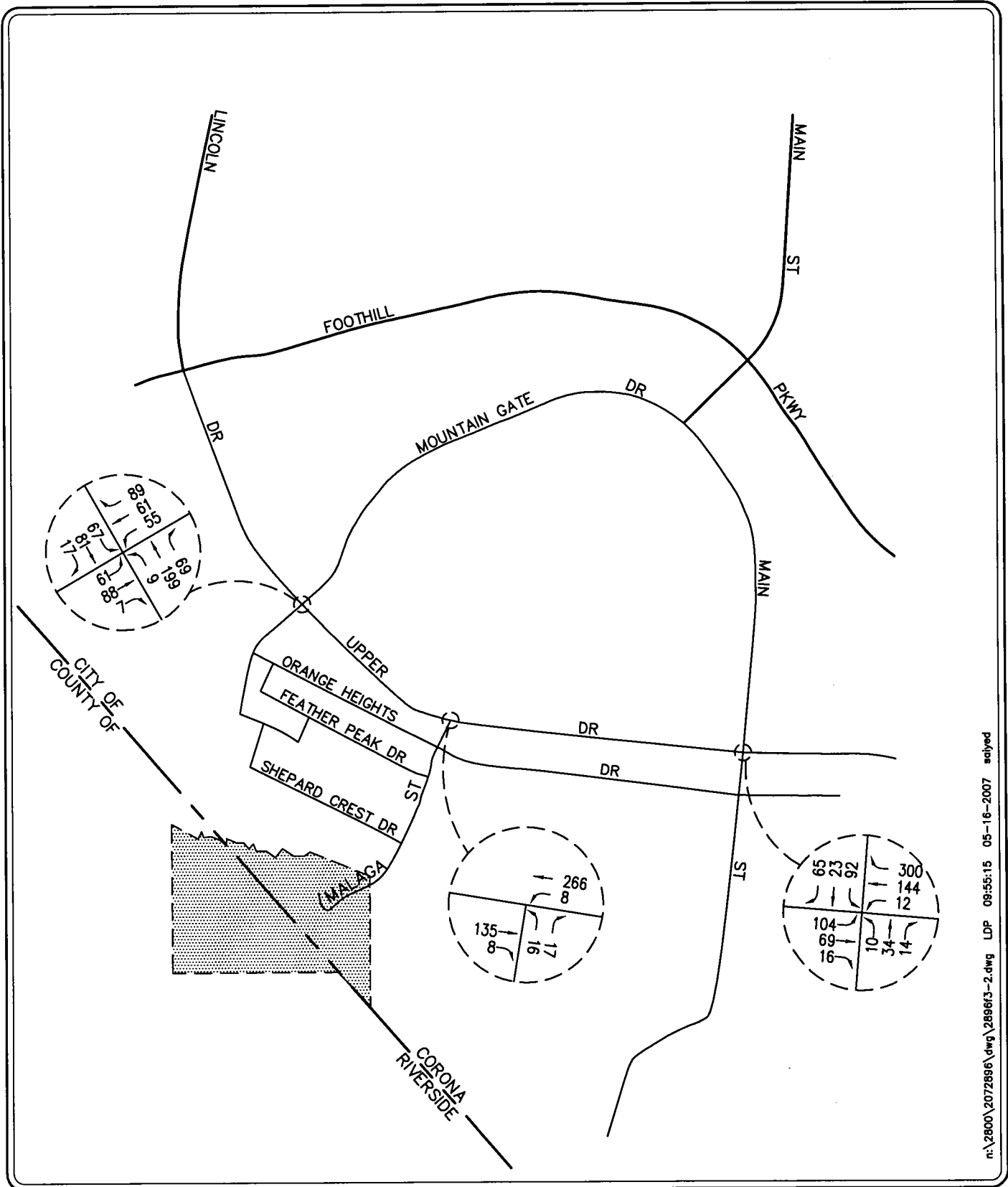


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- KEY**
- ← = APPROACH LANE ASSIGNMENT
  - ▼ = STOP SIGN
  - P = PARKING, NP = NO PARKING
  - U = UNDIVIDED, D = DIVIDED
  - 2 = NUMBER OF TRAVEL LANES
  - (XX) = POSTED SPEED LIMIT (MPH)
  - [Hatched Box] = PROJECT SITE

# FIGURE 3-1

EXISTING ROADWAY CONDITIONS  
AND INTERSECTION CONTROLS  
TTM NO. 34760 RESIDENTIAL DEVELOPMENT, CORONA



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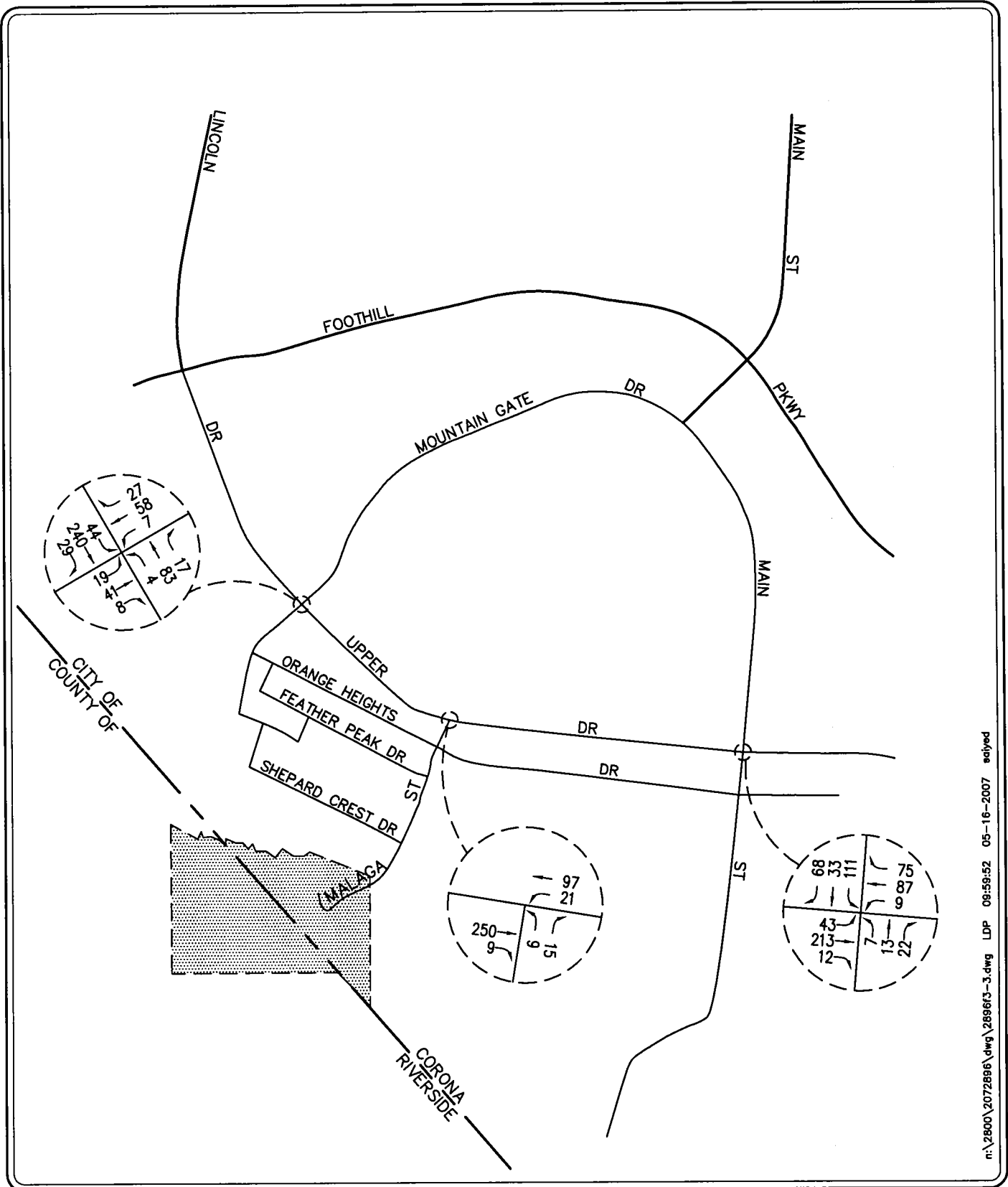
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### FIGURE 3-2

EXISTING AM PEAK HOUR TRAFFIC VOLUMES  
TTM NO. 34760 RESIDENTIAL DEVELOPMENT, CORONA





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KEY  
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# FIGURE 3-3

EXISTING PM PEAK HOUR TRAFFIC VOLUMES  
 TTM NO. 34760 RESIDENTIAL DEVELOPMENT, CORONA

**TABLE 3-1**  
**LEVEL OF SERVICE CRITERIA FOR UNSIGNALIZED INTERSECTIONS (HCM)<sup>1</sup>**

Level of Service (LOS)	Highway Capacity Manual Delay Value (sec/veh)	Level of Service Description
A	$\leq 10.0$	Little or no delay
B	$> 10.0$ and $\leq 15.0$	Short traffic delays
C	$> 15.0$ and $\leq 25.0$	Average traffic delays
D	$> 25.0$ and $\leq 35.0$	Long traffic delays
E	$> 35.0$ and $\leq 50.0$	Very long traffic delays
F	$> 50.0$	Severe congestion

<sup>1</sup> Source: *Highway Capacity Manual 2000*, Chapter 17 (Unsignalized Intersections).

**TABLE 3-2**  
**EXISTING INTERSECTION PEAK HOUR LEVELS OF SERVICE SUMMARY <sup>2</sup>**

Key Intersections		Time Period	Control Type	HCM Delay	LOS
1.	Mountain Gate Drive at	AM	All-Way	10.4 s/v	B
	Lincoln Drive/Upper Drive	PM	Stop	9.1 s/v	A
2.	Malaga Street at	AM	One-Way	10.4 s/v	B
	Upper Drive	PM	Stop	10.4 s/v	B
3.	Main Street at	AM	All-Way	13.3 s/v	B
	Upper Drive	PM	Stop	10.0 s/v	B

Notes:

- s/v = seconds per vehicle
- LOS = Level of Service, please refer to *Table 3-1* for the LOS definitions.

<sup>2</sup> *Appendix C* contains LOS calculation worksheets for all study intersections.





**TABLE 5-1  
PROJECT TRAFFIC GENERATION RATES AND FORECAST<sup>3</sup>**

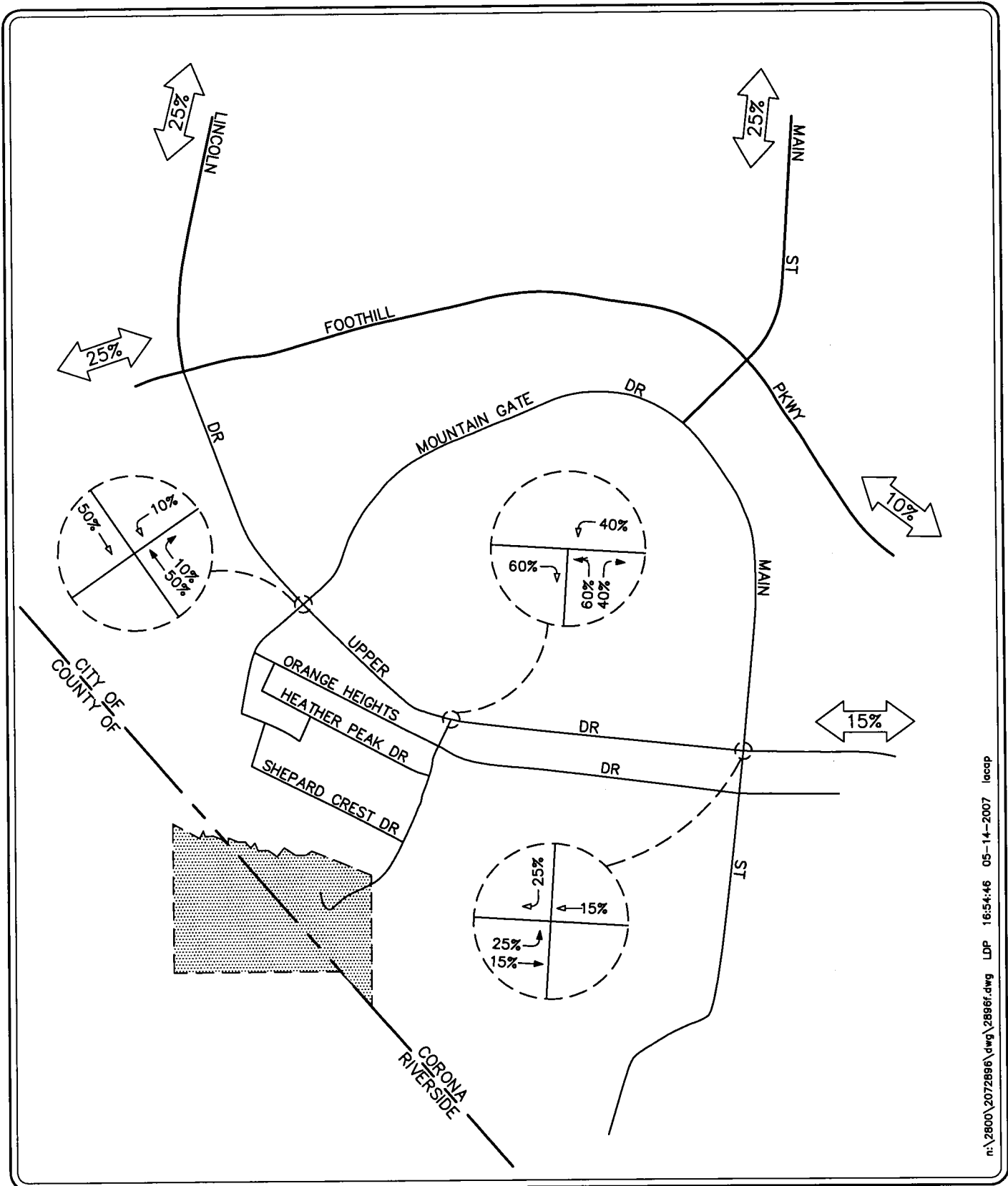
Land Use	Daily	AM Peak Hour			PM Peak Hour		
		Enter	Exit	Total	Enter	Exit	Total
<b>Generation Factors:</b>							
▪ 210: Single Family Detached Housing (TE/DU)	9.57	0.19	0.56	0.75	0.64	0.37	1.01
<b>Generation Forecast:</b>							
▪ Residential - (34 DU)	325	6	19	25	22	13	35
<b>Proposed Project Traffic Generation Forecast</b>	<b>325</b>	<b>6</b>	<b>19</b>	<b>25</b>	<b>22</b>	<b>13</b>	<b>35</b>

Notes:

- TE/DU = Trip ends per Dwelling Unit

<sup>3</sup> Source: *Trip Generation*, 7<sup>th</sup> Edition, Institute of Transportation Engineers (ITE), Washington D.C. (2003).





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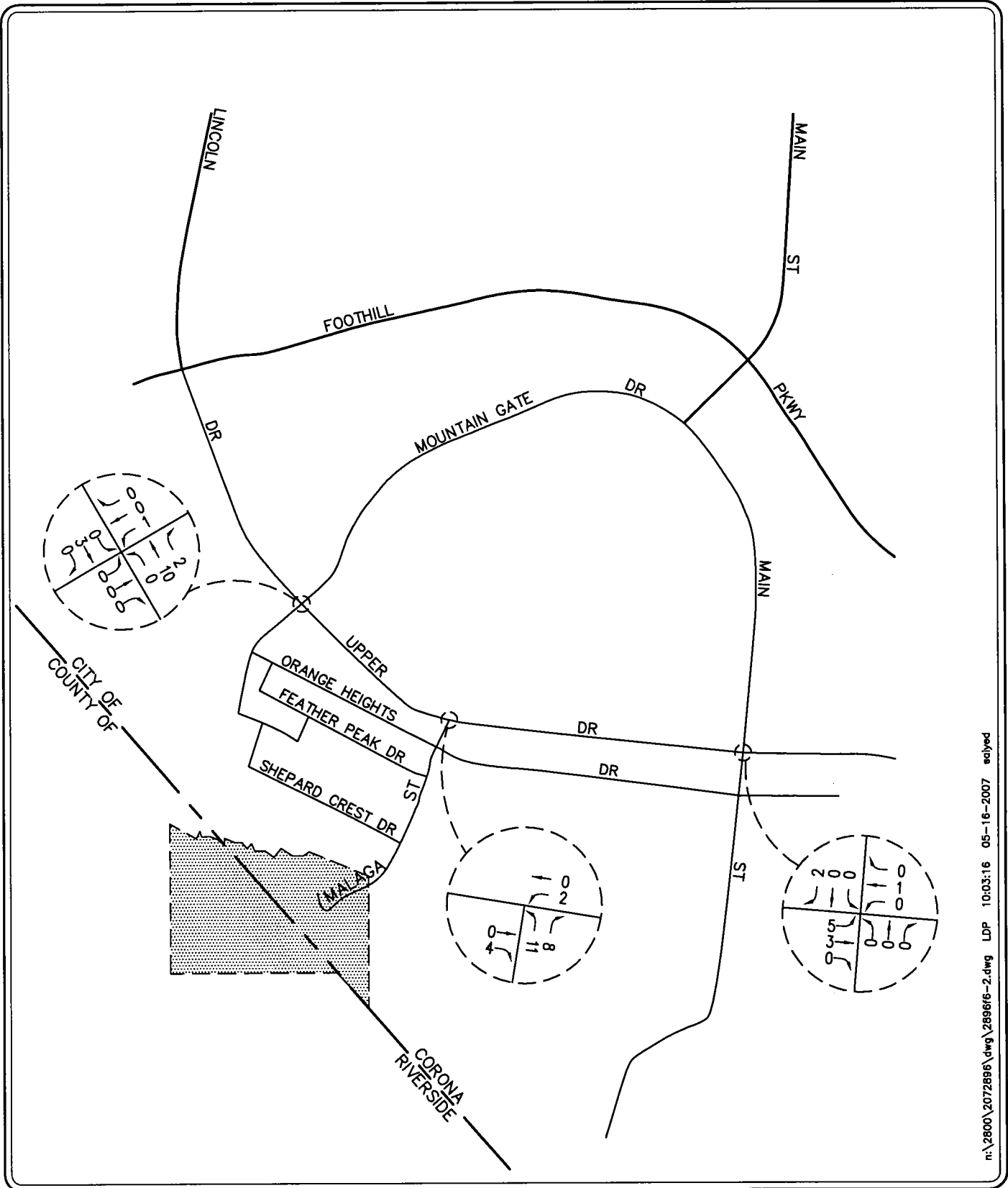
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- KEY**
- ← = INBOUND PERCENTAGE
  - = OUTBOUND PERCENTAGE
  - [Hatched Box] = PROJECT SITE

**FIGURE 6-1**

**PROJECT TRAFFIC DISTRIBUTION PATTERN**  
TTM NO. 34760 RESIDENTIAL DEVELOPMENT, CORONA





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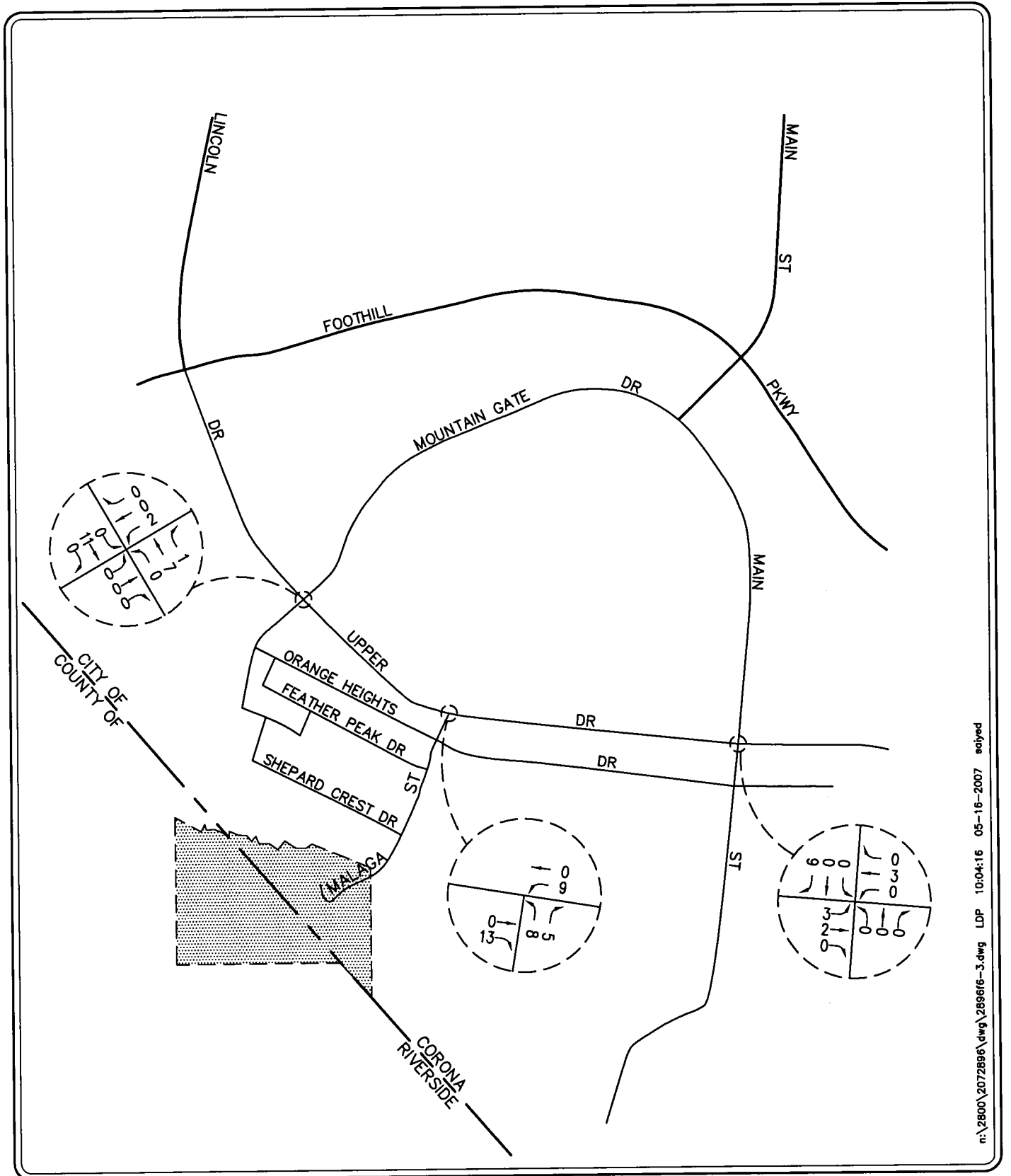


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KEY  
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### FIGURE 6-2

AM PEAK HOUR PROJECT TRAFFIC VOLUMES  
TTM NO. 34760 RESIDENTIAL DEVELOPMENT, CORONA



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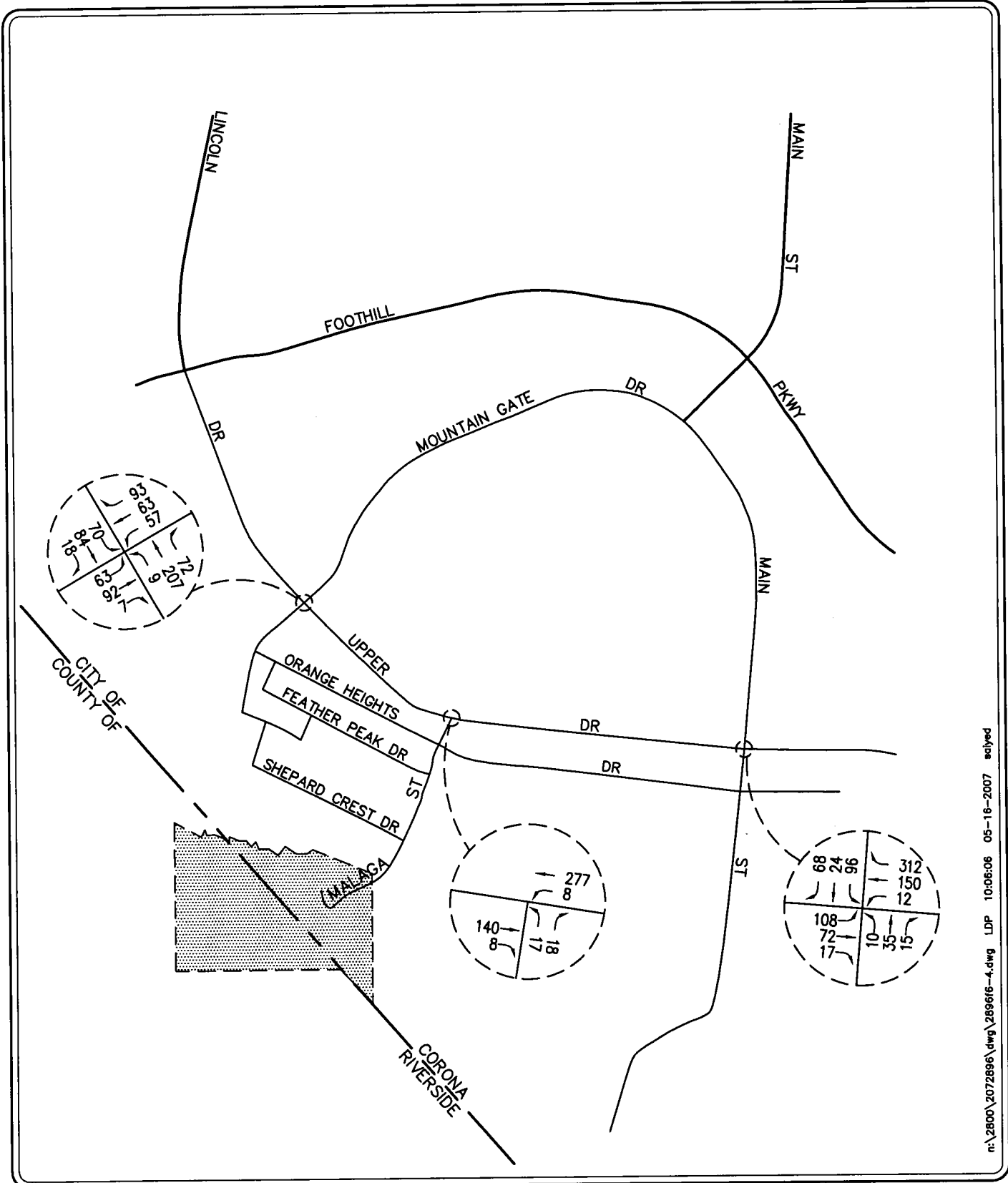


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KEY  
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# FIGURE 6-3

PM PEAK HOUR PROJECT TRAFFIC VOLUMES  
 TTM NO. 34760 RESIDENTIAL DEVELOPMENT, CORONA



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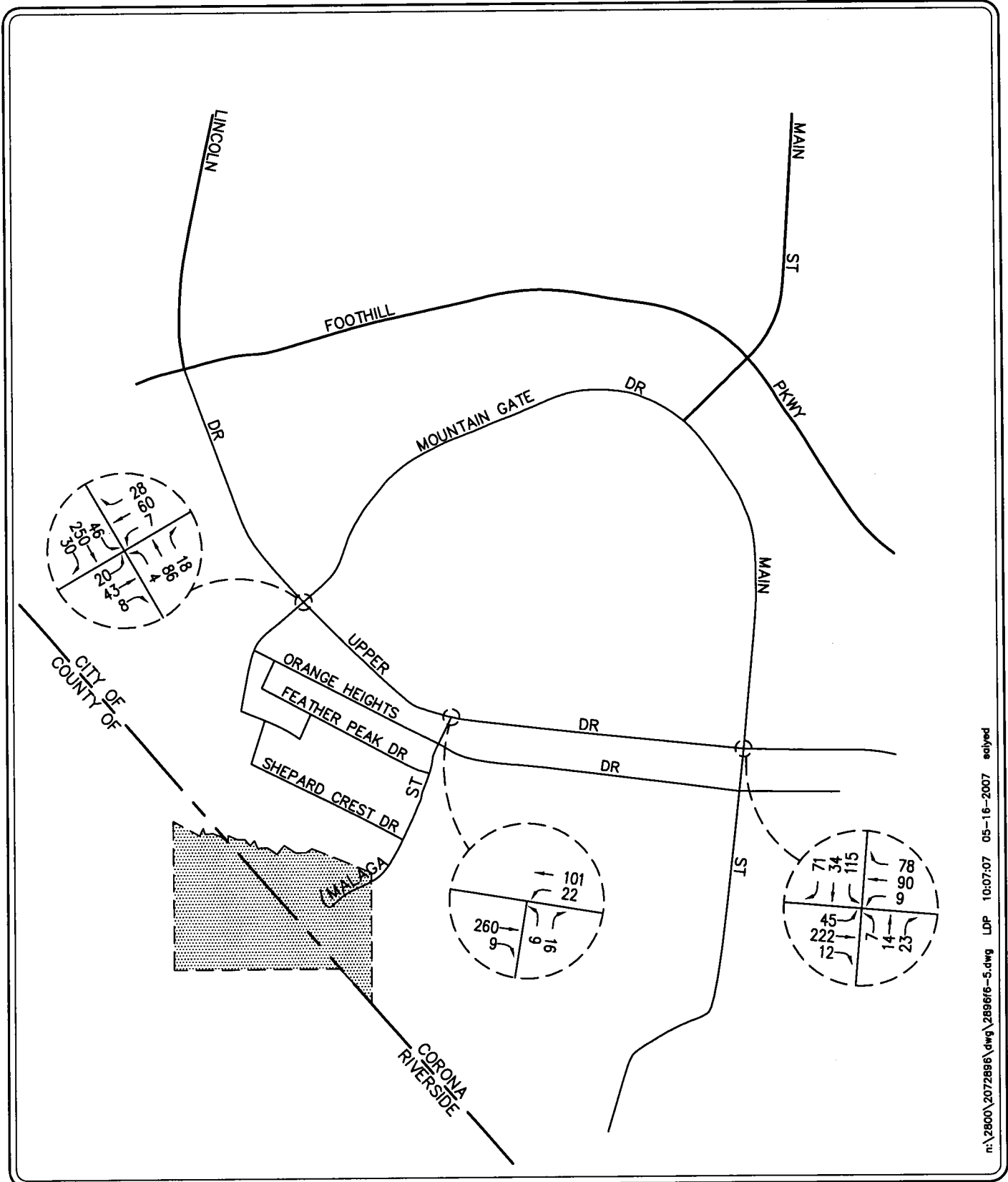
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# FIGURE 6-4

YEAR 2009 AM PEAK HOUR  
 BACKGROUND TRAFFIC VOLUMES  
 TTM NO. 34760 RESIDENTIAL DEVELOPMENT, CORONA



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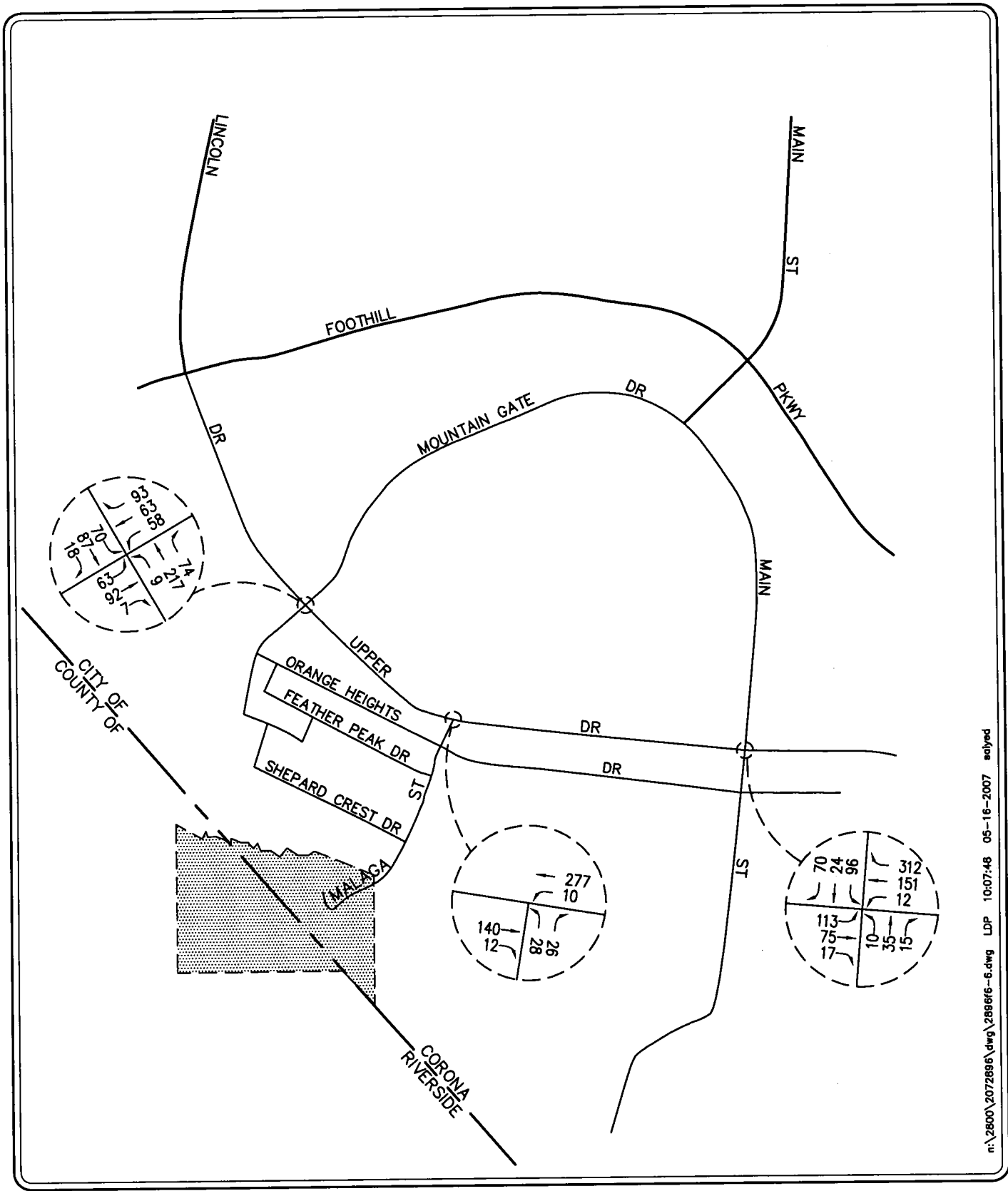
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# FIGURE 6-5

YEAR 2009 PM PEAK HOUR  
BACKGROUND TRAFFIC VOLUMES

TTM NO. 34760 RESIDENTIAL DEVELOPMENT, CORONA



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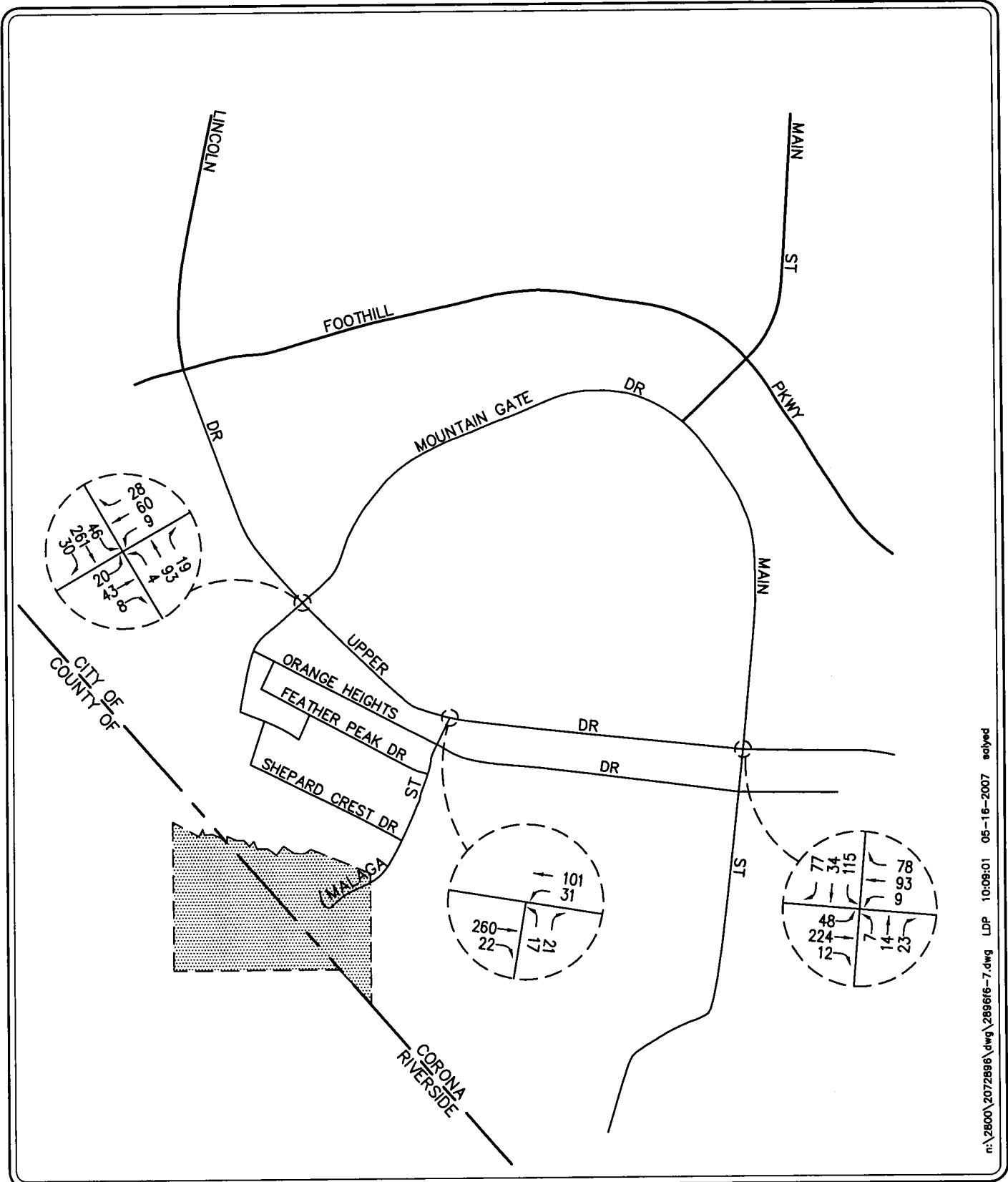


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KEY  
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# FIGURE 6-6

YEAR 2009 AM PEAK HOUR BACKGROUND  
 PLUS PROJECT TRAFFIC VOLUMES  
 TTM NO. 34760 RESIDENTIAL DEVELOPMENT, CORONA



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# FIGURE 6-7

YEAR 2009 PM PEAK HOUR BACKGROUND  
PLUS PROJECT TRAFFIC VOLUMES  
TTM NO. 34760 RESIDENTIAL DEVELOPMENT, CORONA

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## 7.0 YEAR 2009 TRAFFIC IMPACT ANALYSIS

The relative impact of the added Project traffic volumes generated by the proposed Project during the AM and PM peak hours was evaluated based on analysis of future operating conditions at the three key area intersections, with and without, the proposed Project. The previously discussed capacity analysis procedures were utilized to investigate the future delay and service level characteristics at each study intersection. The significance of the potential impacts of the Project at each key intersection was then evaluated using traffic impact criteria published in the City's *Traffic Impact Study Guidelines*, dated July 2006.

### 7.1 Significance of Impacts

#### 7.1.1 Impact Criteria and thresholds

The City of Corona considers LOS D to be the minimum acceptable LOS for all intersections that consist of collector and arterial roadways. In addition, The City of Corona considers LOS C to be the minimum acceptable LOS for local intersections in residential and industrial areas.

#### 7.1.2 Traffic Impact Analysis Scenarios

The following scenarios are those for which HCM/LOS calculations have been performed at the three key intersections for the existing Year 2007 and future Year 2009 traffic conditions:

- A. Year 2007: existing traffic conditions;
- B. Year 2009: future background traffic conditions (existing plus ambient growth to horizon year 2009 at 2.0% per year);
- C. Year 2009: future background traffic conditions plus Project Traffic; and
- D. Scenario (C) with mitigation, if necessary.

### 7.2 Year 2009 Intersection Capacity Analysis

*Table 7-1* summarizes the AM and PM peak hour Level of Service results at the three key study intersections during a "typical" weekday for the Year 2009 future background plus Project traffic conditions. The first column (1) of HCM/LOS values in *Table 7-1* presents a summary of existing AM and PM peak hour traffic conditions (which were also presented in *Table 3-2*). The second column (2) lists forecast Year 2009 background traffic conditions based on existing intersection geometry. The third column (3) lists forecast Year 2009 background plus Project traffic conditions and the fourth column (4) indicates whether the traffic associated with the Project will have a significant impact based on the City of Corona significant traffic impact criteria.

#### 7.2.1 Year 2007 Existing Conditions

As previously presented in *Table 3-2*, review of this table indicates that all of the three intersections currently operate at acceptable LOS B or better during the AM and PM peak hours.

#### 7.2.2 Year 2009 Background Traffic Conditions

Review of Column (2) of *Table 7-1* shows that all of the three intersections are forecast to operate at acceptable LOS B or better during the AM and PM peak hours.

### **7.2.3 Year 2009 Background Plus Project Traffic Conditions**

Review of Columns (3) and (4) of *Table 7-1* shows that none of the three key study intersections will be significantly impacted with the addition of Project traffic based on City of Corona LOS impact criteria. All the three intersections are forecast to operate at acceptable LOS B or better during the AM and PM peak hours.

*Appendix C* contains the Year 2009 Highway Capacity Manual (HCM) level of service calculation worksheets.





## 8.0 PROJECT-SPECIFIC IMPROVEMENTS

For those intersections where projected traffic volumes are expected to result in unacceptable operating conditions, this report recommends (identifies) improvement measures that change the intersection geometry to increase capacity. These capacity improvements involve roadway widening and/or re-striping to reconfigure (add lanes) to specific approaches of a key intersection. The identified improvements are expected to:

- mitigate the impact of existing traffic, project traffic and future non-project (ambient traffic growth and cumulative project) traffic, and
- improve Levels of Service to an acceptable range and/or to pre-project conditions.

As there are no significant impacts at the three study intersections, therefore no traffic mitigation measures are required or recommended, other than the recommendation to install an all-way stop at the intersection of Malaga Street and “A” Circle for traffic calming purposes.

## 9.0 SITE ACCESS AND INTERNAL CIRCULATION EVALUATION

### 9.1 Site Access Evaluation

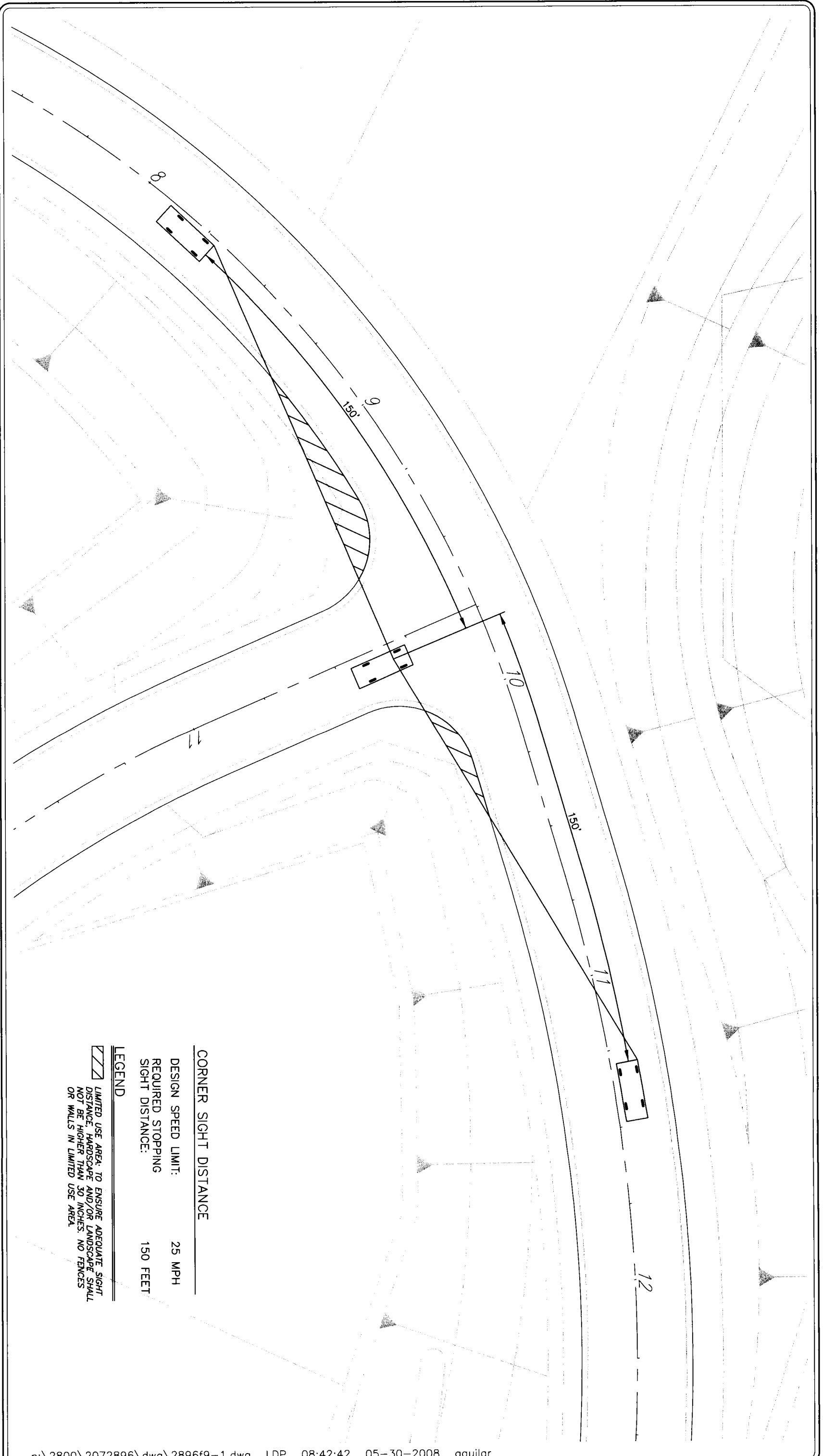
As shown previously in *Figure 2-2*, access to the Project will be provided via Malaga Street. The Project access roadway is forecast to operate at acceptable LOS during the AM and PM peak hours. As such, motorists entering and exiting the Project site will be able to do so comfortably, safely, and without undue congestion. In addition, as discussed with City of Corona Traffic Engineering staff, it is recommended that an all-way stop be installed at the intersection of Malaga Street and Shepard Crest Drive in order to calm northbound traffic traveling downhill away from the Project site and to facilitate access onto Malaga Street for traffic on Shepard Crest Drive.

### 9.2 Internal Circulation Evaluation

The internal circulation was evaluated in terms of vehicle-pedestrian conflicts. Based on our review of the preliminary site plan, the overall layout does not create any unsafe vehicle-pedestrian conflict points. The internal circulation is very good based on our review of the proposed site plan, whereas the alignment and spacing of the driveways is adequate. The circulation throughout the residential area is adequate with sufficient sight distance at the one internal intersection.

### 9.3 Sight Distance Evaluation

At the request of City staff, a sight distance evaluation was prepared for the “A” Circle along Malaga Street, based on the current Caltrans Highway Design Manual (HDM) and City Standards, as documented in the *City of Corona Street Design Table*. Since these roadway are proposed as private streets, the corner sight distance requirement is indicated to be 150 feet. The Corner Sight distance is measured from the driver’s eyes, which are assumed to be 3.5 feet above the pavement surface, to an object 0.5-foot high on the roadway. *Figures 9-1* presents a schematic of the sight distance evaluation performed at “A” Circle along Malaga Street. This figure illustrates the required sight distances and corresponding limited use areas at this intersection. As shown in *Figure 9-1*, “A” Circle has adequate sight distance as only a minimal amount of future landscape area is affected.



**CORNER SIGHT DISTANCE**

DESIGN SPEED LIMIT: 25 MPH  
 REQUIRED STOPPING SIGHT DISTANCE: 150 FEET

**LEGEND**

▨ LIMITED USE AREA: TO ENSURE ADEQUATE SIGHT DISTANCE, HARDSCAPE AND/OR LANDSCAPE SHALL NOT BE HIGHER THAN 30 INCHES. NO FENCES OR WALLS IN LIMITED USE AREA.



SCALE: 1"=30'

**FIGURE 9-1**

SIGHT DISTANCE EVALUATION  
 TTM NO. 34760 RESIDENTIAL DEVELOPMENT, CORONA

## 10.0 GENERAL PLAN CONFORMANCE

The project site consists of a total of 64.3 acres of vacant/agricultural land of which 39.8 acres is in the City of Corona and 24.5 acres is in the unincorporated area of Riverside County. The current General Plan designation for the area in the County of Riverside is one (1) single-family dwelling unit (DU) per two (2) acres or 0.5 DU per acre and the current General Plan designation for the area in the City of Corona is Estate residential, which is zero (0) to three (3) single-family dwelling units per acre. Consequently, the maximum number of single-family dwelling units permitted under the Current City and County General Plans is 131 DU. Since the proposed Project consists of 34 DU and the current County General Plan designation will remain unchanged when the County land is annexed into the City of Corona, the proposed Project is forecast to generate significantly less traffic than the permitted density and therefore is in conformance with the City of Corona General as it relates to traffic impacts.

**APPENDIX A**  
**TRAFFIC STUDY SCOPE OF WORK**



**Exhibit F**

**Focused Site Traffic Impact Study Scope - City of Corona**

<b>Project Name:</b>	TTM No. 34760 Residential Development
<b>Project Address:</b>	The project site is located on the southerly terminus of Malaga Street south of Upper Drive. (See attached Vicinity Map Figure 1)
<b>Project Description:</b>	The proposed residential project consists of developing 34 estate residential single-family detached dwelling units on approximately one-half-acre lots. (See attached Site Plan Figure 2)
<b>Case Number:</b>	

	<b>Consultant:</b>	<b>Developer:</b>
<b>Name:</b>	Linscott, Law and Greenspan, Engineers	Rancho Paso De Valencia
<b>Address:</b>	1580 Corporate Drive, Suite 122 Costa Mesa, CA 92626	1253 Enterprise Court Corona, California 92882
<b>Telephone:</b>	<b>W:</b> (714) 641 1587 <b>F:</b> (714) 641-0139	<b>W:</b> (951) 279-4877 <b>F:</b> (951) 279-4889
<b>E-mail:</b>	maberry@llgengineers.com	

**A. Trip Generation**

<b>Proposed Land Use</b>	Residential	<b>Previous Land Use</b>	Agricultural (Vacant)
<b>Existing Zoning</b>	Hillside Dev Overlay	<b>Proposed Zoning</b>	Hillside Dev Overlay

	In	Out	Total
<b>AM Peak Hour</b>	6	19	25
<b>PM Peak Hour</b>	22	13	35
<b>Daily</b>	163	163	326

(See attached Trip Generation Table 1)

**B. Trip Distribution**

Attach graphical representation (See attached Project Traffic Distribution Pattern - Figure 3)

**C. Background Traffic**

<b>Project Opening year:</b> 2009	<b>Growth Rate:</b> 2% / Year
-----------------------------------	-------------------------------

**D. Study Intersections**

1. Mountain Gate Drive at Upper Drive	
2. Malaga Street at Upper Drive	
3. Main Street at Upper Drive	

**E. Specific Issues to be addressed in the Study**

Site Access and On-Site Circulation

**Approved By:**

<b>City of Corona Traffic Engineering:</b>
<b>Date:</b>

**TABLE 1  
PROJECT TRAFFIC GENERATION RATES AND FORECAST  
TTM NO. 34760 RESIDENTIAL DEVELOPMENT**

Project Description	Daily 2-Way	AM Peak Hour			PM Peak Hour		
		Enter	Exit	Total	Enter	Exit	Total
<i>Generation Factors [1]:</i> 210: Single Family Detached Housing (TE/DU)	9.57	0.19	0.56	0.75	0.64	0.37	1.01
<i>Proposed Project Generation Forecast:</i> Residential (34 DU)	325	6	19	25	22	13	35
<b><i>Proposed Project Traffic Generation Forecast</i></b>	<b>325</b>	<b>6</b>	<b>19</b>	<b>25</b>	<b>22</b>	<b>13</b>	<b>35</b>

Notes:

[1] Source: Trip Generation, 7th Edition, Institute of Transportation Engineers (ITE), Washington, D.C. (2003). Average rates used.

TE/DU = Trip ends per Dwelling Units







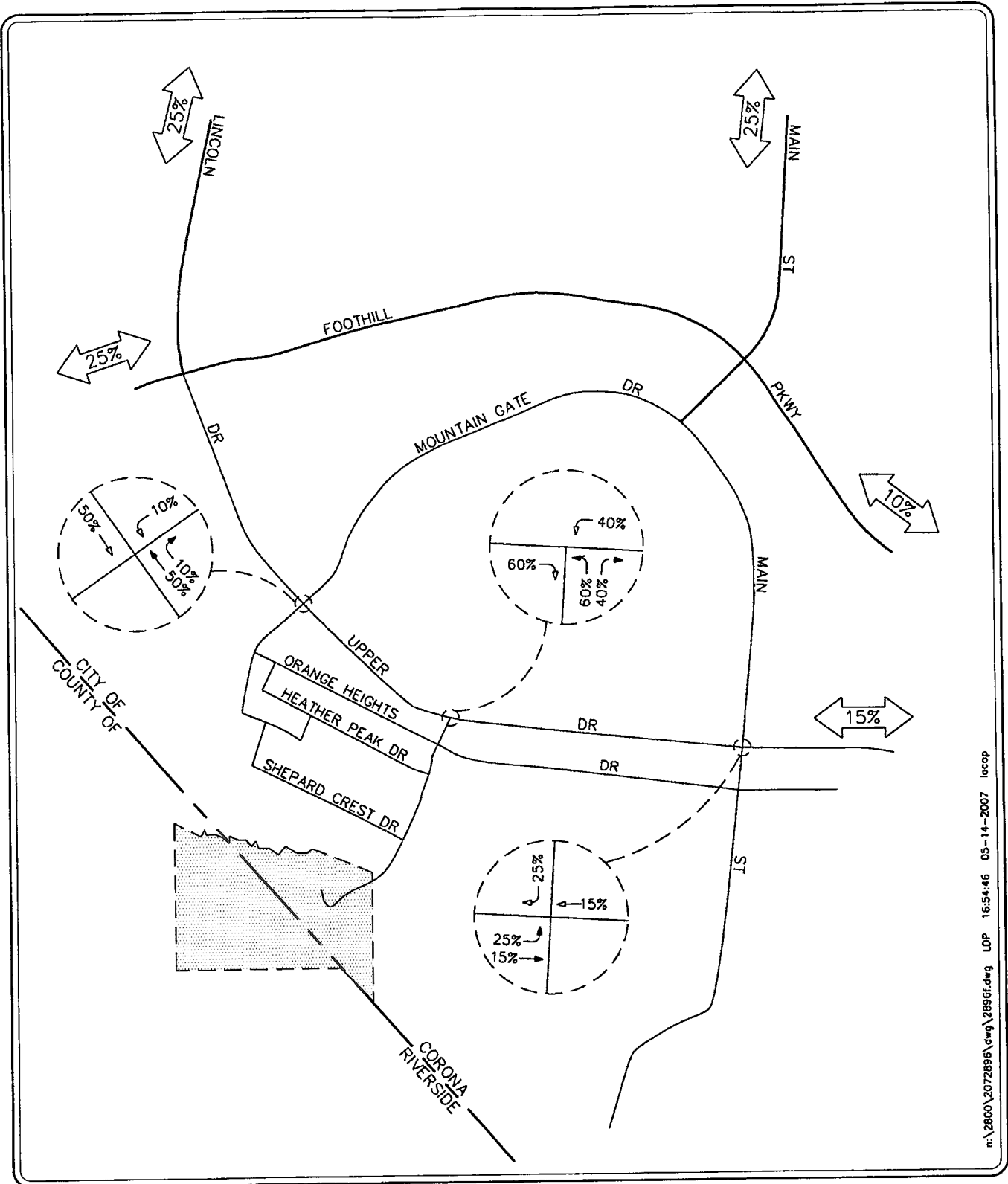
**FIGURE 2**

PROPOSED SITE PLAN  
TTM NO 34760 RESIDENTIAL DEVELOPMENT, CORONA

SOURCE: ARMSTRONG AND BROOKS CONSULTING ENGINEERS



LINSCOTT  
LAW &  
GREENSPAN  
↑  
engineers



n:\2800\2072895\dwg\2895f.dwg LDP 16:54:46 05-14-2007 lscop

LINSCOTT  
LAW &  
GREENSPAN  
engineers



- KEY
- ← = INBOUND PERCENTAGE
  - = OUTBOUND PERCENTAGE
  - = PROJECT SITE

### FIGURE 3

PROJECT TRAFFIC DISTRIBUTION PATTERN  
TTM NO. 34760 RESIDENTIAL DEVELOPMENT, CORONA

**APPENDIX B**  
**YEAR 2007 EXISTING TRAFFIC COUNT DATA**

City of Corona  
 N/S: Mountain Gate Drive  
 E/W: Upper Drive / Lincoln Avenue  
 Weather: Sunny

File Name : COMGUPAM  
 Site Code : 05721323  
 Start Date : 5/9/2007  
 Page No : 1

Groups Printed- Total Volume

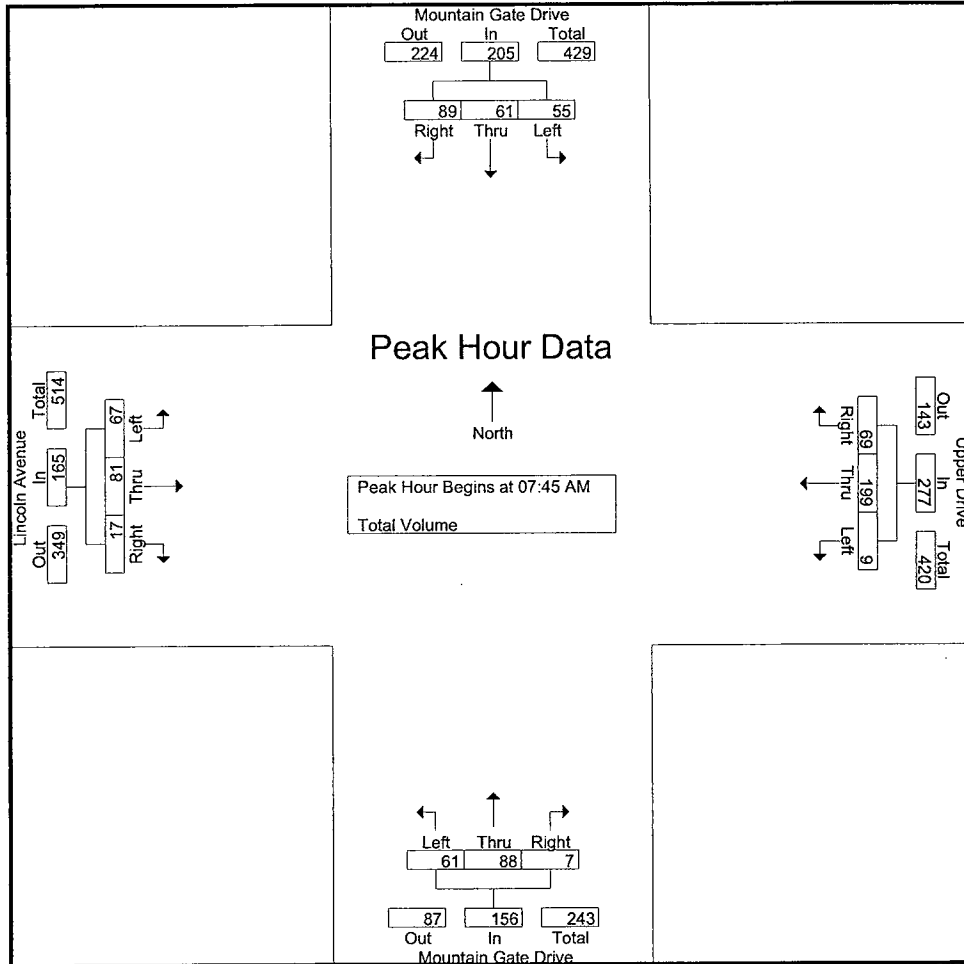
Start Time	Mountain Gate Drive Southbound				Upper Drive Westbound				Mountain Gate Drive Northbound				Lincoln Avenue Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
06:30 AM	0	2	7	9	0	48	0	48	10	10	0	20	1	11	1	13	90
06:45 AM	0	4	8	12	0	45	1	46	14	13	0	27	2	10	2	14	99
Total	0	6	15	21	0	93	1	94	24	23	0	47	3	21	3	27	189
07:00 AM	2	8	13	23	1	46	4	51	11	15	4	30	5	7	1	13	117
07:15 AM	2	5	11	18	3	48	3	54	10	21	6	37	1	20	3	24	133
07:30 AM	3	7	8	18	7	47	3	57	6	10	0	16	4	15	6	25	116
07:45 AM	1	5	15	21	1	52	11	64	21	16	0	37	12	10	4	26	148
Total	8	25	47	80	12	193	21	226	48	62	10	120	22	52	14	88	514
08:00 AM	16	14	12	42	4	49	28	81	17	28	3	48	27	13	7	47	218
08:15 AM	31	28	48	107	2	55	27	84	14	29	2	45	20	16	3	39	275
08:30 AM	7	14	14	35	2	43	3	48	9	15	2	26	8	42	3	53	162
08:45 AM	4	12	22	38	0	37	5	42	9	10	3	22	5	25	6	36	138
Total	58	68	96	222	8	184	63	255	49	82	10	141	60	96	19	175	793
Grand Total	66	99	158	323	20	470	85	575	121	167	20	308	85	169	36	290	1496
Apprch %	20.4	30.7	48.9		3.5	81.7	14.8		39.3	54.2	6.5		29.3	58.3	12.4		
Total %	4.4	6.6	10.6	21.6	1.3	31.4	5.7	38.4	8.1	11.2	1.3	20.6	5.7	11.3	2.4	19.4	

Start Time	Mountain Gate Drive Southbound				Upper Drive Westbound				Mountain Gate Drive Northbound				Lincoln Avenue Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
07:45 AM	1	5	15	21	1	52	11	64	21	16	0	37	12	10	4	26	148
08:00 AM	16	14	12	42	4	49	28	81	17	28	3	48	27	13	7	47	218
08:15 AM	31	28	48	107	2	55	27	84	14	29	2	45	20	16	3	39	275
08:30 AM	7	14	14	35	2	43	3	48	9	15	2	26	8	42	3	53	162
Total Volume	55	61	89	205	9	199	69	277	61	88	7	156	67	81	17	165	803
% App. Total	26.8	29.8	43.4		3.2	71.8	24.9		39.1	56.4	4.5		40.6	49.1	10.3		
PHF	.444	.545	.464	.479	.563	.905	.616	.824	.726	.759	.583	.813	.620	.482	.607	.778	.730

Peak Hour Analysis From 06:30 AM to 08:45 AM - Peak 1 of 1  
 Peak Hour for Entire Intersection Begins at 07:45 AM

City of Corona  
 N/S: Mountain Gate Drive  
 E/W: Upper Drive / Lincoln Avenue  
 Weather: Sunny

File Name : COMGUPAM  
 Site Code : 05721323  
 Start Date : 5/9/2007  
 Page No : 2



Peak Hour Analysis From 06:30 AM to 08:45 AM Peak 1 of 1  
 Peak Hour for Each Approach Begins at:

	08:00 AM				07:30 AM				07:45 AM				08:00 AM			
+0 mins.	16	14	12	42	7	47	3	57	21	16	0	37	27	13	7	47
+15 mins.	31	28	48	107	1	52	11	64	17	28	3	48	20	16	3	39
+30 mins.	7	14	14	35	4	49	28	81	14	29	2	45	8	42	3	53
+45 mins.	4	12	22	38	2	55	27	84	9	15	2	26	5	25	6	36
Total Volume	58	68	96	222	14	203	69	286	61	88	7	156	60	96	19	175
% App. Total	26.1	30.6	43.2		4.9	71	24.1		39.1	56.4	4.5		34.3	54.9	10.9	
PHF	.468	.607	.500	.519	.500	.923	.616	.851	.726	.759	.583	.813	.556	.571	.679	.825

City of Corona  
 N/S: Mountain Gate Drive  
 E/W: Upper Drive / Lincoln Avenue  
 Weather: Sunny

File Name : COMGUPPM  
 Site Code : 05721323  
 Start Date : 5/9/2007  
 Page No : 1

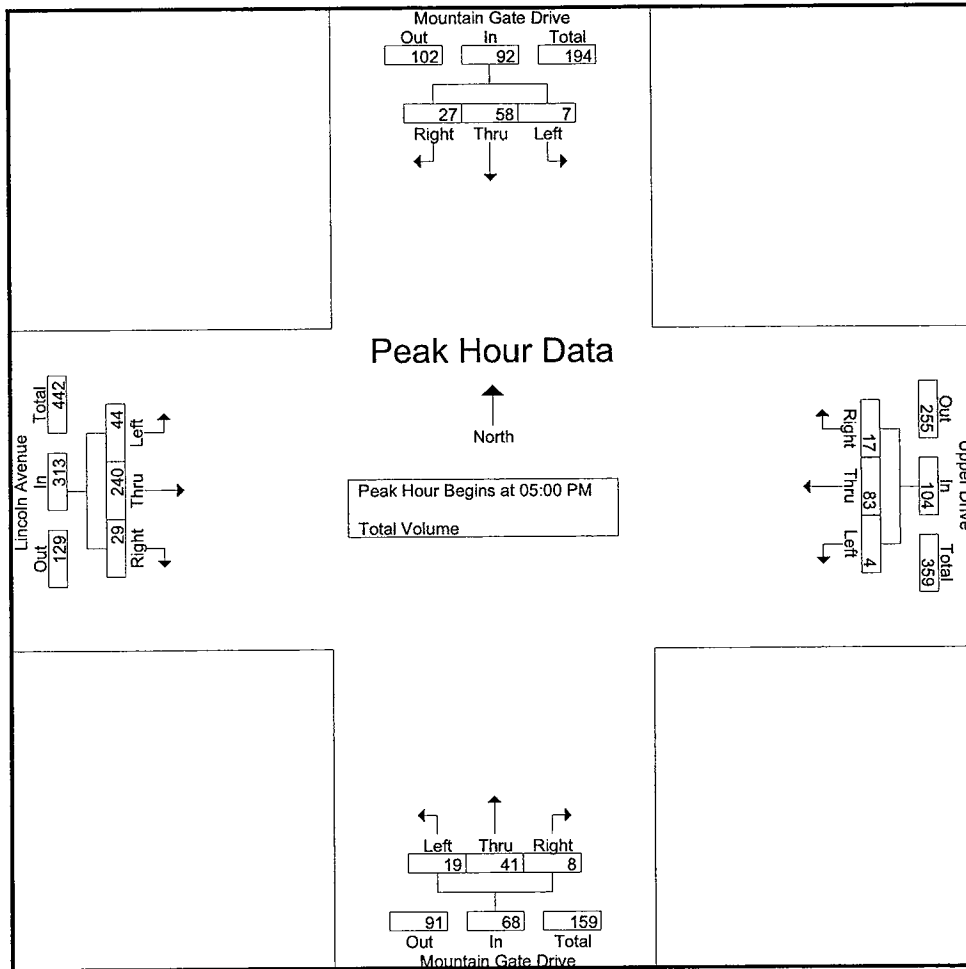
Groups Printed- Total Volume

Start Time	Mountain Gate Drive Southbound				Upper Drive Westbound				Mountain Gate Drive Northbound				Lincoln Avenue Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
04:00 PM	5	14	8	27	0	19	3	22	6	10	2	18	8	47	12	67	134
04:15 PM	0	13	9	22	2	20	2	24	5	4	0	9	8	51	9	68	123
04:30 PM	2	10	7	19	2	17	3	22	4	7	2	13	7	48	7	62	116
04:45 PM	4	16	6	26	1	16	3	20	6	18	0	24	9	33	6	48	118
Total	11	53	30	94	5	72	11	88	21	39	4	64	32	179	34	245	491
05:00 PM	4	16	11	31	0	19	6	25	4	10	3	17	9	55	5	69	142
05:15 PM	1	18	6	25	0	16	0	16	4	6	1	11	16	69	6	91	143
05:30 PM	0	12	7	19	1	20	3	24	7	9	3	19	9	51	4	64	126
05:45 PM	2	12	3	17	3	28	8	39	4	16	1	21	10	65	14	89	166
Total	7	58	27	92	4	83	17	104	19	41	8	68	44	240	29	313	577
Grand Total	18	111	57	186	9	155	28	192	40	80	12	132	76	419	63	558	1068
Apprch %	9.7	59.7	30.6		4.7	80.7	14.6		30.3	60.6	9.1		13.6	75.1	11.3		
Total %	1.7	10.4	5.3	17.4	0.8	14.5	2.6	18	3.7	7.5	1.1	12.4	7.1	39.2	5.9	52.2	

Start Time	Mountain Gate Drive Southbound				Upper Drive Westbound				Mountain Gate Drive Northbound				Lincoln Avenue Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 05:00 PM																	
05:00 PM	4	16	11	31	0	19	6	25	4	10	3	17	9	55	5	69	142
05:15 PM	1	18	6	25	0	16	0	16	4	6	1	11	16	69	6	91	143
05:30 PM	0	12	7	19	1	20	3	24	7	9	3	19	9	51	4	64	126
05:45 PM	2	12	3	17	3	28	8	39	4	16	1	21	10	65	14	89	166
Total Volume	7	58	27	92	4	83	17	104	19	41	8	68	44	240	29	313	577
% App. Total	7.6	63	29.3		3.8	79.8	16.3		27.9	60.3	11.8		14.1	76.7	9.3		
PHF	.438	.806	.614	.742	.333	.741	.531	.667	.679	.641	.667	.810	.688	.870	.518	.860	.869

City of Corona  
 N/S: Mountain Gate Drive  
 E/W: Upper Drive / Lincoln Avenue  
 Weather: Sunny

File Name : COMGUPPM  
 Site Code : 05721323  
 Start Date : 5/9/2007  
 Page No : 2



Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1

Peak Hour for Each Approach Begins at:

	04:30 PM				05:00 PM				04:45 PM				05:00 PM			
+0 mins.	2	10	7	19	0	19	6	25	6	18	0	24	9	55	5	69
+15 mins.	4	16	6	26	0	16	0	16	4	10	3	17	16	69	6	91
+30 mins.	4	16	11	31	1	20	3	24	4	6	1	11	9	51	4	64
+45 mins.	1	18	6	25	3	28	8	39	7	9	3	19	10	65	14	89
Total Volume	11	60	30	101	4	83	17	104	21	43	7	71	44	240	29	313
% App. Total	10.9	59.4	29.7		3.8	79.8	16.3		29.6	60.6	9.9		14.1	76.7	9.3	
PHF	.688	.833	.682	.815	.333	.741	.531	.667	.750	.597	.583	.740	.688	.870	.518	.860



Counts Unlimited Inc.  
 25424 Jaclyn Avenue  
 Moreno Valley, CA 92557  
 951-247-6716

City of Corona  
 N/S: Malaga Street  
 E/W: Upper Drive  
 Weather: Sunny

File Name : COMLUPAM  
 Site Code : 05721312  
 Start Date : 5/9/2007  
 Page No : 1

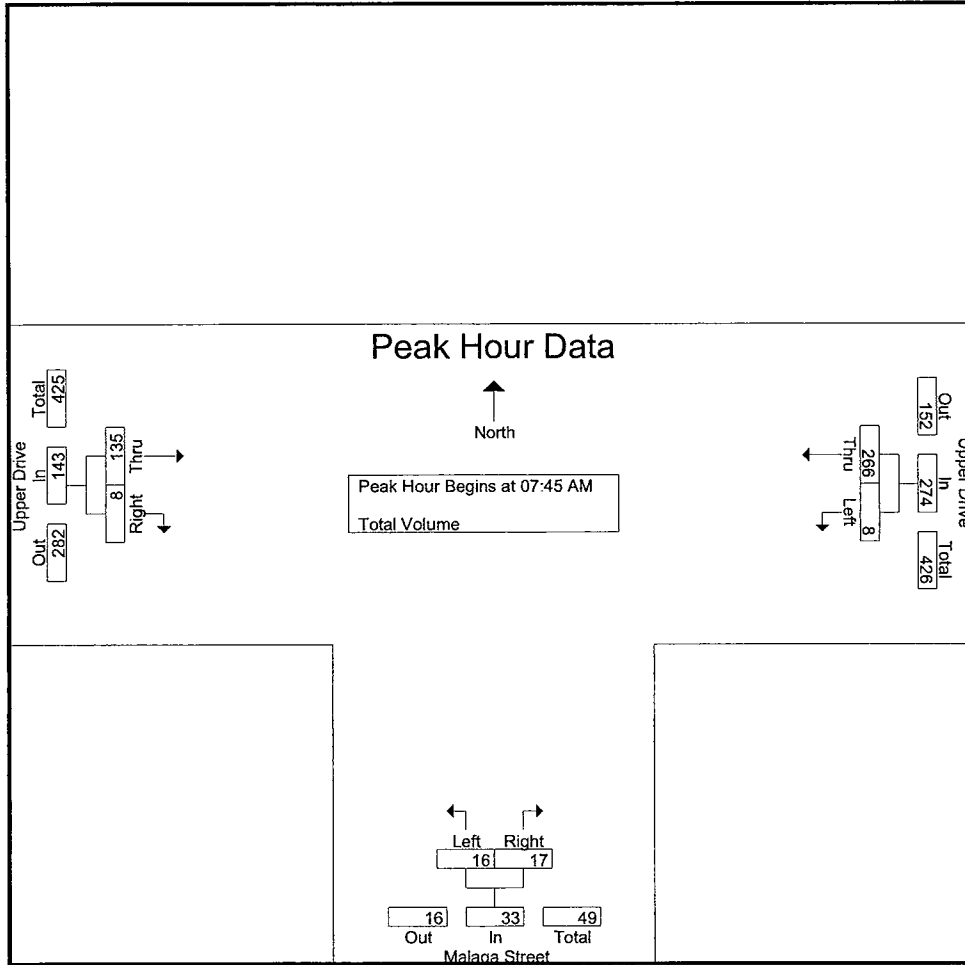
Groups Printed- Total Volume

Start Time	Upper Drive Westbound			Malaga Street Northbound			Upper Drive Eastbound			Int. Total
	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	
06:30 AM	1	48	49	0	3	3	10	0	10	62
06:45 AM	1	44	45	3	7	10	11	1	12	67
Total	2	92	94	3	10	13	21	1	22	129
07:00 AM	0	47	47	2	9	11	8	4	12	70
07:15 AM	2	54	56	0	18	18	25	1	26	100
07:30 AM	3	62	65	1	8	9	17	1	18	92
07:45 AM	3	62	65	2	6	8	11	0	11	84
Total	8	225	233	5	41	46	61	6	67	346
08:00 AM	2	78	80	7	6	13	25	4	29	122
08:15 AM	0	79	79	7	4	11	50	4	54	144
08:30 AM	3	47	50	0	1	1	49	0	49	100
08:45 AM	2	40	42	4	4	8	32	2	34	84
Total	7	244	251	18	15	33	156	10	166	450
Grand Total	17	561	578	26	66	92	238	17	255	925
Apprch %	2.9	97.1		28.3	71.7		93.3	6.7		
Total %	1.8	60.6	62.5	2.8	7.1	9.9	25.7	1.8	27.6	

Start Time	Upper Drive Westbound			Malaga Street Northbound			Upper Drive Eastbound			Int. Total
	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	
Peak Hour Analysis From 06:30 AM to 08:45 AM - Peak 1 of 1										
Peak Hour for Entire Intersection Begins at 07:45 AM										
07:45 AM	3	62	65	2	6	8	11	0	11	84
08:00 AM	2	78	80	7	6	13	25	4	29	122
08:15 AM	0	79	79	7	4	11	50	4	54	144
08:30 AM	3	47	50	0	1	1	49	0	49	100
Total Volume	8	266	274	16	17	33	135	8	143	450
% App. Total	2.9	97.1		48.5	51.5		94.4	5.6		
PHF	.667	.842	.856	.571	.708	.635	.675	.500	.662	.781

City of Corona  
 N/S: Malaga Street  
 E/W: Upper Drive  
 Weather: Sunny

File Name : COMLUPAM  
 Site Code : 05721312  
 Start Date : 5/9/2007  
 Page No : 2



Peak Hour Analysis From 06:30 AM to 08:45 AM Peak 1 of 1

Peak Hour for Each Approach Begins at:

	07:30 AM			06:45 AM			08:00 AM		
+0 mins.	3	62	65	3	7	10	25	4	29
+15 mins.	3	62	65	2	9	11	50	4	54
+30 mins.	2	78	80	0	18	18	49	0	49
+45 mins.	0	79	79	1	8	9	32	2	34
Total Volume	8	281	289	6	42	48	156	10	166
% App. Total	2.8	97.2		12.5	87.5		94	6	
PHF	.667	.889	.903	.500	.583	.667	.780	.625	.769

Counts Unlimited Inc.  
 25424 Jaclyn Avenue  
 Moreno Valley, CA 92557  
 951-247-6716

City of Corona  
 N/S: Malaga Street  
 E/W: Upper Drive  
 Weather: Sunny

File Name : COMLUPPM  
 Site Code : 05721312  
 Start Date : 5/9/2007  
 Page No : 1

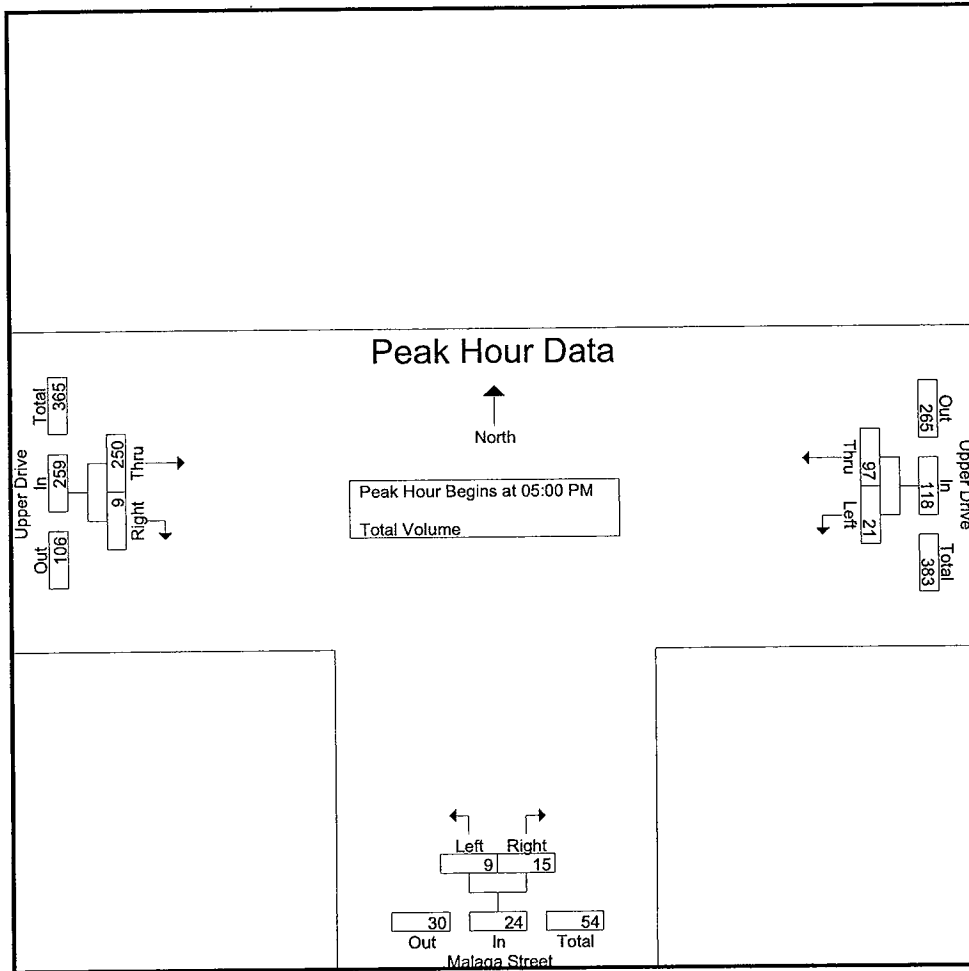
Groups Printed- Total Volume

Start Time	Upper Drive Westbound			Malaga Street Northbound			Upper Drive Eastbound			Int. Total
	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	
04:00 PM	7	23	30	1	3	4	59	1	60	94
04:15 PM	3	24	27	1	6	7	58	0	58	92
04:30 PM	2	21	23	1	5	6	47	5	52	81
04:45 PM	7	22	29	0	3	3	37	3	40	72
Total	19	90	109	3	17	20	201	9	210	339
05:00 PM	3	23	26	1	2	3	63	1	64	93
05:15 PM	3	16	19	1	2	3	69	0	69	91
05:30 PM	12	21	33	3	7	10	51	2	53	96
05:45 PM	3	37	40	4	4	8	67	6	73	121
Total	21	97	118	9	15	24	250	9	259	401
Grand Total	40	187	227	12	32	44	451	18	469	740
Apprch %	17.6	82.4		27.3	72.7		96.2	3.8		
Total %	5.4	25.3	30.7	1.6	4.3	5.9	60.9	2.4	63.4	

Start Time	Upper Drive Westbound			Malaga Street Northbound			Upper Drive Eastbound			Int. Total
	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	
Peak Hour Analysis From 04:00 PM to 05:45 PM Peak 1 of 1										
Peak Hour for Entire Intersection Begins at 05:00 PM										
05:00 PM	3	23	26	1	2	3	63	1	64	93
05:15 PM	3	16	19	1	2	3	69	0	69	91
05:30 PM	12	21	33	3	7	10	51	2	53	96
05:45 PM	3	37	40	4	4	8	67	6	73	121
Total Volume	21	97	118	9	15	24	250	9	259	401
% App. Total	17.8	82.2		37.5	62.5		96.5	3.5		
PHF	.438	.655	.738	.563	.536	.600	.906	.375	.887	.829

City of Corona  
 N/S: Malaga Street  
 E/W: Upper Drive  
 Weather: Sunny

File Name : COMLUPPM  
 Site Code : 05721312  
 Start Date : 5/9/2007  
 Page No : 2



Peak Hour Analysis From 04:00 PM to 05:45 PM Peak 1 of 1

Peak Hour for Each Approach Begins at:

	05:00 PM			05:00 PM			05:00 PM		
+0 mins.	3	23	26	1	2	3	63	1	64
+15 mins.	3	16	19	1	2	3	69	0	69
+30 mins.	12	21	33	3	7	10	51	2	53
+45 mins.	3	37	40	4	4	8	67	6	73
Total Volume	21	97	118	9	15	24	250	9	259
% App. Total	17.8	82.2		37.5	62.5		96.5	3.5	
PHF	.438	.655	.738	.563	.536	.600	.906	.375	.887

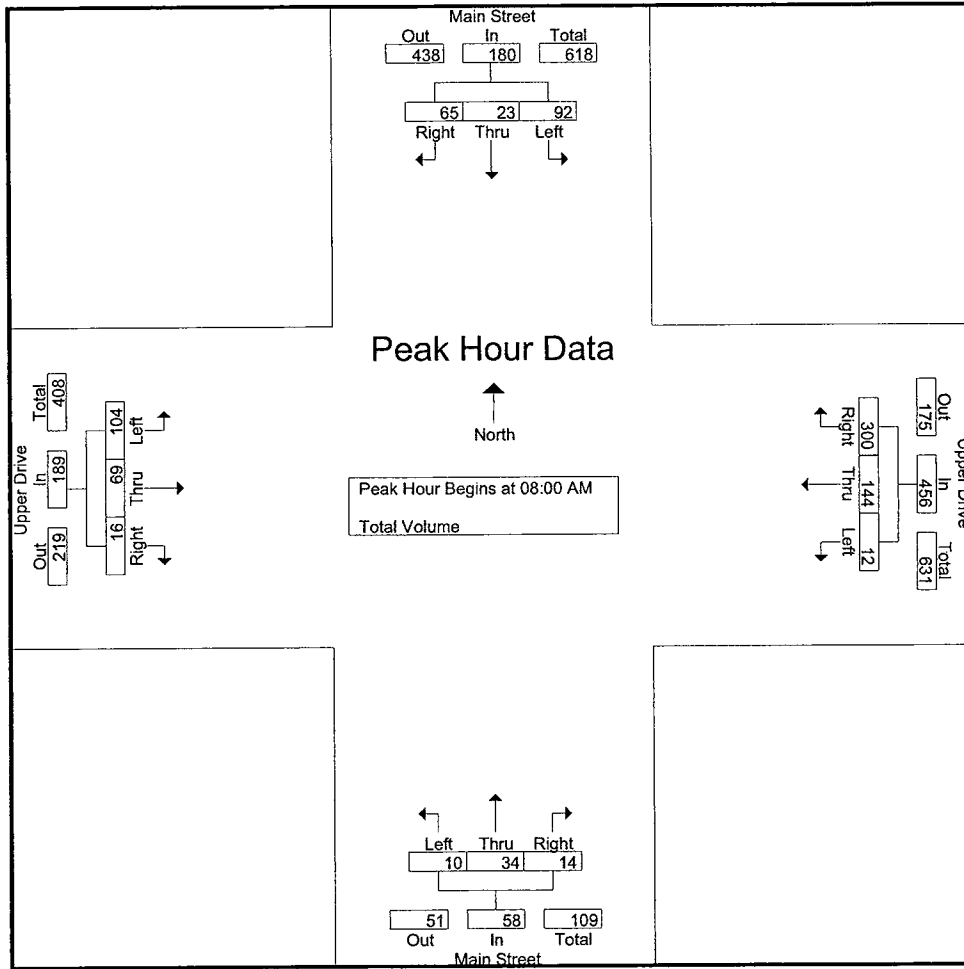
City of Corona  
 N/S: Main Street  
 E/W: Upper Drive  
 Weather: Sunny

File Name : COMAUPAM  
 Site Code : 05721313  
 Start Date : 5/9/2007  
 Page No : 1

Groups Printed- Total Volume

Start Time	Main Street Southbound				Upper Drive Westbound				Main Street Northbound				Upper Drive Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
06:30 AM	2	2	1	5	0	36	8	44	1	4	1	6	11	12	0	23	78
06:45 AM	5	2	4	11	3	24	24	51	1	3	4	8	16	15	1	32	102
Total	7	4	5	16	3	60	32	95	2	7	5	14	27	27	1	55	180
07:00 AM	17	3	5	25	1	35	28	64	0	3	1	4	11	24	0	35	128
07:15 AM	24	2	6	32	2	48	45	95	0	2	12	14	18	46	0	64	205
07:30 AM	17	9	12	38	6	49	47	102	1	9	1	11	18	21	1	40	191
07:45 AM	16	2	11	29	2	49	24	75	2	3	4	9	17	11	1	29	142
Total	74	16	34	124	11	181	144	336	3	17	18	38	64	102	2	168	666
08:00 AM	18	6	14	38	1	54	51	106	4	12	1	17	21	15	4	40	201
08:15 AM	16	5	14	35	5	40	96	141	3	7	3	13	25	22	3	50	239
08:30 AM	30	6	20	56	4	24	104	132	2	4	4	10	31	14	7	52	250
08:45 AM	28	6	17	51	2	26	49	77	1	11	6	18	27	18	2	47	193
Total	92	23	65	180	12	144	300	456	10	34	14	58	104	69	16	189	883
Grand Total	173	43	104	320	26	385	476	887	15	58	37	110	195	198	19	412	1729
Apprch %	54.1	13.4	32.5		2.9	43.4	53.7		13.6	52.7	33.6		47.3	48.1	4.6		
Total %	10	2.5	6	18.5	1.5	22.3	27.5	51.3	0.9	3.4	2.1	6.4	11.3	11.5	1.1	23.8	

Start Time	Main Street Southbound				Upper Drive Westbound				Main Street Northbound				Upper Drive Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
Peak Hour Analysis From 06:30 AM to 08:45 AM Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 08:00 AM																	
08:00 AM	18	6	14	38	1	54	51	106	4	12	1	17	21	15	4	40	201
08:15 AM	16	5	14	35	5	40	96	141	3	7	3	13	25	22	3	50	239
08:30 AM	30	6	20	56	4	24	104	132	2	4	4	10	31	14	7	52	250
08:45 AM	28	6	17	51	2	26	49	77	1	11	6	18	27	18	2	47	193
Total Volume	92	23	65	180	12	144	300	456	10	34	14	58	104	69	16	189	883
% App. Total	51.1	12.8	36.1		2.6	31.6	65.8		17.2	58.6	24.1		55	36.5	8.5		
PHF	.767	.958	.813	.804	.600	.667	.721	.809	.625	.708	.583	.806	.839	.784	.571	.909	.883



Peak Hour Analysis From 06:30 AM to 08:45 AM - Peak 1 of 1  
 Peak Hour for Each Approach Begins at:

	08:00 AM				08:00 AM				08:00 AM				08:00 AM			
+0 mins.	18	6	14	38	1	54	51	106	4	12	1	17	21	15	4	40
+15 mins.	16	5	14	35	5	40	96	141	3	7	3	13	25	22	3	50
+30 mins.	30	6	20	56	4	24	104	132	2	4	4	10	31	14	7	52
+45 mins.	28	6	17	51	2	26	49	77	1	11	6	18	27	18	2	47
Total Volume	92	23	65	180	12	144	300	456	10	34	14	58	104	69	16	189
% App. Total	51.1	12.8	36.1		2.6	31.6	65.8		17.2	58.6	24.1		55	36.5	8.5	
PHF	.767	.958	.813	.804	.600	.667	.721	.809	.625	.708	.583	.806	.839	.784	.571	.909

City of Corona  
 N/S: Main Street  
 E/W: Upper Drive  
 Weather: Sunny

File Name : COMAUPPM  
 Site Code : 05721313  
 Start Date : 5/9/2007  
 Page No : 1

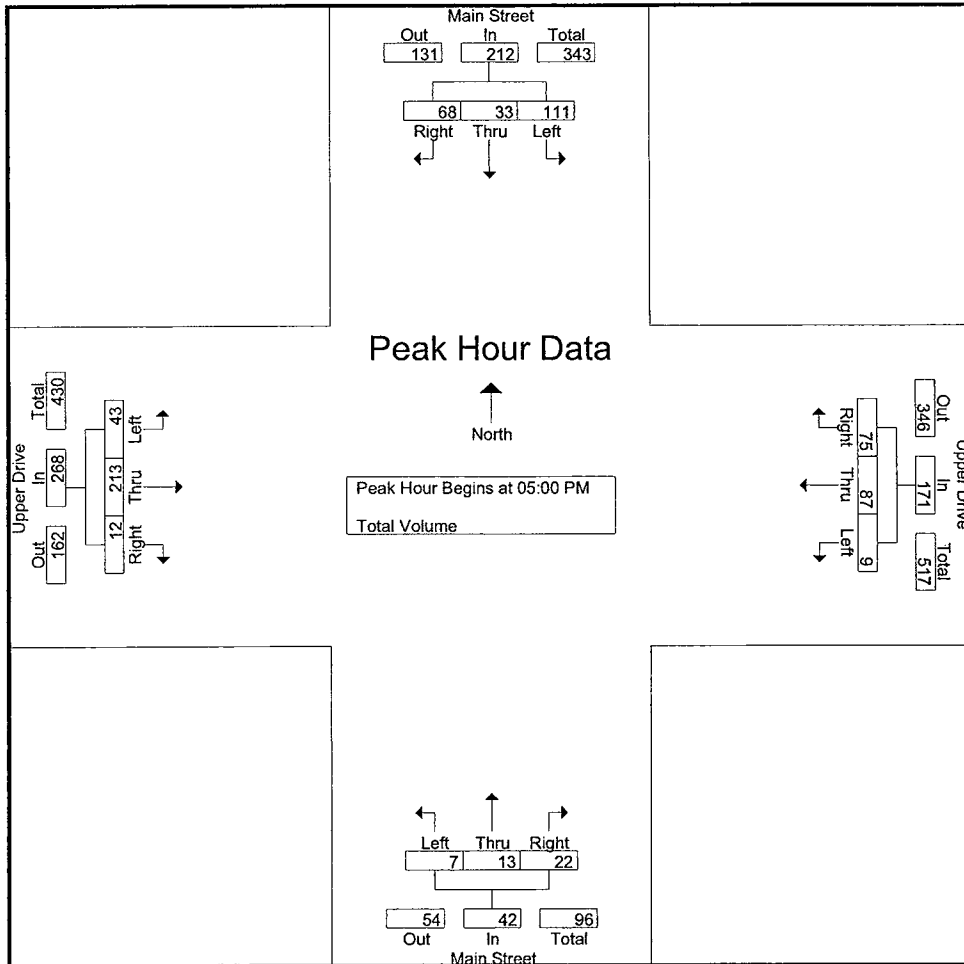
Groups Printed- Total Volume

Start Time	Main Street Southbound				Upper Drive Westbound				Main Street Northbound				Upper Drive Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
04:00 PM	16	9	13	38	4	21	18	43	0	9	4	13	11	45	1	57	151
04:15 PM	18	6	7	31	1	27	19	47	0	1	2	3	8	41	5	54	135
04:30 PM	19	5	16	40	3	18	18	39	0	3	7	10	8	46	2	56	145
04:45 PM	19	4	19	42	3	22	17	42	1	12	3	16	14	23	2	39	139
Total	72	24	55	151	11	88	72	171	1	25	16	42	41	155	10	206	570
05:00 PM	24	5	17	46	1	21	18	40	2	3	5	10	8	51	5	64	160
05:15 PM	23	11	15	49	2	17	16	35	0	1	4	5	15	61	1	77	166
05:30 PM	24	8	19	51	1	23	22	46	2	2	7	11	12	38	5	55	163
05:45 PM	40	9	17	66	5	26	19	50	3	7	6	16	8	63	1	72	204
Total	111	33	68	212	9	87	75	171	7	13	22	42	43	213	12	268	693
Grand Total	183	57	123	363	20	175	147	342	8	38	38	84	84	368	22	474	1263
Apprch %	50.4	15.7	33.9		5.8	51.2	43		9.5	45.2	45.2		17.7	77.6	4.6		
Total %	14.5	4.5	9.7	28.7	1.6	13.9	11.6	27.1	0.6	3	3	6.7	6.7	29.1	1.7	37.5	

Start Time	Main Street Southbound				Upper Drive Westbound				Main Street Northbound				Upper Drive Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
Peak Hour Analysis From 04:00 PM to 05:45 PM Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 05:00 PM																	
05:00 PM	24	5	17	46	1	21	18	40	2	3	5	10	8	51	5	64	160
05:15 PM	23	11	15	49	2	17	16	35	0	1	4	5	15	61	1	77	166
05:30 PM	24	8	19	51	1	23	22	46	2	2	7	11	12	38	5	55	163
05:45 PM	40	9	17	66	5	26	19	50	3	7	6	16	8	63	1	72	204
Total Volume	111	33	68	212	9	87	75	171	7	13	22	42	43	213	12	268	693
% App. Total	52.4	15.6	32.1		5.3	50.9	43.9		16.7	31	52.4		16	79.5	4.5		
PHF	.694	.750	.895	.803	.450	.837	.852	.855	.583	.464	.786	.656	.717	.845	.600	.870	.849

City of Corona  
 N/S: Main Street  
 E/W: Upper Drive  
 Weather: Sunny

File Name : COMAUPPM  
 Site Code : 05721313  
 Start Date : 5/9/2007  
 Page No : 2



Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1  
 Peak Hour for Each Approach Begins at:

	05:00 PM				04:00 PM				04:00 PM				05:00 PM			
+0 mins.	24	5	17	46	4	21	18	43	0	9	4	13	8	51	5	64
+15 mins.	23	11	15	49	1	27	19	47	0	1	2	3	15	61	1	77
+30 mins.	24	8	19	51	3	18	18	39	0	3	7	10	12	38	5	55
+45 mins.	40	9	17	66	3	22	17	42	1	12	3	16	8	63	1	72
Total Volume	111	33	68	212	11	88	72	171	1	25	16	42	43	213	12	268
% App. Total	52.4	15.6	32.1		6.4	51.5	42.1		2.4	59.5	38.1		16	79.5	4.5	
PHF	.694	.750	.895	.803	.688	.815	.947	.910	.250	.521	.571	.656	.717	.845	.600	.870



## APPENDIX C

### YEAR 2009 INTERSECTION LEVEL OF SERVICE CALCULATION WORKSHEETS

## YEAR 2007 EXISTING CONDITIONS

AM Existing (2007)  
 TTM No 34760 Residential Development, Corona  
 Linscott, Law and Greenspan, Engineers

Level Of Service Computation Report  
 2000 HCM 4-Way Stop Method (Future Volume Alternative)

\*\*\*\*\*

Intersection #1 Mountain Gate Drive at Lincoln Drive/Upper Drive

\*\*\*\*\*

Cycle (sec): 100 Critical Vol /Cap (X): 0 294  
 Loss Time (sec): 0 (Y+R=4 0 sec) Average Delay (sec/veh): 10 4  
 Optimal Cycle: 0 Level Of Service: B  
 \*\*\*\*\*

Street Name:	Mountain Gate Drive						Lincoln Drive/Upper Drive					
	North Bound			South Bound			East Bound			West Bound		
Approach:												
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Stop Sign			Stop Sign			Stop Sign			Stop Sign		
Rights:	Include			Include			Include			Include		
Min Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	0	0	1	0	0	1	1	0	1	1	0	1

Volume Module:

Base Vol:	61	88	7	55	61	89	67	81	17	9	199	69
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	61	88	7	55	61	89	67	81	17	9	199	69
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	61	88	7	55	61	89	67	81	17	9	199	69
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
PHF Volume:	64	93	7	58	64	94	71	85	18	9	209	73
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	64	93	7	58	64	94	71	85	18	9	209	73
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
Final Volume:	64	93	7	58	64	94	71	85	18	9	209	73

Saturation Flow Module:

Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	0.39	0.57	0.04	1.00	0.41	0.59	1.00	1.65	0.35	1.00	1.49	0.51
Final Sat.:	219	315	25	527	248	362	496	893	192	519	849	306

Capacity Analysis Module:

Vol/Sat:	0.29	0.29	0.29	0.11	0.26	0.26	0.14	0.10	0.09	0.02	0.25	0.24
Crit Moves:	****			****			****			****		
Delay/Veh:	11.5	11.5	11.5	10.0	10.1	10.1	10.6	9.6	9.4	9.4	10.5	10.1
Delay Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	11.5	11.5	11.5	10.0	10.1	10.1	10.6	9.6	9.4	9.4	10.5	10.1
LOS by Move:	B	B	B	A	B	B	B	A	A	A	B	B
ApproachDel:	11.5			10.1			10.0			10.4		
Delay Adj:	1.00			1.00			1.00			1.00		
ApprAdjDel:	11.5			10.1			10.0			10.4		
LOS by Appr:	B			B			A			B		
AllWayAvgQ:	0.4	0.4	0.4	0.1	0.3	0.3	0.1	0.1	0.1	0.0	0.3	0.3

\*\*\*\*\*

AM Existing (2007)
TTM No. 34760 Residential Development, Corona
Linscott, Law and Greenspan, Engineers

Level Of Service Computation Report
2000 HCM Unsignalized Method (Future Volume Alternative)

\*\*\*\*\*
Intersection #2 Malaga Street at Upper Drive
\*\*\*\*\*

Average Delay (sec/veh): 0.9 Worst Case Level Of Service: B[ 10.4]
\*\*\*\*\*

Table with columns for Street Name, Approach, Movement, Control, Rights, Lanes. Rows for Malaga Street and Upper Drive, detailing North, South, East, and West bounds.

Volume Module table showing Base Vol, Growth Adj, Initial Bse, Added Vol, PasserByVol, Initial Fut, User Adj, PHF Adj, PHF Volume, Reduct Vol, Final Volume.

Critical Gap Module table showing Critical Gp, FollowUpTim.

Capacity Module table showing Cnflct Vol, Potent Cap., Move Cap., Volume/Cap.

Level Of Service Module table showing 2Way95thQ, Control Del, LOS by Move, Movement, Shared Cap., Shared Queue, Shrd ConDel, Shared LOS, ApproachDel, ApproachLOS.

Note: Queue reported is the number of cars per lane
\*\*\*\*\*

AM Existing (2007)
TTM No 34760 Residential Development, Corona
Linscott, Law and Greenspan, Engineers

Level Of Service Computation Report
2000 HCM 4-Way Stop Method (Future Volume Alternative)

Intersection #3 Main Street at Upper Drive

Cycle (sec): 100 Critical Vol /Cap (X): 0 663
Loss Time (sec): 0 (Y+R=4.0 sec) Average Delay (sec/veh): 13 3
Optimal Cycle: 0 Level Of Service: B

Table with columns for Street Name (Main Street, Upper Drive), Approach (North Bound, South Bound, East Bound, West Bound), Movement (L, T, R), Control (Stop Sign, Include), Rights, Min Green, and Lanes.

Volume Module table showing Base Vol, Growth Adj, Initial Bse, Added Vol, PasserByVol, Initial Fut, User Adj, PHF Adj, PHF Volume, Reduct Vol, Reduced Vol, PCE Adj, MLF Adj, and Final Volume across various lanes.

Saturation Flow Module table showing Adjustment, Lanes, and Final Sat. values for different approaches.

Capacity Analysis Module table showing Vol/Sat, Crit Moves, Delay/Veh, Delay Adj, AdjDel/Veh, LOS by Move, ApproachDel, Delay Adj, ApprAdjDel, LOS by Appr, and AllWayAvgQ.

PM Existing (2007)  
 TTM No. 34760 Residential Development, Corona  
 Linscott, Law and Greenspan, Engineers

Level Of Service Computation Report  
 2000 HCM 4-Way Stop Method (Future Volume Alternative)

\*\*\*\*\*  
 Intersection #1 Mountain Gate Drive at Lincoln Drive/Upper Drive  
 \*\*\*\*\*  
 Cycle (sec): 100 Critical Vol /Cap (X): 0 210  
 Loss Time (sec): 0 (Y+R=4 0 sec) Average Delay (sec/veh): 9 1  
 Optimal Cycle: 0 Level Of Service: A  
 \*\*\*\*\*

Street Name:	Mountain Gate Drive						Lincoln Drive/Upper Drive																
Approach:	North Bound			South Bound			East Bound			West Bound													
Movement:	L	-	T	-	R	L	-	T	-	R	L	-	T	-	R	L	-	T	-	R			
Control:	Stop Sign						Stop Sign						Stop Sign										
Rights:	Include						Include						Include										
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
Lanes:	0	0	1	0	0	0	1	0	0	1	0	0	1	0	1	1	0	1	0	1	1	0	0

Volume Module:

Base Vol:	19	41	8	7	58	27	44	240	29	4	83	17
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	19	41	8	7	58	27	44	240	29	4	83	17
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	19	41	8	7	58	27	44	240	29	4	83	17
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
PHF Volume:	20	43	8	7	61	28	46	253	31	4	87	18
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	20	43	8	7	61	28	46	253	31	4	87	18
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:	20	43	8	7	61	28	46	253	31	4	87	18

Saturation Flow Module:

Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	0.28	0.60	0.12	1.00	0.68	0.32	1.00	1.78	0.22	1.00	1.66	0.34
Final Sat.:	169	364	71	554	427	199	608	1202	147	556	1017	214

Capacity Analysis Module:

Vol/Sat:	0.12	0.12	0.12	0.01	0.14	0.14	0.08	0.21	0.21	0.01	0.09	0.08
Crit Moves:	****			****			****			****		
Delay/Veh:	9.4	9.4	9.4	8.9	9.0	9.0	8.9	9.2	9.1	8.9	8.8	8.6
Delay Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	9.4	9.4	9.4	8.9	9.0	9.0	8.9	9.2	9.1	8.9	8.8	8.6
LOS by Move:	A	A	A	A	A	A	A	A	A	A	A	A
ApproachDel:	9.4			9.0			9.2			8.7		
Delay Adj:	1.00			1.00			1.00			1.00		
ApprAdjDel:	9.4			9.0			9.2			8.7		
LOS by Appr:	A			A			A			A		
AllWayAvgQ:	0.1	0.1	0.1	0.0	0.1	0.1	0.1	0.3	0.2	0.0	0.1	0.1

PM Existing (2007)
TTM No 34760 Residential Development, Corona
Linscott, Law and Greenspan, Engineers

Level Of Service Computation Report
2000 HCM Unsignalized Method (Future Volume Alternative)

Intersection #2 Malaga Street at Upper Drive

Average Delay (sec/veh): 1 0 Worst Case Level Of Service: B[ 10 4]

Table with columns: Street Name, Malaga Street, Upper Drive, North Bound, South Bound, East Bound, West Bound. Rows include Approach, Movement, Control, Rights, Lanes.

Table with columns: Volume Module, Base Vol, Growth Adj, Initial Bse, Added Vol, PasserByVol, Initial Fut, User Adj, PHF Adj, PHF Volume, Reduct Vol, FinalVolume.

Table with columns: Critical Gap Module, Critical Gp, FollowUpTim.

Table with columns: Capacity Module, Cnflct Vol, Potent Cap., Move Cap., Volume/Cap.

Table with columns: Level Of Service Module, 2Way95thQ, Control Del, LOS by Move, Movement, Shared Cap, SharedQueue, Shrd ConDel, Shared LOS, ApproachDel, ApproachLOS.

Note: Queue reported is the number of cars per lane

PM Existing (2007)  
 TTM No 34760 Residential Development, Corona  
 Linscott, Law and Greenspan, Engineers

Level Of Service Computation Report  
 2000 HCM 4-Way Stop Method (Future Volume Alternative)

\*\*\*\*\*  
 Intersection #3 Main Street at Upper Drive  
 \*\*\*\*\*

Cycle (sec): 100 Critical Vol /Cap (X): 0 365  
 Loss Time (sec): 0 (Y+R=4 0 sec) Average Delay (sec/veh): 10 0  
 Optimal Cycle: 0 Level Of Service: B  
 \*\*\*\*\*

Street Name:	Main Street						Upper Drive					
	North Bound			South Bound			East Bound			West Bound		
Approach:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Stop Sign			Stop Sign			Stop Sign			Stop Sign		
Rights:	Include			Include			Include			Include		
Min Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	1	0	0	1	0	0	1	0	0	1	0	0

Volume Module:

Base Vol:	7	13	22	111	33	68	43	213	12	9	87	75
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	7	13	22	111	33	68	43	213	12	9	87	75
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	7	13	22	111	33	68	43	213	12	9	87	75
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
PHF Volume:	7	14	23	117	35	72	45	224	13	9	92	79
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	7	14	23	117	35	72	45	224	13	9	92	79
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	7	14	23	117	35	72	45	224	13	9	92	79

Saturation Flow Module:

Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	1.00	0.37	0.63	1.00	0.33	0.67	1.00	0.95	0.05	1.00	0.54	0.46
Final Sat.:	518	223	377	551	211	436	588	614	35	573	356	307

Capacity Analysis Module:

Vol/Sat:	0.01	0.06	0.06	0.21	0.16	0.16	0.08	0.37	0.37	0.02	0.26	0.26
Crit Moves:			****	****				****		****		
Delay/Veh:	9.3	8.6	8.6	10.5	8.9	8.9	9.1	11.0	11.0	8.8	9.6	9.6
Delay Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	9.3	8.6	8.6	10.5	8.9	8.9	9.1	11.0	11.0	8.8	9.6	9.6
LOS by Move:	A	A	A	B	A	A	A	B	B	A	A	A
ApproachDel:		8.7			9.7			10.7			9.6	
Delay Adj:		1.00			1.00			1.00			1.00	
ApprAdjDel:		8.7			9.7			10.7			9.6	
LOS by Appr:		A			A			B			A	
AllWayAvgQ:	0.0	0.1	0.1	0.2	0.2	0.2	0.1	0.5	0.5	0.0	0.3	0.3



## YEAR 2009 BACKGROUND CONDITIONS

AM Background (2009)
TTM No 34760 Residential Development, Corona
Linscott, Law and Greenspan, Engineers

Level Of Service Computation Report
2000 HCM 4-Way Stop Method (Future Volume Alternative)

Intersection #1 Mountain Gate Drive at Lincoln Drive/Upper Drive

Cycle (sec) 100 Critical Vol./Cap (X): 0 309
Loss Time (sec) 0 (Y+R=4 0 sec) Average Delay (sec/veh): 10 7
Optimal Cycle: 0 Level Of Service: B

Table with columns for Street Name, Approach, Movement, Control, Rights, Min Green, Lanes. Rows for Mountain Gate Drive (North/South Bound) and Lincoln Drive/Upper Drive (East/West Bound).

Volume Module table with columns for Base Vol, Growth Adj, Initial Bse, Added Vol, PasserByVol, Initial Fut, User Adj, PHF Adj, PHF Volume, Reduct Vol, Reduced Vol, PCE Adj, MLF Adj, Final Volume.

Saturation Flow Module table with columns for Adjustment, Lanes, Final Sat.

Capacity Analysis Module table with columns for Vol/Sat, Crit Moves, Delay/Veh, Delay Adj, AdjDel/Veh, LOS by Move, ApproachDel, Delay Adj, ApprAdjDel, LOS by Appr, AllWayAvgQ.

AM Background (2009)
TTM No. 34760 Residential Development, Corona
Linscott, Law and Greenspan, Engineers

Level Of Service Computation Report
2000 HCM Unsignalized Method (Future Volume Alternative)

\*\*\*\*\*
Intersection #2 Malaga Street at Upper Drive
\*\*\*\*\*

Average Delay (sec/veh): 0 9 Worst Case Level Of Service: B{ 10 5}
\*\*\*\*\*

Table with columns: Street Name, Approach, Movement, Control, Rights, Lanes. Rows include Malaga Street and Upper Drive with various traffic details.

Volume Module: Table with columns for Base Vol, Growth Adj, Initial Bse, Added Vol, PasserByVol, Initial Fut, User Adj, PHF Adj, PHF Volume, Reduct Vol, Final Volume.

Critical Gap Module: Table with columns for Critical Gp, FollowUpTim.

Capacity Module: Table with columns for Cnflct Vol, Potent Cap., Move Cap, Volume/Cap.

Level Of Service Module: Table with columns for 2Way95thQ, Control Del, LOS by Move, Movement, Shared Cap, SharedQueue, Shrd ConDel, Shared LOS, ApproachDel, ApproachLOS.

Note: Queue reported is the number of cars per lane
\*\*\*\*\*

AM Background (2009)  
 TTM No 34760 Residential Development, Corona  
 Linscott, Law and Greenspan, Engineers

Level Of Service Computation Report  
 2000 HCM 4-Way Stop Method (Future Volume Alternative)

\*\*\*\*\*  
 Intersection #3 Main Street at Upper Drive  
 \*\*\*\*\*

Cycle (sec): 100 Critical Vol /Cap (X): 0 696  
 Loss Time (sec): 0 (Y+R=4 0 sec) Average Delay (sec/veh): 14 1  
 Optimal Cycle: 0 Level Of Service: B  
 \*\*\*\*\*

Street Name:	Main Street						Upper Drive					
	North Bound			South Bound			East Bound			West Bound		
Approach:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Stop Sign			Stop Sign			Stop Sign			Stop Sign		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	1	0	0	1	0	0	1	0	0	1	0	0

Volume Module:

Base Vol:	10	34	14	92	23	65	104	69	16	12	144	300
Growth Adj:	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04
Initial Bse:	10	35	15	96	24	68	108	72	17	12	150	312
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	10	35	15	96	24	68	108	72	17	12	150	312
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
PHF Volume:	11	37	15	101	25	71	114	76	18	13	158	328
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	11	37	15	101	25	71	114	76	18	13	158	328
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
Final Volume:	11	37	15	101	25	71	114	76	18	13	158	328

Saturation Flow Module:

Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	1.00	0.71	0.29	1.00	0.26	0.74	1.00	0.81	0.19	1.00	0.32	0.68
Final Sat.:	463	361	149	491	149	421	549	493	114	579	226	472

Capacity Analysis Module:

Vol/Sat:	0.02	0.10	0.10	0.20	0.17	0.17	0.21	0.15	0.15	0.02	0.70	0.70
Crit Moves:	****			****			****			****		
Delay/Veh:	9 9	9 7	9 7	11.2	9.6	9.6	10.6	9.4	9.4	8.9	18.1	18.1
Delay Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	9 9	9 7	9 7	11.2	9.6	9.6	10.6	9.4	9.4	8.9	18.1	18.1
LOS by Move:	A	A	A	B	A	A	B	A	A	A	C	C
ApproachDel:	9 8			10.4			10.0			17.8		
Delay Adj:	1.00			1.00			1.00			1.00		
ApprAdjDel:	9 8			10.4			10.0			17.8		
LOS by Appr:	A			B			B			C		
AllWayAvgQ:	0 0	0 1	0 1	0.2	0.2	0.2	0.2	0.2	0.2	0.0	2.0	2.0

PM Background (2009)
TTM No 34760 Residential Development, Corona
Linscott, Law and Greenspan, Engineers

Level Of Service Computation Report
2000 HCM 4-Way Stop Method (Future Volume Alternative)

\*\*\*\*\*
Intersection #1 Mountain Gate Drive at Lincoln Drive/Upper Drive
\*\*\*\*\*

Cycle (sec): 100 Critical Vol /Cap (X): 0 220
Loss Time (sec): 0 (Y+R=4 0 sec) Average Delay (sec/veh): 9.2
Optimal Cycle: 0 Level Of Service: A
\*\*\*\*\*

Table with columns for Street Name, Approach, Movement, Control, Rights, Min Green, and Lanes. Rows include Mountain Gate Drive and Lincoln Drive/Upper Drive with sub-approaches North Bound, South Bound, East Bound, and West Bound.

Volume Module table with columns for Base Vol, Growth Adj, Initial Bse, Added Vol, PasserByVol, Initial Fut, User Adj, PHF Adj, PHF Volume, Reduct Vol, Reduced Vol, PCE Adj, MLF Adj, and FinalVolume. Rows include Mountain Gate Drive and Lincoln Drive/Upper Drive.

Saturation Flow Module table with columns for Adjustment, Lanes, and Final Sat. Rows include Mountain Gate Drive and Lincoln Drive/Upper Drive.

Capacity Analysis Module table with columns for Vol/Sat, Crit Moves, Delay/Veh, Delay Adj, AdjDel/Veh, LOS by Move, ApproachDel, Delay Adj, ApprAdjDel, LOS by Appr, and AllWayAvgQ. Rows include Mountain Gate Drive and Lincoln Drive/Upper Drive.

PM Background (2009)  
 TTM No 34760 Residential Development, Corona  
 Linscott, Law and Greenspan, Engineers

Level Of Service Computation Report  
 2000 HCM Unsignalized Method (Future Volume Alternative)

\*\*\*\*\*  
 Intersection #2 Malaga Street at Upper Drive  
 \*\*\*\*\*

Average Delay (sec/veh): 1 0 Worst Case Level Of Service: B[ 10 5]  
 \*\*\*\*\*

Street Name:	Malaga Street						Upper Drive												
	North Bound			South Bound			East Bound			West Bound									
Approach:	L	T	R	L	T	R	L	T	R	L	T	R							
Movement:																			
Control:	Stop Sign			Stop Sign			Uncontrolled			Uncontrolled									
Rights:	Include			Include			Include			Include									
Lanes:	0	0	1	0	0	0	0	0	0	0	0	0	1	0	1	0	1	0	0

Volume Module:	North Bound			South Bound			East Bound			West Bound		
Base Vol:	9	0	15	0	0	0	0	250	9	21	97	0
Growth Adj:	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04
Initial Bse:	9	0	16	0	0	0	0	260	9	22	101	0
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	9	0	16	0	0	0	0	260	9	22	101	0
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
PHF Volume:	10	0	16	0	0	0	0	274	10	23	106	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
FinalVolume:	10	0	16	0	0	0	0	274	10	23	106	0

Critical Gap Module:	North Bound			South Bound			East Bound			West Bound		
Critical Gp:	6.4	6.5	6.2	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	4.1	xxxxx	xxxxx
FollowUpTim:	3.5	4.0	3.3	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	2.2	xxxxx	xxxxx

Capacity Module:	North Bound			South Bound			East Bound			West Bound		
Cnflct Vol:	431	431	279	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	284	xxxxx	xxxxx
Potent Cap.:	585	520	765	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	1290	xxxxx	xxxxx
Move Cap.:	577	511	765	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	1290	xxxxx	xxxxx
Volume/Cap:	0.02	0.00	0.02	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	0.02	xxxxx	xxxxx

Level Of Service Module:	North Bound			South Bound			East Bound			West Bound		
2Way95thQ:	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	0.1	xxxxx	xxxxx
Control Del:	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	7.8	xxxxx	xxxxx
LOS by Move:	*	*	*	*	*	*	*	*	*	A	*	*
Movement:	LT	LTR	RT	LT	LTR	RT	LT	LTR	RT	LT	LTR	RT
Shared Cap.:	xxxxx	682	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx
SharedQueue:	xxxxx	0.1	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx
Shrd ConDel:	xxxxx	10.5	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx
Shared LOS:	*	B	*	*	*	*	*	*	*	*	*	*
ApproachDel:	10.5			xxxxxxx			xxxxxxx			xxxxxxx		
ApproachLOS:	B			*			*			*		

Note: Queue reported is the number of cars per lane  
 \*\*\*\*\*

PM Background (2009)  
 TTM No 34760 Residential Development, Corona  
 Linscott, Law and Greenspan, Engineers

Level Of Service Computation Report  
 2000 HCM 4-Way Stop Method (Future Volume Alternative)

\*\*\*\*\*  
 Intersection #3 Main Street at Upper Drive  
 \*\*\*\*\*

Cycle (sec): 100 Critical Vol /Cap (X): 0 383  
 Loss Time (sec): 0 (Y+R=4.0 sec) Average Delay (sec/veh): 10 2  
 Optimal Cycle: 0 Level Of Service: B  
 \*\*\*\*\*

Street Name:	Main Street						Upper Drive					
	North Bound			South Bound			East Bound			West Bound		
Approach:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Stop Sign			Stop Sign			Stop Sign			Stop Sign		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	1	0	0	1	0	0	1	0	0	1	0	0

Volume Module:	Main Street			Main Street			Upper Drive			Upper Drive		
Base Vol:	7	13	22	111	33	68	43	213	12	9	87	75
Growth Adj:	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04
Initial Bse:	7	14	23	115	34	71	45	222	12	9	90	78
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	7	14	23	115	34	71	45	222	12	9	90	78
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
PHF Volume:	8	14	24	122	36	74	47	233	13	10	95	82
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	8	14	24	122	36	74	47	233	13	10	95	82
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	8	14	24	122	36	74	47	233	13	10	95	82

Saturation Flow Module:	Main Street			Main Street			Upper Drive			Upper Drive		
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	0.37	0.63	1.00	0.33	0.67	1.00	0.95	0.05	1.00	0.54	0.46
Final Sat.:	511	219	371	546	209	431	583	609	34	568	352	304

Capacity Analysis Module:	Main Street			Main Street			Upper Drive			Upper Drive		
Vol/Sat:	0.01	0.06	0.06	0.22	0.17	0.17	0.08	0.38	0.38	0.02	0.27	0.27
Crit Moves:			****	****			****			****		
Delay/Veh:	9.3	8.7	8.7	10.7	9.0	9.0	9.2	11.3	11.3	8.9	9.8	9.8
Delay Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	9.3	8.7	8.7	10.7	9.0	9.0	9.2	11.3	11.3	8.9	9.8	9.8
LOS by Move:	A	A	A	B	A	A	A	B	B	A	A	A
ApproachDel:		8.8			9.9			11.0			9.8	
Delay Adj:		1.00			1.00			1.00			1.00	
ApprAdjDel:		8.8			9.9			11.0			9.8	
LOS by Appr:		A			A			B			A	
AllWayAvgQ:	0.0	0.1	0.1	0.3	0.2	0.2	0.1	0.6	0.6	0.0	0.3	0.3

**YEAR 2009 BACKGROUND PLUS PROJECT  
CONDITIONS**



AM Background Plus Project (2009)  
 TTM No 34760 Residential Development, Corona  
 Linscott, Law and Greenspan, Engineers

Level of Service Computation Report  
 2000 HCM 4-Way Stop Method (Future Volume Alternative)

\*\*\*\*\*  
 Intersection #1 Mountain Gate Drive at Lincoln Drive/Upper Drive  
 \*\*\*\*\*

Cycle (sec): 100 Critical Vol /Cap (X): 0 312  
 Loss Time (sec): 0 (Y+R=4.0 sec) Average Delay (sec/veh): 10.8  
 Optimal Cycle: 0 Level Of Service: B  
 \*\*\*\*\*

Street Name:	Mountain Gate Drive						Lincoln Drive/Upper Drive								
	North Bound			South Bound			East Bound			West Bound					
Approach:	L	T	R	L	T	R	L	T	R	L	T	R			
Control:	Stop Sign			Stop Sign			Stop Sign			Stop Sign					
Rights:	Include			Include			Include			Include					
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0			
Lanes:	0	0	1	0	0	1	0	0	1	0	1	0	1	1	0

Volume Module:

Base Vol:	61	88	7	55	61	89	67	81	17	9	199	69
Growth Adj:	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04
Initial Bse:	63	92	7	57	63	93	70	84	18	9	207	72
Added Vol:	0	0	0	1	0	0	0	3	0	0	10	2
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	63	92	7	58	63	93	70	87	18	9	217	74
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
PHF Volume:	67	96	8	61	67	97	73	92	19	10	228	78
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	67	96	8	61	67	97	73	92	19	10	228	78
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
Final Volume:	67	96	8	61	67	97	73	92	19	10	228	78

Saturation Flow Module:

Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	0.39	0.57	0.04	1.00	0.41	0.59	1.00	1.66	0.34	1.00	1.49	0.51
Final Sat.:	214	309	25	516	243	354	487	878	182	511	840	296

Capacity Analysis Module:

Vol/Sat:	0.31	0.31	0.31	0.12	0.28	0.28	0.15	0.10	0.10	0.02	0.27	0.26
Crit Moves:	****					****	****			****		
Delay/Veh:	11.9	11.9	11.9	10.2	10.4	10.4	10.8	9.8	9.6	9.5	10.9	10.5
Delay Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	11.9	11.9	11.9	10.2	10.4	10.4	10.8	9.8	9.6	9.5	10.9	10.5
LOS by Move:	B	B	B	B	B	B	B	A	A	A	B	B
ApproachDel:		11.9			10.3			10.2			10.8	
Delay Adj:		1.00			1.00			1.00			1.00	
ApprAdjDel:		11.9			10.3			10.2			10.8	
LOS by Appr:		B			B			B			B	
AllWayAvgQ:	0.4	0.4	0.4	0.1	0.3	0.3	0.2	0.1	0.1	0.0	0.3	0.3

AM Background Plus Project (2009)  
 TTM No 34760 Residential Development, Corona  
 Linscott, Law and Greenspan, Engineers

Level Of Service Computation Report  
 2000 HCM Unsignalized Method (Future Volume Alternative)

\*\*\*\*\*  
 Intersection #2 Malaga Street at Upper Drive  
 \*\*\*\*\*

Average Delay (sec/veh): 1 3 Worst Case Level Of Service: B[ 10 8]  
 \*\*\*\*\*

Street Name:	Malaga Street						Upper Drive								
	North Bound			South Bound			East Bound			West Bound					
Approach:	L - T - R			L - T - R			L - T - R			L - T - R					
Movement:															
Control:	Stop Sign			Stop Sign			Uncontrolled			Uncontrolled					
Rights:	Include			Include			Include			Include					
Lanes:	0	0	1	0	0	0	0	0	0	1	0	1	0	0	0

Volume Module:	North Bound			South Bound			East Bound			West Bound		
Base Vol:	16	0	17	0	0	0	0	135	8	8	266	0
Growth Adj:	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04
Initial Bse:	17	0	18	0	0	0	0	140	8	8	277	0
Added Vol:	11	0	8	0	0	0	0	0	4	2	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	28	0	26	0	0	0	0	140	12	10	277	0
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
PHF Volume:	29	0	27	0	0	0	0	148	13	11	291	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Final Volume:	29	0	27	0	0	0	0	148	13	11	291	0

Critical Gap Module:	North Bound			South Bound			East Bound			West Bound		
Critical Gp:	6.4	6.5	6.2	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	4.1	xxxx	xxxxx
FollowUpTim:	3.5	4.0	3.3	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	2.2	xxxx	xxxxx

Capacity Module:	North Bound			South Bound			East Bound			West Bound		
Cnflct Vol:	467	467	154	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	161	xxxx	xxxxx
Potent Cap :	558	496	897	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	1431	xxxx	xxxxx
Move Cap :	555	493	897	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	1431	xxxx	xxxxx
Volume/Cap:	0.05	0.00	0.03	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	0.01	xxxx	xxxx

Level Of Service Module:	North Bound			South Bound			East Bound			West Bound		
2Way95thQ:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	0	0	xxxxx
Control Del:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	7	5	xxxxx
LOS by Move:	*	*	*	*	*	*	*	*	*	A	*	*
Movement:	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	
Shared Cap :	xxxx	679	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
SharedQueue:	xxxxx	0.3	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Shrd ConDel:	xxxxx	10.8	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Shared LOS:	*	B	*	*	*	*	*	*	*	*	*	*
ApproachDel:	10.8			xxxxxx			xxxxxx			xxxxxx		
ApproachLOS:	B			*			*			*		

Note: Queue reported is the number of cars per lane  
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AM Background Plus Project (2009)  
 TTM No 34760 Residential Development, Corona  
 Linscott, Law and Greenspan, Engineers

Level of Service Computation Report  
 2000 HCM 4-Way Stop Method (Future Volume Alternative)

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Intersection #3 Main Street at Upper Drive

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Cycle (sec): 100 Critical Vol /Cap (X): 0 701  
 Loss Time (sec): 0 (Y+R=4 0 sec) Average Delay (sec/veh): 14 2  
 Optimal Cycle: 0 Level of Service: B  
 \*\*\*\*\*

Street Name:	Main Street						Upper Drive					
	North Bound			South Bound			East Bound			West Bound		
Approach:	L	T	R	L	T	R	L	T	R	L	T	R
Movement:												
Control:	Stop Sign			Stop Sign			Stop Sign			Stop Sign		
Rights:	Include			Include			Include			Include		
Min Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	1	0	0	1	0	0	1	0	0	1	0	0

Volume Module:	Main Street			Main Street			Upper Drive			Upper Drive		
Base Vol:	10	34	14	92	23	65	104	69	16	12	144	300
Growth Adj:	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04
Initial Bse:	10	35	15	96	24	68	108	72	17	12	150	312
Added Vol:	0	0	0	0	0	2	5	3	0	0	1	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	10	35	15	96	24	70	113	75	17	12	151	312
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
PHF Volume:	11	37	15	101	25	73	119	79	18	13	159	328
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	11	37	15	101	25	73	119	79	18	13	159	328
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
Final Volume:	11	37	15	101	25	73	119	79	18	13	159	328

Saturation Flow Module:	Main Street			Main Street			Upper Drive			Upper Drive		
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	0.71	0.29	1.00	0.26	0.74	1.00	0.82	0.18	1.00	0.33	0.67
Final Sat.:	460	359	148	489	145	423	548	496	110	578	226	468

Capacity Analysis Module:	Main Street			Main Street			Upper Drive			Upper Drive		
Vol/Sat:	0.02	0.10	0.10	0.21	0.17	0.17	0.22	0.16	0.16	0.02	0.70	0.70
Crit Moves:	****			****			****			****		
Delay/Veh:	10.0	9.8	9.8	11.2	9.7	9.7	10.7	9.4	9.4	8.9	18.3	18.3
Delay Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	10.0	9.8	9.8	11.2	9.7	9.7	10.7	9.4	9.4	8.9	18.3	18.3
LOS by Move:	A	A	A	B	A	A	B	A	A	A	C	C
ApproachDel:	9.8			10.4			10.1			18.1		
Delay Adj:	1.00			1.00			1.00			1.00		
ApprAdjDel:	9.8			10.4			10.1			18.1		
LOS by Appr:	A			B			B			C		
AllWayAvgQ:	0.0	0.1	0.1	0.2	0.2	0.2	0.3	0.2	0.2	0.0	2.0	2.0

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PM Background Plus Project (2009)  
 TTM No 34760 Residential Development, Corona  
 Linscott, Law and Greenspan, Engineers

Level Of Service Computation Report

2000 HCM 4-Way Stop Method (Future Volume Alternative)

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Intersection #1 Mountain Gate Drive at Lincoln Drive/Upper Drive

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Cycle (sec): 100 Critical Vol /Cap (X): 0 230  
 Loss Time (sec): 0 (Y+R=4 0 sec) Average Delay (sec/veh): 9 3  
 Optimal Cycle: 0 Level Of Service: A

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Street Name:	Mountain Gate Drive						Lincoln Drive/Upper Drive								
	North Bound			South Bound			East Bound			West Bound					
Approach:	L	T	R	L	T	R	L	T	R	L	T	R			
Control:	Stop Sign			Stop Sign			Stop Sign			Stop Sign					
Rights:	Include			Include			Include			Include					
Min Green:	0	0	0	0	0	0	0	0	0	0	0	0			
Lanes:	0	0	1	0	0	1	0	0	1	0	1	0	1	1	0

Volume Module:

Base Vol:	19	41	8	7	58	27	44	240	29	4	83	17
Growth Adj:	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04
Initial Bse:	20	43	8	7	60	28	46	250	30	4	86	18
Added Vol:	0	0	0	2	0	0	0	11	0	0	7	1
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	20	43	8	9	60	28	46	261	30	4	93	19
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
PHF Volume:	21	45	9	10	63	30	48	274	32	4	98	20
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	21	45	9	10	63	30	48	274	32	4	98	20
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:	21	45	9	10	63	30	48	274	32	4	98	20

Saturation Flow Module:

Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	0.28	0.60	0.12	1.00	0.68	0.32	1.00	1.79	0.21	1.00	1.67	0.33
Final Sat.:	165	357	70	544	419	195	601	1191	140	547	1006	206

Capacity Analysis Module:

Vol/Sat:	0.13	0.13	0.13	0.02	0.15	0.15	0.08	0.23	0.23	0.01	0.10	0.10
Crit Moves:	****			****			****			****		
Delay/Veh:	9.5	9.5	9.5	9.1	9.1	9.1	9.0	9.5	9.3	9.0	8.9	8.8
Delay Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	9.5	9.5	9.5	9.1	9.1	9.1	9.0	9.5	9.3	9.0	8.9	8.8
LOS by Move:	A	A	A	A	A	A	A	A	A	A	A	A
ApproachDel:		9.5			9.1			9.4			8.9	
Delay Adj:		1.00			1.00			1.00			1.00	
ApprAdjDel:		9.5			9.1			9.4			8.9	
LOS by Appr:		A			A			A			A	
AllWayAvgQ:	0.1	0.1	0.1	0.0	0.2	0.2	0.1	0.3	0.3	0.0	0.1	0.1

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PM Background Plus Project (2009)  
 TTM No 34760 Residential Development, Corona  
 Linscott, Law and Greenspan, Engineers

Level Of Service Computation Report  
 2000 HCM Unsignalized Method (Future Volume Alternative)

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 Intersection #2 Malaga Street at Upper Drive  
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Average Delay (sec/veh): 1 5 Worst Case Level Of Service: B[ 10 9]

Street Name:	Malaga Street						Upper Drive					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Stop Sign			Stop Sign			Uncontrolled			Uncontrolled		
Rights:	Include			Include			Include			Include		
Lanes:	0	0	1! 0 0	0	0	0 0 0	0	0	0 1 0	1	0	1 0 0

Volume Module:

Base Vol:	9	0	15	0	0	0	0	250	9	21	97	0
Growth Adj:	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04
Initial Bse:	9	0	16	0	0	0	0	260	9	22	101	0
Added Vol:	8	0	5	0	0	0	0	0	13	9	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	17	0	21	0	0	0	0	260	22	31	101	0
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
PHF Volume:	18	0	22	0	0	0	0	274	24	32	106	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Final Volume:	18	0	22	0	0	0	0	274	24	32	106	0

Critical Gap Module:

Critical Gp:	6.4	6.5	6.2	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	4.1	xxxx	xxxxx
FollowUpTim:	3.5	4.0	3.3	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	2.2	xxxx	xxxxx

Capacity Module:

Cnflct Vol:	457	457	285	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	297	xxxx	xxxxx
Potent Cap.:	566	503	758	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	1276	xxxx	xxxxx
Move Cap.:	555	490	758	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	1276	xxxx	xxxxx
Volume/Cap:	0.03	0.00	0.03	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	0.03	xxxx	xxxx

Level Of Service Module:

2Way95thQ:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	0.1	xxxx	xxxxx
Control Del:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	7.9	xxxx	xxxxx
LOS by Move:	*	*	*	*	*	*	*	*	*	A	*	*
Movement:	LT	LTR	RT	LT	LTR	RT	LT	LTR	RT	LT	LTR	RT
Shared Cap.:	xxxx	649	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
Shared Queue:	xxxxx	0.2	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Shrd ConDel:	xxxxx	10.9	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Shared LOS:	*	B	*	*	*	*	*	*	*	*	*	*
ApproachDel:	10.9			xxxxxx			xxxxxx			xxxxxx		
ApproachLOS:	B			*			*			*		

Note: Queue reported is the number of cars per lane  
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PM Background Plus Project (2009)  
 TTM No 34760 Residential Development, Corona  
 Linscott, Law and Greenspan, Engineers

Level Of Service Computation Report  
 2000 HCM 4-Way Stop Method (Future Volume Alternative)

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Intersection #3 Main Street at Upper Drive

Cycle (sec): 100 Critical Vol /Cap (X): 0 388  
 Loss Time (sec): 0 (Y+R=4 0 sec) Average Delay (sec/veh): 10 3  
 Optimal Cycle: 0 Level Of Service: B  
 \*\*\*\*\*

Street Name:	Main Street						Upper Drive					
	North Bound			South Bound			East Bound			West Bound		
Approach:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Stop Sign			Stop Sign			Stop Sign			Stop Sign		
Rights:	Include			Include			Include			Include		
Min Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	1	0	0	1	0	0	1	0	0	1	0	0

Volume Module:	Main Street			Main Street			Upper Drive			Upper Drive		
Base Vol:	7	13	22	111	33	68	43	213	12	9	87	75
Growth Adj:	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04
Initial Bse:	7	14	23	115	34	71	45	222	12	9	90	78
Added Vol:	0	0	0	0	0	6	3	2	0	0	3	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	7	14	23	115	34	77	48	224	12	9	93	78
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
PHF Volume:	8	14	24	122	36	81	50	235	13	10	98	82
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	8	14	24	122	36	81	50	235	13	10	98	82
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
Final Volume:	8	14	24	122	36	81	50	235	13	10	98	82

Saturation Flow Module:	Main Street			Main Street			Upper Drive			Upper Drive		
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	0.37	0.63	1.00	0.31	0.69	1.00	0.95	0.05	1.00	0.55	0.45
Final Sat :	508	218	369	544	197	441	581	607	34	565	356	297

Capacity Analysis Module:	Main Street			Main Street			Upper Drive			Upper Drive		
Vol/Sat:	0.02	0.07	0.07	0.22	0.18	0.18	0.09	0.39	0.39	0.02	0.28	0.28
Crit Moves:	****			****			****			****		
Delay/Veh:	9.4	8.7	8.7	10.7	9.1	9.1	9.2	11.4	11.4	8.9	9.9	9.9
Delay Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	9.4	8.7	8.7	10.7	9.1	9.1	9.2	11.4	11.4	8.9	9.9	9.9
LOS by Move:	A	A	A	B	A	A	A	B	B	A	A	A
ApproachDel:	8.8			9.9			11.0			9.9		
Delay Adj:	1.00			1.00			1.00			1.00		
ApprAdjDel:	8.8			9.9			11.0			9.9		
LOS by Appr:	A			A			B			A		
AllWayAvgQ:	0.0	0.1	0.1	0.3	0.2	0.2	0.1	0.6	0.6	0.0	0.3	0.3

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