
**TRAFFIC
COMMISSION
REGULAR
MEETING**



**SEPTEMBER 19, 2012
7:00 PM**

AGENDA

Tim Hillis - Chair

**Ed Rowe - Vice Chair
Pamela Dow - Commissioner**

**Rick Frazier - Commissioner
Donald Froelich - Commissioner**

Location: City Council Chamber, 24035 El Toro Road, Laguna Hills, California 92653

Any person wishing to address the Traffic Commission on any matter, whether or not it appears on this Agenda, is asked to complete a "Request to Speak" form available on the table at the back of the Chamber. The completed form is to be submitted to the Recording Secretary prior to an individual being heard by the Traffic Commission.

Members of the public wishing to address the Traffic Commission can do so during the Public Comments portion of the Agenda with a time limitation of three minutes per person, an overall time limit of ten minutes for any one subject, and a total time limit of thirty minutes for Public Comments. If you are commenting on an Agenda item, your comments will be heard at the time that item is scheduled on the Agenda. If you are addressing the Commission on an item not listed on the Agenda, the Traffic Commission is prohibited by law from discussing or taking any action on that item.

CALL TO ORDER

Resolution No. 96-04-09-1 established rules of decorum for public meetings held by the City of Laguna Hills. Resolution No. 96-04-09-1 is available on the table at the back of the City Council Chamber.

PLEDGE OF ALLEGIANCE

ROLL CALL OF COMMISSION MEMBERS

1. PUBLIC COMMENTS

This is the time to address the Traffic Commission on any matter not listed on this Agenda that is within the subject matter jurisdiction of the Commission. Public Comments are limited to three minutes per person, an overall time limit of ten minutes for any one subject, and a total time limit of thirty minutes.

2. MINUTES

3. PRESENTATIONS**4. ADMINISTRATIVE REPORTS****4.1 EQUESTRIAN TRAIL CROSSING EVALUATION**

RECOMMENDATION: THAT THE TRAFFIC COMMISSION RECOMMEND TO THE CITY COUNCIL: (1) THE ADDITION OF SIGNAGE AND STRIPING AS DEPICTED IN THE ATTACHED VICINITY MAPS AT THE EQUESTRIAN TRAIL CROSSINGS OF NELLIE GAIL ROAD EAST OF LOST COLT DRIVE AND NOTTINGHAM COURT SOUTH OF OSO PARKWAY; (2) IMPLEMENTATION OF ADDITIONAL TRAFFIC SPEED ENFORCEMENT; AND (3) ESTABLISHMENT OF AN EQUESTRIAN AD HOC COMMITTEE TO PRIORITIZE AND EVALUATE EQUESTRIAN TRAIL CROSSINGS IN THE COMMUNITY.

4.2 SIGHT DISTANCE ANALYSIS AT PASEO DE VALENCIA SOUTH OF ALICIA PARKWAY AT THE "RALPHS" ENTRANCE

RECOMMENDATION: THAT THE TRAFFIC COMMISSION RECEIVE AND FILE THIS REPORT.

5. INFORMATIONAL ITEMS**5.1 RADAR SPEED TRAILER****5.2 SHERIFF'S DEPARTMENT VERBAL REPORT****6. COMMISSIONER COMMENTS****7. ADJOURNMENT**

The next Regular Meeting of the Traffic Commission will be November 21, 2012, in the City Council Chamber, located at 24035 El Toro Road, Laguna Hills, California.

CERTIFICATION

I, HUMZA JAVED, Associate Civil Engineer of the City of Laguna Hills, do hereby certify that a copy of the foregoing Agenda was posted at Laguna Hills City Hall, Laguna Hills Community Center, and La Paz Center by Friday, September 14, 2012, at 5:00PM.



HUMZA JAVED
ASSOCIATE CIVIL ENGINEER

September 14, 2012
DATE

In compliance with the Americans with Disabilities Act, if you need special assistance to participate in this meeting, you should contact the office of the City Engineer at (714) 707-2650. Notification 48 hours prior to the meeting will enable the City to make reasonable arrangements to assure access.

Materials related to an item on this Agenda submitted to the Commission after distribution of the Agenda packet are available for public inspection in the Public Services Department at 24035 El Toro Road, Laguna Hills, California, during normal business hours.

**CITY OF LAGUNA HILLS, CALIFORNIA
TRAFFIC COMMISSION MEETING
MINUTES
JULY 18, 2012**

CALL TO ORDER

The Regular Meeting of the Traffic Commission of the City of Laguna Hills, California, was called to order by Chair Tim Hillis at 7:00 p.m. in the Laguna Hills City Council Chamber, 24035 El Toro Road, Laguna Hills.

PLEDGE OF ALLEGIANCE:

Chair Tim Hillis led the Pledge of Allegiance.

ROLL CALL OF COMMISSION MEMBERS:

Present: Tim Hillis, Chair
 Ed Rowe, Vice Chair
 Pamela Dow, Commissioner
 Donald Froelich, Commissioner

Absent: Rick Frazier, Commissioner

Staff Present: Humza Javed, Associate Civil Engineer; Cindy Sands,
 Administrative Assistant

1. PUBLIC COMMENTS

Ms. Bonnie Adams, a resident of Lost Colt Drive, presented the Traffic Commission with a Petition for Improving the Safety of Nellie Gail Equestrian Street Crossings and thanked the Traffic Commission for the recent improvements made to the equestrian crosswalks with signage and pavement markings. Ms. Adams stated that in her opinion it is not the visibility of the horses but the excessive speeds in which drivers approach the equestrian street crossings and reported that the crossing at Nellie Gail Road just above Lost Colt Drive is her greatest concern. Ms. Adams requested that the Traffic Commission consider the installation of blinking crosswalk lights and speed bumps or Botts dots at Lost Colt Drive and Nellie Gail Road and other equestrian crosswalks in Nellie Gail. Chair Hillis requested that this item be reviewed and addressed at the Traffic Commission meeting of September 19, 2012.

2. APPROVAL OF MINUTES

IT WAS MOVED BY COMMISSIONER PAMELA DOW, SECONDED BY COMMISSIONER ED ROWE, TO APPROVE THE MINUTES OF THE MAY 16, 2012, TRAFFIC COMMISSION MEETING.

The motion carried by the following vote:

AYES: Commissioners Dow, Froelich, Vice Chair Rowe, and Chair Hillis

NOES:

ABSENT: Commissioner Frazier

3. PRESENTATIONS

None

4. ADMINISTRATIVE REPORTS

4.1 SCHOOL AND SPEED LIMIT SIGNAGE AROUND VALENCIA ELEMENTARY SCHOOL

Staff stated that City Council requested a review of the school and speed limit signage in the vicinity of Valencia Elementary School. As a result of this request, staff performed a field review to compare the current signage with guidelines listed in the 2012 California Manual on Uniform Traffic Control Devices (MUTCD) and determined that sign modifications are necessary to be in compliance with current State standards. Staff is recommending that School Advance Warning Assembly D(CA) and School Speed Limit Assembly C(CA) signage be installed in the vicinity of Valencia Elementary School in all directions as traffic approaches the school crosswalk.

Commissioner Froelich inquired as to if all schools in Laguna Hills were in compliance. Staff reported that a review would be performed at all schools and modifications will be recommended to meet current standards.

MOTION WAS MADE BY COMMISSIONER FROELICH, SECONDED BY COMMISSIONER DOW, TO RECOMMEND TO THE CITY COUNCIL THE SIGNAGE MODIFICATIONS IN THE VICINITY OF VALENCIA ELEMENTARY SCHOOL AS SHOWN IN EXHIBIT B.

The motion carried by the following vote:

AYES: Commissioners Dow, Froelich, Vice Chair Rowe,
Chair Hillis

NOES:

ABSENT: Vice Chair Frazier

5. INFORMATIONAL ITEMS

5.1 ENFORCEMENT OF OVERSIZED VEHICLE AND OVERSIZED COMMERCIAL VEHICLE PARKING REGULATIONS

Staff stated that this informational item is in regards to the City's ability to enforce parking regulations as stated in the Laguna Hills Municipal Code (LHMC) Chapter 11-12. In the past, staff has questioned the ability to enforce these parking regulations because the State does not allow local governments to make distinctions between classes of vehicles when adopting parking regulations; however, the City Attorney has looked into recent court cases and found that the City may adopt regulations that apply to limited classes of vehicles such as "oversized" vehicles or "oversized commercial" vehicles provided adequate notice is given. To improve the clarity of the City's regulations, staff will propose changes to the City's Municipal Code and current signage will be modified to reflect current regulations.

5.2 RADAR TRAILER SCHEDULE FOR AUGUST/SEPTEMBER

Staff submitted the planned schedule for deployment of the radar trailer and stated the Commission is welcome to make suggestions for other locations.

5.3 SHERIFF'S DEPARTMENT VERBAL REPORT

Staff not available.

6. COMMISSIONER COMMENTS

Commissioner Froelich requested information on the completion of the La Paz/I-5 Project.

7. ADJOURNMENT

There being no further business before the Traffic Commission at this session, Chair Hillis declared the meeting adjourned at 7:35 p.m. to the meeting of September 19, 2012.

Prepared by:

Approved by:

Humza Javed, P.E.
Associate Civil Engineer

Tim Hillis
Chair

**CITY OF LAGUNA HILLS
TRAFFIC COMMISSION
AGENDA REPORT
TRAFFIC ENGINEER DEPARTMENT**

ISSUE: EQUESTRIAN TRAIL CROSSING EVALUATION

SUMMARY:

Recently, a community member approached the Traffic Commission with concerns about certain equestrian trail crossing locations in the Nellie Gail Ranch community. The primary concern presented was speeding vehicles not yielding to equestrians that are attempting to cross a public street. The resident suggested the installation of various traffic control devices at selected equestrian trail crossings. Staff implemented a standard traffic speed and volume data collection effort at the two locations initially requested by the resident (Nellie Gail Road at Lost Colt Drive and Nottingham Court at Oso Parkway). The analysis and field review determined that traffic volumes are low, traffic speeds are above acceptable levels, there is no traffic collision history, and there is justification to enhance the traffic control signage and markings. In accordance with the Residential Streets Traffic Management Policy, staff is recommending an incremental approach to address vehicular speeding and improving visibility of the equestrian crossings to motorists. Increased law enforcement, the use of the radar trailer, additional warning signs and pavement markings are recommended as detailed in this report. It is also recommended that an ad hoc equestrian committee be formed to expand the review of additional equestrian trail crossing locations.

BACKGROUND:

At the Traffic Commission meeting of July 18, 2012, Ms. Bonnie Adams, a resident of Lost Colt Drive, addressed the Traffic Commission regarding equestrian trail crossing safety in the Nellie Gail Ranch community. She generally discussed various crossings throughout the community but focused her concerns upon the locations of Nellie Gail Road east of Lost Colt Drive and Nottingham Court south of Oso Parkway. Ms. Adams' concerns included vehicle speed and vehicles failing to yield to equestrians attempting to cross a public street. In order to address these concerns, Ms. Adams suggested the installation of various traffic control devices including in-roadway crosswalk pavement

RECOMMENDATION: THAT THE TRAFFIC COMMISSION RECOMMEND TO THE CITY COUNCIL: (1) THE ADDITION OF SIGNAGE AND STRIPING AS DEPICTED IN THE ATTACHED VICINITY MAPS AT THE EQUESTRIAN TRAIL CROSSINGS OF NELLIE GAIL ROAD EAST OF LOST COLT DRIVE AND NOTTINGHAM COURT SOUTH OF OSO PARKWAY; (2) IMPLEMENTATION OF ADDITIONAL TRAFFIC SPEED ENFORCEMENT; AND (3) ESTABLISHMENT OF AN EQUESTRIAN AD HOC COMMITTEE TO PRIORITIZE AND EVALUATE EQUESTRIAN TRAIL CROSSINGS IN THE COMMUNITY.

lighting, speed bumps, rumble strips, painted crosswalks, flashing signage, etc. Staff provided Ms. Adams with a copy of the City's Residential Streets Traffic Management Policy and held a field meeting with her to discuss traffic control standards.

In 2007-2008, City staff met multiple times with an ad hoc committee of residents interested in equestrian trail crossings of public streets. Through this process, a dozen equestrian trail crossing locations were identified and reviewed. An "Equestrian Sign Package," attached, was created based upon the California Manual of Uniform Traffic Control Devices (MUTCD) and comments received from the ad hoc committee through which enhanced traffic controls were implemented at the identified locations. A copy of the power point presentation presented at the April 10, 2007, City Council meeting is also included as an attachment to this report. In the past review, in addition to the sign package, staff recommended the equestrian crossing activity be shifted to nearby intersections, if feasible.

In response to the concerns expressed about current equestrian trial crossing safety, staff contracted the services of its Consulting Traffic Engineers, Hartzog & Crabill, Inc., to perform speed and traffic data collection efforts and field reviews at the two aforementioned locations in accordance with City policy. A full week of 24-hour speed and volume data was obtained, a radar spot speed study was performed, a field review was performed, and traffic collision histories were reviewed. Please see the attached September 12, 2012, report.

In order to provide an overall picture of traffic speed trends, a seven-day data collection effort was undertaken. This data collection effort provides information on traffic speeds in "5 mph" increments and is not a radar spot speed study. Accordingly, the speed data represents a trend and cannot be used, for example, to evaluate speed limits. Nevertheless, the data can be manipulated to estimate the 85th percentile speed, the speed at which 85 percent of the motorists are traveling at or below, also known as the "prevailing speed." The results of this data collection by location and direction are shown in the table below.

<i>Locations</i>	<i>Traffic Volume</i>	<i>85th Percentile Speed</i>
W/B Nellie Gail Road e/o Lost Colt Drive	667	38 mph
E/B Nellie Gail Road e/o Lost Colt Drive	741	35 mph
N/B Nottingham Court s/o Oso Parkway	586	35mph
S/B Nottingham Court s/o Oso Parkway	603	33mph

The City has performed numerous radar speed studies on residential streets. The combination of these years of studies has found that the prevailing speed of traffic on residential streets is typically in the range of 32 to 34 mph and this prevailing speed does not result in traffic safety issues. The City's Residential Streets Management Policy recognizes this traffic speed range as typical and not one, in and of itself, which triggers

the need for changes to traffic control. Based upon the table above, traffic speed enforcement is appropriate for both equestrian trail crossing locations discussed herein as the traffic speed is slightly above the expected range. To confirm the findings of the speed increment data, a radar spot speed measurement was also taken at both equestrian trail crossing locations. The prevailing speed at the Nellie Gail Road location was found to be 36 mph and at the Nottingham Drive locations was found to be 34 mph. These prevailing speeds from the radar speed study confirm the need for speed enforcement. A site specific review of the equestrian trail crossings follows:

Nellie Gail Road e/o Lost Colt Drive

Nellie Gail Road is a curvilinear two-lane residential roadway with both vertical and horizontal curves at the crossing location. On-street parking is not prohibited at or near this location and there is residential frontage. The posted speed limit is 25 mph. The equestrian crossing is not at an intersection. Upon crossing Nellie Gail Road, in the northerly direction, the equestrian needs to travel westerly over a Nellie Gail equestrian easement to connect to the equestrian trail. Please see attached vicinity map. In reviewing the table above, traffic volumes are low; however, the prevailing speeds in both directions exceed the typical 32-34 mph prevailing speed for a residential roadway. Therefore, vehicular speed is a concern at this location. A review of the past three years of traffic collision history found no history of collisions at this location.

Current signage at the location in both directions includes a diamond Equestrian Warning Sign, Equestrian Crossing Sign, and an arrow sign pointing downward to the location of the crossing. In order to improve identification of the equestrian crossing, staff is recommending the following additions in accordance with the Equestrian Sign Package.

- Installation of advance "EQUESTRIAN" warning signs in both directions approximately 350 feet in advance of the crossing;
- Installation of "HORSE XING" pavement markings in both directions approximately 305 feet in advance of the crossing;
- Installation of white chevrons to delineate the crossing location.

In addition to the foregoing, trimming of private vegetation to optimize the site visibility, the placement of the radar trailer, and increased law enforcement is recommended.

Nottingham Court s/o Oso Parkway

Nottingham Court is a curvilinear two-lane residential roadway with a vertical and horizontal curve at this location. On-street parking is not prohibited at or near this location and there is residential frontage southerly of this location. The posted speed limit is 25 mph. From the table above, traffic volumes are low and the prevailing speed is at the upper range of the typical prevailing speed for a residential roadway. A review of the past three years of traffic collision history found no history of traffic collisions at this location. Please see attached vicinity map.

Current signage at the location in both directions includes a diamond Equestrian Warning Sign, Equestrian Crossing Sign, and an arrow sign pointing downward to the location of the crossing. "Horse Xing" pavement markings and another diamond Equestrian Warning Sign is located in the northbound direction in advance of the crossing. In order to improve identification of the equestrian crossing, staff is recommending the following in accordance with its Equestrian Sign Package.

- Installation of advance "EQUESTRIAN" warning sign in the southbound direction in advance of the crossing;
- Installation of white chevrons to delineate the crossing location.

In addition, trimming of vegetation in order to optimize the site visibility, the placement of the radar trailer, and increased law enforcement is recommended.

The additional signage and striping at these two locations will provide additional warnings to the motorist that will alert them to the equestrian crossings. It is recommended that these improvements be installed, along with implementation of speed enforcement, and then be reviewed in six months for their effectiveness.

ALTERNATE TRAFFIC CONTROL DEVICES

Hartzog & Crabill, Inc. was requested to review other physical traffic control devices as requested by Ms. Adams and a detailed explanation is provided in the attached report. A summary is provided below:

Marked Crosswalks

In accordance with the California MUTCD, both of the aforementioned locations are not justified for installation of marked crosswalks due to low pedestrian activity. Furthermore, studies have clearly shown that marked mid-block crosswalks at uncontrolled locations (no signal or stop sign) have higher collision rates than at unmarked crosswalks. This is believed to be due to the false sense of security that pedestrians feel while in the crosswalk. No crosswalk markings are recommended at the studied locations.

In-Roadway Warning Lights

In accordance with the California MUTCD, both of the aforementioned locations are not justified for the installation of in-roadway warning lights due to low pedestrian activity and low vehicular volume.

Speed Humps

In accordance with the City's Residential Streets Management Policy speed humps cannot be justified at the locations due to the steep grade of the roadways (maximum

allowed grade is 6%) and also due to low traffic volume (minimum 1,500 vehicles per 24-hour period is the required volume).

In order to review additional equestrian crossings as requested by Ms. Adams, it is proposed that an ad hoc equestrian committee be formed. By doing this, all of the equestrian community's concerns can be reviewed concurrently. The committee will be able to work with City staff and the City's Consulting Traffic Engineers, Hartzog & Crabill, Inc., in order to effectively address safety concerns at other equestrian crossings.

FISCAL IMPACT:

The installation of the recommended signage and markings has an estimated cost of \$1,500 and funds are available for this work in the 2012-2013 Fiscal Year Public Works Maintenance Budget.

RECOMMENDATION: THAT THE TRAFFIC COMMISSION RECOMMEND TO THE CITY COUNCIL: (1) THE ADDITION OF SIGNAGE AND STRIPING AS DEPICTED IN THE ATTACHED VICINITY MAPS AT THE EQUESTRIAN TRAIL CROSSINGS OF NELLIE GAIL ROAD EAST OF LOST COLT DRIVE AND NOTTINGHAM COURT SOUTH OF OSO PARKWAY; (2) IMPLEMENTATION OF ADDITIONAL TRAFFIC SPEED ENFORCEMENT; AND (3) ESTABLISHMENT OF AN EQUESTRIAN AD HOC COMMITTEE TO PRIORITIZE AND EVALUATE EQUESTRIAN TRAIL CROSSINGS IN THE COMMUNITY.

ATTACHMENTS:

- Equestrian Standard Sign Package
- Vicinity Maps
- Hartzog and Crabill, Inc. report, September 12, 2012
- April 10, 2007 Powerpoint Presentation

Typical Layout & Warning Signs

“Sign package”

W11-7



W11-7P



W16-7P



W11-7, W11-7P

350'

W11-7

HORSE

XING

XING
HORSE

PROPOSED
EQUESTRIAN
CROSSING

350'

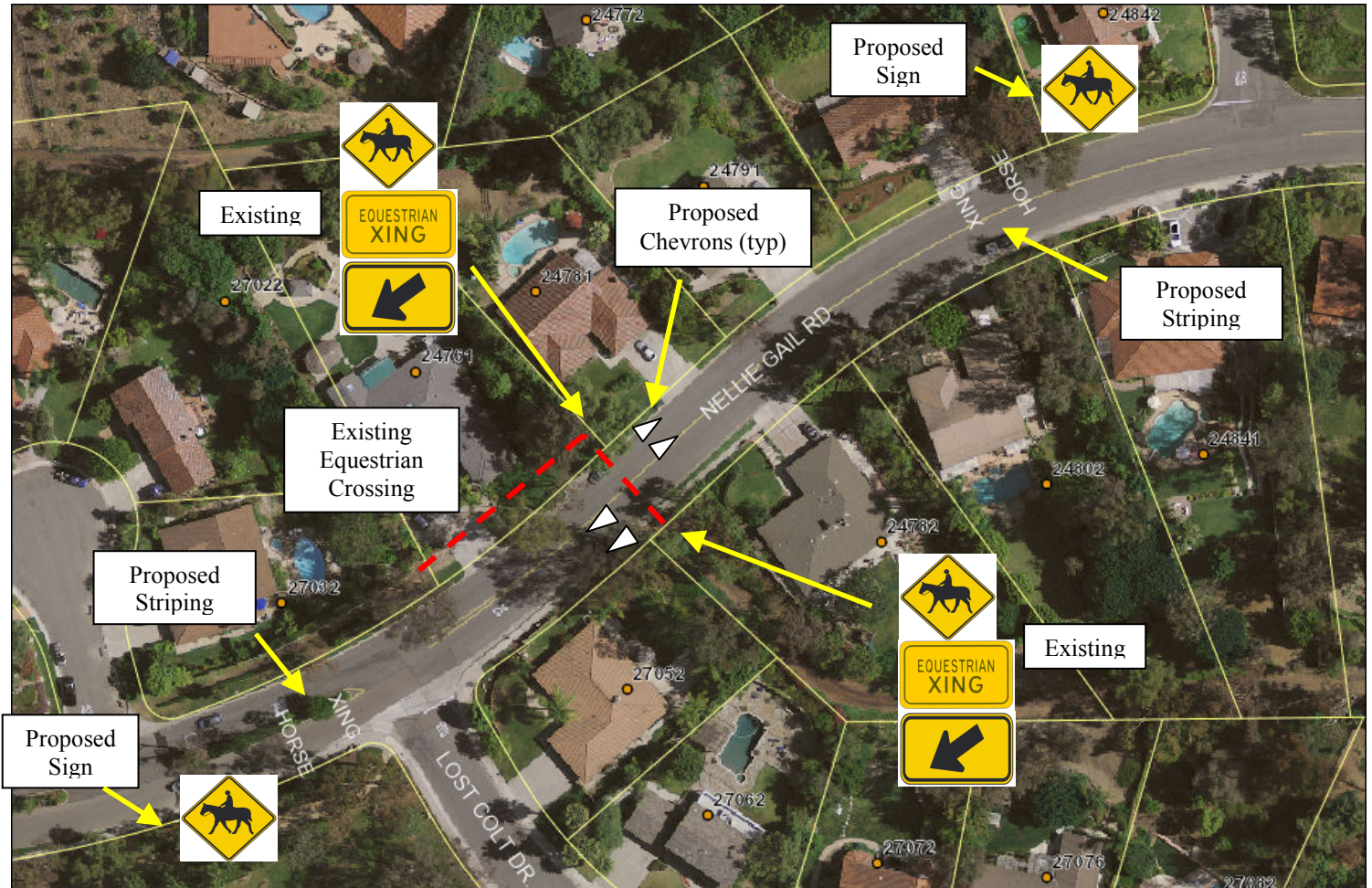
W11-7, W11-7P, W16-7P

W11-7

*Addition of Chevron or Arrow Head is an option to further point out the crossing location

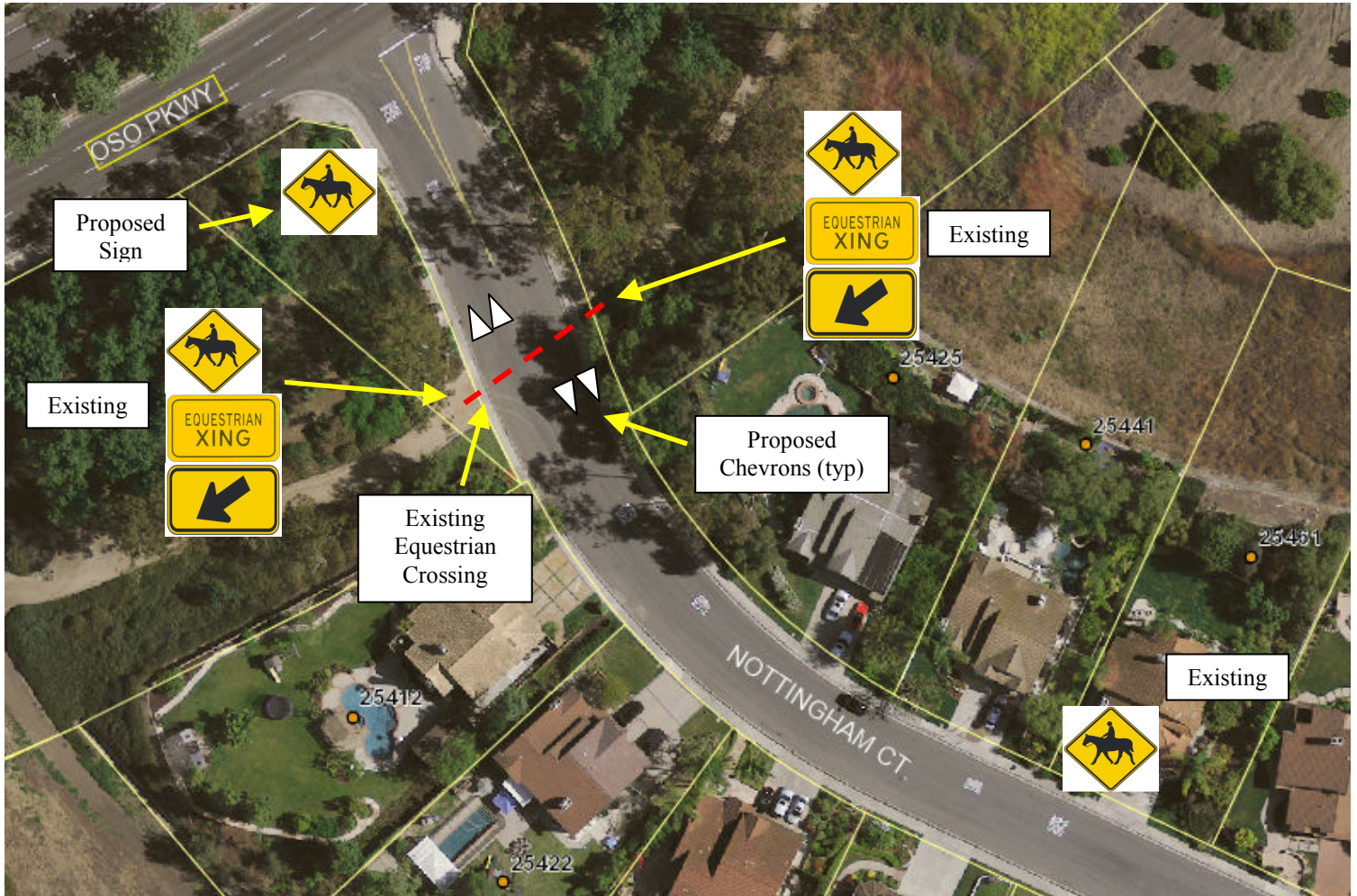
VICINITY MAP

NELLIE GAIL RD. EAST OF LOST COLT DR. EQUESTRIAN CROSSING IMPROVEMENTS



VICINITY MAP

NOTTINGHAM CT. SOUTH OF OSO PKWY. EQUESTRIAN CROSSING IMPROVEMENTS





Trammell Hartzog, President
Jerry Crabill, P.E. (Retired)
Gerald J. Stock, P.E.,
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www.hartzog-crabill.com

September 12, 2012

TO: Ken Rosenfield PE, Director of Public Works
City of Laguna Hills

FROM: Jerry Stock PE, Consulting Traffic Engineer
Hartzog & Crabill, Inc.

SUBJECT: Equestrian Crossing Concerns at Two Locations –
Nellie Gail Road at Lost Colt Drive
Nottingham Court Near Oso Parkway

BACKGROUND

The City recently received correspondence from a resident regarding equestrian safety at two existing equestrian crossings. The first crossing is located on Nellie Gail Road just east of Lost Colt Drive, and the second crossing is located on Nottingham Court just south of Oso Parkway.

The concerns presented are that motorists are failing to yield to equestrians at the subject crossings. In addition, concerns of vehicle speeding were also expressed. The resident suggested yellow YIELD pavement markings be painted accompanied by a painted “brightly colored cross hatched crosswalk”. The resident also suggested installation of “blinking lights” at the Nellie Gail/Lost Colt crossing, and the possible use of rubber pavers, typically used as flooring in horse barns, to replace the concrete sidewalk on the equestrian trail.

In response to the concerns and suggestions presented, the City requested Hartzog & Crabill, Inc. (HCI) to complete an analysis at both locations.

Prior Equestrian Crossing Analysis

In recent years, an Equestrian Crossing Alternatives (ECA) analysis was completed by HCI and presented to the members of the Nellie Gail Equestrian Ad Hoc Committee. That analysis looked at 12 equestrian crossings in the City. The Nellie Gail/Lost Colt crossing was not considered problematic at that time and consequently was not included as one of the 12 study crossings; however, the Nottingham/Oso crossing was one of the 12 crossings evaluated.

The ECA identified several options for enhancing equestrian crossing safety. These options included clearing of vegetation to ensure clear sight lines, and installation of pavement markings and an advanced sign assembly.

ANALYSIS

Field Data:

Accompanied by Associate Civil Engineer, Humza Javed, P.E., HCI staff conducted a site visit at both equestrian crossing locations on Friday, August 3, 2012.

Nellie Gail Road E/o Lost Colt Drive

Our observations specific to the Nellie Gail/Lost Colt location noted an offset equestrian crossing. In other words, equestrians crossing Nellie Gail Rd in the northerly direction first cross the street and then travel westerly either in the street or along an equestrian easement under jurisdiction of the Nellie Gail Ranch Homeowners Association that connects to the equestrian trail. The opposite movement is associated with crossing in a southerly direction.

Nellie Gail Road is curvilinear with a downgrade in the westerly direction, and on-street parking is not prohibited at/near this location. The adjacent land use is primarily residential. Nellie Gail Road is posted 25 mph, accompanied by a "25" pavement marking near the crossing.

We also noted the posting of the following California MUTCD signs:

- W11-7 (a yellow diamond warning sign with an "EQUESTRIAN" symbol)
- W11-7P (yellow rectangular sign with "EQUESTRIAN XING")
- W16-7P (rectangular yellow sign with a black arrow pointing downward indicating the location of the crossing).

In the eastbound direction of Nellie Gail Road, vegetation partially obscures visibility of the subject signs and should be routinely trimmed. Moving the sign assembly a few feet in advance of the crossing may be considered for improved visibility.

Nottingham Court just south of Oso Parkway

Unlike the Nellie Gail/Lost Colt crossing, this crossing is in-line with the equestrian trail (not offset). Specific to Nottingham Court, our staff noted a curvilinear roadway with a downgrade in the northbound direction. On-street parking is not prohibited at/near the crossing and the adjacent land use is primarily residential. The street is posted 25 mph.

Staff noted the posting of the following California MUTCD signs/markings at this location:

- W11-7 (a yellow, diamond warning sign with an "EQUESTRIAN" symbol)
- W11-7P (yellow rectangular sign with "EQUESTRIAN XING")
- W16-7P (rectangular yellow sign with a black arrow pointing downward indicating the location of the crossing).
- W11-7 sign posted in advance of the crossing in the northbound direction only.
- "HORSE XING" pavement markings are painted on the street in advance of the crossing in both travel directions.

ANALYSIS (continued)

Speeding:

HCI initiated the collection of speed and traffic volume data at both crossings to determine prevailing traffic speeds and traffic volumes. To ensure that data collected on only one day could be anomalous, HCI first collected (7) consecutive days of 24-hour speed profile and traffic volume (ADT) data that provides a trend of vehicular speed information throughout the day and week.

Nellie Gail Road E/o Lost Colt Drive

The speed profile study period for the Nellie Gail/Lost Colt location began on Friday, August 10 and was completed on Thursday, August 16, 2012.

The data for this location shows that the highest 85th percentile speed, or critical speed, recorded during the 7-day study period was 35 mph in the eastbound direction of Nellie Gail Road (all 7 study days reported a 35 mph critical speed). In the westbound direction of Nellie Gail Road, the highest 85th percentile speed reported was 38 mph, which occurred on three of the seven study days. The remaining four days reported a critical speed of 37 mph.

HCI also conducted a follow-up spot speed radar study at this location during the afternoon peak period of Thursday, September 6, 2012 in order to verify the speed profile machine data. The spot speed data did confirm the accuracy of the daily speed profile data as the 85th percentile speed resulted in 36 mph. In summary, the results show that speeding is occurring along this segment of Nellie Gail Road. Use of a portable radar trailer accompanied by increased law enforcement is recommended to reduce travel speeds.

Nottingham Court just south of Oso Parkway

The speed profile study period for the Nottingham/Oso location began on Wednesday, August 22 and was completed on Tuesday, August 28, 2012.

The data for this location shows that the highest 85th percentile speed recorded during the 7-day study period was 35 mph in the northbound direction of Nottingham Court, which occurred on three of the seven days. The remaining four days reported a critical speed of 34 mph. In the southbound direction of Nottingham Court, the highest 85th percentile speed reported was 33 mph, which occurred on one of the seven study days. The remaining six days reported a critical speed of 32 mph on five study days and 31 mph on the other day.

Similarly, HCI conducted a follow-up spot speed radar study at this location during the afternoon peak period of Thursday, September 6, 2012 in order to verify the speed profile machine data. The spot speed data did confirm the accuracy of the daily speed profile data as the 85th percentile speed resulted in 34 mph. In summary, the results show that speeding is occurring along this segment of Nottingham Court. Use of a portable radar trailer accompanied by increased law enforcement is recommended to reduce travel speeds.

ANALYSIS (continued)

Traffic Volumes:

Nellie Gail Road E/o Lost Colt Drive

The 7-day ADT data collection determined that in the eastbound direction of Nellie Gail Road, the highest 24-hour traffic volume recorded was 741 vehicles on Thursday, August 16. In the westbound direction the peak 24-hour traffic volume was 667 vehicles, also on Thursday August 16.

Nottingham Court just south of Oso Parkway

The 7-day ADT data collection determined that in the northbound direction of Nottingham Court, the highest 24-hour traffic volume recorded was 586 vehicles on Monday, August 27. In the southbound direction the peak 24-hour traffic volume was 603 vehicles, on Friday, August 24.

In summary, the traffic volumes on the subject roadways are typical for residential streets of this character. National Data Surveying (NDS), a national traffic data collection company, collected the 7-day speed and traffic count data (attached).

Collisions:

A review of the most recent three-year collision history at the two equestrian crossings identified no reported collisions at either equestrian crossing location.

In regards to the vicinity of the Nellie Gail/Lost Colt location, two collisions were reported approximately 163 feet west of, and 217 feet east of the nearby intersection of Red Lodge Place. One collision was reported in 2008 and one collision reported in 2009. The 2009 collision is located closest to the equestrian crossing and involves a vehicle striking a fixed object. The City-provided collision data is attached.

Marked Crosswalks:

As stated previously the consideration of any specific traffic control device requires an engineering study to ensure compliance with established standards. The criteria for the use of marked crosswalks are contained in the CA MUTCD (guidelines attached).

The California MUTCD describes these markings as follows:

ANALYSIS (continued)

Section 3B.18 Crosswalk Markings

Guidance:

Crosswalk lines should not be used indiscriminately. An engineering study should be performed before a marked crosswalk is installed at a location away from a traffic control signal or an approach controlled a STOP or YIELD sign. The engineering study should consider the number of lanes, the presence of a median, the distance from adjacent signalized intersections, the pedestrian volumes and delays, the average daily traffic (ADT), the posted or statutory speed limit or 85th percentile speed, the geometry of the location, the possible consolidation of multiple crossing points, the availability of street lighting, and other appropriate factors.

This following California MUTCD guideline is also stated under this same section:

Section 3B.18 Crosswalk Markings

Guidance:

Mid-block pedestrian crossings are generally unexpected by the motorist and should be discouraged unless, in the opinion of the engineer, there is strong justification in favor of such installation.

Marked crosswalks at uncontrolled locations may be considered where there are frequent pedestrian crossings. Given our observations of minimal pedestrian activity, the roadway geometry, and that both locations are uncontrolled, HCI does not recommend the installation of marked crosswalks at either equestrian crossing.

In-Roadway Warning Lights:

The criteria for the use of in-pavement lights are contained in the CA MUTCD (guidelines attached) and are summarized below:

Section 4N.01 Application of In-Roadway Lights

Support:

In-Roadway Lights are special types of highway traffic signals installed in the roadway surface to warn road users that they are approaching a condition on or adjacent to the roadway that might not be readily apparent and might require the road users to slow down and/or come to a stop.

ANALYSIS (continued)

This includes situations warning of marked school crosswalks, marked midblock crosswalks, marked crosswalks on uncontrolled approaches, marked crosswalks in advance of roundabouts as described in Chapter 3C, and other roadway situations involving pedestrian crossings.

On the next page are some of the applicable California MUTCD guidelines for this type of traffic control device:

Section 4N.02 In-Roadway Warning Lights at Crosswalks

Standard:

If used, In-Roadway Warning Lights at crosswalks shall be installed only at marked crosswalks with applicable warning signs. They shall not be used at crosswalks controlled by YIELD signs, STOP signs, or traffic signals.

- *If used, In-Roadway Warning Lights at crosswalks shall display a flashing yellow light when actuated.*
- *At least 40 pedestrians regularly use the crossing during each of any two hours (not necessarily consecutive) during a 24-hour period.*
- *The vehicular volume through the crossing exceeds 200 vehicles per hour in urban areas or 140 vehicles per hour in rural areas during peak-hour pedestrian usage.*
- *The critical approach speed (85th percentile speed) is 45 MPH or less.*
- *In-Roadway Warning Lights are visible to drivers at the minimum stopping sight distance for the posted speed limit.*
- *Public education on In-Roadway Warning Lights is conducted for new installations.*

The above guidelines are not satisfied at either of these equestrian crossing locations due to the insufficient amount of pedestrians crossing the street and vehicles traveling through the crossing.

FINDINGS

In summary, field, speed, traffic volume, and collision data were gathered for both equestrian crossing locations. Speed profile data collected for Nellie Gail Road resulted in 35 mph critical speeds in the eastbound direction, which are higher than the posted 25 mph speed limit for this street. In the westbound direction, higher 85th percentile speeds of 37 and 38 mph were collected throughout the week. Speed data collected for Nottingham Court resulted in 35 mph critical speeds in the northbound direction, which are higher than the posted 25 mph speed limit for this street. In the southbound direction, 85th percentile speeds of 33, 32, and 31 mph were collected throughout the week. The speed profile data for both roadways were also confirmed by follow-up spot speed studies. It is noted, the Nottingham Court speeds are not considered unusual by the City for this type of roadway.

Traffic volume data was found typical for residential streets of this character. There were no reported collisions occurring at either of these equestrian crossings.

In regards to marked crosswalks and in-roadway warning lights, both of these devices are not recommended at either of these equestrian crossing locations due to the insufficient amount of pedestrians crossing the street and vehicles traveling through the crossing.

It was also suggested that a rubberized surface (i.e., rubber pavers) replace existing concrete sidewalk along the equestrian crossing. The rubber pavers suggested are designed for use in barns, horse stables, etc., not public sidewalks. The City uses established standards for sidewalks in the public right-of-way, specifically Portland Cement Concrete, and we do not recommend deviating from established standards.

RECOMMENDATIONS

HCI recommends an incremental approach be taken regarding the two equestrian crossings. Our recommendations for each location follow:

Nellie Gail Road Just East of Lost Colt Drive:

- The speed data results show that speeding is occurring along this segment of Nellie Gail Road. Use of a portable radar trailer accompanied by increased law enforcement is recommended to reduce travel speeds.
- Trim vegetation near warning signs to optimize sight distance.
- Install advance EQUESTRIAN warning signs in both directions of travel approximately 350' in advance of the crossing.
- Install HORSE XING pavement markings in both directions of travel approximately 305' in advance of the crossing.
- Install white arrowhead YIELD pavement markings just in advance of the crossing to more clearly delineate where vehicles are to stop when the crossing is in use.

RECOMMENDATIONS *(continued)*

Nottingham Court South of Oso Parkway:

- The speed data results for this roadway show that speeding over the speed limit is occurring along this segment of Nottingham Court. Use of a portable radar trailer accompanied by increased law enforcement is recommended to reduce travel speeds.
- Trim vegetation near warning signs to optimize sight distance.
- Install advance EQUESTRIAN warning signs in the southbound direction of travel as far as possible in advance of the crossing.
- Install white arrowhead YIELD pavement markings just in advance of the crossing to more clearly delineate where vehicles are to stop when the crossing is in use.

7-Day Speed Profile and Traffic Volume Data

Nellie Gail Road at Lost Colt Drive

SPEED

Nellie Gail Rd e/o Lost Colt Dr

City: Laguna Hills
Project #: CA12_1158_001eDay: Friday
Date: 8/10/2012**East Bound**

Time	< 15	15 - 19	20 - 24	25 - 29	30 - 34	35 - 39	40 - 44	45 - 49	50 - 54	55 - 59	60 - 64	65 - 69	70 +	Total
00:00 AM	1	0	0	1	0	0	0	0	0	0	0	0	0	2
01:00	0	0	0	1	0	0	0	0	0	0	0	0	0	1
02:00	0	0	0	0	1	0	0	0	0	0	0	0	0	1
03:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:00	1	0	0	0	1	0	0	0	0	0	0	0	0	2
06:00	0	2	2	2	3	0	0	0	0	0	0	0	0	9
07:00	3	5	3	5	11	4	0	0	0	0	0	0	0	31
08:00	5	6	5	10	15	3	2	0	0	0	0	0	0	46
09:00	4	3	3	15	18	4	2	0	0	0	0	0	0	49
10:00	2	2	4	9	7	10	1	0	0	0	0	0	0	35
11:00	3	9	4	7	10	6	0	0	0	0	0	0	0	39
12:00 PM	6	9	4	11	12	7	0	0	0	0	0	0	0	49
13:00	3	6	5	10	9	8	0	0	0	0	0	0	0	41
14:00	3	3	3	6	14	6	1	0	0	0	0	0	0	36
15:00	3	7	3	16	17	7	1	0	0	0	0	0	0	54
16:00	0	6	4	12	12	6	3	0	0	0	0	0	0	43
17:00	4	6	2	13	16	11	3	0	0	0	0	0	0	55
18:00	1	4	7	14	23	8	0	0	0	0	0	0	0	57
19:00	3	5	8	5	10	3	1	0	0	0	0	0	0	35
20:00	3	4	3	7	9	1	0	0	0	0	0	0	0	27
21:00	0	4	8	4	9	3	0	1	0	0	0	0	0	29
22:00	0	0	1	3	7	0	0	0	0	0	0	0	0	11
23:00	0	2	1	3	2	1	0	0	0	0	0	0	0	9
Totals	45	83	70	154	206	88	14	1	1					661
% of Totals	7%	13%	11%	23%	31%	13%	2%	0%						100%

Directional Peak Periods		All Speeds		AM 7-9			NOON 12-2			PM 4-5			Off Peak Volumes		
				Volume	↔		%	Volume	↔		%	Volume	↔		%
AM Volumes	19	27	21	50	66	27	5	0	0	0	0	0	0	215	
% AM	3%	4%	3%	8%	10%	4%	1%							33%	
AM Peak Hour	08:00	11:00	08:00	09:00	09:00	10:00	08:00							09:00	
Volume	5	9	5	15	18	10	2							49	
PM Volumes	26	56	49	104	140	61	9	1	0	0	0	0	446		
% PM	4%	8%	7%	16%	21%	9%	1%	0%						67%	
PM Peak Hour	12:00	12:00	19:00	15:00	18:00	17:00	16:00	21:00						18:00	
Volume	6	9	8	16	23	11	3	1						57	

Street Name	Direction	15th	50th	Average	85th	95th	ADT
Nellie Gail Rd	East Bound	18	29	28	35	39	661
Nellie Gail Rd	West Bound	22	31	30	37	39	606

SPEED

Nellie Gail Rd e/o Lost Colt Dr

City: Laguna Hills
Project #: CA12_1158_001wDay: Friday
Date: 8/10/2012

West Bound

Time	< 15	15 - 19	20 - 24	25 - 29	30 - 34	35 - 39	40 - 44	45 - 49	50 - 54	55 - 59	60 - 64	65 - 69	70 +	Total
00:00 AM	0	0	1	0	0	1	0	0	0	0	0	0	0	3
01:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0
02:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0
03:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:00	0	0	0	1	0	0	0	0	0	0	0	0	0	1
05:00	0	0	0	0	0	1	0	0	0	0	0	0	0	2
06:00	1	0	5	2	9	3	0	0	0	0	0	0	0	20
07:00	0	2	2	9	10	6	0	0	0	0	0	0	0	29
08:00	1	2	11	11	15	12	0	1	0	0	0	0	0	53
09:00	2	4	7	10	15	11	2	1	0	0	0	0	0	52
10:00	2	5	8	8	20	7	1	0	0	0	0	0	0	51
11:00	0	0	10	11	13	12	1	1	0	0	0	0	0	48
12:00 PM	0	6	6	1	14	10	0	0	0	0	0	0	0	37
13:00	4	2	7	9	20	10	0	0	0	0	0	0	0	52
14:00	0	0	6	7	16	4	0	0	0	0	0	0	0	33
15:00	1	3	2	7	19	4	2	0	0	0	0	0	0	38
16:00	1	2	4	6	12	6	0	0	0	0	0	0	0	31
17:00	0	1	4	8	5	6	1	0	0	0	0	0	0	25
18:00	0	1	7	14	13	8	0	0	0	0	0	0	0	43
19:00	0	1	6	10	15	5	3	0	0	0	0	0	0	40
20:00	0	1	0	3	4	6	0	1	0	0	0	0	0	15
21:00	0	0	6	3	3	3	1	0	0	0	0	0	0	16
22:00	0	0	4	2	2	2	0	0	0	0	0	0	0	10
23:00	0	0	2	1	3	1	0	0	0	0	0	0	0	7
Totals	12	30	98	123	210	118	11	4						606
% of Totals	2%	5%	16%	20%	35%	19%	2%	1%						100%

Directional Peak Periods		AM 7-9			NOON 12-2			PM 4-6			Off Peak Volumes		
All Speeds		Volume	%		Volume	%		Volume	%		Volume	%	
		82	↔ 14%		89	↔ 15%		56	↔ 9%		379	↔ 63%	
AM Volumes	6	13	44	52	84	53	4	3	0	0	0	0	259
% AM	1%	2%	7%	9%	14%	9%	1%	0%	0%	0%	0%	0%	43%
AM Peak Hour	09:00	10:00	08:00	08:00	10:00	08:00	09:00	08:00	08:00	08:00	08:00	08:00	08:00
Volume	2	5	11	11	20	12	2	1					53
PM Volumes	6	17	54	71	126	65	7	1	0	0	0	0	347
% PM	1%	3%	9%	12%	21%	11%	1%	0%	0%	0%	0%	0%	57%
PM Peak Hour	13:00	12:00	13:00	18:00	13:00	12:00	19:00	20:00	20:00	20:00	20:00	20:00	13:00
Volume	4	6	7	14	20	10	3	1					52

Street Name	Direction	15th	50th	Average	85th	95th	ADT
Nellie Gail Rd	East Bound	18	29	28	35	39	661
Nellie Gail Rd	West Bound	22	31	30	37	39	606

SPEED

Nellie Gail Rd e/o Lost Colt Dr

City: Laguna Hills
Project #: CA12_1158_001Day: Friday
Date: 8/10/2012**Summary**

Time	< 15	15 - 19	20 - 24	25 - 29	30 - 34	35 - 39	40 - 44	45 - 49	50 - 54	55 - 59	60 - 64	65 - 69	70 +	Total
00:00 AM	1	0	1	1	1	1	0	0	0	0	0	0	0	5
01:00	0	0	0	1	0	0	0	0	0	0	0	0	0	1
02:00	0	0	0	0	1	0	0	0	0	0	0	0	0	1
03:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:00	1	0	0	0	2	1	0	0	0	0	0	0	0	4
06:00	1	2	7	4	12	3	0	0	0	0	0	0	0	29
07:00	3	7	5	14	21	10	0	0	0	0	0	0	0	60
08:00	6	8	16	21	30	15	2	1	0	0	0	0	0	99
09:00	6	7	10	25	33	15	4	1	0	0	0	0	0	101
10:00	4	7	12	17	27	17	2	0	0	0	0	0	0	86
11:00	3	9	14	18	23	18	1	1	0	0	0	0	0	87
12:00 PM	6	15	10	12	26	17	0	0	0	0	0	0	0	86
13:00	7	8	12	19	29	18	0	0	0	0	0	0	0	93
14:00	3	3	9	13	30	10	1	0	0	0	0	0	0	69
15:00	4	10	5	23	36	11	3	0	0	0	0	0	0	92
16:00	1	8	8	18	24	12	3	0	0	0	0	0	0	74
17:00	4	7	6	21	21	17	4	0	0	0	0	0	0	80
18:00	1	5	14	28	36	16	0	0	0	0	0	0	0	100
19:00	3	6	14	15	25	8	4	0	0	0	0	0	0	75
20:00	3	5	3	10	13	7	0	1	0	0	0	0	0	42
21:00	0	4	14	7	12	6	1	1	0	0	0	0	0	45
22:00	0	0	5	5	9	2	0	0	0	0	0	0	0	21
23:00	0	2	3	4	5	2	0	0	0	0	0	0	0	16
Totals	57	113	168	277	416	206	25	5	5	5	5	5	5	1267
% of Totals	4%	9%	13%	22%	33%	16%	2%	0%	0%	0%	0%	0%	0%	100%

Directional Peak Periods														
All Speeds														
AM 7-9					NOON 12-2					PM 4-6				
Volume					Volume					Volume				
↔					↔					↔				
159	13%				179	14%				154	12%			
40	65	102	150	80	9	3	0	0	0	0	0	0	0	0
25	3%	5%	8%	12%	6%	1%	0%	0%	0%	0%	0%	0%	0%	0%
2%	08:00	11:00	09:00	09:00	11:00	09:00	08:00	09:00	09:00	08:00	09:00	09:00	09:00	09:00
6	9	16	25	33	18	4	1							
32	73	103	175	266	126	2	0	0	0	0	0	0	0	0
3%	6%	8%	14%	21%	10%	1%	0%	0%	0%	0%	0%	0%	0%	0%
13:00	12:00	18:00	18:00	15:00	13:00	17:00	20:00							
7	15	14	28	36	18	4	1							
474	37%													
793	63%													
18:00														
100														

Street Name	Direction	Percentiles					
		15th	50th	Average	85th	95th	ADT
Nellie Gail Rd	Summary	21	30	29	36	39	1267

SPEED

Nellie Gail Rd e/o Lost Colt Dr

City: Laguna Hills
Project #: CA12_1158_001eDay: Saturday
Date: 8/11/2012

East Bound

Time	< 15	15 - 19	20 - 24	25 - 29	30 - 34	35 - 39	40 - 44	45 - 49	50 - 54	55 - 59	60 - 64	65 - 69	70 +	Total
00:00 AM	0	0	1	1	3	0	0	1	0	0	0	0	0	6
01:00	1	4	0	0	1	0	0	0	0	0	0	0	0	6
02:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0
03:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:00	0	1	0	1	1	0	0	0	0	0	0	0	0	3
06:00	0	1	0	3	4	1	0	0	0	0	0	0	0	9
07:00	1	4	6	5	6	1	0	0	0	0	0	0	0	23
08:00	1	4	0	8	13	2	2	0	0	0	0	0	0	30
09:00	1	0	7	11	9	2	0	0	0	0	0	0	0	30
10:00	2	10	2	6	12	5	1	0	0	0	0	0	0	38
11:00	1	6	6	9	14	9	2	0	0	0	0	0	0	47
12:00 PM	1	1	2	16	18	5	0	0	0	0	0	0	0	43
13:00	1	4	2	12	9	8	0	0	0	0	0	0	0	36
14:00	4	5	5	9	8	6	1	0	0	0	0	0	0	38
15:00	3	7	2	5	13	7	1	0	0	0	0	0	0	38
16:00	2	5	4	13	20	6	0	0	0	0	0	0	0	50
17:00	1	3	1	7	8	5	0	1	0	0	0	0	0	26
18:00	1	0	3	9	7	5	1	0	0	0	0	0	0	26
19:00	0	5	3	5	8	1	1	0	0	0	0	0	0	23
20:00	0	1	2	2	5	2	0	0	0	0	0	0	0	12
21:00	1	3	4	8	7	0	0	0	0	0	0	0	0	23
22:00	1	5	3	3	4	1	0	0	0	0	0	0	0	17
23:00	1	5	2	3	3	2	0	0	0	0	0	0	0	16
Totals	23	74	55	136	173	68	9	2						540
% of Totals	4%	14%	10%	25%	32%	13%	2%	0%						100%

Directional Peak Periods		All Speeds		AM 7-9			NOON 12-2			PM 4-6			Off Peak Volumes		
				Volume			Volume			Volume			Volume		
				53			79			76			332		
				10%			15%			14%			14%		
				10%			15%			14%			14%		
				10%			15%			14%			14%		
				10%			15%			14%			14%		
				10%			15%			14%			14%		
				10%			15%			14%			14%		
				10%			15%			14%			14%		
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				10%			15%			14%			14%		
				10%			15%			14%			14%		
				10%			15%			14%			14%		

Nellie Gail Rd e/o Lost Colt Dr

Day: Saturday

Date: 8/11/2012

City: Laguna Hills

Project #: CA12_1158_001w

West Bound														
Time	< 15	15 - 19	20 - 24	25 - 29	30 - 34	35 - 39	40 - 44	45 - 49	50 - 54	55 - 59	60 - 64	65 - 69	70 +	Total
00:00 AM	0	0	1	0	0	0	0	0	0	0	0	0	0	1
01:00	0	0	0	0	0	1	0	0	0	0	0	0	0	1
02:00	0	0	1	0	0	0	0	0	0	0	0	0	0	1
03:00	0	0	0	0	1	0	0	0	0	0	0	0	0	1
04:00	0	0	0	1	1	1	0	0	0	0	0	0	0	3
05:00	0	0	0	2	2	1	0	0	0	0	0	0	0	5
06:00	0	1	5	0	3	1	0	0	0	0	0	0	0	10
07:00	0	3	4	1	2	4	1	0	0	0	0	0	0	15
08:00	0	1	1	9	13	1	6	0	0	0	0	0	0	31
09:00	0	0	2	4	17	11	1	0	0	0	0	0	0	35
10:00	0	1	5	11	12	3	2	0	0	0	0	0	0	34
11:00	0	2	3	14	16	11	0	0	0	0	0	0	0	46
12:00 PM	0	1	4	14	13	8	4	0	0	0	0	0	0	44
13:00	1	0	6	4	13	8	2	0	0	0	0	0	0	34
14:00	0	0	3	9	12	2	1	0	0	0	0	0	0	27
15:00	0	0	0	3	9	6	0	0	0	0	0	0	0	26
16:00	0	5	9	8	14	5	2	0	0	0	0	0	0	43
17:00	2	2	5	15	10	5	1	0	0	0	0	0	0	40
18:00	0	0	2	9	8	3	2	0	0	0	0	0	0	24
19:00	0	0	2	6	7	2	1	0	0	0	0	0	0	18
20:00	0	0	3	3	4	2	1	0	0	0	0	0	0	13
21:00	0	2	3	4	5	0	0	0	0	0	0	0	0	14
22:00	0	0	2	6	3	2	0	1	0	0	0	0	0	14
23:00	0	0	4	0	5	0	0	0	0	0	0	0	0	9
Totals	3	18	68	128	170	77	24	1						489
% of Totals	1%	4%	14%	26%	35%	16%	5%	0%						100%

Directional Peak Periods															
		AM 7-9				NOON 12-2				PM 4-6				Off Peak Volumes	
		Volume	%	↔	%	Volume	%	↔	%	Volume	%	↔	%		
AM Volumes	0	8	22	42	67	34	10	0	0	0	0	0	0	0	183
% AM		2%	4%	9%	14%	7%	2%								37%
AM Peak Hour		07:00	06:00	11:00	09:00	09:00	08:00								11:00
Volume		3	5	14	17	11	6								46
PM Volumes	3	10	46	86	103	43	14	1	0	0	0	0	0	0	306
% PM	1%	2%	9%	18%	21%	9%	3%	0%							63%
PM Peak Hour	17:00	16:00	16:00	17:00	16:00	12:00	12:00	22:00							12:00
Volume	2	5	9	15	14	8	4	1							44

Street Name	Direction	Percentiles					
		15th	50th	Average	85th	95th	ADT
Nellie Gail Rd	East Bound	19	29	28	35	39	540
Nellie Gail Rd	West Bound	24	31	30	37	40	489

SPEED

Nellie Gail Rd e/o Lost Colt Dr

Day: Saturday

Date: 8/11/2012

City: Laguna Hills

Project #: CA12_1158_001

Summary

Time	< 15	15 - 19	20 - 24	25 - 29	30 - 34	35 - 39	40 - 44	45 - 49	50 - 54	55 - 59	60 - 64	65 - 69	70 +	Total
00:00 AM	0	0	2	1	3	0	0	1	0	0	0	0	0	7
01:00	1	4	0	0	1	1	0	0	0	0	0	0	0	7
02:00	0	0	1	0	0	0	0	0	0	0	0	0	0	1
03:00	0	0	0	0	1	0	0	0	0	0	0	0	0	1
04:00	0	0	0	1	1	1	0	0	0	0	0	0	0	3
05:00	0	1	0	3	3	1	0	0	0	0	0	0	0	8
06:00	0	2	5	3	7	2	0	0	0	0	0	0	0	19
07:00	1	7	10	6	8	5	1	0	0	0	0	0	0	38
08:00	1	5	1	17	26	3	8	0	0	0	0	0	0	61
09:00	1	0	9	15	26	13	1	0	0	0	0	0	0	65
10:00	2	11	7	17	24	8	3	0	0	0	0	0	0	72
11:00	1	8	9	23	30	20	2	0	0	0	0	0	0	93
12:00 PM	1	2	6	30	31	13	4	0	0	0	0	0	0	87
13:00	2	4	8	16	22	16	2	0	0	0	0	0	0	70
14:00	4	5	8	18	20	8	2	0	0	0	0	0	0	65
15:00	3	7	5	13	22	13	1	0	0	0	0	0	0	64
16:00	2	10	13	21	34	11	2	0	0	0	0	0	0	93
17:00	3	5	6	22	18	10	1	1	0	0	0	0	0	66
18:00	1	0	5	18	15	8	3	0	0	0	0	0	0	50
19:00	0	5	5	11	15	3	2	0	0	0	0	0	0	41
20:00	0	1	5	5	9	4	1	0	0	0	0	0	0	25
21:00	1	5	7	12	12	0	0	0	0	0	0	0	0	37
22:00	1	5	5	9	7	3	0	1	0	0	0	0	0	31
23:00	1	5	6	3	8	2	0	0	0	0	0	0	0	25
Totals	26	92	123	264	343	145	33	0%						1029
% of Totals	3%	9%	12%	26%	33%	14%	3%	0%						100%

Directional Peak Periods		AM 7-9			NOON 12-2			PM 4-6			Off Peak Volumes		
All Speeds		Volume	%		Volume	%		Volume	%		Volume	%	
AM Volumes	7	38	44	86	130	54	15	1	0	0	0	0	375
% AM	1%	4%	4%	8%	13%	5%	1%	0%					36%
AM Peak Hour	10:00	10:00	07:00	11:00	11:00	11:00	08:00						11:00
Volume	2	11	10	23	30	20	8	1					93
PM Volumes	19	54	79	178	213	91	18	2	0	0	0	0	654
% PM	2%	5%	8%	17%	21%	9%	2%	0%					64%
PM Peak Hour	14:00	16:00	16:00	12:00	16:00	13:00	12:00	17:00					16:00
Volume	4	10	13	30	34	16	4	1					93

Street Name	Direction	Percentiles					
		15th	50th	Average	85th	95th	ADT
Nellie Gail Rd	Summary	21	30	29	36	39	1029

SPEED

Nellie Gail Rd e/o Lost Colt Dr

City: Laguna Hills
Project #: CA12_1158_001eDay: Sunday
Date: 8/12/2012**East Bound**

Time	< 15	15 - 19	20 - 24	25 - 29	30 - 34	35 - 39	40 - 44	45 - 49	50 - 54	55 - 59	60 - 64	65 - 69	70 +	Total
00:00 AM	1	1	0	3	3	1	2	0	0	0	0	0	0	8
01:00	0	2	1	2	2	0	1	0	0	0	0	0	0	6
02:00	0	0	0	2	0	0	0	0	0	0	0	0	0	2
03:00	0	0	0	1	1	1	0	0	0	0	0	0	0	2
04:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06:00	0	0	2	2	4	4	2	0	0	0	0	0	0	10
07:00	3	3	1	4	4	1	1	0	0	0	0	0	0	16
08:00	1	1	3	10	10	5	5	1	0	0	0	0	0	31
09:00	1	1	2	7	8	1	0	0	0	0	0	0	0	20
10:00	1	8	3	4	9	4	0	0	0	0	0	0	0	29
11:00	1	6	1	7	8	3	1	0	0	0	0	0	0	27
12:00 PM	2	10	2	10	7	5	1	0	0	0	0	0	0	37
13:00	1	4	4	17	13	2	1	0	0	0	0	0	0	42
14:00	2	1	4	9	7	4	0	0	0	0	0	0	0	27
15:00	0	5	4	10	12	3	1	1	0	0	0	0	0	36
16:00	2	2	1	14	7	9	1	0	0	0	0	0	0	37
17:00	1	6	4	9	9	3	1	0	0	0	0	0	0	33
18:00	2	4	3	11	9	3	1	0	0	0	0	0	0	33
19:00	3	4	0	9	6	1	0	0	0	0	0	0	0	23
20:00	1	1	3	11	4	1	0	0	0	0	0	0	0	21
21:00	2	0	2	4	3	0	0	0	0	0	0	0	0	11
22:00	0	3	1	3	0	0	0	0	0	0	0	0	0	7
23:00	0	1	1	1	3	3	1	0	0	0	0	0	0	7
Totals	24	63	42	150	125	51	8	2						465
% of Totals	5%	14%	9%	32%	27%	11%	2%	0%						100%

Time	< 15	15 - 19	20 - 24	25 - 29	30 - 34	35 - 39	40 - 44	45 - 49	50 - 54	55 - 59	60 - 64	65 - 69	70 +	Total
00:00 AM	1	1	0	3	3	1	2	0	0	0	0	0	0	8
01:00	0	2	1	2	2	0	1	0	0	0	0	0	0	6
02:00	0	0	0	2	0	0	0	0	0	0	0	0	0	2
03:00	0	0	0	1	1	1	0	0	0	0	0	0	0	2
04:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06:00	0	0	2	2	4	4	2	0	0	0	0	0	0	10
07:00	3	3	1	4	4	1	1	0	0	0	0	0	0	16
08:00	1	1	3	10	10	5	5	1	0	0	0	0	0	31
09:00	1	1	2	7	8	1	0	0	0	0	0	0	0	20
10:00	1	8	3	4	9	4	0	0	0	0	0	0	0	29
11:00	1	6	1	7	8	3	1	0	0	0	0	0	0	27
12:00 PM	2	10	2	10	7	5	1	0	0	0	0	0	0	37
13:00	1	4	4	17	13	2	1	0	0	0	0	0	0	42
14:00	2	1	4	9	7	4	0	0	0	0	0	0	0	27
15:00	0	5	4	10	12	3	1	1	0	0	0	0	0	36
16:00	2	2	1	14	7	9	1	0	0	0	0	0	0	37
17:00	1	6	4	9	9	3	1	0	0	0	0	0	0	33
18:00	2	4	3	11	9	3	1	0	0	0	0	0	0	33
19:00	3	4	0	9	6	1	0	0	0	0	0	0	0	23
20:00	1	1	3	11	4	1	0	0	0	0	0	0	0	21
21:00	2	0	2	4	3	0	0	0	0	0	0	0	0	11
22:00	0	3	1	3	0	0	0	0	0	0	0	0	0	7
23:00	0	1	1	1	3	3	1	0	0	0	0	0	0	7
Totals	24	63	42	150	125	51	8	2						465
% of Totals	5%	14%	9%	32%	27%	11%	2%	0%						100%

Street Name	Direction	15th	50th	Average	85th	95th	ADT
Nellie Gail Rd	East Bound	19	28	28	35	39	465
Nellie Gail Rd	West Bound	24	31	31	38	41	454

SPEED

Nellie Gail Rd e/o Lost Colt Dr

City: Laguna Hills
Project #: CA12_1158_001WDay: Sunday
Date: 8/12/2012

West Bound

Time	< 15	15 - 19	20 - 24	25 - 29	30 - 34	35 - 39	40 - 44	45 - 49	50 - 54	55 - 59	60 - 64	65 - 69	70 +	Total
00:00 AM	0	0	1	2	1	1	0	0	0	0	0	0	0	5
01:00	0	0	1	2	2	0	0	0	0	0	0	0	0	3
02:00	0	0	2	0	1	1	0	0	0	0	0	0	0	4
03:00	0	1	0	0	0	0	0	0	0	0	0	0	0	1
04:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:00	0	0	1	0	0	0	0	0	0	0	0	0	0	1
06:00	0	0	3	1	3	0	1	0	0	0	0	0	0	8
07:00	0	0	3	4	5	1	0	0	0	0	0	0	0	13
08:00	0	1	2	8	9	2	1	0	0	0	0	0	0	23
09:00	0	2	4	6	8	5	3	0	0	0	0	0	0	28
10:00	0	0	2	2	15	7	4	0	0	0	0	0	0	30
11:00	0	0	4	7	14	12	3	0	0	0	0	0	0	40
12:00 PM	1	0	5	8	13	5	3	0	0	0	0	0	0	35
13:00	1	1	5	8	10	10	3	0	0	0	0	0	0	38
14:00	0	0	4	10	10	8	5	0	0	0	0	0	0	37
15:00	0	3	4	6	10	9	2	0	0	0	0	0	0	34
16:00	0	0	2	10	8	4	0	0	0	0	0	0	0	24
17:00	0	0	5	8	7	11	2	0	0	0	0	0	0	33
18:00	1	1	5	4	3	6	1	0	0	0	0	0	0	21
19:00	0	1	4	9	11	4	0	1	0	0	0	0	0	30
20:00	0	2	4	2	8	3	0	0	0	0	0	0	0	19
21:00	0	1	1	1	3	1	0	0	0	0	0	0	0	7
22:00	0	1	6	1	2	3	0	0	0	0	0	0	0	13
23:00	0	1	1	0	4	0	1	0	0	0	0	0	0	7
Totals	3	15	69	99	145	93	29	1	0	0	0	0	0	454
% of Totals	1%	3%	15%	22%	32%	20%	6%	0%	0%	0%	0%	0%	0%	100%

Directional Peak Periods	All Speeds	AM 7-9	NOON 12-2	PM 4-6	Off Peak Volumes
Volume	Volume	Volume	Volume	Volume	Volume
AM Volumes	0	23	29	0	0
% AM	1%	5%	6%	0%	0%
AM Peak Hour	09:00	09:00	11:00	10:00	11:00
Volume	2	4	12	4	40
PM Volumes	3	11	64	0	0
% PM	1%	2%	14%	0%	0%
PM Peak Hour	12:00	15:00	17:00	19:00	13:00
Volume	1	3	11	5	38
Directional Peak Periods	All Speeds	AM 7-9	NOON 12-2	PM 4-6	Off Peak Volumes
Volume	36	73	16%	57	288
%	8%	13%	63%	13%	63%

Street Name	Direction	Percentiles	ADT
Nellie Gail Rd	East Bound	15th 19 24 28 31 35 38 41 45	465
Nellie Gail Rd	West Bound	15th 19 24 28 31 35 38 41 45	454

SPEED

Nellie Gail Rd e/o Lost Colt Dr

City: Laguna Hills
Project #: CA12_1158_001

Day: Sunday

Date: 8/12/2012

Summary

Time	< 15	15 - 19	20 - 24	25 - 29	30 - 34	35 - 39	40 - 44	45 - 49	50 - 54	55 - 59	60 - 64	65 - 69	70 +	Total
00:00 AM	1	1	1	5	2	3	0	0	0	0	0	0	0	13
01:00	0	2	2	4	0	1	0	0	0	0	0	0	0	9
02:00	0	0	2	2	1	1	0	0	0	0	0	0	0	6
03:00	0	1	0	1	1	0	0	0	0	0	0	0	0	3
04:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:00	0	0	1	0	0	0	0	0	0	0	0	0	0	1
06:00	0	0	5	3	7	2	1	0	0	0	0	0	0	18
07:00	3	3	4	8	9	2	0	0	0	0	0	0	0	29
08:00	1	2	5	18	19	7	2	0	0	0	0	0	0	54
09:00	1	3	6	13	16	6	3	0	0	0	0	0	0	48
10:00	1	8	5	6	24	11	4	0	0	0	0	0	0	59
11:00	1	6	5	14	22	15	4	0	0	0	0	0	0	67
12:00 PM	3	10	7	18	20	10	4	0	0	0	0	0	0	72
13:00	2	5	9	25	23	12	4	0	0	0	0	0	0	80
14:00	2	1	8	19	17	12	5	0	0	0	0	0	0	64
15:00	0	8	8	16	22	12	3	1	0	0	0	0	0	70
16:00	2	2	3	24	15	13	1	1	0	0	0	0	0	61
17:00	1	6	9	17	16	14	3	0	0	0	0	0	0	66
18:00	3	5	8	15	12	9	2	0	0	0	0	0	0	54
19:00	3	5	4	18	17	5	0	1	0	0	0	0	0	53
20:00	1	3	7	13	12	4	0	0	0	0	0	0	0	40
21:00	2	1	3	5	6	1	0	0	0	0	0	0	0	18
22:00	0	4	7	4	2	3	0	0	0	0	0	0	0	20
23:00	0	2	2	1	7	1	1	0	0	0	0	0	0	14
Totals	27	78	111	249	270	144	37	3	0	0	0	0	0	919
% of Totals	3%	8%	12%	27%	29%	16%	4%	0%	0%	0%	0%	0%	0%	100%

Directional Peak Periods	All Speeds		AM 7-9		NOON 12-2		PM 4-6		Off Peak Volumes	
	Volume	%	Volume	%	Volume	%	Volume	%	Volume	%
AM Volumes	8	1%	26	3%	36	4%	48	5%	14	2%
% AM	1%	07:00	10:00	09:00	08:00	11:00	10:00	11:00	10:00	11:00
AM Peak Hour	3	8	6	18	24	15	4	0	0	0
PM Volumes	19	2%	52	6%	75	8%	96	10%	23	3%
% PM	2%	12:00	12:00	13:00	13:00	17:00	15:00	0	0	0
PM Peak Hour	3	10	9	25	14	5	1	0	0	0
Volume	83	9%	83	9%	152	17%	127	14%	557	61%
Summary										

Street Name	Direction	Percentiles			
		15th	50th	Average	95th
Nellie Gail Rd	Summary	21	30	29	40
					ADT
					919

SPEED

Nellie Gail Rd e/o Lost Colt Dr

City: Laguna Hills

Project #: CA12_1158_001e

Day: Monday

Date: 8/13/2012

East Bound

Time	< 15	15 - 19	20 - 24	25 - 29	30 - 34	35 - 39	40 - 44	45 - 49	50 - 54	55 - 59	60 - 64	65 - 69	70 +	Total
00:00 AM	0	0	0	1	1	1	0	0	0	0	0	0	0	3
01:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0
02:00	0	0	0	0	0	0	1	0	0	0	0	0	0	1
03:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:00	2	2	0	1	1	0	0	0	0	0	0	0	0	6
06:00	0	3	1	3	4	1	0	0	0	0	0	0	0	12
07:00	4	5	1	9	6	3	0	0	0	0	0	0	0	28
08:00	3	13	8	9	7	4	0	0	0	0	0	0	0	44
09:00	1	6	6	6	9	7	1	0	0	0	0	0	0	36
10:00	4	10	8	14	11	1	1	0	0	0	0	0	0	49
11:00	3	6	13	13	8	3	0	0	0	0	0	0	0	46
12:00 PM	3	6	3	12	13	4	3	0	0	0	0	0	0	44
13:00	2	4	2	8	9	5	0	0	0	0	0	0	0	30
14:00	2	2	6	11	11	7	1	0	0	0	0	0	0	40
15:00	1	3	6	22	16	5	2	0	0	0	0	0	0	55
16:00	3	4	3	16	15	12	1	0	0	0	0	0	0	54
17:00	0	12	2	19	19	12	0	0	0	0	0	0	0	64
18:00	2	5	5	19	21	4	2	0	0	0	0	0	0	58
19:00	0	8	3	11	11	2	0	0	0	0	0	0	0	35
20:00	0	1	2	6	3	5	1	0	0	0	0	0	0	18
21:00	1	0	2	3	9	0	0	0	0	0	0	0	0	15
22:00	1	3	1	7	1	3	0	0	0	0	0	0	0	16
23:00	0	2	0	0	1	1	0	0	0	0	0	0	0	3
Totals	32	95	72	190	176	79	12	1						657
% of Totals	5%	14%	11%	29%	27%	12%	2%	0%						100%

Directional Peak Periods		AM 7-9		NOON 12-2		PM 4-6		Off Peak Volumes			
All Speeds		Volume	%	Volume	%	Volume	%	Volume	%		
AM Volumes	17	45	37	56	47	20	2	1	0	0	225
% AM	3%	7%	6%	9%	7%	3%	0%	0%			34%
AM Peak Hour	07:00	08:00	11:00	10:00	10:00	09:00	09:00				10:00
Volume	4	13	13	14	11	7	1	1			49
PM Volumes	15	50	35	134	129	59	10	0	0	0	432
% PM	2%	8%	5%	20%	20%	9%	2%				66%
PM Peak Hour	12:00	17:00	14:00	15:00	18:00	16:00	12:00				17:00
Volume	3	12	6	22	21	12	3				64

Street Name	Direction	15th	50th	Average	85th	95th	ADT
Nellie Gail Rd	East Bound	19	28	28	35	39	657
Nellie Gail Rd	West Bound	23	30	30	37	40	600

SPEED

Nellie Gail Rd e/o Lost Colt Dr

Day: Monday

Date: 8/13/2012

City: Laguna Hills

Project #: CA12_1158_001w

West Bound

Time	< 15	15 - 19	20 - 24	25 - 29	30 - 34	35 - 39	40 - 44	45 - 49	50 - 54	55 - 59	60 - 64	65 - 69	70 +	Total
00:00 AM	0	0	0	1	1	0	0	0	0	0	0	0	0	2
01:00	0	1	1	1	0	0	0	0	0	0	0	0	0	3
02:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0
03:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06:00	0	3	7	5	3	4	1	0	0	0	0	0	0	2
07:00	0	2	4	5	11	3	1	1	0	0	0	0	0	23
08:00	6	3	8	11	15	10	5	0	0	0	0	0	0	26
09:00	1	4	5	6	13	11	1	0	0	0	0	0	0	58
10:00	2	3	6	13	5	12	2	1	0	0	0	0	0	41
11:00	0	2	8	11	15	6	1	0	0	0	0	0	0	44
12:00 PM	1	1	2	9	12	10	0	0	0	0	0	0	0	43
13:00	0	2	1	9	12	9	4	0	0	0	0	0	0	35
14:00	1	3	4	10	7	4	2	0	0	0	0	0	0	37
15:00	0	0	3	12	14	12	2	0	0	0	0	0	0	31
16:00	0	4	7	15	13	12	2	1	0	0	0	0	0	43
17:00	0	0	7	9	14	10	0	1	0	0	0	0	0	54
18:00	0	0	8	6	11	5	1	0	0	0	0	0	0	41
19:00	2	2	2	11	2	4	0	0	0	0	0	0	0	31
20:00	2	1	2	7	10	4	0	1	0	0	0	0	0	23
21:00	0	1	2	9	5	1	1	0	0	0	0	0	0	27
22:00	0	0	3	4	2	0	1	0	0	0	0	0	0	19
23:00	0	0	0	3	2	0	2	0	0	0	0	0	0	10
Totals	15	32	80	158	167	118	26	4						600
% of Totals	3%	5%	13%	26%	28%	20%	4%	1%						100%

Directional Peak Periods	All Speeds	AM 7-9	NOON 12-2	PM 4-6	Off Peak Volumes
AM Volumes	9	18	39	47	63
% AM	2%	3%	7%	8%	11%
AM Peak Hour	08:00	09:00	08:00	10:00	08:00
Volume	6	4	8	12	15
PM Volumes	6	14	41	71	104
% PM	1%	2%	7%	17%	17%
PM Peak Hour	19:00	16:00	18:00	15:00	15:00
Volume	2	4	8	12	14
Directional Peak Periods	All Speeds	AM 7-9	NOON 12-2	PM 4-6	Off Peak Volumes
Volume	84	84	72	95	349
%		14%	12%	16%	58%

Street Name	Direction	15th	50th	Average	85th	95th	ADT
Nellie Gail Rd	East Bound	19	28	28	35	39	657
Nellie Gail Rd	West Bound	23	30	30	37	40	600

SPEED

Nellie Gail Rd e/o Lost Colt Dr

City: Laguna Hills
Project #: CA12_1158_001Day: Monday
Date: 8/13/2012**Summary**

Time	< 15	15 - 19	20 - 24	25 - 29	30 - 34	35 - 39	40 - 44	45 - 49	50 - 54	55 - 59	60 - 64	65 - 69	70 +	Total
00:00 AM	0	0	0	2	2	0	0	1	0	0	0	0	0	5
01:00	0	1	1	1	0	0	0	0	0	0	0	0	0	3
02:00	0	0	0	0	0	1	0	0	0	0	0	0	0	1
03:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:00	2	2	0	2	1	1	0	0	0	0	0	0	0	8
06:00	0	6	8	8	7	5	1	0	0	0	0	0	0	35
07:00	4	7	5	14	17	6	1	0	0	0	0	0	0	54
08:00	9	16	16	20	22	14	5	0	0	0	0	0	0	102
09:00	2	10	11	12	22	18	2	1	0	0	0	0	0	77
10:00	6	13	14	27	16	13	3	1	0	0	0	0	0	93
11:00	3	8	21	24	23	9	1	0	0	0	0	0	0	89
12:00 PM	4	7	5	21	25	14	3	0	0	0	0	0	0	79
13:00	2	6	3	17	21	14	4	0	0	0	0	0	0	67
14:00	3	5	10	21	18	11	3	0	0	0	0	0	0	71
15:00	1	3	9	34	30	17	4	0	0	0	0	0	0	98
16:00	3	8	10	31	28	24	3	1	0	0	0	0	0	108
17:00	0	12	9	28	33	22	0	1	0	0	0	0	0	105
18:00	2	5	13	25	32	9	3	0	0	0	0	0	0	89
19:00	2	10	5	22	13	6	0	0	0	0	0	0	0	58
20:00	2	2	4	13	13	9	1	1	0	0	0	0	0	45
21:00	1	1	4	12	14	1	1	0	0	0	0	0	0	34
22:00	1	3	4	11	3	3	1	0	0	0	0	0	0	26
23:00	0	2	0	3	3	0	2	0	0	0	0	0	0	10
Totals	47	127	152	348	343	197	38	5						1257
% of Totals	4%	10%	12%	28%	27%	16%	3%	0%						100%

Directional Peak Periods													
All Speeds		AM 7-9			NOON 12-2			PM 4-6			Off Peak Volumes		
Volume		Volume			Volume			Volume			Volume		
%		%			%			%			%		
↔		↔			↔			↔			↔		
156		156			146			213			742		
12%		12%			12%			12%			17%		
12%		12%			12%			12%			17%		
12%		12%			12%			12%			17%		
12%		12%			12%			12%			17%		
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12%		12%			12%			12%			17%		
12%		12%			12%			12%			17%		
12%		12%											

Street Name	Direction	15th	50th	Average	85th	95th	ADT
Nellie Gail Rd	Summary	20	29	29	36	39	1257

Nellie Gail Rd e/o Lost Colt Dr

Day: Tuesday

Date: 8/14/2012

City: Laguna Hills

Project #: CA12_1158_001e

East Bound														
Time	< 15	15 - 19	20 - 24	25 - 29	30 - 34	35 - 39	40 - 44	45 - 49	50 - 54	55 - 59	60 - 64	65 - 69	70 +	Total
00:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
01:00	0	0	1	1	0	0	0	0	0	0	0	0	0	2
02:00	0	0	0	0	1	0	0	0	0	0	0	0	0	1
03:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:00	0	0	0	0	0	0	1	0	0	0	0	0	0	1
05:00	2	3	0	0	1	1	1	0	0	0	0	0	0	7
06:00	1	3	0	1	2	2	0	0	0	0	0	0	0	9
07:00	0	3	3	8	7	0	0	0	0	0	0	0	0	21
08:00	2	7	5	10	17	2	1	0	0	0	0	0	0	44
09:00	3	5	3	13	10	3	0	0	0	0	0	0	0	37
10:00	4	1	5	10	18	2	1	0	0	0	0	0	0	41
11:00	0	6	10	15	12	7	3	2	0	0	0	0	0	55
12:00 PM	4	1	4	10	14	1	0	0	0	0	0	0	0	34
13:00	4	5	2	9	9	8	1	0	0	0	0	0	0	38
14:00	2	3	3	17	14	3	1	0	0	0	0	0	0	43
15:00	2	10	7	18	19	7	1	0	0	0	0	0	0	64
16:00	3	3	4	9	21	6	0	0	0	0	0	0	0	46
17:00	4	5	8	24	23	8	0	1	0	0	0	0	0	73
18:00	3	5	3	19	18	4	1	0	0	0	0	0	0	53
19:00	1	5	5	13	11	4	0	0	0	0	0	0	0	39
20:00	0	4	3	3	8	3	1	0	0	0	0	0	0	22
21:00	1	2	1	4	6	1	0	0	0	0	0	0	0	15
22:00	1	9	2	4	3	3	0	0	0	0	0	0	0	22
23:00	0	0	0	2	4	2	0	0	0	0	0	0	0	8
Totals	37	80	69	190	218	68	10	3						675
% of Totals	5%	12%	10%	28%	32%	10%	1%	0%						100%

Directional Peak Periods															
All Speeds					AM 7-9			NOON 12-2			PM 4-6			Off Peak Volumes	
Volume					Volume			Volume			Volume			Volume	
%					%			%			%			%	
AM Volumes	12	28	27	58	68	18	5	2	0	0	0	0	0	0	218
% AM	2%	4%	4%	9%	10%	3%	1%	0%							32%
AM Peak Hour	10:00	08:00	11:00	11:00	10:00	11:00	11:00	11:00							11:00
Volume	4	7	10	15	18	7	3	2							55
PM Volumes	25	52	42	132	150	50	5	1	0	0	0	0	0	0	457
% PM	4%	8%	6%	20%	22%	7%	1%	0%							68%
PM Peak Hour	12:00	15:00	17:00	17:00	17:00	13:00	13:00	17:00							17:00
Volume	4	10	8	24	23	8	1	1							73

Street Name	Direction	Percentiles					
		15th	50th	Average	85th	95th	ADT
Nellie Gail Rd	East Bound	19	29	28	35	38	675
Nellie Gail Rd	West Bound	24	31	31	37	40	638

SPEED

Nellie Gail Rd e/o Lost Colt Dr

City: Laguna Hills
Project #: CA12_1158_001wDay: Tuesday
Date: 8/14/2012

West Bound

Time	< 15	15 - 19	20 - 24	25 - 29	30 - 34	35 - 39	40 - 44	45 - 49	50 - 54	55 - 59	60 - 64	65 - 69	70 +	Total
00:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
01:00	0	0	1	0	1	0	0	0	0	0	0	0	0	2
02:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0
03:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:00	0	0	0	0	1	0	0	0	0	0	0	0	0	1
05:00	1	0	1	0	2	1	0	0	0	0	0	0	0	5
06:00	0	0	3	7	6	1	0	0	0	0	0	0	0	17
07:00	0	0	5	7	14	5	1	0	0	0	0	0	0	32
08:00	0	0	5	10	21	11	3	0	0	0	0	0	0	50
09:00	0	1	5	5	15	9	2	0	0	0	0	0	0	37
10:00	1	0	3	12	17	11	3	2	0	0	0	0	0	49
11:00	0	1	3	20	15	12	2	0	0	0	0	0	0	53
12:00 PM	1	1	6	13	9	8	2	1	0	0	0	0	0	41
13:00	1	0	5	7	10	9	3	0	0	0	0	0	0	35
14:00	1	2	7	11	11	12	0	0	0	0	0	0	0	44
15:00	0	3	8	15	20	4	0	0	0	0	0	0	0	50
16:00	0	5	6	13	15	6	3	0	0	0	0	0	0	48
17:00	0	0	4	6	16	7	1	1	0	0	0	0	0	35
18:00	0	0	7	11	10	10	2	0	0	0	0	0	0	40
19:00	0	3	11	6	9	9	1	0	0	0	0	0	0	39
20:00	0	1	4	5	1	5	1	0	0	0	0	0	0	17
21:00	0	1	3	8	5	3	3	0	0	0	0	0	0	23
22:00	0	1	4	2	3	2	0	0	0	0	0	0	0	12
23:00	1	0	0	5	2	0	0	0	0	0	0	0	0	8
Totals	6	19	91	163	203	125	27	4						638
% of Totals	1%	3%	14%	26%	32%	20%	4%	1%						100%

Directional Peak Periods	All Speeds	AM 7-9	NOON 12-2	PM 4-6	Off Peak Volumes
Volume	%	Volume	%	Volume	%
AM Volumes	2	26	50	0	0
% AM	0%	4%	8%	0	0
AM Peak Hour	05:00	07:00	11:00	10:00	11:00
Volume	1	5	20	3	2
PM Volumes	4	65	102	75	2
% PM	1%	10%	16%	12%	0%
PM Peak Hour	12:00	16:00	15:00	14:00	12:00
Volume	1	5	15	12	1
Off Peak Volumes					
Volume					
%					
62%					

Street Name	Direction	15th	50th	Average	85th	95th	ADT
Nellie Gail Rd	East Bound	19	29	28	35	38	675
Nellie Gail Rd	West Bound	24	31	31	37	40	638

SPEED

Nellie Gail Rd e/o Lost Colt Dr

City: Laguna Hills
Project #: CA12_1158_001Day: Tuesday
Date: 8/14/2012**Summary**

Time	< 15	15 - 19	20 - 24	25 - 29	30 - 34	35 - 39	40 - 44	45 - 49	50 - 54	55 - 59	60 - 64	65 - 69	70 +	Total
00:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
01:00	0	0	2	1	1	0	0	0	0	0	0	0	0	4
02:00	0	0	0	0	1	0	0	0	0	0	0	0	0	1
03:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:00	0	0	0	0	1	1	0	0	0	0	0	0	0	2
05:00	3	3	1	0	3	2	0	0	0	0	0	0	0	12
06:00	1	3	3	8	8	3	0	0	0	0	0	0	0	26
07:00	0	3	3	15	21	5	1	0	0	0	0	0	0	53
08:00	2	7	10	20	38	13	4	0	0	0	0	0	0	94
09:00	3	6	8	18	25	12	2	0	0	0	0	0	0	74
10:00	5	1	8	22	35	13	4	2	0	0	0	0	0	90
11:00	0	7	13	35	27	19	5	2	0	0	0	0	0	108
12:00 PM	5	2	10	23	23	9	2	1	0	0	0	0	0	75
13:00	5	5	7	16	19	17	4	0	0	0	0	0	0	73
14:00	3	5	10	28	25	15	1	0	0	0	0	0	0	87
15:00	2	13	15	33	39	11	1	0	0	0	0	0	0	114
16:00	3	8	10	22	36	12	3	0	0	0	0	0	0	94
17:00	4	5	12	30	39	15	1	2	0	0	0	0	0	108
18:00	3	5	10	30	28	14	3	0	0	0	0	0	0	93
19:00	1	8	16	19	20	13	1	0	0	0	0	0	0	78
20:00	0	5	7	8	9	8	2	0	0	0	0	0	0	39
21:00	1	3	4	12	11	4	3	0	0	0	0	0	0	38
22:00	1	10	6	6	6	5	0	0	0	0	0	0	0	34
23:00	1	0	0	7	6	2	0	0	0	0	0	0	0	16
Totals	43	99	160	353	421	193	37	7						1313
% of Totals	3%	8%	12%	27%	32%	15%	3%	1%						100%

Directional Peak Periods	All Speeds	AM 7-9	NOON 12-2	PM 4-6	Off Peak Volumes
AM Volumes	14	53	68	4	0
% AM	1%	4%	5%	0%	0
AM Peak Hour	10:00	11:00	11:00	10:00	11:00
Volume	5	13	19	2	0
PM Volumes	29	69	125	3	0
% PM	2%	5%	10%	0%	0
PM Peak Hour	12:00	15:00	13:00	17:00	15:00
Volume	5	13	17	2	0
Percentiles	15th	50th	Average	85th	95th
Nellie Gail Rd	22	30	29	36	39
ADT	1313				

SPEED

Nellie Gail Rd e/o Lost Colt Dr

City: Laguna Hills
Project #: CA12_1158_001eDay: Wednesday
Date: 8/15/2012

East Bound

Time	< 15	15 - 19	20 - 24	25 - 29	30 - 34	35 - 39	40 - 44	45 - 49	50 - 54	55 - 59	60 - 64	65 - 69	70 +	Total
00:00 AM	0	0	1	0	0	0	1	0	0	0	0	0	0	2
01:00	0	0	0	1	0	0	1	0	0	0	0	0	0	2
02:00	1	0	0	1	0	0	0	0	0	0	0	0	0	3
03:00	0	0	1	0	0	0	0	0	0	0	0	0	0	1
04:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:00	1	2	0	1	2	0	0	0	0	0	0	0	0	6
06:00	0	3	2	2	4	0	0	0	0	0	0	0	0	11
07:00	1	3	4	6	7	6	0	0	0	0	0	0	0	27
08:00	2	5	6	16	13	6	1	0	0	0	0	0	0	49
09:00	1	6	5	12	17	6	6	1	0	0	0	0	0	48
10:00	1	5	7	9	14	6	1	0	0	0	0	0	0	43
11:00	2	3	7	15	10	2	1	0	0	0	0	0	0	40
12:00 PM	3	4	6	10	13	2	1	0	0	0	0	0	0	39
13:00	1	8	6	5	13	1	0	0	0	0	0	0	0	34
14:00	0	12	9	7	17	4	2	0	0	0	0	0	0	51
15:00	1	4	4	17	19	8	0	0	0	0	0	0	0	53
16:00	3	8	2	18	22	9	1	0	0	0	0	0	0	63
17:00	2	6	5	23	25	7	2	0	0	0	0	0	0	70
18:00	2	6	4	24	14	2	0	0	0	0	0	0	0	52
19:00	2	4	3	11	16	4	0	0	0	0	0	0	0	40
20:00	1	3	3	8	10	5	1	0	0	0	0	0	0	31
21:00	0	1	1	9	6	1	0	0	0	0	0	0	0	18
22:00	1	1	4	3	3	0	0	0	0	0	0	0	0	12
23:00	0	1	1	4	3	1	0	0	0	0	0	0	0	9
Totals	25	85	80	202	228	72	11	1						704
% of Totals	4%	12%	11%	29%	32%	10%	2%	0%						100%

Directional Peak Periods												
All Speeds			AM 7-9			NOON 12-2			PM 4-6		Off Peak Volumes	
	Volume	%		Volume	%		Volume	%		Volume	%	
AM Volumes	27	33	63	67	28	4	1	0	0	0	0	
% AM	4%	5%	9%	10%	4%	1%	0%					
AM Peak Hour	09:00	10:00	08:00	09:00	07:00	02:00	09:00					
Volume	6	7	16	17	6	1	1					
PM Volumes	58	47	139	161	44	7	0	0	0	0	0	
% PM	8%	7%	20%	23%	6%	1%						
PM Peak Hour	14:00	14:00	18:00	17:00	16:00	14:00						
Volume	12	9	24	25	9	2						
Percentiles			Percentiles			Percentiles			Percentiles			
15th			50th			85th			95th			
20			29			35			38			
24			32			38			40			

Street Name	Direction	15th	50th	Average	85th	95th	ADT
Nellie Gail Rd	East Bound	20	29	28	35	38	704
Nellie Gail Rd	West Bound	24	32	31	38	40	650

SPEED

Nellie Gail Rd e/o Lost Colt Dr

Day: Wednesday

City: Laguna Hills

Date: 8/15/2012

Project #: CA12_1158_001w

West Bound

Time	< 15	15 - 19	20 - 24	25 - 29	30 - 34	35 - 39	40 - 44	45 - 49	50 - 54	55 - 59	60 - 64	65 - 69	70 +	Total
00:00 AM	0	0	0	1	0	0	0	0	0	0	0	0	0	2
01:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0
02:00	0	2	1	2	0	0	0	0	0	0	0	0	0	5
03:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:00	0	0	0	0	1	1	1	0	0	0	0	0	0	1
06:00	0	0	2	4	5	3	0	0	0	0	0	0	0	3
07:00	0	0	3	11	19	5	1	1	0	0	0	0	0	14
08:00	1	3	7	8	28	10	2	1	0	0	0	0	0	39
09:00	1	1	9	11	12	20	1	0	0	0	0	0	0	60
10:00	0	5	1	9	17	8	2	0	0	0	0	0	0	55
11:00	1	0	5	3	11	17	3	1	0	0	0	0	0	42
12:00 PM	0	4	4	10	16	7	2	0	0	0	0	0	0	41
13:00	0	2	3	6	10	7	2	0	0	0	0	0	0	43
14:00	1	0	4	6	10	8	5	0	0	0	0	0	0	30
15:00	0	0	3	16	12	15	1	0	0	0	0	0	0	34
16:00	0	2	6	9	14	10	2	0	0	0	0	0	0	47
17:00	0	2	6	10	17	15	1	2	0	0	0	0	0	43
18:00	0	3	5	11	14	8	3	0	0	0	0	0	0	53
19:00	0	1	5	5	11	7	0	0	0	0	0	0	0	44
20:00	1	0	3	10	5	5	7	0	0	0	0	0	0	29
21:00	0	0	5	9	6	0	1	0	0	0	0	0	0	26
22:00	0	0	4	4	4	0	1	0	0	0	0	0	0	21
23:00	0	0	0	2	2	0	0	0	0	0	0	0	0	13
Totals	5	25	78	147	215	149	27	4						650
% of Totals	1%	4%	12%	23%	33%	23%	4%	1%						100%

Directional Peak Periods		All Speeds		AM 7-9		NOON 12-2		PM 4-6		Off Peak Volumes	
				Volume	%	Volume	%	Volume	%	Volume	%
AM Volumes	3	11	28	50	94	65	9	2	0	0	0
% AM	0%	2%	4%	8%	14%	10%	1%	0%			40%
AM Peak Hour	08:00	10:00	09:00	07:00	08:00	09:00	11:00	08:00			08:00
Volume	1	5	9	11	28	20	3	1			60
PM Volumes	2	14	50	97	121	84	18	2	0	0	388
% PM	0%	2%	8%	15%	19%	13%	3%	0%			60%
PM Peak Hour	14:00	12:00	16:00	15:00	17:00	15:00	14:00	17:00			17:00
Volume	1	4	6	16	17	15	5	2			53

Street Name	Direction	15th	50th	Average	85th	95th	ADT
Nellie Gail Rd	East Bound	20	29	28	35	38	704
Nellie Gail Rd	West Bound	24	32	31	38	40	650

SPEED

Nellie Gail Rd e/o Lost Colt Dr

City: Laguna Hills
Project #: CA12_1158_001Day: Wednesday
Date: 8/15/2012**Summary**

Time	< 15	15 - 19	20 - 24	25 - 29	30 - 34	35 - 39	40 - 44	45 - 49	50 - 54	55 - 59	60 - 64	65 - 69	70 +	Total
00:00 AM	0	0	1	1	0	2	0	0	0	0	0	0	0	4
01:00	0	0	0	1	0	1	0	0	0	0	0	0	0	2
02:00	1	2	1	3	0	0	1	0	0	0	0	0	0	8
03:00	0	0	1	0	0	0	0	0	0	0	0	0	0	1
04:00	0	0	0	0	1	0	0	0	0	0	0	0	0	1
05:00	1	2	0	2	3	1	0	0	0	0	0	0	0	9
06:00	0	3	4	6	9	3	0	0	0	0	0	0	0	25
07:00	1	3	7	17	26	11	1	1	0	0	0	0	0	66
08:00	3	8	13	24	41	16	3	1	0	0	0	0	0	109
09:00	2	7	14	23	29	26	1	1	0	0	0	0	0	103
10:00	1	10	8	18	31	14	3	0	0	0	0	0	0	85
11:00	3	3	12	18	21	19	4	1	0	0	0	0	0	81
12:00 PM	3	8	10	20	29	9	3	0	0	0	0	0	0	82
13:00	1	10	9	11	23	8	2	0	0	0	0	0	0	64
14:00	1	12	13	13	27	12	7	0	0	0	0	0	0	85
15:00	1	4	7	33	31	23	1	0	0	0	0	0	0	100
16:00	3	10	8	27	36	19	3	0	0	0	0	0	0	106
17:00	2	8	11	33	42	22	3	2	0	0	0	0	0	123
18:00	2	9	9	35	28	10	3	0	0	0	0	0	0	96
19:00	2	5	8	16	27	11	0	0	0	0	0	0	0	69
20:00	2	3	6	18	15	12	1	0	0	0	0	0	0	57
21:00	0	1	6	18	12	1	1	0	0	0	0	0	0	39
22:00	1	1	8	7	7	0	1	0	0	0	0	0	0	25
23:00	0	1	2	5	5	1	1	0	0	0	0	0	0	14
Totals	30	110	158	349	443	221	38	5						1354
% of Totals	2%	8%	12%	26%	33%	16%	3%	0%						100%

Directional Peak Periods All Speeds	AM 7-9			NOON 12-2			PM 4-6			Off Peak Volumes		
	Volume	%		Volume	%		Volume	%		Volume	%	
AM Volumes	12	38	61	113	161	93	3	0	0	0	0	0
% AM	1%	3%	5%	8%	12%	7%	1%	0%	0%	0%	0%	0%
AM Peak Hour	08:00	10:00	09:00	08:00	08:00	09:00	11:00	08:00	08:00			
Volume	3	10	14	24	41	26	4	1				
PM Volumes	18	72	97	236	282	128	25	2	0	0	0	0
% PM	1%	5%	7%	17%	21%	9%	2%	0%	0%	0%	0%	0%
PM Peak Hour	12:00	14:00	14:00	18:00	17:00	15:00	14:00	17:00				
Volume	3	12	13	35	42	23	7	2				
Totals	175	13%	175	146	11%	146	229	17%	804	59%	804	59%

Street Name	Direction	Percentiles			
		15th	50th	85th	95th
Nellie Gail Rd	Summary	22	30	36	39
					ADT
					1354

SPEED

Nellie Gail Rd e/o Lost Colt Dr

City: Laguna Hills

Project #: CA12_1158_001e

Day: Thursday

Date: 8/16/2012

East Bound

Time	< 15	15 - 19	20 - 24	25 - 29	30 - 34	35 - 39	40 - 44	45 - 49	50 - 54	55 - 59	60 - 64	65 - 69	70 +	Total
00:00 AM	0	1	1	1	0	0	0	0	0	0	0	0	0	3
01:00	0	0	0	0	1	0	0	0	0	0	0	0	0	1
02:00	0	0	0	1	0	0	0	0	0	0	0	0	0	1
03:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:00	0	1	0	0	0	0	0	0	0	0	0	0	0	1
05:00	2	2	0	0	1	1	0	0	0	0	0	0	0	7
06:00	0	4	1	5	3	2	0	0	0	0	0	0	0	15
07:00	2	3	2	7	12	2	0	0	0	0	0	0	0	28
08:00	1	5	0	11	10	2	0	0	0	0	0	0	0	29
09:00	4	7	5	11	14	5	0	0	0	0	0	0	0	46
10:00	3	4	6	13	17	6	1	1	0	0	0	0	0	51
11:00	3	6	5	9	15	4	0	0	0	0	0	0	0	42
12:00 PM	1	9	4	16	15	2	0	0	0	0	0	0	0	47
13:00	2	8	2	22	13	5	0	0	0	0	0	0	0	52
14:00	3	3	8	15	20	5	0	1	0	0	0	0	0	55
15:00	0	4	6	10	18	9	1	0	0	0	0	0	0	48
16:00	2	8	4	11	19	10	0	0	0	0	0	0	0	54
17:00	3	7	10	26	24	11	1	0	0	0	0	0	0	82
18:00	1	4	3	17	26	10	2	1	0	0	0	0	0	64
19:00	0	3	3	7	14	5	1	1	0	0	0	0	0	34
20:00	2	4	3	13	14	4	0	0	0	0	0	0	0	40
21:00	2	4	1	3	7	1	1	0	0	0	0	0	0	19
22:00	0	2	1	3	6	3	0	0	0	0	0	0	0	15
23:00	0	0	0	4	2	1	0	0	0	0	0	0	0	7
Totals	31	89	65	206	251	88	7	1%	1%	12%	4	1%	741	100%
% of Totals	4%	12%	9%	28%	34%	12%	1%	1%						

Directional Peak Periods	All Speeds	AM 7-9	NOON 12-2	PM 4-6	Off Peak Volumes
AM Volumes	15	33	20	22	0
% AM	2%	4%	3%	3%	0%
AM Peak Hour	09:00	09:00	10:00	10:00	10:00
Volume	4	7	6	1	1
PM Volumes	16	56	45	66	3
% PM	2%	8%	6%	9%	0%
PM Peak Hour	14:00	12:00	17:00	17:00	17:00
Volume	3	9	10	11	2
					82
					449
					61%

Street Name	Direction	15th	50th	Average	85th	95th	ADT
Nellie Gail Rd	East Bound	20	30	28	35	39	741
Nellie Gail Rd	West Bound	24	31	31	38	41	667

SPEED

Nellie Gail Rd e/o Lost Colt Dr

City: Laguna Hills
Project #: CA12_1158_001w

Day: Thursday

Date: 8/16/2012

West Bound

Time	< 15	15 - 19	20 - 24	25 - 29	30 - 34	35 - 39	40 - 44	45 - 49	50 - 54	55 - 59	60 - 64	65 - 69	70 +	Total
00:00 AM	0	1	0	1	0	0	2	0	0	0	0	0	0	4
01:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0
02:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0
03:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:00	0	1	0	0	0	0	0	0	0	0	0	0	0	1
05:00	0	0	0	2	1	2	2	0	0	0	0	0	0	5
06:00	0	0	4	8	5	5	2	1	0	0	0	0	0	20
07:00	0	0	1	7	13	19	6	1	0	0	0	0	0	28
08:00	1	1	4	8	19	11	4	0	0	0	0	0	0	48
09:00	2	2	3	11	10	11	2	0	0	0	0	0	0	41
10:00	1	1	9	11	19	10	2	0	0	0	0	0	0	53
11:00	0	2	10	11	18	9	2	0	0	0	0	0	0	52
12:00 PM	0	0	7	14	12	11	1	0	0	0	0	0	0	45
13:00	1	3	10	11	19	4	2	0	0	0	0	0	0	50
14:00	1	0	4	12	15	4	3	0	0	0	0	0	0	39
15:00	0	1	3	9	19	17	4	0	0	0	0	0	0	53
16:00	0	2	6	13	19	13	2	1	0	0	0	0	0	56
17:00	0	0	5	6	13	11	5	0	0	0	0	0	0	40
18:00	0	1	7	12	10	6	1	0	0	0	0	0	0	37
19:00	0	1	5	5	8	5	0	1	0	0	0	0	0	25
20:00	0	0	4	4	8	5	0	0	0	0	0	0	0	21
21:00	0	0	7	1	10	3	4	0	0	0	0	0	0	25
22:00	0	1	3	7	4	1	1	0	0	0	0	0	0	17
23:00	0	0	3	1	2	1	0	0	0	0	0	0	0	7
Totals	6	17	95	154	224	134	35	2						667
% of Totals	1%	3%	14%	23%	34%	20%	5%	0%						100%

Directional Peak Periods	All Speeds	AM 7-9	NOON 12-2	PM 4-6	Off Peak Volumes
Volume	76	Volume	95	Volume	400
%		%	%	%	%
AM Volumes	4	8	53	0	0
% AM	1%	1%	8%	0	0
AM Peak Hour	09:00	09:00	08:00		
Volume	2	2	11		
PM Volumes	2	9	81	0	0
% PM	0%	1%	12%	0%	0%
PM Peak Hour	13:00	13:00	15:00	16:00	
Volume	1	3	17	5	1
Percentiles					
	15th	50th	Average	85th	95th
	20	30	28	35	39
	24	31	31	38	41
					ADT
					741
					667

Street Name	Direction	15th	50th	Average	85th	95th	ADT
Nellie Gail Rd	East Bound	20	30	28	35	39	741
Nellie Gail Rd	West Bound	24	31	31	38	41	667

SPEED

Nellie Gail Rd e/o Lost Colt Dr

City: Laguna Hills
Project #: CA12_1158_001Day: Thursday
Date: 8/16/2012**Summary**

Time	< 15	15 - 19	20 - 24	25 - 29	30 - 34	35 - 39	40 - 44	45 - 49	50 - 54	55 - 59	60 - 64	65 - 69	70 +	Total
00:00 AM	0	2	1	2	0	2	0	0	0	0	0	0	0	7
01:00	0	0	0	0	1	0	0	0	0	0	0	0	0	1
02:00	0	0	0	1	0	0	0	0	0	0	0	0	0	1
03:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:00	0	2	0	0	0	0	0	0	0	0	0	0	0	2
05:00	2	2	0	3	2	3	0	0	0	0	0	0	0	12
06:00	0	4	5	13	8	4	1	0	0	0	0	0	0	35
07:00	2	3	3	14	25	8	1	0	0	0	0	0	0	56
08:00	2	6	4	19	29	13	4	0	0	0	0	0	0	77
09:00	6	9	8	22	24	16	2	0	0	0	0	0	0	87
10:00	4	5	15	24	36	16	3	1	0	0	0	0	0	104
11:00	3	8	15	20	33	13	2	0	0	0	0	0	0	94
12:00 PM	1	9	11	30	27	13	1	0	0	0	0	0	0	92
13:00	3	11	12	33	32	9	2	0	0	0	0	0	0	102
14:00	4	3	12	27	35	9	3	1	0	0	0	0	0	94
15:00	0	5	5	19	37	26	5	0	0	0	0	0	0	101
16:00	2	10	10	24	38	23	2	1	0	0	0	0	0	110
17:00	3	7	15	32	37	22	6	0	0	0	0	0	0	122
18:00	1	5	10	29	36	16	3	1	0	0	0	0	0	101
19:00	0	4	8	12	22	10	1	2	0	0	0	0	0	59
20:00	2	4	7	17	22	9	0	0	0	0	0	0	0	61
21:00	2	4	8	4	17	4	5	0	0	0	0	0	0	44
22:00	0	3	4	10	10	4	1	0	0	0	0	0	0	32
23:00	0	0	3	5	4	2	0	0	0	0	0	0	0	14
Totals	37	106	160	360	475	222	42	6						1408
% of Totals	3%	8%	11%	26%	34%	16%	3%	0%						100%

Directional Peak Periods	All Speeds		AM 7-9		NOON 12-2		PM 4-6		Off Peak Volumes	
	Volume	%	Volume	%	Volume	%	Volume	%	Volume	%
AM Volumes	19	41	51	118	75	13	1	0	0	0
% AM	1%	3%	4%	8%	5%	1%	0%			
AM Peak Hour	09:00	09:00	10:00	10:00	09:00	08:00	10:00			
Volume	6	9	15	24	16	4	1			
PM Volumes	18	65	109	242	147	29	5	0	0	0
% PM	1%	5%	8%	17%	10%	2%	0%			
PM Peak Hour	14:00	13:00	17:00	13:00	15:00	17:00	19:00			
Volume	4	11	15	33	26	6	2			
Totals	4	11	133	33	194	6	2	232	849	122
%	4%	11%	13%	3%	16%	3%	0%	23%	60%	10%

Street Name	Direction	Percentiles			
		15th	50th	Average	95th
Nellie Gail Rd	Summary	22	30	30	39
					ADT
					1408

Nottingham Court Near Oso Parkway

SPEED

Nottingham Ct s/o Oso Pkwy

City: Laguna Hills
Project #: CA12_1158_002nDay: Wednesday
Date: 8/22/2012

North Bound

Time	< 15	15 - 19	20 - 24	25 - 29	30 - 34	35 - 39	40 - 44	45 - 49	50 - 54	55 - 59	60 - 64	65 - 69	70 +	Total
00:00 AM	0	0	0	1	0	0	0	0	0	0	0	0	0	1
01:00	0	0	0	2	1	1	0	0	0	0	0	0	0	4
02:00	0	0	0	1	0	1	0	0	0	0	0	0	0	2
03:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:00	0	0	0	2	0	1	0	0	0	0	0	0	0	3
05:00	0	0	0	1	2	0	0	0	0	0	0	0	0	3
06:00	0	0	1	3	3	2	0	0	0	0	0	0	0	9
07:00	0	0	2	5	10	3	0	0	0	0	0	0	0	20
08:00	0	1	1	11	9	6	1	0	0	0	0	0	0	29
09:00	0	0	1	5	11	6	1	0	0	0	0	0	0	24
10:00	1	0	2	8	5	2	0	0	0	0	0	0	0	18
11:00	0	1	4	8	10	2	0	0	0	0	0	0	0	25
12:00 PM	0	1	4	8	9	0	0	0	0	0	0	0	0	22
13:00	0	0	2	8	10	2	0	0	0	0	0	0	0	22
14:00	1	3	3	7	7	0	0	0	0	0	0	0	0	21
15:00	0	0	4	5	12	2	0	0	0	0	0	0	0	23
16:00	0	0	4	7	12	1	0	0	0	0	0	0	0	24
17:00	0	1	6	7	7	0	0	0	0	0	0	0	0	21
18:00	0	4	8	4	3	0	0	0	0	0	0	0	0	19
19:00	0	2	4	6	3	0	0	0	0	0	0	0	0	15
20:00	1	1	3	5	0	0	0	0	0	0	0	0	0	10
21:00	0	0	3	9	2	1	1	0	0	0	0	0	0	16
22:00	0	0	2	2	1	0	0	0	0	0	0	0	0	5
23:00	0	0	0	1	2	1	0	0	0	0	0	0	0	4
Totals	3	14	54	116	119	31	3	1%						340
% of Totals	1%	4%	16%	34%	35%	9%	1%							100%

Directional Peak Periods	All Speeds	AM 7-9	NOON 12-2	PM 4-6	Off Peak Volumes
Volume	49	Volume	44	Volume	202
%		%	%	%	%
AM Volumes	2	47	24	0	0
% AM	1%	14%	7%	0%	0%
AM Peak Hour	08:00	08:00	08:00	08:00	08:00
Volume	1	11	6	1	29
PM Volumes	12	69	7	0	0
% PM	4%	20%	2%	0%	0%
PM Peak Hour	18:00	21:00	13:00	21:00	16:00
Volume	4	9	2	1	24

Street Name	Direction	Percentiles	ADT
Nottingham Ct	North Bound	15th 23 50th 29 Average 29 85th 34 95th 38	340
Nottingham Ct	South Bound	15th 21 50th 27 Average 27 85th 31 95th 34	536

Nottingham Ct s/o Oso Pkwy

Day: Wednesday
Date: 8/22/2012

City: Laguna Hills
Project #: CA12_1158

South Bound														
Time	< 15	15 - 19	20 - 24	25 - 29	30 - 34	35 - 39	40 - 44	45 - 49	50 - 54	55 - 59	60 - 64	65 - 69	70 +	Total
00:00 AM	0	0	1	0	1	0	1	0	0	0	0	0	0	3
01:00	0	0	2	2	0	1	0	0	0	0	0	0	0	5
02:00	0	0	0	0	1	1	0	0	0	0	0	0	0	2
03:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:00	0	0	0	1	0	0	0	0	0	0	0	0	0	0
06:00	0	0	2	3	2	0	0	0	0	0	0	0	0	1
07:00	0	0	1	7	3	0	0	0	0	0	0	0	0	7
08:00	0	2	5	7	6	1	0	0	0	0	0	0	0	11
09:00	0	0	6	16	3	2	0	0	0	0	0	0	0	21
10:00	0	1	2	13	3	1	0	0	0	0	0	0	0	27
11:00	0	1	8	12	5	2	0	0	0	0	0	0	0	20
12:00 PM	0	0	7	14	8	1	0	0	0	0	0	0	0	28
13:00	1	1	9	12	3	0	0	0	0	0	0	0	0	30
14:00	0	4	3	19	8	0	1	0	0	0	0	0	0	26
15:00	0	3	5	19	4	2	0	0	0	0	0	0	0	35
16:00	0	3	7	28	12	2	0	0	0	0	0	0	0	33
17:00	1	2	12	18	8	0	0	0	0	0	0	0	0	52
18:00	0	8	26	25	6	0	0	0	0	0	0	0	0	41
19:00	3	2	19	14	3	0	0	0	0	0	0	0	0	65
20:00	0	2	16	23	4	0	0	1	0	0	0	0	0	41
21:00	2	1	5	9	2	1	0	0	0	0	0	0	0	46
22:00	0	1	5	7	3	0	0	0	0	0	0	0	0	20
23:00	0	0	1	3	1	1	0	0	0	0	0	0	0	16
Totals	7	31	142	252	86	15	2	1	0	0	0	0	0	536
% of Totals	1%	6%	26%	47%	16%	3%	0%	0%						100%

Directional Peak Periods										All Speeds			AM 7-9			NOON 12-2			PM 4-6			Off Peak Volumes			
		AM Volumes		0		4		27		61		24		8		1		0		0		0		125	
		% AM				1%		5%		11%		4%		1%		0%								23%	
		AM Peak Hour				08:00		11:00		09:00		08:00		09:00										11:00	
		Volume				2		8		16		6		2		1								28	
		PM Volumes		7		27		115		191		62		7		1		0		0		0		411	
		% PM		1%		5%		21%		36%		12%		1%		0%		0%						77%	
		PM Peak Hour		19:00		18:00		18:00		16:00		16:00		15:00		14:00		20:00						18:00	
		Volume		3		8		26		28		12		2		1		1						65	

Street Name	Direction	Percentiles					
		15th	50th	Average	85th	95th	ADT
Nottingham Ct	North Bound	23	29	29	34	38	340
Nottingham Ct	South Bound	21	27	27	31	34	536

SPEED

Nottingham Ct s/o Oso Pkwy

City: Laguna Hills
Project #: CA12_1158_002Day: Wednesday
Date: 8/22/2012**Summary**

Time	< 15	15 - 19	20 - 24	25 - 29	30 - 34	35 - 39	40 - 44	45 - 49	50 - 54	55 - 59	60 - 64	65 - 69	70 +	Total
00:00 AM	0	0	1	1	1	0	0	0	0	0	0	0	0	4
01:00	0	0	2	4	1	2	0	0	0	0	0	0	0	9
02:00	0	0	0	1	1	2	0	0	0	0	0	0	0	4
03:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:00	0	0	0	2	0	1	0	0	0	0	0	0	0	3
05:00	0	0	0	2	2	0	0	0	0	0	0	0	0	4
06:00	0	0	3	6	5	2	0	0	0	0	0	0	0	16
07:00	0	0	3	12	13	3	0	0	0	0	0	0	0	31
08:00	0	0	6	18	15	7	1	0	0	0	0	0	0	50
09:00	0	0	7	21	14	8	1	0	0	0	0	0	0	51
10:00	1	1	4	21	8	3	0	0	0	0	0	0	0	38
11:00	0	2	12	20	15	4	0	0	0	0	0	0	0	53
12:00 PM	0	1	11	22	17	1	0	0	0	0	0	0	0	52
13:00	1	1	11	20	13	2	0	0	0	0	0	0	0	48
14:00	1	7	6	26	15	0	1	0	0	0	0	0	0	56
15:00	0	3	9	24	16	4	0	0	0	0	0	0	0	56
16:00	0	3	11	35	24	3	0	0	0	0	0	0	0	76
17:00	1	3	18	25	15	0	0	0	0	0	0	0	0	62
18:00	0	12	34	29	9	0	0	0	0	0	0	0	0	84
19:00	3	4	23	20	6	0	0	0	0	0	0	0	0	56
20:00	1	3	19	28	4	0	0	1	0	0	0	0	0	56
21:00	2	1	8	18	4	2	1	0	0	0	0	0	0	36
22:00	0	1	7	9	4	0	0	0	0	0	0	0	0	21
23:00	0	0	1	4	3	2	0	0	0	0	0	0	0	10
Totals	10	45	196	368	205	46	5	1						876
% of Totals	1%	5%	22%	42%	23%	5%	1%	0%						100%

Directional Peak Periods		AM 7-9			NOON 12-2			PM 4-6			Off Peak Volumes		
All Speeds		Volume		%	Volume		%	Volume		%	Volume		%
AM Volumes	1	6	38	108	75	32	3	0	0	0	0	0	263
% AM	0%	1%	4%	12%	9%	4%	0%						30%
AM Peak Hour	10:00	08:00	11:00	09:00	08:00	09:00							11:00
Volume	1	3	12	21	15	8	1						53
PM Volumes	9	39	158	260	130	14	2	1	0	0	0	0	613
% PM	1%	4%	18%	30%	15%	2%	0%	0%					70%
PM Peak Hour	19:00	18:00	18:00	16:00	16:00	15:00	14:00	20:00					18:00
Volume	3	12	34	35	24	4	1	1					84

Street Name	Direction	15th	50th	Average	85th	95th	ADT
Nottingham Ct	Summary	22	28	27	33	36	876

SPEED

Nottingham Ct s/o Oso Pkwy

City: Laguna Hills

Project #: CA12_1158_002n

Day: Thursday

Date: 8/23/2012

North Bound

Time	< 15	15 - 19	20 - 24	25 - 29	30 - 34	35 - 39	40 - 44	45 - 49	50 - 54	55 - 59	60 - 64	65 - 69	70 +	Total
00:00 AM	0	0	0	1	1	1	0	0	0	0	0	0	0	3
01:00	0	0	0	0	1	0	0	0	0	0	0	0	0	1
02:00	0	0	0	0	2	0	0	0	0	0	0	0	0	2
03:00	0	0	1	0	0	0	0	0	0	0	0	0	0	1
04:00	0	0	0	1	1	0	0	0	0	0	0	0	0	2
05:00	1	0	1	2	2	0	0	0	0	0	0	0	0	6
06:00	0	0	0	2	5	2	0	0	0	0	0	0	0	9
07:00	0	1	3	15	7	2	2	0	0	0	0	0	0	28
08:00	0	0	3	12	4	2	0	0	0	0	0	0	0	21
09:00	0	2	3	10	9	1	0	0	0	0	0	0	0	25
10:00	1	1	1	7	7	3	0	0	0	0	0	0	0	20
11:00	0	0	4	7	14	0	0	0	0	0	0	0	0	25
12:00 PM	0	1	1	8	5	2	0	0	0	0	0	0	0	17
13:00	0	1	1	5	8	1	0	0	0	0	0	0	0	16
14:00	1	0	6	12	3	1	0	0	0	0	0	0	0	23
15:00	1	0	1	3	8	3	0	0	0	0	0	0	0	16
16:00	0	0	3	11	9	2	0	0	0	0	0	0	0	25
17:00	0	0	3	6	4	4	1	0	0	0	0	0	0	18
18:00	0	1	1	7	7	2	0	0	0	0	0	0	0	18
19:00	0	0	2	3	4	3	0	0	0	0	0	0	0	12
20:00	0	0	2	4	6	0	0	0	0	0	0	0	0	12
21:00	0	0	1	4	3	0	0	0	0	0	0	0	0	8
22:00	0	0	0	4	1	1	1	0	0	0	0	0	0	7
23:00	0	1	0	1	2	0	0	0	0	0	0	0	0	4
Totals	4	8	37	125	113	30	2							319
% of Totals	1%	3%	12%	39%	35%	9%	1%							100%

Directional Peak Periods		AM 7-9		NOON 12-2		PM 4-6		Off Peak Volumes	
All Speeds		Volume	%	Volume	%	Volume	%	Volume	%
AM Volumes	2	4	57	53	11	0	0	0	0
% AM	1%	1%	18%	17%	3%				
AM Peak Hour	05:00	09:00	11:00	07:00	11:00	10:00			
Volume	1	2	4	15	14	3			
PM Volumes	2	4	21	68	60	19	2	0	0
% PM	1%	1%	7%	21%	19%	6%	1%		
PM Peak Hour	14:00	12:00	14:00	14:00	16:00	17:00	17:00		
Volume	1	1	6	12	9	4	1		

Street Name	Direction	15th	50th	Average	85th	95th	ADT
Nottingham Ct	North Bound	25	29	29	34	38	319
Nottingham Ct	South Bound	22	27	27	32	34	560

SPEED

Nottingham Ct s/o Oso Pkwy

City: Laguna Hills

Project #: CA12_1158_002s

Day: Thursday

Date: 8/23/2012

South Bound

Time	< 15	15 - 19	20 - 24	25 - 29	30 - 34	35 - 39	40 - 44	45 - 49	50 - 54	55 - 59	60 - 64	65 - 69	70 +	Total
00:00 AM	0	0	0	3	3	0	0	0	0	0	0	0	0	6
01:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0
02:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0
03:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:00	1	0	0	0	0	0	0	0	0	0	0	0	0	1
06:00	0	0	1	3	0	0	0	0	0	0	0	0	0	4
07:00	1	1	7	5	1	0	0	0	0	0	0	0	0	15
08:00	0	1	6	4	1	0	0	0	0	0	0	0	0	12
09:00	1	5	5	8	3	0	0	0	0	0	0	0	0	22
10:00	0	3	6	15	8	0	0	0	0	0	0	0	0	32
11:00	0	1	7	15	6	0	0	0	0	0	0	0	0	29
12:00 PM	0	1	11	15	9	0	0	0	0	0	0	0	0	36
13:00	1	3	7	16	8	2	0	0	0	0	0	0	0	37
14:00	0	0	7	21	9	0	0	0	0	0	0	0	0	37
15:00	0	0	3	18	13	3	0	0	0	0	0	0	0	37
16:00	3	2	8	23	9	2	0	0	0	0	0	0	0	47
17:00	0	2	12	31	15	1	0	0	0	0	0	0	0	61
18:00	0	0	16	26	13	1	0	0	0	0	0	0	0	56
19:00	0	0	10	34	8	0	0	0	0	0	0	0	0	52
20:00	0	0	6	16	8	1	0	0	0	0	0	0	0	31
21:00	0	1	5	17	3	0	0	0	0	0	0	0	0	26
22:00	0	0	1	4	7	0	0	0	0	0	0	0	0	12
23:00	0	0	1	5	1	0	0	0	0	0	0	0	0	7
Totals	7	21	118	279	125	10								560
% of Totals	1%	4%	21%	50%	22%	2%								100%

Directional Peak Periods		AM 7-9		NOON 12-2		PM 4-6		Off Peak Volumes	
All Speeds		Volume	%	Volume	%	Volume	%	Volume	%
AM Volumes	3	11	32	53	22	0	0	0	0
% AM	1%	2%	6%	9%	4%				
AM Peak Hour	05:00	09:00	07:00	10:00	10:00				
Volume	1	5	7	15	8				
PM Volumes	4	10	86	226	103	10	0	0	0
% PM	1%	2%	15%	40%	18%	2%			
PM Peak Hour	16:00	13:00	18:00	19:00	17:00	15:00			
Volume	3	3	16	34	15	3			
								</	

Street Name	Direction	15th	50th	Average	85th	95th	ADT
Nottingham Ct	North Bound	25	29	29	34	38	319
Nottingham Ct	South Bound	22	27	27	32	34	560

SPEED

Nottingham Ct s/o Oso Pkwy

City: Laguna Hills
Project #: CA12_1158_002nDay: Friday
Date: 8/24/2012

North Bound

Time	< 15	15 - 19	20 - 24	25 - 29	30 - 34	35 - 39	40 - 44	45 - 49	50 - 54	55 - 59	60 - 64	65 - 69	70 +	Total
00:00 AM	0	1	1	1	3	0	0	0	0	0	0	0	0	6
01:00	0	0	0	0	2	0	0	0	0	0	0	0	0	2
02:00	0	0	0	0	1	0	0	0	0	0	0	0	0	1
03:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:00	0	0	0	2	1	0	0	0	0	0	0	0	0	3
05:00	0	1	0	1	0	0	0	0	0	0	0	0	0	2
06:00	0	0	0	2	7	2	0	0	0	0	0	0	0	11
07:00	1	2	2	7	4	4	0	0	0	0	0	0	0	20
08:00	2	1	9	10	9	3	0	0	0	0	0	0	0	34
09:00	1	0	2	7	8	5	0	0	0	0	0	0	0	23
10:00	1	1	5	3	5	3	0	0	0	0	0	0	0	18
11:00	2	0	6	9	7	0	0	0	0	0	0	0	0	24
12:00 PM	0	0	2	8	9	4	1	0	0	0	0	0	0	24
13:00	1	0	8	11	5	1	0	0	0	0	0	0	0	26
14:00	0	2	5	10	8	0	0	0	0	0	0	0	0	25
15:00	1	4	2	10	5	2	1	0	0	0	0	0	0	25
16:00	1	1	4	7	10	4	1	0	0	0	0	0	0	28
17:00	0	1	2	5	7	1	0	0	0	0	0	0	0	16
18:00	0	2	0	7	7	1	0	0	0	0	0	0	0	17
19:00	0	0	3	8	10	1	0	0	0	0	0	0	0	22
20:00	0	2	1	2	2	0	0	0	0	0	0	0	0	7
21:00	0	2	1	3	2	1	0	0	0	0	0	0	0	9
22:00	0	0	0	5	2	1	0	0	0	0	0	0	0	8
23:00	0	0	0	0	1	0	0	0	0	0	0	0	0	1
Totals	10	20	53	118	115	33	3							352
% of Totals	3%	6%	15%	34%	33%	9%	1%							100%

Directional Peak Periods	All Speeds	AM 7-9	NOON 12-2	PM 4-6	Off Peak Volumes
Volume	%	Volume	%	Volume	%
AM Volumes	7	42	17	0	0
% AM	2%	12%	5%	0	0
AM Peak Hour	08:00	08:00	09:00		
Volume	2	10	5		
PM Volumes	3	76	16	0	0
% PM	1%	22%	5%	0	0
PM Peak Hour	13:00	13:00	12:00		
Volume	1	11	4		
Off Peak Volumes					
Volume	204				
%	58%				

Street Name	Direction	Percentiles					
		15th	50th	Average	85th	95th	ADT
Nottingham Ct	North Bound	22	29	28	34	38	352
Nottingham Ct	South Bound	22	27	27	32	34	603

SPEED

Nottingham Ct s/o Oso Pkwy

City: Laguna Hills

Project #: CA12_1158_002s

Day: Friday

Date: 8/24/2012

South Bound

Time	< 15	15 - 19	20 - 24	25 - 29	30 - 34	35 - 39	40 - 44	45 - 49	50 - 54	55 - 59	60 - 64	65 - 69	70 +	Total
00:00 AM	0	0	0	1	3	0	0	0	0	0	0	0	0	4
01:00	0	0	1	2	1	1	0	0	0	0	0	0	0	5
02:00	0	0	1	0	0	0	0	0	0	0	0	0	0	1
03:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06:00	1	0	0	2	0	0	0	0	0	0	0	0	0	3
07:00	0	2	3	9	5	0	0	0	0	0	0	0	0	19
08:00	3	1	10	8	1	0	0	0	0	0	0	0	0	23
09:00	0	3	5	13	5	0	0	0	0	0	0	0	0	26
10:00	1	2	6	15	10	1	0	0	0	0	0	0	0	35
11:00	0	1	6	14	8	0	0	0	0	0	0	0	0	29
12:00 PM	0	3	13	16	5	1	0	0	0	0	0	0	0	38
13:00	0	1	9	13	10	1	0	0	0	0	0	0	0	34
14:00	1	2	9	18	9	0	0	0	0	0	0	0	0	39
15:00	0	1	8	29	6	1	0	0	0	0	0	0	0	45
16:00	2	1	9	23	15	3	0	0	0	0	0	0	0	53
17:00	0	0	13	36	13	0	0	0	0	0	0	0	0	62
18:00	3	1	17	26	7	2	0	0	0	0	0	0	0	56
19:00	1	4	10	14	9	1	0	0	0	0	0	0	0	39
20:00	1	3	7	14	4	1	0	0	0	0	0	0	0	30
21:00	0	2	6	15	7	0	0	0	0	0	0	0	0	30
22:00	0	0	7	12	4	0	0	0	0	0	0	0	0	23
23:00	0	0	0	7	2	0	0	0	0	0	0	0	0	9
Totals	13	27	141	289	121	12								603
% of Totals	2%	4%	23%	48%	20%	2%								100%

Directional Peak Periods	All Speeds	AM 7-9	NOON 12-2	PM 4-6	Off Peak Volumes
Volume	Volume	Volume	Volume	Volume	Volume
AM Volumes	5	33	2	0	0
% AM	1%	5%	0%	0%	0%
AM Peak Hour	08:00	08:00	01:00		
Volume	3	10	1		
PM Volumes	8	108	91	0	0
% PM	1%	18%	15%	0%	0%
PM Peak Hour	18:00	18:00	16:00		
Volume	3	17	15		
Totals	13	141	121	12	9
% of Totals	2%	23%	20%	2%	1%

Street Name	Direction	15th	50th	Average	85th	95th	ADT
Nottingham Ct	North Bound	22	29	28	34	38	352
Nottingham Ct	South Bound	22	27	27	32	34	603

SPEED

Nottingham Ct s/o Oso Pkwy

City: Laguna Hills
Project #: CA12_1158_002Day: Friday
Date: 8/24/2012**Summary**

Time	< 15	15 - 19	20 - 24	25 - 29	30 - 34	35 - 39	40 - 44	45 - 49	50 - 54	55 - 59	60 - 64	65 - 69	70 +	Total
00:00 AM	0	1	2	4	3	0	0	0	0	0	0	0	0	10
01:00	0	0	1	2	3	1	0	0	0	0	0	0	0	7
02:00	0	0	1	0	1	0	0	0	0	0	0	0	0	2
03:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:00	0	0	0	2	1	0	0	0	0	0	0	0	0	3
05:00	0	1	0	1	0	0	0	0	0	0	0	0	0	2
06:00	1	0	0	4	7	2	0	0	0	0	0	0	0	14
07:00	1	4	5	16	9	4	0	0	0	0	0	0	0	39
08:00	5	2	19	18	10	3	0	0	0	0	0	0	0	57
09:00	1	3	7	20	13	5	0	0	0	0	0	0	0	49
10:00	2	3	11	18	15	4	0	0	0	0	0	0	0	53
11:00	2	1	12	23	15	0	0	0	0	0	0	0	0	53
12:00 PM	0	3	15	24	14	5	1	0	0	0	0	0	0	62
13:00	1	1	17	24	15	2	0	0	0	0	0	0	0	60
14:00	1	4	14	28	17	0	0	0	0	0	0	0	0	64
15:00	1	5	10	39	11	3	1	0	0	0	0	0	0	70
16:00	3	2	13	30	25	7	1	0	0	0	0	0	0	81
17:00	0	1	15	41	20	1	0	0	0	0	0	0	0	78
18:00	3	3	17	33	14	3	0	0	0	0	0	0	0	73
19:00	1	4	13	22	19	2	0	0	0	0	0	0	0	61
20:00	1	5	8	16	6	1	0	0	0	0	0	0	0	37
21:00	0	4	7	18	9	1	0	0	0	0	0	0	0	39
22:00	0	0	7	17	6	1	0	0	0	0	0	0	0	31
23:00	0	0	0	7	3	0	0	0	0	0	0	0	0	10
Totals	23	47	194	407	236	45	3	0%						955
% of Totals	2%	5%	20%	43%	25%	5%	0%							100%

Directional Peak Periods	All Speeds		AM 7-9		NOON 12-2		PM 4-6		Off Peak Volumes	
	Volume	%	Volume	%	Volume	%	Volume	%	Volume	%
AM Volumes	12	1%	58	6%	19	2%	0	0%	0	0%
% AM	08:00	07:00	08:00	11:00	09:00	08:00				
AM Peak Hour	08:00	07:00	08:00	11:00	09:00	08:00				
Volume	5	4	19	23	5					
PM Volumes	11	3%	136	14%	26	3%	0	0%	0	0%
% PM	16:00	15:00	13:00	17:00	16:00	12:00				
PM Peak Hour	16:00	15:00	13:00	17:00	16:00	12:00				
Volume	3	5	17	41	7	1				
Totals	25	10%	96	10%	122	13%	159	17%	578	61%

Street Name	Percentiles			
	15th	50th	85th	95th
Nottingham Ct	22	28	33	35
Direction	ADT			
Summary	955			

SPEED

Nottingham Ct s/o Oso Pkwy

City: Laguna Hills
Project #: CA12_1158_002nDay: Saturday
Date: 8/25/2012**North Bound**

Time	< 15	15 - 19	20 - 24	25 - 29	30 - 34	35 - 39	40 - 44	45 - 49	50 - 54	55 - 59	60 - 64	65 - 69	70 +	Total
00:00 AM	0	1	1	0	0	1	0	0	0	0	0	0	0	3
01:00	0	0	0	1	2	0	0	0	0	0	0	0	0	3
02:00	0	0	1	0	0	1	0	0	0	0	0	0	0	2
03:00	0	0	0	1	0	0	0	0	0	0	0	0	0	1
04:00	0	0	1	1	0	0	0	0	0	0	0	0	0	2
05:00	1	1	0	0	0	0	0	0	0	0	0	0	0	2
06:00	0	0	0	2	4	1	0	0	0	0	0	0	0	7
07:00	0	1	0	3	3	3	0	0	0	0	0	0	0	10
08:00	0	1	1	3	6	5	0	0	0	0	0	0	0	16
09:00	1	0	5	7	7	3	0	0	0	0	0	0	0	17
10:00	0	0	3	3	8	4	0	0	0	0	0	0	0	18
11:00	0	1	1	6	9	3	0	0	0	0	0	0	0	20
12:00 PM	1	1	2	3	13	2	0	0	0	0	0	0	0	22
13:00	0	1	2	11	3	2	0	0	0	0	0	0	0	19
14:00	1	0	1	10	9	3	0	0	0	0	0	0	0	24
15:00	0	0	4	11	12	3	0	0	0	0	0	0	0	30
16:00	0	0	2	6	6	1	0	0	0	0	0	0	0	15
17:00	0	0	5	5	5	3	0	0	0	0	0	0	0	18
18:00	0	0	0	8	6	2	1	0	0	0	0	0	0	17
19:00	0	0	0	5	2	1	0	0	0	0	0	0	0	8
20:00	0	1	5	2	3	0	0	0	0	0	0	0	0	11
21:00	0	0	6	4	3	0	0	0	0	0	0	0	0	13
22:00	0	0	1	7	2	2	1	0	0	0	0	0	0	13
23:00	0	0	1	0	1	0	0	0	0	0	0	0	0	2
Totals	4	8	42	93	104	40	2	1%						293
% of Totals	1%	3%	14%	32%	35%	14%	1%							100%

Directional Peak Periods	All Speeds	AM 7-9	NOON 12-2	PM 4-6	Off Peak Volumes
Volume	%	Volume	%	Volume	%
AM Volumes	2	13	21	0	0
% AM	1%	4%	7%	0	0
AM Peak Hour	05:00	09:00	11:00	08:00	
Volume	1	5	6	5	
PM Volumes	2	29	19	0	0
% PM	1%	10%	6%	0	0
PM Peak Hour	12:00	21:00	14:00		
Volume	1	6	11	3	
Totals	4	42	40	2	293
% of Totals	1%	3%	14%	1%	100%

Street Name	Direction	15th	50th	Average	85th	95th	ADT
Nottingham Ct	North Bound	24	30	30	35	38	293
Nottingham Ct	South Bound	23	28	27	32	35	508

SPEED

Nottingham Ct s/o Oso Pkwy

City: Laguna Hills

Project #: CA12_1158_002s

Day: Saturday

Date: 8/25/2012

South Bound

Time	< 15	15 - 19	20 - 24	25 - 29	30 - 34	35 - 39	40 - 44	45 - 49	50 - 54	55 - 59	60 - 64	65 - 69	70 +	Total
00:00 AM	0	0	2	11	3	0	0	0	0	0	0	0	0	16
01:00	0	0	0	2	0	1	0	0	0	0	0	0	0	3
02:00	0	0	0	1	0	1	0	0	0	0	0	0	0	2
03:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:00	0	0	1	1	0	0	0	0	0	0	0	0	0	2
06:00	0	0	0	2	0	1	0	0	0	0	0	0	0	3
07:00	0	1	2	4	0	0	0	0	0	0	0	0	0	7
08:00	0	1	4	6	0	0	0	0	0	0	0	0	0	11
09:00	0	2	4	12	3	0	0	0	0	0	0	0	0	21
10:00	1	1	3	22	10	0	0	0	0	0	0	0	0	37
11:00	0	1	5	20	6	2	0	0	0	0	0	0	0	34
12:00 PM	0	0	8	15	10	1	0	0	0	0	0	0	0	34
13:00	0	0	7	21	10	2	0	0	0	0	0	0	0	40
14:00	0	1	2	16	11	2	0	0	0	0	0	0	0	32
15:00	0	3	6	26	9	2	0	0	0	0	0	0	0	46
16:00	2	4	4	27	9	1	0	0	0	0	0	0	0	47
17:00	1	0	13	20	13	0	0	0	0	0	0	0	0	47
18:00	0	0	12	16	10	0	0	0	0	0	0	0	0	38
19:00	1	1	6	12	6	2	0	0	0	0	0	0	0	28
20:00	0	3	7	6	3	0	0	0	0	0	0	0	0	19
21:00	0	1	7	7	4	0	0	0	0	0	0	0	0	19
22:00	0	0	0	8	4	0	1	0	0	0	0	0	0	13
23:00	0	0	2	5	2	0	0	0	0	0	0	0	0	9
Totals	5	19	95	260	113	15	1	0%						508
% of Totals	1%	4%	19%	51%	22%	3%	0%							100%

Directional Peak Periods		AM 7-9		NOON 12-2		PM 4-6		Off Peak Volumes	
All Speeds		Volume	%	Volume	%	Volume	%	Volume	%
AM Volumes	1	6	21	81	22	5	0	0	0
% AM	0%	1%	4%	16%	4%	1%			
AM Peak Hour	10:00	09:00	11:00	10:00	10:00	11:00			
Volume	1	2	5	22	10	2			
PM Volumes	4	13	74	179	91	10	1	0	0
% PM	1%	3%	15%	35%	18%	2%	0%		
PM Peak Hour	16:00	16:00	17:00	16:00	17:00	13:00	22:00		
Volume	2	4	13	27	13	2	1		

Street Name	Direction	Percentiles	ADT
Nottingham Ct	North Bound	15th	24
Nottingham Ct	South Bound	15th	23
		50th	30
		85th	35
		95th	38
		ADT	293
			508

SPEED

Nottingham Ct s/o Oso Pkwy

City: Laguna Hills
Project #: CA12_1158_002Day: Saturday
Date: 8/25/2012**Summary**

Time	< 15	15 - 19	20 - 24	25 - 29	30 - 34	35 - 39	40 - 44	45 - 49	50 - 54	55 - 59	60 - 64	65 - 69	70 +	Total
00:00 AM	0	1	3	11	3	1	0	0	0	0	0	0	0	19
01:00	0	0	0	3	2	1	0	0	0	0	0	0	0	6
02:00	0	0	1	1	0	2	0	0	0	0	0	0	0	4
03:00	0	0	0	1	0	0	0	0	0	0	0	0	0	1
04:00	0	0	1	1	0	0	0	0	0	0	0	0	0	2
05:00	1	1	1	1	0	0	0	0	0	0	0	0	0	4
06:00	0	0	0	4	4	2	0	0	0	0	0	0	0	10
07:00	0	2	2	7	3	3	0	0	0	0	0	0	0	17
08:00	0	2	5	9	6	5	0	0	0	0	0	0	0	27
09:00	1	2	9	13	10	3	0	0	0	0	0	0	0	38
10:00	1	1	6	25	18	4	0	0	0	0	0	0	0	55
11:00	0	2	6	26	15	5	0	0	0	0	0	0	0	54
12:00 PM	1	1	10	18	23	3	0	0	0	0	0	0	0	56
13:00	0	1	9	32	13	4	0	0	0	0	0	0	0	59
14:00	1	1	3	26	20	5	0	0	0	0	0	0	0	56
15:00	0	3	10	37	21	5	0	0	0	0	0	0	0	76
16:00	2	4	6	33	15	2	0	0	0	0	0	0	0	62
17:00	1	0	18	25	18	3	0	0	0	0	0	0	0	65
18:00	0	0	12	24	16	2	1	0	0	0	0	0	0	55
19:00	1	1	6	17	8	3	0	0	0	0	0	0	0	36
20:00	0	4	12	8	6	0	0	0	0	0	0	0	0	30
21:00	0	1	13	11	7	0	0	0	0	0	0	0	0	32
22:00	0	0	1	15	6	2	2	0	0	0	0	0	0	26
23:00	0	0	3	5	3	0	0	0	0	0	0	0	0	11
Totals	9	27	137	353	217	55	3	0%						801
% of Totals	1%	3%	17%	44%	27%	7%	0%							100%

Directional Peak Periods	All Speeds		AM 7-9		NOON 12-2		PM 4-6		Off Peak Volumes	
	Volume	%	Volume	%	Volume	%	Volume	%	Volume	%
AM Volumes	34	102	61	26	0	0	0	0	0	0
% AM	4%	13%	8%	3%						
AM Peak Hour	09:00	11:00	10:00	08:00						
Volume	9	26	18	5						
PM Volumes	103	251	156	29	3	0	0	0	0	0
% PM	13%	31%	19%	4%	0%					
PM Peak Hour	17:00	15:00	12:00	14:00	22:00					
Volume	18	37	23	5	2					
Totals	44	5%	115	14%	127	16%	515	64%		

Street Name	Direction	Percentiles			
		15th	50th	85th	95th
Nottingham Ct	Summary	23	28	34	37
					ADT
					801

SPEED

Nottingham Ct s/o Oso Pkwy

City: Laguna Hills
Project #: CA12_1158_002nDay: Sunday
Date: 8/26/2012

North Bound

Time	< 15	15 - 19	20 - 24	25 - 29	30 - 34	35 - 39	40 - 44	45 - 49	50 - 54	55 - 59	60 - 64	65 - 69	70 +	Total
00:00 AM	0	2	1	2	1	1	1	0	0	0	0	0	0	8
01:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0
02:00	0	0	0	0	1	0	0	0	0	0	0	0	0	1
03:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:00	1	0	0	0	0	0	0	0	0	0	0	0	0	1
06:00	0	1	2	1	2	0	0	0	0	0	0	0	0	6
07:00	0	0	1	2	3	1	0	0	0	0	0	0	0	7
08:00	0	0	2	6	9	2	0	0	0	0	0	0	0	19
09:00	0	1	1	5	4	4	0	0	0	0	0	0	0	15
10:00	0	2	2	5	8	3	0	0	0	0	0	0	0	20
11:00	0	1	3	3	6	3	1	0	0	0	0	0	0	17
12:00 PM	0	0	2	3	4	3	0	0	0	0	0	0	0	12
13:00	1	1	3	4	9	3	0	0	0	0	0	0	0	21
14:00	0	1	0	4	5	5	0	0	0	0	0	0	0	15
15:00	0	0	1	6	5	1	1	0	0	0	0	0	0	14
16:00	0	0	2	5	4	0	0	0	0	0	0	0	0	11
17:00	0	0	2	6	3	1	0	0	0	0	0	0	0	12
18:00	1	0	4	2	4	1	1	0	0	0	0	0	0	13
19:00	0	0	1	6	4	0	0	0	0	0	0	0	0	11
20:00	0	0	1	8	1	2	1	0	0	0	0	0	0	13
21:00	0	1	1	4	3	1	0	0	0	0	0	0	0	10
22:00	0	0	1	0	2	0	0	0	0	0	0	0	0	3
23:00	0	0	1	1	1	0	1	0	0	0	0	0	0	4
Totals	3	10	31	73	79	31	6							233
% of Totals	1%	4%	13%	31%	34%	13%	3%							100%

Directional Peak Periods		AM 7-9			NOON 12-2			PM 4-6			Off Peak Volumes		
All Speeds		Volume			%			Volume			%		
		26			11%			33			10%		
		↔			↔			↔			↔		
AM Volumes	1	7	12	24	34	14	2	0	0	0	0	0	94
% AM	0%	3%	5%	10%	15%	6%	1%						40%
AM Peak Hour	05:00	11:00	08:00	08:00	08:00	09:00							10:00
Volume	1	2	3	6	9	4	1						20
PM Volumes	2	3	19	49	45	17	4	0	0	0	0	0	139
% PM	1%	1%	8%	21%	19%	7%	2%						60%
PM Peak Hour	13:00	13:00	18:00	20:00	13:00	14:00	15:00						13:00
Volume	1	1	4	8	9	5	1						21

Street Name	Direction	Percentiles					
		15th	50th	Average	85th	95th	ADT
Nottingham Ct	North Bound	24	30	30	35	39	233
Nottingham Ct	South Bound	22	27	27	32	35	491

SPEED

Nottingham Ct s/o Oso Pkwy

City: Laguna Hills
Project #: CA12_1158_002s

Day: Sunday

Date: 8/26/2012

South Bound

Time	< 15	15 - 19	20 - 24	25 - 29	30 - 34	35 - 39	40 - 44	45 - 49	50 - 54	55 - 59	60 - 64	65 - 69	70 +	Total
00:00 AM	0	0	1	6	1	1	0	0	0	0	0	0	0	9
01:00	0	0	2	2	1	0	1	0	0	0	0	0	0	6
02:00	0	0	0	0	1	0	1	0	0	0	0	0	0	2
03:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06:00	0	0	1	1	0	0	0	0	0	0	0	0	0	2
07:00	0	1	2	2	0	0	0	0	0	0	0	0	0	5
08:00	0	0	5	8	5	0	0	0	0	0	0	0	0	18
09:00	0	1	2	9	2	0	0	0	0	0	0	0	0	14
10:00	0	1	6	8	7	2	0	0	0	0	0	0	0	24
11:00	0	0	4	20	5	0	0	0	0	0	0	0	0	29
12:00 PM	1	0	5	20	12	0	0	0	0	0	0	0	0	38
13:00	0	1	8	16	13	1	0	0	0	0	0	0	0	39
14:00	1	1	7	19	15	0	0	0	0	0	0	0	0	43
15:00	0	0	12	23	6	0	0	0	0	0	0	0	0	41
16:00	0	1	20	19	4	1	0	0	0	0	0	0	0	45
17:00	0	2	17	27	3	0	0	0	0	0	0	0	0	49
18:00	1	1	6	17	7	3	0	0	0	0	0	0	0	35
19:00	0	1	7	14	6	0	0	0	0	0	0	0	0	28
20:00	0	1	9	7	5	0	0	0	0	0	0	0	0	22
21:00	0	1	4	11	2	1	0	0	0	0	0	0	0	19
22:00	0	2	3	5	3	3	0	0	0	0	0	0	0	16
23:00	0	1	0	4	1	1	0	0	0	0	0	0	0	7
Totals	3	15	121	238	99	13	2							491
% of Totals	1%	3%	25%	48%	20%	3%	0%							100%

Directional Peak Periods	All Speeds	AM 7-9	NOON 12-2	PM 4-6	Off Peak Volumes
Volume	%	Volume	%	Volume	%
AM Volumes	0	23	3	0	0
% AM	1%	5%	1%	0%	0%
AM Peak Hour	07:00	10:00	10:00	01:00	11:00
Volume	1	6	2	1	29
PM Volumes	3	12	10	0	0
% PM	1%	2%	2%	0%	0%
PM Peak Hour	12:00	17:00	18:00		
Volume	1	20	15		49
Percentiles	15th	50th	Average	85th	95th
Nottingham Ct	24	30	30	35	39
Nottingham Ct	22	27	27	32	35
ADT					491

SPEED

Nottingham Ct s/o Oso Pkwy

City: Laguna Hills
Project #: CA12_1158_002Day: Sunday
Date: 8/26/2012**Summary**

Time	< 15	15 - 19	20 - 24	25 - 29	30 - 34	35 - 39	40 - 44	45 - 49	50 - 54	55 - 59	60 - 64	65 - 69	70 +	Total
00:00 AM	0	2	2	8	2	2	1	0	0	0	0	0	0	17
01:00	0	0	2	2	1	0	1	0	0	0	0	0	0	6
02:00	0	0	0	0	2	0	1	0	0	0	0	0	0	3
03:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:00	1	0	0	0	0	0	0	0	0	0	0	0	0	1
06:00	0	1	3	2	2	0	0	0	0	0	0	0	0	8
07:00	0	1	3	4	3	1	0	0	0	0	0	0	0	12
08:00	0	0	7	14	14	2	0	0	0	0	0	0	0	37
09:00	0	2	3	14	6	4	0	0	0	0	0	0	0	29
10:00	0	3	8	13	15	5	0	0	0	0	0	0	0	44
11:00	0	1	7	23	11	3	1	0	0	0	0	0	0	46
12:00 PM	1	0	7	23	16	3	0	0	0	0	0	0	0	50
13:00	1	2	11	20	22	4	0	0	0	0	0	0	0	60
14:00	1	2	7	23	20	5	0	0	0	0	0	0	0	58
15:00	0	0	13	29	11	1	1	0	0	0	0	0	0	55
16:00	0	1	22	24	8	1	0	0	0	0	0	0	0	56
17:00	0	2	19	33	6	1	0	0	0	0	0	0	0	61
18:00	2	1	10	19	11	4	1	0	0	0	0	0	0	48
19:00	0	1	8	20	10	0	0	0	0	0	0	0	0	39
20:00	0	1	10	15	6	2	1	0	0	0	0	0	0	35
21:00	0	2	5	15	5	2	0	0	0	0	0	0	0	29
22:00	0	2	4	5	5	3	0	0	0	0	0	0	0	19
23:00	0	1	1	5	2	1	1	0	0	0	0	0	0	11
Totals	6	25	152	311	178	44	8	1%						724
% of Totals	1%	3%	21%	43%	25%	6%	1%							100%

Directional Peak Periods	All Speeds	AM 7-9	NOON 12-2	PM 4-6	Off Peak Volumes
Volume	Volume	Volume	Volume	Volume	Volume
AM Volumes	10	35	17	0	0
% AM	1%	5%	2%	0	0
AM Peak Hour	10:00	10:00	10:00		
Volume	3	8	5		
PM Volumes	5	117	27	0	0
% PM	1%	16%	4%	0	0
PM Peak Hour	18:00	16:00	14:00		
Volume	2	22	5		
Totals	2	49	110	117	448
%	62%	16%	15%	16%	62%

Street Name	Direction	Percentiles	ADT
Nottingham Ct	Summary	15th 23 50th 28 85th 33 95th 37	724

SPEED

Nottingham Ct s/o Oso Pkwy

City: Laguna Hills

Project #: CA12_1158_002s

Day: Monday

Date: 8/27/2012

South Bound

Time	< 15	15 - 19	20 - 24	25 - 29	30 - 34	35 - 39	40 - 44	45 - 49	50 - 54	55 - 59	60 - 64	65 - 69	70 +	Total
00:00 AM	0	0	0	3	0	0	0	0	0	0	0	0	0	3
01:00	0	0	0	1	0	0	0	0	0	0	0	0	0	2
02:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0
03:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:00	0	0	1	3	0	0	0	0	0	0	0	0	0	4
06:00	1	0	1	1	1	0	0	0	0	0	0	0	0	4
07:00	0	1	5	7	1	0	0	0	0	0	0	0	0	14
08:00	1	1	2	6	3	0	0	0	0	0	0	0	0	13
09:00	1	1	3	17	6	0	0	0	0	0	0	0	0	28
10:00	1	2	1	16	8	1	0	0	0	0	0	0	0	29
11:00	0	1	5	16	5	1	0	0	0	0	0	0	0	28
12:00 PM	0	2	9	18	11	1	0	0	0	0	0	0	0	41
13:00	0	1	6	19	9	0	0	0	0	0	0	0	0	35
14:00	0	0	10	23	5	1	0	0	0	0	0	0	0	39
15:00	0	1	6	19	12	2	0	0	0	0	0	0	0	40
16:00	1	1	14	16	14	1	0	0	0	0	0	0	0	47
17:00	0	1	14	34	21	1	0	0	0	0	0	0	0	71
18:00	0	2	10	21	15	3	0	0	0	0	0	0	0	51
19:00	2	2	10	14	11	1	0	0	0	0	0	0	0	40
20:00	0	1	7	18	6	0	0	0	0	0	0	0	0	32
21:00	0	1	8	9	4	1	0	0	0	0	0	0	0	23
22:00	0	0	1	6	4	1	0	0	0	0	0	0	0	12
23:00	0	0	3	4	5	0	0	0	0	0	0	0	0	12
Totals	7	18	116	271	141	15								568
% of Totals	1%	3%	20%	48%	25%	3%								100%

Directional Peak Periods	All Speeds	AM 7-9	NOON 12-2	PM 4-6	Off Peak Volumes
Volume	Volume	Volume	Volume	Volume	Volume
AM Volumes	4	6	18	3	0
% AM	1%	1%	3%	1%	0
AM Peak Hour	06:00	10:00	07:00	01:00	
Volume	1	2	5	1	
PM Volumes	3	12	98	12	0
% PM	1%	2%	17%	2%	0
PM Peak Hour	19:00	12:00	16:00	18:00	
Volume	2	2	14	3	
Totals	7	18	116	15	0
% of Totals	1%	3%	20%	48%	0%

Street Name	Direction	15th	50th	Average	85th	95th	ADT
Nottingham Ct	North Bound	24	30	29	34	38	586
Nottingham Ct	South Bound	23	28	27	33	35	568

SPEED

Nottingham Ct s/o Oso Pkwy

City: Laguna Hills
Project #: CA12_1158_002Day: Monday
Date: 8/27/2012**Summary**

Time	< 15	15 - 19	20 - 24	25 - 29	30 - 34	35 - 39	40 - 44	45 - 49	50 - 54	55 - 59	60 - 64	65 - 69	70 +	Total
00:00 AM	0	0	0	3	0	0	0	0	0	0	0	0	0	3
01:00	0	0	0	1	0	0	0	0	0	0	0	0	0	2
02:00	0	0	1	0	0	0	0	0	0	0	0	0	0	2
03:00	0	0	1	0	0	0	0	0	0	0	0	0	0	1
04:00	0	0	0	1	0	0	0	0	0	0	0	0	0	2
05:00	0	0	1	6	0	1	0	0	0	0	0	0	0	8
06:00	3	0	1	2	7	0	0	0	0	0	0	0	0	13
07:00	0	2	9	11	9	3	0	0	0	0	0	0	0	34
08:00	1	4	5	12	13	5	0	0	0	0	0	0	0	40
09:00	1	2	4	22	16	5	0	0	0	0	0	0	0	50
10:00	3	2	4	23	16	4	0	0	0	0	0	0	0	52
11:00	0	2	9	21	15	1	0	0	0	0	0	0	0	48
12:00 PM	0	4	16	44	44	8	1	0	0	0	0	0	0	117
13:00	2	3	25	68	52	10	0	0	0	0	0	0	0	160
14:00	0	1	24	42	30	10	0	0	0	0	0	0	0	107
15:00	1	3	14	59	40	8	0	0	0	0	0	0	0	125
16:00	1	2	15	28	23	2	0	0	0	0	0	0	0	71
17:00	1	2	14	43	28	2	1	0	0	0	0	0	0	91
18:00	0	3	14	26	23	7	0	0	0	0	0	0	0	73
19:00	2	2	10	18	19	2	0	0	0	0	0	0	0	53
20:00	0	1	10	21	12	0	0	0	0	0	0	0	0	44
21:00	1	1	9	10	5	2	0	0	0	0	0	0	0	28
22:00	0	0	2	6	4	3	0	0	0	0	0	0	0	15
23:00	0	0	4	4	7	0	0	0	0	0	0	0	0	15
Totals	16	34	192	471	363	76	2	0%						1154
% of Totals	1%	3%	17%	41%	31%	7%	0%							100%

Directional Peak Periods	All Speeds	AM 7-9	NOON 12-2	PM 4-6	Off Peak Volumes
Volume	%	Volume	%	Volume	%
AM Volumes	8	102	76	22	0
% AM	1%	9%	7%	2%	0
AM Peak Hour	06:00	10:00	09:00	08:00	10:00
Volume	3	23	16	5	52
PM Volumes	8	369	287	54	0
% PM	1%	32%	25%	5%	0
PM Peak Hour	13:00	13:00	13:00	13:00	13:00
Volume	2	68	52	10	160
Summary	15th	50th	Average	85th	95th
Nottingham Ct	23	29	28	34	36
					ADT
					1154

SPEED

Nottingham Ct s/o Oso Pkwy

City: Laguna Hills
Project #: CA12_1158_002nDay: Tuesday
Date: 8/28/2012

North Bound

Time	< 15	15 - 19	20 - 24	25 - 29	30 - 34	35 - 39	40 - 44	45 - 49	50 - 54	55 - 59	60 - 64	65 - 69	70 +	Total
00:00 AM	0	0	0	1	1	0	0	0	0	0	0	0	0	3
01:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0
02:00	0	0	0	0	0	1	0	0	0	0	0	0	0	1
03:00	0	0	0	1	0	0	1	0	0	0	0	0	0	2
04:00	0	1	0	1	0	0	0	0	0	0	0	0	0	2
05:00	0	0	1	2	3	1	0	0	0	0	0	0	0	7
06:00	1	0	1	3	2	0	0	0	0	0	0	0	0	7
07:00	1	1	3	6	8	2	0	0	0	0	0	0	0	21
08:00	1	2	6	18	17	2	1	0	0	0	0	0	0	47
09:00	1	1	2	10	8	6	0	0	0	0	0	0	0	28
10:00	0	1	3	6	7	1	0	0	0	0	0	0	0	18
11:00	0	1	3	7	8	1	0	0	0	0	0	0	0	20
12:00 PM	0	0	2	6	7	1	0	0	0	0	0	0	0	16
13:00	0	1	3	9	6	3	0	0	0	0	0	0	0	22
14:00	1	0	2	5	3	5	1	0	0	0	0	0	0	17
15:00	0	0	2	6	12	2	1	0	0	0	0	0	0	23
16:00	0	0	2	9	7	5	0	0	0	0	0	0	0	23
17:00	0	1	3	9	8	2	0	0	0	0	0	0	0	23
18:00	0	0	4	8	7	1	0	0	0	0	0	0	0	20
19:00	0	1	0	8	7	4	0	0	0	0	0	0	0	20
20:00	0	0	0	4	6	4	0	0	0	0	0	0	0	14
21:00	0	0	1	3	3	0	0	0	0	0	0	0	0	7
22:00	0	0	1	1	4	0	0	0	0	0	0	0	0	6
23:00	0	0	0	0	2	0	0	0	0	0	0	0	0	2
Totals	5	10	40	123	126	41	4							349
% of Totals	1%	3%	11%	35%	36%	12%	1%							100%

Directional Peak Periods	All Speeds	AM 7-9	NOON 12-2	PM 4-6	Off Peak Volumes
AM Volumes	4	7	54	14	0
% AM	1%	2%	15%	4%	0
AM Peak Hour	06:00	08:00	08:00	09:00	08:00
Volume	1	2	17	6	47
PM Volumes	1	3	72	27	0
% PM	0%	1%	21%	8%	0
PM Peak Hour	14:00	13:00	15:00	14:00	15:00
Volume	1	4	12	5	23
Directional Peak Periods		AM 7-9	NOON 12-2	PM 4-6	Off Peak Volumes
All Speeds		Volume	Volume	Volume	Volume
		68	38	46	197
		%	%	%	%
		19%	11%	13%	56%

Street Name	Direction	15th	50th	Average	85th	95th	ADT
Nottingham Ct	North Bound	25	30	30	35	38	349
Nottingham Ct	South Bound	23	28	27	32	35	563

SPEED

Nottingham Ct s/o Oso Pkwy

City: Laguna Hills

Project #: CA12_1158_002s

Day: Tuesday

Date: 8/28/2012

South Bound

Time	< 15	15 - 19	20 - 24	25 - 29	30 - 34	35 - 39	40 - 44	45 - 49	50 - 54	55 - 59	60 - 64	65 - 69	70 +	Total
00:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
01:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0
02:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0
03:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06:00	1	0	2	4	0	0	0	0	0	0	0	0	0	1
07:00	1	2	5	2	1	0	0	0	0	0	0	0	0	7
08:00	0	2	5	13	3	0	0	0	0	0	0	0	0	11
09:00	0	1	3	13	4	0	0	0	0	0	0	0	0	23
10:00	0	0	4	10	4	1	0	0	0	0	0	0	0	21
11:00	0	1	6	11	6	1	0	0	0	0	0	0	0	19
12:00 PM	0	0	8	13	7	0	0	0	0	0	0	0	0	25
13:00	1	0	10	19	12	0	0	0	0	0	0	0	0	28
14:00	1	1	6	17	9	1	0	0	0	0	0	0	0	42
15:00	1	0	6	15	5	1	0	0	0	0	0	0	0	35
16:00	1	0	10	27	6	1	1	0	0	0	0	0	0	28
17:00	1	2	10	31	14	0	0	0	0	0	0	0	0	46
18:00	0	3	12	34	23	2	0	0	0	0	0	0	0	58
19:00	0	1	6	25	14	1	0	0	0	0	0	0	0	74
20:00	0	1	15	26	6	1	0	0	0	0	0	0	0	47
21:00	0	1	5	12	8	0	1	0	0	0	0	0	0	49
22:00	0	0	2	7	5	2	0	0	0	0	0	0	0	27
23:00	0	1	1	2	2	2	0	0	0	0	0	0	0	16
Totals	7	16	115	281	128	14	2	0	0	0	0	0	0	563
% of Totals	1%	3%	20%	50%	23%	2%	0%							100%

Directional Peak Periods	All Speeds	AM 7-9	NOON 12-2	PM 4-6	Off Peak Volumes
Volume	Volume	Volume	Volume	Volume	Volume
AM Volumes	2	6	18	3	0
% AM	0%	1%	3%	1%	0
AM Peak Hour	06:00	07:00	11:00	05:00	11:00
Volume	1	2	6	1	25
PM Volumes	5	10	110	11	0
% PM	1%	2%	20%	2%	0
PM Peak Hour	13:00	18:00	18:00	18:00	18:00
Volume	1	3	23	2	74
Percentiles					
15th	25	30	35	38	ADT
50th	30	28	32	35	349
85th	30	27	32	35	563
95th	30	27	32	35	

SPEED

Nottingham Ct s/o Oso Pkwy

City: Laguna Hills
Project #: CA12_1158_002Day: Tuesday
Date: 8/28/2012**Summary**

Time	< 15	15 - 19	20 - 24	25 - 29	30 - 34	35 - 39	40 - 44	45 - 49	50 - 54	55 - 59	60 - 64	65 - 69	70 +	Total
00:00 AM	0	0	1	1	1	0	0	0	0	0	0	0	0	3
01:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0
02:00	0	0	0	0	0	1	0	0	0	0	0	0	0	1
03:00	0	0	0	1	0	0	1	0	0	0	0	0	0	2
04:00	0	1	0	1	0	0	0	0	0	0	0	0	0	2
05:00	0	0	1	2	3	2	0	0	0	0	0	0	0	8
06:00	2	0	3	7	2	0	0	0	0	0	0	0	0	14
07:00	2	3	8	8	9	2	0	0	0	0	0	0	0	32
08:00	1	4	11	31	20	2	1	0	0	0	0	0	0	70
09:00	1	2	5	23	12	6	0	0	0	0	0	0	0	49
10:00	0	1	7	16	11	2	0	0	0	0	0	0	0	37
11:00	0	2	9	18	14	2	0	0	0	0	0	0	0	45
12:00 PM	0	0	10	19	14	1	0	0	0	0	0	0	0	44
13:00	1	1	13	28	18	3	0	0	0	0	0	0	0	64
14:00	2	1	8	22	12	6	1	0	0	0	0	0	0	52
15:00	1	0	8	21	17	3	1	0	0	0	0	0	0	51
16:00	1	0	12	36	13	6	1	0	0	0	0	0	0	69
17:00	1	3	13	40	22	2	0	0	0	0	0	0	0	81
18:00	0	3	16	42	30	3	0	0	0	0	0	0	0	94
19:00	0	2	6	33	21	5	0	0	0	0	0	0	0	67
20:00	0	1	15	30	12	5	0	0	0	0	0	0	0	63
21:00	0	1	6	15	11	0	1	0	0	0	0	0	0	34
22:00	0	0	3	8	9	2	0	0	0	0	0	0	0	22
23:00	0	1	0	2	3	2	0	0	0	0	0	0	0	8
Totals	12	26	155	404	254	55	6							912
% of Totals	1%	3%	17%	44%	28%	6%	1%							100%

Directional Peak Periods		AM 7-9			NOON 12-2			PM 4-6			Off Peak Volumes		
All Speeds		Volume		%	Volume		%	Volume		%	Volume		%
AM Volumes	6	13	45	108	72	17	2	0	0	0	0	0	263
% AM	1%	1%	5%	12%	8%	2%	0%						29%
AM Peak Hour	06:00	08:00	08:00	08:00	08:00	09:00	03:00						08:00
Volume	2	4	11	31	20	6	1						70
PM Volumes	6	13	110	296	182	38	4	0	0	0	0	0	649
% PM	1%	1%	12%	32%	20%	4%	0%						71%
PM Peak Hour	14:00	17:00	18:00	18:00	18:00	14:00	14:00						18:00
Volume	2	3	16	42	30	6	1						94
Percentiles													
15th		50th		Average		85th		95th		ADT			
Nottingham Ct		23		28		28		34		36		912	

Spot Speed Studies

Nellie Gail Road at Lost Colt Drive

Spot Speed Study

Prepared by: National Data & Surveying Services

City of Laguna Hills

DATE: 9/6/2012

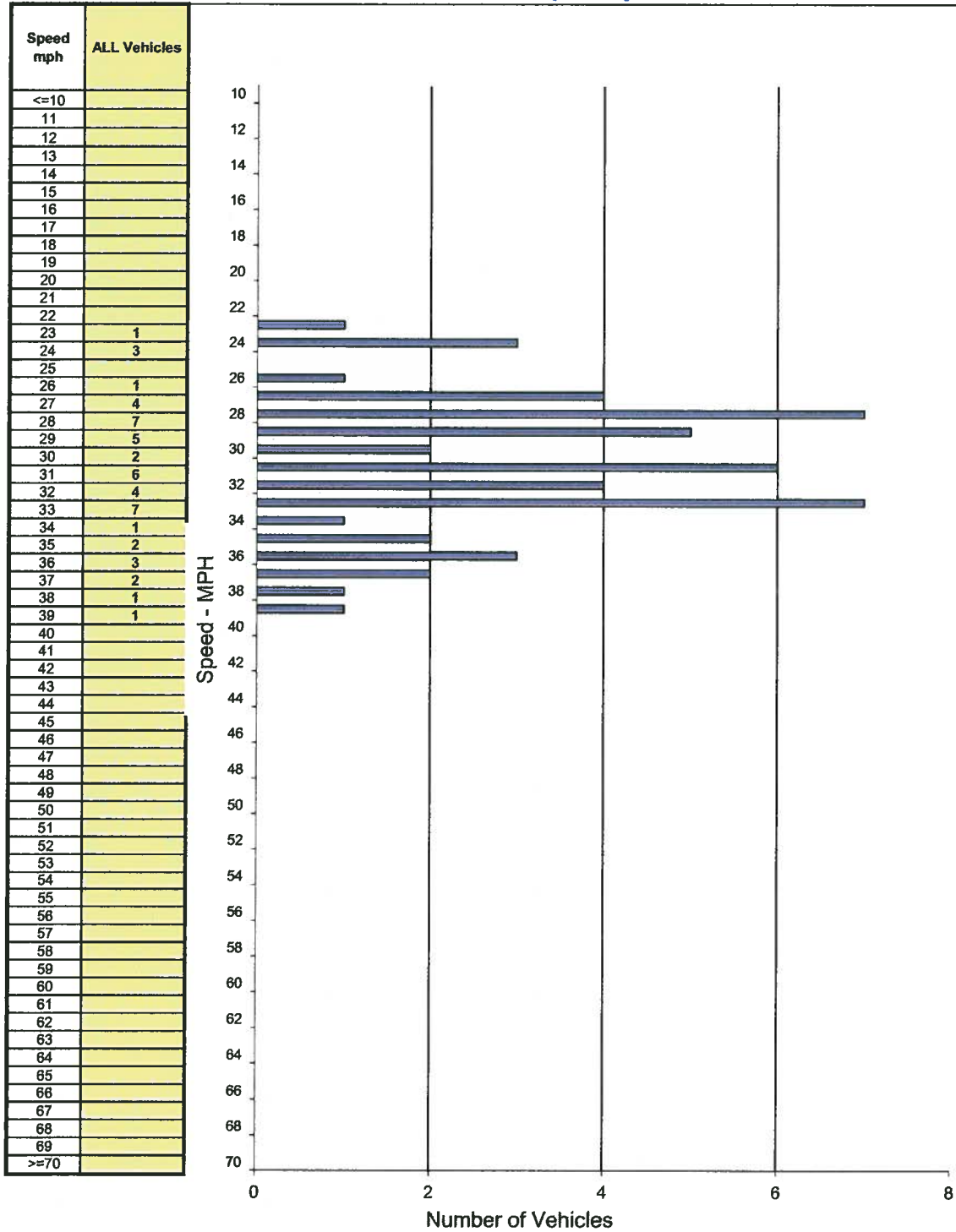
Location: Nellie Gail Rd e/o Lost Colt Dr

DAY: Thursday

Posted Speed: 30 MPH

Project #: 12-1172-001

Eastbound Spot Speeds



SPEED PARAMETERS									
Class	Count	Range	50th Percentile	85th Percentile	10 MPH Pace	# in Pace	Percent in Pace	% / # Below Pace	% / # Above Pace
ALL	50	23 - 39	31 mph	35 mph	27 - 36	41	82%	10% / 5	8% / 4

Spot Speed Study

Prepared by: National Data & Surveying Services

City of Laguna Hills

DATE: 9/6/2012

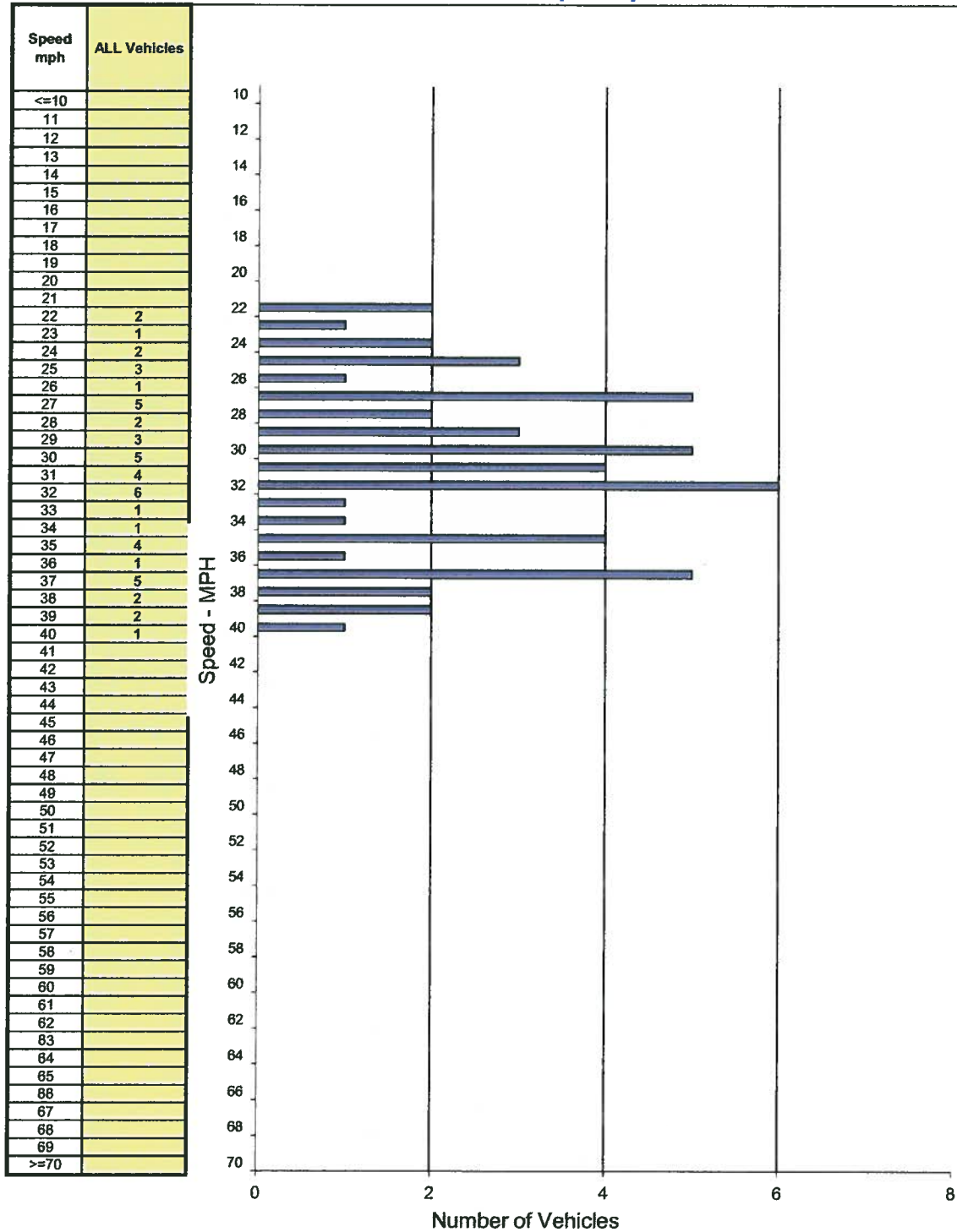
Location: Nellie Gall Rd e/o Lost Colt Dr

DAY: Thursday

Posted Speed: 30 MPH

Project #: 12-1172-001

Westbound Spot Speeds



SPEED PARAMETERS									
Class	Count	Range	50th Percentile	85th Percentile	10 MPH Pace	# In Pace	Percent In Pace	% / # Below Pace	% / # Above Pace
ALL	51	22 - 40	31 mph	37 mph	23 - 32	32	63%	3% / 2	34% / 17

Spot Speed Study

Prepared by: National Data & Surveying Services

City of Laguna Hills

DATE: 9/6/2012

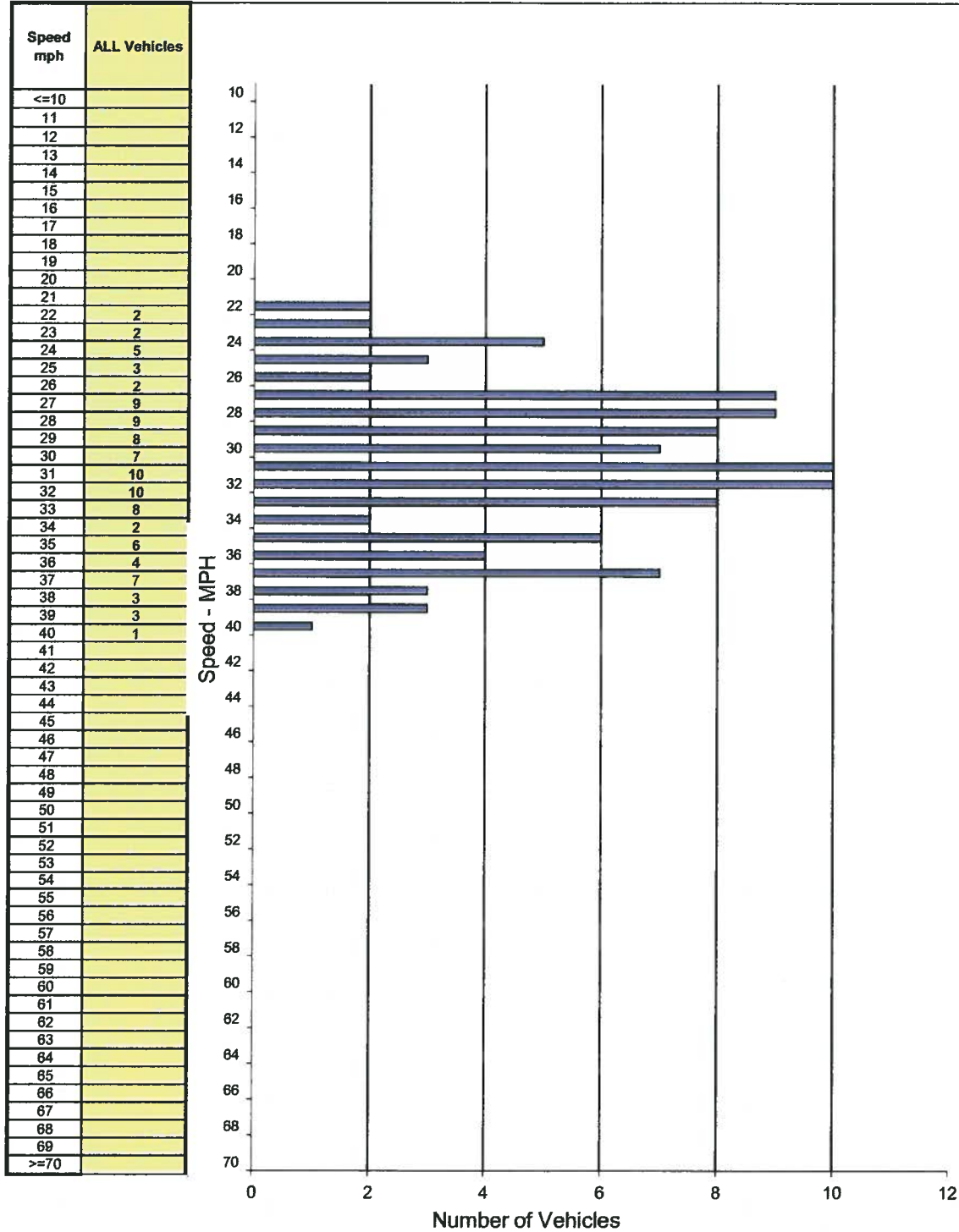
Location: Nellie Gail Rd e/o Lost Colt Dr

DAY: Thursday

Posted Speed: 30 MPH

Project #: 12-1172-001

Eastbound & Westbound Spot Speeds



SPEED PARAMETERS									
Class	Count	Range	50th Percentile	85th Percentile	10 MPH Pace	# in Pace	Percent in Pace	% / # Below Pace	% / # Above Pace
ALL	101	22 - 40	31 mph	36 mph	27 - 36	73	72%	13% / 14	14% / 14

Nottingham Court Near Oso Parkway

Spot Speed Study

Prepared by: National Data & Surveying Services

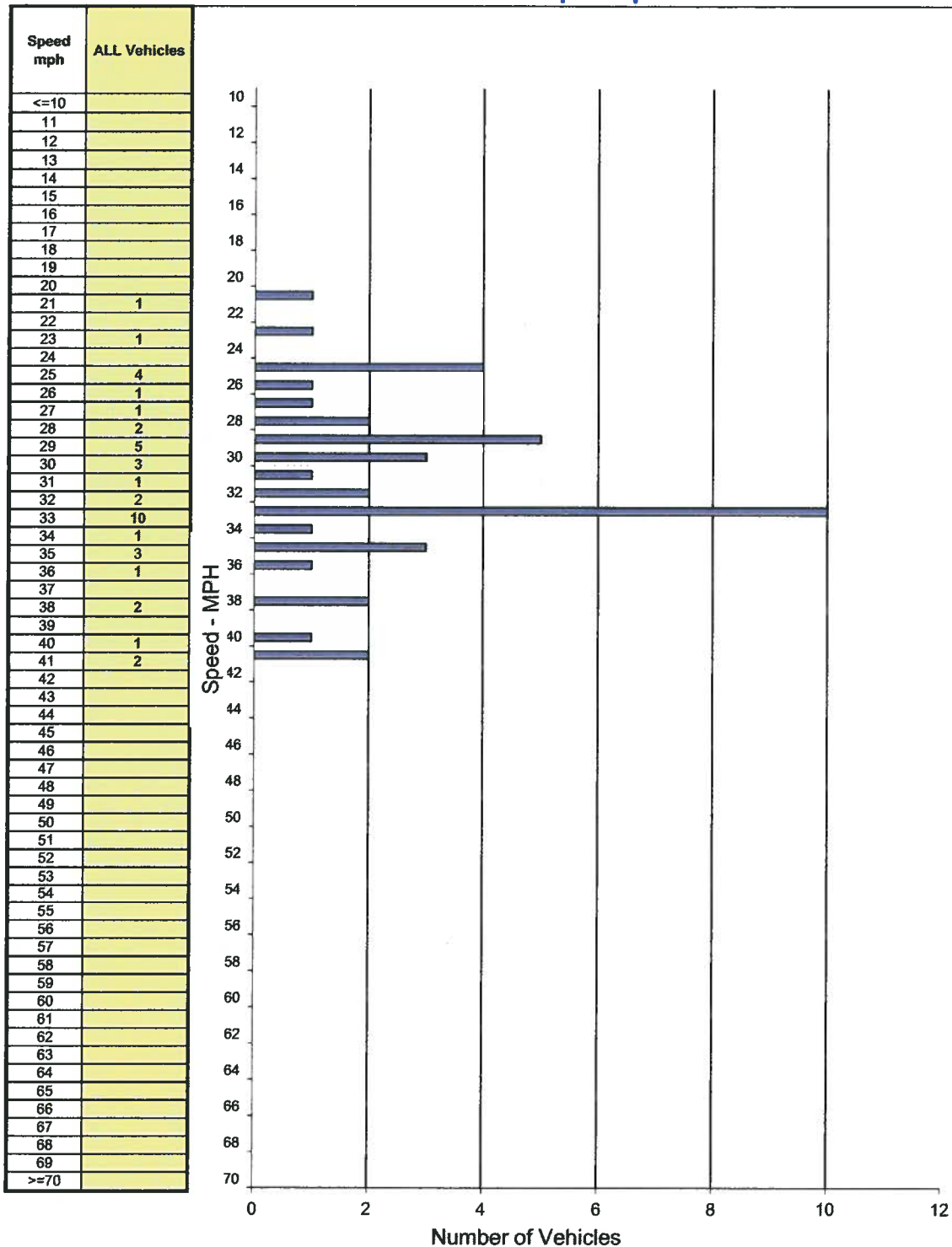
City of Laguna Hills

DATE: 9/6/2012
DAY: Thursday

Location: Nottingham Ct s/o Oso Parkway
Posted Speed: None

Project #: 12-1172-002

Northbound Spot Speeds



SPEED PARAMETERS									
Class	Count	Range	50th Percentile	85th Percentile	10 MPH Pace	# In Pace	Percent in Pace	% / # Below Pace	% / # Above Pace
ALL	41	21 - 41	32 mph	35 mph	25 - 34	30	73%	4% / 2	22% / 9

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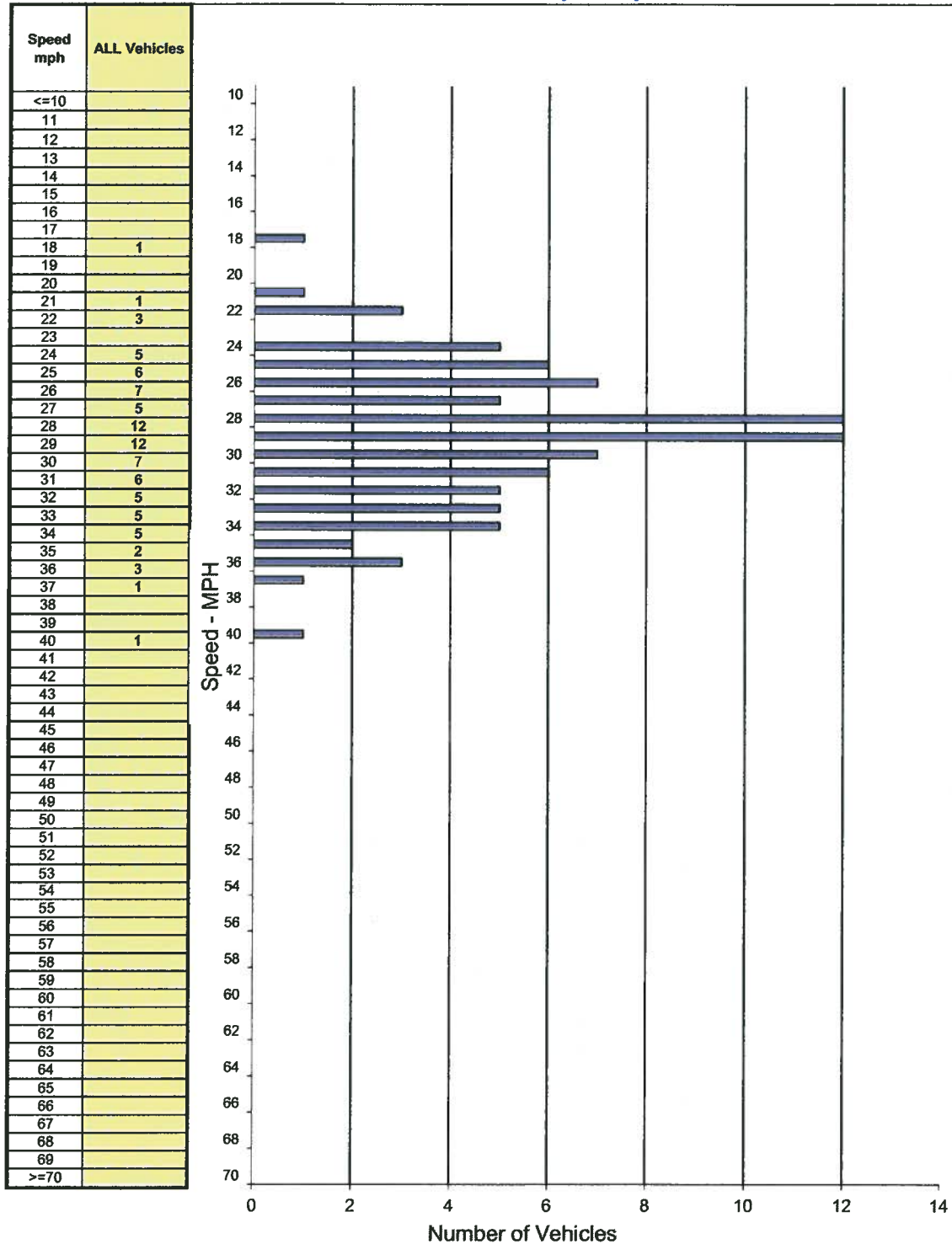
Location: Nottingham Ct s/o Oso Parkway

DAY: Thursday

Posted Speed: None

Project #: 12-1172-002

Southbound Spot Speeds



SPEED PARAMETERS									
Class	Count	Range	50th Percentile	85th Percentile	10 MPH Pace	# in Pace	Percent in Pace	% / # Below Pace	% / # Above Pace
ALL	87	18 - 40	29 mph	33 mph	24 - 33	70	80%	5% / 5	14% / 12

Spot Speed Study

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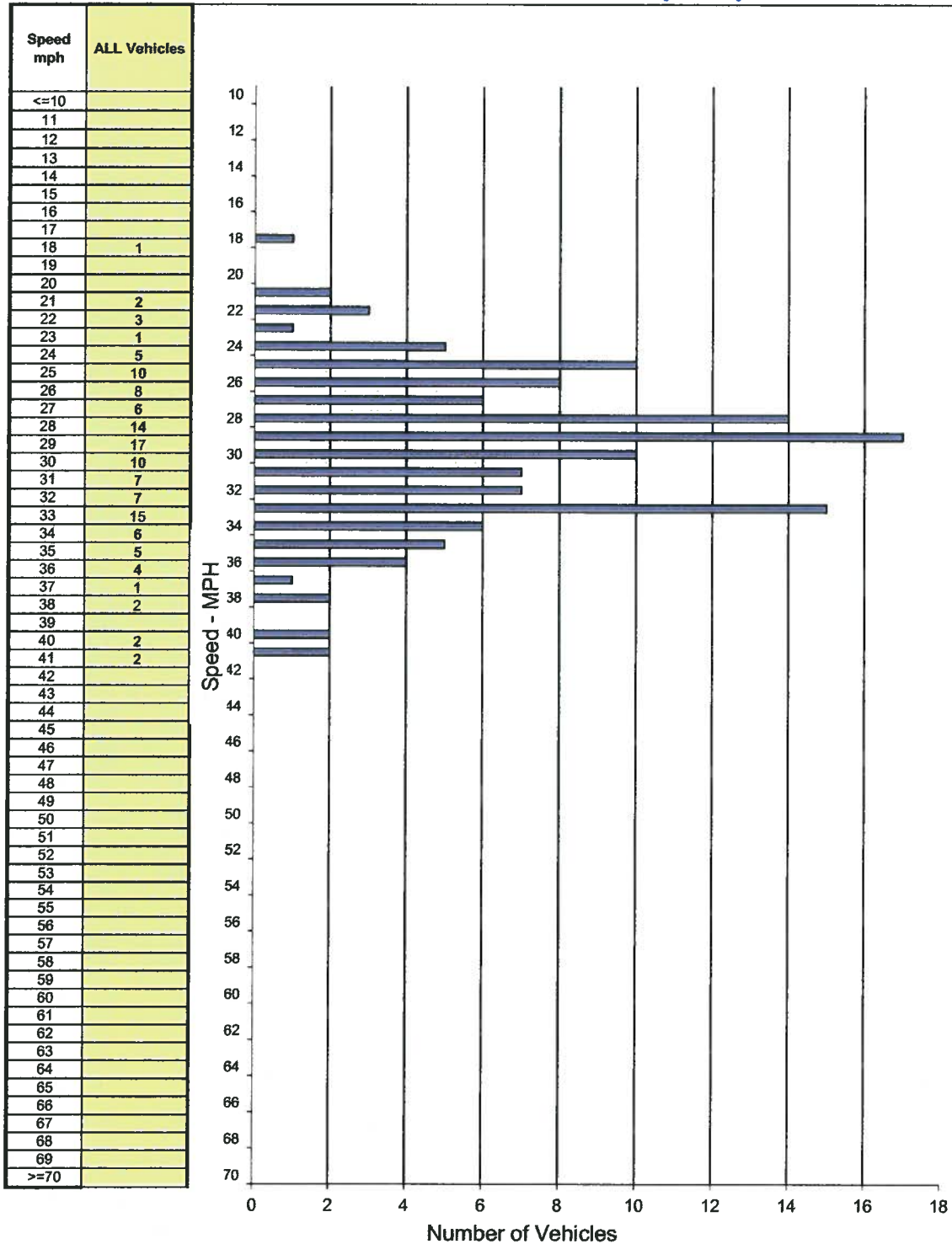
DAY: Thursday

Location: Nottingham Ct s/o Oso Parkway

Posted Speed: None

Project #: 12-1172-002

Northbound & Southbound Spot Speeds



SPEED PARAMETERS									
Class	Count	Range	50th Percentile	85th Percentile	10 MPH Pace	# In Pace	Percent in Pace	% / # Below Pace	% / # Above Pace
ALL	128	18 - 41	29 mph	34 mph	25 - 34	100	78%	9% / 12	13% / 16

Collision Data

Accident listing
 03/20/2008 - 03/19/2011
 Nellie Gail Rd & Red Lodge Pl
 Sorted by <DATE;TIME;ACC#>

CASE ID	DATE	STREET 1	STREET 2	DIST	DIR FROM	VEH 1 MOV	VEH 1 DIR	VEH 2 MOV	VEH 2 DIR	COLL TYPE
3927940	09/05/2008	NELLIE GAIL RD	RED LODGE PL	163	West	Left turn	EAST	Not stated	WEST	Head on
4035811	01/26/2009	NELLIE GAIL RD	RED LODGE PL	217	East	Other Veh Mov	WEST	Not stated	Not stated	Hit object

Marked Crosswalk Guidelines

Option:

²³ A limit line may be placed in advance of a crosswalk where vehicles are required to stop, in compliance with a STOP (R1-1) sign, traffic control signal or some other traffic control device.

Support:

²⁴ If a marked crosswalk is in place, it would normally function as a limit line.

²⁵ Typical limit line markings are shown in Figure 3B-103(CA).

Standard:

²⁶ The individual triangles comprising the yield line shall have a base of 2 feet wide and a height of 3 feet. The space between the triangles shall be 1 foot.

Support:

²⁷ Figure 3B-16(CA) shows typical yield line layout for streets and highways.

Section 3B.17 Do Not Block Intersection Markings

Support:

⁰⁰ Refer to CVC 22526 for entering intersection, rail crossing or marked crosswalk.

Option:

⁰¹ Do Not Block Intersection markings may be used to mark the edges of an intersection area that is in close proximity to a signalized intersection, railroad crossing, or other nearby traffic control that might cause vehicles to stop within the intersection and impede other traffic entering the intersection. If authorized by law, Do Not Block Intersection markings with appropriate signs may also be used at other locations.

Standard:

⁰² If used, Do Not Block Intersection markings (see Figure 3B-18 3B-18(CA)) shall consist of one of the following alternatives:

~~A. Wide solid white lines that outline the intersection area that vehicles must not block;~~

B. Wide solid white lines that outline the intersection area that vehicles must not block and a white word message such as DO NOT BLOCK or KEEP CLEAR;

~~C. Wide solid white lines that outline the intersection area that vehicles must not block and white cross-hatching within the intersection area; or~~

D. A white word message, such as DO NOT BLOCK or KEEP CLEAR, within the intersection area that vehicles must not block.

⁰³ Do Not Block Intersection markings shall be accompanied by one or more DO NOT BLOCK INTERSECTION (DRIVEWAY) (CROSSING) (R10-7) signs (see Section 2B.53), one or more DO NOT STOP ON TRACKS (R8-8) signs (see Section 8B.09), or one or more similar signs.

Section 3B.18 Crosswalk Markings

Support:

⁰¹ Crosswalk markings provide guidance for pedestrians who are crossing roadways by defining and delineating paths on approaches to and within signalized intersections, and on approaches to other intersections where traffic stops.

⁰² In conjunction with signs and other measures, crosswalk markings help to alert road users of a designated pedestrian crossing point across roadways at locations that are not controlled by traffic control signals or STOP or YIELD signs.

⁰³ At non-intersection locations, crosswalk markings legally establish the crosswalk.

Standard:

⁰⁴ When crosswalk lines are used, they shall consist of solid white lines that mark the crosswalk. They shall not be less than 6 12 inches or greater than 24 inches in width.

Guidance:

⁰⁵ If transverse lines are used to mark a crosswalk, the gap between the lines should not be less than 6 feet. If diagonal or longitudinal lines are used without transverse lines to mark a crosswalk, the crosswalk should be not less than 6 feet wide.

06 *Crosswalk lines, if used on both sides of the crosswalk, should extend across the full width of pavement or to the edge of the intersecting crosswalk to discourage diagonal walking between crosswalks (see Figures 3B-17 and 3B-19).*

07 *At locations controlled by traffic control signals or on approaches controlled by STOP or YIELD signs, crosswalk lines should be installed where engineering judgment indicates they are needed to direct pedestrians to the proper crossing path(s).*

08 *Crosswalk lines should not be used indiscriminately. An engineering study should be performed before a marked crosswalk is installed at a location away from a traffic control signal or an approach controlled by a STOP or YIELD sign. The engineering study should consider the number of lanes, the presence of a median, the distance from adjacent signalized intersections, the pedestrian volumes and delays, the average daily traffic (ADT), the posted or statutory speed limit or 85th-percentile speed, the geometry of the location, the possible consolidation of multiple crossing points, the availability of street lighting, and other appropriate factors.*

09 *New marked crosswalks alone, without other measures designed to reduce traffic speeds, shorten crossing distances, enhance driver awareness of the crossing, and/or provide active warning of pedestrian presence, should not be installed across uncontrolled roadways where the speed limit exceeds 40 mph and either:*

- A. The roadway has four or more lanes of travel without a raised median or pedestrian refuge island and an ADT of 12,000 vehicles per day or greater; or*
- B. The roadway has four or more lanes of travel with a raised median or pedestrian refuge island and an ADT of 15,000 vehicles per day or greater.*

Support:

10 Chapter 4F contains information on Pedestrian Hybrid Beacons. Section 4L.03 contains information regarding Warning Beacons to provide active warning of a pedestrian's presence. Section 4N.02 contains information regarding In-Roadway Warning Lights at crosswalks. Chapter 7D contains information regarding school crossing supervision.

Guidance:

11 *Because non-intersection pedestrian crossings are generally unexpected by the road user, warning signs (see Section 2C.50) should be installed for all marked crosswalks at non-intersection locations and adequate visibility should be provided by parking prohibitions.*

Support:

12 Section 3B.16 contains information regarding placement of stop line markings near crosswalk markings.

Option:

13 *For added visibility, the area of the crosswalk may be marked with white diagonal lines at a 45-degree angle to the line of the crosswalk or with white longitudinal lines parallel to traffic flow as shown in Figure 3B-19.*

14 *When diagonal or longitudinal lines are used to mark a crosswalk, the transverse crosswalk lines may be omitted. This type of marking may be used at locations where substantial numbers of pedestrians cross without any other traffic control device, at locations where physical conditions are such that added visibility of the crosswalk is desired, or at places where a pedestrian crosswalk might not be expected.*

Guidance:

15 *If used, the diagonal or longitudinal lines should be 12 to 24 inches wide and separated by gaps of 12 to 60 inches. The design of the lines and gaps should avoid the wheel paths if possible, and the gap between the lines should not exceed 2.5 times the width of the diagonal or longitudinal lines.*

Option:

16 *When an exclusive pedestrian phase that permits diagonal crossing of an intersection is provided at a traffic control signal, a marking as shown in Figure 3B-20 may be used for the crosswalk.*

Guidance:

17 *Crosswalk markings should be located so that the curb ramps are within the extension of the crosswalk markings.*

Support:

18 *Detectable warning surfaces mark boundaries between pedestrian and vehicular ways where there is no raised curb. Detectable warning surfaces are required by 49 CFR, Part 37 and by the Americans with Disabilities Act (ADA) where curb ramps are constructed at the junction of sidewalks and the roadway, for marked and unmarked crosswalks. Detectable warning surfaces contrast visually with adjacent walking surfaces, either light-on-dark, or*

dark-on-light. The “Americans with Disabilities Act Accessibility Guidelines for Buildings and Facilities (ADAAG)” (see Section 1A.11) contains specifications for design and placement of detectable warning surfaces.
Standard:

19 Crosswalk markings near schools shall be yellow as provided in CVC 21368. See Part 7.

Option:

20 Pedestrian crosswalk markings may be placed at intersections, representing extensions of the sidewalk lines, or on any portion of the roadway distinctly indicated for pedestrian crossing. Refer to CVC 275.

Guidance:

21 In general, crosswalks should not be marked at intersections unless they are intended to channelize pedestrians.

Emphasis is placed on the use of marked crosswalks as a channelization device.

22 The following factors may be considered in determining whether a marked crosswalk should be used:

A. Vehicular approach speeds from both directions.

B. Vehicular volume and density.

C. Vehicular turning movements.

D. Pedestrian volumes.

E. Roadway width.

F. Day and night visibility by both pedestrians and motorists.

G. Channelization is desirable to clarify pedestrian routes for sighted or sight impaired pedestrians.

H. Discouragement of pedestrian use of undesirable routes.

I. Consistency with markings at adjacent intersections or within the same intersection.

Option:

23 Crosswalk markings may be established between intersections (mid-block) in accordance with CVC 21106(a).

Guidance:

24 Mid-block pedestrian crossings are generally unexpected by the motorist and should be discouraged unless, in the opinion of the engineer, there is strong justification in favor of such installation. Particular attention should be given to roadways with two or more traffic lanes in one direction as a pedestrian may be hidden from view by a vehicle yielding the right-of-way to a pedestrian.

Option:

25 When diagonal or longitudinal lines are used to mark a crosswalk, the transverse crosswalk lines may be omitted.

Standard:

26 However, when the factor that determined the need to mark a crosswalk is the clarification of pedestrian routes for sight-impaired pedestrians, the transverse crosswalk lines shall be marked.

Option:

27 At controlled approaches, limit lines (stop lines) help to define pedestrian paths and are therefore a factor the engineer may consider in deciding whether or not to mark the crosswalk.

28 Where it is desirable to remove a marked crosswalk, the removal may be accomplished by repaving or surface treatment.

Guidance:

29 A marked crosswalk should not be eliminated by allowing it to fade out or be worn away.

Support:

30 The worn or faded crosswalk retains its prominent appearance to the pedestrian at the curb, but is less visible to the approaching driver.

Standard:

31 Notification to the public shall be given at least 30 days prior to the scheduled removal of an existing marked crosswalk. The notice of proposed removal shall inform the public how to provide input related to the scheduled removal and shall be posted at the crosswalk identified for removal. Refer to CVC 21950.5

Option:

32 Signs may be installed at or adjacent to an intersection directing that pedestrians shall not cross in a crosswalk indicated at the intersection in accordance with CVC 21106(b).

33 White PED XING pavement markings may be placed in each approach lane to a marked crosswalk, except at intersections controlled by traffic signals or STOP or YIELD signs.

In-Roadway Warning Light Guidelines

CHAPTER 4N. IN-ROADWAY LIGHTS

Section 4N.01 Application of In-Roadway Lights

Support:

01 In-Roadway Lights are special types of highway traffic signals installed in the roadway surface to warn road users that they are approaching a condition on or adjacent to the roadway that might not be readily apparent and might require the road users to slow down and/or come to a stop. This includes situations warning of marked school crosswalks, marked midblock crosswalks, marked crosswalks on uncontrolled approaches, marked crosswalks in advance of roundabouts as described in Chapter 3C, and other roadway situations involving pedestrian crossings.

Standard:

02 In-Roadway Lights shall not be used for any application that is not described in this Chapter.

03 If used, In-Roadway Lights shall not exceed a height of 3/4 inch above the roadway surface.

04 When used, In-Roadway Lights shall be flashed and shall not be steadily illuminated.

Support:

05 Steadily illuminated lights installed in the roadway surface are considered to be internally illuminated raised pavement markers (see Section 3B.11).

Option:

06 In-Roadway Lights may be flashed in a manner that includes a continuous flash of varying intensity and time duration that is repeated to provide a flickering effect (see Section 4N.02).

Section 4N.02 In-Roadway Warning Lights at Crosswalks

Option:

01 In-roadway lights may be installed at certain marked crosswalks, based on an engineering study or engineering judgment, to provide additional warning to road users.

Standard:

02 If used, In-Roadway Warning Lights at crosswalks shall be installed only at marked crosswalks with applicable warning signs. They shall not be used at crosswalks controlled by YIELD signs, STOP signs, or traffic control signals.

03 If In-Roadway Warning Lights are used at a crosswalk, the following requirements shall apply:

A. Except as provided in Paragraphs 7 and 8, they shall be installed along both sides of the crosswalk and shall span its entire length.

B. They shall initiate operation based on pedestrian actuation and shall cease operation at a predetermined time after the pedestrian actuation or, with passive detection, after the pedestrian clears the crosswalk.

C. They shall display a flashing yellow light when actuated. The flash rate shall be at least 50, but no more than 60, flash periods per minute. If they are flashed in a manner that includes a continuous flash of varying intensity and time duration that is repeated to provide a flickering effect, the flickers or pulses shall not repeat at a rate that is between 5 and 30 per second to avoid frequencies that might cause seizures.

D. They shall be installed in the area between the outside edge of the crosswalk line and 10 feet from the outside edge of the crosswalk.

E. They shall face away from the crosswalk if unidirectional, or shall face away from and across the crosswalk if bidirectional.

04 If used on one-lane, one-way roadways, a minimum of two In-Roadway Warning Lights shall be installed on the approach side of the crosswalk. If used on two-lane roadways, a minimum of three In-Roadway Warning Lights shall be installed along both sides of the crosswalk. If used on roadways with more than two lanes, a minimum of one In-Roadway Warning Light per lane shall be installed along both sides of the crosswalk.

Guidance:

05 *If used, In-Roadway Warning Lights should be installed in the center of each travel lane, at the center line of the roadway, at each edge of the roadway or parking lanes, or at other suitable locations away from the normal tire track paths.*

06 *The location of the In-Roadway Warning Lights within the lanes should be based on engineering judgment.*

Option:

07 On one-way streets, In-Roadway Warning Lights may be omitted on the departure side of the crosswalk.

08 Based on engineering judgment, the In-Roadway Warning Lights on the departure side of the crosswalk on the left side of a median may be omitted.

09 Unidirectional In-Roadway Warning Lights installed at crosswalk locations may have an optional, additional yellow light indication in each unit that is visible to pedestrians in the crosswalk to indicate to pedestrians in the crosswalk that the In-Roadway Warning Lights are in fact flashing as they cross the street. These yellow lights may flash with and at the same flash rate as the light module in which each is installed.

Guidance:

10 *If used, the period of operation of the In-Roadway Warning Lights following each actuation should be sufficient to allow a pedestrian crossing in the crosswalk to leave the curb or shoulder and travel at a walking speed of 3.5 feet per second to at least the far side of the traveled way or to a median of sufficient width for pedestrians to wait. Where pedestrians who walk slower than 3.5 feet per second, or pedestrians who use wheelchairs, routinely use the crosswalk, a walking speed of less than 3.5 feet per second should be considered in determining the period of operation.*

Standard:

11 **If pedestrian pushbuttons are used to actuate the in-roadway lights, a Push Button To Turn On Warning Lights (with pushbutton symbol) (R10-25) sign (see Figure 2B-26) shall be mounted adjacent to or integral with each pedestrian pushbutton.**

12 **Where the period of operation is sufficient only for crossing from a curb or shoulder to a median of sufficient width for pedestrians to wait, median-mounted pedestrian actuators shall be provided.**

13 **In-Roadway Warning Lights (IRWLs) shall not be placed on or within the crosswalk markings. If the In-Roadway Warning Lights are activated by a push button, the PUSH BUTTON FOR PEDESTRIAN WARNING LIGHTS, CROSS WITH CAUTION (R62E(CA)) sign shall be used.**

14 **The following shall be considered when evaluating the need for In-Roadway Warning Lights:**

A. Whether the crossing is controlled or uncontrolled.

B. An engineering traffic study to determine if In-Roadway Warning Lights are compatible with the safety and operation of nearby intersections, which may or may not be, controlled by traffic signals or STOP/YIELD signs.

C. Standard traffic signs for crossings and crosswalk pavement markings are provided.

D. At least 40 pedestrians regularly use the crossing during each of any two hours (not necessarily consecutive) during a 24-hour period.

E. The vehicular volume through the crossing exceeds 200 vehicles per hour in urban areas or 140 vehicles per hour in rural areas during peak-hour pedestrian usage.

F. The critical approach speed (85th percentile) is 45 mph or less.

G. In-Roadway Warning Lights are visible to drivers at the minimum stopping sight distance for the posted speed limit.

H. Public education on In-Roadway Warning Lights is conducted for new installations.

Option:

15 **Overhead or roadside Flashing Yellow Beacons may be installed in conjunction with In-Roadway Warning Lights. In-Roadway Warning Lights may be installed independently, but are not necessarily intended to be a substitute for standard flashing beacons. Engineering judgment should be exercised.**

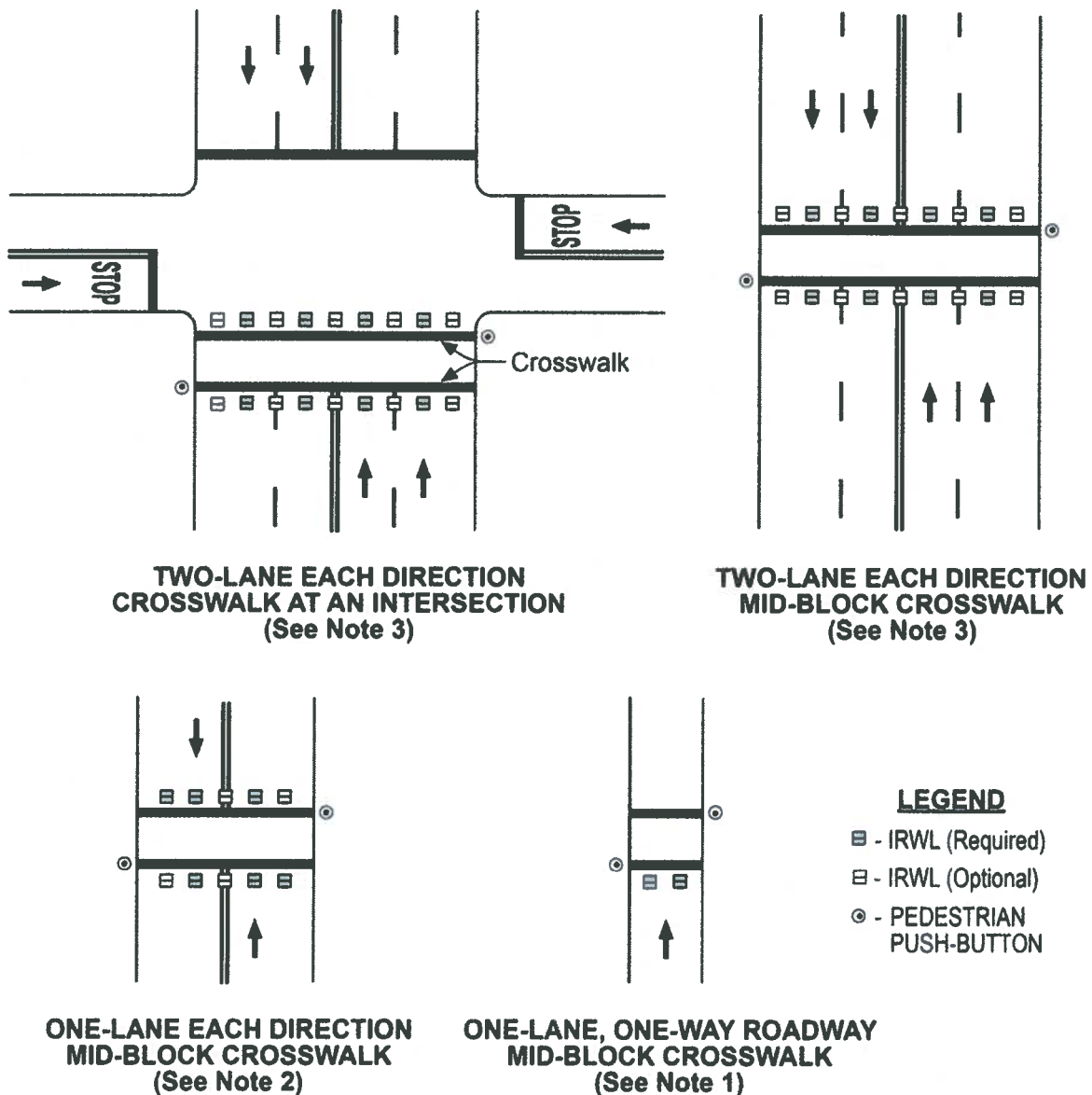
Guidance:

16 *Typical applications of In-Roadway Warning Lights are shown in Figure 4N-101(CA).*

Section 4N.101(CA) In-Roadway Warning Lights at Crosswalks Financing and Maintenance-State Highways Standard:

01 When In-Roadway Warning Lights are proposed by Department of Transportation on State highways, the Department of Transportation shall pay the costs of installation and maintenance. When In-Roadway Warning Lights are proposed and installed by a local agency on State highways, the installation of In-Roadway Warning Lights shall be covered by an Encroachment Permit issued by the local District Director of Department of Transportation. The local agency shall be responsible for installation and maintenance of the In-Roadway Warning Lights.

Figure 4N-101 (CA). Typical Layout for In-Roadway Warning Lights (IRWLs)



NOTES:

1. One-Lane, One-Way Roadways, a minimum of two IRWLs shall be installed on the approach side of the crosswalk.
2. One-Lane each direction, a minimum of three IRWLs shall be installed along both sides of the crosswalk.
3. Two-Lanes each direction, a minimum of one IRWLs per lane, shall be installed along both sides of the crosswalk.
4. IRWLs should be located off the tire tracks.

City of Laguna Hills

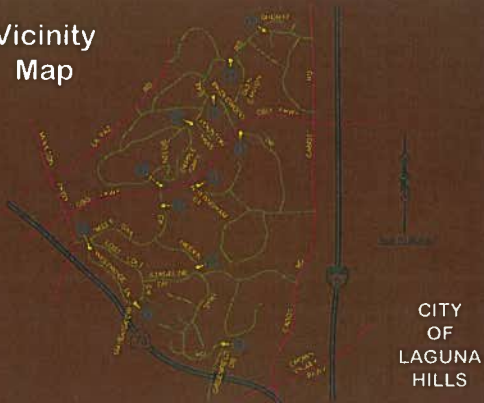


Selected Equestrian Crossing Review

Equestrian Crossing Locations

1. On Bridlewood Dr. $\pm 200'$ east of the intersection of Bridlewood Dr. & Nellie Gail Rd.
2. On the knuckle corner of Greenfield Dr. at Hidden Trail Rd.
3. On Hidden Trail Rd. $\pm 200'$ north of the intersection of Hidden Trail Rd. & Stageline Dr.
4. On Bridlewood Dr. $\pm 200'$ south of the intersection of Oso Pkwy. & Bridlewood Dr.
5. On Nottingham Ct. $\pm 100'$ south of the intersection of Oso Pkwy. & Nottingham Ct.
6. On Nellie Gail Rd. $\pm 600'$ south of the intersection of Oso Pkwy. & Nellie Gail Rd.
7. On Nellie Gail Rd. $\pm 200'$ west of the intersection of Nellie Gail Rd. & Glen Canyon Dr.
8. On Nellie Gail Rd. between Dapple Gray Dr. & Houston Trail
9. On Westridge Ln. at Maverick Cir.
10. On Westridge Ln. $\pm 100'$ south of Lost Colt Dr.
11. On Nellie Gail Rd. at Sheriff Rd.
12. On Nellie Gail Rd. $\pm 200'$ north of Oso Pkwy.

Vicinity Map



Hierarchy of Traffic Engineering Solutions

(in order of preference)

1. Physically separate equestrian from vehicles
2. Utilize controlled crossings
3. Provide maximum Sight Distance and notice to motorists as feasible

Traffic Controls to be in accordance with C-MUTCD

Equestrian Characteristics

- Average horse is ± 5 feet at the withers (where the saddle goes)
- A person sitting on an average horse is another 2.5 to 3 feet at top of head providing extended visibility
- Average "turning radius" is ± 15 feet
- Horses need secure footing (slick concrete, asphalt, flagstone or marble make it slippery for a horse with steel shoes)
- For below grade crossings (tunnel) a horse needs to see the light at the end of the tunnel

Rider Characteristics

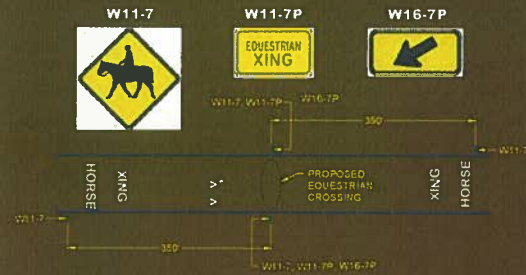
- Riders like to cross where line-of-sight is excellent and the area is clear of obstacles
- High traffic volume locations are undesirable
- Horses are hard to see at dusk and at night – reflective gear should be worn by riders
- Riders should be trained to be able to control their horses in an urban setting

Traffic Engineering Tools for Equestrian Crossing Improvement

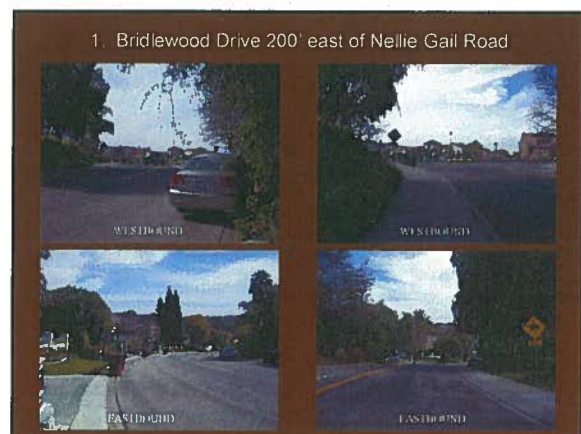
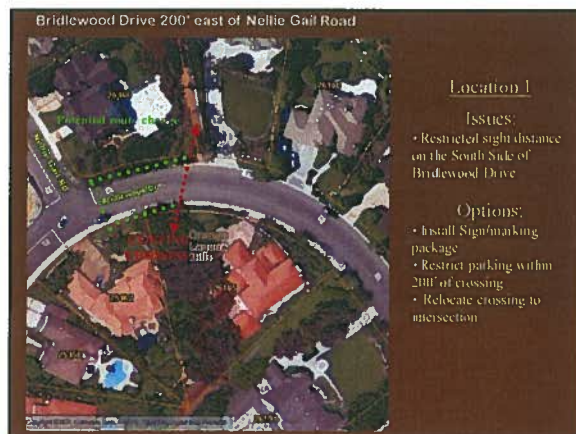
- Trim vegetation / remove trees
- Add crossing signs
- Install advance warning signs
- Install advance pavement legends
- Apply parking restrictions as needed
- Perform traffic enforcement (speed and parking)
- Evaluate crossing relocation - alternate location
- Install rumble strips
- Install flashing beacons / in-ground lights
- Evaluate tunnel construction
- Private improvements by others

Typical Layout & Warning Signs

"Sign package"



*Addition of Chevron or Arrow Head is an option to further point out the crossing location



On the knuckle corner of Greenfield Dr. & Hidden Trail Rd.



Location 2

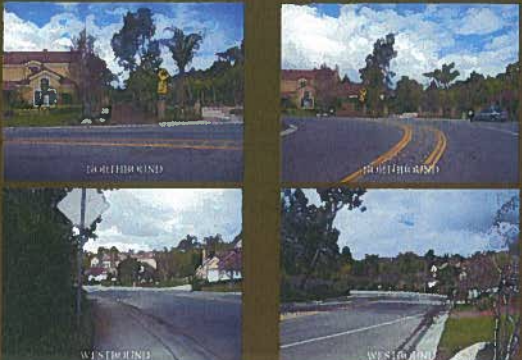
Issues:

- Restricted sight distance all directions

Options:

- Install Sign/markings package
- Restrict parking within 200' of crossing
- Potential tunnel site
- Rumble strips

2. On the knuckle corner of Greenfield Dr. & Hidden Trail Rd.



NORTHBOUND

SOUTHBOUND

EASTBOUND

WESTBOUND

Hidden Trail Road 200' north of Stageline Drive



Location 3

Issues:

- Restricted sight distance on the West Side of Hidden Trail Road

Options:

- Install Sign/markings package
- Restrict parking within 200' of crossing
- Re-route crossing and abandon trail segment on west side.
- Restrict parking at 27212 & 27222 Hidden Trail Rd.

3. Hidden Trail Road 200' north of Stageline Drive



NORTHBOUND

SOUTHBOUND

EASTBOUND

WESTBOUND

Bridlewood Drive 200' south of Oso Parkway



Location 4

Issues:

- Restricted Sight Distance

Options:

- Install Sign/markings package
- Restrict parking within 200' of crossing
- Relocate crossing to Oso Parkway
- Create spur connection on existing parkway turf with new fencing at back of sidewalk.

4. Bridlewood Drive 200' south of Oso Parkway

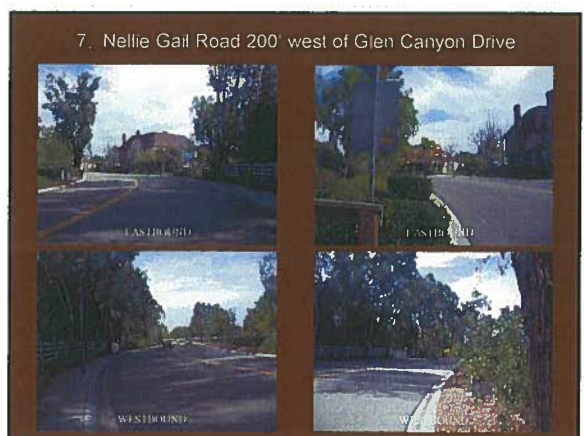
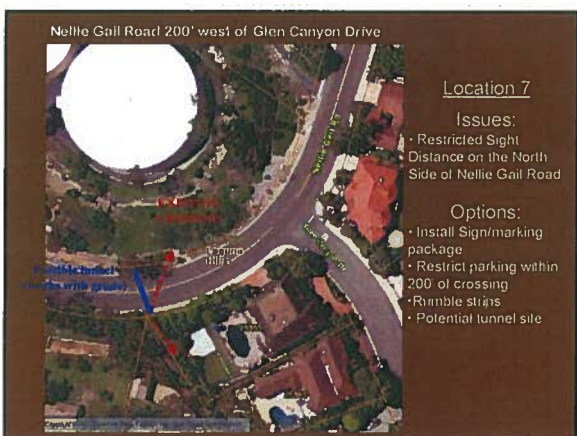
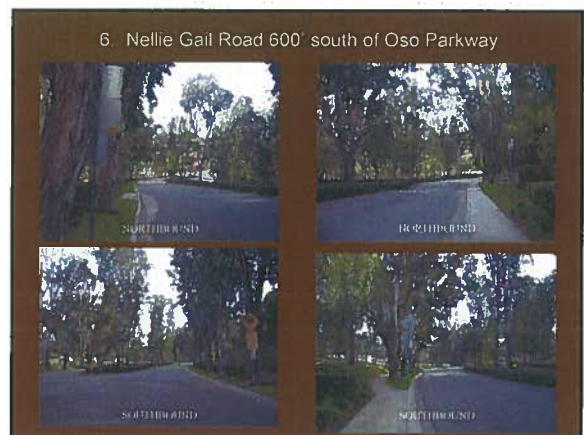
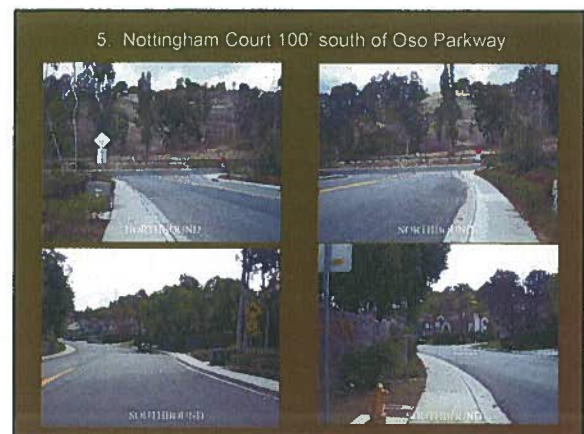


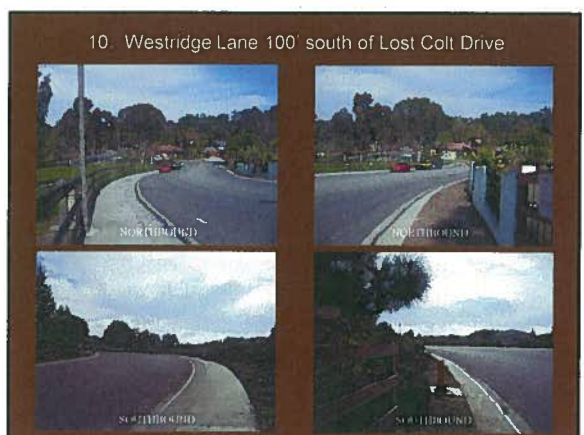
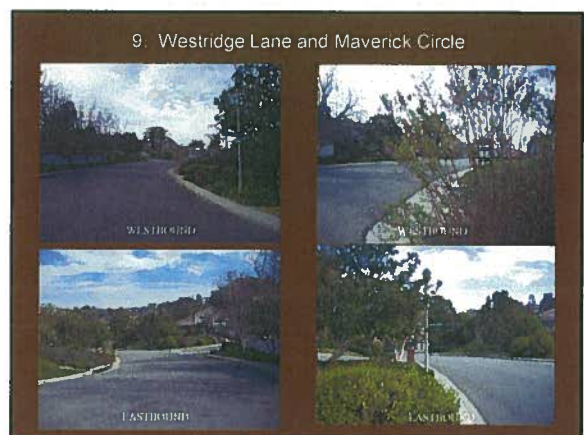
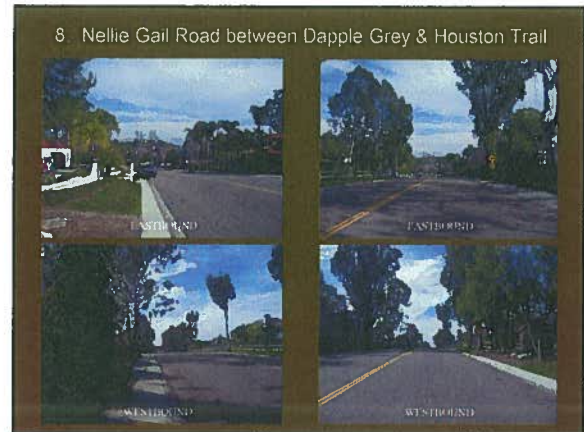
NORTHBOUND

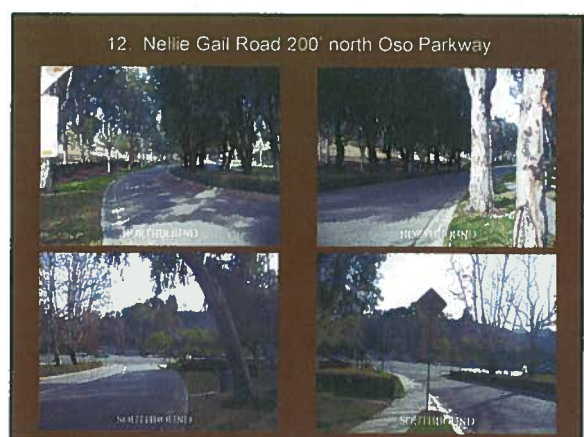
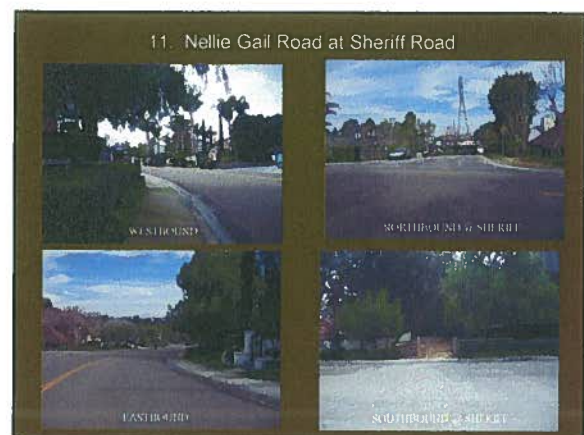
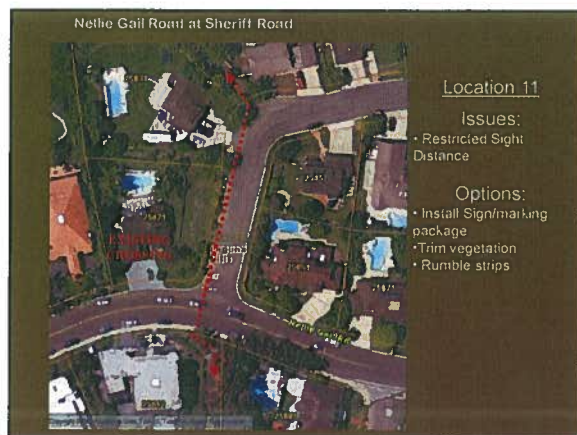
SOUTHBOUND

EASTBOUND

WESTBOUND







Cost of Options

- Clear vegetation to optimize sight distance (est. \$200 to \$1000)
- Remove on-street parking within 200 feet of all crossings (est. \$500)
- Install Sign/markings package (est. \$750)
- Provide pavement markings or street print (est. \$1000 to \$4,000)
- Evaluate the need for flashing beacons or in-ground crossing lights, subject to warrants (est. \$45,000-\$60,000 each location)
- Evaluate the need for tunnel construction (est. \$200,000 +, subject to length)

Recommendations

- Implement an incremental approach (low cost to high cost) to improve crossing visibility / comfort for both the equestrian and motorist. Install "Sign Package" and trim vegetation.
- Evaluate effectiveness of implemented options through field observation of conditions.
- Apply the effective options to all crossing locations over time and determined priority.

Existing June 2008
(Bridlewood s/o Oso)



Existing June 2008
(Nellie Gail n/o Oso)



Existing June 2008
(Nellie Gail w/o Glen Canyon)



**CITY OF LAGUNA HILLS
TRAFFIC COMMISSION
AGENDA REPORT
TRAFFIC ENGINEER DEPARTMENT**

**ISSUE: SIGHT DISTANCE ANALYSIS AT PASEO DE VALENCIA SOUTH OF
ALICIA PARKWAY AT THE “RALPHS” ENTRANCE**

SUMMARY:

Upon receiving a complaint from a motorist about potential sight distance inadequacy at the Ralph's Shopping Center drive approach on Paseo de Valencia, south of Alicia Parkway, City staff contracted the services of its consulting Traffic Engineers, Hartzog & Crabill, Inc., to perform an evaluation. It was determined that sight distance is not restricted and there are no other concerns from a traffic engineering standpoint that would trigger turning movement restrictions at this driveway. It is recommended that the Traffic Commission receive and file this report.

BACKGROUND:

Recently, City staff received a complaint from a motorist regarding his concerns about the sight distance at the Ralph's Shopping Center drive approach on Paseo de Valencia. The drive approach is located on the west side of Paseo de Valencia approximately 230' southerly of Alicia Parkway, please see attached Vicinity Map.

Paseo de Valencia is a five-lane (with a center left turn lane) north-south arterial highway with a speed limit of 45 miles per hour (mph). A review of three years of traffic collision history revealed four traffic collisions in the area near the Ralph's driveway. Two were rear-end type collisions, which are typically not considered susceptible to correction. There were two broadside collisions at this location. Two traffic collisions in a three-year span are considered to be a very low rate for this location.

Staff contracted the services of Hartzog & Crabill, Inc., to perform a sight distance evaluation and operational analysis of this location. Utilizing a design speed of 50 mph (5 mph above the posted speed limit of 45 mph), a stopping sight distance of 425 feet was reviewed per the California Manual on Uniform Traffic Control Devices (MUTCD). The field evaluations revealed adequate stopping sight distance in both directions, i.e. north and south of the driveway. Additionally, vehicles travelling eastbound on Alicia Parkway turning south onto Paseo de Valencia were also reviewed for visibility from the driveway. Using a typical turning speed of 20 mph and a stopping sight distance of 175

**RECOMMENDATION: THAT THE TRAFFIC COMMISSION RECEIVE AND FILE THIS
REPORT.**

feet, it was determined that there is sufficient sight distance from the driveway as it is approximately 200 feet away.

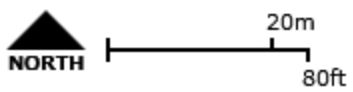
Additionally, traffic count data and traffic signal timing data was obtained and entered into a traffic operations program (Synchro) in order to analyze the traffic flow in the area. This analysis determined the Level of Service (LOS) values were acceptable for left turn movements in and out of the driveway. Please see the attached report by Hartzog & Crabill, Inc.

Based on this evaluation, there are no traffic control concerns that would trigger left turn restrictions in and out of the Ralph's Shopping Center driveway.

RECOMMENDATION: THAT THE TRAFFIC COMMISSION RECEIVE AND FILE THIS REPORT.

ATTACHMENTS:

- Vicinity Map
- Hartzog and Crabill, Inc. report, July 25, 2012



Date: 08/01/12

VICINITY MAP



9/19/2012 ITEM NO. 4.2



Trammell Hartzog, President
Jerry Crabill, P.E. (Retired)
Gerald J. Stock, P.E.,
Executive Vice President

17772 E. 17th Street
Suite 101
Tustin, CA 92780

Phone: (714) 731-9455
FAX: (714) 731-9498

www.hartzog-crabill.com

July 25, 2012

Mr. Kenneth H. Rosenfield, P.E.
Director of Public Services
City of Laguna Hills
24045 El Toro Road
Laguna Hills, CA 92653

**Subject: Recommendations Regarding Sight Distance Analysis on
Paseo de Valencia, South of Alicia Parkway**

Dear Mr. Rosenfield:

Pursuant to your request, Hartzog & Crabill, Inc. (HCI) has completed our field review and evaluation regarding the issue of sight distance at the driveway located on the south side of Paseo de Valencia, just east of Alicia Parkway (*Ralph's shopping center driveway*). Our field observations confirmed that a driver's visibility from the shopping center driveway looking at oncoming traffic along Paseo de Valencia is not restricted.

Our approach to the evaluation included review of accident history, sight distance field measurements, and a Synchro operational analysis.

Accident History

Our initial task was to review the accident history. The most recent 3-year accident history was collected from the City of Laguna Hills for this driveway location (attached). As summarized below, the accident listing contained a total of four (4) accidents reported in the 3-year period:

<u>2008</u>	<u>2009</u>	<u>2010</u>	<u>2011</u>
1	3	0	0

Of the four accidents, two were rear-end type and two were broadside type. Since rear-end type accidents are not typically considered susceptible to correction, it can be summarized that one broadside accident was reported in 2008 and one in 2009 at this driveway location.

Sight Distance Field Measurements

HCI staff field-reviewed the driveway location on Wednesday, July 11, 2012 to measure actual sight distance for on-coming traffic from each approach on Paseo de Valencia. Our staff measured the minimum stopping sight distance recommended for a 50 MPH 'design' speed on Paseo de Valencia. The design speed was assumed to be 5 MPH above the posted speed limit of 45 MPH. For this design speed, 425 feet is recommended, as listed in the State of California Manual on Uniform Traffic Control Devices (California MUTCD) attachment.

Sight Distance Field Measurements (continued)

More specifically, 425 feet was field-measured from a typical stopped vehicle location at the shopping center driveway towards the near-side lanes of on-coming traffic from both approaching directions on Paseo de Valencia. An orange cone was set on the lane line at this distance. A photograph was then taken from the stopped vehicle location looking both ways verifying a driver's visibility was not restricted when looking from/to the driveway (see attached stopping sight distance photo exhibit).

Additionally, the turning vehicles from Alicia Parkway onto eastbound Paseo de Valencia were reviewed for visibility from the driveway. The distance from the driveway location to Alicia Parkway was measured at approximately 200 feet. Our staff drove northbound Alicia Parkway and turned right onto eastbound Paseo de Valencia, and estimated a typical vehicle turning speed upon completion of the turn of 20 MPH. The minimum stopping sight distance recommended for a 20 MPH speed is 175 feet; consequently, there is sufficient sight distance from the driveway to the turning vehicles as well.

Table 1 below summarizes our sight distance verification.

Table 1

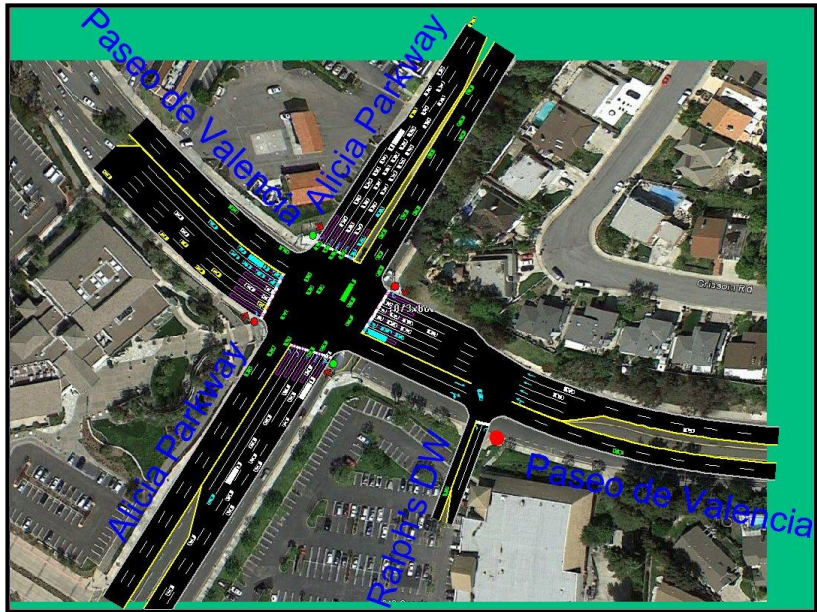
Intersection	Posted Speed Limit (mph)	Design Speed (mph)	California Stopping Sight Distance for Design Speed (feet)	Stopping Sight Distance Satisfied (Yes or No)	Comments
<u>Ralph's DW</u> (located on south side of Paseo de Valencia, just east of Alicia Parkway)	45	50	425	Yes	This distance was field-verified as being met from the driveway location looking at oncoming traffic along Paseo de Valencia. There are 'NO PARKING' restrictions along Paseo de Valencia at/near the driveway which help visibility from being restricted.
<u>Ralph's DW</u> (When looking at turning vehicles from Alicia Parkway onto eastbound Paseo de Valencia)	N/A	20	175	Yes	This distance was field-verified from the driveway location looking at turning traffic from Alicia Parkway.

Synchro Analysis

The driveway location, as well as the adjacent intersection of Paseo de Valencia and Alicia Parkway, were analyzed using the Synchro Traffic Signal Software program (Synchro). Synchro is a faithful implementation of the 2000 Highway Capacity Manual (HCM 2000) procedures, and is capable of analyzing unsignalized intersections, such as the driveway.

HCI first gathered the traffic signal timing sheets for the signalized intersection for evaluation of possible impacts. The timing sheets revealed that signal coordination timing exists along Alicia Parkway during the AM and PM peak-hour periods using a 130-second weekday cycle.

HCI then collected peak-hour turning movement traffic counts recorded during typical midweek peak-hours for the two locations (see attached peak-hour traffic count data).



The timing and count data was then entered and evaluated using Synchro (see attached Synchro reports). Following is a summary of the Synchro level-of-service (LOS) results for both intersections:

<u>Intersection</u>	<u>Peak</u>	<u>LOS</u>	<u>Delay (s)</u>
1) Paseo de Valencia at Alicia Parkway (signal)	AM	D	38.7
	PM	D	39.7
2) Paseo de Valencia at Ralph's DW (un-signalized)	AM	B	11.8
	PM	C	16.1

FINDINGS:

- Accident history showed that there was one broadside-type accident reported in 2008 and one in 2009 at this driveway location during the most recent 3-year period.
- Field measurements/observations confirmed adequate visibility, or sight distance, when looking from the Ralph's driveway location at oncoming traffic along Paseo de Valencia.
- As the driveway location is located near the signalized intersection of Paseo de Valencia and Alicia Parkway, a Synchro analysis was completed for both intersections. The operational results for the driveway location, as well as the traffic signal, were found acceptable for allowing left-turn movements into and out of the driveway.

RECOMMENDATION:

Based on the above evaluation, it is recommended that the City of Laguna Hills continue to allow left-turn movements in and out of the Ralph's driveway location. There are no further recommendations at this time.

We look forward to your acceptance of our analysis findings and to any additional services the City of Laguna Hills may request. If you have any questions or need more information please call me at (714) 731-9455. Thank you again for the opportunity to serve your community.

Sincerely,

HARTZOG & CRABILL, INC.



Gerald Stock, P.E.
Executive Vice/President
City & Traffic Engineering Services

Attachments: Accident History
 Stopping Sight Distance as a Function of Speed Table (California MUTCD)
 Sight Distance Photo Exhibit
 Traffic Count Data
 Synchro Reports

ACCIDENT HISTORY

Intersection Magic VER 6.727
City of Laguna Hills, CA 05/16/2012

Accident listing
01/01/2008 - 03/19/2011
Alicia Pkwy & Paseo De Valencia
Sorted by <DATE;TIME;ACC#>

ID	DATE	STREET 1	STREET 2	DIST	DIR	FROM	VEH 1 MOV	VEH 1 DIR	VEH 2 MOV
975	12/17/2008	PASEO DE VALENCIA	ALICIA PKWY	199	South		Left turn	EAST	Straight
235	04/15/2009	PASEO DE VALENCIA	ALICIA PKWY	183	South		Stopped	NORTH	Straight
770	05/12/2009	PASEO DE VALENCIA	ALICIA PKWY	198	South		Left turn	EAST	Straight
620	09/26/2009	PASEO DE VALENCIA	ALICIA PKWY	99	South		Stopped	NORTH	Stopped

STOPPING SIGHT DISTANCE (CALIFORNIA MUTCD)

Table 6C-1. ~~Suggested Advance Warning Sign Spacing~~
Suggested Minimum Advance Warning Sign Spacing

Road Type	Distance Between Signs**		
	A	B	C
Urban (low speed)* 25 mph or less	30 (100)	30 (100)	30 (100)
Urban (high speed)* 30 mph or more	100 (350)	100 (350)	100 (350)
Rural	150 (500)	150 (500)	150 (500)
Expressway / Freeway	300 (1,000)	450 (1,500)	800 (2,640)

* Speed category to be determined by highway agency

** Distances are shown in meters (feet). The column headings A, B, and C are the dimensions shown in Figures 6H-1 through 6H-46. The A dimension is the distance from the transition or point of restriction to the first sign. The B dimension is the distance between the first and second signs. The C dimension is the distance between the second and third signs. (The third sign is the first one in a three-sign series encountered by a driver approaching a TTC zone.)

Table 6C-2. Stopping Sight Distance as a Function of Speed

Speed* (km/h)	Distance (m)	Speed* (mph)	Distance (ft)
30	35	20	115
40	50	25	155
50	65	30	200
60	85	35	250
70	105	40	305
80	130	45	360
90	160	50	425
100	185	55	495
110	220	60	570
120	250	65	645
		70	730
		75	820

* Posted speed, off-peak 85th-percentile speed prior to work starting, or the anticipated operating speed

SIGHT DISTANCE PHOTO EXHIBIT

**STOPPING SIGHT DISTANCE
(JULY 11, 2012)**



RALPH'S DW (LOOKING EAST) @ WB PASEO DE VALENCIA (DESIGN SPEED OF 50 MPH)



RALPH'S DW (LOOKING WEST) @ EB PASEO DE VALENCIA (DESIGN SPEED OF 50 MPH)

TRAFFIC COUNT DATA

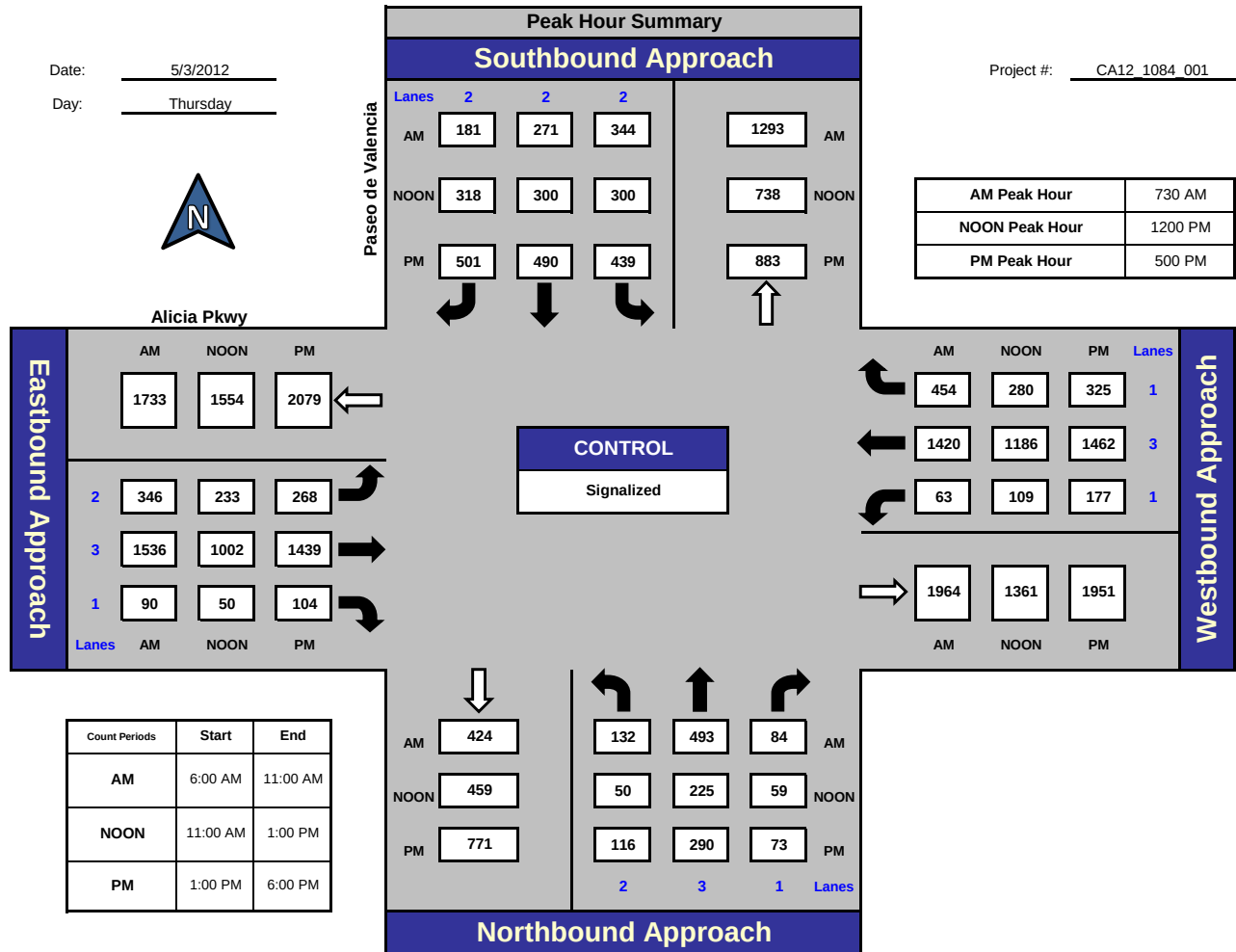
ITM Peak Hour Summary

Prepared by:

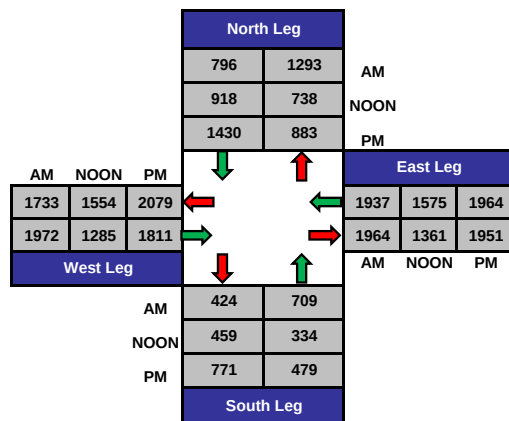


National Data & Surveying Services

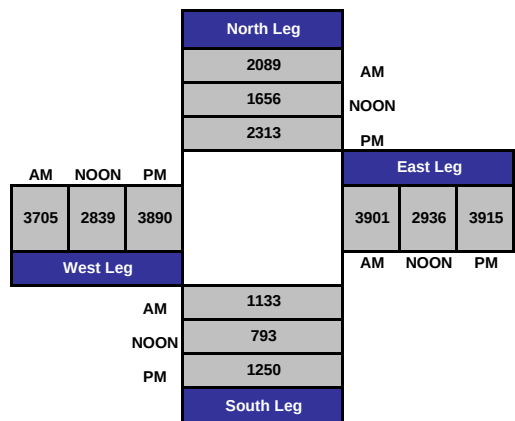
Paseo de Valencia and Alicia Pkwy, City of Laguna Hills



Total Ins & Outs



Total Volume Per Leg



ITM Peak Hour Summary

Prepared by:



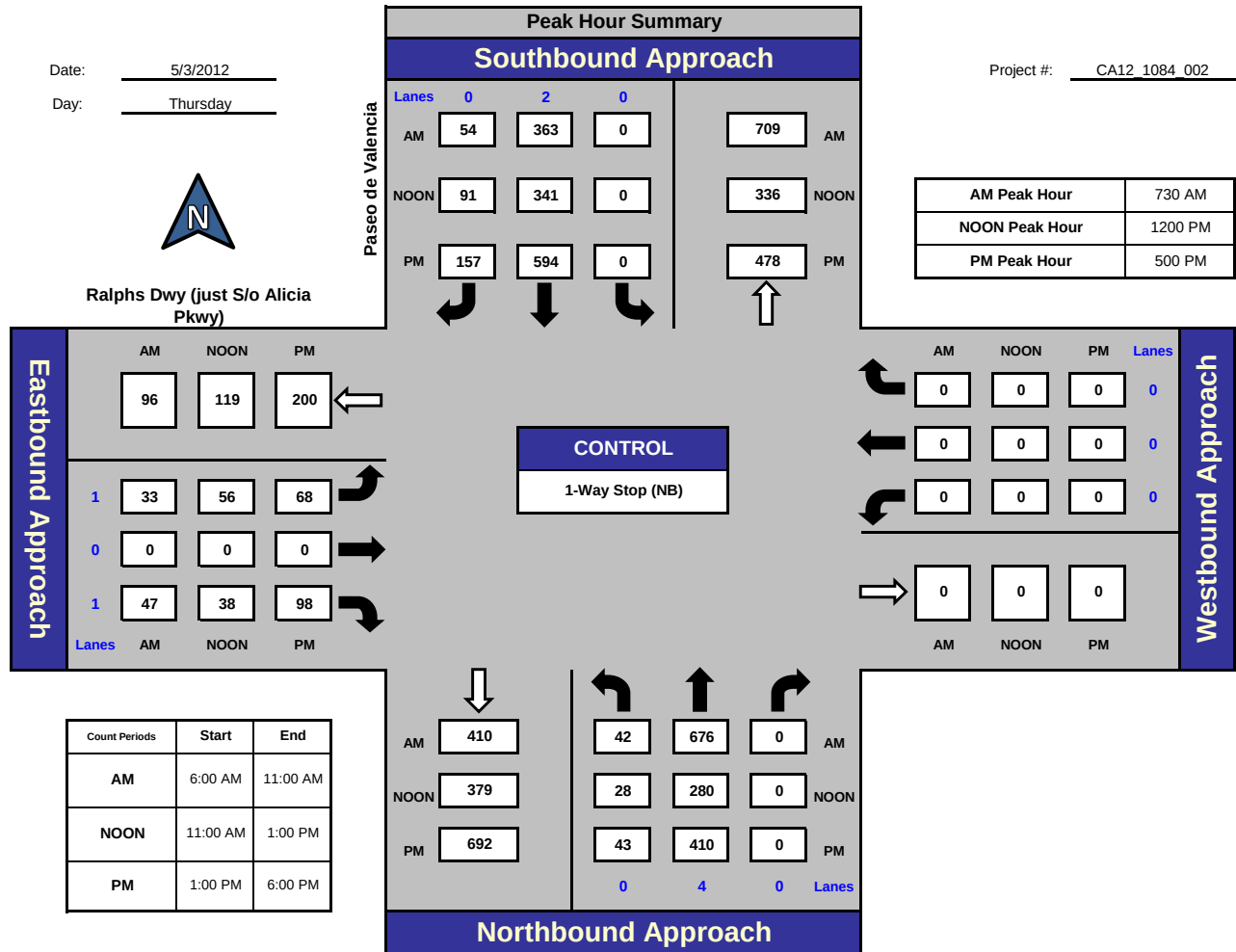
National Data & Surveying Services

Paseo de Valencia and Ralphs Dwy (just S/o Alicia Pkwy) , City of Laguna Hills

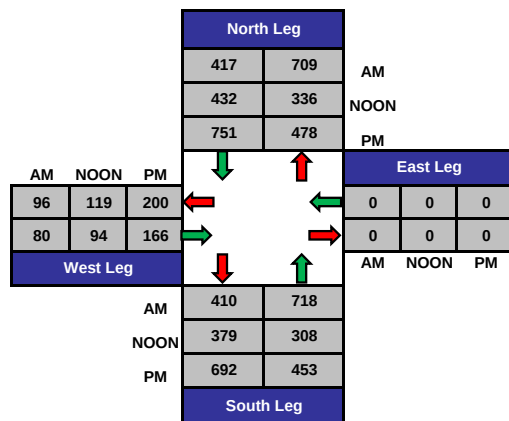
Date: 5/3/2012

Day: Thursday

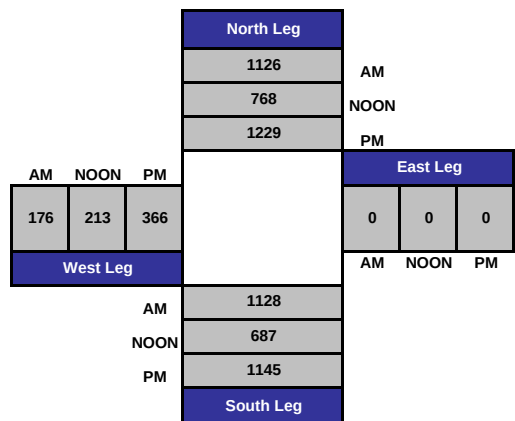
Project #: CA12 1084 002



Total Ins & Outs



Total Volume Per Leg



SYNCHRO REPORTS

City of Laguna Hills
Paseo de Valencia at Alicia Pkwy

Lanes, Volumes, Timings Report
Existing Conditions - AM Peak Hour

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	275		0	250		135	230		0	285		155
Storage Lanes	2		2	0		1	2		0	1		1
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Leading Detector (ft)	50	50	50	50	50	50	50	50		50	50	50
Trailing Detector (ft)	0	0	0	0	0	0	0	0		0	0	0
Turning Speed (mph)	15		9	15		9	15		9	15		9
Lane Util. Factor	0.97	0.95	0.88	0.97	0.91	1.00	0.97	0.91	0.91	1.00	0.91	1.00
Frt			0.850			0.850			0.992			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	3433	3539	2787	3433	5085	1583	3433	5045	0	1770	5085	1583
Flt Permitted	0.950			0.950			0.950			0.950		
Satd. Flow (perm)	3433	3539	2787	3433	5085	1583	3433	5045	0	1770	5085	1583
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			115			91			7			232
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Link Speed (mph)		45			45			45			45	
Link Distance (ft)		376			268			520			449	
Travel Time (s)		5.7			4.1			7.9			6.8	
Volume (vph)	344	271	181	132	493	84	346	1536	90	63	1420	454
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	374	295	197	143	536	91	376	1670	98	68	1543	493
Lane Group Flow (vph)	374	295	197	143	536	91	376	1768	0	68	1543	493
Turn Type	Prot		pm+ov	Prot		Perm	Prot			Prot		Perm
Protected Phases	7	4	1	3	8		1	6		5	2	
Permitted Phases			4			8						2
Detector Phases	7	4	1	3	8	8	1	6		5	2	2
Minimum Initial (s)	3.0	10.0	7.0	3.0	10.0	10.0	7.0	15.0		5.0	15.0	15.0
Minimum Split (s)	11.5	34.0	11.5	11.5	33.8	33.8	11.5	37.0		11.5	36.4	36.4
Total Split (s)	31.2	46.8	28.6	18.2	33.8	33.8	28.6	45.5	0.0	19.5	36.4	36.4
Total Split (%)	24.0%	36.0%	22.0%	14.0%	26.0%	26.0%	22.0%	35.0%	0.0%	15.0%	28.0%	28.0%
Maximum Green (s)	26.7	40.8	24.1	13.7	27.8	27.8	24.1	39.5		15.0	30.4	30.4
Yellow Time (s)	3.5	5.0	3.5	3.5	5.0	5.0	3.5	5.0		3.5	5.0	5.0
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0		1.0	1.0	1.0
Lead/Lag	Lead	Lead	Lead	Lag	Lag	Lag	Lead	Lead		Lag	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes		Yes	Yes	Yes
Vehicle Extension (s)	3.0	4.0	2.0	2.0	4.0	4.0	2.0	4.0		2.0	4.0	4.0
Minimum Gap (s)	0.2	2.0	0.2	0.2	2.0	2.0	0.2	2.0		0.2	2.0	2.0
Time Before Reduce (s)	0.0	12.0	0.0	0.0	12.0	12.0	0.0	12.0		0.0	12.0	12.0
Time To Reduce (s)	0.0	12.0	0.0	0.0	12.0	12.0	0.0	12.0		0.0	12.0	12.0
Recall Mode	None	None	None	None	None	None	None	C-Max		None	C-Max	C-Max
Walk Time (s)		7.0			7.0	7.0		7.0			7.0	7.0
Flash Dont Walk (s)		21.0			21.0	21.0		24.0			25.0	25.0
Pedestrian Calls (#/hr)		0			0	0		0			0	0
Act Effct Green (s)	19.4	18.0	36.7	22.7	21.3	21.3	18.7	61.7		13.5	54.6	54.6
Actuated g/C Ratio	0.15	0.14	0.28	0.17	0.16	0.16	0.14	0.47		0.10	0.42	0.42
v/c Ratio	0.73	0.60	0.23	0.24	0.64	0.27	0.76	0.74		0.37	0.72	0.62
Control Delay	61.3	57.6	8.0	46.3	54.2	10.7	63.7	32.2		59.1	35.4	20.6

City of Laguna Hills
Paseo de Valencia at Alicia Pkwy

Lanes, Volumes, Timings Report
Existing Conditions - AM Peak Hour

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
Total Delay	61.3	57.6	8.0	46.3	54.2	10.7	63.7	32.2		59.1	35.4	20.6
LOS	E	E	A	D	D	B	E	C		E	D	C
Approach Delay	47.9			47.6			37.7			32.7		
Approach LOS	D			D			D			C		
Queue Length 50th (ft)	157	124	18	54	156	0	159	456		53	391	169
Queue Length 95th (ft)	202	167	31	81	191	47	205	#595		101	#575	349
Internal Link Dist (ft)	296			188			440			369		
Turn Bay Length (ft)	275				250	135	230				285	155
Base Capacity (vph)	718	1165	991	600	1166	433	650	2397		211	2134	799
Starvation Cap Reductn	0	0	0	0	0	0	0	0		0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0		0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0		0	0	0
Reduced v/c Ratio	0.52	0.25	0.20	0.24	0.46	0.21	0.58	0.74		0.32	0.72	0.62

Intersection Summary

Area Type: Other

Cycle Length: 130

Actuated Cycle Length: 130

Offset: 41.6 (32%), Referenced to phase 2:SBT and 6:NBT, Start of Green

Natural Cycle: 95

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.76

Intersection Signal Delay: 38.7

Intersection LOS: D

Intersection Capacity Utilization 70.0%

ICU Level of Service C

Analysis Period (min) 15

95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

Splits and Phases: 1: Paseo de Valencia & Alicia Parkway

 ø1	 ø2	 ø4	 ø3
28.6 s	36.4 s	46.8 s	18.2 s
 ø6	 ø5	 ø7	 ø8
45.5 s	19.5 s	31.2 s	33.8 s

								
Movement	EBT	EBR	WBL	WBT	NBL	NBR		
Lane Configurations	↑↑			↑↑↑↑		↑	↑	
Sign Control	Free			Free	Stop			
Grade	0%			0%	0%			
Volume (veh/h)	370	54	42	676	33	47		
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92		
Hourly flow rate (vph)	402	59	46	735	36	51		
Pedestrians								
Lane Width (ft)								
Walking Speed (ft/s)								
Percent Blockage								
Right turn flare (veh)								
Median type					None			
Median storage veh)								
Upstream signal (ft)	268							
pX, platoon unblocked			0.92			0.92	0.92	
vC, conflicting volume			461			707	230	
vC1, stage 1 conf vol								
vC2, stage 2 conf vol								
vCu, unblocked vol			335			601	86	
tC, single (s)			4.1			6.8	6.9	
tC, 2 stage (s)								
tF (s)			2.2			3.5	3.3	
p0 queue free %			96			91	94	
cM capacity (veh/h)			1129			383	884	
Direction, Lane #	EB 1	EB 2	WB 1	WB 2	WB 3	WB 4	NB 1	NB 2
Volume Total	268	193	151	210	210	210	36	51
Volume Left	0	0	46	0	0	0	36	0
Volume Right	0	59	0	0	0	0	0	51
cSH	1700	1700	1129	1700	1700	1700	383	884
Volume to Capacity	0.16	0.11	0.04	0.12	0.12	0.12	0.09	0.06
Queue Length 95th (ft)	0	0	3	0	0	0	8	5
Control Delay (s)	0.0	0.0	2.8	0.0	0.0	0.0	15.4	9.3
Lane LOS			A				C	A
Approach Delay (s)	0.0	0.5					11.8	
Approach LOS							B	
Intersection Summary								
Average Delay			1.1					
Intersection Capacity Utilization			35.7%	ICU Level of Service		A		
Analysis Period (min)			15					

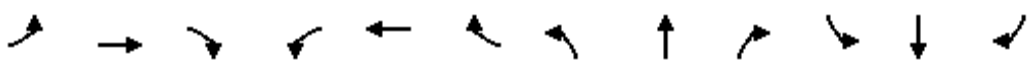
City of Laguna Hills
Paseo de Valencia at Alicia Pkwy

Lanes, Volumes, Timings Report
Existing Conditions - PM Peak Hour

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	275		0	250		135	230		0	285		155
Storage Lanes	2		2	0		1	2		0	1		1
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Leading Detector (ft)	50	50	50	50	50	50	50	50		50	50	50
Trailing Detector (ft)	0	0	0	0	0	0	0	0		0	0	0
Turning Speed (mph)	15		9	15		9	15		9	15		9
Lane Util. Factor	0.97	0.95	0.88	0.97	0.91	1.00	0.97	0.91	0.91	1.00	0.91	1.00
Frt			0.850			0.850			0.990			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	3433	3539	2787	3433	5085	1583	3433	5034	0	1770	5085	1583
Flt Permitted	0.950			0.950			0.950			0.950		
Satd. Flow (perm)	3433	3539	2787	3433	5085	1583	3433	5034	0	1770	5085	1583
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			115			79			9			165
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Link Speed (mph)		45			45			45			45	
Link Distance (ft)		376			268			520			449	
Travel Time (s)		5.7			4.1			7.9			6.8	
Volume (vph)	439	490	501	116	290	73	268	1439	104	177	1462	325
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	477	533	545	126	315	79	291	1564	113	192	1589	353
Lane Group Flow (vph)	477	533	545	126	315	79	291	1677	0	192	1589	353
Turn Type	Prot		pm+ov	Prot		Perm	Prot			Prot		Perm
Protected Phases	7	4	1	3	8		1	6		5	2	
Permitted Phases			4			8						2
Detector Phases	7	4	1	3	8	8	1	6		5	2	2
Minimum Initial (s)	3.0	10.0	7.0	3.0	10.0	10.0	7.0	15.0		5.0	15.0	15.0
Minimum Split (s)	11.5	34.0	11.5	11.5	33.8	33.8	11.5	37.0		11.5	38.0	38.0
Total Split (s)	28.6	45.5	28.6	16.9	33.8	33.8	28.6	42.9	0.0	24.7	39.0	39.0
Total Split (%)	22.0%	35.0%	22.0%	13.0%	26.0%	26.0%	22.0%	33.0%	0.0%	19.0%	30.0%	30.0%
Maximum Green (s)	24.1	39.5	24.1	12.4	27.8	27.8	24.1	36.9		20.2	33.0	33.0
Yellow Time (s)	3.5	5.0	3.5	3.5	5.0	5.0	3.5	5.0		3.5	5.0	5.0
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0		1.0	1.0	1.0
Lead/Lag	Lag	Lag	Lead	Lead	Lead	Lead	Lead	Lead		Lag	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes		Yes	Yes	Yes
Vehicle Extension (s)	3.0	4.0	2.0	2.0	4.0	4.0	2.0	4.0		2.0	4.0	4.0
Minimum Gap (s)	0.2	2.0	0.2	0.2	2.0	2.0	0.2	2.0		0.2	2.0	2.0
Time Before Reduce (s)	0.0	12.0	0.0	0.0	12.0	12.0	0.0	12.0		0.0	12.0	12.0
Time To Reduce (s)	0.0	12.0	0.0	0.0	12.0	12.0	0.0	12.0		0.0	12.0	12.0
Recall Mode	None	None	None	None	None	None	None	C-Max		None	C-Max	C-Max
Walk Time (s)		7.0			7.0	7.0		7.0			7.0	7.0
Flash Dont Walk (s)		21.0			21.0	21.0		24.0			25.0	25.0
Pedestrian Calls (#/hr)		0			0	0		0			0	0
Act Effct Green (s)	23.7	29.9	49.8	9.6	15.9	15.9	15.9	53.8		20.7	58.6	58.6
Actuated g/C Ratio	0.18	0.23	0.38	0.07	0.12	0.12	0.12	0.41		0.16	0.45	0.45
v/c Ratio	0.76	0.65	0.48	0.50	0.51	0.30	0.69	0.80		0.68	0.69	0.44
Control Delay	58.6	49.0	23.9	64.3	56.1	13.6	63.4	37.8		64.8	32.2	16.2

City of Laguna Hills
Paseo de Valencia at Alicia Pkwy

Lanes, Volumes, Timings Report
Existing Conditions - PM Peak Hour

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
Total Delay	58.6	49.0	23.9	64.3	56.1	13.6	63.4	37.8		64.8	32.2	16.2
LOS	E	D	C	E	E	B	E	D		E	C	B
Approach Delay		43.2			51.6			41.6			32.5	
Approach LOS		D			D			D			C	
Queue Length 50th (ft)	199	216	154	53	92	0	123	444		155	379	100
Queue Length 95th (ft)	244	260	178	85	123	46	164	#616		240	#538	224
Internal Link Dist (ft)		296			188			440			369	
Turn Bay Length (ft)	275			250		135	230			285		155
Base Capacity (vph)	686	1130	1318	341	1166	424	650	2088		282	2293	804
Starvation Cap Reductn	0	0	0	0	0	0	0	0		0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0		0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0		0	0	0
Reduced v/c Ratio	0.70	0.47	0.41	0.37	0.27	0.19	0.45	0.80		0.68	0.69	0.44

Intersection Summary

Area Type: Other

Cycle Length: 130

Actuated Cycle Length: 130

Offset: 14.3 (11%), Referenced to phase 2:SBT and 6:NBT, Start of Green

Natural Cycle: 115

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.80

Intersection Signal Delay: 39.7

Intersection LOS: D

Intersection Capacity Utilization 74.1%

ICU Level of Service D

Analysis Period (min) 15

95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

Splits and Phases: 1: Paseo de Valencia & Alicia Parkway

 ø1	 ø2	 ø3	 ø4
28.6 s	39 s	16.9 s	45.5 s
 ø6	 ø5	 ø8	 ø7
42.9 s	24.7 s	33.8 s	28.6 s

								
Movement	EBT	EBR	WBL	WBT	NBL	NBR		
Lane Configurations	↑↑			↑↑↑↑		↱	↱	
Sign Control	Free			Free	Stop			
Grade	0%			0%	0%			
Volume (veh/h)	614	157	43	411	68	98		
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92		
Hourly flow rate (vph)	667	171	47	447	74	107		
Pedestrians								
Lane Width (ft)								
Walking Speed (ft/s)								
Percent Blockage								
Right turn flare (veh)								
Median type					None			
Median storage veh)								
Upstream signal (ft)	268							
pX, platoon unblocked			0.87			0.87	0.87	
vC, conflicting volume			838			958	419	
vC1, stage 1 conf vol								
vC2, stage 2 conf vol								
vCu, unblocked vol			657			796	173	
tC, single (s)			4.1			6.8	6.9	
tC, 2 stage (s)								
tF (s)			2.2			3.5	3.3	
p0 queue free %			94			72	85	
cM capacity (veh/h)			802			264	727	
Direction, Lane #	EB 1	EB 2	WB 1	WB 2	WB 3	WB 4	NB 1	NB 2
Volume Total	445	393	111	128	128	128	74	107
Volume Left	0	0	47	0	0	0	74	0
Volume Right	0	171	0	0	0	0	0	107
cSH	1700	1700	802	1700	1700	1700	264	727
Volume to Capacity	0.26	0.23	0.06	0.08	0.08	0.08	0.28	0.15
Queue Length 95th (ft)	0	0	5	0	0	0	28	13
Control Delay (s)	0.0	0.0	4.5	0.0	0.0	0.0	23.8	10.8
Lane LOS			A				C	B
Approach Delay (s)	0.0	1.0					16.1	
Approach LOS							C	
Intersection Summary								
Average Delay			2.3					
Intersection Capacity Utilization			42.4%	ICU Level of Service			A	
Analysis Period (min)			15					

CITY OF LAGUNA HILLS

OCTOBER 2012

RADAR TRAILER SCHEDULE

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
	1	2	3	4	5	6
7	8 Stageline W/O Hidden Trail 25 MPH	9 Santa Vittoria N/O Ridge Route 30 MPH	10 Mustang W/O Farrier 25 MPH	11	12	13
14	15	16	17	18	19	20
21	22 Rapid Falls W/O Sundowner 25 MPH	23 Glen Canyon S/O Nellie Gail 25 MPH	24 Clarington W/B Mid-Block 25 MPH	25	26	27
28	29	30	31			

CITY OF LAGUNA HILLS

November 2012

RADAR TRAILER SCHEDULE

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
					1	2
						3
4	5	Nellie Gail N/O Empty Saddle 25 MPH	6 Woodbluff S/O Middleridge 25 MPH	7 Lost Colt E/O Beargrass 25 MPH	8	9
						10
11	12		13	14	15	16
						17
18	19	Bridlewood S/O Laurel Crest 25 MPH	20 Stageline W/O Hidden Trail 25 MPH	21	22 HOLIDAY	23 HOLIDAY
						24
25	26		27	28	29	30

Rainy Days Excluded