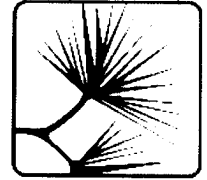


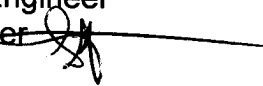


# City of Del Mar Staff Report

904-2, 904-4



TO: Honorable Mayor and City Council Members

FROM: Dawn Wilson, City Traffic Engineer  
Via Scott Huth, City Manager 

DATE: June 4, 2012

SUBJECT: Engineering and Traffic Survey for Speed Zoning Report & Recommended Speed Limits

## REQUESTED ACTION/RECOMMENDATION:

Adopt the proposed Resolution (Attachment A) accepting the Engineering and Traffic Survey for Speed Zoning report (Attachment B) establishing speed limits for portions of Camino del Mar, Jimmy Durante Boulevard, San Dieguito Drive, Via de la Valle, and Coast Boulevard within the City of Del Mar.

## EXECUTIVE SUMMARY:

As part of the FY 2011-2012 and FY 2012/2013 Capital Budget, City Council authorized funding for the Engineering Department to update the City's Engineering and Traffic Survey for Speed Zoning report in order to maintain compliance with the current California Vehicle Code (CVC) requirements for establishing speed limits. To ensure speed limits in the City are current and enforceable, Sections 40801 and 40802 of the CVC, Engineering and Traffic Surveys must be conducted every 5 to 7 years.

The last survey was conducted in 2004 and the speed limits were set by Resolution 2005-04 in February 2005. New Engineering and Speed Survey data was collected in September 2011 and the report was completed in November 2011.

The 2011 Engineering and Traffic Survey determined that existing speed limits within the City of Del Mar are currently in compliance with the 85<sup>th</sup> percentile speeds measured in September 2011 with one exception:

- San Dieguito Drive within the City limits – Increase speed limit to 40 mph from the existing 25 mph.

---

## City Council Action:

Action Taken: Adopted Resolution 2012-27, accepting the Engineering and Traffic Survey for Speed Zoning Report establishing speed limits for portions of Camino del Mar, Jimmy Durante Boulevard, San Dieguito Road, Via de la Valle, and Coast Boulevard within the City of Del Mar. *m. martin, Clerk*

4 2012 ITEM 12

DISCUSSION/ANALYSIS:

In November 2011, the Engineering and Traffic Survey for Speed Zoning report was prepared in compliance with the current Manual on Uniform Traffic Control Devices (MUTCD), California Edition methodology. The report is provided as Attachment B.

The Engineering and Traffic Survey consisted of a measurement of prevailing (85<sup>th</sup> percentile) speeds using radar guns on arterials in the City of Del Mar. For all survey locations, an accident history assessment was conducted and a field assessment was completed to evaluate physical conditions not readily apparent to the motorist.

As a result of the Engineering and Traffic Survey, the City Traffic Engineer recommends the existing speed limits be retained on all roadway segments. The speed survey suggests that speed limits on San Dieguito Drive within the City limits should be increased to 40 mph from the existing 25 mph to be in compliance with the 85<sup>th</sup> percentile speed. The prior Engineering and Traffic Survey for Speed Zoning report (2005) made a similar recommendation to increase the speed limit from 25 mph to 35 mph on San Dieguito Drive. At that time, the Transportation and Parking Advisory Committee (TPAC) recommended and City Council subsequently adopted the 25 mph speed limit for San Dieguito Drive. Since the last report, the 85<sup>th</sup> percentile speed has increased from 35 mph to 40 mph on San Dieguito Drive. The disadvantage of leaving the existing 25 mph speed limit is reluctance on the part of the Sheriff's traffic unit to issue citations for speeding as courts will not uphold the tickets since the speed limit does not conform to state law establishing procedures for speed zones. Staff has consulted with the Sheriff's traffic unit and TPAC and both agreed with the prior Council recommendation to leave the posted speed zone on San Dieguito Drive at 25 mph.

FISCAL IMPACT:

None

ENVIRONMENTAL IMPACT:

None

PRIOR CITY COUNCIL REVIEW:

City approved the following resolutions:

- 2005-04: Engineering and Traffic Survey (2005)
- 2000-31: Engineering and Traffic Survey (2000)

2

ATTACHMENTS:

Attachment A – Proposed Resolution 2012-XX

Attachment B – Engineering & Traffic Survey for Speed Zoning (November 2011), RBF  
Consulting

3

ATTACHMENT A

For City Council Report dated June 4, 2012

JUN 04 2012 **ITEM 12**

4

RESOLUTION 2012-XX

A RESOLUTION OF THE CITY COUNCIL OF THE CITY OF DEL MAR, ESTABLISHING VEHICULAR SPEED LIMITS ON PORTIONS OF CAMINO DEL MAR, JIMMY DURANTE BOULEVARD, SAN DIEGUITO DRIVE, VIA DE LA VALLE AND COAST BOULEVARD.

WHEREAS, the City Council of the City of Del Mar sets forth the speed limits on all streets in the City pursuant to Chapter 14.08 of the Del Mar Municipal Code and in accordance with the authority granted to the City by the Vehicle Code; and

WHEREAS, the consulting firm of RBF Consulting has conducted an engineering and traffic survey for speed zoning as defined by the State of California Vehicle Code; and

WHEREAS, RBF Consulting has presented its recommendations to the City Council; and

WHEREAS, the City Council of the City of Del Mar has reviewed the consultant's recommendations, taking into consideration public health and safety issues; and

WHEREAS, it is in the public interest to establish speed limits that are reasonable and safe.

NOW, THEREFORE, BE IT RESOLVED that the City Council of the City of Del Mar DOES hereby establish the following speed limits:

<u>STREET NAME</u>	<u>FROM:</u>	<u>TO:</u>	<u>SPEED LIMIT</u>
Camino del Mar	Via de la Valle	Bridge	40
Camino Del Mar	Bridge	27 <sup>th</sup> Street	35
Camino Del Mar	27 <sup>th</sup> Street	Coast Blvd.	35
Camino Del Mar	Coast Blvd.	15 <sup>th</sup> Street	40
Camino Del Mar	15 <sup>th</sup> Street	9 <sup>th</sup> Street	25
Camino Del Mar	9 <sup>th</sup> Street	4 <sup>th</sup> Street	40
Camino Del Mar	4 <sup>th</sup> Street	Carmel Valley Rd.	40
Coast Blvd.	Camino del Mar	19 <sup>th</sup> Street	25
Coast Blvd.	19 <sup>th</sup> Street	15 <sup>th</sup> Street	25
Jimmy Durante Blvd.	Via de la Valle	Bridge	45
Jimmy Durante Blvd.	Bridge	Camino Del Mar	40
<b>San Dieguito Drive</b>	<b>Jimmy Durante Blvd</b>	<b>East City Limit</b>	<b>25</b>
Via de la Valle	Camino Del Mar	Jimmy Durante Blvd.	45

BE IT FURTHER RESOLVED, that the City Manager is hereby directed to cause to have all appropriate speed limits posted in accordance with this resolution.

5

JUN 04 2012 ITEM 12

BE IT FURTHER RESOLVED, that the City Clerk is directed to certify the approved speed surveys and file them with the Sheriff's Department and Municipal Court noting the exception to speed limit on San Dieguito Drive.

PASSED, APPROVED AND ADOPTED by the City Council of the City of Del Mar at a regular meeting held this 4<sup>th</sup> day of June, 2012.

\_\_\_\_\_  
CARL HILLIARD, Mayor  
City of Del Mar

APPROVED AS TO FORM:

\_\_\_\_\_  
Leslie E. Devaney, City Attorney  
City of Del Mar

ATTEST AND CERTIFICATION:

STATE OF CALIFORNIA  
COUNTY OF SAN DIEGO  
CITY OF DEL MAR

I, MERCEDES MARTIN, City Clerk of the City of Del Mar, California, DO HEREBY CERTIFY that the foregoing is a true and correct copy of Resolution No. 2012-XX, adopted by the City Council of the City of Del Mar, California, at a Regular Meeting held the 4<sup>th</sup> day of June, 2012 by the following vote:

AYES:       XXX,XXX,XXX,XXX  
NOES:       XXX  
ABSENT:     XXX  
ABSTAIN:    XXX

\_\_\_\_\_  
Mercedes Martin, City Clerk  
City of Del Mar

6

ATTACHMENT B

For City Council Report dated June 4, 2012

JUN 04 2012 **ITEM** 12

7



May 30, 2012

JN 55100629.002

Mr. Eric Minicilli, P.E.  
Public Works Director  
**CITY OF DEL MAR**  
2240 Jimmy Durante Boulevard  
Del Mar, CA 92014

**Subject: Engineering and Traffic Survey for Speed Zoning**

Dear Mr. Minicilli:

RBF is pleased to submit the enclosed report, which contains recommendations for posted speed limits on 13 selected street segments within the City of Del Mar. A summary of these recommendations is included in the Executive Summary and in the Appendix of the report.

The report was conducted in accordance with applicable provisions of the California Vehicle Code, following procedures outlined in the California Manual on Uniform Traffic Control Devices (CA MUTCD) 2010. The report is intended to satisfy the requirements of Section 40802(b) and 40802(c) of the California Vehicle Code by reevaluating speeds on local roads every 7 years to enable the use of radar for traffic speed enforcement.

If you should have any questions regarding this analysis, please call me at (760)-603-6246.

Sincerely,

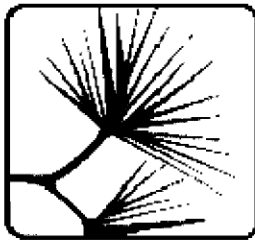
A handwritten signature in black ink, appearing to read 'Dawn Wilson', written in a cursive style.

Dawn Wilson, PE, TE, PTOE  
Senior Associate  
Traffic Engineer  
Transportation Services

H:\PDATA\55100629\TrafficSpeed Survey\Report\Speed Survey Report.docx

JUN 04 2012 **ITEM 12**

A handwritten number '8' in black ink, located in the bottom left corner of the page.



# **Engineering & Traffic Survey for Speed Zoning Report**



Prepared For:  
City of Del Mar  
November 2011



Prepared By:  
**RBF Consulting**  
Contact: Dawn L. Wilson, P.E., T.E., PTOE  
City Traffic Engineer  
(760) 603-6246  
[dwilson@rbf.com](mailto:dwilson@rbf.com)

9

JUN 04 2012 **ITEM** 12

## EXECUTIVE SUMMARY

This Engineering and Traffic Survey was prepared using methodologies contained in the 2010 California Manual on Uniform Traffic Control Devices. The prior report was prepared in 2004 and has been used by the City to enforce speed limit laws since that time. To satisfy the requirements of Section 40802(b) and 40802(c) of the California Vehicle Code, this report must be updated at least every 7 years to enable police officers to use radar for traffic speed enforcement. This study has been prepared for 13 roadway segments on five streets located within the City of Del Mar:

- Camino Del Mar: from Via de la Valle to the San Dieguito Bridge
- Camino Del Mar: from the San Dieguito Bridge to 27<sup>th</sup> Street
- Camino Del Mar: from 27<sup>th</sup> Street to Coast Boulevard
- Camino Del Mar: from Coast Boulevard to 15<sup>th</sup> Street
- Camino Del Mar: from 15<sup>th</sup> Street to 9<sup>th</sup> Street
- Camino Del Mar: from 9<sup>th</sup> Street to 4<sup>th</sup> Street
- Camino Del Mar: from 4<sup>th</sup> Street to Carmel Valley Road
- Coast Boulevard: from Camino del Mar to 19<sup>th</sup> Street
- Coast Boulevard: from 19<sup>th</sup> Street to 15<sup>th</sup> Street
- Jimmy Durante Boulevard: from Via de la Valle to the San Dieguito Bridge
- Jimmy Durante Boulevard: from the San Dieguito Bridge to Camino del Mar
- San Dieguito Drive: from Jimmy Durante Boulevard to Eastern City Limits
- Via de la Valle: from Camino del Mar to Jimmy Durante Boulevard

Table 1 summarizes the findings and recommendations of the Engineering & Traffic Survey. Table 2 presents a comparison of 85<sup>th</sup> percentile speeds from 2004 to 2011. As shown in Table 2, the 85<sup>th</sup> percentile speed along the study segments has declined along 11 of the 13 segments, remained unchanged on one segment and increased by 1 mph on 1 segment.

Recently, Camino del Mar was restriped between 11<sup>th</sup> and 9<sup>th</sup> Street to include on-street parking and a new sidewalk was constructed on the west side of Camino del Mar. These improvements resulted in improved pedestrian access, increased parking activity and wider bicycle lanes. As a result of these improvements, Camino del Mar now has consistent road features from 9<sup>th</sup> to 15<sup>th</sup> street and has resulted in increased pedestrian and parking activity in the southern portion of Camino del Mar. No other significant changes in roadway conditions have occurred over the past 7 years that would affect traffic flow or speed along the remaining study segments. Therefore no changes to the existing speed limits are recommended on 12 of the 13 segments.

For one study segment, the reported traffic speeds have increased over the 2004 reported 85<sup>th</sup> percentile speeds. Jimmy Durante Boulevard from the San Dieguito Bridge to Camino del Mar increased by 1 mph.

In October 2011, the Governor of the State of California signed Assembly Bill 529, which amends Section 21400 of the California Vehicle Code. AB529 states that state or local authority may round

speed limits to within 5 mph of the of the 85<sup>th</sup> percentile speed of free-flowing traffic. The bill indicates that in cases where the 85<sup>th</sup> percentile speed would mean rounding up to the nears 5 mph, the local authority may elect to round down to the nearest 5 mph. If the local authority chooses to round down, to the lower 5 mph increment, then the local authority would be prohibited from further lowering the speed limit for any reason.

As shown in Table 1 below, one of the thirteen segments is outside the 5 mph allowable threshold for setting speed limits. In order to enforce speed limit laws using radar, it is recommended that the speed limit on these segments be increased.

**Table ES-1  
Speed Survey Recommendations**

<b>Roadway</b>	<b>Segment</b>	<b>Posted Speed Limit</b>	<b>85<sup>th</sup> percentile speed (mph)</b>	<b>Recommendations</b>
Camino Del Mar	Via De La Valle to San Dieguito Bridge	40	42	Retain existing speed limit
Camino Del Mar	San Dieguito Bridge to 27th St	35	37	Retain existing speed limit
Camino Del Mar	27th St to Coast Blvd	35	30	Retain existing speed limit
Camino Del Mar	Coast Blvd to 15th St	40	44	Retain existing speed limit
Camino Del Mar	15th St to 9th St	25	28	Retain existing speed limit
Camino Del Mar	9th St to 4th St	40	41	Retain existing speed limit
Camino Del Mar	4th St to Carmel Valley Rd	40	44	Retain existing speed limit
Coast Blvd	Camino Del Mar to 19th St	25	30	Retain existing speed limit
Coast Blvd	19th St to 15th St	25	26	Retain existing speed limit
Jimmy Durante Blvd	Via De La Valle to San Dieguito Bridge	45	47	Retain existing speed limit
Jimmy Durante Blvd	San Dieguito Bridge to Camino Del Mar	40	43	Retain existing speed limit
<b>San Dieguito Dr</b>	<b>Jimmy Durante Blvd to East city limits</b>	<b>25</b>	<b>40</b>	<b>Increase Speed Limit to 40 mph</b>
Via De La Valle	Camino Del Mar to Jimmy Durante Blvd	45	45	Retain existing speed limit

**Table 2**  
**85<sup>th</sup> Percentile Comparisons between 2004 and 2011**

Roadway	Segment	85th percentile speed (mph)		Change (mph)
		2004	2011	
Camino Del Mar	Via De La Valle to San Dieguito Bridge	46	42	-4
Camino Del Mar	San Dieguito Bridge to 27th St	42	37	-5
Camino Del Mar	27th St to Coast Blvd	34	30	-4
Camino Del Mar	Coast Blvd to 15th St	47	44	-3
Camino Del Mar	15th St to 9th St	29	28	-1
Camino Del Mar	9th St to 4th St	48	41	-7
Camino Del Mar	4th St to Carmel Valley Rd	48	44	-4
Coast Blvd	Camino Del Mar to 19th St	31	30	-1
Coast Blvd	19th St to 15th St	29	26	-3
Jimmy Durante Blvd	Via De La Valle to San Dieguito Bridge	51	47	-4
Jimmy Durante Blvd	San Dieguito Bridge to Camino Del Mar	42	43	+1
San Dieguito Dr	Jimmy Durante Blvd to East city limits	40	40	0
Via De La Valle	Camino Del Mar to Jimmy Durante Blvd	49	45	-4

12

## **INTRODUCTION**

This Engineering and Traffic Survey for the City of Del Mar evaluates the existing 85<sup>th</sup> percentile speeds along 13 roadway segments in the City and presents the recommended speed limits. The California Vehicle Code requires state and local agencies to conduct an Engineering and Traffic Survey once every seven years to reevaluate speed limits to ensure that they reflect current field conditions. These surveys provide a determination of speed limits that is rational and defensible in order to maintain public confidence and to be enforceable by law.

## **Methodology**

The method used for conducting this Engineering and Traffic Survey is based on the California Vehicle Code section 40802 and is detailed in the California Manual on Uniform Traffic Control Devices (California Edition, 2010). These studies are used to allow enforcement of existing speed limits using radar detection. Requirements of section 40802 do not apply to school zones, local streets or local roads. Section 40802(b) of the California Vehicle Code defines a local street or road as one that is functionally classified as "local" on the "California Road System Maps", approved by the Federal Highway Administration. If a street or road does not appear on these maps, local streets are defined as those streets primarily providing access to abutting residential property and meeting the following three conditions:

1. Roadway width of not more than 40 feet.
2. Not more than one-half mile of uninterrupted length.
3. Not more than one traffic lane in each direction.

For all other roads, Caltrans mandates that the methodology for Engineering and Speed Surveys conform to California Vehicle Code (CVC), Section 627(b), which states that such surveys should consider all of the following:

- (1) Prevailing speeds as determined by traffic engineering measurements.
- (2) Accident records.
- (3) Highway, traffic, and roadside conditions not readily apparent to the driver.

In addition, Section 627(c), states that "(W)hen conducting an Engineering and Traffic Survey, local authorities, in addition to the factors set forth in paragraphs (1) to (3), inclusive, of subdivision (b) may consider all of the following:

- (1) Residential density, if any of the following conditions exist on the particular portion of highway and the property contiguous thereto, other than a business district:
  - (A) Upon one side of the highway, within a distance of a quarter of a mile, the contiguous property fronting thereon is occupied by 13 or more separate dwelling houses or business structures.
  - (B) Upon both sides of the highway, collectively, within a distance of quarter of a mile, the contiguous property fronting thereon is

occupied by 16 or more separate dwelling houses or business structures.

(C) The portion of highway is longer than one-quarter of a mile but has the ratio of separate dwelling houses or business structures to the length of the highway described in either subparagraph (A) or (B).

(2) Pedestrian and bicyclist safety.”

### **Prevailing Speeds**

Posted speed limits are primarily established to protect the general public from the unreasonable behavior of reckless, unreliable, or otherwise dangerous drivers. Since the majority of drivers comply with the Basic Speed Law (Section 22350 of the CVC), these posted limits provide law enforcement with the means to identify and cite those that violate what is accepted by the majority. The Basic Speed Law states that “No person shall drive a vehicle upon a highway at a speed greater than is reasonable or prudent having due regard for weather, visibility, the traffic on, and the surface and width of, the highway, and in no event at a speed which endangers the safety of persons or property.” The basic fundamentals for establishing speed limits is based on the principle that a reasonable speed limit is one that conforms to the actual behavior of the majority of motorists, and by measuring motorists’ speeds, one should be able to come up with a limit that is both safe and effective. As with most laws, legality should depend on this voluntary compliance of the greater majority of motorists. Speed limits established on these fundamentals conform to the consensus of those who drive the roads rather than depending on the judgment of one or a few individuals. A radar speed survey is usually used to determine the prevailing speed of reasonable drivers.

### **Accident Records**

It is generally accepted that speed limits cannot be successfully enforced without voluntary compliance by a majority of drivers. Consequently, only the driver whose behavior is clearly out of line with the normal flow of traffic is usually considered a violator for enforcement purposes. As a result, careful consideration must be taken in establishing a speed limit considerably lower than what is observed as a majority since this may make violators of a disproportionately large number of reasonable drivers. Studies have also shown that a speed limit that is too low generally results in an increase in collision rates. Careful consideration of accident records to determine speeding related incidents was conducted to assess existing speed limits.

### **Roadway Conditions Not Apparent to the Driver**

Speed limits are also established to advise those on the road of conditions which may not be readily apparent to a reasonable driver. RBF conducted data analysis and field assessment of the existing conditions to provide sufficient documentation to ensure that all conditions not readily apparent to drivers are acknowledged in this report. Accident history, roadway geometry, traffic and road conditions, and land use were analyzed in determining speed limits.

14

In adopting Section 22358.5 of the California Vehicle Code, the Legislature aims to prevent special downward speed zoning due to any physical conditions such as width, curvature, grade and surface conditions, or any other condition that is readily apparent to a driver, in the absence of other factors.

#### **Establishing Recommended Speed Limits**

California State Assembly Bill 529, approved by the Governor on October 7, 2011, states that speed limits shall be rounded to the nearest 5 mph of the 85<sup>th</sup> percentile speed. If upward rounding of traffic speeds is required, the City may chose to round down to the nearest 5 mph. When the City chooses to round down to the nearest 5 mph, the City will then be prohibited from any further reduction in speed for any reason.

#### **STUDY AREA**

Based on the criteria established in the California Vehicle Code, 13 segments were included in the Engineering and Traffic Survey for the City of Del Mar, as summarized in Table 1. As shown in Table 1, most segments exceed the 0.25 mile segment length. The segment of Camino Del Mar from 27<sup>th</sup> to Coast Boulevard is less than 0.25 miles. However, this segment is a transitional segment and represents a change in land use compared to the adjacent segment. Therefore, the speed limits for these segments were considered independent of the adjacent segments.

#### **85<sup>TH</sup> PERCENTILE SPEED MEASUREMENTS**

Radar and machine speed measurements were conducted during September 2011 to obtain data regarding the prevailing speed of vehicles in the study area. Additional data was also obtained regarding recent traffic collisions, roadway geometry and characteristics, and traffic conditions within the community. All of these results are presented on the Engineering and Traffic Survey forms in Appendix A.

The following describes the data collection process used to measure vehicle speeds with electronic radar on selected streets within the City of Del Mar. Fourteen roadway segments were surveyed. Traffic in both directions was recorded during the survey period. To ensure capture of free flow speed, the specific location of measurement for each segment was selected after considering the following:

1. Minimal stop sign and traffic signal influence.
2. Little to no visibility restrictions.
3. Uncongested traffic flow.
4. Avoid influence from curves or other roadway conditions that would affect the normal operation of a vehicle.

15

16

**Table 1**  
**Study Roadway Segments**

Segment	Limits	Segment Length (miles)	Description	Posted Speed Limit (mph)	Bicycle Lanes?	Accident Rate	85 <sup>th</sup> Percentile Speed
Camino Del Mar:	from Via de la Valle to San Dieguito Bridge	0.38	4 lanes transitions to 2 lanes with median	40	Yes	0.26	42
Camino Del Mar:	from San Dieguito Bridge to 27 <sup>th</sup> Street	0.25	2 lanes with median and left turn pockets	35	Yes	1.60	37
Camino Del Mar:	from 27 <sup>th</sup> Street to Coast Boulevard	0.21	2 lanes with median and left turn pockets	35	Yes	0.48	30
Camino Del Mar:	from Coast Boulevard to 15 <sup>th</sup> Street	0.61	2 lanes with median and left turn pockets transition to 4 lanes at Jimmy Durante	40	Yes	0.00	44
Camino Del Mar:	from 15 <sup>th</sup> Street to 9 <sup>th</sup> Street	0.45	4 lanes with median, on-street parking	25	Yes	1.04	28
Camino Del Mar:	from 9 <sup>th</sup> Street to 4 <sup>th</sup> Street	0.38	4 lanes with median	40	Yes	0.00	41
Camino Del Mar:	from 4 <sup>th</sup> Street to Carnel Valley Road	0.55	2 lanes northbound, 1 lane southbound	40	Yes	0.	44
Coast Boulevard:	from Camino del Mar to 19 <sup>th</sup> Street	0.23	2 lanes undivided with on-street parking	25	Yes	3.39	30
Coast Boulevard:	from 19 <sup>th</sup> Street to 15 <sup>th</sup> Street	0.39	2 lanes undivided with on-street parking	25	Yes	0.00	26
Jimmy Durante Blvd:	from Via de la Valle to San Dieguito Bridge	0.86	4 lanes with striped median	45	Yes	0.55	47
Jimmy Durante Blvd:	from San Dieguito Bridge to Camino del Mar	0.51	2 lanes with median and left turn pockets	40	Yes	0.00	43
San Dieguito Drive:	from Jimmy Durante to Eastern City Limits	>1.0	2 lanes undivided	25	No	0.00	40
Via de la Valle:	from Camino del Mar to Jimmy Durante Blvd	0.72	2 to 4 lanes with striped median and intermittent on-street parking	45	Yes	1.40	45

On each segment, speeds were measured for a minimum of 100 vehicles in each direction or for one hour. The surveys were conducted in good weather conditions during off-peak periods. Speeds were read directly from an electronic handheld radar unit in an unmarked vehicle on all 13 of the segments.

### **ACCIDENT HISTORY**

Accident history was obtained from the City for the period of July 2009-July 2011. In addition, the City provided ADT volumes collected in 2011 for 13 of the segments, and 2009 ADT volumes for Jimmy Durante Blvd. Using this data, accident rates on the 13 segments were calculated and are expressed in accidents per million vehicle miles (mvm).

### **PROCEDURES**

An Engineering and Traffic Survey form was prepared for each of the 13 segments studied. Significant values reported in the Engineering and Traffic Survey forms are summarized below:

- **The critical speed, or 85<sup>th</sup> percentile speed,** is the speed at or below which 85 percent of the traffic is moving. This speed is the primary guide in determining the voluntary compliance of the greater majority of drivers. Speed limits set higher than the critical speed are not considered reasonable and safe. Speed limits set a great deal lower than the critical speed would not elicit respect from the public.
- **The 10 mph pace is the 10 mph range of speed which contains the most vehicles.** It is a measure of the dispersion of speeds within the samples surveyed. The accepted practice is to keep the speed limit within the 10 mph pace after considering the critical speed and any factors requiring a speed lower than the critical speed.
- **Collision data.** The collision reports for each street segment were compared to accident rates that can be reasonably expected to occur on streets and highways, considering the volume of traffic accommodated. These anticipated accident rates have been developed by the State of California and are considered reasonable for use in the City of Del Mar. This collision analysis helps to identify unusual conditions which are not readily apparent to drivers and can help justify speed limits somewhat below the 85<sup>th</sup> percentile speed.

The Engineering and Speed Survey forms and photographs of each segment surveyed are provided in Appendix A. Associated data collected for the project and the applicable sections of the MUTCD, and California Vehicle Code are provided in Appendices B through F.

17

**SUMMARY AND CONCLUSION**

Based on the data collected and evaluated in this report, most speed limits within the City are recommended to remain unchanged. Recommended speed limits are summarized in Table 2. As shown, the speed on San Dieguito Drive was measured at 40 mph. The existing posted speed limit is 25 mph. Although this is a residential road, San Dieguito Drive is not currently included on the California Road System (CRS) map. The segment is greater than one mile in length, thereby excluding this road from local prima facie speed limits. Therefore, it is recommended that the posted speed limit be increased to 40 mph to conform with the 85<sup>th</sup> percentile speed for this segment.

**Table 2  
Speed Survey Recommendations**

Roadway	Segment	Posted Speed Limit	85 <sup>th</sup> percentile speed (mph)	Recommendations
Camino Del Mar	Via De La Valle to San Dieguito Bridge	40	42	Retain existing speed limit
Camino Del Mar	San Dieguito Bridge to 27th St	35	37	Retain existing speed limit
Camino Del Mar	27th St to Coast Blvd	35	30	Retain existing speed limit
Camino Del Mar	Coast Blvd to 15th St	40	44	Retain existing speed limit
Camino Del Mar	15th St to 9th St	25	28	Retain existing speed limit
Camino Del Mar	9th St to 4th St	40	41	Retain existing speed limit
Camino Del Mar	4th St to Carmel Valley Rd	40	44	Retain existing speed limit
Coast Blvd	Camino Del Mar to 19th St	25	30	Retain existing speed limit
Coast Blvd	19th St to 15th St	25	26	Retain existing speed limit
Jimmy Durante Blvd	Via De La Valle to San Dieguito Bridge	45	47	Retain existing speed limit
Jimmy Durante Blvd	San Dieguito Bridge to Camino Del Mar	40	43	Retain existing speed limit
<b>San Dieguito Dr</b>	<b>Jimmy Durante Blvd to East city limits</b>	25	40	<b>Increase Speed Limit to 40 mph</b>
Via De La Valle	Camino Del Mar to Jimmy Durante Blvd	45	45	Retain existing speed limit

18

**Appendix A**  
**Engineering and Traffic Survey Forms**

19

**ENGINEERING AND TRAFFIC SURVEY (CVC SEC. 627)**

City of Del Mar

Street: Camino Del Mar between Via de la Valle and San Dieguito Bridge

Year of Survey	2004	2011
----------------	------	------

**PART I: PREVAILING SPEED MEASUREMENT**

Location of Survey		North of Bridge		North of Bridge	
Date of Survey		10-13-04		08-16-11	
50 %ile	85 %ile	41 mph	46 mph	38 mph	42 mph
10 mph pace (% of vehicle)		37 - 46 mph (82%)		34 - 43 mph (85%)	
Posted Speed Limit		40 mph		40 mph	

**PART II: ACCIDENT RECORDS**

Time Period Covered		August 2002 to July 2004	July 2009 to June 2011
Number of Accidents	Intersection	3	1
	Mid-Block	3	1
Mid-Block Accident Rate per Million Vehicle Miles		0.49	0.26
Expected Mid-Block Accident Rate		2.19	

**PART III: HIGHWAY, TRAFFIC, AND ROADSIDE CHARACTERISTICS NOT READILY APPARENT**

Date Observations Made	09-17-04	09-26-11
HIGHWAY: Geometric, access (driveways, intersections, other).	<ul style="list-style-type: none"> <li>- Two lanes in each direction, changes to one lane 300 feet n/o bridge</li> <li>- Asphalt curb, no gutter, no sidewalk on both sides, except on eastside just south of Via de la Valle</li> <li>- Bike lane both directions</li> <li>- Traffic signal at Via de la Valle</li> </ul>	UNCHANGED
TRAFFIC: Pedestrians, parking turnover, school crossings.	<ul style="list-style-type: none"> <li>- No perking 10PM - 4PM</li> <li>- Pay parking on westside</li> <li>- NPAT on eastside</li> </ul>	UNCHANGED
ROADSIDE: Land uses not apparent (park, school, etc.) other conditions.	<ul style="list-style-type: none"> <li>- Undeveloped/beach access</li> </ul>	UNCHANGED

**PART IV: ADDITIONAL REMARKS**

The 85th percentile speed is within the allowable range for this section of Camino Del Mar.		
<b>RECOMMENDATION</b>	<b>Retain 40 mph speed limit</b>	<b>Retain 40 mph speed limit</b>

The 85th percentile speed is within the allowable range of the posted speed limit (AB 529).

20

**SEGMENT 1: Camino Del Mar from Via De La Valle to San Dieguito Bridge**



Photo location: Southbound at north of Bridge

21

**ENGINEERING AND TRAFFIC SURVEY (CVC SEC. 627)**

City of Del Mar

Street: Camino Del Mar between San Dieguito Bridge and 27th Street

Year of Survey	2004	2011
----------------	------	------

**PART I: PREVAILING SPEED MEASUREMENT**

Location of Survey		Between 29th Street and Sandy Lane		Between 29th Street and Sandy Lane	
Date of Survey		10-26-04		08-16-11	
50 %ile	85 %ile	37 mph	42 mph	33 mph	37 mph
10 mph pace (% of vehicle)		31 - 40 mph (73%)		30 - 39 mph (88%)	
Posted Speed Limit		35 mph		35 mph	

**PART II: ACCIDENT RECORDS**

Time Period Covered		August 2002 to July 2004	July 2009 to June 2011
Number of Accidents	Intersection	2	1
	Mid-Block	2	4
Mid-Block Accident Rate per Million Vehicle Miles		0.27	1.60
Expected Mid-Block Accident Rate		1.96	

**PART III: HIGHWAY, TRAFFIC, AND ROADSIDE CHARACTERISTICS NOT READILY APPARENT**

Date Observations Made	09-17-04	09-26-11
HIGHWAY: Geometric, access (driveways, intersections, other).	- One lane in each direction - Bike lanes on both sides - Center medians with turn pockets - R-1 at 27th St - Rolled curb and gutter on eastside - Sporadic curb, no gutter or sidewalk on westside	UNCHANGED
TRAFFIC: Pedestrians, parking turnover, school crossings.	- Significant pedestrian and bicycle traffic - Parallel parking on street	UNCHANGED
ROADSIDE: Land uses not apparent (park, school, etc.) other conditions.	- Single and multi-family residential frontage	UNCHANGED

**PART IV: ADDITIONAL REMARKS**

The 85th percentile speed is within the allowable range of the posted speed limit (AB 529).		
<b>RECOMMENDATION</b>	<b>Retain 35 mph speed limit</b>	<b>Retain 35 mph speed limit</b>

22

JUN 04 2012 ITEM 12

SEGMENT 2: Camino Del Mar from San Dieguito Bridge to 27th St



Photo Location: Northbound at 28th Street

**ENGINEERING AND TRAFFIC SURVEY (CVC SEC. 627)**

City of Del Mar

Street: Camino Del Mar between 27th Street and Coast Boulevard

Year of Survey	2004	2011
----------------	------	------

**PART I: PREVAILING SPEED MEASUREMENT**

Location of Survey		North of 25th Street		North of 25th Street	
Date of Survey		10-26-04		08-16-11	
50 %ile	85 %ile	30 mph	34 mph	27 mph	30 mph
10 mph pace (% of vehicle)		25 - 34 mph (83%)		22 - 31 mph (88%)	
Posted Speed Limit		35 mph		35 mph	

**PART II: ACCIDENT RECORDS**

Time Period Covered		August 2002 to July 2004	July 2009 to June 2011
Number of Accidents	Intersection	1	0
	Mid-Block	2	1
Mid-Block Accident Rate per Million Vehicle Miles		0.43	0.48
Expected Mid-Block Accident Rate		1.96	

**PART III: HIGHWAY, TRAFFIC, AND ROADSIDE CHARACTERISTICS NOT READILY APPARENT**

Date Observations Made	09-17-04	09-26-11
HIGHWAY: Geometric, access (driveways, intersections, other).	- One lane in each direction - Bike lanes on both sides - Center medians with left turn pockets  - R-1 at Coast Blvd - Sporadic sidewalks, curbs and gutters on both sides	UNCHANGED
TRAFFIC: Pedestrians, parking turnover, school crossings.	- Parallel on-street parking	UNCHANGED
ROADSIDE: Land uses not apparent (park, school, etc.) other conditions.	- Single and multi-unit frontage	UNCHANGED

**PART IV: ADDITIONAL REMARKS**

The 85th percentile speed is within the allowable range of the posted speed limit (AB 529).		
RECOMMENDATION	Retain 35 mph speed limit	Retain 35 mph speed limit

24

**SEGMENT 3: Camino Del Mar from 27th St to Coast Blvd**



Photo location: Southbound at 25th Street

25

**ENGINEERING AND TRAFFIC SURVEY (CVC SEC. 627)**

City of Del Mar

Street: Camino Del Mar between Coast Boulevard and 15th Street

Year of Survey	2004	2011
----------------	------	------

**PART I: PREVAILING SPEED MEASUREMENT**

Location of Survey		South of Jimmy Durante Blvd		South of Jimmy Durante Blvd	
Date of Survey		10-13-04		08-16-11	
50 %ile	85 %ile	43 mph	47 mph	41 mph	44 mph
10 mph pace (% of vehicle)		38 - 47 mph (75%)		36 - 45 mph (82%)	
Posted Speed Limit		40 mph		40 mph	

**PART II: ACCIDENT RECORDS**

Time Period Covered		August 2002 to July 2004	July 2009 to June 2011
Number of Accidents	Intersection	2	0
	Mid-Block	7	
Mid-Block Accident Rate per Million Vehicle Miles		0.54	0.00
Expected Mid-Block Accident Rate		2.19	

**PART III: HIGHWAY, TRAFFIC, AND ROADSIDE CHARACTERISTICS NOT READILY APPARENT**

Date Observations Made	09-17-04	09-26-11
HIGHWAY: Geometric, access (driveways, intersections, other).	<ul style="list-style-type: none"> <li>- One lane in each direction, transitions to 2 lanes south of Jimmy Durante Boulevard</li> <li>- Unusual geometrics at Jimmy Durante Blvd</li> <li>- Bike lanes on both sides</li> <li>- Center medians with left turn pockets</li> <li>- Traffic signals at 15th St and Plaza</li> <li>- R-1 at Coast Blvd</li> <li>- Sporadic curb, gutter, sidewalk on the both sides</li> </ul>	UNCHANGED
TRAFFIC: Pedestrians, parking turnover, school crossings.	<ul style="list-style-type: none"> <li>- Two hour parallel parking on eastside between 15th St and Plaza</li> <li>- NPAT westside and eastside north of plaza traffic signal</li> </ul>	UNCHANGED
ROADSIDE: Land uses not apparent (park, school, etc.) other conditions.	<ul style="list-style-type: none"> <li>- Non-fronting residential north of Plaza traffic signal</li> <li>- Commercial frontage south of Plaza traffic signal</li> </ul>	UNCHANGED

**PART IV: ADDITIONAL REMARKS**

Based on the unusual geometrics at Jimmy Durante Blvd and the significant amount of bicycle traffic, which is required to cross travel lanes when continuing north on Camino Del Mar at this intersection, a 5 mph reduction from the 85th percentile speed is appropriate.		
<b>RECOMMENDATION</b>	Retain 40 mph speed limit	Retain 40 mph speed limit

26

JUNO 4 2012 ITEM 12

SEGMENT 4: Camino del Mar from Coast Blvd to 15th St



Photo location: Northbound at south of Jimmy Durante Blvd

**ENGINEERING AND TRAFFIC SURVEY (CVC SEC. 627)**

City of Del Mar

Street: Camino Del Mar between 15th Street and 9th Street

Year of Survey	2004	2011
----------------	------	------

**PART I: PREVAILING SPEED MEASUREMENT**

Location of Survey		Between 12th Street and 13th Street		Between 13th and 14th Street	
Date of Survey		10-13-04		08-16-11	
50 %ile	85 %ile	27 mph	29 mph	25 mph	28 mph
10 mph pace (% of vehicle)		21 - 30 mph (91%)		20 - 29 mph (86%)	
Posted Speed Limit		25 mph		25 mph	

**PART II: ACCIDENT RECORDS**

Time Period Covered		August 2002 to July 2004	July 2009 to June 2011
Number of Accidents	Intersection	7	1
	Mid-Block	6	2
Mid-Block Accident Rate per Million Vehicle Miles		0.83	1.04
Expected Mid-Block Accident Rate		2.19	

**PART III: HIGHWAY, TRAFFIC, AND ROADSIDE CHARACTERISTICS NOT READILY APPARENT**

Date Observations Made	09-17-04	05-30-12
HIGHWAY: Geometric, access (driveways, intersections, other).	- Two lanes in each direction - Bike lanes on both sides - Center medians - R-1 at 11th St - Traffic signal at 9th St - Sidewalk, curb and gutter on both sides	UNCHANGED
TRAFFIC: Pedestrians, parking turnover, school crossings.	- In pavement lighted pedestrian - Time limit parallel parking - Off street parallel/angle parking both sides	- Sidewalk constructed between 9th and 11th on the west side of Camino del Mar, new on-street parking added south of 11th
ROADSIDE: Land uses not apparent (park, school, etc.) other conditions.	- Business district	UNCHANGED

**PART IV: ADDITIONAL REMARKS**

The 85th percentile speed is within the allowable range of the posted speed limit (AB 529). This segment is in the downtown commercial area with high pedestrian and bicycle activity.		
RECOMMENDATION	Retain 25 mph speed limit	Retain 25 mph speed limit

28

JUNO 4 2012 ITEM 12

SEGMENT 5A: Camino Del Mar from 15th St to 9th St



Photo location: Northbound at 12th Street

29

JUN 04 2012 ITEM 12

**ENGINEERING AND TRAFFIC SURVEY (CVC SEC. 627)**

City of Del Mar

Street: Camino Del Mar between 9th Street and 4th Street

Year of Survey	2004	2011
----------------	------	------

**PART I: PREVAILING SPEED MEASUREMENT**

Location of Survey		South of 8th Street		South of 8th Street	
Date of Survey		10-13-04		08-16-11	
50 %ile	85 %ile	41 mph	48 mph	38 mph	41 mph
10 mph pace (% of vehicle)		36 - 45 mph (69%)		33 - 42 mph (86%)	
Posted Speed Limit		40 mph		40 mph	

**PART II: ACCIDENT RECORDS**

Time Period Covered		August 2002 to July 2004	July 2009 to June 2011
Number of Accidents	Intersection	2	4
	Mid-Block	4	0
Mid-Block Accident Rate per Million Vehicle Miles		0.59	0.00
Expected Mid-Block Accident Rate		2.19	

**PART III: HIGHWAY, TRAFFIC, AND ROADSIDE CHARACTERISTICS NOT READILY APPARENT**

Date Observations Made	09-17-04	09-26-11
HIGHWAY: Geometric, access (driveways, intersections, other).	- Two lanes in each direction - Bike lanes on both sides - Center medians with turn pockets - Traffic signals at 9th St and 4th St - AC curb, no sidewalk on westside - Curb, gutter, no sidewalk on eastside - Curb, gutter and sidewalk between 8th St and 9th St	UNCHANGED
TRAFFIC: Pedestrians, parking turnover, school crossings.	- NPAT, both sides	UNCHANGED
ROADSIDE: Land uses not apparent (park, school, etc.) other conditions.	- Elementary school in area - Commercial frontage on eastside near 9th St - Lodging and non-fronting residential	UNCHANGED

**PART IV: ADDITIONAL REMARKS**

The 85th percentile speed is within the allowable range of the posted speed limit.		
<b>RECOMMENDATION</b>	Retain 40 mph speed limit	Retain 40 mph speed limit

30

JUN 04 2012 ITEM 12

SEGMENT 6: Camino Del Mar from 9th St to 4th St



Photo location: Southbound at south of 8th Street

31

JUN 4 2012 ITEM 12

**ENGINEERING AND TRAFFIC SURVEY (CVC SEC. 627)**

City of Del Mar

Street: Camino Del Mar between 4th Street and Carmel Valley Road

Year of Survey	2004	2011
----------------	------	------

**PART I: PREVAILING SPEED MEASUREMENT**

Location of Survey		North of Carmel Valley Road		North of Carmel Valley Road	
Date of Survey		10-13-04		08-16-11	
50 %ile	85 %ile	41 mph	48 mph	40 mph	44 mph
10 mph pace (% of vehicle)		37 - 46 mph (75%)		35 - 44 mph (75%)	
Posted Speed Limit		40 mph		40 mph	

**PART II: ACCIDENT RECORDS**

Time Period Covered		August 2002 to July 2004	July 2009 to June 2011
Number of Accidents	Intersection	3	0
	Mid-Block	0	0
Mid-Block Accident Rate per Million Vehicle Miles		0.27	0.00
Expected Mid-Block Accident Rate		2.19	

**PART III: HIGHWAY, TRAFFIC, AND ROADSIDE CHARACTERISTICS NOT READILY APPARENT**

Date Observations Made		09-17-04	09-26-11
HIGHWAY: Geometric, access (driveways, intersections, other).		<ul style="list-style-type: none"> <li>- Two lanes northbound</li> <li>- Two lanes transition to one lane south of 4th St, southbound</li> <li>- Bike lanes on both sides</li> <li>- Center medians</li> <li>- Traffic signal at Carmel Valley Rd</li> <li>- AC curb on both sides</li> </ul>	UNCHANGED
TRAFFIC: Pedestrians, parking turnover, school crossings.		<ul style="list-style-type: none"> <li>- NPAT on the eastside</li> <li>- NPAT on westside, except north of Carmel Valley Rd - pay parking</li> </ul>	UNCHANGED
ROADSIDE: Land uses not apparent (park, school, etc.) other conditions.		<ul style="list-style-type: none"> <li>- Single and multi-family non-fronting residential on both sides</li> </ul>	UNCHANGED

**PART IV: ADDITIONAL REMARKS**

Due to the significant bicycle traffic, lack of sidewalk and beach parking adjacent to the roadway, an additional 5 mph reduction from the 85th percentile speed is appropriate. (AB 529)		
<b>RECOMMENDATION</b>	Retain 40 mph speed limit	Retain 40 mph speed limit

32

JUN 04 2012 ITEM 12

SEGMENT 7: Camino Del Mar from 4th St to Carmel Valley Rd



Photo location: Southbound at north of Carmel Valley Road

33

**ENGINEERING AND TRAFFIC SURVEY (CVC SEC. 627)**

City of Del Mar

Street: Coast Boulevard between Camino Del Mar and 19th Street

Year of Survey	2004	2011
----------------	------	------

**PART I: PREVAILING SPEED MEASUREMENT**

Location of Survey	South of 20th Street	North of 20th Street
Date of Survey	10-26-04	08-16-11
50 %ile	27 mph	27 mph
85 %ile	31 mph	30 mph
10 mph pace (% of vehicle)	23 - 32 mph (83%)	22 - 31 mph (84%)
Posted Speed Limit	25 mph	25 mph

**PART II: ACCIDENT RECORDS**

Time Period Covered	August 2002 to July 2004	July 2009 to June 2011
Number of Accidents	Intersection	0
	Mid-Block	2
Mid-Block Accident Rate per Million Vehicle Miles	0.18	3.39
Expected Mid-Block Accident Rate	1.96	

**PART III: HIGHWAY, TRAFFIC, AND ROADSIDE CHARACTERISTICS NOT READILY APPARENT**

Date Observations Made	09-17-04	09-26-11
HIGHWAY: Geometric, access (driveways, intersections, other).	- One lane in each direction - Bike lanes on both sides - Parking on both sides - R-1 at 20th St and 19th St - Sidewalk, curb and gutter on both sides	UNCHANGED
TRAFFIC: Pedestrians, parking turnover, school crossings.	- Heavy on street parking - Numerous driveways	UNCHANGED
ROADSIDE: Land uses not apparent (park, school, etc.) other conditions.	- Fronting and non-fronting residential on both sides - Slight vertical grade	UNCHANGED

**PART IV: ADDITIONAL REMARKS**

<p>The two measured segments on Coast Boulevard are each less than the 0.5 mile threshold for speed zone segments. A 5 mph reduction to the 85th percentile speed is appropriate for this segment to conform with the existing residential uses along the corridor. The substantial parking movements, heavy pedestrian traffic and numerous driveways in this segment also supports this reduction. Parking limits visibility and line of sight and therefore affects stopping sight distance. Driveways and pedestrians are blocked by parked vehicles. Maintaining lower speeds will reduce the stopping sight distance for vehicles based on the surrounding conditions.</p>		
RECOMMENDATION	Retain 25 mph speed limit	Retain 25 mph speed limit

34

JUNO 4 2012 ITEM 12

SEGMENT 8: Coast Blvd from Camino Del Mar to 19th St



Photo location: Northbound at south of 20th Street

35

JUN 04 2012 ITEM 12

**ENGINEERING AND TRAFFIC SURVEY (CVC SEC. 627)**

City of Del Mar

Street: Coast Boulevard between 19th Street and 15th Street

Year of Survey	2004	2011
----------------	------	------

**PART I: PREVAILING SPEED MEASUREMENT**

Location of Survey		Between 18th Street & RR tracks		Between 18th Street & RR tracks	
Date of Survey		10-26-04		08-16-11	
50 %ile	85 %ile	24 mph	29 mph	21 mph	26 mph
10 mph pace (% of vehicle)		18 - 27 mph (69%)		17 - 26 mph (86%)	
Posted Speed Limit		25 mph		25 mph	

**PART II: ACCIDENT RECORDS**

Time Period Covered		August 2002 to July 2004	July 2009 to June 2011
Number of Accidents	Intersection	2	1
	Mid-Block	2	0
Mid-Block Accident Rate per Million Vehicle Miles		1.5	0.00
Expected Mid-Block Accident Rate		1.96	

**PART III: HIGHWAY, TRAFFIC, AND ROADSIDE CHARACTERISTICS NOT READILY APPARENT**

Date Observations Made	09-17-04	09-26-11
HIGHWAY: Geometric, access (driveways, intersections, other).	<ul style="list-style-type: none"> <li>- One lane in each direction</li> <li>- Bike lanes on both sides</li> <li>- Parking on both sides</li> <li>- Railroad crossing north of 15th St.</li> <li>- R-1 at 15th St. &amp; 19th St.</li> <li>- Sidewalk, curb, and gutter on both sides</li> </ul>	UNCHANGED
TRAFFIC: Pedestrians, parking turnover, school crossings.	<ul style="list-style-type: none"> <li>- Variable parking both sides, including meters; dense parking</li> <li>- Numerous driveways</li> </ul>	UNCHANGED
ROADSIDE: Land uses not apparent (park, school, etc.) other conditions.	<ul style="list-style-type: none"> <li>- Slight vertical grade</li> <li>- Fronting residential, commercial, lodging, parking lot and open space</li> </ul>	UNCHANGED

**PART IV: ADDITIONAL REMARKS**

The 85th percentile speed is within the allowable range of the posted speed limit.		
<b>RECOMMENDATION</b>	<b>Retain 25 mph speed limit</b>	<b>Retain 25 mph speed limit</b>

36

JUN 04 2012 ITEM 12

SEGMENT 9: Coast Blvd from 19th St to 15th St



Photo location: Northbound at north of train tracks

END SELECTION HERE FOR PRINTING

37

JUN 04 2012 ITEM 12

**ENGINEERING AND TRAFFIC SURVEY (CVC SEC. 627)**

City of Del Mar

Street: Jimmy Durante Boulevard between Via De La Valle and Bridge

Year of Survey	2004	2011
----------------	------	------

**PART I: PREVAILING SPEED MEASUREMENT**

Location of Survey		South of Via De La Valle		South of Via De La Valle	
Date of Survey		10-13-04		08-16-11	
50 %ile	85 %ile	47 mph	51 mph	43 mph	47 mph
10 mph pace (% of vehicle)		42 - 51 mph (70%)		39 - 48 mph (80%)	
Posted Speed Limit		45 mph		45 mph	

**PART II: ACCIDENT RECORDS**

Time Period Covered		August 2002 to July 2004	July 2009 to June 2011
Number of Accidents	Intersection	9	3
	Mid-Block	7	3
Mid-Block Accident Rate per Million Vehicle Miles		0.81	0.55
Expected Mid-Block Accident Rate		3.31	

**PART III: HIGHWAY, TRAFFIC, AND ROADSIDE CHARACTERISTICS NOT READILY APPARENT**

Date Observations Made	09-17-04	09-26-11
HIGHWAY: Geometric, access (driveways, intersections, other).	-Two lanes in each direction, transitions to one lane at bridge -Bike lanes in both directions -Two way left turn lane -Traffic signal at Via De La Valle -Curb, gutter, and walk path on both sides -Sidewalk on Westside north of fair entrance	UNCHANGED
TRAFFIC: Pedestrians, parking turnover, school crossings.	-Pedestrian crossing at north end of bridge -Parking prohibitions from Via De La Valle to bridge – both sides	UNCHANGED
ROADSIDE: Land uses not apparent (park, school, etc.) other conditions.	-Del Mar Race Track access -Commercial district, lodging and open terrain -Horizontal curve, posted with a 35 mph advisory speed	UNCHANGED

**PART IV: ADDITIONAL REMARKS**

The 85th percentile speed is within the allowable range of the posted speed limit. (AB 529)		
<b>RECOMMENDATION</b>	<b>Retain 45 mph speed limit</b>	<b>Retain 45 mph speed limit</b>

38

SEGMENT 10: Jimmy Durante Blvd from Via de la Valle to Bridge



Photo location: Northbound at mid-block

39

JUN 04 2012 **ITEM** 12

**ENGINEERING AND TRAFFIC SURVEY (CVC SEC. 627)**

City of Del Mar

Street: Jimmy Durante Boulevard between Bridge and Camino Del Mar

Year of Survey	2004	2011
----------------	------	------

**PART I: PREVAILING SPEED MEASUREMENT**

Location of Survey		South of Bridge		South of Bridge	
Date of Survey		10-13-04		08-16-11	
50 %ile	85 %ile	n/b - 38 mph s/b - 36 mph	n/b - 43 mph s/b - 41 mph	n/b - 37 mph s/b - 39 mph	n/b - 42 mph s/b - 44 mph
10 mph pace (% of vehicle)		n/b: 34 - 43 mph (73%) s/b: 33 - 42 mph (84%)		n/b: 33 - 42 mph (88%) s/b: 34 - 43 mph (74%)	
Posted Speed Limit		40 mph		40 mph	

**PART II: ACCIDENT RECORDS**

Time Period Covered		August 2002 to July 2004	July 2009 to June 2011
Number of Accidents	Intersection	4	0
	Mid-Block	3	0
Mid-Block Accident Rate per Million Vehicle Miles		0.21	0.00
Expected Mid-Block Accident Rate		1.96	

**PART III: HIGHWAY, TRAFFIC, AND ROADSIDE CHARACTERISTICS NOT READILY APPARENT**

Date Observations Made	09-17-04	09-26-11
HIGHWAY: Geometric, access (driveways, intersections, other).	-One lane in each direction -Bike lanes on both sides -Median island with turn pockets -Curb and gutter on both sides -No sidewalks	UNCHANGED
TRAFFIC: Pedestrians, parking turnover, school crossings.	-Parking prohibitions on both sides -Railroad tracks	UNCHANGED
ROADSIDE: Land uses not apparent (park, school, etc.) other conditions.	-Non-fronting residential, undeveloped, commercial fronting development	UNCHANGED

**PART IV: ADDITIONAL REMARKS**

Based on the 85th percentile speed, the free flow speeds have only increased in the southbound direction and have decreased in the northbound direction. There have been no significant changes in land use or development along this segment. It is recommended that the speed limit be maintained on account of the heavy bicycle traffic and lack of sidewalk along portions of this segment.		
RECOMMENDATION	Retain 40 mph speed limit	Retain 40 mph speed limit

40

JUNO 4 2012 ITEM 12

SEGMENT 11: Jimmy Durante Blvd from Bridge to Camino Del Mar



Photo location: Northbound at south of Bridge

41

**ENGINEERING AND TRAFFIC SURVEY (CVC SEC. 627)**

City of Del Mar

Street: San Dieguito Drive between Jimmy Durante Boulevard and East City Limits

Year of Survey	2004	2011
----------------	------	------

**PART I: PREVAILING SPEED MEASUREMENT**

Location of Survey		Mid-block		Mid-block	
Date of Survey		10-26-04		08-16-11	
50 %ile	85 %ile	34 mph	40 mph	34 mph	40 mph
10 mph pace (% of vehicle)		31 - 40 mph (58%)		28 - 37 mph (64%)	
Posted Speed Limit		25 mph		25 mph	

**PART II: ACCIDENT RECORDS**

Time Period Covered		August 2002 to July 2004	July 2009 to June 2011
Number of Accidents	Intersection	0	0
	Mid-Block	0	0
Mid-Block Accident Rate per Million Vehicle Miles		0.00	0.00
Expected Mid-Block Accident Rate		1.96	

**PART III: HIGHWAY, TRAFFIC, AND ROADSIDE CHARACTERISTICS NOT READILY APPARENT**

Date Observations Made	09-17-04	09-26-11
HIGHWAY: Geometric, access (driveways, intersections, other).	- One lane in each direction	UNCHANGED
TRAFFIC: Pedestrians, parking turnover, school crossings.	-NPAT on both sides -Variable AC curb -No sidewalks or gutters Double yellow centerline	UNCHANGED
ROADSIDE: Land uses not apparent (park, school, etc.) other conditions.	-Undeveloped frontage except at Jimmy Durante Blvd. -Numerous horizontal curves	UNCHANGED

**PART IV: ADDITIONAL REMARKS**

Based on the 85th percentile speed and a lack of other factors which would justify a further reduction in the speed zoning, it is appropriate to increase the existing 25 mph speed limit to 40 mph.		
<b>RECOMMENDATION</b>	<b>Increase speed limit to 40 mph</b>	<b>Increase speed limit to 40 mph</b>

42

SEGMENT 12: San Dieguito Drive from Jimmy Durante Blvd to East City Limits

JUN 04 2012 ITEM 12



Photo location: Eastbound at start of segment

43

JUN 04 2012 **ITEM** 12

**ENGINEERING AND TRAFFIC SURVEY (CVC SEC. 627)**

City of Del Mar

Street: Via De La Valle between Camino Del Mar and Jimmy Durante Boulevard

Year of Survey	2004	2011
----------------	------	------

**PART I: PREVAILING SPEED MEASUREMENT**

Location of Survey		East of Solano Circle		East of Solano Circle	
Date of Survey		10-13-04		08-16-11	
50 %ile	85 %ile	43 mph	49 mph	41 mph	45 mph
10 mph pace (% of vehicle)		38 - 47 mph (65%)		36 - 45 mph (82%)	
Posted Speed Limit		45 mph		45 mph	

**PART II: ACCIDENT RECORDS**

Time Period Covered		August 2002 to July 2004	July 2009 to June 2011
Number of Accidents	Intersection	8	2
	Mid-Block	9	11
Mid-Block Accident Rate per Million Vehicle Miles		0.73	1.40
Expected Mid-Block Accident Rate		1.96	

**PART III: HIGHWAY, TRAFFIC, AND ROADSIDE CHARACTERISTICS NOT READILY APPARENT**

Date Observations Made	09-17-04	09-26-11
HIGHWAY: Geometric, access (driveways, intersections, other).	-Two lanes in each direction; transitions to one lane in each direction further west of Jimmy Durante Blvd. -Bike lanes in both directions -Traffic signals at Jimmy Durante Blvd. and at Camino Del Mar	UNCHANGED
TRAFFIC: Pedestrians, parking turnover, school crossings.	-Time limit parking on north side -NPAT on south side, except for 200' east of Camino Del Mar -Variable AC curb, no gutter or sidewalk on south side Sidewalk, curb and gutter on north side	UNCHANGED
ROADSIDE: Land uses not apparent (park, school, etc.) other conditions.	-Commercial and multi-family residential, north side -Del Mar Race Track on the south side -Slight upgrade to west	UNCHANGED

**PART IV: ADDITIONAL REMARKS**

The 85th percentile speed is within the allowable range of the posted speed limit.		
<b>RECOMMENDATION</b>	Retain 45 mph speed limit	Retain 45 mph speed limit

44

SEGMENT 13: Via de la Valle from Camino Del Mar to Jimmy Durante Blvd



Photo location: Eastbound at east of Solano Circle

45

JUN 04 2012 **ITEM** 12

**Appendix B  
Speed Survey Data**

46

# Spot Speed Study

Prepared by: National Data & Surveying Services

City of Del Mar

Survey Time: 11:36-11:58

DATE: 8/16/2011

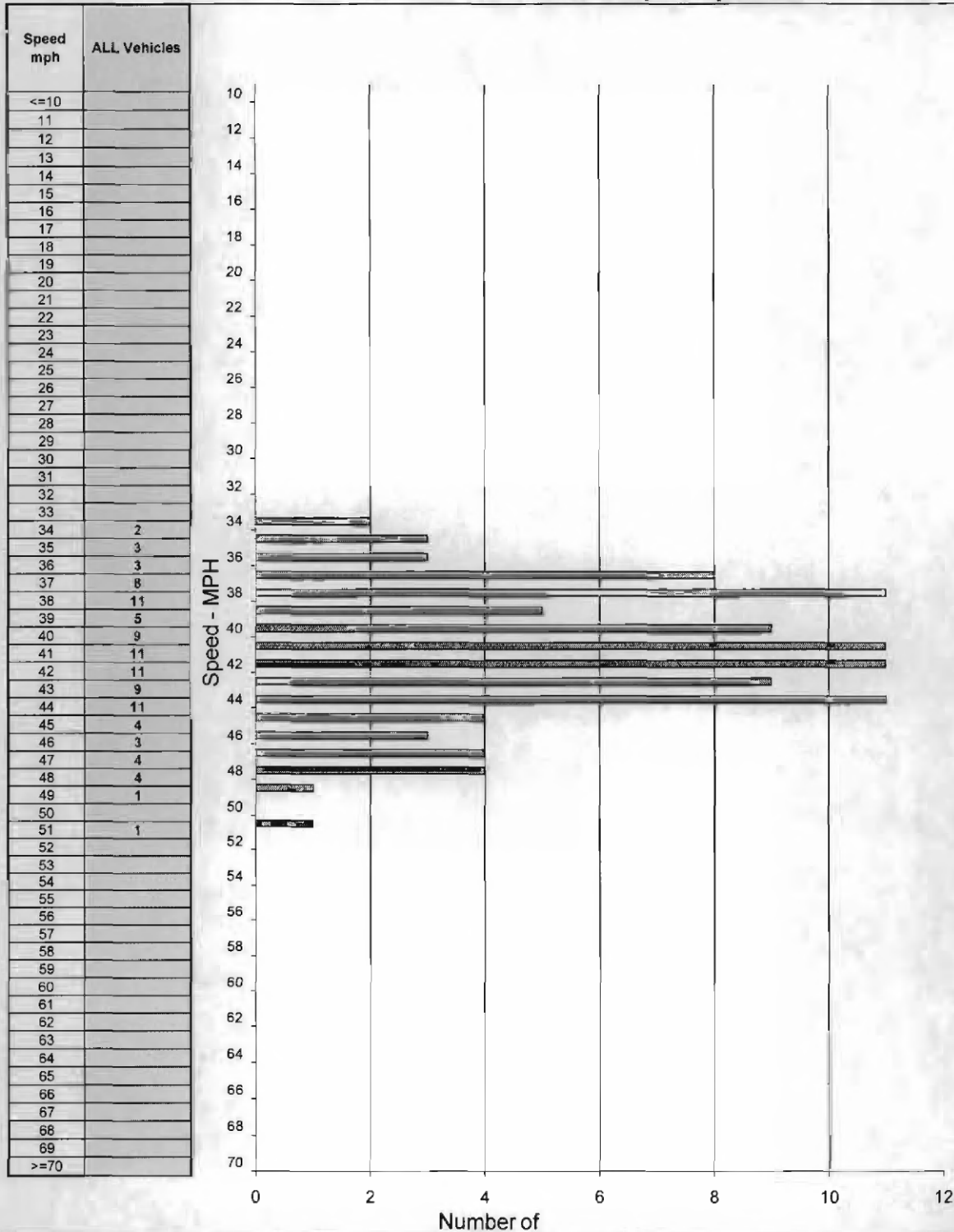
Location: Via De La Valle from Camino Del Mar to Jimmy Durante Blvd. e/o Solono Circle

DAY: Thursday

Posted Speed: 45 MPH

Project #: 11-4203-013

## Eastbound & Westbound Spot Speeds



JUN 4 2012 ITEM 12

47

SPEED PARAMETERS									
Class	Count	Range	50th Percentile	85th Percentile	10 MPH Pace	# In Pace	Percent in Pace	% / # Below Pace	% / # Above Pace
ALL	100	34 - 51	41 mph	45 mph	36 - 45	82	82%	5% / 5	13% / 13

# Spot Speed Study

Prepared by: National Data & Surveying Services

## City of Del Mar

Survey Time: 14:10-16:10

DATE: 8/16/2011

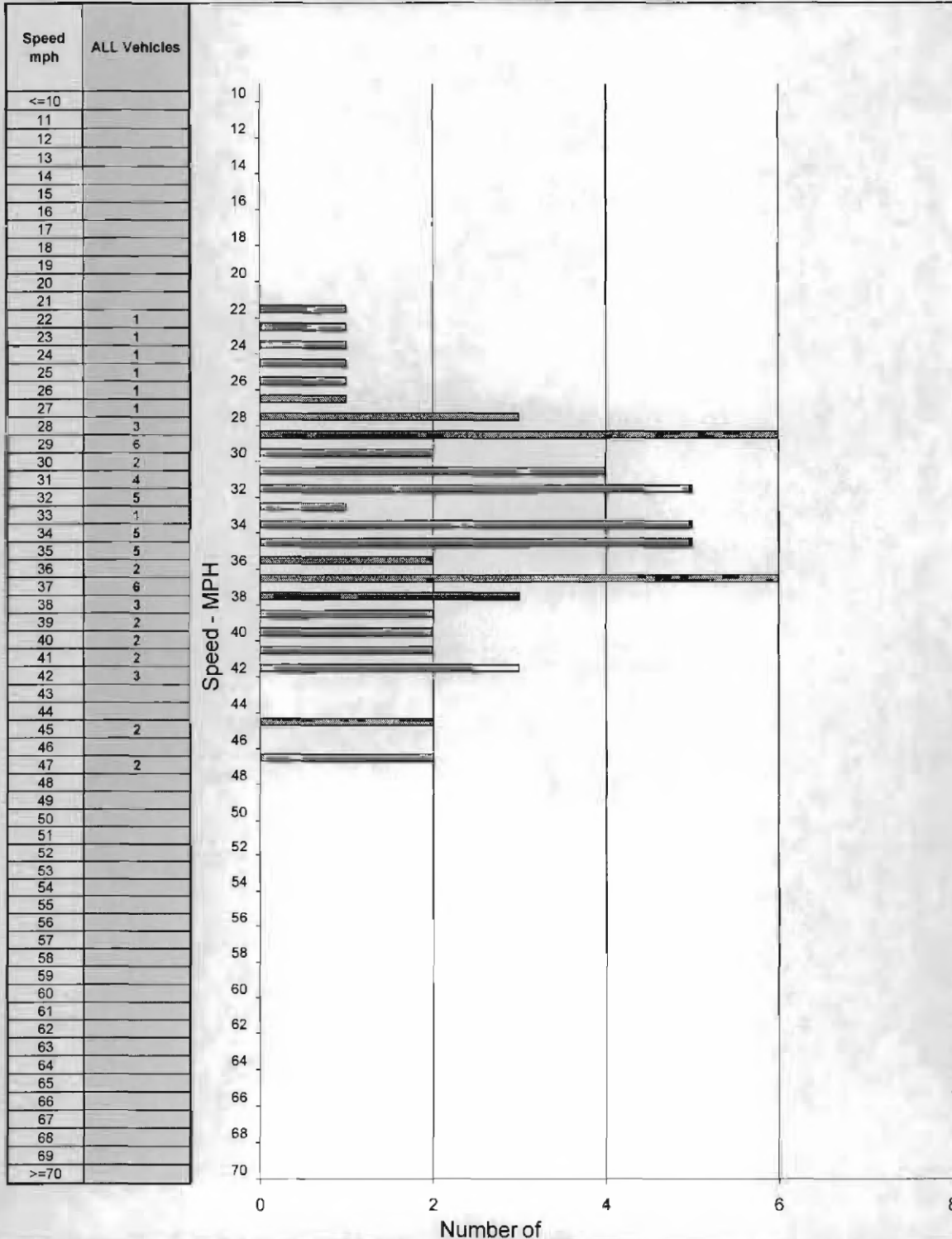
Location: San Dieguito Dr. from Jimmy Durante Blvd. to East City Limits mid-block

DAY: Thursday

Posted Speed: 25 MPH

Project #: 11-4203-012

### Northbound & Southbound Spot Speeds



JUN 04 2012 ITEM 12

48

SPEED PARAMETERS									
Class	Count	Range	50th Percentile	85th Percentile	10 MPH Pace	# in Pace	Percent In Pace	% / # Below Pace	% / # Above Pace
ALL	61	22 - 47	34 mph	40 mph	28 - 37	39	64%	9% / 6	27% / 16

# Spot Speed Study

Prepared by: National Data & Surveying Services

## City of Del Mar

Survey Time: 13:46-14:09

DATE: 8/16/2011

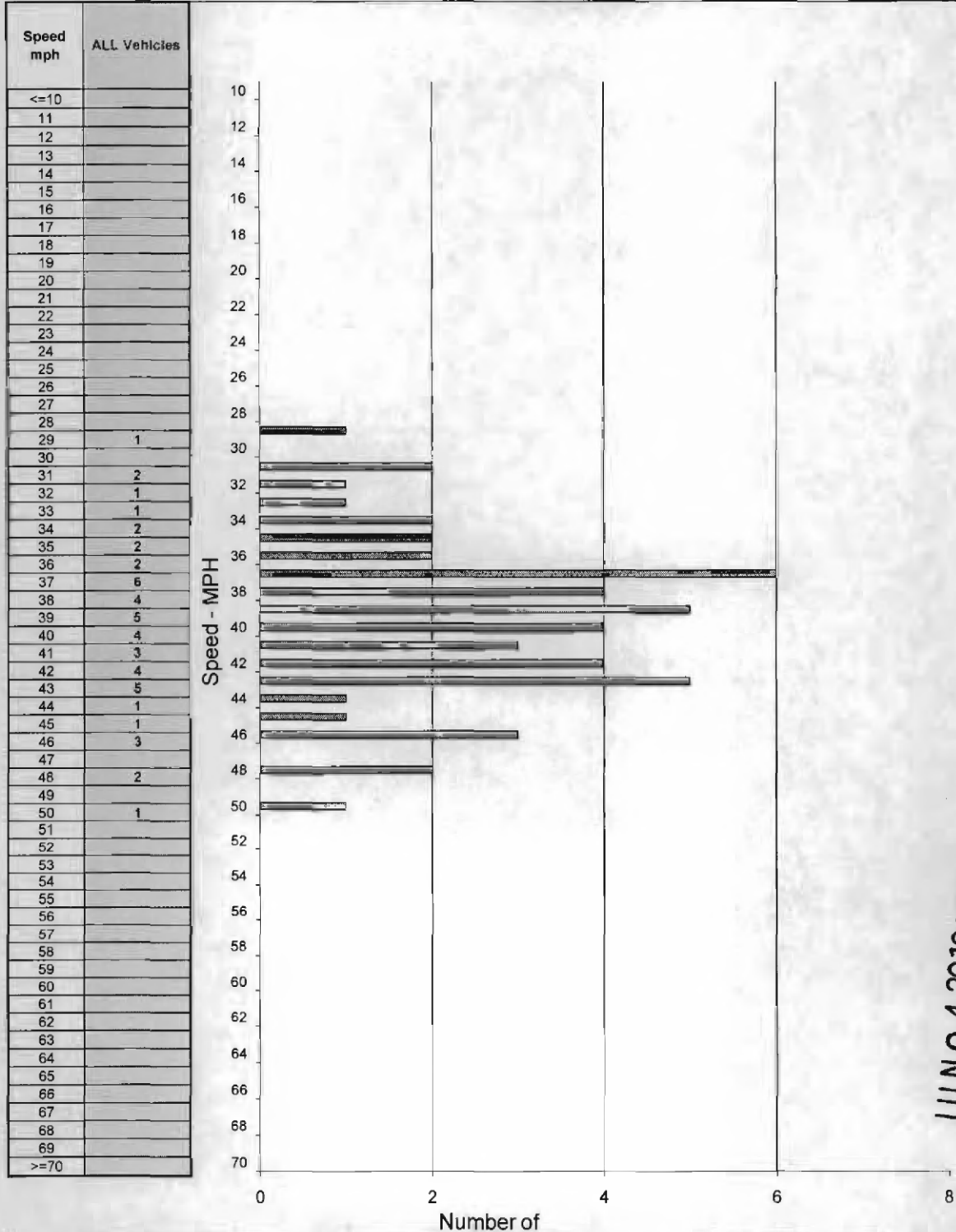
Location: Jimmy Durante Blvd. from Bridge to Camino Del Mar s/o Bridge

DAY: Thursday

Posted Speed: 40 MPH

Project #: 11-4203-011

### Southbound Spot Speeds



JUN 04 2012 ITEM 712

49

SPEED PARAMETERS									
Class	Count	Range	50th Percentile	85th Percentile	10 MPH Pace	# in Pace	Percent In Pace	% / # Below Pace	% / # Above Pace
ALL	50	29 - 50	39 mph	44 mph	34 - 43	37	74%	10% / 5	16% / 8

# Spot Speed Study

Prepared by: National Data & Surveying Services

City of Del Mar

Survey Time: 13:46-14:09

DATE: 8/16/2011

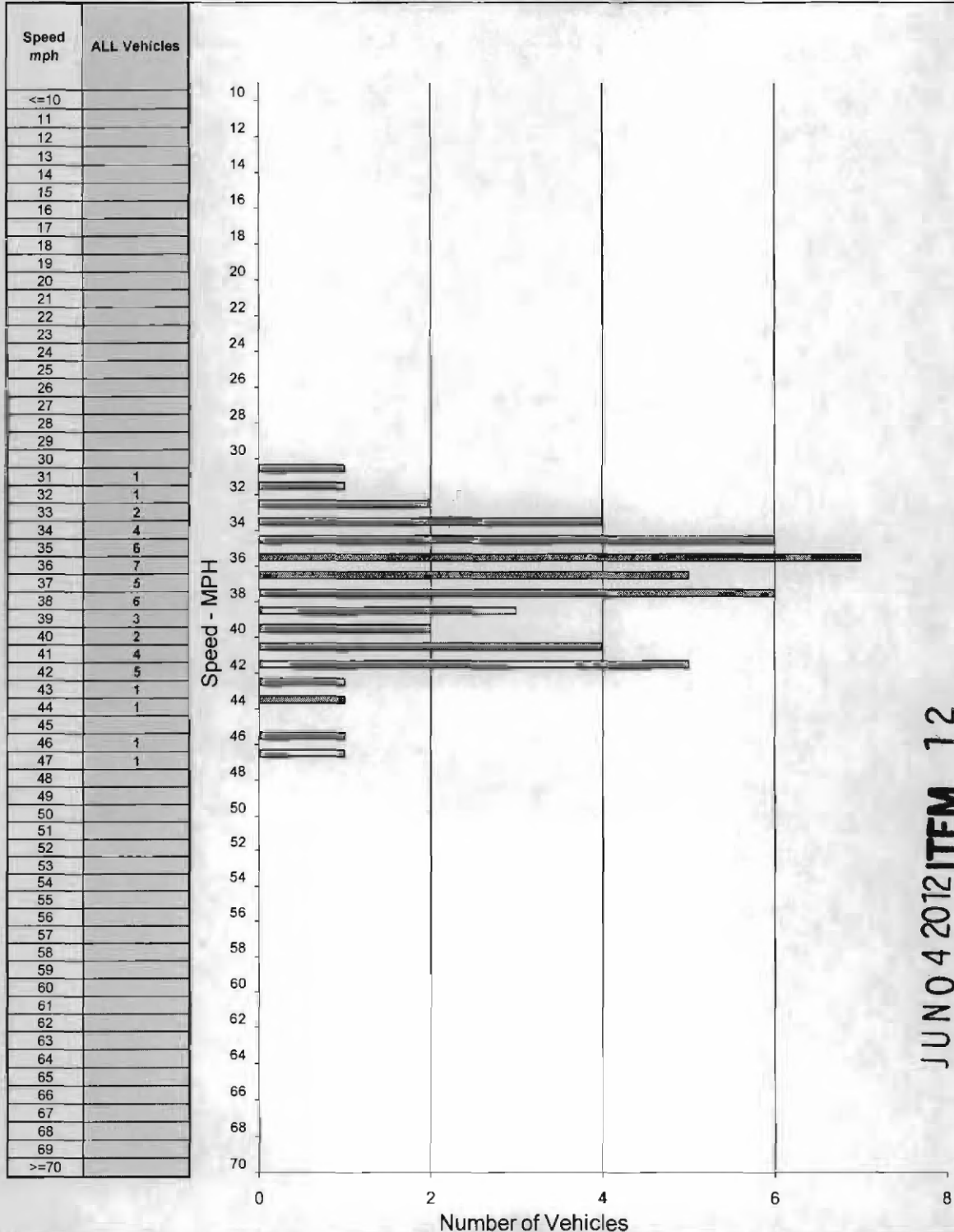
Location: Jimmy Durante Blvd. from Bridge to Camino Del Mar s/o Bridge

DAY: Thursday

Posted Speed: 40 MPH

Project #: 11-4203-011

## Northbound Spot Speeds



JUN 04 2012 ITEM 12

50

SPEED PARAMETERS									
Class	Count	Range	50th Percentile	85th Percentile	10 MPH Pace	# In Pace	Percent in Pace	% / # Below Pace	% / # Above Pace
ALL	50	31 - 47	37 mph	42 mph	33 - 42	44	88%	4% / 2	8% / 4

# Spot Speed Study

Prepared by: National Data & Surveying Services

City of Del Mar

Survey Time: 12:20-12:45

DATE: 8/16/2011

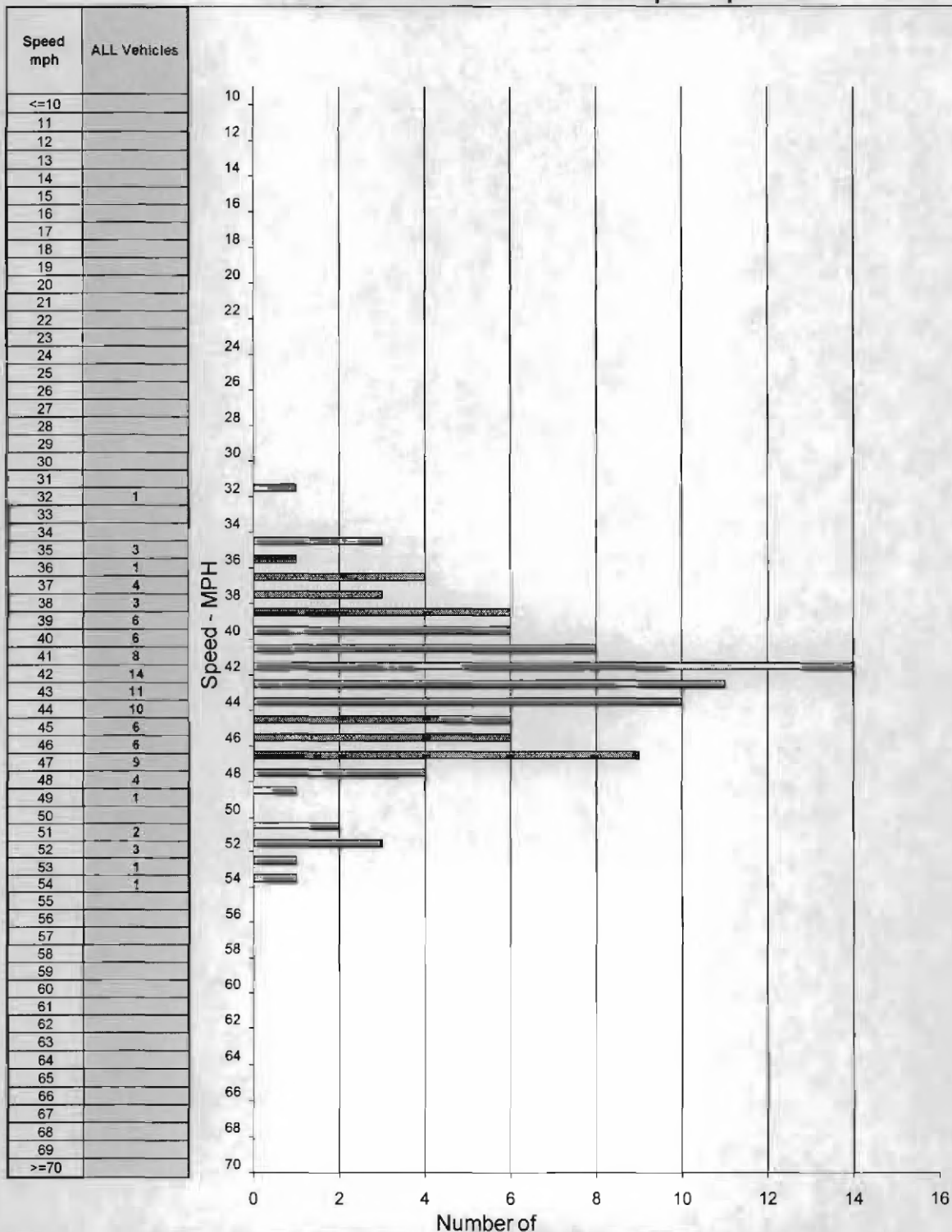
Location: Jimmy Durante Blvd. from Via De La Valle to Bridge s/o Via De La Valle

DAY: Thursday

Posted Speed: 45 MPH

Project #: 11-4203-010

## Northbound & Southbound Spot Speeds



JUN 04 2012 ITEM 12

51

SPEED PARAMETERS									
Class	Count	Range	50th Percentile	85th Percentile	10 MPH Pace	# in Pace	Percent in Pace	% / # Below Pace	% / # Above Pace
ALL	100	32 - 54	43 mph	47 mph	39 - 48	80	80%	12% / 12	8% / 8

# Spot Speed Study

Prepared by: National Data & Surveying Services

City of Del Mar

Survey Time: 11:50-12:22

DATE: 8/16/2011

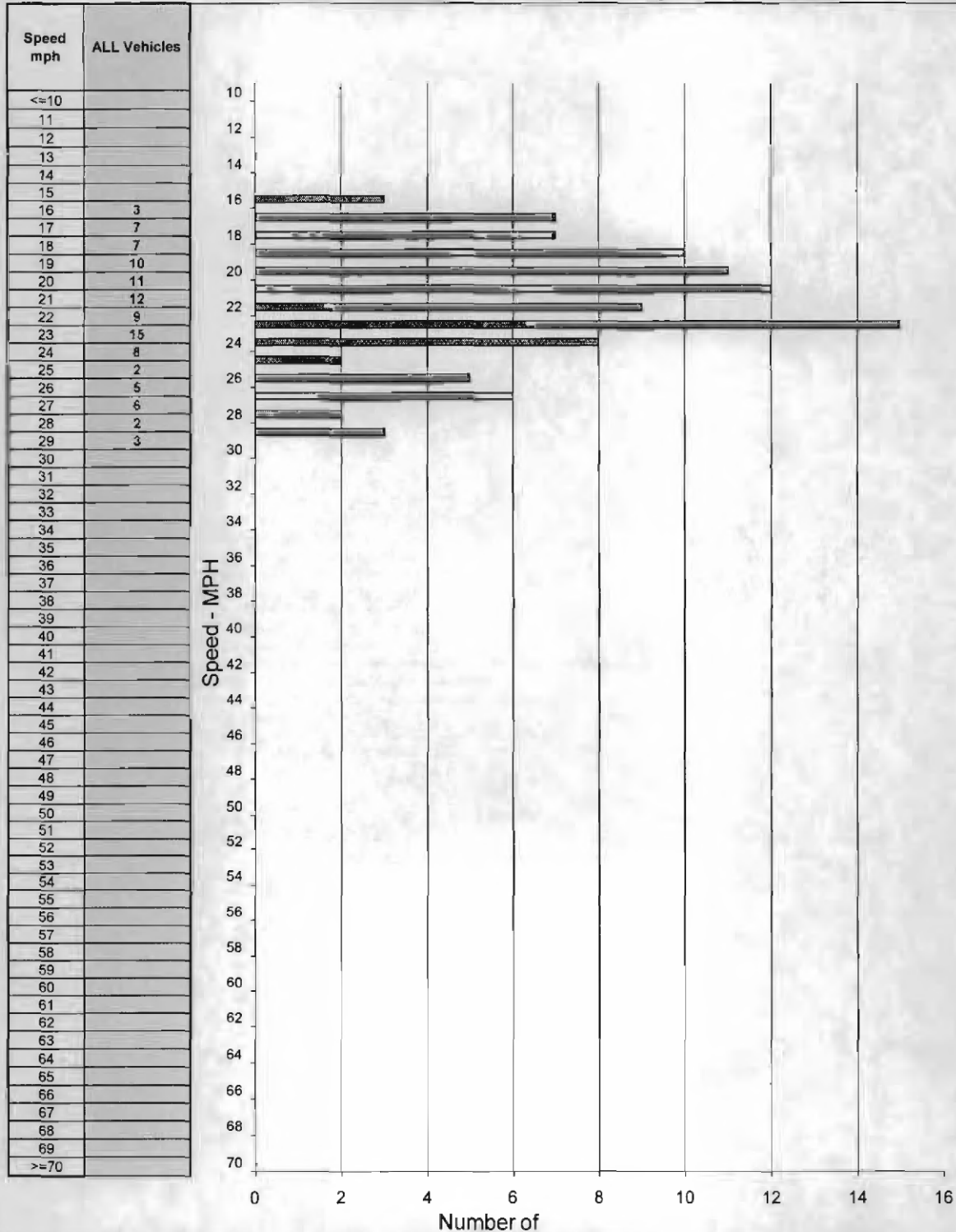
Location: Coast Blvd. from 19th St. to 15th St. b/t 18th St. & R.R.

DAY: Thursday

Posted Speed: 25 MPH

Project #: 11-4203-009

## Northbound & Southbound Spot Speeds



JUN 04 2012 ITEM 12

SPEED PARAMETERS									
Class	Count	Range	50th Percentile	85th Percentile	10 MPH Pace	# in Pace	Percent in Pace	% / # Below Pace	% / # Above Pace
ALL	100	16 - 29	21 mph	26 mph	17 - 26	86	86%	3% / 3	11% / 11

52

# Spot Speed Study

Prepared by: National Data & Surveying Services

City of Del Mar

Survey Time: 11:04-11:25

DATE: 8/16/2011

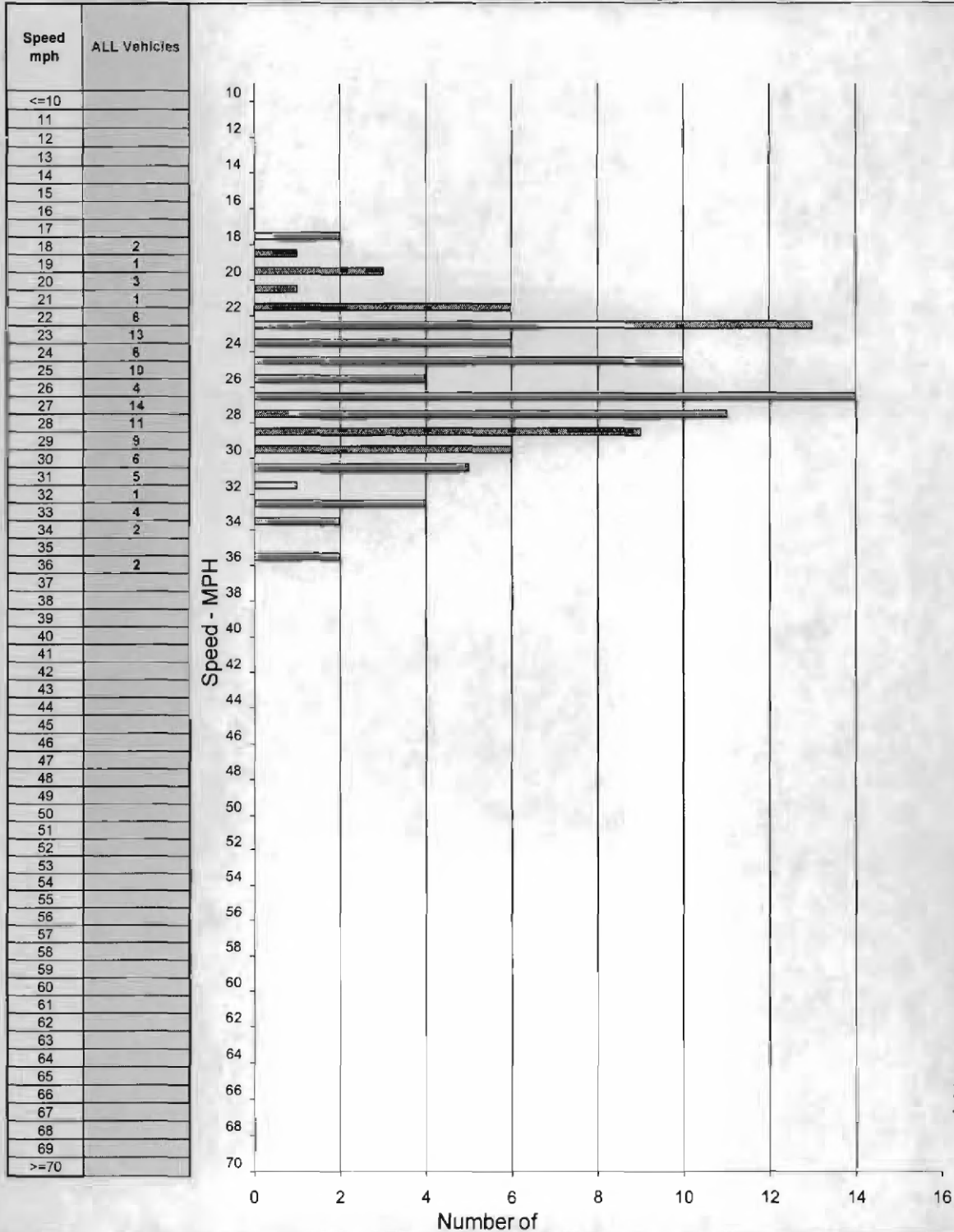
Location: Coast Blvd. from Camino Del Mar to 19th St. n/o 20th St.

DAY: Thursday

Posted Speed: 25 MPH

Project #: 11-4203-008

## Northbound & Southbound Spot Speeds



JUN 04 2012 ITEM 12

53

SPEED PARAMETERS									
Class	Count	Range	50th Percentile	85th Percentile	10 MPH Pace	# In Pace	Percent In Pace	% / # Below Pace	% / # Above Pace
ALL	100	18 - 36	27 mph	30 mph	22 - 31	84	84%	7% / 7	9% / 9

# Spot Speed Study

Prepared by: National Data & Surveying Services

## City of Del Mar

Survey Time: 10:07-10:25

DATE: 8/16/2011

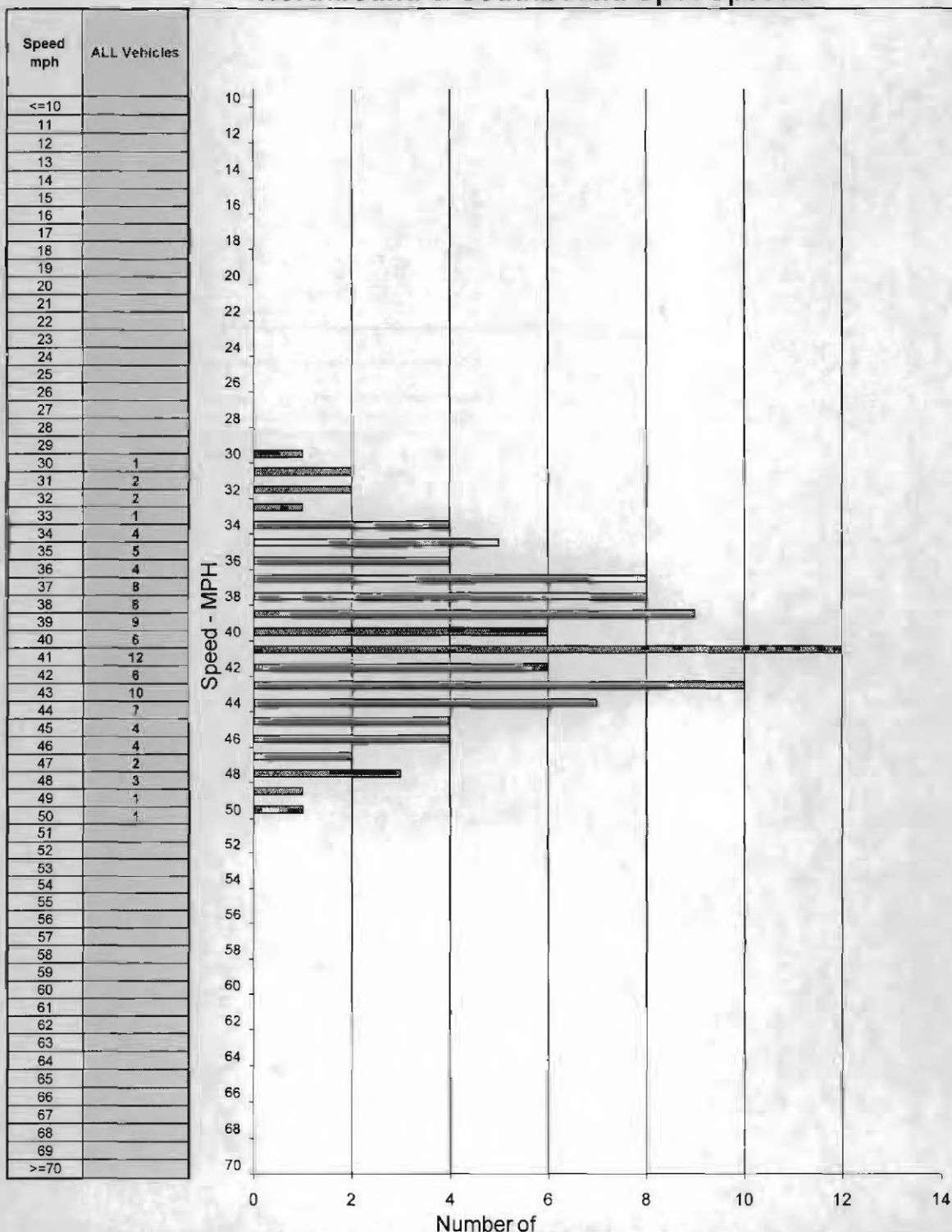
Location: Camino Del Mar from 4th St. to Camel Valley Road n/o Camel Valley Rd.

DAY: Thursday

Posted Speed: 40 MPH

Project #: 11-4203-007

### Northbound & Southbound Spot Speeds



JUN 04 2012 ITEM 12

SA

SPEED PARAMETERS									
Class	Count	Range	50th Percentile	85th Percentile	10 MPH Pace	# in Pace	Percent in Pace	% / # Below Pace	% / # Above Pace
ALL	100	30 - 50	40 mph	44 mph	35 - 44	75	75%	10% / 10	15% / 15

# Spot Speed Study

Prepared by: National Data & Surveying Services

## City of Del Mar

Survey Time: 10:33-10:53

DATE: 8/16/2011

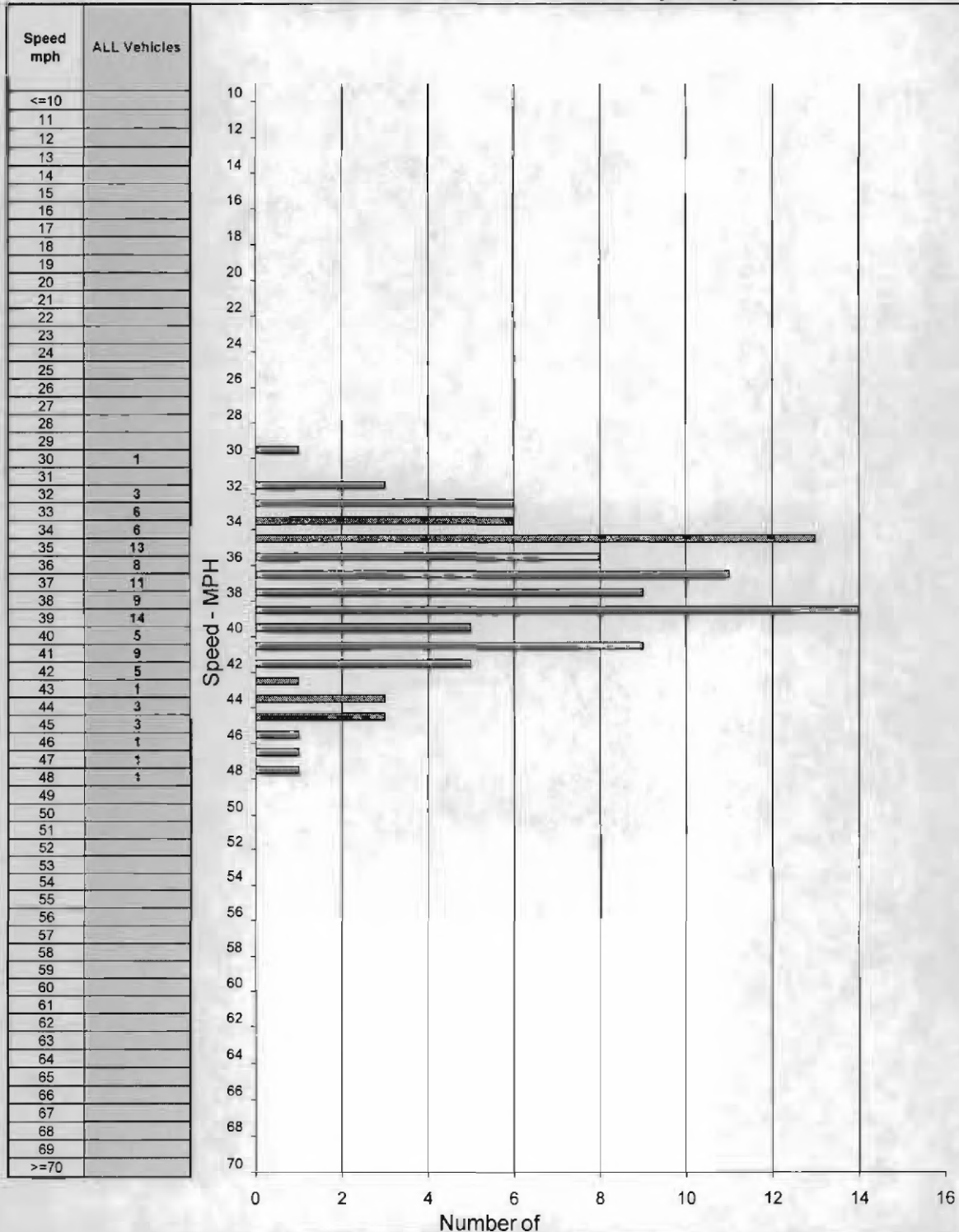
Location: Camino Del Mar from 9th St. to 4th St. s/o 8th St.

DAY: Thursday

Posted Speed: 40 MPH

Project #: 11-4203-006

### Northbound & Southbound Spot Speeds



JUN 04 2012 ITEM 12

55

SPEED PARAMETERS									
Class	Count	Range	50th Percentile	85th Percentile	10 MPH Pace	# in Pace	Percent in Pace	% / # Below Pace	% / # Above Pace
ALL	100	30 - 48	38 mph	41 mph	33 - 42	86	86%	4% / 4	10% / 10

# Spot Speed Study

Prepared by: National Data & Surveying Services

## City of Del Mar

Survey Time: 9:00-9:22

DATE: 8/16/2011

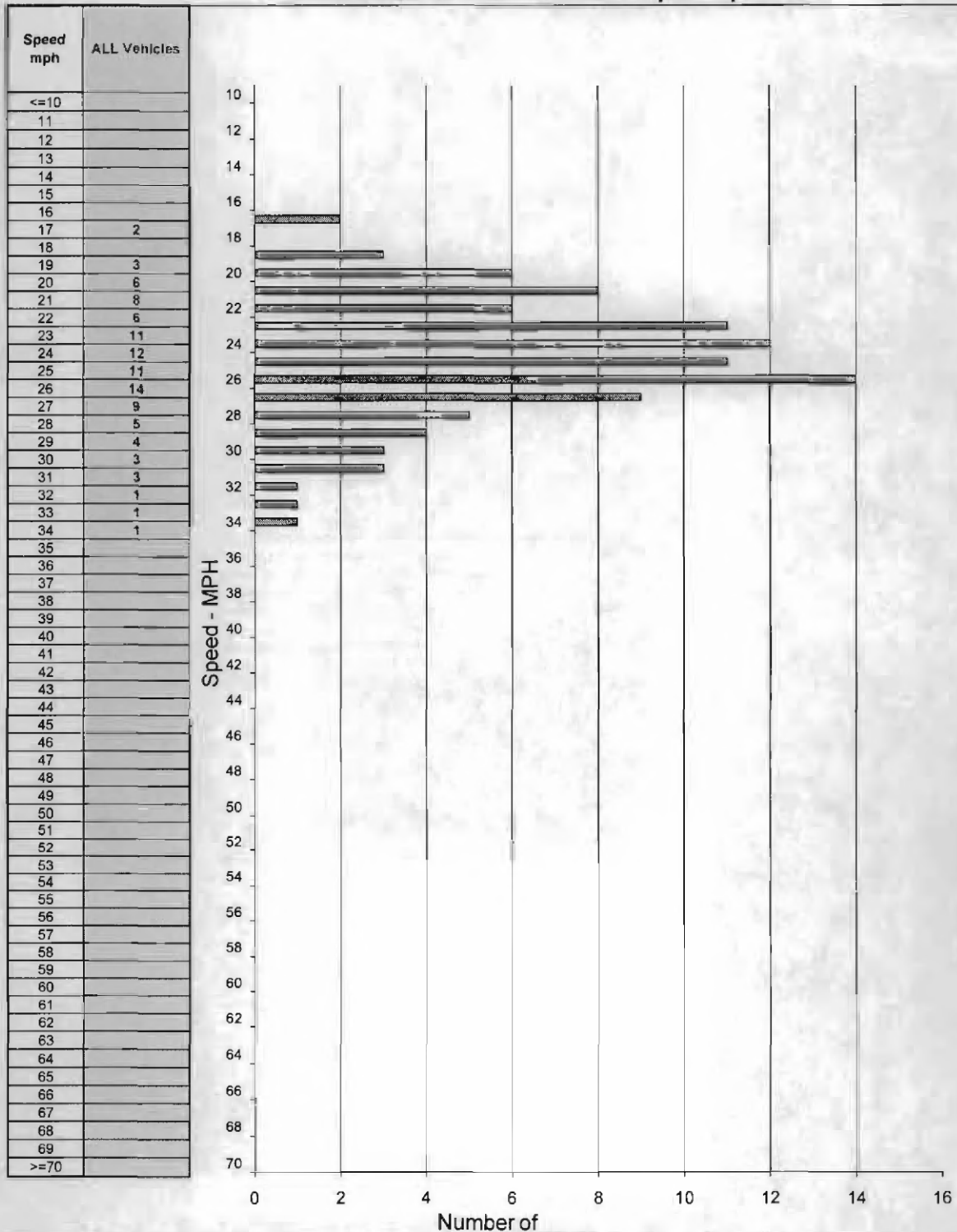
Location: Camino Del Mar from 15th St. to 9th St. just South of 14th St.

DAY: Thursday

Posted Speed: 25 MPH

Project #: 11-4203-015

### Northbound & Southbound Spot Speeds



JUN 04 2012 ITEM 12

56

SPEED PARAMETERS									
Class	Count	Range	50th Percentile	85th Percentile	10 MPH Pace	# in Pace	Percent in Pace	% / # Below Pace	% / # Above Pace
ALL	100	17 - 34	25 mph	28 mph	20 - 29	86	86%	5% / 5	9% / 9

# Spot Speed Study

Prepared by: National Data & Surveying Services

## City of Del Mar

Survey Time: 9:00-9:23

DATE: 8/16/2011

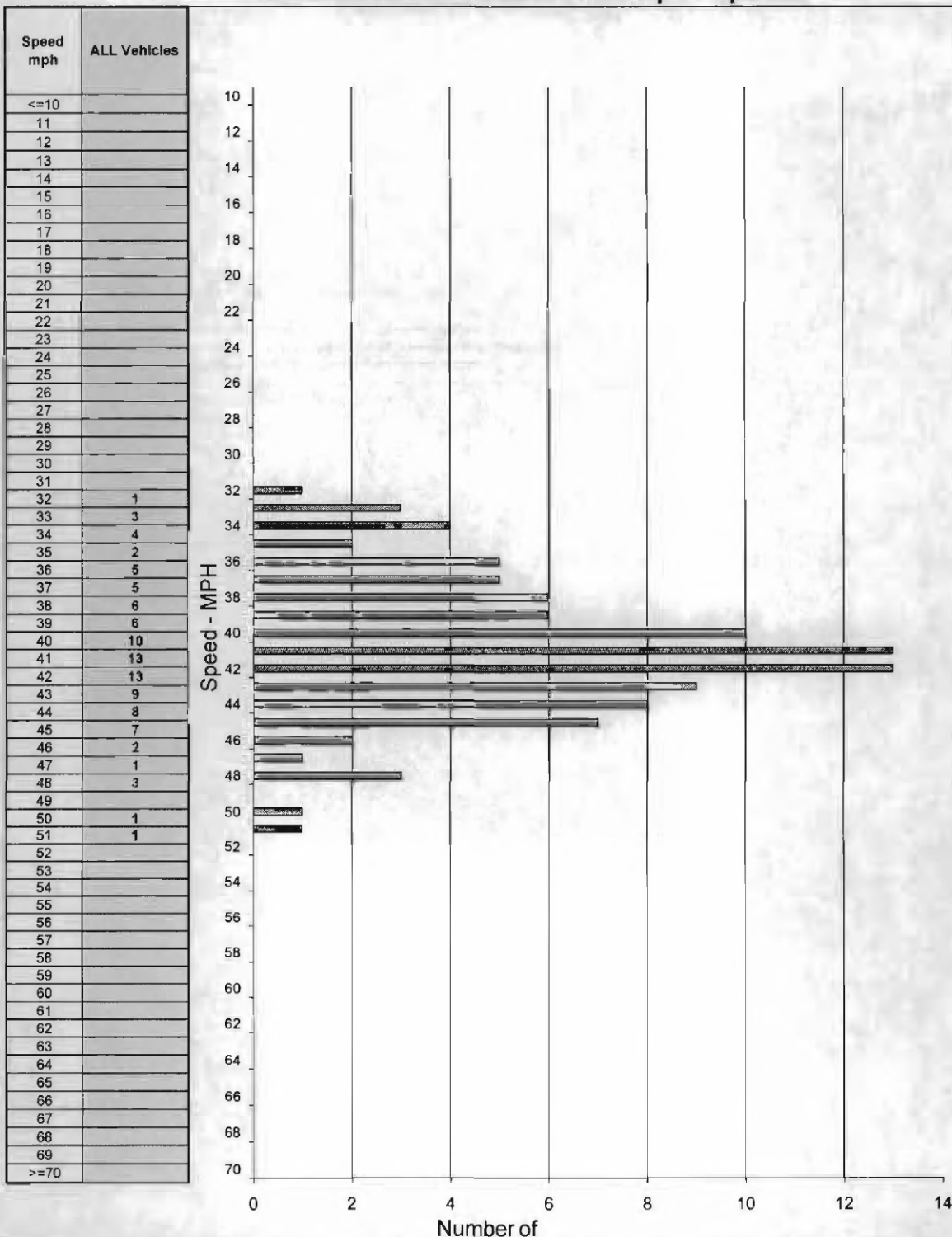
Location: Camino Del Mar from Coast Blvd. to 15th St. s/o Jimmy Durante Blvd.

DAY: Thursday

Posted Speed: 40 MPH

Project #: 11-4203-004

### Northbound & Southbound Spot Speeds



JUN 04 2012 ITEM 12

SPEED PARAMETERS									
Class	Count	Range	50th Percentile	85th Percentile	10 MPH Pace	# in Pace	Percent in Pace	% / # Below Pace	% / # Above Pace
ALL	100	32 - 51	41 mph	44 mph	36 - 45	82	82%	10% / 10	8% / 8

57

# Spot Speed Study

Prepared by: National Data & Surveying Services

City of Del Mar

Survey Time: 13:00-13:37

DATE: 8/16/2011

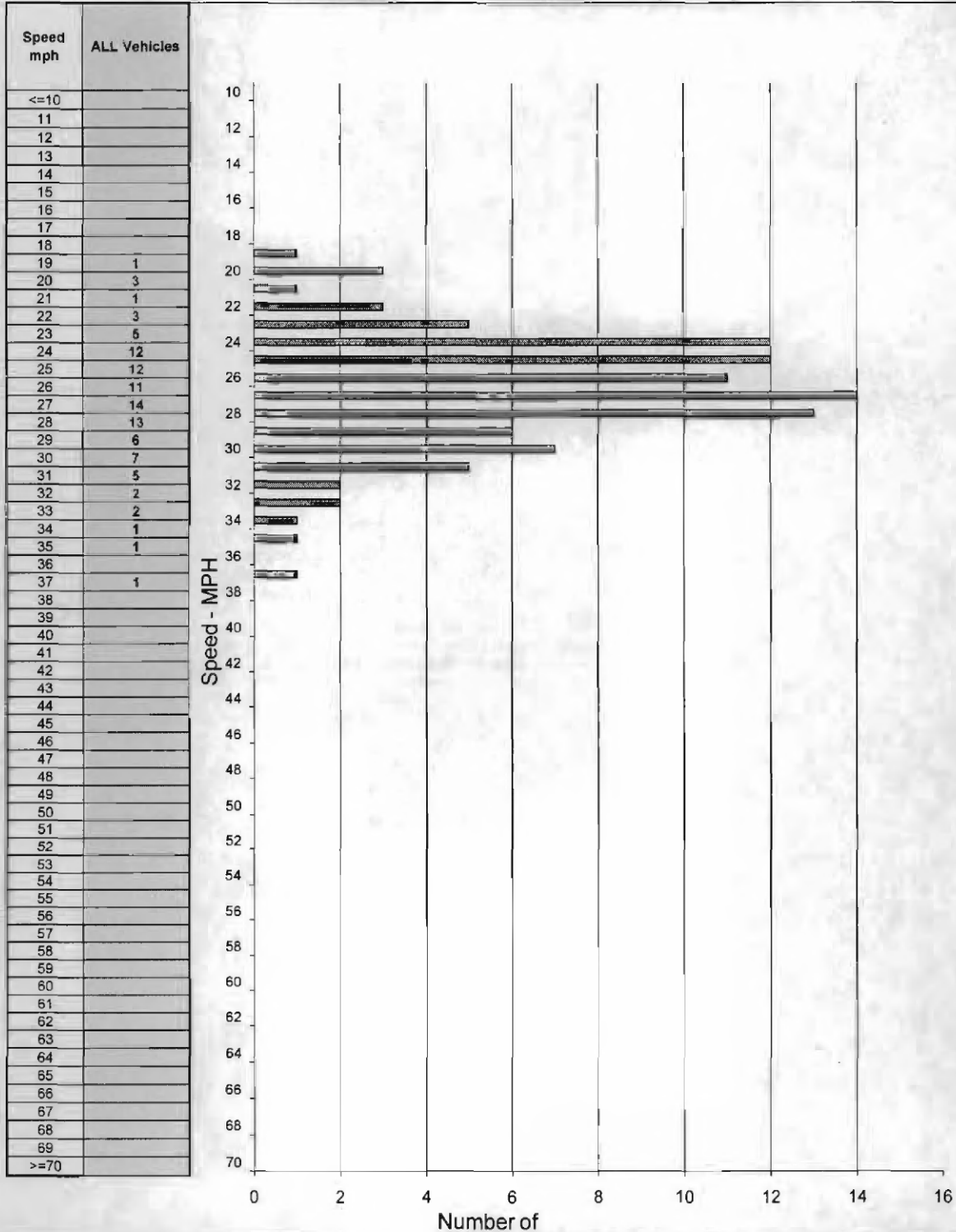
Location: Camino Del Mar from 27th St. to Coast Blvd. n/o 25th St.

DAY: Thursday

Posted Speed: 35 MPH

Project #: 11-4203-003

## Northbound & Southbound Spot Speeds



JUN 04 2012 ITEM 12

58

SPEED PARAMETERS									
Class	Count	Range	50th Percentile	85th Percentile	10 MPH Pace	# In Pace	Percent in Pace	% / # Below Pace	% / # Above Pace
ALL	100	19 - 37	27 mph	30 mph	22 - 31	88	88%	5% / 5	7% / 7

# Spot Speed Study

Prepared by: National Data & Surveying Services

City of Del Mar

Survey Time: 12:35-13:10

DATE: 8/16/2011

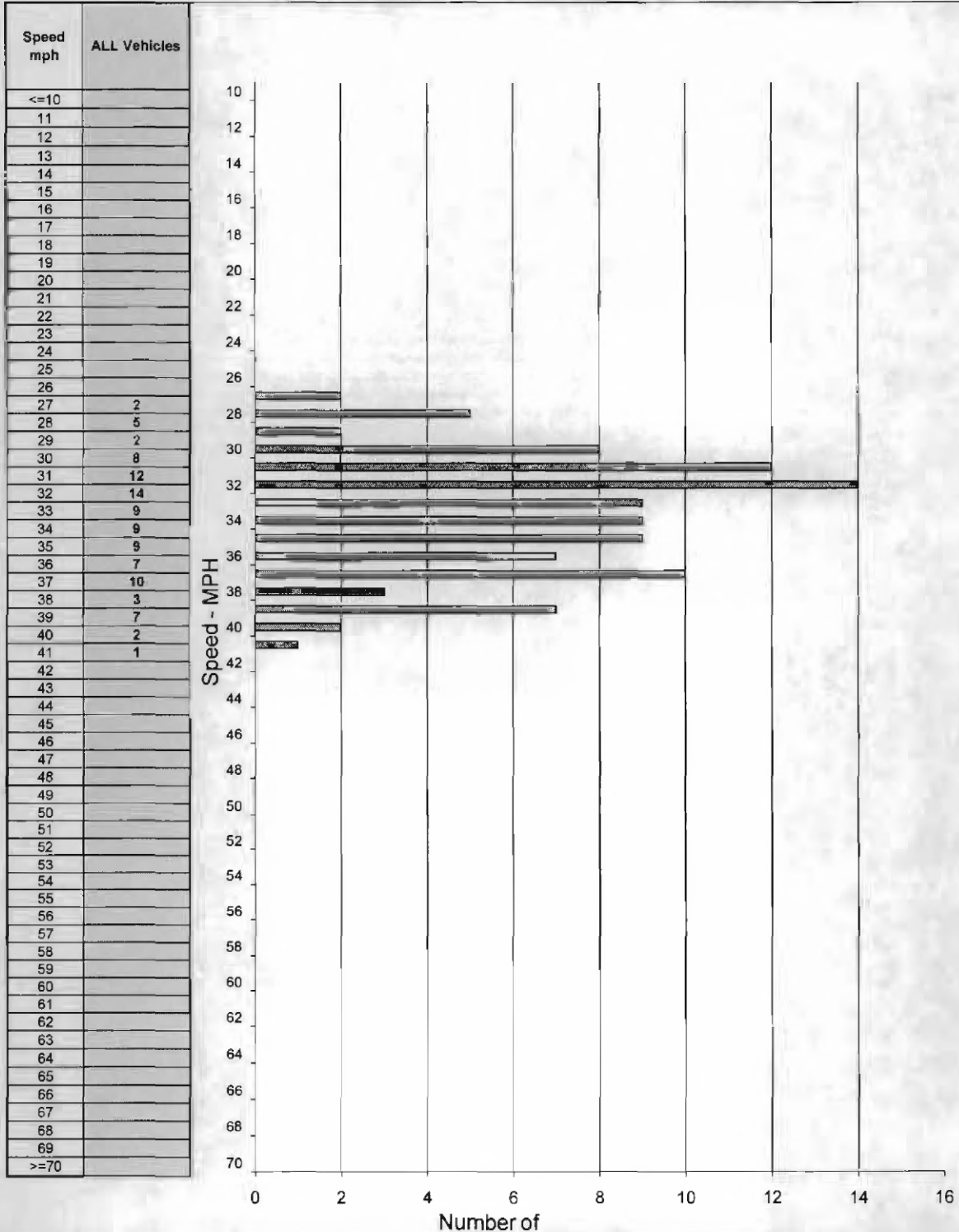
Location: Camino Del Mar from Bridge to 27th St. b/t 29th St. & Sandy Ln.

DAY: Thursday

Posted Speed: 40 MPH

Project #: 11-4203-002

## Northbound & Southbound Spot Speeds



JUN 04 2012 ITEM 12

59

SPEED PARAMETERS									
Class	Count	Range	50th Percentile	85th Percentile	10 MPH Pace	# In Pace	Percent in Pace	% / # Below Pace	% / # Above Pace
ALL	100	27 - 41	33 mph	37 mph	30 - 39	88	88%	9% / 9	3% / 3

# Spot Speed Study

Prepared by: National Data & Surveying Services

City of Del Mar

Survey Time: 12:03-12:29

DATE: 8/16/2011

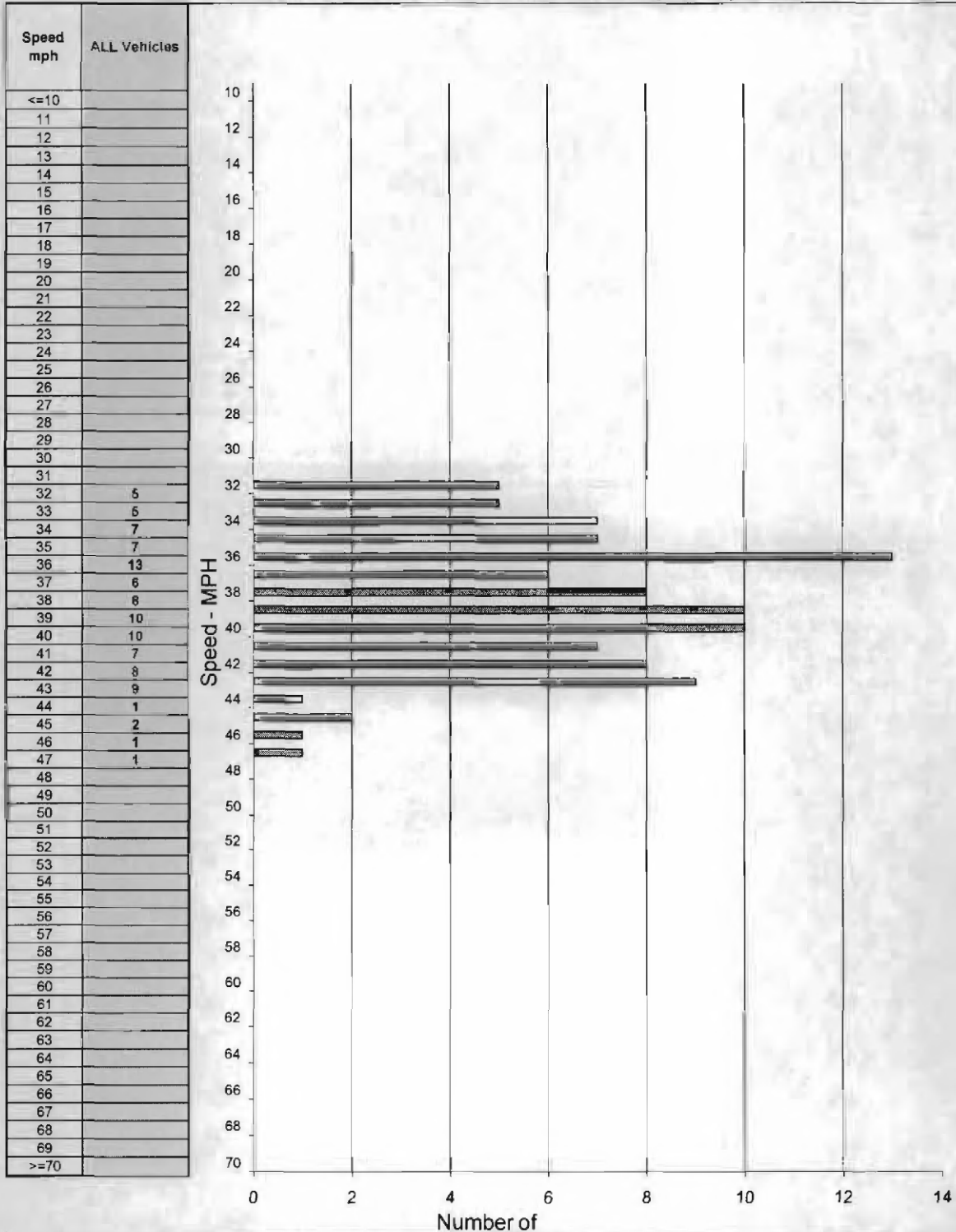
Location: Camino Del Mar from Via De La Valle to Bridge n/o Bridge

DAY: Thursday

Posted Speed: 40 MPH

Project #: 11-4203-001

## Northbound & Southbound Spot Speeds



JUN 04 2012 ITEM 12

60

SPEED PARAMETERS									
Class	Count	Range	50th Percentile	85th Percentile	10 MPH Pace	# In Pace	Percent in Pace	% / # Below Pace	% / # Above Pace
ALL	100	32 - 47	38 mph	42 mph	34 - 43	85	85%	10% / 10	5% / 5

**Appendix C**  
**ADT Counts from the City of Del Mar**

lel





**2011 - S22 Camino Del Mar NB & SB traffic (921' South of Via De La Valle)**

Box D

Day ->	Tue	Wed	Thu	Fri	Tue	Wed	Thu	Fri
Date ->	5/24/2011	5/25/2011	5/26/2011	5/27/2011	5/24/2011	5/25/2011	5/26/2011	5/27/2011
Leg ->	N/B	N/B	N/B	N/B	S/B	S/B	S/B	S/B
0:00:00		11	19	24		16	17	31
1:00:00		7	12	16		9	17	18
2:00:00		8	3	7		8	8	16
3:00:00		5	5	6		1	2	5
4:00:00		7	13	13		5	4	6
5:00:00		27	31	28		39	45	45
6:00:00		119	104	103		218	200	227
7:00:00		222	200	222		543	475	423
8:00:00		266	279			652	546	
9:00:00		336	321			463	445	
10:00:00	382	379	365		375	410	419	
11:00:00	430	420	455		431	488	489	
12:00:00	448	470	485		527	510	533	
13:00:00	459	501	486		491	497	529	
14:00:00	510	546	508		522	508	509	
15:00:00	569	568	592		463	483	495	
16:00:00	605	655	627		460	464	503	
17:00:00	606	672	741		473	464	456	
18:00:00	441	477	525		413	443	409	
19:00:00	322	338	335		350	313	320	
20:00:00	229	190	211		227	209	216	
21:00:00	159	141	150		133	134	131	
22:00:00	82	115	108		87	84	84	
23:00:00	33	27	43		26	45	45	
DAY-TOTAL->	N/B	N/B	N/B	N/B	S/B	S/B	S/B	S/B
	5275	6507	6618	419	4978	7006	6897	771
LEG-TOTAL: Tue.->Fri.	18819				19652			
Vehicles: Avg/hr.	377	271	276	52	356	292	287	96
AVG-DAILY	N/B				S/B			
Total weekday/leg	6563				6952			
weekend/leg								
TOTAL / Leg->	6563				6952			

GA

JUN 04 2012 ITEM 12

65

2009 S19: Jimmy Durante Blvd @ San Dieguito River Bridge

Box C

Day ->	Thu	Fri	Sat	Sun	Mon	Thu	Fri	Sat	Sun	Mon	
Date ->	4/8/2010	4/9/2010	4/10/2010	4/11/2010	4/12/2010	4/8/2010	4/9/2010	4/10/2010	4/11/2010	4/12/2010	
Leg ->	N/B	N/B	N/B	N/B	N/B	S/B	S/B	S/B	S/B	S/B	
0:00:00		25	82	44	22			9	23	27	8
1:00:00		14	57	55	8			6	16	12	2
2:00:00		12	25	18	3			2	4	5	5
3:00:00		2	12	11	11			9	5	4	4
4:00:00		9	14	12	10			7	9	6	8
5:00:00		23	22	12	21			28	10	12	35
6:00:00		58	55	37	60			191	60	46	98
7:00:00		151	146	116	191			371	126	97	251
8:00:00		290	207	162	242			326	154	121	333
9:00:00		321	299	197				345	179	151	
10:00:00		243	392	277				353	281	228	
11:00:00		9	396	318				427	293	210	
12:00:00		0	406	296				397	321	256	
13:00:00		215	400	283				381	310	258	
14:00:00		604	339	271				366	329	210	
15:00:00	422	800	326	259		322	338	393	246		
16:00:00	498	744	312	264		302	322	375	220		
17:00:00	636	759	223	193		269	376	461	215		
18:00:00	449	623	218	182		243	259	195	146		
19:00:00	281	267	212	171		173	183	150	115		
20:00:00	168	179	167	100		132	139	119	83		
21:00:00	129	152	132	86		97	129	85	43		
22:00:00	105	147	138	53		46	82	76	20		
23:00:00	52	95	117	27		23	56	37	20		
DAY-TOTAL->	N/B	N/B	N/B	N/B	N/B	S/B	S/B	S/B	S/B	S/B	S/B
	2740	5742	4697	3444	568	1607	5102	4011	2751	744	
LEG-TOTAL: Th -> M	17191					4/8/2010	4/9/2010	4/10/2010	4/11/2010	4/12/2010	
Vehicles: Avg/hr.	304	239	196	144	63	179	213	167	115	83	
AVG-DAILY											
Total weekday/leg	5742					5102					
weekend/leg	4071					3381					
TOTAL / Leg->	4628					3955					

2011 S4: CDM N/S between Carmel Valley Road & Del Mar Heights Rd. @ Anderson Cyn

Box B

Day ->	Wed	Thu	Fri	Sat	Sun	Mon	Wed	Thu	Fri	Sat	Sun	Mon
Date ->	2/9/2011	2/10/2011	2/11/2011	2/12/2011	2/13/2011	2/14/2011	2/9/2011	2/10/2011	2/11/2011	2/12/2011	2/13/2011	2/14/2011
Leg ->	N/B	N/B	N/B	N/B	N/B	N/B	S/B	S/B	S/B	S/B	S/B	S/B
0:00:00		19	13	27	27	30		18	16	33	44	24
1:00:00		10	9	17	19	17		11	9	25	25	4
2:00:00		6	4	5	11	10		5	6	11	7	1
3:00:00		3	5	7	6	9		7	12	10	8	8
4:00:00		8	3	11	7	26		13	10	12	5	17
5:00:00		15	17	12	11	33		56	55	9	16	46
6:00:00		68	77	64	48	64		273	279	94	56	238
7:00:00		220	231	141	104	197		787	703	159	107	703
8:00:00		241	265	308	218	257		966	963	303	216	1029
9:00:00		343	346	366	341	332		709	625	451	372	637
10:00:00	323	393	389	485	478	371	447	456	485	562	494	432
11:00:00	500	556	590	608	602	485	482	425	502	698	622	416
12:00:00	551	568	604	660	670	550	501	532	611	771	700	526
13:00:00	492	492	569	732	717	539	559	580	611	766	580	530
14:00:00	491	570	680	648	636	566	497	524	595	743	741	581
15:00:00	654	687	924	687	627	454	485	478	553	732	727	374
16:00:00	982	1017	1170	624	565		383	419	511	688	698	
17:00:00	1136	1262	1136	605	469		379	416	457	594	531	
18:00:00	714	801	1166	315	254		225	262	343	348	290	
19:00:00	275	281	521	193	158		163	170	202	228	189	
20:00:00	149	163	183	159	111		170	151	190	188	118	
21:00:00	129	134	148	139	182		107	139	150	171	104	
22:00:00	80	66	97	93	123		60	72	112	105	47	
23:00:00	25	40	70	49	71		21	64	71	64	24	
Overlap Wed. -> Mon.	7476						7166					
DAY-TOTAL->	N/B	N/B	N/B	N/B	N/B	N/B	S/B	S/B	S/B	S/B	S/B	S/B
	6501	7963	9217	6975	6455	3940	4459	7533	8071	7765	6912	5566
LEG-TOTAL:	41051						40306					
Vehicles: Avg/60 min.	464	332	384	291	269	246	319	314	336	324	288	348
AVG-DAILY	N/B						S/B					
Total weekday/leg	8219						7590					
weekend/leg	6715						7339					
TOTAL / Leg->	7617						7489					

66

JUNO 4 2012 ITEM 12

2011 S5: Camino Del Mar North of Del Mar Heights Road, South of 9th ST

Box A

Day ->	Wed	Thu	Fri	Sat	Sun	Mon	Wed	Thu	Fri	Sat	Sun	Mon
Date ->	3/2/2011	3/3/2011	3/4/2011	3/5/2011	3/6/2011	3/7/2011	3/2/2011	3/3/2011	3/4/2011	3/5/2011	3/6/2011	3/7/2011
Leg ->	N/B	N/B	N/B	N/B	N/B	N/B	S/B	S/B	S/B	S/B	S/B	S/B
0:00:00		15	13	50	33	13		49	41	104	106	21
1:00:00		11	10	9	21	10		24	28	84	77	11
2:00:00		7	11	3	6	10		14	8	24	29	8
3:00:00		6	7	6	6	9		16	11	7	15	5
4:00:00		9	21	33	10	9		17	15	12	15	9
5:00:00		37	51	33	7	35		53	37	13	18	43
6:00:00		79	76	70	26	62		195	214	57	47	197
7:00:00		323	283	190	93	202		704	601	183	111	618
8:00:00		497	440	450	242	262		840	662	284	271	524
9:00:00	522	526	488	623	304		451	549	586	517	332	
10:00:00	561	569	513	717	595		543	565	571	667	480	
11:00:00	692	689	802	904	711		589	576	605	866	710	
12:00:00	683	722	847	974	714		665	644	735	943	776	
13:00:00	619	603	708	996	659		678	785	855	977	889	
14:00:00	600	646	746	913	533		655	721	856	1049	815	
15:00:00	683	683	947	802	459		593	659	765	1035	765	
16:00:00	750	749	1015	726	419		602	671	752	994	655	
17:00:00	737	788	986	556	341		592	590	664	824	565	
18:00:00	494	636	660	382	240		409	429	566	702	401	
19:00:00	207	274	333	233	130		334	349	411	388	296	
20:00:00	180	161	190	108	123		420	335	379	358	213	
21:00:00	61	75	101	118	42		411	317	339	383	175	
22:00:00	57	73	114	95	28		236	214	277	287	108	
23:00:00	34	24	50	55	20		185	94	190	191	47	
Overlap Wed --> Mon:	7492						8799					
DAY-TOTAL->	N/B	N/B	N/B	N/B	N/B	N/B	S/B	S/B	S/B	S/B	S/B	S/B
	6880	8202	9412	9022	5762	612	7363	9410	10168	10949	7916	1436
LEG-TOTAL: Th->M	39890	3/3/2011	3/4/2011	3/5/2011	3/6/2011	3/7/2011	3/2/2011	3/3/2011	3/4/2011	3/5/2011	3/6/2011	3/7/2011
Vehicles: Avg/hr.	459	342	392	376	240	68	47242	392	424	456	330	160
AVG-DAILY							491					
Total weekday/leg	8369						9459					
weekend/leg	7392						9433					
TOTAL / Leg->	7978						9448					

68

2011 S17: Camino Del Mar @ Seaview Ave.												
Box A												
Day ->	Tue	Wed	Thu	Fri	Tue	Wed	Thu	Fri	Tue	Wed	Thu	Fri
Date ->	5/24/2011	5/25/2011	5/26/2011	5/27/2011	5/24/2011	5/25/2011	5/26/2011	5/27/2011	5/24/2011	5/25/2011	5/26/2011	5/27/2011
Leg ->	N/B	N/B	N/B	N/B	S/B	S/B	N/B	N/B	S/B	S/B	S/B	S/B
0:00:00		30	38	38		21	10				10	33
1:00:00		14	17	27		7	11				11	20
2:00:00		19	15	10		8	16				16	6
3:00:00		8	10	5		7	9				9	10
4:00:00		9	11	21		13	14				14	18
5:00:00		37	32	41		51	53				53	61
6:00:00		118	129	125		238	221				221	283
7:00:00		250	249	165		684	658				658	403
8:00:00		354	377			822	722				722	
9:00:00		436	430			606	623				623	
10:00:00		509	505			553	522				522	
11:00:00		590	605			599	618				618	
12:00:00		594	601			630	665				665	
13:00:00		671	674			593	643				643	
14:00:00	656	714	687		578	670	638				638	
15:00:00	760	778	802		594	592	598				598	
16:00:00	860	880	916		580	538	612				612	
17:00:00	934	942	1098		599	598	596				596	
18:00:00	626	654	714		488	462	507				507	
19:00:00	391	381	417		412	356	394				394	
20:00:00	307	290	301		258	254	279				279	
21:00:00	276	232	254		151	171	171				171	
22:00:00	154	164	199		126	116	110				110	
23:00:00	75	64	83		33	46	48				48	
DAY-TOTAL->	N/B	N/B	N/B	N/B	S/B	S/B	S/B	S/B	S/B	S/B	S/B	S/B
	5039	8738	9164	432	3819	8635	8738	834			8738	834
LEG-TOTAL: Tue.->Fri.	Tue	Wed	Thu	Fri	Tue	Wed	Thu	Fri			Thu	Fri
Vehicles: Avg/hr.	5/24/2011	5/25/2011	5/26/2011	5/27/2011	5/24/2011	5/25/2011	5/26/2011	5/27/2011			5/26/2011	5/27/2011
AVG-DAILY	23373				22026							
Total weekday/leg	504	364	382	54	382	360	364	104			364	104
weekend/leg	8951				8687							
TOTAL / Leg->	-				-							
	8951				8687							

**Appendix D  
Collision Data**

69



71

No	Date	Day of week	Time	Location	PCF	Cause/Summary	Type	Remarks
342								
11/12/2006								
05	09/12/04	Sunday	11:16 AM	SB CDM at 11th Street	22450(a) v failure to stop for a stop sign	INL-0		2nd cause, 22350 v unsafe speed for conditions
05	10/17/04	Sunday	7:27 PM	SB CDM at 11th Street	21950(a) v failure to yield R-to-W to P	INL-1		
05	10/28/04	Thursday	5:10 PM	1219 CDM (parking lot)	22106 v unsafe backing in parkin	H&R		
05	12/22/04	Wednesday	8:36 PM	SB CDM 73' S of SCL of 13th St	23152(b)(1) v failure to yield to pedestrian	H&R		
05	01/19/05	Tuesday	4:53 PM	SB CDM South of 14th Street	22350 v unsafe speed for conditions	INL-1		
05	02/02/11	Saturday	2:21 PM	Northbound CDM 55 S of 12th St	21717 v unsafe speed for conditions	INL-1		
05	02/02/11	Wednesday	11:49 AM	CDM NB 79 feet north of 10th St	21717 v unsafe speed for conditions	INL-1		
05	02/04/05	Friday	4:44 PM	SB CDM 146' S of 15th Street	21658(a) v unsafe lane change	INL-1		
05	02/08/05	Tuesday	5:20 PM	MB CDM 146' S of 15th Street	21804(a) v unsafe lane change	INL-1		
05	07/07/05	Thursday	10:55 AM	1160 CDM	Operator a Driver's shoes slipped off	INL-0		
05	12/23/05	Monday	1:00 PM	11th St or 7' E of CDM	unknown	INL-0		
05	02/05/06	Saturday	2:27 AM	CDM or 147.3 N of 12th Street	21966 Pedestrian in bike lane, P	INL-0		
05	01/15/11	Saturday	9:00 PM	Bully's Bar Parking Lot	Unsafe turn	H&R		
05	12/05/05	Tuesday	8:10 PM	Maiden Lane 8' S of 13th Street	22107 v unsafe turning movement	H&R		
05	12/06/05	Tuesday	11:47 AM	Maiden Lane 8' N of NCL of 21st St	22107 v unsafe turning movement	H&R		
05	12/09/05	Tuesday	8:09 PM	11th St 33' W of CDM	23116a(b) v failure to transport passengers	INL-1		
05	01/01/06	Sunday	3:34 PM	CDM 51' N of 8th St	22350 v unsafe speed for conditions	INL-1		
05	02/29/09	Sunday	7:07 AM	SB CDM at 15th Street	21735 v P1 tried to pass P2 on right	INL-0		
05	02/02/06	Thursday	2:09 AM	15th St 32' W of Luneta Dr	23152a v unsafe maneuver	H&R		
05	02/06/06	Monday	3:03 PM	10th St 107' E of ECL of CDM	22107 v unsafe lane change	H&R		
05	02/15/06	Monday	5:13 PM	SB CDM 176' N of SCL of 15th St	22107 v unsafe lane change	H&R		
05	03/23/09	Monday	6:00 PM	SB on CDM at 11th St	21900(a) v failure to yield Right of Way	INL-0		
05	04/01/10	Thursday	4:57 PM	900 Block of Camino Del Mar, 1	23152(a)(1) v failure to yield Right of Way	INL-0		
05	02/24/06	Friday	8:36 PM	SB CDM 18.4' N of 11th Street	23152 v Offending vehicle (DUJ)	INL-0		
05	04/07/11	Thursday	5:22 PM	CDM 30' N south of 12th St	21717 v P1 cut off bicyclist while	INL-1		
05	04/21/09	Tuesday	4:32 PM	CDM at 13th Street	21902(a) v V1 drove south on CDM	INL-0		
05	07/14/10	Wednesday	5:42 PM	CDM 88 ft south of 13th St	22107 v P1 drove car past bicyclist	INL-1		
05	04/19/09	Sunday	6:34 PM	CDM 100 ft south of 13th St	21658(a) v V1 in #2 lane NB on CDM	H&R		
05	06/06/08	Tuesday	5:17 PM	CDM 26' N of South of 11th Street	23152(a)(2) v failure to yield under the DUJ	INL-0		
05	12/28/10	Tuesday	5:49 PM	CDM 7' of 11th St	21902(a) v P1 driving SB on CDM	INL-0		
05	06/25/11	Saturday	9:05 PM	CDM at 15th St intersection	21800(a) v Both vehicles in SB drive	H&R		
05	08/22/09	Saturday	6:18 PM	CDM at 13th Street	21600(a) v V1 did not respect the right to give up	INL-0		
05	08/07/10	Sunday	1:45 AM	1000 CDM, 144 feet north of 11	23152(a) v Rear end collision by DUJ	INL-0		
05	02/27/06	Monday	8:41 PM	SB CDM 85' S of SCL of 13th St	23152a, 22 on wet road DUJ veered	DUJ		
05	03/15/07	Wednesday	1:24 PM	CDM 60' S of NCL of 12th St	22106 v Unsafe backing end hit	H&R		
05	08/21/05	Monday	7:46 PM	CDM at 11th Street	22450(a) v Failing to stop for a stop	INL-0		
05	09/05/09	Saturday	11:47 AM	CDM at 10th St	21717 v V1, a car NB on CDM	makin INL-1		
05	08/24/06	Thursday	4:20 PM	CDM at 13th Street	22450(a) v Failing to stop at the stop	INL-0		
05	09/05/06	Monday	12:57 PM	CDM at 13th Street	22450(a) v Failing to stop at the stop	INL-0		
05	09/05/06	Tuesday	10:13 AM	CDM 28' S of South curb line of	22350 v Speed too fast for condit	INL-0		
05	11/26/06	Sunday		CDM @ 13th Street	23152(a) v	INL-0		
05	03/16/07	Friday	10:11 AM	CDM 11 feet S of 11th St		INL-0		
05	08/11/07	Wednesday	10:49 PM	CDM 26' North of 13th St	23152 (b) DUJ+ unsafe speed	INL-0		
05	01/14/08	Monday	2:33 PM	CDM at 15th Street	22350 3 vehicles stopped N/B	CINL-0		
05	11/25/03	Tuesday	8:53 AM	Crosswalk E/B 9th at CDM	Car making right hand turn	INL-1		
05	04/23/04	Friday	4:02 PM	CDM 155' N of North curb line o	21658(a) v failed to give due caution	INL-2		
05	06/12/04	Saturday	1:41 PM	126' N of La Amaluisa	22350 v Unsafe speed, unstable	INL-0		
05	06/14/04	Saturday	7:12 PM	720 CDM	23152(a)(1) DUJ+ unsafe speed	H&R (DUJ)		
05	06/19/04	Sunday	12:38 AM	CDM 172' S of 9th Street	23152(b)(1) DUJ	INL-2		
05	10/13/04	Friday	4:23 PM	CDM at La Amaluisa	21801(a) v Failing to yield to bicyclist	INL-1		
05	05/18/03	Monday	12:24 PM	CDM 225 ft north of 4th St	Unk v mechanical failure, steer	INL-1		
05	04/17/09	Friday	5:21 PM	CDM at La Amaluisa	21801(a) v Two independent riding	INL-2		
05	12/17/10	Friday	8:29 PM	CDM SB at DMHRd	23152(a)(1) v P1 driving SB on CDM	INL-0		
05	05/09/09	Saturday	10:45 AM	CDM 686 feet north of DMHRd	22350 v P1 collided into V2 who v	INL-1		
05	03/28/10	Friday	4:32 PM	CDM 100 feet South of 9th St	22360 v P1 collided into P.2 with	INL-0		
05	02/25/05	Wednesday	8:25 AM	SB CDM to EB DMHRd	21453 v V1 ran around red or red	INL-1		
05	08/19/09	Wednesday	3:51 PM	CDM SB at DMHRd	21453 (a) Violation circular red or r	INL-1		
05	05/17/10	Monday	1:57 PM	CDM 37 ft North of DMHRd	21453 (a) Violation circular red or r	INL-0		
05	03/09/06	Saturday	1:40 AM	720 CDM Parking Lot of Del Mar	unsafe passing maneuver	H&R		
05	07/13/06	Sunday	3:33 PM	CDM 107 ft N of 4th Street	23152(a) v (DUJ), 22350 v	INL-1		
05	03/23/05	Wednesday	6:00 AM	WB DMHRd on CDM	21452(b) v red light violation	INL-0		
05	10/21/05	Friday	9:46 PM	CDM 66.2' N of 4th Street	22350 v Unsafe speed	INL-0		
05	07/27/06	Thursday		CDM at 4th St	23152(b) v CDM	INL-0		
05	08/03/06	Sunday	10:12 AM	DMHRd at CDM intersection	20002(a) v Primary cause	22350 v H&R		

72

No	Date	Day of week	Time	Location	PCF	Cause/Summary	Type	Remarks	
11/12/2006	11/12/2006	Tuesday	1:35 AM	710 CDM (Private Parking)	23152(a)	DUI hit a parked vehicle in parking lot	DUI	possible hit and run	
177	04/23/07	Sunday	4:26 PM	CDM at 9th Street	21453	CVC Circular Red or Red Arm	INJ-0	Vehicle running NB on CDM at 9th St, failure to stop at the red light signal	
193	03/30/08	Tuesday	2:00 AM	CDM at 27th Street	23152(a)	Driving NB on CDM North	INJ-0		
194	04/08/05	Wednesday	11:46 AM	CDM at CVRD	21453(a)	Failure to stop at a red light	INJ-1	V1 ran red light NB on CDM at CVRD and hit V2 that made a left to SB Hwy 101 while the sign	
17	04/02/03	Wednesday	2:30 PM	100 9th CDM or 355 N of CVRD	22107	unsafe movement to right	INJ-1	Associated, biker transient admitted being tired and may have been out of bike lane, vehicle	
19	08/16/03	Thursday	11:25 AM	SE corner of Carmel Valley Rd +	Truck w/ low license plate			See letter of 1/13/04 to AIG, who paid the damage (we never received a sheriff's report)	
20	10/30/03	Thursday	3:04 PM	CDM 170 South of La Amalita	22350	Cvc V2 pulled out of La Amalita	INJ-0	Youthful driver w/ probationary license wanted to show off for girls in car (also illegal), came in	
234	12/12/08	Friday	7:30 PM	CDM & Carmel Valley Road	22107	unknown driver driving sr H&R			
23	11/19/03	Wednesday	5:26 PM	Southbound 14.25 N of CVRD	23152(a)	WDLU careened in car stop	INJ-0		
48	06/11/04	Tuesday	3:16 PM	SB CDM 761 N of NCL	CVRD	22107	unsafe movement to right	INJ-1	Secondary cause: V1 failure to signal (22108) vc
95	01/05/05	Wednesday	12:02 PM	CDM at CVRD	21453(a)	Collision caused by turn	INJ-1	2nd cause: inattention	
101	02/02/05	Wednesday	3:26 AM	CDM 1330 N of CVRD	23152(a)	DUI	INJ-1	CDM car veered off course and overturned, injuring sole driver	
118	10/15/05	Saturday	10:24 AM	SB CDM NTPinas Bridge railing hit by vehicle	(old repair + 8 other sections un			We didn't receive the accident report because this is actually in the City of San Diego	
140	04/04/08	Tuesday	2:58 AM	SE CDM or 704 N or N curline	22350	unsafe speed for conditio	INJ-0	2nd cause: 22107 cvc unsafe turning movement to the right, taxi cab hit "Pay & Display" near	
07	10/14/06	Saturday	3:25 PM	CDM 417 S of Carmel Valley Rd	22107	From NB Torrey Pines R	INJ-0	22101(d) when official traffic control devices are placed as required in subdivisions (b) or (c), 1	
166	12/16/06	Saturday	11:11 AM	Intersection of SB CDM at CVRD	21801(a)	The driver of a vehicle m	INJ-2	The U-turn is not avert, allowed at said location (NB to SB CDM at CVRD)	
176	04/10/07	Tuesday	8:29 AM	CDM 20 N of CVRD	22350	unsafe speed for conditio	INJ-2	Rear and collision at 30 mph, accident caused by unlicensed, uninsured, illegal immigrant, no	
187	06/06/07	Thursday	1:52 AM	CDM 646 North of Carmel Valley Road	Pedestrian crossed E to W	PEDE	Killed	Pedestrian considered to be cause of accident and was killed	
191	01/23/08	Wednesday	11:10 AM	NE Coast Blvd 25 W of CDM	23152(a)	DUI	INJ-0	V1 from NB wanted to turn left on CDM, missed the turn when reaching for cigarettes and hit V1	
97	01/11/05	Tuesday	4:13 PM	Coast Blvd 221 N of 2nd Street	22106	unsafe backing	PD	DUI over 0.08	
331	04/29/11	Friday	1:42 AM	Coast Blvd 4th North of 20th St	23152(a)	FDUJ and 22350 (high skilled-1	INJ-1	pass car ran NB on Coast hit the dip at 80 MPH around 20th Street and knifed around a palm tree	
206	06/05/06	Friday	9:04 PM	SB Coast Blvd 15 N of 21st St	22106	unsafe backing (car stop	H&R	No person shall start a vehicle stopped, standing, or parked on a highway until such movemer	
138	04/01/06	Saturday	11:27 PM	Coast Blvd 193 N of NCL	15th Street	22107	vc	Unsafe turning movement	
08	06/30/00	Friday	7:00 PM	Coast Blvd at 15th Street	22350	vc	V1 rear ended (and dro	Unsafe speed for conditions	
2	04/30/00	Friday	2:42 PM	Coast Blvd 42 N of 22nd Street	22350	vc	Rear and collision into sr	INJ-1	
08	01/17/01	Wednesday	8:25 PM	Coast Blvd 121 S of 2nd Street	22106	vc	unsafe backing		
4	02/21/01	Wednesday	4:13 PM	Coast Blvd 221 N of 20th St	21802(a)	vc	Vehicle 1 didn't yield the PD		
330	04/29/11	Friday	1:16 PM	Coast Blvd at 18th Street	22350	vc	V1 while looking for parki	INJ-1	
09	06/30/01	Saturday	9:36 AM	Coast Blvd at 15th Street	22107	vc	V1 on NB Coast N of 15	INJ-1	
8	07/13/01	Friday	1:06 PM	1500 Coast Blvd 90 N of R/R	22107	vc	V1 on NB Coast N of 15	INJ-1	
09	01/22/02	Tuesday	4:08 PM	Coast Blvd 214 S of SCL	18th Street	22317	vc	V1 opening door hit biker	INJ-1
09	02/20/02	Saturday	12:27 AM	Coast Blvd	23152(a)	vc	w/ drunk in car drove into re	INJ-1	
11	06/01/02	Thursday	4:17 PM	Coast Blvd 211 N of NCL	of 151	23152(a)	East side of 1500 blk	Coast Blvd	
12	03/22/02	Sunday	4:56 PM	Coast Blvd 212 N of NCL	22103	vc	SB parked car made U-	INJ-0	
09	02/05/02	Wednesday	9:21 AM	Coast Blvd 17 North of NCL	22350	vc	vehicle hit stopped vehic	INJ-3	
14	12/20/02	Friday	9:21 AM	Coast Blvd near train tra	21954(a)	vc	Pedestrian outside of c	INJ-2	
15	02/06/03	Saturday	10:05 AM	Coast Blvd 250 N of 15th St	22107	vc	car veered off to right	H&R	
09	02/20/03	Saturday	9:40 AM	Coast Blvd or 230 S of 18th St	21650	vc	Bike rode on sidewalk	EE INJ-0	
16	06/30/03	Monday	4:13 PM	Coast Blvd 160 S of 19th Street	29003(b)	vc	Hitch coupling device not	INJ-0	
08	02/18/04	Wednesday	1:29 PM	Coast Blvd at 18th Street	22106	vc	improper position to make	INJ-0	
35	03/10/04	Wednesday	6:10 PM	Coast Blvd at 16th Street	21802(a)	vc	V1 in V1 crossed stop ba	INJ-1	
225	09/03/06	Monday	4:00 PM	Coast Blvd 85 N of 18th Street	22106	vc	unsafe backing	INJ-0	
36	03/11/04	Thursday	5:30 PM	Coast Blvd or North of north curt	21801(a)	vc	making incomplete U-	INJ-1	
47	05/13/04	Thursday	3:00 PM	SB Coast Blvd 405 N of NCL	of 23152(a)	vc	DUI	INJ-0	
77	06/05/04	Sunday	9:15 AM	NE Coast Blvd 527 S of 18th St	22107	vc	Big luck hit small car on	H&R	
93	12/31/04	Friday	11:45 AM	Coast Blvd just N of R/R	track 22107	vc	Turning movements and	INJ-1	
08	07/30/05	Saturday	1:06 PM	Coast Blvd 228 N of R/R	vc	V1 made U-turn in NB	b INJ-4		
135	03/12/06	Sunday	12:45 PM	Coast Blvd at 15th Street	22350	vc	Rear and collision due to	H&R	
111	07/05/05	Wednesday	9:23 PM	JDB 667 S of NCL of San Dir	21954(a)	vc	pedestrian crossed away	alleged-1	
154	06/03/06	Sunday	11:26 PM	JDB 30 W of Wasat Curt	22107	vc	unsafe turning movement	INJ-2	
28	12/18/03	Thursday	12:30 PM	JDB 633 S of North curb line of	21703	vc	unsafe speed	INJ-4	
10	04/09/04	Friday	6:45 PM	NE JDB 816 S of VDLV	22350	vc	Following too close	H&R	
45	05/02/04	Sunday	11:35 AM	JDB 1325 S of VDLV	22102	vc	unsafe speed	INJ-0	
52	06/12/04	Saturday	12:35 PM	JDB 90N south of Milepost Bus	21703	vc	V1 ran into V2 which was	INJ-1	
58	06/23/04	Wednesday	7:46 PM	Private Property at 2260 JDB	other than		vision obscurement sun	INJ-1	
60	06/24/04	Wednesday	6:30 PM	JDB 15 W of West of Bus Gate	F 22350	vc		INJ-1	
251	06/24/04	Wednesday	12:20 PM	VDLV East of JDB	21650	vc		INJ-0	
62	07/01/04	Thursday	6:26 PM	JDB at 1200 feet South of VDLV	23152(a)	vc	P2 was traveling SB on	J INJ-1	
209	06/21/08	Saturday	12:30 PM	JDB 1900 N South of VDLV	21804(a)	vc		INJ-1	
210	06/29/08	Sunday							
243	04/26/09	Sunday							
303	06/19/10	Thursday							
244	05/08/08	Friday							

23

No	Date	Day of week	Time	Location	PCF	Cause/Summary	Type	Remarks
111/2/2006								
11/12/2006								
10	06/05/03	Saturday	3:32 PM	JDB 1350 S of South of VDLV	22107	Unsafe turning movement	INU-1	No person shall turn a vehicle from a direct course or move right or left upon a roadway until s
341	06/30/11	Thursday	3:55 PM	JDB 2200 Jimmy Durante Blvd	21801	Unsafe turning movement	INU-1	Driver 1 (17 year old girl) caused the collision by violating 21801(a) CVC - Right of Way violat
334	05/09/11	Monday	7:45 AM	JDB 2260 JDB 0.3 miles south of VD 21801	21801	Unsafe turning movement	INU-1	21801(a) CVC Left turn or U-turn driver shall yield right of way (The driver of a vehicle intend
336	06/11/11	Saturday	11:00 PM	DHR Parking Lot of ZEDAAA Fairg 23152	23152	Unsafe turning movement	INU-0	DUI with H&RM attempt, but held back by bystanders 23152 CVC - Driving under the influence
337	06/14/11	Tuesday	2:30 PM	Main Gate of FG towards tunnel	22107	Unsafe turning movement	INU-0	No person shall turn a vehicle from a direct course or move right or left upon a roadway until s
292	06/20/10	Friday	7:20 PM	JDB 8 S of VDLV	22107	Unsafe turning movement	INU-0	Primary Collision Factor due to unsafe turning movement, V1 guided by W-4 FG Traffic pnc
222	06/26/08	Thursday	7:00 AM	West Pkg Lot of Fairgrounds	20002(a)	Unsafe turning movement	INU-2	No further details because the file was not included only know the basic information from the
311	11/14/10	Sunday	7:31 PM	JDB 2260 JDB (Small dirt lot)	UNK VC	Unsafe turning movement	H&RM	V2 was parked in west parking lot of 2260 JDB, an unknown vehicle collided into V2, and left
282	06/28/09	Sunday	6:47 PM	JDB 2260 JDB (Small dirt lot)	UNK VC	Unsafe turning movement	H&RM	It is unlawful for any person who is under the influence of any alcoholic beverage or drug, or u
261	08/19/09	Wednesday	5:18 PM	JDB 27-71 East of West carb in 21804(a)	21804(a)	Unsafe turning movement	INU-0	V1 came out of the FG main exit pkg lot, made a left hand turn into NB JDB, and did not yield
224	03/03/03	Wednesday	9:00 AM	JDB 692 N of San Diego Blvd	21804(a)	Unsafe turning movement	INU-0	V1 leaving FG into SB direction hit V2 running 818 JDB, V1 did not yield the R-o-W
212	07/01/08	Tuesday	1:02 PM	JDB 2260 Jimmy Durante Blvd (Fairg	22350	Unsafe turning movement	INU-0	All as well that ends well
218	07/20/10	Sunday	12:02 PM	JDB 1955 Jimmy Durante Blvd	22350	Unsafe turning movement	INU-0	P1 caused this collision by violating 22350 cvc - unsafe speed No person shall drive a vehicu
307	06/30/10	Monday	12:08 PM	JDB 2260 JDB (Fairgrounds)	23152(a)	Unsafe turning movement	INU-0	(a) the driver of any vehicle involved in an accident resulting only in damage to any property, a
306	07/19/10	Sunday	6:17 PM	JDB 2260 JDB (Fairgrounds)	23152(a)	Unsafe turning movement	INU-0	caused by DUI 23152(e) and (b) > 08
339	06/28/11	Sunday	6:59 PM	JDB 2260 JDB (Fairgrounds)	UNK VC	Unsafe turning movement	H&RM	(Personal remark, the backer was a water truck, the one that got backed into a regular car. I
258	07/02/09	Thursday	7:00 PM	JDB 2260 JDB (Lufke Dnt Lot)	UNK VC	Unsafe turning movement	H&RM	Improper driving - Unsafe Turn and/or Turn Signage
293	07/05/10	Monday	3:15 PM	JDB 2200 Jimmy Durante Blvd (Bg	UNK VC	Unsafe turning movement	H&RM	Never drink and drive !! Because people do stupid things
249	06/13/00	Saturday	5:00 PM	JDB 2260 JDB (FG employee dir lot)	23152(a)	Unsafe turning movement	INU-1	V2 near ended V1 waiting to enter the main FG entrance
217	07/21/08	Friday	10:34 AM	JDB 87 N of North of Main, SD Cou	22350	Unsafe turning movement	INU-0	Big truck hitched safety barricade and dug it along leaving FG, barricade than hit a motorcycle
284	07/21/10	Wednesday	10:34 AM	JDB 87 N of North of Main, SD Cou	22350	Unsafe turning movement	INU-0	V2 near ended V1 waiting to enter the main FG entrance
211	07/01/10	Tuesday	8:35 PM	JDB 2260 JDB (Fairgrounds)	23152(a)	Unsafe turning movement	INU-0	Big truck hitched safety barricade and dug it along leaving FG, barricade than hit a motorcycle
207	06/15/08	Sunday	10:07 PM	JDB 19290 S of South of VDLV	23152(a)	Unsafe turning movement	INU-0	V2 near ended V1 waiting to enter the main FG entrance
286	06/24/10	Thursday	10:15 PM	JDB 877 N of North of San Diego Blvd	23152(a)	Unsafe turning movement	INU-0	Big truck hitched safety barricade and dug it along leaving FG, barricade than hit a motorcycle
94	01/04/05	Tuesday	8:28 PM	JDB 877 N of North of San Diego Blvd	23152(a)	Unsafe turning movement	INU-0	V2 near ended V1 waiting to enter the main FG entrance
205	05/24/08	Saturday	5:51 PM	JDB 324 S of Stadium (FC -	22107	Unsafe turning movement	INU-2	Unsafe turning movement
107	07/02/05	Saturday	4:00 PM	NB JDB 100' N of Bridge at 2201	22107	Unsafe turning movement	INU-1	Unsafe turning movement
210	06/22/08	Sunday	11:13 AM	JDB 1838 S of NCL of VDLV	22107	Unsafe turning movement	INU-1	Unsafe turning movement
109	07/04/05	Monday	4:00 PM	NB JDB 100' N of Bridge at 2201	22107	Unsafe turning movement	INU-1	Unsafe turning movement
150	08/13/06	Sunday	4:00 PM	NB JDB 100' N of Bridge at 2201	22107	Unsafe turning movement	INU-1	Unsafe turning movement
156	09/20/06	Wednesday	4:00 PM	NB JDB 100' N of Bridge at 2201	22107	Unsafe turning movement	INU-1	Unsafe turning movement
157	10/12/06	Thursday	4:00 PM	NB JDB 100' N of Bridge at 2201	22107	Unsafe turning movement	INU-1	Unsafe turning movement
182	11/20/06	Monday	4:00 PM	NB JDB 100' N of Bridge at 2201	22107	Unsafe turning movement	INU-1	Unsafe turning movement
170	02/14/07	Wednesday	4:00 PM	NB JDB 100' N of Bridge at 2201	22107	Unsafe turning movement	INU-1	Unsafe turning movement
72	08/15/04	Sunday	11:12 PM	JDB 172 N of NCL Luzon Ave	21854(a)	Unsafe turning movement	INU-1	Unsafe turning movement
73	08/29/04	Sunday	6:24 PM	NB JDB 172 N of NCL Luzon Ave	21854(a)	Unsafe turning movement	INU-1	Unsafe turning movement
90	11/01/04	Monday	3:53 PM	NB JDB 500' S of David Way 21650	21650	Unsafe turning movement	INU-1	Unsafe turning movement
235	02/23/09	Monday	9:43 PM	JDB 2200 BK of JDB SB, 32' S of Da	23152(a)	Unsafe turning movement	INU-0	Unsafe turning movement
238	12/26/06	Friday	11:40 AM	SB at Entrance to 2260 JDB	21804(a)	Unsafe turning movement	INU-0	Unsafe turning movement
96	01/05/05	Saturday	6:55 PM	JDB 2200 JDB 5 miles S of SCL VDI	21804(a)	Unsafe turning movement	INU-0	Unsafe turning movement
108	07/03/05	Sunday	6:19 AM	JDB 2200 JDB 5 miles S of SCL VDI	21804(a)	Unsafe turning movement	INU-0	Unsafe turning movement
117	10/06/05	Thursday	9:00 PM	JDB 767 S of SCL of David Way	22350	Unsafe turning movement	INU-0	Unsafe turning movement
138	03/27/06	Monday	12:25 AM	JDB 767 S of SCL of David Way	22350	Unsafe turning movement	INU-0	Unsafe turning movement
179	06/10/07	Sunday	6:57 PM	JDB 1011' W of JDB	22350	Unsafe turning movement	INU-0	Unsafe turning movement
48	06/01/04	Tuesday	5:33 PM	JDB 1011' W of JDB	22350	Unsafe turning movement	INU-0	Unsafe turning movement
54	06/16/04	Wednesday	6:11 PM	JDB 281' W of JDB	22107	Unsafe turning movement	INU-1	Unsafe turning movement
57	06/21/04	Monday	12:00 PM	JDB 281' W of JDB	22107	Unsafe turning movement	INU-1	Unsafe turning movement
59	06/23/04	Wednesday	11:00 AM	JDB 281' W of JDB	22107	Unsafe turning movement	INU-1	Unsafe turning movement
65	07/04/04	Sunday	9:16 PM	JDB 281' W of JDB	22107	Unsafe turning movement	INU-1	Unsafe turning movement
69	07/26/04	Friday	1:09 PM	JDB 281' W of JDB	22107	Unsafe turning movement	INU-1	Unsafe turning movement
70	07/26/04	Monday	4:29 PM	JDB 281' W of JDB	22107	Unsafe turning movement	INU-1	Unsafe turning movement
246	03/10/05	Wednesday	7:15 PM	JDB 306-300 BK of WB VDLV	23152(a)	Unsafe turning movement	INU-2	Unsafe turning movement
233	11/29/08	Saturday	3:45 PM	JDB 400' East of Hwy 101	21703	Unsafe turning movement	INU-1	Unsafe turning movement
265	06/08/08	Sunday	10:25 AM	JDB 75 east of ECL of Valley, 21717	21717	Unsafe turning movement	INU-1	Unsafe turning movement
271	05/31/08	Saturday	9:04 AM	JDB 75 east of ECL of Valley, 21717	21717	Unsafe turning movement	INU-1	Unsafe turning movement
80	03/09/04	Thursday	7:54 PM	JDB 238' W of WCL Steve 21804(a)	21804(a)	Unsafe turning movement	INU-0	Unsafe turning movement
82	03/15/04	Wednesday	8:58 PM	JDB 238' W of WCL Steve 21804(a)	21804(a)	Unsafe turning movement	INU-0	Unsafe turning movement
322	02/09/11	Wednesday	2:13 PM	JDB 500 feet east of 21855a	21855a	Unsafe turning movement	INU-0	Unsafe turning movement
289	06/10/11	Thursday	7:39 AM	JDB 500 feet east of 21855a	21855a	Unsafe turning movement	INU-0	Unsafe turning movement
229	01/15/08	Wednesday	4:26 PM	JDB 510' W of JDB	22350	Unsafe turning movement	INU-2	Unsafe turning movement
213	07/02/08	Wednesday	3:25 PM	JDB 348' east of JDB	21804(a)	Unsafe turning movement	INU-0	Unsafe turning movement
287	06/22/10	Tuesday	3:40 PM	JDB 404' east of I-15	21856(a)	Unsafe turning movement	INU-0	Unsafe turning movement
286	06/15/11	Tuesday						

74

No	Date	Day of week	Time	Location	PCF	Cause/Summary	Type	Remarks
11/12/2006								
342	06/30/11	Thursday	3:24 PM	VDLV 178 feet east of Del Mar	E21658(a) CV1 merged over from #2	INJ-1	Primary cause of the first collision was P1 being in violation of CVC 21658(a), which states W	
340	06/30/11	Thursday	4:31 PM	DLV 2102 feet east of Solana	C 21705 and Primary cause of accident	INJ-1	The drive of a motor vehicle shall not follow another vehicle more closely than is reasonable a	
285	06/15/10	Thursday	4:24 PM	VDLV 79 ft East of JDB	21705 vs Following too closely, truck rear end	INJ-0		
274	03/26/10	Friday	8:48 PM	VDLV 300 ft East of Plimito Dr	23152(a), 23152(b), it is unlawful to INJ-0/DUI	INJ-0		
91	11/08/04	Saturday	5:10 PM	EB VDLV 132' E of ECL	of Solari 21804(a) vs Unsafe entering of roadway INJ-0	INJ-0		
291	07/01/10	Thursday	8:10 PM	VDLV at intersection with JDB	22350 vs Driver hit vehicle in front INJ-0/H&R	INJ-0	An unknown driver caused the collision by driving V-1 in violation of 22350 CVC, basic speed	
272	03/17/10	Sunday	4:56 PM	VDLV 142.3 ft East of Solana	CI 21604(a) The driver of any vehicle INJ-1	INJ-1	Bicycle coming down slope along VDLV near Solana Circle, could not avoid a vehicle that was	
309	10/22/10	Friday	9:43 PM	VDLV 66 feet east of JDB	21658 vs Vehicle coming out of JD	INJ-1	Whenever any roadway has been divided into two or more clearly marked lanes for traffic in or	
317	11/19/10	Sunday	11:24 AM	VDLV 484' east of East curb line	22350 vs P1 caused collision being INJ-3	INJ-3	P1 driving in #2 lane WB on VDLV, looked over to her mother driving in #1 lane next to her. R	
281	04/27/10	Tuesday	7:51 PM	VDLV 350' west of JDB	22102 cvc	INJ-0	No person in a business district shall make a U-turn, except at an intersection, or on a divided	
104	02/08/05	Tuesday	8:36 PM	Valley Ave, 7' N of VDLV	23152(a)(b) DUI	INJ-1	2nd cause of collision. P1's attention distracted because she consumed salad which was on h	
110	07/05/05	Tuesday	1:04 PM	EB VDLV 367' E of ECL	of S. Ct 22350 vs Unsafe speed caused 4 r INJ-0	INJ-0		
113	07/05/05	Thursday	12:27 PM	EB VDLV 525' E of Del Mar	22350 vs unsafe speed for conditio INJ-1	INJ-1		
202	04/16/08	Friday	4:38 PM	VDLV 36 ft W of JDB	21606(a) Upon the immediate app INJ-1	INJ-1		
120	09/26/05	Wednesday	4:19 PM	VDLV at South Cedros Avenue	21802 Driver did not yield right INJ-1	INJ-1	The driver of any vehicle approaching any intersection which is controlled by a yield right-of-w	
149	06/12/06	Saturday	10:43 PM	VDLV at CDM	21803(a) C failure to yield right of wa INJ-0	INJ-0		
159	10/23/06	Monday	7:24 AM	VDLV, or 308' 4' W of WCL	JDB 22350 cvc unsafe speed rear end INJ-0	INJ-0		
165	12/15/06	Friday	4:25 PM	VDLV at CDM	21451(a) C Failure to yield row to th INJ-1	INJ-1	A driver facing a circular green signal shall proceed through or turn right or left or make a U-tu	
167	12/17/06	Sunday	-	VDLV or 137' W of JDB	23152(b) C	INJ-1		
171	02/20/07	Saturday	11:44 AM	600 Via De La Valle (Fish Market)	21804vc The driver of any vehicle H&R-1	H&R-1	Also booked for H&R felony per 20001(a) CVC - The driver of any vehicle involved in an accid	
178	05/25/07	Friday	3:25 PM	VDLV 78.8 ft East of ECL	Solan. 22107 vc a safety and then only aft INJ-1	INJ-1	Something flew in driver's eye and she veered of course (WB on VDLV) hit a parked vehicle D	
182	06/26/07	Tuesday	6:49 PM	VDLV just West of I-5 off-ramp	21750 cvc vehicle coming of S/B off INJ-0	INJ-0	The driver of a vehicle overtaking another vehicle or a bicycle proceeding in the same directio	
132	02/21/06	Tuesday	2:21 PM	1670 Coast Blvd (Poseidon Res	23152a vs Person under influence o DUI, H&R	H&R	Primary violation: drive under the influence, secondary violation: veering off direct course colli	
200	07/22/04	Thursday	5:20 PM	Coast Blvd 148' North of 18th St	21804(a) vs The driver of any vehicle INJ-1	INJ-1		
315	12/14/10	Tuesday	11:45 PM	Coast Blvd at 0 ft West of Coast	23651b PCF was Wrong-Way dr INJ-0	INJ-0	P-1 stated he was intoxicated and inadvertently drove the wrong way down a one-way street (	
290	06/16/10	Wednesday	6:26 PM	1660 Coast Blvd - Jake's Privat	23152(a) C DUI, Jake's patron hit and INJ-0	INJ-0		
215	07/10/08	Thursday	3:50 PM	Coast Blvd 1600 Blk (Powerhou	Loss of consciousness	INJ-0	Driver (born 1923, 85 yrs old) hit bicyclist from the rear with front right bumper and right rear v	
269	07/03/10	Sunday	5:30 PM	Coast Blvd at intersection with 1	22103 P1 from NB Coast Blvd, INJ-1	INJ-1	22103 U-turn in residence district. No person in a residence district shall make a U-turn when	
146	08/01/06	Tuesday	10:20 PM	Coast Blvd 30' S of 21st Street	22106 vs Unsafe backing	INJ-0	H&R-Secondary cause matter/in due to on call phone while parking	
197	04/25/08	Friday	10:20 PM	2000 Blk of Coast Blvd	23152(b), 20002(a) CVC, DUI, H&R	H&R	Primary violation: drive under the influence, secondary violation: veering off direct course colli	
198	07/01/08	Tuesday	1:48 PM	Coast Blvd, at 19th St	22350 cvc No person shall drive a v INJ-0	INJ-0		
168	12/29/06	Friday	9:29 AM	DMH-Rd or 144' E of CDM	22350vc Unsafe speed for conditio INJ-2	INJ-2	Driving at a speed that was unsafe for conditions, driver unable to stop in time to prevent collis	
163	06/28/07	Thursday	2:16 PM	DMH-Rd @ CDM	22350 Basic speed V1 rear end INJ-2	INJ-2	V1 caused collision by driving too fast for conditions + associated factor violation of 26453(a) I	
195	04/11/08	Friday	8:27 PM	DMH-Rd @ CDM	22350 Basic speed V1 rear end INJ-1	INJ-1	The one caused the accident was injured	
196	04/12/08	Saturday	12:39 PM	CDM at 4th St intersection	21453(a) CV1 failed to stop at red light INJ-0	INJ-0	driver driving too fast lost control over vehicle and ran over median island and landed on deco	
169	07/05/07	Saturday	12:02 AM	Crest Rd/44 ft S of Hosaka Drive	22350vc Unsafe speed for conditio INJ-0	INJ-0		
173	02/22/07	Thursday	8:13 AM	Crest Rd & Kliah Way	20002(a) C' Hit and Run Mademean H&R	H&R	Collision caused by turning left, not safely negotiating semi-truck through a turning movement	
199	07/13/07	Friday	8:00 PM	Starford Ct South of 13th St	22107 cvc Unsafe turning movement H&R	H&R		
227	09/23/08	Tuesday	9:20 PM	Starford Ct 214 ft S of 11th St	23152(a) C V1 NB on Starford below DUI, INJ-0	INJ-0	It is unlawful for any person who is under the influence of any alcoholic beverage or drug, or u	
301	09/14/10	Saturday	7:55 PM	13th St 50' West of Starford Ct	20002(a) C P2 was parked on the no H&R	H&R	The primary cause of the collision was determined to be P1 in violation of 22350 cvc, which st	
277	09/27/10	Saturday	6:28 PM	200 Block of Starford Ct	N/A occur Unsafe speed	INJ-1	3 bikes riding at high speed down Starford Ct 200 Blk, one bike hit speedbump and bicyclist lo	
160	11/14/06	Tuesday	5:49 PM	Starford Ct 181' S of 6th Street	23152(a) vs DUI, H&R, uninsured w H&R	H&R	driver hit left rear with his front right when pulling out of parking spot, after drinking	
89	10/30/04	Saturday	5:25 AM	Starford Ct 150' N of 13th Street	unknown Stolen maroon Honda Cr H&R-W	H&R-W		
181	11/14/06	Tuesday	5:25 AM	Starford Ct 181' S of 6th Street	unknown Stolen maroon Honda Cr H&R-W	H&R-W		
31	01/17/04	Saturday	2:45 PM	2260 JDB Pkg lot	22107 vc Unsafe turning movement H&R	H&R		
32	07/30/04	Friday	11:57 AM	13th Street 50' W of Starford Ct	22106 vc unsafe backing	INJ-0		
33	02/15/04	Sunday	4:10 PM	13th Street 111' W of Starford C	22106 vc unsafe backing	INJ-0		
37	03/18/04	Thursday	4:56 PM	11th Street 3' E of West curb line	22100 vc left turn out short	INJ-0		

**Appendix E**  
**Applicable Sections of California Vehicle Code**

75

**Assembly Bill No. 529**

**CHAPTER 528**

An act to amend Section 21400 of the Vehicle Code, relating to vehicles.

{Approved by Governor October 7, 2011. Filed with  
Secretary of State October 7, 2011.}

**LEGISLATIVE COUNSEL'S DIGEST**

AB 529, Gatto. Vehicles: speed limits: downward speed zoning.

(1) Existing law requires the Department of Transportation, after consultation with local agencies and public hearings, to adopt rules and regulations prescribing uniform standards and specifications for all official traffic control devices and setting of speed limits. Existing law makes it a crime for a driver to fail to obey a sign or signal, defined as regulatory in the California Manual on Uniform Traffic Control Devices (Manual), or a Department of Transportation-approved supplement to that manual.

This bill would require the Department of Transportation to revise the Manual, as it read on January 1, 2012, to require the department or a local authority to round speed limits to within 5 miles per hour of the 85th-percentile speed of free-flowing traffic. The bill would allow, in cases in which the speed limit needs to be rounded up to the nearest 5 miles per hour increment of the 85th-percentile speed, the department or a local authority to decide to instead round down the speed limit to the lower 5 miles per hour increment, but then the department or a local authority would be prohibited from reducing the speed limit any further for any reason.

(2) This bill would incorporate changes to Section 21400 of the Vehicle Code proposed by both this bill and AB 345, which would become operative only if both bills are enacted and become effective on or before January 1, 2012, and this bill is chaptered last.

*The people of the State of California do enact as follows:*

SECTION 1. It is the intent of the Legislature that the changes made to subdivision (b) of Section 21400 of the Vehicle Code by Section 2 of this act or the changes made to subdivision (f) of Section 21400 of the Vehicle Code by Section 2.5 of this act shall not alter any other provision of the California Manual on Uniform Traffic Control Devices as it read on January 1, 2012.

SEC. 2. Section 21400 of the Vehicle Code is amended to read:

21400. (a) (1) The Department of Transportation shall, after consultation with local agencies and public hearings, adopt rules and regulations prescribing uniform standards and specifications for all official traffic control

76

(F) Two representatives, approved by the director, from nonmotorized users of the highway recommended by the Active Transportation and Livable Communities Committee created within the department.

(b) For purposes of this section, "users of the highway" means bicyclists, children, persons with disabilities, motorists, movers of commercial goods, pedestrians, users of public transportation, and seniors.

(c) The Department of Transportation shall, after notice and public hearing, determine and publicize the specifications for uniform types of warning signs, lights, and devices to be placed upon a highway by a person engaged in performing work that interferes with or endangers the safe movement of traffic upon that highway.

(d) Only those signs, lights, and devices as are provided for in this section shall be placed upon a highway to warn traffic of work which is being performed on the highway.

(e) Control devices or markings installed upon traffic barriers on or after January 1, 1984, shall conform to the uniform standards and specifications required by this section.

(f) The Department of Transportation shall revise the California Manual on Uniform Traffic Control Devices, as it read on January 1, 2012, to require the Department of Transportation or a local authority to round speed limits to the nearest five miles per hour of the 85th percentile of the free-flowing traffic. However, in cases in which the speed limit needs to be rounded up to the nearest five miles per hour increment of the 85th-percentile speed, the Department of Transportation or a local authority may decide to instead round down the speed limit to the lower five miles per hour increment, but then the Department of Transportation or a local authority shall not reduce the speed limit any further for any reason.

SEC. 3. Section 2.5 of this bill incorporates amendments to Section 21400 of the Vehicle Code proposed by both this bill and Assembly Bill 345. It shall only become operative if (1) both bills are enacted and become effective on or before January 1, 2012, (2) each bill amends Section 21400 of the Vehicle Code, and (3) this bill is enacted after Assembly Bill 345, in which case Section 2 of this bill shall not become operative.

O

77

## APPLICABLE SECTIONS OF THE CALIFORNIA VEHICLE CODE

### ***Basic Speed Law***

Section 22350. No person shall drive a vehicle upon a highway at a speed greater than is reasonable or prudent having due regard for weather, visibility, the traffic on, and the surface and width of, the highway, and in no event at a speed which endangers the safety of persons or property.

### ***Speed Law Violations***

Section 22351. (a) The speed of any vehicle upon a highway not in excess of the limits specified in Section 22352 or established as authorized in this code is lawful unless clearly proved to be in violation of the basic speed law.

(b) The speed of any vehicle upon a highway in excess of the prima facie speed limits in Section 22352 or established as authorized in this code is prima facie unlawful unless the defendant establishes by competent evidence that the speed in excess of said limits did not constitute a violation of the basic speed law at the time, place and under the conditions then existing.

### ***Prima Facie Speed Limits***

Section 22352. (a) The prima facie limits are as follows and shall be applicable unless changed as authorized in this code and, if so changed, only when signs have been erected giving notice thereof:

(1) Fifteen miles per hour:

(A) When traversing a railway grade crossing, if during the last 100 feet of the approach to the crossing the driver does not have a clear and unobstructed view of the crossing and of any traffic on the railway for a distance of 400 feet in both directions along the railway. This subdivision does not apply in the case of any railway grade crossing where a human flagman is on duty or a clearly visible electrical or mechanical railway crossing signal device is installed but does not then indicate the immediate approach of a railway train or car.

(B) When traversing any intersection of highways if during the last 100 feet of the driver's approach to the intersection the driver does not have a clear and unobstructed view of the intersection and of any traffic upon all of the highways entering the intersection for a distance of 100 feet along all those highways, except at an intersection protected by stop signs or yield right-of-way signs or controlled by official traffic control signals.

(C) On any alley.

(2) Twenty-five miles per hour:

78

- (A) On any highway other than a state highway, in any business or residence district unless a different speed is determined by local authority under procedures set forth in this code.
- (B) When approaching or passing a school building or the grounds thereof, contiguous to a highway and posted with a standard "SCHOOL" warning sign, while children are going to or leaving the school either during school hours or during the noon recess period. The prima facie limit shall also apply when approaching or passing any school grounds which are not separated from the highway by a fence, gate, or other physical barrier while the grounds are in use by children and the highway is posted with a standard "SCHOOL" warning sign. For purposes of this subparagraph, standard "SCHOOL" warning signs may be placed at any distance up to 500 feet away from school grounds.
- (C) When passing a senior center or other facility primarily used by senior citizens, contiguous to a street other than a state highway and posted with a standard "SENIOR" warning sign. A local authority is not required to erect any sign pursuant to this paragraph until donations from private sources covering those costs are received and the local agency makes a determination that the proposed signing should be implemented. A local authority may, however, utilize any other funds available to it to pay for the erection of those signs.

(b) This section shall become operative on March 1, 2001.

***Speed Limit Change: Consultation and Consideration Requirements***

Section 22354.5. (a) Whenever the Department of Transportation determines, upon the basis of an engineering and traffic survey, to increase or decrease the existing speed limit on a particular portion of a state highway pursuant to Section 22354, it shall, prior to increasing or decreasing that speed limit, consult with, and take into consideration the recommendations of, the Department of the California Highway Patrol.

(b) The city council or board of supervisors of a city or county through which any portion of a state highway subject to subdivision (a) extends may conduct a public hearing on the proposed increase or decrease at a convenient location as near as possible to that portion of state highway. The Department of Transportation shall take into consideration the results of the public hearing in determining whether to increase or decrease the speed limit.

***Increase of Local Speed Limits to 65 Miles Per Hour***

Section 22357. (a) Whenever a local authority determines upon the basis of an engineering and traffic survey that a speed greater than 25 miles per hour would facilitate the orderly movement of vehicular traffic and would be reasonable and safe upon any street other than a state highway

79

otherwise subject to a prima facie limit of 25 miles per hour, the local authority may by ordinance determine and declare a prima facie speed limit of 30, 35, 40, 45, 50, 55, or 60 miles per hour or a maximum speed limit of 65 miles per hour, whichever is found most appropriate to facilitate the orderly movement of traffic and is reasonable and safe. The declared prima facie or maximum speed limit shall be effective when appropriate signs giving notice thereof are erected upon the street and shall not thereafter be revised except upon the basis of an engineering and traffic survey. This section does not apply to any 25-mile-per-hour prima facie limit which is applicable when passing a school building or the grounds thereof or when passing a senior center or other facility primarily used by senior citizens.

(b) This section shall become operative on the date specified in subdivision (c) of Section 22366.

### ***Decrease Near Children's Playgrounds***

Section 22357.1. Notwithstanding Section 22357, a local authority may, by ordinance or resolution, set a prima facie speed limit of 25 miles per hour on any street, other than a state highway, adjacent to any children's playground in a public park but only during particular hours or days when children are expected to use the facilities. The 25 miles per hour speed limit shall be effective when signs giving notice of the speed limit are posted.

### ***Decrease of Local Speed Limits***

Section 22358. (a) Whenever a local authority determines upon the basis of an engineering and traffic survey that the limit of 65 miles per hour is more than is reasonable or safe upon any portion of any street other than a state highway where the limit of 65 miles per hour is applicable, the local authority may by ordinance determine and declare a prima facie speed limit of 60, 55, 50, 45, 40, 35, 30, or 25 miles per hour, whichever is found most appropriate to facilitate the orderly movement of traffic and is reasonable and safe, which declared prima facie limit shall be effective when appropriate signs giving notice thereof are erected upon the street.

(b) This section shall become operative on the date specified in subdivision (c) of Section 22366.

Section 22358.5. It is the intent of the Legislature that physical conditions such as width, curvature, grade and surface conditions, or any other condition readily apparent to a driver, in the absence of other factors, would not require special downward speed zoning, as the basic rule of Section 22350 is sufficient regulation as to such conditions.

### ***Boundary Line Streets***

Section 22359. With respect to boundary line streets and highways where portions thereof are within different jurisdictions, no ordinance adopted under Sections 22357 and 22358 shall be effective as to any such portion until

80

all authorities having jurisdiction of the portions of the street concerned have approved the same. This section shall not apply in the case of boundary line streets consisting of separate roadways within different jurisdictions.

### **Speed Trap Prohibition**

Section 40801. No peace officer or other person shall use a speed trap in arresting, or participating or assisting in the arrest of, any person for any alleged violation of this code nor shall any speed trap be used in securing evidence as to the speed of any vehicle for the purpose of an arrest or prosecution under this code.

### **Speed Traps**

- Section 40802. (a) A "speed trap" is either of the following:
- (1) A particular section of a highway measured as to distance and with boundaries marked, designated, or otherwise determined in order that the speed of a vehicle may be calculated by securing the time it takes the vehicle to travel the known distance.
  - (2) A particular section of a highway with a prima facie speed limit that is provided by this code or by local ordinance under subparagraph (A) of paragraph (2) of subdivision (a) of Section 22352, or established under Section 22354, 22357, 22358, or 22358.3, if that prima facie speed limit is not justified by an engineering and traffic survey conducted within five years prior to the date of the alleged violation, and enforcement of the speed limit involves the use of radar or any other electronic device that measures the speed of moving objects. This paragraph does not apply to a local street, road, or school zone.
- (b) (1) For purposes of this section, a local street or road is ( ) ***one that is functionally classified as "local" on the "California Road System Maps," that are approved by the Federal Highway Administration and maintained by the Department of Transportation. When a street or road does not appear on the "California Road System Maps," it may be defined as a "local street or road" if it primarily provides access to abutting residential property and meets the following three conditions:***
- (A) Roadway width of not more than 40 feet.
  - (B) Not more than one-half of a mile of uninterrupted length. Interruptions shall include official traffic control signals as defined in Section 445.
  - (C) Not more than one traffic lane in each direction.
- (2) For purposes of this section "school zone" means that area approaching or passing a school building or the grounds thereof

81

JUN 04 2012 ITEM 12

that is contiguous to a highway and on which is posted a standard "SCHOOL" warning sign, while children are going to or leaving the school either during school hours or during the noon recess period. "School zone" also includes the area approaching or passing any school grounds that are not separated from the highway by a fence, gate, or other physical barrier while the grounds are in use by children if that highway is posted with a standard "SCHOOL" warning sign.

- (c) (1) When all of the following criteria are met, paragraph (2) of this subdivision shall be applicable and subdivision (a) shall not be applicable:
    - (A) When radar is used, the arresting officer has successfully completed a radar operator course of not less than 24 hours on the use of police traffic radar, and the course was approved and certified by the Commission on Peace Officer Standards and Training.
    - (B) When laser or any other electronic device is used to measure the speed of moving objects, the arresting officer has successfully completed the training required in subparagraph (A) and an additional training course of not less than two hours approved and certified by the Commission on Peace Officer Standards and Training.
  - (C) (i) The prosecution proved that the arresting officer complied with subparagraphs (A) and (B) and that an engineering and traffic survey has been conducted in accordance with subparagraph (B) of paragraph (2). The prosecution proved that, prior to the officer issuing the notice to appear, the arresting officer established that the radar, laser, or other electronic device conformed to the requirements of subparagraph (D).
  - (ii) The prosecution proved the speed of the accused was unsafe for the conditions present at the time of alleged violation unless the citation was for a violation of Section 22349, 22356, or 22406.
  - (D) The radar, laser, or other electronic device used to measure the speed of the accused meets or exceeds the minimal operational standards of the National Traffic Highway Safety Administration, and has been calibrated within the three years prior to the date of the alleged violation by an independent certified laser or radar repair and testing or calibration facility.
- (2) A "speed trap" is either of the following:
- (A) A particular section of a highway measured as to distance and with boundaries marked, designated, or otherwise determined in order that the speed of a vehicle may be calculated by securing the time it takes the vehicle to travel the known distance.

82

- (B) (i) A particular section of a highway or state highway with a prima facie speed limit that is provided by this code or by local ordinance under subparagraph (A) of paragraph (2) of subdivision (a) of Section 22352, or established under Section 22354, 22357, 22358, or 22358.3, if that prima facie speed limit is not justified by an engineering and traffic survey conducted within one of the following time periods, prior to the date of the alleged violation, and enforcement of the speed limit involves the use of radar or any other electronic device that measures the speed of moving objects:
  - (I) Except as specified in subclause (II), seven years.
  - (II) If an engineering and traffic survey was conducted more than seven years prior to the date of the alleged violation, and a registered engineer evaluates the section of the highway and determines that no significant changes in roadway or traffic conditions have occurred, including, but not limited to, changes in adjoining property or land use, roadway width, or traffic volume, 10 years.
- (ii) This subparagraph does not apply to a local street, road, or school zone.

### **Speed Trap Evidence**

Section 40803.

(a) No evidence as to the speed of a vehicle upon a highway shall be admitted in any court upon the trial of any person in any prosecution under this code upon a charge involving the speed of a vehicle when the evidence is based upon or obtained from or by the maintenance or use of a speedtrap.

(b) In any prosecution under this code of a charge involving the speed of a vehicle, where enforcement involves the use of radar or other electronic devices which measure the speed of moving objects, the prosecution shall establish, as part of its prima facie case, that the evidence or testimony presented is not based upon a speedtrap as defined in paragraph (2) of subdivision (a) of Section 40802.

(c) When a traffic and engineering survey is required pursuant to paragraph (2) of subdivision (a) of Section 40802, evidence that a traffic and engineering survey has been conducted within five years of the date of the alleged violation or evidence that the offense was committed on a local street or road as defined in paragraph (2) of subdivision (a) of Section 40802 shall constitute a prima facie case that the evidence or testimony is not based upon a speedtrap as defined in paragraph (2) of subdivision (a) of Section 40802.

83

**Appendix F**  
**Applicable Sections of California MUTCD**

84

deviation above the average speed and establishes the upper limit of what is considered reasonable and prudent. As with most laws, speed limits need to depend on the voluntary compliance of the greater majority of motorists. Speed limits cannot be set arbitrarily low, as this would create violators of the majority of drivers and would not command the respect of the public.

**Standard:**

**After an engineering and traffic survey (E&TS) study has been made in accordance with established traffic engineering practices, the Speed Limit (R2-1) sign (see Figure 2B-1) shall display the limit established by law, ordinance, regulation, or as adopted by the authorized agency. The speed limits shown shall be in multiples of 10 km/h or (5 mph).**

**Guidance:**

At least once every 5, 7 or 10 years, in compliance with CVC Section 40802, States and local agencies should reevaluate non-statutory speed limits on segments of their roadways that have undergone a significant change in roadway characteristics or surrounding land use since the last review.

No more than three speed limits should be displayed on any one Speed Limit sign or assembly.

~~When a speed limit is to be posted, it should be within 10 km/h or 5 mph of the 85th percentile speed of free-flowing traffic.~~

**Standard:**

**When a speed limit is to be posted, it shall be established at the nearest 10 km/h (5 mph) increment of the 85th-percentile speed of free-flowing traffic, except as shown in the Option below.**

**Option:**

The posted speed may be reduced by 10 km/h (5 mph) from the nearest 10 km/h (5 mph) increment of the 85th-percentile speed, in compliance with CVC Sections 627 and 22358.5.

**Standard:**

**If the speed limit to be posted has had the 10 km/h (5 mph) reduction applied, then an E&TS shall document in writing the conditions and justification for the lower speed limit and be approved by a registered Civil or Traffic Engineer. The reasons for the lower speed limit shall be in compliance with CVC Sections 627 and 22358.5.**

**Support:**

The following examples are provided to explain the application of these speed limit criteria:

1. If the 85<sup>th</sup> percentile speed in a speed survey for a location was 37 mph, then the speed limit would be established at 35 mph since it is the closest 5 mph increment to the 37 mph speed. As indicated by the option, this 35 mph established speed limit can be further reduced by 5 mph to 30 mph if the conditions and justification for using this lower speed limit are documented in the E&TS and approved by a registered Civil or traffic Engineer.
2. If the 85<sup>th</sup> percentile speed in a speed survey for a location was 33 mph, then the speed limit would be established at 35 mph since it is the closest 5 mph increment to the 33 mph speed. As indicated by the option, this 35 mph established speed limit can be further reduced by 5 mph to 30 mph if the conditions and justification for using this lower speed limit are documented in the E&TS and approved by a registered Civil or traffic Engineer.
3. If the 85<sup>th</sup> percentile speed in a speed survey for a location was 38 mph, then the speed limit would be established at 40 mph since it is the closest 5 mph increment to the 38 mph speed. As indicated by the option, this 40 mph established speed limit can be further reduced by 5 mph to 35 mph if the conditions and justification for using this lower speed limit are documented in the E&TS and approved by a registered Civil or traffic Engineer.

**Standard:**

**This method of establishing posted speed limits shall apply to all engineering and traffic surveys (E&TS) performed on or after July 1, 2009 in accordance with the Department's Traffic Operations Policy Directive Number 09-04 dated June 29, 2009.**

85

**Support:**

Any existing E&TS that was performed before July 1, 2009 in accordance with previous traffic control device standards is not required to comply with the new criteria until it is due for reevaluation per the 5, 7 or 10 year criteria.

**Option:**

Other factors that may be considered when establishing speed limits are the following:

- A. Road characteristics, shoulder condition, grade, alignment, and sight distance;
- B. The pace speed;
- C. Roadside development and environment;
- D. Parking practices and pedestrian activity; and
- E. Reported crash experience for at least a 12-month period.

Two types of Speed Limit signs may be used: one to designate passenger car speeds, including any nighttime information or minimum speed limit that might apply; and the other to show any special speed limits for trucks and other vehicles.

A changeable message sign that changes the speed limit for traffic and ambient conditions may be installed provided that the appropriate speed limit is shown at the proper times.

A changeable message sign that displays to approaching drivers the speed at which they are traveling may be installed in conjunction with a Speed Limit sign.

**Guidance:**

If a changeable message sign displaying approach speeds is installed, the legend YOUR SPEED XX km/h (MPH) or such similar legend should be shown. The color of the changeable message legend should be a yellow legend on a black background or the reverse of these colors.

**Support:**

Advisory Speed signs are discussed in Sections 2C.36 and 2C.46 and Temporary Traffic Control Zone Speed signs are discussed in Part 6.

Speed limits in California are governed by the California Vehicle Code (CVC), Sections 22348 through 22413; also, pertinent sections are found in Sections 627 and 40802 and others referenced in this section. See Section 1A.11 for information regarding this publication.

Refer to Part 6, Section 6C.01 for speed limit signs in temporary traffic control zones. Refer to Part 7 for speed limit signs in school areas.

**Engineering and Traffic Survey (E&TS)**

**Support:**

CVC Section 627 defines the term "Engineering and traffic survey" and lists its requirements.

**Standard:**

An engineering and traffic survey (E&TS) shall include, among other requirements deemed necessary by the department, consideration of all of the following:

- (1) Prevailing speeds as determined by traffic engineering measurements.
- (2) Collision records.
- (3) Highway, traffic, and roadside conditions not readily apparent to the driver.

**Guidance:**

The E&TS should contain sufficient information to document that the required three items of CVC Section 627 are provided and that other conditions not readily apparent to a driver are properly identified.

Prevailing speeds are determined by a speed zone survey. A speed zone survey should include:

- The intent of the speed measurements is to determine the actual speed of unimpeded traffic. The speed of traffic should not be altered by concentrated law enforcement, or other means, just prior to, or while taking the speed measurements.
- Only one person is required for the field work. Speeds should be read directly from a radar or other electronic speed measuring devices; or,
- Devices, other than radar, capable of accurately distinguishing and measuring the unimpeded speed of free flowing vehicles may be used.

86

- A location should be selected where prevailing speeds are representative of the entire speed zone section. If speeds vary on a given route, more than one speed zone section may be required, with separate measurements for each section. Locations for measurements should be chosen so as to minimize the effects of traffic signals or stop signs.
- Speed measurements should be taken during off-peak hours between peak traffic periods on weekdays. If there is difficulty in obtaining the desired quantity, speed measurements may be taken during any period with free flowing traffic.
- The weather should be fair (dry pavement) with no unusual conditions prevailing.
- The surveyor and equipment should not affect the traffic speeds. For this reason, an unmarked car is recommended, and the radar speed meter located as inconspicuously as possible.
- In order for the sample to be representative of the actual traffic flow, the minimum sample should be 100 vehicles in each survey. In no case should the sample contain less than 50 vehicles.
- Short speed zones of less than 0.8 km (0.5 mi) should be avoided, except in transition areas.
- Speed zone changes should be coordinated with changes in roadway conditions or roadside development.
- Speed zoning should be in 20 km/h (10 mph) increments except in urban areas where 10 km/h (5 mph) increments are preferable.
- Speed zoning should be coordinated with adjacent jurisdictions.

Support:

Physical conditions such as width, curvature, grade and surface conditions, or any other condition readily apparent to the driver, in the absence of other factors, would not require special downward speed zoning. Refer to CVC 22358.5.

Option:

When qualifying an appropriate speed limit, local authorities may also consider all of the following findings:

1. Residential density, if any of the following conditions exist on the particular portion of highway and the property contiguous thereto, other than a business district:
  - a. Upon one side of the highway, within 0.4 km (0.25 mi), the contiguous property fronting thereon is occupied by 13 or more separate dwelling houses or business structures.
  - b. Upon both sides of the highway, collectively, within a distance of 0.4 km (0.25 mi) the contiguous property fronting thereon is occupied by 16 or more separate dwelling houses or business structures.
  - c. The portion of highway is larger than 0.4 km (0.25 mi) but has the ratio of separate dwelling houses or business structures to the length of the highway described in either subparagraph a or b.
2. Pedestrian and bicyclist safety.

The following two methods of conducting E&TS may be used to establish speed limits:

1. State Highways - The E&TS for State highways is made under the direction of the Department of Transportation's District Traffic Engineer. The data includes:
  - a. One copy of the Standard Speed Zone Survey Sheet (See Figure 2B-101(CA)) showing:
    - A north arrow
    - Engineer's station or post mileage
    - Limits of the proposed zones
    - Appropriate notations showing type of roadside development, such as "scattered business," "solid residential," etc. Schools adjacent to the highway are shown, but other buildings need not be plotted unless they are a factor in the speed recommendation or the point of termination of a speed zone.
    - Collision rates for the zones involved
    - Average daily traffic volume
    - Location of traffic signals, signs and markings
    - If the highway is divided, the limits of zones for each direction of travel
    - Plotted 85<sup>th</sup> percentile and pace speeds at location taken showing speed profile
  - b. A report to the District Director that includes:
    - The reason for the initiation of speed zone survey.
    - Recommendations and supporting reasons.

- The enforcement jurisdictions involved and the recommendations and opinions of those officials.
  - The stationing or reference post in kilometers (mileage) at the beginning and ending of each proposed zone and any intermediate equations. Location ties must be given to readily identifiable physical features.
2. City and County Through Highways, Arterials, Collector Roads and Local Streets.
- a. The short method of speed zoning is based on the premise that a reasonable speed limit is one that conforms to the actual behavior of the majority of motorists, and that by measuring motorists' speeds, one will be able to select a speed limit that is both reasonable and effective. Other factors that need to be considered include but are not limited to: the most recent two-year collision record, roadway design speed, safe stopping sight distance, superelevation, shoulder conditions, profile conditions, intersection spacing and offsets, commercial driveway characteristics, and pedestrian traffic in the roadway without sidewalks.
  - b. Determination of Existing Speed Limits - Figures 2B-103(CA) & 2B-104(CA) show samples of data sheets which may be used to record speed observations. Specific types of vehicles may be tallied by use of letter symbols in appropriate squares.

In most situations, the short form for local streets and roads will be adequate; however, the procedure used on State highways may be used at the option of the local agency.

**Guidance:**

The factors justifying a reduction below the 85<sup>th</sup> percentile speed for the posted speed limit are the same factors mentioned above. Whenever such factors are considered to establish the speed limit, they should be documented on the speed zone survey or the accompanying engineering report.

The establishment of a speed limit of more than 10 km/h (5 mph) below the 85<sup>th</sup> percentile speed should be done with great care as studies have shown that establishing a speed limit at less than the 85<sup>th</sup> percentile generally results in an increase in collision rates; in addition, this may make violators of a disproportionate number of the reasonable majority of drivers.

**Support:**

Generally, the most decisive evidence of conditions not readily apparent to the driver surface in collision histories.

Speed limits are established at or near the 85<sup>th</sup> percentile speed, which is defined as that speed at or below which 85<sup>th</sup> percent of the traffic is moving. The 85<sup>th</sup> percentile speed is often referred to as the critical speed. Pace speed is defined as the 16 km/h (10 mph) increment of speed containing the largest number of vehicles (See Figure 2B-102(CA)). The lower limit of the pace is plotted on the Speed Zone Survey Sheets as an aid in determining the proper zone limits. Speed limits higher than the 85<sup>th</sup> percentile are not generally considered reasonable and prudent. Speed limits below the 85<sup>th</sup> percentile do not ordinarily facilitate the orderly movement of traffic and require constant enforcement to maintain compliance. Speed limits established on the basis of the 85<sup>th</sup> percentile conform to the consensus of those who drive highways as to what speed is reasonable and prudent, and are not dependent on the judgment of one or a few individuals.

The majority of drivers comply with the basic speed law. Speed limits set at or near the 85<sup>th</sup> percentile speed provide law enforcement officers with a limit to cite drivers who will not conform to what the majority considers reasonable and prudent. Further studies show that establishing a speed limit at less than the 85<sup>th</sup> percentile (Critical Speed) generally results in an increase in collision rates.

**Option:**

When roadside development results in traffic conflicts and unusual conditions which are not readily apparent to drivers, as indicated in collision records, speed limits somewhat below the 85<sup>th</sup> percentile may be justified. Concurrence and support of enforcement officials are necessary for the successful operation of a restricted speed zone.

**Guidance:**

Speed zones of less than 0.8 km (0.5 mi) and short transition zones should be avoided.

**Signs**

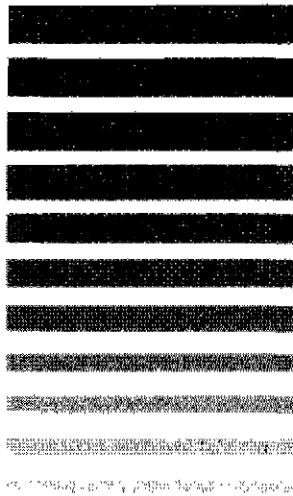
**Standard:**

The Speed Limit (R2-1) sign shall be used to give notice of a prima facie or maximum speed limit except as provided under Prima Facie Speed Limits in CVC 22352.

JUN 4 2012 ITEM 12

# REALISTIC SPEED ZONING

Why  
&  
How



89

**REALISTIC  
SPEED ZONING  
Why and How**

---

---

TO PUBLIC OFFICIALS AND INTERESTED CITIZENS  
RECEIVING THIS MANUAL:

All too often speed zoning is considered a cure-all for a community's traffic ills. Citizens frequently demand speed zoning in an effort to develop a quick solution to complicated traffic problems.

Realistic speed zoning is a traffic engineering tool used to derive the best traffic service for a given set of conditions. This manual tells what realistic speed zoning will do, what it won't do, and how to go about it.

We hope you will find this booklet useful and will keep it in your files for continuing reference. Additional copies are available upon request, and inquiries about the points therein are welcomed.

UNIVERSITY OF CALIFORNIA

TRAVEL INFORMATION CENTER



UNIVERSITY OF CALIFORNIA

TRAVEL INFORMATION CENTER  
UNIVERSITY OF CALIFORNIA

90

JUN 04 2012 ITEM 12

INTRODUCTION

---

---

This manual is a practical guide to realistic speed zoning for those who are unfamiliar with engineering and traffic surveys as defined in the California Vehicle Code.

Speed zoning should generally be applied to major thoroughfares carrying appreciable volumes of traffic, transition points on major highways from rural to urban conditions and areas with a high number of speed related collisions or unusual enforcement problems. The Vehicle Code supports this viewpoint.

THE UNIVERSITY OF CALIFORNIA  
INSTITUTE OF TRANSPORTATION STUDIES  
4054 AVENUE LAWRENCE  
BERKELEY, CALIFORNIA 94720-1787  
TEL: (415) 845-6900 FAX: (415) 845-6901  
WWW: WWW.ITSTUDIES.ORG

The first part of the manual tells why speed limits should be realistic and selected on the basis of an engineering and traffic survey. The second section shows how to complete such a survey and how to select a realistic speed limit. When called upon, the Public Affairs staff of the Automobile Club of Southern California will be happy to be of further service regarding specific speed zoning problems.

Acknowledgment is given to the Institute of Transportation Studies, University of California, for permission to use material from the syllabus "Fundamentals of Traffic Engineering" and to the California Department of Transportation for excerpts from the "State Traffic Manual."

Page 1



91

## SPEED ZONING - WHY?

### FUNDAMENTALS OF REALISTIC SPEED ZONING

---

---

Most citizens can be relied upon to behave in a reasonable manner as they go about their daily activities. Many of our laws reflect observations of the way reasonable people behave under most circumstances. Traffic regulations are also based upon observations of the behavior of groups of motorists under various conditions. Generally speaking, traffic laws that reflect the behavior of the majority of motorists are found to be successful. Laws that arbitrarily restrict the majority of drivers encourage wholesale violations, lack public support and usually fail to bring about desirable changes in driving behavior. This is especially true of speed zoning.

Speed zoning is based upon several fundamental concepts deeply rooted in our American system of government and law.

- Driving behavior is an extension of social attitude. The majority of drivers operate their vehicles in a safe and reasonable manner as demonstrated by their consistently favorable driving records.
- The normally careful and competent actions of a reasonable person should be considered legal.
- Laws are established for the protection of the public and the regulation of unreasonable behavior by the individual.
- Laws cannot be effectively enforced without the consent and voluntary compliance of the public majority.

Public acceptance of these precepts is normally instinctive. However, the same public, when emotionally aroused in a specific instance, will invariably reject these fundamentals and rely instead on more comfortable and widely held misconceptions, such as:

- Speed limit signs will slow the speed of traffic.
- Speed limit signs will decrease the accident rate and increase safety.
- Raising a posted speed limit will cause an increase in the speed of traffic.
- Any posted speed limit must be safer than an unposted speed limit, regardless of the type of roadway or conditions present.

page 2



92

JUN 04 2012 ITEM 12

---

Before-and-after studies consistently demonstrate that there are no significant changes in traffic speeds following the posting of new or revised speed limits. Furthermore, no published research findings have established any direct relationship between posted speed limits and accident frequency. Short-term reductions have resulted, however, from saturation enforcement efforts directed at speed and other traffic law violations.

Police agencies necessarily rely on reasonable and well-recognized speed laws to control the unreasonable violator whose behavior is clearly out of line with the normal flow of traffic.

#### **WHY ARE REALISTIC SPEED ZONES DESIRABLE?**

Realistic Speed Zones are of public importance for a variety of reasons:

- They satisfy the requirements of the state law for establishing prima facie speed limits on public streets and highways.
- They invite public compliance by conforming to the behavior of the majority and by giving a clear reminder to non-conforming violators.
- They offer an effective enforcement tool to the police by clearly separating the occasional violator from the reasonable majority.
- They tend to minimize current public antagonism toward police enforcement of obviously unreasonable regulations.
- They inject an element of logic and reason into an otherwise arbitrary and often emotional issue.
- They correctly serve to place responsibility for justifying so-called "tolerances" upon those administrative agencies that grant them.
- They lend credence and acceptability to the widely posted admonition, "Speed Laws Strictly Enforced," at many city boundaries.

Page 3



93

JUN 04 2012 ITEM 12

**WHERE ARE REALISTIC SPEED ZONES APPLICABLE?**

Speed zoning should be reserved for thoroughfares with appreciable volumes of traffic where such zoning can be shown to facilitate the orderly movement of traffic by increasing driver awareness of a reasonable speed.

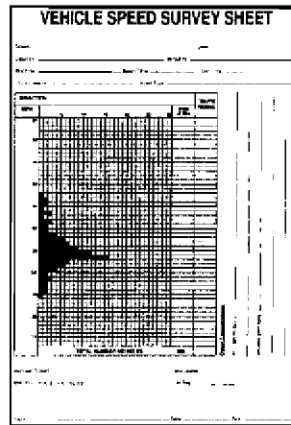
Transition sections between rural and suburban conditions usually require "reminder" zoning. Business or residence districts that barely satisfy the legal definition for automatic 25 mph limits can also be zoned to advise the driver of a safe speed and to avoid confusion in determining if Vehicle Code prima facie limits apply.

Through streets that are not wide thoroughfares frequently require zoning to aid the police in determining what is a reasonable limit. On the other hand, it is seldom necessary to post limits relating to business or residence districts in obviously well-established urban areas, where such districts are clearly apparent to drivers.

The basic intent of speed zoning is to influence as many drivers as possible to operate at or near the same speed--thus reducing conflicts created by wide differentials in operating speeds. Low-volume streets offer little opportunity for traffic platoons to form so as to affect the speed of individual vehicles.

Page 4  
[Vertical column of small, illegible text or markings]

Figure 3



94

---

---

### WHAT DOES THE LAW REQUIRE?

---

---

The California Vehicle Code reflects the sensible viewpoint that speed zoning, as with other types of traffic control, should be based on traffic conditions and natural driver behavior—and not simply upon a hasty or arbitrary response to a traffic event.

#### BASIC SPEED LAW

All fifty states base their speed regulations on the Basic Speed Law:

*No person shall drive a vehicle upon a highway at a speed in excess of that which is reasonable and proper under the existing conditions of traffic, and in no event shall a person drive a vehicle upon a highway at a speed which is in excess of the maximum speed authorized by law.*

This law recognizes that driving conditions vary widely from time-to-time and place-to-place. No set of fixed driving rules will adequately serve all conditions. Motorists must constantly adjust their driving behavior to fit the conditions they meet. They must learn to do this with a minimum of assistance from the police. The basic speed law is founded on the belief that most motorists are able to modify their driving behavior properly, as long as they are aware of the conditions around them.



page 5



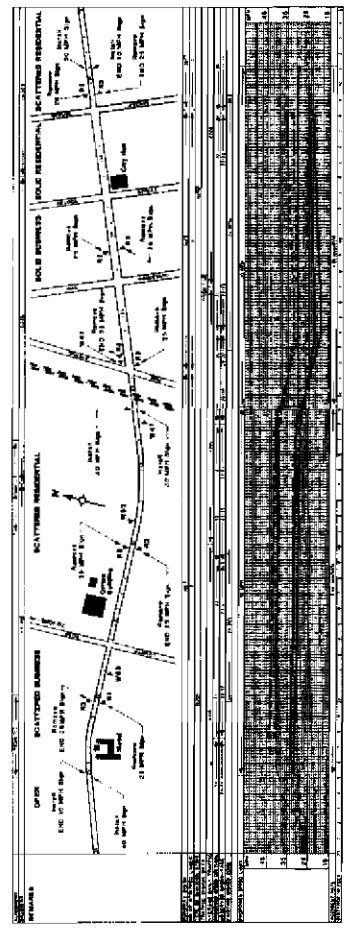
95

96



Figure 2

### SPEED ZONE SURVEY SHEET



MAXIMUM SPEED LIMITS

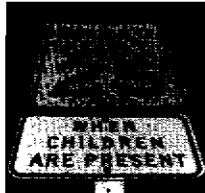
In California, all speed limits in excess of 50 mph are maximum limits that cannot be exceeded under any circumstance. These limits include:

- 55 mph for all trucks and any vehicle towing a trailer. The 55 mph maximum speed limit also applies to all passenger vehicles travelling upon conventional (non-freeway) highways not more than two lanes in width.
- 65 mph for passenger vehicles on freeways, except for those special freeway segments posted at 70 mph. The 65 mph maximum speed limit also applies to passenger vehicles travelling upon conventional highways three or more lanes in width.

The 55 mph maximum speed limit for passenger vehicles may be raised to 60 mph or 65 mph, and the 65 mph limit may be lowered to 60 mph or 55 mph where conditions justify such action.

PRIMA FACIE SPEED LIMITS

All other speed limits are prima facie limits which, "on the face of it," are reasonable and prudent under normal conditions. A driver may exceed any prima facie limit if prevailing conditions make it safe to do so. However when a police officer issues a citation for exceeding a prima facie speed limit, the driver will be required to prove that his or her actions did not compromise safety.



The opportunity given to the driver to exceed a prima facie speed limit recognizes the fact that any posted speed limit cannot adequately reflect the many different conditions of traffic, weather, visibility, etc., that may be found on the same highway at different times.

Certain blanket (or automatic) prima facie limits are established by law. They include the 15 mph limit in alleys, blind intersections and at blind railroad crossings, and the 25 mph limit in business and residence districts. A 25 mph prima facie limit also applies to roadways adjacent to schools, playgrounds in public parks, and senior centers when appropriate signs are in place.

Business and residence districts are defined in the Vehicle Code as areas meeting a specified minimum density of roadside development. A count of houses or active businesses facing on a highway must be made to determine whether or not a valid business or residence district exists. The law does not require posting these prima facie limits which are readily apparent.

page 7



97



## SPEED ZONING - HOW?

### ENGINEERING AND TRAFFIC SURVEY

As defined in the California Vehicle Code, an engineering and traffic survey is "a survey of highway and traffic conditions in accordance with methods determined by the Department of Transportation for use by the state and local authorities." The survey shall include (but not be limited to) a consideration of the following:

- Prevailing speeds as determined by traffic engineering measurements
- Accident records
- Highway, traffic and roadside conditions not readily apparent to the driver

Several key elements of the speed survey should be determined before undertaking the collection of field data.

#### LOCATION

On a small-scale map of the street to be surveyed, select enough speed check sites to assure a good representation of differing conditions throughout the study section. Normally in urban and suburban areas, measurements are made at about one-half-mile intervals or at points where traffic and roadway characteristics change.

Care should be taken to select locations sufficiently removed from any stop signs, traffic signals, or other traffic flow interruptions that significantly affect operating speeds. Mid-block locations generally represent typical flow conditions for accurate sampling.

#### EQUIPMENT

Field survey equipment consists simply of speed survey sheets and a speed measuring device, commonly radar, in an unmarked vehicle. Other tools include a stop watch, a ball-bank indicator for establishing advisory speeds on horizontal curves, a measuring wheel for determining sight distances, a camera, and a manual counter for recording pedestrian movements and density of roadside development.

Page 9



99

JUN 04 2012 ITEM 12

**PERSONNEL**

While one person can normally accomplish the field survey task, it is desirable, under busy urban conditions, to assign both an observer and a recorder to measure prevailing speeds accurately and to inventory roadway and roadside conditions.

**TIME OF DAY**

Speed limits are established to advise the motorist of safe speeds during normal conditions. Prevailing speeds for zoning purposes are therefore measured during off-peak periods when traffic is closest to free or uninterrupted flow. This condition exists on most street networks throughout the majority of daytime hours. It is sometimes desirable for comparative purposes to measure peak-hour speeds, however, the characteristics of peak traffic flow are usually not representative of the conditions necessary for realistic speed zoning.

**POSITIONING THE SPEED MEASURING DEVICE**

To not affect the normal flow of traffic, the observer should locate the device as inconspicuously as possible. Radar antennas should be positioned at an angle of not greater than 15° to the centerline of the roadway and about three feet above the surface. In this position the device will measure speeds in either direction or in adjacent lanes. Speeds and direction are recorded by appropriate tallies on Vehicle Speed Survey Sheets. (Refer to Figure 1, Page 4.)

**SIZE OF SAMPLE**

Sample sizes are frequently related to traffic volumes within the study section. An engineering and traffic survey is normally satisfied by 100, but no less than 50, properly selected observations. This size of sample is usually enough to assure accuracy within the normal capability of the measuring device. On multi-lane streets, either divided or undivided, separate samples should be recorded for each direction of travel.

page 10



page 10

100

**OBSERVING AND MEASURING PREVAILING SPEEDS**

The data collection phase of the speed survey is extremely important and requires considerable care due to the many variables involved and the sources of possible bias in sampling. For this reason, it is necessary to assign a trained observer who is capable of properly selecting vehicles on a truly random basis. Some common errors that tend to introduce bias and the procedures for eliminating them are:

- *Selecting the first vehicle in a platoon of traffic*  
When traffic is constantly platooned, try to select vehicles from varying positions in the platoons. If platoons are densely packed, it may mean that congestion has been reached and that traffic is too heavy to permit a good survey.
- *Selecting too large a proportion of trucks*  
Obtain about the same proportion of trucks in the sample as exist in the traffic stream.
- *Selecting too large a proportion of higher-speed vehicles*  
Untrained observers often ignore measuring normal-speed vehicles to "catch" the occasional high-speed vehicle. This should be avoided as the results will be biased toward the upper speed ranges.

**INVENTORY OF ACCIDENT RECORDS**

The required accident records inventory consists of a review of the most recent two-year traffic collision history for each roadway surveyed. Where a concentration of reported accidents or an accident rate significantly higher than normal for the type of roadway under study is observed, a detailed accident analysis should be made. This analysis would typically include a collision diagram for the route or for specific locations. Adequate consideration may then be given to other corrective measures including the degree of enforcement emphasis needed as well as the general applicability of posting a speed zone at all. (Refer to Figure 3, Page 8.)

**INVENTORY OF ROAD CONDITIONS**

This final phase of the survey consists of a review of the physical characteristics of the roadway and adjacent development. Particular attention must be paid to identifying conditions which are not easily

DATE 11



101

observed by motorists. For city and county roads, the results may be summarized on the Vehicle Speed Survey Sheet. For state highways and roadways with an abnormally high accident rate, the Speed Zone Survey Sheet should be used to document all pertinent data and to facilitate the analysis process. To assure compatibility with the prevailing speeds, identified deficiencies should be corrected. (Refer to Figure 1, Page 4 and Figure 2, Page 6.)

#### **ANALYZING SPEED SURVEY FIELD DATA**

Two characteristics developed from the prevailing speed data are of primary importance in the selection of a reasonable limit: the critical (85th percentile) speed, and the pace.

##### **CRITICAL (85th PERCENTILE) SPEED**

This is the speed at or below which 85% of the traffic is moving. The critical speed can be determined directly from the Vehicle Speed Survey Sheet. From the top speed count the number of vehicles equaling 15% of the total number of vehicles observed. In the example shown, 15% of the 100 vehicles observed (or 15 vehicles) were traveling at 40 mph or more, and the 85th percentile speed was therefore 40 mph. (Refer to Figure 1, Page 4.)

The 85th percentile speed is usually within two miles per hour of the upper limit of the pace. This can be compared on the cumulative speed curve that presents a measure of the validity of the field data or the presence of an abnormal bias. (Refer to Figure 4, Page 13.)

##### **PACE**

The pace is the 10 mph range of speeds containing the largest number of observations. This can usually be determined by visual inspection of the Vehicle Speed Survey Sheet. After determining the pace, it is useful to compute the percentage of vehicles in the pace, the percentage over the pace, and the percentage under the pace. A normal speed distribution will contain approximately 20% of the sample within the pace with 15% above and 15% below. (Refer to Figure 1, Page 4.)

#### **SELECTING THE PROPER SPEED LIMIT**

Experience has shown that the 85th percentile speed is the one characteristic of traffic speeds most nearly conforming to a safe and reasonable limit. Speed limits set higher than the critical speed will make very few additional drivers "legal" for each 5 mph that the posted speed limit is increased.



102

JUN 04 2012 ITEM 12

Speed limits set lower than the critical speed will make a large number of reasonable drivers "illegal" for each 5 mph increment that speed is reduced. This can be easily demonstrated by development of the cumulative speed curve (Figure 4). As the name implies, the cumulative speed (or "S") curve is a representation of cumulative speeds on a percentile basis. In the example shown, an increase of 5 mph from the 40 mph 85th percentile speed would "legalize" an additional ten percent of the sample traffic whereas a decrease of 5 mph would make "violators" of an additional 28% of the sampled traffic.

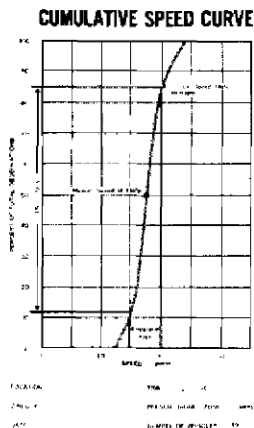


For practical purposes, the 5 mph increment at or immediately below the 85th percentile (or the upper limit of the posted) is the numerical value properly selected for posting a realistic and enforceable speed limit.

#### FINAL CONSIDERATIONS

As a final aid to establishing realistic speed zones, the following practical considerations should be kept in mind:

Figure 4



- Intermediate speed limits are applicable to through routes. Such routes have the positive intersection controls, signing, striping and markings necessary to accommodate appreciable volumes of traffic from beyond the immediate neighborhood.
- Unusually short zones, less than a half mile in length, should be avoided.
- Speed zone changes should be coordinated with visible changes in roadway conditions or roadside development.
- Changes in speed zones should normally be in 10 mph increments, however in some urban areas 5 mph changes are acceptable.

page 13



103



Additional copies available upon request from the  
AUTOMOBILE CLUB OF SOUTHERN CALIFORNIA  
PUBLIC AFFAIRS  
3343 Fairview Road, AT 11  
Costa Mesa, CA 92626

18044 3-98

---

104

JUN 4 2012 **ITEM** 12