San Diego County Traffic Advisory Committee

Committee Secretary
5510 Overland Avenue #410, Room 470, M.S. 0-334
San Diego, California 92123-1239
(858) 694-3845

Represented Agencies

Automobile Club of Southern California
California Department of Transportation
California Highway Patrol
Independent Insurance Agents & Brokers of San Diego
San Diego County Bicycle Coalition
San Diego County Department of Public Works
San Diego County Office of Education
San Diego County Pacific Safety Council
San Diego County Sheriff's Department

October 15, 2014

TO: Community Planning/Sponsor/ Group Chairpersons

FROM: Secretary, Traffic Advisory Committee

MEETING NOTICE

Attached is the tentative agenda for the October 24, 2014 meeting of the Traffic Advisory Committee (TAC). The meeting will begin at 9:00 AM in the **Department of the Public Works, Second Floor Room 271, 5510 Overland Avenue in San Diego.**

If there is an item on this agenda that your community planning/sponsor group would like to submit a formal recommendation to the Board of Supervisors on and need additional time to review it, please contact Patricia Johnson-Horsman at (858) 694-3875 by noon on Friday, October 17, 2014 to request the item be continued. Normally, a continued item will be placed on the agenda of the next TAC meeting. TAC items are usually generated by citizens/residents in the immediate vicinity. In an effort to respond to them in a timely manner, we request a formal recommendation be submitted within a two-month period from the continuance date. TAC staff is available to provide background information on any item that is continued by your group and to answer any questions you may have. We look forward to receiving your group's input.

If your community planning/sponsor group continues an item, it is important that we receive a written reply stating what action your group formally recommends to the Board of Supervisors. Your group's formal recommendation will then be included as part of the Chief Administrative Officer's report to the Board of Supervisors regarding the TAC recommendations. After reviewing both the TAC and the community planning/sponsor group's recommendation, the Board will make the final decision as to what action will be taken.

If you have any questions or need additional information regarding this procedure, please contact me at (858) 694-3843.

Very truly yours,

Kenton R. Jones, Secretary
San Diego County Traffic Advisory Committee
KRJ:pjh

Attachment

SAN DIEGO COUNTY TRAFFIC ADVISORY COMMITTEE

October 24, 2014

AGENDA

I. Call to Order / Roll Call
II. Pledge of Allegiance
III. Items for Review
IV. Minutes from July 25, 2014 meeting

	SUBJECT	LOCATION	AREA	PLANNING/ SPONSOR GROUP
SUPERVISORIAL DISTRICT 2				
A.	THROUGH HIGHWAY	HELIX STREET	SPRING VALLEY	SPRING VALLEY
B.	PARKING PROHIBITION	SOUTH BARCELONA ST	SPRING VALLEY	SPRING VALLEY
SUPERVISORIAL DISTRICT 3				
A.	INTERSECTION REVIEW	CAM SAN BERNARDO @ DEER RIDGE RD	4S RANCH	SAN DIEGUITO
SUPERVISORIAL DISTRICT 5				
A.	RADAR RECERTIFICATION	VIA DE FORTUNA	RHO SANTA FE	SAN DIEGUITO
ALL SUPERVISORIAL DISTRICTS				
A.	TRAFFIC GUIDELINES	COUNTYWIDE	COUNTYWIDE	COUNTYWIDE

SAN DIEGO COUNTY TRAFFIC ADVISORY COMMITTEE

COMMITTEE REPORT OF: October 24, 2014 **Item 2-A**

SUPERVISORIAL DISTRICT: 2

SUBJECT: Through Highway

LOCATION: Helix Street from Jamacha Road northerly to Bancroft Drive, SPRING VALLEY (TB 1291-A2) Spring Valley Community Planning Group

INITIATED BY: Traffic Engineering

REQUEST: Through Highway Designation

PROBLEM AS STATED BY REQUESTER:

A through highway designation on any particular roadway allows the installation of stop controls at the entry of all side streets. On September 14, 1982, The County Board of Supervisors adopted a through highway designation along Helix Street from Jamacha Road to Montemar Drive. Subsequent development and increasing traffic volumes appear to support establishment of a through highway designation along Helix Street from Montemar Drive northerly to Bancroft Drive.

The proposed through highway designation reflects what exists in the field and will formalize the existing driving patterns along these roadways.

DATA:

Existing Traffic Devices

Helix Street is a striped two-lane residential-in-nature roadway that varies in width between 20 and 24 feet. Helix Street, from Jamacha Road northerly to Kenwood Drive, is posted 25 MPH/Radar Certified, beyond it is an unposted roadway. It is unclassified on the County General Plan Mobility Element Network.

Average Daily Traffic Volumes	2014	2007	1990
Helix Street:			
N/o Lamar Street	1,950*		
@ Olive Drive		2,620*	
N/o Kenwood Drive			1,060*

THROUGH HIGHWAYS (2001 Traffic Guidelines)

The establishment of a Through Highway assigns right-of-way to motorists traveling on a road carrying a high volume of daily traffic. Typically, the flow of traffic is improved on a road designated as a Through Highway because all intersecting roads are regulated by stop controls or traffic signals.

A Through Highway, as defined by Section 600 of the California Vehicle Code, may be considered on a road carrying predominantly through traffic when one of the following conditions exists:

- 2,000 or more vehicles a day travel on the proposed Through Highway.
- On roads where the daily traffic volume is at least 1,000 vehicles and any one of the following conditions exists:
    * Is a regularly scheduled public transit route.
    * Is a logical extension of an existing Through Highway.
    * Serves as a Residential Collector route or is identified as a Circulation Element road on the County General Plan.
- 50% or more of the intersections between the limits of the proposed Through Highway are currently controlled with stop signs or traffic signals.

County-Maintained Intersections from Montemar Drive to Bancroft Drive

1) Rosedale Drive (stop control)
2) Vista Drive (stop control)
3) Lamar Street (Helix Street stop controlled)
4) Olive Drive (stop control)/Francis Drive (private stop control)
5) Kenwood Drive (all-way stop control)
6) Hillside Drive (stop control)

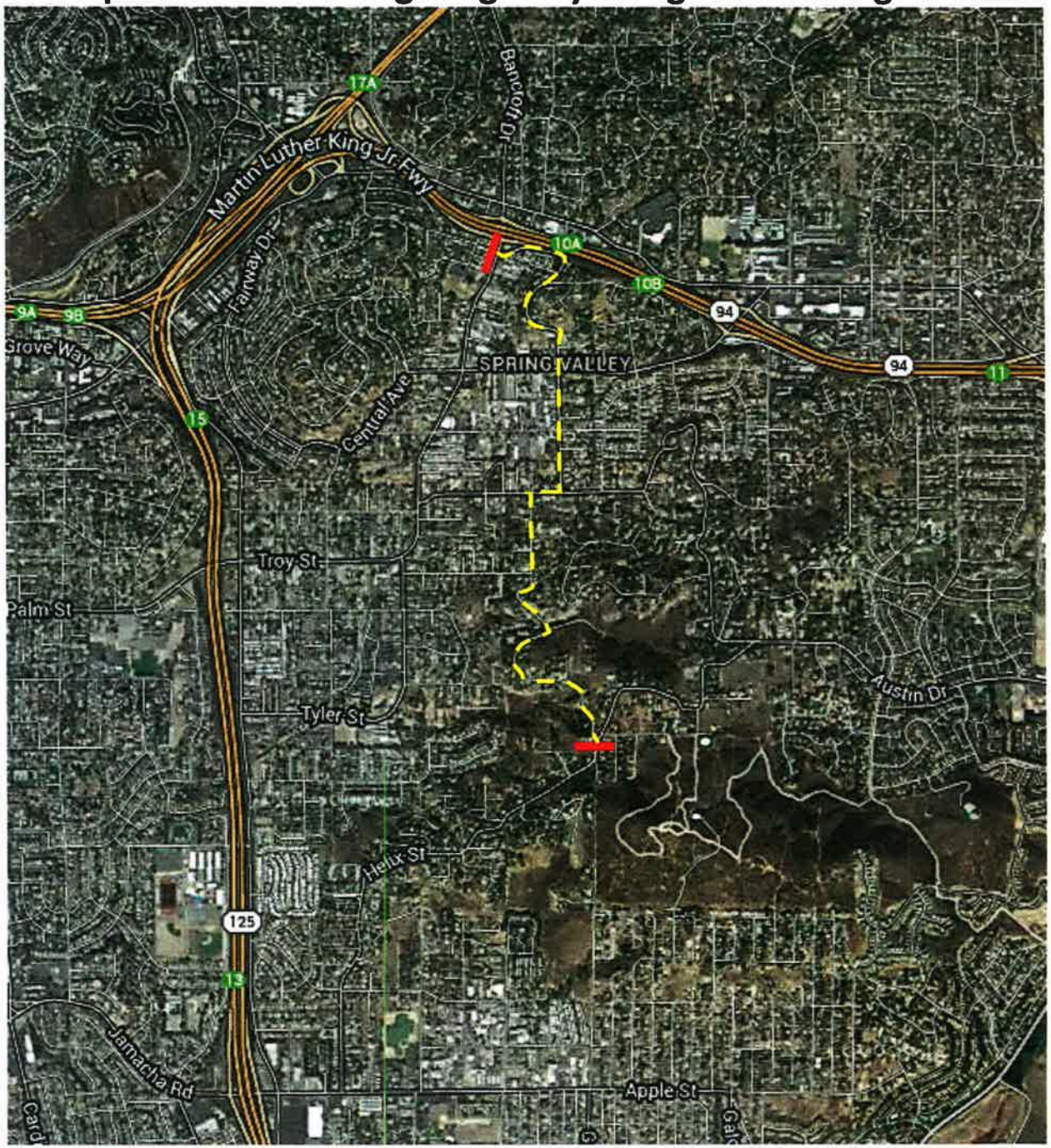
Private Intersections from Montemar Drive to Bancroft Drive

1) Roca Verde Lane (private uncontrolled 6 homes)
2) Rockbrook Lane (private uncontrolled 1 home)
3) Weber Court (private uncontrolled 7 homes)
4) Lori Mar Court (private uncontrolled 7 homes)
5) Stevens Lane (private uncontrolled 8 homes)
6) Simms Court (private uncontrolled 8 homes)

Collision Data

There have been two reported right-of-way violations along the proposed through highway designation, both involved injury, in the last five year-five month period (01-01-09 to 5-31-14).

Proposed New Through Highway Designation along Helix Street



SAN DIEGO COUNTY TRAFFIC ADVISORY COMMITTEE

COMMITTEE REPORT OF: October 24, 2014 **Item 2-B**

SUPERVISORIAL DISTRICT: 2

SUBJECT: Parking Prohibition

LOCATION: South Barcelona Street, east side, a 50 foot section between Chapo Court and Barcelona Court, SPRING VALLEY (Thos. Bros. (1271-D6) Spring Valley Community Planning Group

INITIATED BY: DPW Traffic Engineering

REQUEST: Deletion of Superseded Parking Prohibition

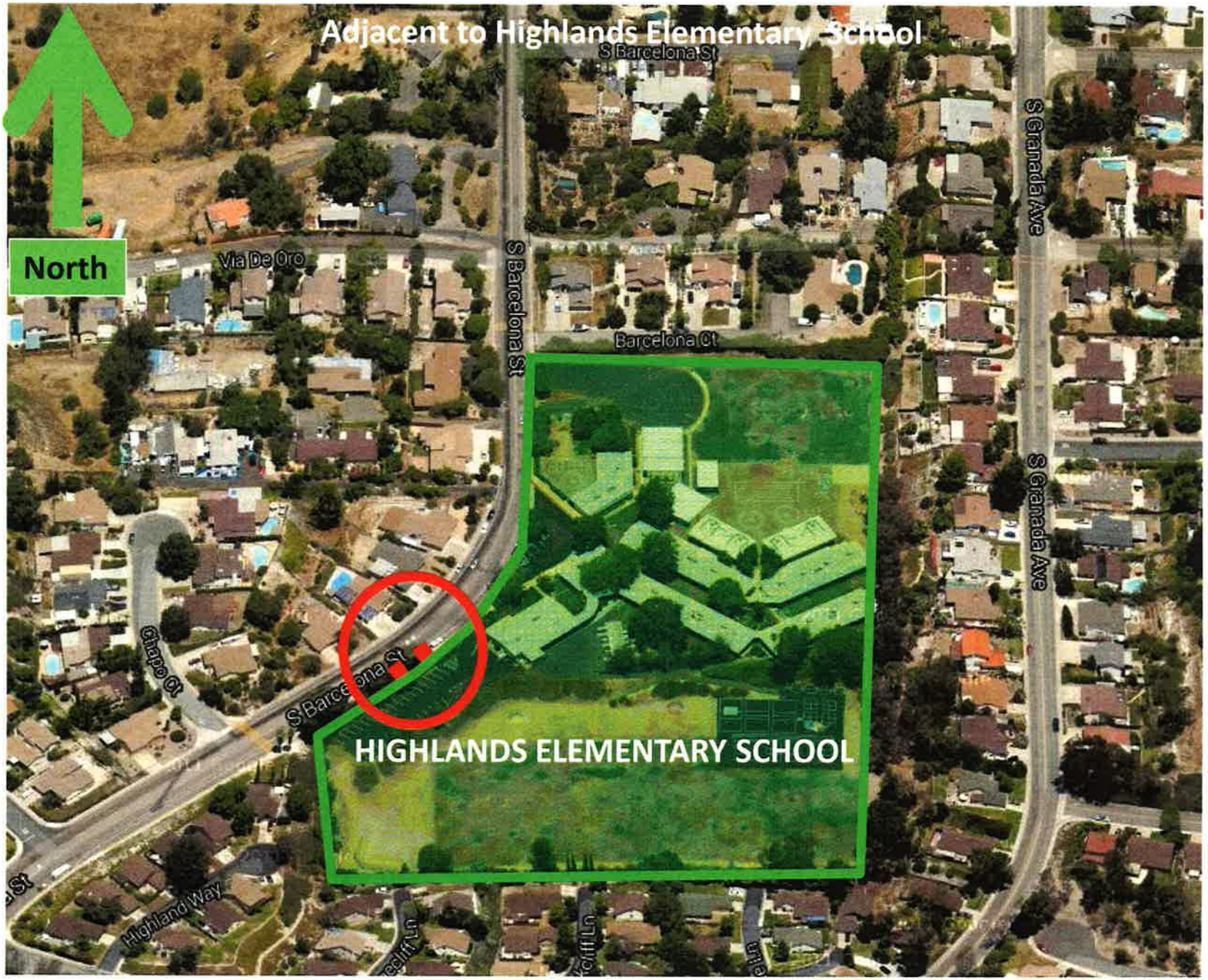
PROBLEM AS STATED BY REQUESTER:

Resulting from a recent field review in the vicinity of Highlands Elementary School, an existing parking prohibition resolution on the east side of South Barcelona Street from 270 feet north of Chapo Court northerly 50 feet, from 7 AM to 5 PM on School Days, has been superseded by a passenger loading zone established by staff's enabling authority.

We respectfully request deletion of the superseded parking prohibition for administrative purposes only; no physical changes will take place in the field.

The Director of Transportation for the La Mesa-Spring Valley Union School District has indicated the existing passenger loading zone is appropriate and a necessary component for the school's day to day operation.

South Barcelona Street



Rubio-Lopez, Maria

From: Craig Wood <craig.wood@lmsvsd.net>
Sent: Tuesday, October 07, 2014 3:30 PM
To: Rubio-Lopez, Maria
Subject: Highlands Elem - Student Loading Zone...

At Highlands Elementary school, we still use and require the student loading zone on South Barcelona, South from the bus loading zone… This loading area is a necessary component to our program.

SAN DIEGO COUNTY TRAFFIC ADVISORY COMMITTEE

COMMITTEE REPORT OF: October 24, 2014 **Item 3-A**

SUPERVISORIAL DISTRICT: 5

SUBJECT: Intersection Control

LOCATION: Camino San Bernardo and Deer Ridge Road, 4S RANCH (Thos. Bros. 1169 E-4) San Dieguito Community Planning Group

INITIATED BY: DPW Traffic Engineering

REQUEST: Review Appropriateness for Intersection Control

PROBLEM AS STATED BY REQUESTER:

At the April 25, 2014 meeting, your Committee reviewed Camino San Bernardo and Deer Ridge Road. The neighborhood's unique circumstances, including continued development and surrounding expansion by the City of San Diego was recognized. Your Committee also noted that based on current conditions, none of the statewide guidelines used to justify establishment of an all-way stop control were met in terms of traffic volume or collision history. Concern was expressed with unguaranteed compliance between a major four-lane roadway being stopped at a minor residential street throughout all hours of the day and especially during night-time hours.

Your Committee recommended the intersection be brought back for further review in the fall of 2014 when the new Design Campus 39 (K-8) became operational and surrounding traffic patterns normalized. Further, the Committee recommended County staff explore operational measures such as striping modifications, flashing beacons and other measures deemed appropriate to improve the level of comfort for all traversing this dynamic intersection.

Existing Traffic Devices

Camino San Bernardo is a striped four-lane roadway that measures 78 feet wide. There is a school crosswalk located on the west leg. The necessary advanced school warning signs and pavement legends are in place. The road is posted 45 MPH/Radar Enforced. (NOTE: This roadway is classified as a Major Road on the County General Plan Mobility Element Network.)

Deer Ridge Road is a striped two-lane roadway that measures 38 feet wide. Both legs are stop controlled with limit lines and pavement legends in place.The road is posted 25 MPH on the southern leg and unposted on the northern leg. (NOTE: This roadway is unclassified on County General Plan Mobility Element Network.)

Average Daily Traffic Volumes	09/14	10/13
Camino San Bernardo:		
E/o Deer Ridge Road	4,100 WB	1,270 WB
W/o Deer Ridge Road	1,180 EB	720 EB
Deer Ridge Road:		
S/o Camino San Bernardo	400 NB	780 NB
N/o Camino San Bernardo	790 SB	670 SB

Collision Data

There have been five reported collisions at this intersection, one involving a pedestrian and two involving injury, in a five year-nine month period (01-01-09 to 09-30-14).

Camino San Bernardo and Deer Ridge Rd

TAC 10-24-14

ITEM 3A

County of San Diego

Department of Public Works

ALL-WAY STOP WARRANTS

Major Street Camino San Bernardo

Minor Street Deer Ridge Road

(Item 1) FOR EACH OF ANY EIGHT HOURS:

500 TOTAL VEHICLES ENTERING THE INTERSECTION

200 TOTAL VEHICLES ON MINOR STREET APPROACH

-OR-

(Item 2) 5 CORRECTABLE ACCIDENTS IN MOST RECENT 12 MONTHS

Minimum Vehicle Volume Warrant must be satisfied in any 8 hours of a 24 hour Day

Use Reduced Warrants if 85th Percentile Speed Limit is Greater than 40 MPH

HOUR	Full Warrant	Reduced Warrant	7	8	13	14	15	16	17	18
Major Street Approach			1130	330	230	410	820	290	380	310
Minor Street Approach	200	140	(+50 peds) 300	60	60	60	(+50 peds) 150	80	90	90
TOTAL	500	350	1480	390	290	470	1020	370	470	400

NO. CORRECTABLE ACCIDENTS (MOST RECENT 12 MONTHS) 1

		YES	NO
VOLUME WARRANT	MET	☐	☒
ACCIDENT WARRANT	MET	☐	☒

Figure 4C-101 (CA). Traffic Signal Warrants Worksheet (Sheet 1 of 5)

COUNT DATE _____
CALC _____ DATE _____
CHK _____ DATE _____

DIST _____ CO _____ RTE _____ PM _____

Major St: Camino San Bernardo
Minor St: Deer Ridge Road

Critical Approach Speed _____ mph
Critical Approach Speed _____ mph

Speed limit or critical speed on major street traffic > 40 mph ☐ or
In built up area of isolated community of < 10,000 population ☐
} RURAL (R)
☐ URBAN (U)

WARRANT 1 - Eight Hour Vehicular Volume **SATISFIED YES ☐ NO ☒**
(Condition A or Condition B or combination of A and B must be satisfied)

Condition A - Minimum Vehicle Volume **100% SATISFIED YES ☐ NO ☒**
80% SATISFIED YES ☐ NO ☒

	MINIMUM REQUIREMENTS (80% SHOWN IN BRACKETS)												
	U	R	U	R									
APPROACH LANES	1		2 or More		7	8	13	14	15	16	17	18	Hour
Both Approaches Major Street	500 (400)	350 (280)	600 (480)	420 (336)	1130	330	230	410	820	290	380	310	
Highest Approach Minor Street	150 (120)	105 (84)	200 (160)	140 (112)	240	30	40	40	130	50	60	60	

Condition B - Interruption of Continuous Traffic **100% SATISFIED YES ☐ NO ☒**
80% SATISFIED YES ☐ NO ☒

	MINIMUM REQUIREMENTS (80% SHOWN IN BRACKETS)												
	U	R	U	R									
APPROACH LANES	1		2 or More		7	8	13	14	15	16	17	18	Hour
Both Approaches Major Street	750 (600)	525 (420)	900 (720)	630 (504)	1130	330	230	410	820	290	380	310	
Highest Approach Minor Street	75 (60)	53 (42)	100 (80)	70 (56)	240	30	40	40	130	50	60	60	

Combination of Conditions A & B **SATISFIED YES ☐ NO ☒**

REQUIREMENT	CONDITION	✓	FULFILLED
TWO CONDITIONS SATISFIED 80%	A. MINIMUM VEHICULAR VOLUME		Yes ☐ No ☒
	AND, B. INTERRUPTION OF CONTINUOUS TRAFFIC		
AND, AN ADEQUATE TRIAL OF OTHER ALTERNATIVES THAT COULD CAUSE LESS DELAY AND INCONVENIENCE TO TRAFFIC HAS FAILED TO SOLVE THE TRAFFIC PROBLEMS			Yes ☐ No ☐

The satisfaction of a traffic signal warrant or warrants shall not in itself require the installation of a traffic control signal.

Figure 4C-101 (CA). Traffic Signal Warrants Worksheet (Sheet 2 of 5)

WARRANT 2 - Four Hour Vehicular Volume **SATISFIED* YES ☐ NO ☒**

Record hourly vehicular volumes for any four hours of an average day.

APPROACH LANES	One	2 or More	7	15	17	18 Hour
Both Approaches - Major Street		✓	1130	820	290	380
Higher Approach - Minor Street	✓		240	130	60	60

*All plotted points fall above the applicable curve in Figure 4C-1. (URBAN AREAS)	Yes ☐ No ☒
OR, All plotted points fall above the applicable curve in Figure 4C-2. (RURAL AREAS)	Yes ☐ No ☒

WARRANT 3 - Peak Hour **SATISFIED YES ☐ NO ☐**
(Part A or Part B must be satisfied)

PART A **SATISFIED YES ☐ NO ☐**

(All parts 1, 2, and 3 below must be satisfied for the same one hour, for any four consecutive 15-minute periods)

1. The total delay experienced by traffic on one minor street approach (one direction only) controlled by a STOP sign equals or exceeds four vehicle-hours for a one-lane approach, or five vehicle-hours for a two-lane approach; AND	Yes ☐ No ☐
2. The volume on the same minor street approach (one direction only) equals or exceeds 100 vph for one moving lane of traffic or 150 vph for two moving lanes; AND	Yes ☐ No ☐
3. The total entering volume serviced during the hour equals or exceeds 800 vph for intersections with four or more approaches or 650 vph for intersections with three approaches.	Yes ☐ No ☐

PART B **SATISFIED YES ☐ NO ☐**

APPROACH LANES	One	2 or More	Hour
Both Approaches - Major Street			
Higher Approach - Minor Street			

The plotted point falls above the applicable curve in Figure 4C-3. (URBAN AREAS)	Yes ☐ No ☐
OR, The plotted point falls above the applicable curve in Figure 4C-4. (RURAL AREAS)	Yes ☐ No ☐

The satisfaction of a traffic signal warrant or warrants shall not in itself require the installation of a traffic control signal.

Figure 4C-101 (CA). Traffic Signal Warrants Worksheet (Sheet 3 of 5)

WARRANT 4 - Pedestrian Volume
(Parts 1 and 2 Must Be Satisfied)

SATISFIED YES ☐ NO ☒

Part 1 (Parts A or B must be satisfied)

	Hours - - ->	7	8	15	16
A.	Vehicles per hour for any 4 hours	1125	329	817	287
	Pedestrians per hour for any 4 hours	50	0	50	0
		(75)	(70)	(95)	(290)

Figure ~~4C-5~~ or Figure 4C-6
SATISFIED YES ☐ NO ☒
45 MPH Camino San Bernardo

	Hours - - ->	7			
B.	Vehicles per hour for any 1 hour	1125			
	Pedestrians per hour for any 1 hour	50			
		(43)			

Figure ~~4C-7~~ or Figure 4C-8
SATISFIED YES ☐ NO ☒

Part 2 **SATISFIED YES ☒ NO ☐**

AND, The distance to the nearest traffic signal along the major street is greater than 300 ft 1,380' to 45 Rancho PKWY	Yes ☒ No ☐
OR, The proposed traffic signal will not restrict progressive traffic flow along the major street.	Yes ☐ No ☐

WARRANT 5 - School Crossing
(Parts A and B Must Be Satisfied)

SATISFIED YES ☐ NO ☒

Part A
Gap/Minutes and # of Children

SATISFIED YES ☐ NO ☒

		10-10-14 AM/PM	10-9-14 Hour
Gaps vs Minutes	Minutes Children Using Crossing	39	44
	Number of Adequate Gaps	39	38
School Age Pedestrians Crossing Street / hr		47	46

Gaps < Minutes YES ☒ NO ☐
AND Children > 20/hr YES ☒ NO ☐

AND, Consideration has been given to less restrictive remedial measures	Yes ☐ No ☒

Part B **SATISFIED YES ☒ NO ☐**

The distance to the nearest traffic signal along the major street is greater than 300 ft 1,380' to 45 Rancho PKWY	Yes ☒ No ☐
OR, The proposed signal will not restrict the progressive movement of traffic.	Yes ☐ No ☐

The satisfaction of a traffic signal warrant or warrants shall not in itself require the installation of a traffic control signal.

Figure 4C-101 (CA). Traffic Signal Warrants Worksheet (Sheet 4 of 5)

WARRANT 6 - Coordinated Signal System **SATISFIED YES ☐ NO ☒**
(All Parts Must Be Satisfied)

MINIMUM REQUIREMENTS	DISTANCE TO NEAREST SIGNAL	
≥ 1000 ft	N 0 ft, S 0 ft, E 1,380 ft, W 0 ft	Yes ☒ No ☐
On a one-way street or a street that has traffic predominantly in one direction, the adjacent traffic control signals are so far apart that they do not provide the necessary degree of vehicular platooning.		Yes ☐ No ☒
OR, On a two-way street, adjacent traffic control signals do not provide the necessary degree of platooning and the proposed and adjacent traffic control signals will collectively provide a progressive operation.		

WARRANT 7 - Crash Experience Warrant **SATISFIED YES ☐ NO ☒**
(All Parts Must Be Satisfied)

Adequate trial of alternatives with satisfactory observance and enforcement has failed to reduce the crash frequency.			Yes ☐ No ☒
REQUIREMENTS	Number of crashes reported within a 12 month period susceptible to correction by a traffic signal, and involving injury or damage exceeding the requirements for a reportable crash.		Yes ☐ No ☒
5 OR MORE			
REQUIREMENTS	CONDITIONS	✓	
ONE CONDITION SATISFIED 80%	Warrant 1, Condition A - Minimum Vehicular Volume		Yes ☐ No ☒
	OR, Warrant 1, Condition B - Interruption of Continuous Traffic		
	OR, Warrant 4, Pedestrian Volume Condition Ped Vol ≥ 152 for any hour OR, Ped Vol ≥ 80 for any 4 hours		

WARRANT 8 - Roadway Network **SATISFIED YES ☐ NO ☑**
(All Parts Must Be Satisfied)

MINIMUM VOLUME REQUIREMENTS	ENTERING VOLUMES - ALL APPROACHES	✓	FULFILLED
1000 Veh/Hr	During Typical Weekday Peak Hour 1370 Veh/Hr and has 5-year projected traffic volumes that meet one or more of Warrants 1, 2, and 3 during an average weekday.		Yes ☑ No ☐
	OR During Each of Any 5 Hrs. of a Sat. or Sun _____ Veh/Hr		

CHARACTERISTICS OF MAJOR ROUTES	MAJOR ROUTE A	MAJOR ROUTE B	
Hwy. System Serving as Principal Network for Through Traffic	✓		
Rural or Suburban Highway Outside Of, Entering, or Traversing a City	✓		
Appears as Major Route on an Official Plan	✓		
Any Major Route Characteristics Met, Both Streets			Yes ☐ No ☑

The satisfaction of a traffic signal warrant or warrants shall not in itself require the installation of a traffic control signal.

Figure 4C-101 (CA). Traffic Signal Warrants Worksheet (Sheet 5 of 5)

WARRANT 9 - Intersection Near a Grade Crossing **SATISFIED YES ☐ NO ☒**
(Both Parts A and B Must Be Satisfied) N/A

PART A A grade crossing exists on an approach controlled by a STOP or YIELD sign and the center of the track nearest to the intersection is within 140 feet of the stop line or yield line on the approach. Track Center Line to Limit Line _____ ft	Yes ☐ No ☐
PART B **There is one minor street approach lane at the track crossing -** During the highest traffic volume hour during which rail traffic uses the crossing, the plotted point falls above the applicable curve in Figure 4C-9. Major Street - Total of both approaches: _____ VPH Minor Street - Crosses the track (one direction only, approaching the intersection): _____ VPH X AF (Use Tables 4C-2, 3, & 4 below to calculate AF) = _____ VPH	Yes ☐ No ☐
OR, There are two or more minor street approach lanes at the track crossing - During the highest traffic volume hour during which rail traffic uses the crossing, the plotted point falls above the applicable curve in Figure 4C-10. Major Street - Total of both approaches : _____ VPH Minor Street - Crosses the track (one direction only, approaching the intersection): _____ VPH X AF (Use Tables 4C-2, 3, & 4 below to calcualte AF) = _____ VPH	

The minor street approach volume may be multiplied by up to three following adjustment factors (AF) as described in Section 4C.10.

1- Number of Rail Traffic per Day_____ Adjustment factor from table 4C-2____

2- Percentage of High-Occupancy Buses on Minor Street Approach_____ Adjustment factor from table 4C-3____

3- Percentage of Tractor-Trailer Trucks on Minor Street Approach_____ Adjustment factor from table 4C-4____

NOTE: If no data is availale or known, then use AF = 1 (no adjustment)

SYMBOLS	TYPE OF COLLISIONS	ACCIDENT TOTALS BY TYPE
MOVING VEHICLE BACKING VEHICLE UNINVOLVED VECHILE PEDESTRIAN PARKED VEHICLE FIXED OBJECT FATAL ACCIDENT INJURY ACCIDENT	REAR END HEAD ON SIDE SWIPE OUT OF CONTROL LEFT TURN RIGHT ANGLE	

TYPE	DAY	NIGHT	TOTAL
FATAL	0	0	0
PED INJURY	0	0	0
OTHER INJURY	2	0	2
PROP DAMAGE	3	0	3
TOTAL	5	0	5

ESS	EXCEEDING SAFE SPEED
ESL	EXCEEDING SPEED LIMIT
RSS	RAN STOP OR SIGNAL
ULC	UNSAFE LANE CHANGE
FTC	FOLLOWING TOO CLOSE
WSR	WRONG SIDE OF ROAD
VRW	VIOLATED RIGHT-OF-WAY
US	UNSAFE STARTING
UB	UNSAFE BACKING
H-R	HIT RUN
HBD	HAD BEEN DRINKING
DUI	UNDER INFLUENCE
I P	IMPROPER PASS
I T	IMPROPER TURNING

0	2010 ACCIDENTS
1	2011 ACCIDENTS
1	2012 ACCIDENTS
1	2013 ACCIDENTS
2	2014 ACCIDENTS

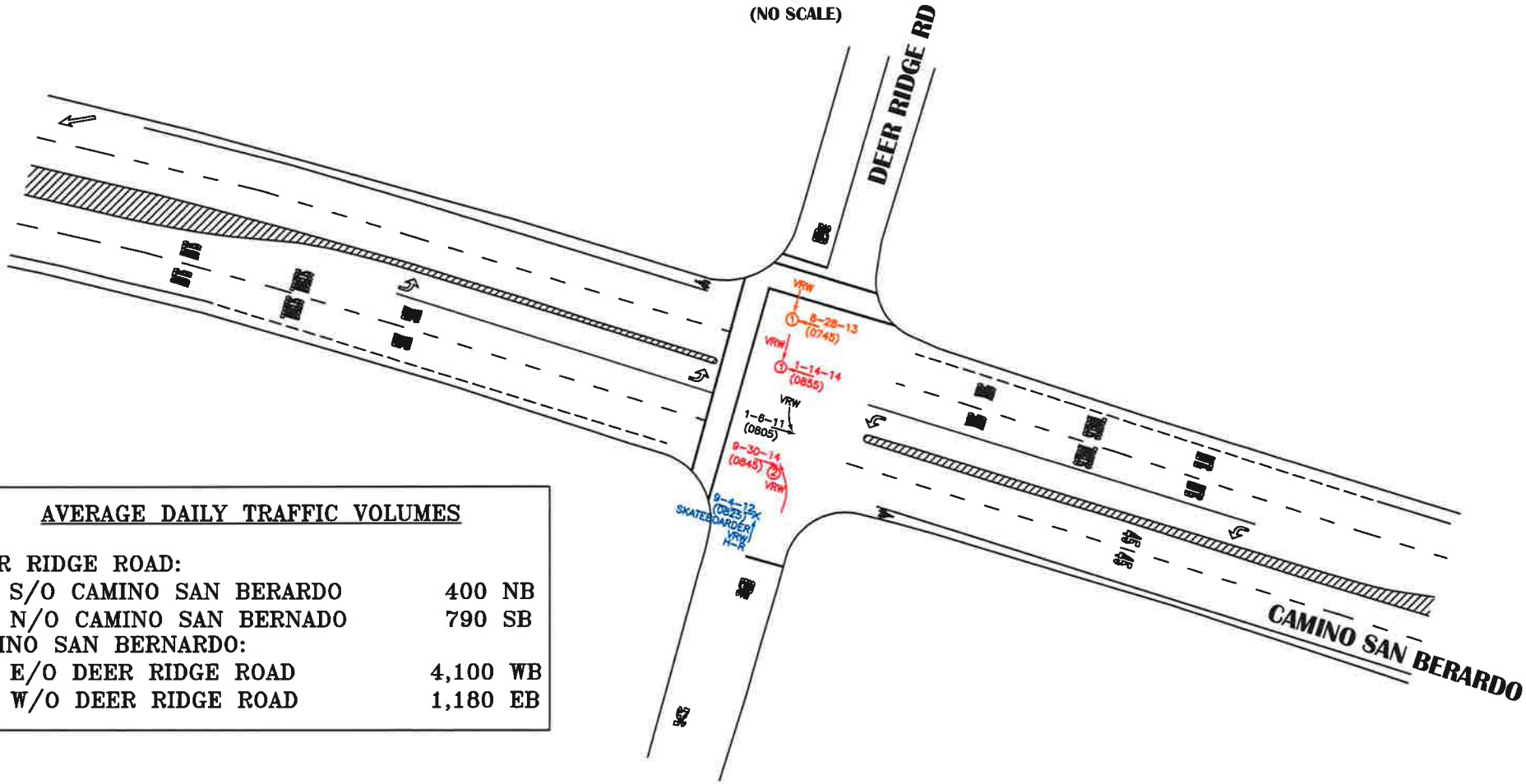
COUNTY OF SAN DIEGO – DPW

TRAFFIC ENGINEERING

COLLISION DIAGRAM

THE INTERSECTION OF DEER RIDGE ROAD AND CAMINO SAN BERNARDO COLLISION HISTORY

(NO SCALE)



AVERAGE DAILY TRAFFIC VOLUMES

DEER RIDGE ROAD:	
S/O CAMINO SAN BERARDO	400 NB
N/O CAMINO SAN BERNADO	790 SB
CAMINO SAN BERNARDO:	
E/O DEER RIDGE ROAD	4,100 WB
W/O DEER RIDGE ROAD	1,180 EB

SAN DIEGO COUNTY TRAFFIC ADVISORY COMMITTEE

COMMITTEE REPORT OF: October 24, 2014 **Item 5-A**

SUPERVISORIAL DISTRICT: 5

SUBJECT: Radar Recertification

LOCATION: Via de Fortuna from San Elijo Avenue northerly to La Crescenta (1.2 miles), RANCHO SANTA FE (Thos. Bros. (1168-B2) San Dieguito Community Planning Group.

INITIATED BY: DPW Traffic Engineering

REQUEST: Review for Radar Recertification

PROBLEM AS STATED BY REQUESTER:

Via de Fortuna is posted 45 MPH and is radar enforced. Preliminary review of prevailing speeds and roadway conditions support radar recertification for the existing 45 MPH speed limit.

Existing Traffic Devices

Via de Fortuna is a striped two-lane Through Highway that measures 23 feet wide. There is edge striping along both sides of the roadway. The road is posted 45 MPH/Radar Certified. (NOTE: Via de Fortuna is unclassified on the County General Plan Mobility Element Network.)

Average Daily Traffic Volumes	07/14	09/05	03/01
Via de Fortuna			
N/o El Mirlo	3,540*	2,490*	
N/o San Elijo Av			1,210*
S/o La Crescenta			3,580*

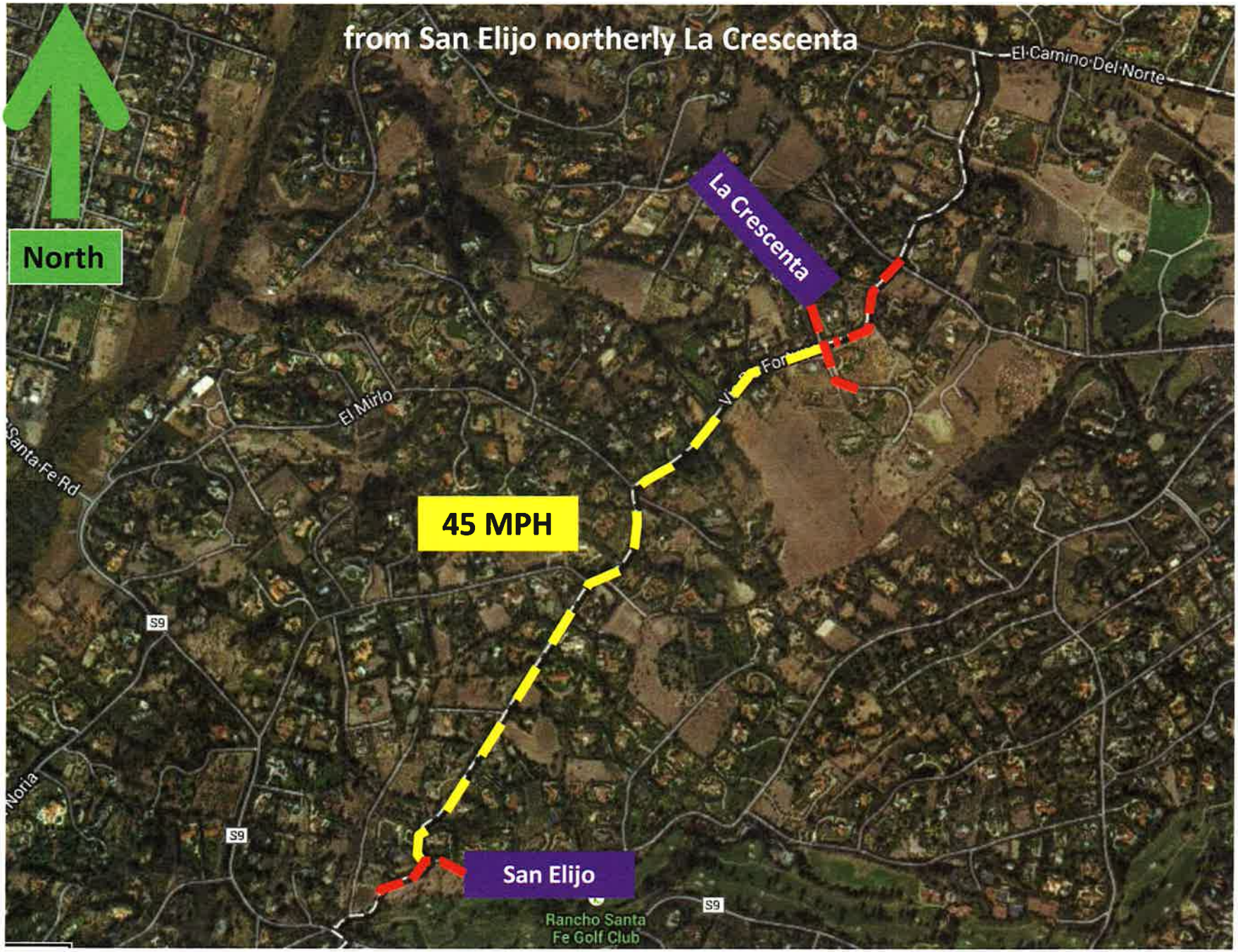
* Two-Way Count

Spot Speed Data		85th Percentile	10 MPH Pace	% in Pace
Via de Fortuna:				
1,500 ft N/o San Elijo Ave	(2014)	46.0 MPH	35-44	62.0%
	(2007)	48.4 MPH	35-44	62.5%
1,000 ft N/o El Mirlo	(2014)	42.0 MPH	33-42	74.0%
	(2007)	44.1 MPH	35-44	67.0%

Collision Data

There have been nine reported collisions along this segment of roadway, four which involved injury, in the last five year period (05-30-09 to 05-31-14).

Via de Fortuna



Spot Speed Study

Prepared by: National Data & Surveying Services

City of Rancho Santa Fe

DATE: 6/26/2014 **Location:** Via De Fortuna 1,500' n/o San Elijo Ave
TIME: 09:00-11:00 **Posted Speed:** 45 MPH Clear/Dry **Project #: 14-4170-001**

Northbound & Southbound Spot Speeds

Speed mph	ALL Vehicles
<=10	
11	
12	
13	
14	
15	
16	
17	
18	
19	
20	
21	
22	1
23	1
24	
25	
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28	1
29	1
30	1
31	3
32	4
33	4
34	3
35	8
36	4
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42	6
43	4
44	6
45	2
46	5
47	3
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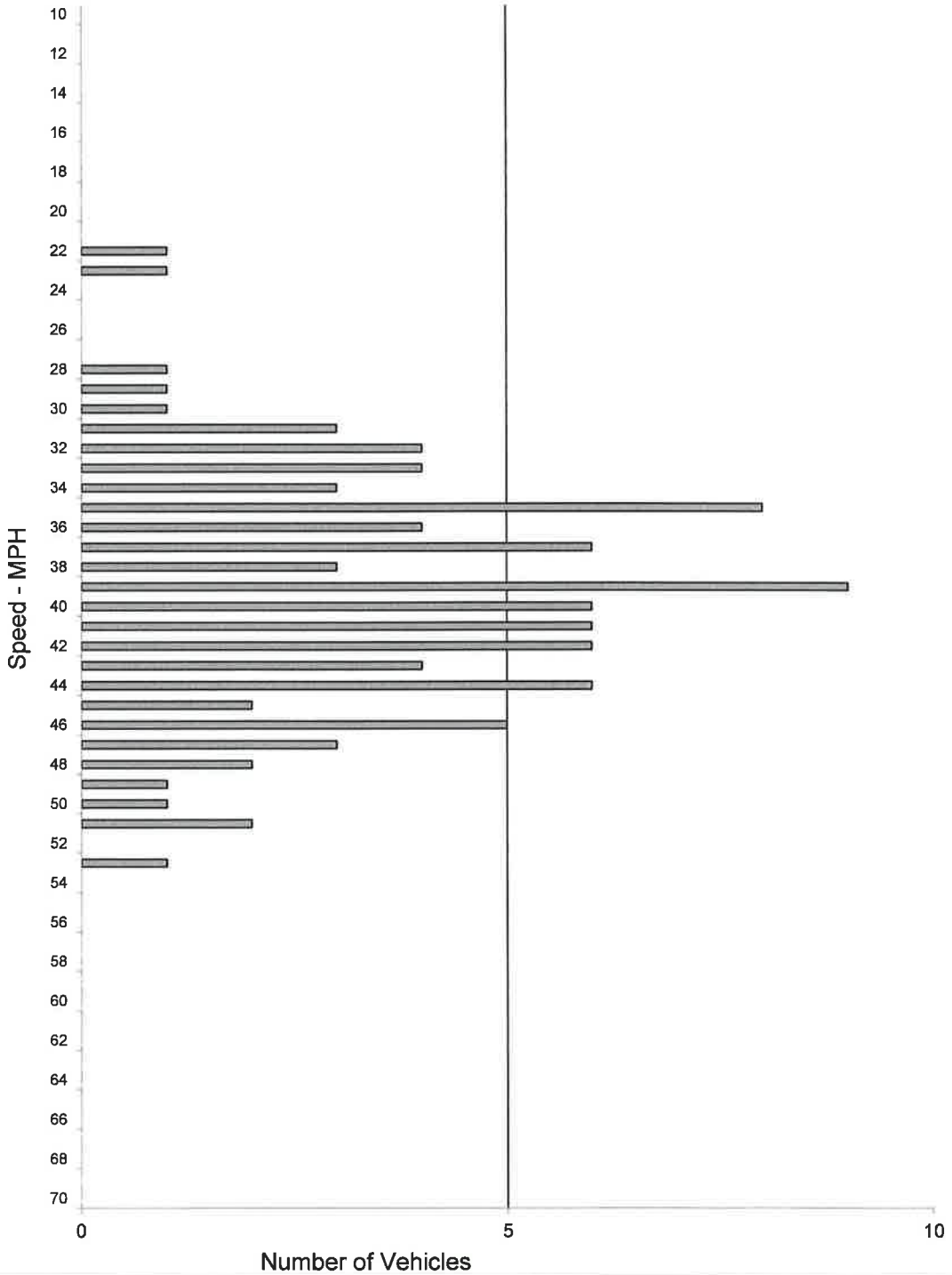

SPEED PARAMETERS									
Class	Count	Range	50th Percentile	85th Percentile	10 MPH Pace	# in Pace	Percent in Pace	% / # Below Pace	% / # Above Pace
ALL	94	22 - 53	39 mph	46 mph	35 - 44	58	62%	20% / 19	19% / 17

Spot Speed Study

Prepared by: National Data & Surveying Services

City of Rancho Santa Fe

DATE: 6/26/2014 **Location:** Via De Fortuna 1,000' n/o El Mirlo
TIME: 11:10-13:10 **Posted Speed:** 45 MPH Clear/Dry **Project #:** 14-4170-003

Northbound & Southbound Spot Speeds

Speed mph	ALL Vehicles
<=10	
11	
12	
13	
14	
15	
16	
17	
18	
19	
20	
21	
22	2
23	
24	
25	1
26	2
27	
28	2
29	1
30	13
31	7
32	11
33	25
34	19
35	18
36	27
37	37
38	37
39	29
40	25
41	25
42	17
43	15
44	14
45	8
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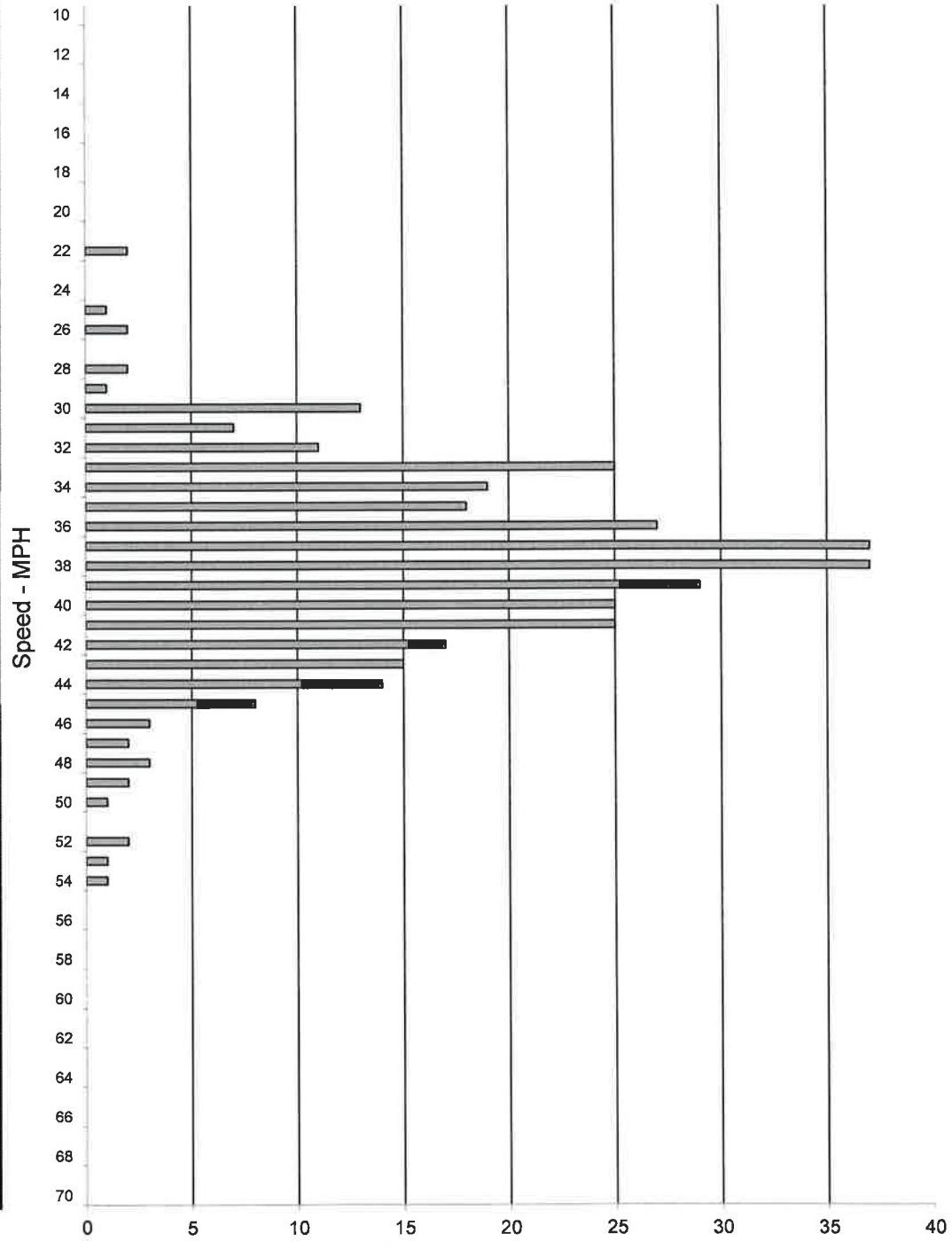


SPEED PARAMETERS									
Class	Count	Range	50th Percentile	85th Percentile	10 MPH Pace	# in Pace	Percent in Pace	% / # Below Pace	% / # Above Pace
ALL	350	22 - 54	38 mph	42 mph	33 - 42	259	74%	11% / 39	15% / 52

COUNTY OF SAN DIEGO – DPW
TRAFFIC ENGINEERING
COLLISION DIAGRAM

RADAR RECERTIFICATION
VIA DE FORTUNA
FROM LA CRESCENTA TO SAN ELIJO
ACCIDENT HISTORY (05-30-09 TO 05-31-14)
VOLUME = 3,540*

1000' N/O El Mirlo

YEAR	DIRECTION	85TH %	10 MPH PACE	% IN PACE
2014		42.0 MPH	33-42	74.0%
2007		44.1 MPH	35-44	67.0%

1500' N/O San Elijo

YEAR	DIRECTION	85TH %	10 MPH PACE	% IN PACE
2014		46.0 MPH	35-44	62.0%
2007		48.4 MPH	35-44	62.5%

SYMBOLS	TYPE OF COLLISIONS
MOVING VEHICLE	REAR END
BACKING VEHICLE	HEAD ON
UNINVOLVED VECHILE	SIDE SWIPE
PEDESTRIAN	OUT OF CONTROL
PARKED VEHICLE	LEFT TURN
FIXED OBJECT	RIGHT ANGLE
FATAL ACCIDENT	
INJURY ACCIDENT	

ACCIDENT TOTALS BY TYPE

TYPE	DAY	NIGHT	TOTAL
FATAL	0	0	0
PED INJURY	0	0	0
OTHER INJURY	2	2	4
PROP DAMAGE	3	2	5
TOTAL	5	4	9

ESS	EXCEEDING SAFE SPEED	FTC	FOLLOWING TOO CLOSE
ESL	EXCEEDING SPEED LIMIT	WSR	WRONG SIDE OF ROAD
RSS	RAN STOP OR SIGNAL	VRW	VIOLATED RIGHT-OF-WAY
ULC	UNSAFE LANE CHANGE	US	UNSAFE STARTING
ROR	RAN OFF ROAD	UB	UNSAFE BACKING

H-R	HIT AND RUN
HBD	HAD BEEN DRINKING
DUI	UNDER INFLUENCE
I P	IMPROPER PASS
I T	IMPROPER TURNING

SAN DIEGO COUNTY TRAFFIC ADVISORY COMMITTEE

COMMITTEE REPORT OF: October 24, 2014 **Item A**

SUPERVISORIAL DISTRICT: All

SUBJECT: Traffic Guidelines

LOCATION: Countywide

INITIATED BY: DPW Traffic Engineering

REQUEST: Traffic Guidelines Review

PROBLEM AS STATED BY REQUESTER:

Periodically, DPW staff updates the long-standing "County of San Diego Traffic Guidelines" document. This document serves as a handy guide for members of the public, law enforcement, and our own staff in developing solutions for common roadway traffic matters such as parking regulations, speed limits, stop signs, traffic signals, centerline & edge striping, guardrail, crosswalks and school traffic safety. This document was last updated in 2001.Please see attached. Staff has updated the document for 2014 and has attached a marked up copy and a single page summary of edits. Updates include matching current criteria set forth in the California Vehicle Code, the California Manual on Uniform Traffic Control Devices and the American Association of State Highway Traffic Officials guidelines.

We respectfully request your review and support to forward these guidelines to the Board for approval of this revised publication.

EXECUTIVE SUMMARY OF MODIFICATIONS IN THE DRAFT TRAFFIC GUIDELINES

COVER - New artwork shows traffic signs for various modes of traffic (pedestrians, bicyclists, motorists, and equestrians) to show the County's continuing commitment to Complete Streets.

INSIDE COVER - Eliminated dates.

MEMBERS OF THE COUNTY BOARD OF SUPERVISORS - Updated District 3 with Dave Roberts.

TABLE OF CONTENTS - Inserted new section entitled "OVERSIZE VEHICLE PARKING PROHIBITIONS IN RESIDENTIAL AREAS." Modified two Operational Guideline titles to "CENTERLINE INSTALLATION" and "EDGE LINE INSTALLATION." Updated page numbers.

INTRODUCTION - Included language supporting and reinforcing the Strategic Initiatives, Complete Streets, and Healthy and Thriving Communities goals.

REGULATORY GUIDELINES:

- **ANGLE PARKING** - Modified "potentially hazardous" language. Added AASHTO as a reference for layouts.
- **COMMERCIAL VEHICLE WEIGHT RESTRICTIONS IN RESIDENTIAL AREAS**
  - Referenced Mobility Element. Added CVC Section reference and Moving Permit information.
- **EQUESTRIAN CROSSINGS** - Defined equestrian. Added responsibility language. Referenced Regional Trails Map.
- **GOLF CART USE ON COUNTY ROADS** - Added the qualification "one or more of the following apply."
- **GOLF CART CROSSINGS** - Clarified CVC references. Used "prevailing speed" in lieu of "vehicular speed."
- **MID-BLOCK CROSSWALKS** - No change.
- **ONE-WAY STREETS** - Used "cut-through traffic" in lieu of "through traffic."
- **OVERSIZE VEHICLE PARKING PROHIBITIONS IN RESIDENTIAL AREAS** - New topic added to document.
- **PARKING REGULATIONS** - Added CCRO reference and enabling authority reference.
- **SPEED LIMITS** - Added current CVC references and CA MUTCD references. Added requirements.
- **STOP SIGNS** - Updated with CVC references and CA MUTCD methodologies.
- **THROUGH HIGHWAYS** - Added requirements with conditionals to listing of conditions.
- **TRAFFIC SIGNALS** - Updated to CA MUTCD reference. Added requirements.
- **YIELD SIGNS** - Updated with CVC references and CA MUTCD methodologies.

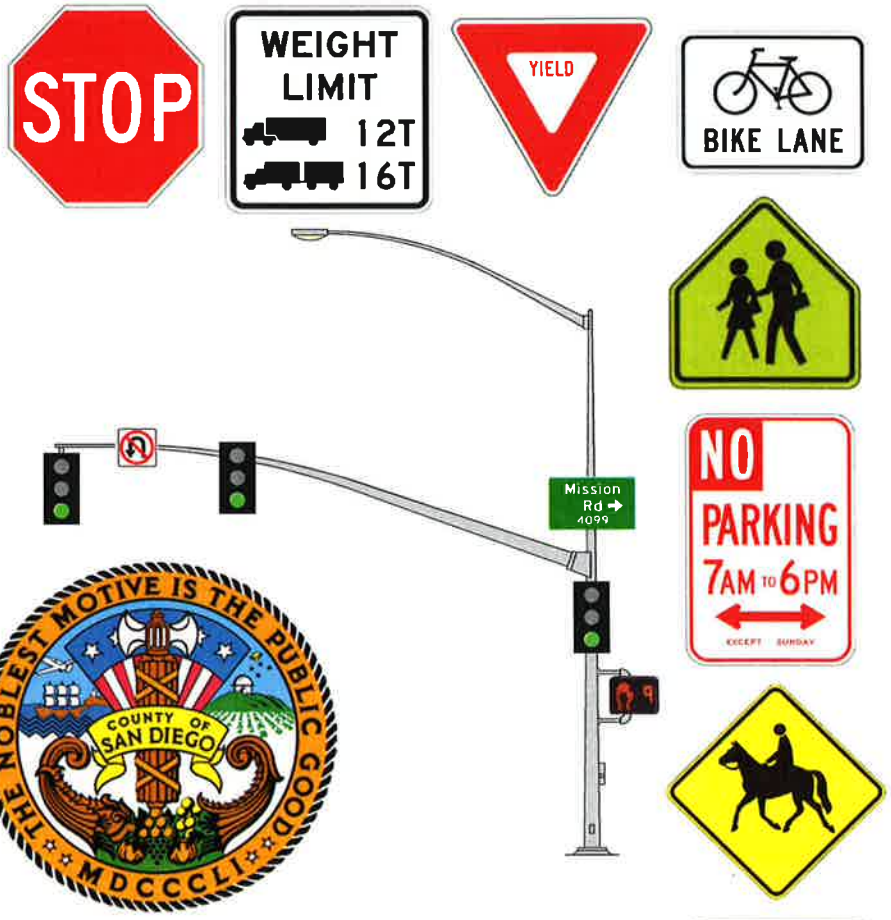
OPERATIONAL GUIDELINES

- **BIKEWAYS** - Updated with current references. Required reviewing and addressing possible parking impacts.
- **CENTERLINE INSTALLATION** - Minimum road width requirement changed to 24 feet. Updated references.
- **EDGE LINE INSTALLATION** - Referenced CA MUTCD. Added additional considerations.
- **FLASHING BEACONS** - Referenced CA MUTCD.
- **GUARDRAIL** - Added condition of run-off the road collisions for considering guardrail. Updated references.
- **INTERSECTION CROSSWALKS** - Added CAMUTCD and CVC references. Added requirement to paint crosswalks at all roads having pedestrian crossing signal indications.
- **MEDIAN OPENINGS** - Added consideration of side streets/driveways on both sides of proposed opening.
- **ON-STREET PARKING DELINEATION** - Updated references. Referenced "Angle Parking" section in guidelines.
- **REFLECTORIZED PAVEMENT MARKERS** - Added consideration of other connecting roads having RPMs. Added ground-in centerline rumble strips as possible alternative to RPMs. Added requirement for the County of San Diego to not install blue RPMs.
- **RESIDENTIAL TRAFFIC PROGRAM** - Added Fire Code restriction and community involvement requirement.
- **SCHOOL TRAFFIC SAFETY** - Added involvement of school administration and law enforcement.
- **STREET LIGHTING** - Described the four methods of how street lighting on County roads is furnished.
- **TEMPORARY ROAD CLOSURES** - Updated with CA MUTCD and San Diego Regional Standard Drawing Traffic Control Plan references. Added clarifying language.

REFERENCES - Updated references.

DRAFT

TRAFFIC GUIDELINES



TRAFFIC ENGINEERING SECTION
DEPARTMENT OF PUBLIC WORKS
COUNTY OF SAN DIEGO

TRAFFIC GUIDELINES

Prepared by:
Traffic Engineering Section
Department of Public Works
County of San Diego
~~**2001**~~

Approved by:
San Diego County
Board of Supervisors
~~**September, 2001**~~

MEMBERS OF THE COUNTY BOARD OF SUPERVISORS

District 1 – Greg Cox

District 2 – Dianne Jacob

District 3 – Dave Roberts ~~Pam Slater~~

District 4 – Ron Roberts

District 5 – Bill Horn

TABLE OF CONTENTS

INTRODUCTION

The County of San Diego adopted a comprehensive, innovative strategy on wellness, called Live Well San Diego. This long-term strategy is being implemented to help all County residents become healthy, safe and thriving. The County's health strategy is built on four themes: A) Building a Better System, B) Supporting Healthy Choices, C) Pursuing Policy Changes for a Healthy Environment and, D) Improving the Culture from Within. Part of being able to make healthy choices is to make it easier for residents to engage in healthy behaviors. Removing barriers to healthy living includes pursuing polices that make it easier for people to engage in physical activities. The Land Use and Environmental Group embarked on a Health in all Policies effort to ensure that policy decisions have beneficial impacts on the determinants of health. This effort emphasizes the need to collaborate across agencies to achieve common health goals. The Department of Public Works is responsible for County Maintained Roads and part of its core mission is to enhance and promote quality of life and public safety through development of reliable and sustainable infrastructure.

Highway and street systems that operate efficiently and safely for all road users are essential for ~~dealing with~~ sustainability, growth, and improving the quality of life in San Diego County. Traffic engineering is a key element in achieving and maintaining a safe and efficient road system for motorists, bicyclists, pedestrians, and equestrians. Roadway facilities that accommodate and encourage bicyclist and pedestrian usage by design lead to increases in the overall health of communities by lowering diabetes and obesity levels of residents. To provide outstanding customer service, it is the intent of the County to ~~provide~~ uphold safe and efficient traffic operations on the County-maintained road system by ~~the use of~~ using proven traffic engineering principles and sound judgment. Uniform application of traffic laws, rules and regulations, as well as uniformity in the traffic control devices that convey these laws, rules and regulations is needed to provide a safe, effective and accurate basis for regulating traffic flow.

The success of any traffic engineering measure depends heavily upon user understanding and compliance. Most citizens can be relied upon to ~~operate their vehicles~~ utilize roadways in a safe and reasonable manner. Traffic regulations are based upon the expected behavior of ~~motorists~~ road users under various conditions. Generally speaking, traffic laws that reflect the behavior of the majority of road users are found to be successful. Laws that arbitrarily restrict the majority of users encourage wholesale violation, and usually fail to accomplish the desired changes in ~~the user's~~ user behavior.

Well-founded guidelines are necessary to convey uniform messages and implement realistic, enforceable traffic regulations. The guidelines discussed in this booklet are intended to serve as an aid in addressing various traffic conditions and are to be used in conjunction with engineering knowledge, experience, and judgment. It is not intended that any standard of conduct or duty toward the public shall be created or imposed by the publication of these Guidelines.

Pursuant to Sections 21400 and 21401 of the California Vehicle Code, the State of California, Department of Transportation's (Caltrans's) ~~Traffic Manual~~ California Manual on Uniform Traffic Control Devices is adopted in principle and shall constitute the basic guideline for the installation of traffic control devices in the County of San Diego. Traffic control devices will normally be installed and maintained at County expense. However, when traffic-related growth is anticipated as a result of proposed development, funding for traffic control devices may be required from the developer.

The Board of Supervisors must approve the establishment of ~~many~~ most regulatory traffic control devices described in this booklet. To assist them in determining the need for these various regulatory controls, the Board established the San Diego County Traffic Advisory Committee (TAC). The TAC is a technical group composed of representatives from various agencies and members-at-large. The ~~Committee~~ TAC reviews requests received from the public, other agencies, and various County departments for regulatory controls on roads maintained by the Department of Public Works.

The ~~Committee~~ TAC forwards their technical recommendation on each request for regulatory control to the Board of Supervisors for final action. Community planning and sponsor groups have the opportunity to provide input to both the TAC and the Board of Supervisors. The Board of Supervisors makes the final determination concerning these traffic regulatory issues on county-maintained roads.

For operational issues on county-maintained roads, the Department of Public Works makes the final determination. The operational guidelines described herein have been developed and are used by the Traffic Engineering Section of the Department of Public Works.

These Traffic Guidelines have been reviewed by the Traffic Advisory Committee and adopted by the Board of Supervisors.

REGULATORY GUIDELINES

ANGLE PARKING

Angle parking typically provides more parking spaces than parallel parking for the same length of curb space. In areas where there is a heavy demand for on-street parking, the installation of angle parking may be desirable. However, the impaired visibility of motorists exiting an angle parking space should be given strong consideration when evaluating the need for angle parking.

The authority for establishing angle parking is provided in Section 22503 of the California Vehicle Code. When evaluating the installation of angle parking, the following criteria should be considered:

- Angle parking requires considerably more street width than parallel parking. Extra street width is necessary for the parking area plus the room required for parked vehicles to back out of the parking spaces without interfering with through traffic in the adjacent lane.

- ~~Angle parking is potentially more hazardous than~~ When compared to parallel parking, ~~because of the impaired~~ angled parking provides reduced visibility ~~of~~ to the driver backing out of the space.

- Speed and traffic volume of the roadway needs to be reviewed to determine possible conflicts.

Angle parking layouts are described in "Fundamentals of Traffic Engineering". Caltrans, AASHTO, or Institute of Transportation Engineers turning templates shall be used to determine the area necessary for the backing out vehicle to not interfere with through traffic (including bicycles) in the adjacent lane.

The Traffic Advisory Committee reviews requests for angle parking and submits recommendations to the Board of Supervisors.

COMMERCIAL VEHICLE WEIGHT RESTRICTIONS IN RESIDENTIAL AREAS

The quality of life in a neighborhood may be adversely impacted when large commercial vehicles regularly use a local road as an alternate route to bypass traffic congestion. The regular use of large commercial vehicles on a residential or subdivision street should be discouraged when a reasonable alternate route is available.

Pursuant to Section 35712 of the California Vehicle Code, commercial vehicles exceeding a gross weight of 14,000 pounds may be prohibited on a County-maintained road located in a residential or subdivision area. For purposes of this section, residential/subdivision areas are defined as areas that predominately contain dwelling units (homes, apartments, condominiums, etc.) along the roadway.

Commercial vehicle weight restrictions may be considered when an alternate route is identified and any one of the following conditions exists:

- Prohibiting of commercial trucks can be reasonably expected to substantially reduce conflicts with pedestrians, bicyclists, or parked vehicles and improve the quality of life (less noise, pollution, etc.).

- Commercial truck traffic would have a detrimental effect on the structural condition of the roadbed.

- The roadway geometrics (grade, alignment, width, etc.) are substandard for truck traffic.

When identifying an unrestricted alternate route, the following conditions should be considered:

- The use of the alternate route will not result in excessive out-of-direction travel.

- The alternate route is a Through Highway or on the General Plan ~~Circulation~~ Mobility Element.

- The alternate route has sufficient capacity to accommodate the added truck traffic without a subsequent reduction in level of service.

- The roadbed conditions and roadway geometrics on the alternate route are suitable for truck traffic.

It should be noted that weight restrictions do not completely eliminate heavy commercial vehicles on a route. As indicated in Section 35714 of the California Vehicle Code, ~~C~~commercial vehicle weight restrictions do not apply to vehicles operated by, or on

behalf of, a public utility in connection with the installation, operation, maintenance, or repair of its facilities. Additionally, these restrictions ~~they~~ do not apply to vehicles making deliveries or picking up goods or materials at locations on the restricted roadway or if the restricted roadway provides the only means to reach the destination point. Moving permits may be obtained for moving any extra-legal load which is overweight and/or oversized on any County road subject to the before mentioned requirements. Furthermore, prior to issuance of a moving permit, provisions to protect the structural integrity of the road and to address potential conflicts with other users of the road during the move may be required.

The Traffic Advisory Committee reviews requests for commercial vehicle weight restrictions in residential areas and submits recommendations to the Board of Supervisors.

EQUESTRIAN CROSSINGS

Equestrian (horseback rider) crossings are intended to delineate locations with heavy equestrian concentration or demonstrated equestrian usage connecting well-defined equestrian trails. When an equestrian crossing is established, it shall be designated with equestrian warning signs and pavement markings. The driver of any vehicle shall yield the right-of-way to equestrians at any designated equestrian crossing. However, the establishment of a crossing does not relieve any equestrian from the duty of using due care for their own safety. Furthermore, no equestrian shall leave a curb or other place of safety and proceed suddenly into the path of a vehicle which is close enough to constitute an immediate hazard.

Establishment of equestrian crossings as defined in Section 21805 of the California Vehicle Code should be evaluated on the basis of an engineering study for the purpose of reducing vehicular/equestrian conflict.

When performing an engineering study, consideration should be given to the following:

- There is a demonstrated equestrian demand.
- The crossing will connect well-defined equestrian trails designated on the San Diego County Regional Trails Map.
- The posted speed limit on the road should not exceed 45 MPH.
- The available sight distance for both motorists and equestrians is compatible with the prevailing vehicular speed.

The Traffic Advisory Committee reviews requests for equestrian crossings and submits recommendations to the Board of Supervisors.

GOLF CART USE ON COUNTY ROADS

Section 21716 of the California Vehicle Code states that golf carts cannot be operated on a roadway with a speed limit greater than 25 MPH. The authority to establish combined use of the roadway is provided by Section 21115 of the California Vehicle Code. Combined use of County-maintained roadways by unlicensed golf carts and motor vehicles is solely intended to provide access to, and facilitate the use of, golf facilities. Authorized use of the roadway for unlicensed golf carts is not intended to promote use of the roadway for activities such as running errands, picking up mail, etc.

Combined use of the roadway by golf carts may be authorized only in those communities where one or more of the following apply:

- The proposed roadway is adjacent or provides access to a golf course.
- The proposed roadway is between the golf course and the place where golf carts are parked or stored.
- The proposed roadway is within or bounded by a real estate development offering golfing facilities and is designed and constructed so as to safely permit the use of regular vehicular traffic and also the driving of golf carts.

The use of golf carts shall not be permitted until the prescribed rules and regulations regarding speed and other operating standards are adopted and the appropriate signs giving notice thereof are posted along the roadway. For purposes of combined road use, a "golf cart" includes a low-speed vehicle as defined in California Vehicle Code Section 21250.

The Traffic Advisory Committee reviews requests for combined use of the roadway and submits recommendations to the Board of Supervisors.

GOLF CART CROSSINGS

When a golf course is located on adjacent sides of a County-maintained road, the golf cart driver may be required to cross the roadway to continue play. Random crossings ~~of~~ on the roadway are not consistent with ~~driver's~~ drivers' expectations. Designated crossings reduce the random use of the roadway and channel the carts to a specific location where signs and pavement markings are used to alert motorists of possible crossing. The authority to establish golf cart crossings is provided by Section 21115.1(a) of the California Vehicle Code (CVC). ~~For the purposes of this section,~~As indicated in CVC Section 21115.1(c), a "golf cart" includes a low speed vehicle as defined by ~~the California Vehicle Code Section~~CVC ~~21115.1(c).~~385.5 .

When evaluating a site for installation of a golf cart crossing, consideration shall be given to the following:

- The posted speed limit shall not be greater than 45 MPH.
- The crossing shall be immediately adjacent to a golf course.
- The crossing shall be constructed at approximately 90 degrees to the direction of travel.
- Construction of a golf cart path over or under the roadway is not feasible.
- The available sight distance for motorists and drivers of golf carts is compatible with the ~~vehicular~~ prevailing speed of vehicles.

The Traffic Advisory Committee reviews requests for the installation of golf cart crossings and submits recommendations to the Board of Supervisors.

MID-BLOCK CROSSWALKS

Motorists normally expect pedestrians to cross a road at an intersection. The California Vehicle Code reinforces this expectation by recognizing the existence of marked and unmarked crosswalks at an intersection.

Mid-block pedestrian crossings are not consistent with driver expectation and should be used with great care. The installation of a marked, mid-block crosswalk should only be considered when an engineering study indicates it is necessary to channel pedestrians to a specific location where signs and pavement markings are used to alert motorists of possible crossings.

When evaluating a request for a mid-block crosswalk, the following criteria should be considered:

- The distance between adjacent intersections exceeds 800 feet.
- There is a demonstrated pedestrian demand.
- The posted speed limit on the road should not exceed 45 MPH.
- The establishment of parking prohibitions adjacent to the marked crosswalk on each side of the road to provide better visibility for both pedestrians and motorists.
- The sight distance for pedestrians is sufficient, based upon the prevailing speed of traffic.

The Traffic Advisory Committee reviews requests for a mid-block crosswalk and submits recommendations to the Board of Supervisors.

ONE-WAY STREETS

Nearly all County-maintained roads were originally designed for two-way traffic. Conversion to one-way operation may be considered for a variety of reasons including increased traffic usage, conflicts among vehicular flows, conflicts between pedestrians and vehicles, and congestion and collisions. Minor streets and/or alleys may also be reviewed for one-way operation because of limited width or to prevent cut-through traffic within a neighborhood.

Conversion of two-way streets to one-way operation should only be done when an engineering study indicates that the overall advantages significantly outweigh the disadvantages. When considering the establishment of a one-way street, the following issues should be considered:

- Potential increase in traffic capacity.
- Potential reduction in the number of traffic collisions.
- Changes in travel times and distances.
- The flow of traffic can be effectively controlled either to or away from specific locations.
- Eliminated turning movements may shift to other locations and may cause or exacerbate traffic concerns in the area surrounding the converted streets.
- Revised traffic patterns may cause confusion and/or adverse operations for transit vehicles, emergency vehicles, and other users.

Appropriate signs shall be placed on designated one-way streets to indicate lawful traffic movement.

The Traffic Advisory Committee reviews requests for one-way streets and submits recommendations to the Board of Supervisors.

OVERSIZE VEHICLE PARKING PROHIBITIONS IN RESIDENTIAL AREAS

The issue of long-term parking or storage of oversized vehicles such as motor homes, horse trailers, empty trailers, trailers transporting boats, motorcycles, etc. in and around residential areas has been a recurring concern in the unincorporated area. The California Highway Patrol (CHP) and County staff frequently receive citizen complaints expressing frustration with oversized vehicles stored on residential streets. This topic is predominately a community aesthetic matter and as such this issue has been difficult to resolve.

Section 72.122 of the County of San Diego Regulatory Ordinance prohibits the storage of vehicles on County maintained roads. Under this ordinance, if a vehicle is parked in the same location for more than 72 hours it is deemed to be stored and can be ticketed. However, this ordinance has not effectively dealt with the issue of long-term storage of recreational vehicles. The ordinance is not vehicle specific and owners often move the oversized vehicles a short distance away.

Section 22507(a) of the California Vehicle Code allows local authorities to prohibit specific type of vehicles on certain streets or highways as follows:

> Local authorities may, by ordinance or resolution, prohibit or restrict the stopping, parking, or standing of vehicles, including, but not limited to, vehicles that are six feet or more in height (including any load thereon) within 100 feet of any intersection, on certain streets or highways, or portions thereof, during all or certain hours of the day.

Section 72.126(c) of the County Code of Regulatory Ordinances defines a residential area as follows:

> For purposes of this ordinance a residential area shall be defined as that portion of a highway and the property contiguous thereto on one or both sides of which highway, the contiguous property is occupied by a residential dwelling unit (single or multi-family dwelling units, including apartments or condominiums).

The County developed an efficient and consistent procedure pursuant to Section 72.128.1 of the County Code of Regulatory Ordinances for dealing with long-term parking of oversized vehicles in residential areas. The Department of Public Works (DPW) is tasked with managing this realistic procedure that will maintain a neighborhood's community aesthetic and allow effective enforcement.

When DPW becomes aware of a condition where parked oversized vehicles, including recreational vehicles, may be creating roadway operational issues, (i.e. obstructing lines of sight); DPW staff will perform a traffic engineering study.

Case 1: Traffic Engineering Operational Issue:

If the traffic engineering study determines parked vehicles are creating traffic engineering operational issues, the item is referred to the San Diego County Traffic Advisory Committee (TAC).

- TAC Staff will solicit input from the respective Community Planning/Sponsor Group and affected homeowners.
- If the TAC supports the traffic engineering study and determines regulation is needed, they will forward a recommendation to establish an appropriate regulation to the County's Board of Supervisors for review and approval.
- The Board considers the TAC recommendation at a public meeting.

Case 2: Neighborhood Quality of Life or Community Aesthetic Issue:

If the traffic engineering study determines parked vehicles do not create traffic engineering operational issues, the neighborhood discontent with the presence of a parked vehicle is deemed to be a quality of life or community aesthetic matter. Quality of life or community aesthetic matters affect local neighborhoods and therefore need to be resolved at the local community level.

If the concern is in a residential area as defined in Section 72.126 of the County Code of Regulatory Ordinances and a resident wishes to pursue regulation, the resident will need to:

- Identify the area to be affected by the regulation and prepare a map.
- Develop a petition indicating support by at least 2/3 (67%) of those who reside in the defined area.
- Provide the petitions and map to DPW staff and reconcile staff review comments.
- Present the proposed regulation to the appropriate neighborhood association and Community Planning/Sponsor Group.

If the neighborhood association and Community Planning/Sponsor Group support the regulation, DPW staff will establish the regulation in accordance with Section 72.128.1 of the County Code and install appropriate signage identifying the vehicles being prohibited by description, size or both. After signage is in place the CHP will provide enforcement.

PARKING REGULATIONS

Various parking regulations may be used to improve traffic or pedestrian safety, traffic flow, or access to public transit. Typically, input from affected property owners is solicited prior to establishing a parking prohibition. Signs may be used as an alternative or under special conditions as a supplement to painted curbs. Listed below are the parking regulations authorized in the California Vehicle Code (CVC) and County Code of Regulatory Ordinances (CCRO) and a description of their use:

- Red Curb - No Parking (CVC Sections 21458 and 22500.5, CCRO Sections 72.135 and 72.115)

  Red curb indicates no stopping, standing, or parking, whether the vehicle is attended or unattended; except that a bus may stop in a red zone designated as a bus loading zone. In areas without curb or where the parking prohibition is extensive in length, signs may be used to designate the parking restriction.

- Yellow Curb - Commercial Vehicle Parking for Loading (CVC Section 21458, CCRO Section 72.135)

  Yellow curb indicates stopping only for the purpose of loading or unloading passengers or freight. The installation of yellow curb will normally be considered at locations where there is insufficient access to abutting or nearby commercial property and there is evidence of double parking.

- White Curb - Passenger Loading (CVC Section 21458, CCRO Section 72.135)

  White curb indicates stopping for either the loading or unloading of passengers at locations adjacent to points of public assemblage (theaters, hotels, churches, public agencies, etc.) and for depositing mail in an adjacent curb-side mailbox.

- Green Curb - Time Limit Parking (CVC Section 21458, CCRO Section 72.135)

  Green curb indicates time limit parking of one hour or less. Time limit parking may be established where short-time parking limits could be expected to benefit the public. For time limit parking areas greater than one hour, signs shall be used to indicate time limit parking.

- Blue Curb - Disabled Parking (CVC Section 22511.7, CCRO Section 72.135)

  Blue curb indicates parking limited exclusively to the vehicles of disabled persons as defined by the Department of Motor Vehicles.

- Height Restriction Near Intersections (CVC Section 22507, CCRO Section 72.128.1)

  Parking prohibitions for vehicles six feet or more in height (including any load thereon) may be established within 100 feet from an intersection. Such restrictions are designated with signs.

- No Parking - Tow Away Zone (CVC Section 22651, CCRO Section 72.125)

  Where parking prohibitions have not been effective or are not expected to be effective, Tow-Away Zones may be established. Such restrictions are designated with signs.

The Traffic Advisory Committee reviews requests for parking restrictions and either establishes parking prohibitions through enabling authority (CCRO Section 72.115f) or submits recommendations to the Board of Supervisors for their approval. The Traffic Advisory Committee also reviews appeals to parking prohibitions established through enabling authority.

SPEED LIMITS

A properly established speed limit serves two primary purposes: to assist motorists in determining the maximum safe speed during favorable conditions and to assist law enforcement in controlling the unreasonable motorist. The basic concept is that most people can be relied upon to behave in a reasonable manner. Properly established speed limits reflect reasonable ~~human~~ behavior and should not attempt to alter, control, or manipulate that behavior.

California Vehicle Code Section 22350 (California's Basic Speed Law) prohibits anyone from driving "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 Speed Law applies to all roads regardless of their length and surface type (i.e. paved or unpaved roads). Speed limits can be either posted or unposted. Drivers are expected to know and obey all posted and unposted speed limits. Drivers must also be aware that it is possible to be ticketed for speeding when traveling at a speed below ~~a~~ the properly posted speed limit when conditions are less than ideal.

SPEED LIMITS ESTABLISHED BY CALIFORNIA LAW

~~State law~~The California Vehicle Code (CVC) establishes the following maximum speed limits that cannot be exceeded under any circumstance:

- 55 MPH - Posted or Unposted
  - All trucks and vehicles towing a trailer [CVC 22406].
  - Conventional two-lane, undivided highways (roadways) [CVC 360, 530, and 22349(b)].

- 65 MPH - Posted or Unposted
  - Conventional three lane or more highways (roadways) [CVC 360, 530, and 22349(a)].
  - Freeways [CVC 332 and 22349(a)].

State law also establishes prima facie speed limits, defined as those that are reasonable and prudent under normal conditions. Examples of ~~blanket~~ prima facie speed limits are as follows:

- 15 MPH – Unposted [CVC 22352(a)(1)]
  - All ~~A~~alleys.
  - Intersections with limited visibility.
  - Unsignalized railway grade crossings with limited visibility.
  - ~~Near campgrounds, campsites, or concentrations of people or animals.~~

- 25 MPH - Unposted or Posted
  - Business Districts [CVC 235, 240, and 22352(a)(2)(A)].

- Residence Districts [CVC 240, 515, and 22352(a)(2)(A)].

- 25 MPH - Posted
  - Senior Centers [CVC 22353(a)(2)(C)].
  - School zones when children are present [CVC 22352(a)(2)(B)].
  - Playgrounds in public parks when children are expected to be present [CVC 22357.1].

SPEED LIMITS ESTABLISHED BY COUNTY ORDINANCE

California law also allows the County Board of Supervisors to establish speed limits based on an Engineering and Traffic Survey. The method for conducting this survey is defined in the ~~Caltrans Traffic Manual~~ California Manual on Uniform Traffic Control Devices (CA MUTCD). The CA MUTCD states that surveys for establishing speed zones of less than 0.5 miles should be avoided. The County also discourages establishing speed zones for roads that have a traffic volume of 2,000 vehicles per day or less because of enforcement issues. An important element of ~~this~~ the Engineering and Traffic S~~s~~urvey is the prevailing speed of the majority of drivers on the road and is defined in the ~~Manual~~ CA MUTCD as the speed at which 85 percent of motorists are traveling at or below. The ~~Manual~~ CA MUTCD indicates that the speed limit should normally be set at the ~~first~~ 5-MPH increment ~~below~~ nearest the 85th percentile speed. The 85th percentile speed is measured under off-peak, free-flowing traffic conditions during clear and dry daylight conditions.

The Engineering and Traffic Survey also considers other factors such as development density, pedestrian and bicyclist safety, physical road features, collision experience, traffic characteristics, and conditions not readily apparent to the driver. Per CVC 627 and 22358.5, ~~Based on these factors,~~ the speed limit may be established an additional 5-MPH below the otherwise normally established speed limit based on these factors.

For cases in which the nearest 5-MPH increment of the 85th percentile speed would require a rounding up, then the speed limit may be rounded down to the nearest 5 MPH increment below the 85th percentile per CVC 21400(b), if no further reduction is used.

Establishing a speed limit that is not justified by an Engineering and Traffic Survey should be done with great care as studies have shown that an unjustified speed limit generally results in increased collision rates. In addition, an unjustified speed limit may make violators out of a reasonable majority of drivers and runs the risk of being an illegal speed trap and ~~becoming~~ unenforceable.

The Traffic Advisory Committee reviews requests for speed limits established by County Ordinance and submits recommendations to the Board of Supervisors.

STOP SIGNS

The California Manual on Uniform Traffic Control Devices (CA MUTCD) as authorized by the California Vehicle Code (CVC) describes the requirements for the installation of a stop control. A stop control may be considered at an intersection where existing conditions suggest the need to provide a greater level of right-of-way assignment. The CA MUTCD states that ~~A~~a stop sign ~~should not be considered as~~is not a "cure-all" ~~or~~and is not ~~used as~~ a substitute for ~~less restrictive alternatives~~other traffic control devices. Often, improving the sight distance at an intersection can eliminate the need for a stop control.

A stop control is used to assign right-of-way and should not be used to regulate the speed of traffic. Studies have demonstrated that although motorists reduce their speed in the immediate vicinity of the stop sign, they quickly resume their previous speed a short distance beyond the stop control.

ONE OR TWO-WAY STOP CONTROL

The establishment of a one or two-way stop control should be considered when one of the following conditions exists:

- ~~On a minor street where a safe approach speed to the intersection is less than 10 MPH.~~

- On a County-maintained road where it intersects a State Highway. At these locations, Caltrans determines the need and maintains the stop sign if installed [CVC 21353].

- ~~At the intersection of two main roads. Determining which road should be stopped depends on approach speeds, volumes and turning movements.~~

- On a County-maintained road where it intersects a Through Highway [CVC 600 and 21354].

- At the intersection of two main roads. Determining which road should be stopped depends on a traffic engineering study involving the review of approach speeds, traffic volumes, pedestrian volumes, turning movements, collision history, sight distance, and roadway geometrics.

- At ~~intersections where a combination of high speed, restricted visibility and collision history indicates a need for the level of control provided by a stop sign~~the intersection of a less important road with a main road where application of the normal right-of-way rule would not be expected to provide reasonable compliance with the law.

- Where ~~T~~three or more reported right-angle collisions have occurred in a twelve-month period at an intersection that may have been correctable by the installation of a stop control, or five or more such crashes have been reported within a 2-year period.

When a required stop is applied at the entrance to an intersection from a one-way street with a roadway of 30 feet or more width, stop signs shall be erected on both the left and right sides of the one-way street at or near the entrance to the intersection [CVC 21355].

ALL-WAY STOP CONTROL

An all-way (multi-way) stop control installation is usually more effective at locations where traffic volumes on the intersecting roads are nearly equal. An all-way stop control installation generally proves to be inefficient ~~inconsistent with driver expectation~~ and inconsistent with driver expectation ~~inefficient~~ at low volume intersections. Studies have demonstrated a higher than expected level of violation of stop controls at locations where an unwarranted all-way stop control installation was installed. As a result, unwarranted all-way stop control installations should be discouraged.

The CA MUTCD states that the decision to install an all-way stop should be based on an engineering study. The following criteria should be considered in the engineering study for an all-way stop installation:~~An all-way stop control installation may be considered when any one of the following conditions exists:~~

A. Where traffic control signals are justified, the all-way stop is an interim measure that can be installed quickly to control traffic while arrangements are being made for the installation of the traffic control signal.
B. Five (5) or more reported collisions in a 12-month period that are susceptible to correction by an all-way stop installation. Such collisions include right- and left-turn collisions as well as right-angle collisions.
C. Minimum volumes:
    1. The vehicular volume entering the intersection from the major street approaches (total of both approaches) averages at least 300 vehicles per hour for any 8 hours of an average day, and
    2. The combined vehicular, pedestrian, and bicycle volume entering the intersection from the minor street approaches (total of both approaches) averages at least 200 units per hour for the same 8 hours, with an average delay to minor-street vehicular traffic of at least 30 seconds per vehicle during the highest hour, but
    3. If the 85th-percentile approach speed of the major-street traffic exceeds 40 MPH, the minimum vehicular volume warrants are 70 percent of the values provided in Items 1 and 2.

D. Where no single criterion is satisfied, but where Criteria B, C.1, and C.2 are all satisfied to 80 percent of the minimum values. Criterion C.3 is excluded from this condition.

Optional other criteria that may be considered in an engineering study for proposed all-way stop controls include:

A. The need to control left-turn conflicts.
B. The need to control vehicle/pedestrian conflicts near locations that generate high pedestrian volumes.
C. Locations where a road user, after stopping, cannot see conflicting traffic and is not able to negotiate the intersection unless conflicting cross traffic is also required to stop; and
D. An intersection of two residential neighborhood collector (through) streets of similar design and operating characteristics where all-way stop control would improve traffic operational characteristics of the intersection.

At all-way stop intersections, the R1-1 (stop) sign at each leg of the intersection shall be supplemented with the R1-4 (all-way) supplemental plate.

Stop sign installations for all one-way, two-way, and all-way stop controls shall be accompanied with limit lines and "STOP" pavement markings except on unpaved roadways, on roadways with wide concrete cross-gutters, and on poorly-maintained, paved private roadways (County guideline).

- ~~The total vehicular volume entering the intersection from all approaches must average at least 500 vehicles per hour for any 8 hours of an average day, and the combined vehicular and pedestrian volume from the minor street or highway must average at least 200 units per hour for the same 8 hours, with an average delay to minor street vehicular traffic of at least 30 seconds per vehicle during the maximum hour.~~

  ~~When the 85th percentile approach speed exceeds 40 MPH, the minimum vehicular volume warrant is 70% of the above requirements.~~

- ~~At an intersection having a demonstrated collision pattern as evidenced by five or more reported collisions in a twelve-month period of a type susceptible to correction by an all-way stop control. Such collisions include right angle, right and left-turn collisions as well as pedestrian collisions.~~

The Traffic Advisory Committee reviews requests for stop signs and submits recommendations to the Board of Supervisors.

THROUGH HIGHWAYS

The establishment of a Through Highway assigns right-of-way to motorists traveling on a road carrying a high volume of daily traffic. Typically, the flow of traffic is improved on a road designated as a Through Highway because all intersecting roads are regulated by stop controls or traffic signals.

A Through Highway, as defined by Section 600 of the California Vehicle Code, may be considered on a road carrying predominantly through traffic when ~~one of~~ the following conditions exists:

- 50% or more of the intersections between the limits of the proposed Through Highway are currently controlled with stop signs or traffic signals.

AND

- 2,000 or more vehicles a day travel on the proposed Through Highway.

OR

- On roads where the daily traffic volume is at least 1,000 vehicles and any one of the following conditions exists:
    - Is a regularly scheduled public transit route.
    - Is a logical extension of an existing Through Highway.
    - Serves as a Residential Collector route or is identified as a ~~Circulation~~Mobility Element R~~r~~oad on the County General Plan.
- ~~50% or more of the intersections between the limits of the proposed Through Highway are currently controlled with stop signs or traffic signals.~~

The Traffic Advisory Committee reviews requests for Through Highway designations and submits recommendations to the Board of Supervisors.

TRAFFIC SIGNALS

Traffic signals are traffic control devices that assign right-of-way to motorists, bicyclists, pedestrians, and equestrians. They are intended to:

- Reduce the frequency of violation of right-of-way.
- Assign the orderly movement of traffic.
- Ensure the efficient flow of traffic along a given route.
- Provide gaps for vehicles, pedestrians, bicyclists, and equestrians to safely cross or enter a heavily traveled road.

Unwarranted traffic signals may cause:

- Excessive delay, waste of energy, and increased air pollution.
- Disregard for signal indications.
- Increased collision frequency.
- Use of alternate routes to avoid delays.

Nationally recognized warrants establishing minimum criteria for traffic signal controls as outlined in Part 4 of the California Manual on Uniform Traffic Control Devices ~~Chapter 9 of the Caltrans Traffic Manual~~ shall be used to evaluate proposed locations for traffic signals. Satisfaction of a warrant does not automatically constitute justification for a traffic signal. Adjacent traffic signals should be located a minimum quarter mile apart. At the discretion of the Director of Public Works, adjacent traffic signals in commercial areas may be at least an eighth of a mile apart provided signalization is warranted and driveway/roadway relocation is not feasible. Adjacent traffic signals that are less than a mile apart shall be interconnected with all applicable equipment to affect a coordinated system to the satisfaction of the Director of Public Works.

Proposed traffic signals that are shared with other jurisdictions shall require a traffic signal maintenance agreement between the County of San Diego and the associated jurisdiction(s). The agreement shall be approved by the Board of Supervisors and associated jurisdiction(s) before the traffic signal is installed. The agreement shall define maintenance and operation responsibilities, cost sharing, and defense and indemnity.

The Traffic Advisory Committee reviews requests for traffic signals and submits recommendations to the Board of Supervisors. Locations approved by the Board of Supervisors are placed on the County's Traffic Signal Priority List. The actual construction of a traffic signal is dependent on its ranking on the list and available funding.

YIELD SIGNS

A yield control is used to formally assign right-of-way at locations where motorists are experiencing uncertainty as to whom has the right-of-way. Vehicles controlled by a YIELD sign need to slow down to a reasonable speed for the existing conditions or stop when necessary to avoid interfering with conflicting traffic. Often, improving the sight distance can eliminate the need for a yield control.

~~A yield control may be considered when any one of the following conditions exists:~~

- ~~On the minor road of an intersection where it is necessary to assign right-of-way to motorists on the major road, but where a stop control would be overly restrictive and the safe approach speed exceeds 10 MPH.~~
- ~~Where there is a separate or channelized right-turn lane without an adequate acceleration lane.~~
- ~~At an intersection where the results of an engineering study indicate conditions are susceptible to improvement by the use of a yield control.~~

The California Manual on Uniform Traffic Control Devices states that R1-2 (YIELD) signs may be installed:

A. On the approaches to a through street or highway where conditions are such that a full stop is not always required.

B. At the second crossroad of a divided highway, where the median width at the intersection is 30 feet or greater. In this case, a STOP or YIELD sign may be installed at the entrance to the first roadway of a divided highway, and a YIELD sign may be installed at the entrance to the second roadway.

C. For a channelized turn lane that is separated from the adjacent travel lanes by an island, even if the adjacent lanes at the intersection are controlled by a highway traffic control signal or by a STOP sign.

D. At an intersection where a special problem exists and where engineering judgment indicates the problem to be susceptible to correction by the use of the YIELD sign.

E. Facing the entering roadway for a merge-type movement if engineering judgment indicates that control is needed because acceleration geometry and/or sight distance is not adequate for merging traffic operation.

A YIELD (R1-2) sign shall be used to assign right-of-way at the entrance to a roundabout. YIELD signs at roundabouts shall be used to control the approach roadways and shall not be used to control the circulatory roadway.

Other than for all of the approaches to a roundabout, YIELD signs shall not be placed at more than one approach of an intersection (California Vehicle Code 21356).

The Traffic Advisory Committee reviews requests for a yield control and submits recommendations to the Board of Supervisors.

OPERATIONAL GUIDELINES

BIKEWAYS

The term "bikeways" is used for all facilities that are specifically installed or signed for bicycle travel. Bikeways are designed per the County Public Road Standards. Bicycle facilities may be installed on roads identified on the County's ~~Circulation Element Bicycle Network~~Bicycle Transportation Plan. Typically, facilities are constructed on the County's Bicycle ~~Network Circulation Element~~Transportation Plan as a continuation of an existing bikeway facility or as a connecting link between population centers and recreational/scenic areas. The ~~three~~ different categories of bicycle facilities are:

- Shared Roadway (No Bikeway Designation)

  Roadways with no bikeway designations (i.e. no bikeway signs and pavement markings) are shared facilities where bicyclists may intermingle with other traffic. In some instances, entire street systems may be fully adequate for safe and efficient bicycle travel, where signing and pavement marking for bicycle use may be unnecessary. In other cases, prior to designation as a bikeway, routes may need improvements for bicycle travel (Index 1002.1(1) Caltrans Highway Design Manual).

- Class I Bikeway - Bike Path ~~or Bike Trail~~

  A completely separated right-of-way facility designated for the exclusive use of bicyclists and pedestrians with cross flows by motorists minimized (California Vehicle Code 231.5 and Index 1002.1(2) Caltrans Highway Design Manual).

- Class II Bikeway - Bike Lane

  A restricted right-of-way facility within the paved roadway designated for the exclusive or semi-exclusive use of bicyclists with through travel by motor vehicles or pedestrians prohibited. Typically, a parking prohibition is established in conjunction with a bike lane unless there is sufficient room for a parking lane. A study of parking impacts and polling of all adjacent property owners shall be conducted prior to deciding to prohibit parking on a roadway (Index 1002.1(3) Caltrans Highway Design Manual and California Vehicle Code Sections 21207 and 21209).

- Class III Bikeway - Bike Route

  A bike route is designated by signs and shared with pedestrians and motorists. They either provide continuity to other bicycle facilities or designate preferred routes through high demand corridors (Index 1002.1(4) Caltrans Highway Design Manual).

While on-street bikeways are desirable to enhance safety and convenience for bicyclists, funding is often necessary to increase the roadway width needed to install a bike lane and address parking demand. Proposed bikeway projects are reviewed and prioritized by the ~~Department of Public Works' Bicycle Coordinator~~Department of Public Works' Project Planning Committee for available funding consideration.

CENTERLINE INSTALLATION~~STRIPING~~

Yellow centerline striping separates traffic traveling in opposite directions and provides important guidance to motorists. On roads where a continuous centerline is not used, short sections may be used to control the position of traffic at specific locations, such as around curves, over hills, adjacent to barriers, and on approaches to intersections, railroad crossings, and bridges. Centerline striping need not be at the geometrical center of the pavement.

Centerline striping may be installed on paved County-maintained roads that are a minimum of 2~~0~~4 feet in width when any one of the following conditions is met:

- On all General Plan ~~Circulation~~ Mobility Element roads having an average daily traffic volume of 400 vehicles or more.
- On non-General Plan ~~Circulation~~ Mobility Element roads having an average daily traffic volume of 400 vehicles or more, provided that one of the following conditions is met:
    - The alignment is curvilinear.
    - There is little or no shoulder area.
    - The road traverses a hilly or mountainous area.
- On roads subject to reduced visibility due to climatic conditions (such as snow, fog, or sandstorms) and having an average daily traffic volume of 400 vehicles or more.
- ~~On roads that provide primary access to recreation areas or military reservations.~~On roads where an engineering study indicates a demonstrated problem that may be correctable by centerline striping.

~~If none of the above conditions are met, centerline striping will be considered on roads where 75% of returned ballots from an organized ballot vote indicate that affected property owners desire centerline striping, and where the organized residents, responsible agency, or association places a deposit sufficient to cover all installation costs. County personnel will perform the striping installation and all subsequent maintenance work.~~

The use of centerline striping on streets less than one-half mile in length in residential areas should be minimized because it may provide a false indication that it is a through route.

Centerline striping details are in Part 3 of the California Manual on Uniform Traffic Control Devices (CA MUTCD).

Raised retroreflective pavement markers shall be used to supplement centerline striping except in snow areas and in areas of drifting sand or rockslides.

EDGE LINE ~~STRIPING~~ INSTALLATION

Edge line striping (commonly referred to as "fog line") is intended to assist motorists in determining the limits of the traveled way. It also serves as a visual reference during adverse weather and visibility conditions and discourages driving on road shoulders that have less structural strength than the traveled way.

On roads with existing centerline striping, edge line striping may be installed when any one of the following conditions exists:

- On roads in hilly or mountainous areas that have unpaved shoulders less than 8' in width.
- On roads that have shoulders (paved or unpaved) less than 8' in width and there is no contrasting color or texture between the traveled way and the road shoulders.
- On roads where it may be desirable to separate a 12' minimum traveled way from an 8' minimum parking lane.
- At other locations where a demonstrated problem exists that may be correctable by the installation of edge striping.

Edge line striping should not be broken for minor driveways. Wide solid edge line markings may be used for greater emphasis. Edge line striping may be excluded, based on engineering judgment, for reasons such as if the traveled way edges are delineated by concrete curb and gutter, bicycle lanes, or other markings.

Edge line striping details are in Part 3 of the California Manual on Uniform Traffic Control Devices (CA MUTCD).

FLASHING BEACONS

A flashing beacon may be used to supplement existing warning or regulatory traffic control devices ~~and alert motorists to a high judgement condition~~where additional emphasis and warning for drivers is desired.

Flashing beacons should be used sparingly and only at locations where an engineering study may determine a beacon is needed or where existing traffic control devices have been determined to be ineffective. The inappropriate use of flashing beacons may reduce the effectiveness of other justified flashing beacon installations.

Typical locations for flashing beacon installation may include the following:

- School Zones
- Fire Stations
- Traffic Signs
    - Signal ahead signs
    - Stop signs
    - Advance warning signs
- Gates

Flashing beacons should be operated only during those hours for which the hazard or regulation exists. Criteria for flashing beacons are outlined in Part 4 of the California Manual on Uniform Traffic Control Devices (CA MUTCD).~~Chapter 9 of the Caltrans Traffic Manual.~~

GUARDRAIL

Guardrail is intended to reduce the severity of run-off-the-road type of collisions. Since guardrail is itself a fixed object, it should only be installed where:

- the severity of striking the guardrail is expected to be less than the severity of leaving the roadway and going down an embankment or striking another fixed object; and
- there is a collision history of run-off-the-road collisions at the location being evaluated.

Engineering judgment shall be used when considering the installation of guardrail. New guardrail installations should not be placed adjacent to sidewalks and shall not be used to protect private property.

The primary contributors to the severity of run-off-the-road type of collisions are embankment height, embankment slope, and clear recovery area. Guardrail may be installed on County-maintained roads at embankment slopes, fixed roadside objects, or structure approach locations when it is determined guardrail will reduce collision severity in accordance with the guidelines outlined in Chapter 7 of the most current Caltrans Traffic Manual.

Locations meeting the conditions described above will be evaluated, ranked, and placed on the Department's Guardrail List. Each year, ~~high-ranking~~proposed guardrail locations will be scheduled for installation depending on available funding and constructability. ~~Locations further down on the Guardrail List may be constructed ahead of schedule if an individual or agency shares the construction costs equally with the County.~~

Guardrail shall be designed per the most current Caltrans Standard Plans and Caltrans Standard Specifications. Drainage improvements, spliced guardrail sections, and sidewalk/pathway improvements are to be installed with guardrail installations to address mandated lower dike heights, the presence of existing conflicting underground utilities, and intrusions onto existing sidewalks/pathways respectively.

INTERSECTION CROSSWALKS

Section 275 of the California Vehicle Code recognizes the existence of marked and unmarked crosswalks at an intersection. An unmarked crosswalk is considered to exist within the prolongation ~~or connection of the boundary lines~~ of ~~a~~ an approaching sidewalk at an intersection where the intersecting roadways meet at approximately right angles.

Marked (painted) intersection crosswalks are intended to channel pedestrians to a desirable location where ~~warning signs and~~ pavement markings can be used to alert motorists of possible crossings. Studies have demonstrated pedestrians are more likely to be struck by a vehicle within a marked crosswalk than within an unmarked crosswalk. This experience is attributed to a false sense of security ~~often~~ assumed by pedestrians when utilizing a painted crosswalk. Therefore, in the interest of pedestrian safety, the installation of a painted crosswalk must be a carefully considered action. Painted crosswalks should only be installed where there is evidence that the advantages to the pedestrian clearly offset the potential "false sense of security" phenomenon.

When evaluating a request for a marked crosswalk that is not school or traffic signal related, the following guidelines should be considered:

- Ten or more pedestrians cross at the desired location during any one-hour of the day.
- The posted speed limit does not exceed 45 MPH.
- The sight distance for pedestrians is sufficient~~,~~ based upon the prevailing speed of traffic.
- Adequate illumination exists ~~or will be provided~~ at the proposed crosswalk site.
- The proposed location will define a pedestrian route across a complex intersection.
- The proposed location will reduce pedestrian exposure to vehicles.

Crosswalks shall be painted across all roads having pedestrian crossing signal indications at signalized intersections.

Crosswalks that are not school related shall be painted per Part 3 of the California Manual on Uniform Traffic Control Devices (CA MUTCD).

The guidelines for evaluating a request for a marked school-related crosswalk are described in the County's "School Traffic Safety Policies and Warrants" booklet and installed in conformance with Section 21368 of the California Vehicle Code and Part 7 of the CA MUTCD.

MEDIAN OPENINGS

Median openings provide for left-turns and U-turns on divided roadways. Guidelines for median openings have been established to facilitate traffic movement and promote traffic safety.

Median openings may be permitted at all intersections with public roads, except where the Director of Public Works determines that such openings may impair the movement of traffic or create other traffic problems.

Mid-block median openings that permit left turns into and out of adjacent driveways may be allowed when all of the following conditions exist:

- The property to be served is a major traffic generator.
- The median opening is not less than 600 feet from the centerline of any intersecting road or any other existing or proposed mid-block median opening.
- The Director of Public Works determines that the geometric design of the proposed median opening is acceptable and will not interfere with the operation of the roadway.
- All costs of construction are borne by the requesting party.

When evaluating a request for a median opening, specific consideration should be given to roadway speed, traffic volumes, median length needed for back-to-back left turn pockets, alignment of driveways and side streets on both sides of the road at the proposed median opening, and available sight distance.

ON-STREET PARKING DELINEATION

Delineation for parallel parking may be installed when justified by heavy parking demand, as determined by an engineering study.

Parking stall delineation should be performed in accordance with common engineering practice and the following publications:

- "~~Caltrans Traffic Manual~~California Manual on Uniform Traffic Control Devices (CA MUTCD)," Caltrans
- "Traffic Engineering Handbook," Institute of Transportation Engineers~~, Traffic Engineering Handbook~~
- "Fundamentals of Traffic Engineering," Institute of Transportation Studies~~, Fundamental of Traffic Engineering~~

Angle parking delineation shall only be installed at locations where angle parking has been legally established by County ordinance. Please refer to the section entitled "Angle Parking" in this guideline.

REFLECTORIZED PAVEMENT MARKERS

Reflectorized Pavement Markers (RPM's) are intended to provide additional nighttime visibility for the guidance or channelization of traffic.

RPM's will only be installed in conjunction with existing centerline or edgeline striping. In general, all new roads accepted into the County-maintained system will receive centerline striping and centerline RPM's. Existing County-maintained roads without RPM's may be reviewed for centerline RPM installation. Installation should be considered if the connecting or surrounding network of roadways has RPM installations. Edgeline RPM's will only be installed on roads where an engineering study indicates a demonstrated problem that may be correctable by edgeline RPM's.

RPM's shall **not** be installed:

- On unpaved roads
- On roads above 3,000 feet in elevation (commonly known as the snow line) or roads that require snow plowing.
- In areas of drifting sand or rockslides.
- On roads surfaced with road-oil mix.

Ground-in centerline rumble strip may be considered on paved roads where reflectorized pavement markers cannot or can be installed, and there are concerns with vehicles crossing the centerline or the edgeline. They shall be installed per Caltrans Standard Plans.

Blue hydrant markers are installed by local fire agencies or water districts so that they can easily locate fire hydrants. They are not official traffic control devices. The County of San Diego does not install or maintain blue hydrant markers per the approved March 5, 1992 DIBBS Suggestion No. 9105-1891 "Facility Owner Replace Blue RPM's."

RESIDENTIAL TRAFFIC PROGRAM

Residents often express concern regarding the excessive speed and/or volume of traffic on ~~the~~ residential streets adjacent to their homes. To address this concern, the Department of Public Works (DPW), in conjunction with the California Highway Patrol, has developed the Residential Traffic Program in an attempt to improve the quality of life on neighborhood streets. This evolving program is designed to calm traffic on local streets so residents will feel more secure in their neighborhoods. The program focuses on reducing speeds and cut-through traffic on residential streets by using the three E's:

- **Education** - Residents receive the information and tools to become active participants in addressing their neighborhood traffic concerns.

- **Engineering** - Engineering principles are used to develop traffic calming strategies that address community-identified traffic issues. Solutions can include traffic control devices ranging from the least restrictive (signing and striping) to the more restrictive (one-way streets and barricades).

- **Enforcement** - Targeted police enforcement supports the traffic-calming plan developed by residents and DPW.

Installation of proposed restrictive roadway design measures first requires concurrence of the local fire district (refer to Section 503.4.1, "Roadway Design Features," of the County of San Diego Consolidated Fire Code). Proposed roadway design measures may adversely affect emergency response time, a great concern for local fire districts. Upon approval from the local fire district, then concurrence from at least 75% of the residents fronting the subject roadway and at least 50% of the affected residents on adjacent roadways is required for the proposed measures. The design, installation, and maintenance of the restrictive measures may require funding through the benefiting property owners.

For further information on this program, please consult the Residential Traffic Program guidelines adopted by the Board of Supervisors.

SCHOOL TRAFFIC SAFETY

To address school traffic safety issues, a publication entitled "School Traffic Safety Policies and Warrants" has been reviewed by the Traffic Advisory Committee and the San Diego County Board of Education and has been adopted by the Board of Supervisors. This publication addresses several school traffic safety related issues including, but not limited to, the following:

- School Safety Advisory Committee
- School Responsibilities
- County Department of Public Works Responsibilities
- Parental Responsibilities
- California Highway Patrol Responsibilities
- Signs and Markings
- Flashing Yellow Beacons
- School Crossing Traffic Signals
- School Safety Patrols
- Adult Crossing Guards
- Pedestrian Walkways
- School Area Parking and Loading Controls

School zones issues require consideration by school administration and law enforcement officials. All school safety concerns should be forwarded to the Traffic Engineering Section of the Department of Public Works by the principal of the affected school. ~~For further information regarding school traffic safety issues, contact the Traffic Engineering Section of the Department of Public Works.~~

STREET LIGHTING

There are four methods ~~three different ways~~ street lighting ~~is furnished~~ on public roads in ~~the~~ unincorporated areas of the County is furnished.

~~Safety Lighting~~

~~Street lighting at spot locations solely for traffic safety considerations is commonly known as "safety lighting" and is administered by the Traffic Engineering Section of the County Department of Public Works. Safety lighting will be installed and maintained by the County under the following conditions:~~

- ~~At locations where unusually frequent or severe nighttime collisions have occurred if they are susceptible to correction by illumination.~~
- ~~At all traffic signals.~~
- ~~At channelized intersections where an engineering study indicates a demonstrated problem exists that may be correctable by safety lighting.~~
- ~~At any location where alignment, construction, grade, sight distance, or other factors constitute a confusing or unsatisfactory condition or where experience has indicated the ineffectiveness of other devices.~~

San Diego County Street Lighting District

The County Street Lighting District provides area-wide street lighting in developed areas. This is the most common type of lighting throughout the County. The Department of Public Works, Special Districts Section administers the Street Lighting District, and the Traffic Engineering Section operates and maintains the street lighting improvements. Street lights are ~~generally installed by developers and~~ maintained through the Street Lighting District by assessments on annual property tax bills.

Method 1 - Installation of lighting with the purpose of illuminating the roadway is typically installed by developers per the General Roadway Lighting Requirements in the County Public Road Standards. Street lighting is also installed by developers at traffic signals they install and where it is anticipated that alignment, grade, sight distance, or other factors will create a condition that is confusing or unsatisfactory to users of the road as approved by the Director of Public Works.

Method 2 - Residents desiring streetlights in ~~a~~an already developed area must complete a petition ~~and ballot process.~~ signed by 60% of the affected property owners in order to initiate Proposition 218 ballot proceedings with the Department of Public Works, Special Districts Section. Streetlights will only be installed ~~after 50% of the affected property owners consent to the~~

~~initial and annual assessments and the proposed lighting is approved by the Board of Supervisors~~ per County Public Road Standards after the Board of Supervisors confirms that a majority protest was not achieved and that the properties are annexed into Zone A of the Street Lighting District. Property owners must pay all costs associated with the annexation process and the installation of street lights plus annual assessments thereafter.

~~The Special Districts Section of the Department of Public Works administers this type of street lighting.~~

Safety Lighting

Method 3 - Street lighting at spot locations solely for traffic safety considerations is commonly known as "safety lighting" and is administered by the Traffic Engineering Section. Safety lighting will be installed and maintained by the County under the following conditions:

- Illumination is needed at all signalized locations. Vehicles, pedestrians, bicyclists and equestrians all benefit from an intersection that is well lit. Conflict points within a signalized intersection that are illuminated well will experience a reduced probability of conflict between users.
- At locations where unusually frequent nighttime collisions have occurred. An engineering study is performed to determine if noted collisions are susceptible to correction by illumination.
- At any location where alignment, grade, sight distance, or other factors create a condition that is confusing or unsatisfactory to users of the road.

San Diego Gas & Electric (SDG&E) "Dusk to Dawn" Street Lighting Program

Method 4 - For a monthly fee, residents can arrange for SDG&E to install and maintain a "dusk to dawn" light at their residence. ~~Contact~~ SDG&E must be contacted for details ~~on~~ of this program.

TEMPORARY ROAD CLOSURES

In general, road closures are not acceptable, as they are a burden to the motoring public. However, there are occasions where a temporary inconvenience to the motoring public can be deemed acceptable. In these cases, requests for temporary closure of County-maintained roads will follow a permit application process.

PARADES AND SPECIAL EVENTS

The Department of Public Works (DPW) may issue special event permits in accordance with Sections 72.249.5 and 72.249.6 of the County Code of Regulatory Ordinances for the temporary closure of roads for parades and similar community events. A ~~request~~complete Special Event Permit application should be submitted to DPW's Traffic Engineering Section not less than 30 days prior to the proposed date of special event to ensure adequate coordination with public service agencies (law enforcement, fire departments, etc.) and affected stakeholders (adjacent residents, homeowner's association, etc.). Requests that come in less than 30 days may result in the special event permit application being denied.

Temporary road closures shall not unduly inconvenience traffic. The duration of the road closure must be within a reasonable time limit, generally not to exceed eight hours. No road closure shall be permitted for more than 24 hours without the approval of the Board of Supervisors. Applicants for block parties need to provide a signed petition from a majority of the residents and/or businesses affected by the temporary road closure stating that the residents are in concurrence with the temporary road closure.

Adequate signing for detours associated with a temporary road closure shall be in accordance with the ~~Caltrans Traffic Manual~~most current California Manual on Uniform Traffic Control Devices (CA MUTCD) and the Traffic Control Plans found in the Appendix of the San Diego County Regional Standard Drawings. Informational signs informing the public of the temporary road closure shall be posted at least 7 days in advance of the event. Newspaper ads, information signs, and/or changeable signs informing the public of the temporary road closure may be required at least 2 weeks in advance of the event.

~~The applicant may be required to make a deposit for signs and barricades borrowed from DPW.~~ When barricades and signs are ~~obtained~~ borrowed from DPW, the applicant is responsible for their pickup, placement, and return. ~~There will be a charge if DPW is requested to provide traffic control to support the event.~~ The applicant shall provide a certificate of insurance as evidence of commercial general liability with a minimum $1,000,000 per occurrence limit of liability for the event with a separate additional insurance endorsement naming the County of San Diego, its agents, officers and employees as additional insured. Applicants for block parties ~~do not need~~are not required to provide a certificate of insurance.

WORK WITHIN A COUNTY-MAINTAINED ROAD

In conformance with the adopted County Road Policy, a temporary road closure may be granted to perform work or traffic studies within the road right of way. For construction projects, the applicant must justify the proposed temporary road closure by proving to DPW's Construction Inspection Section or Private Development Construction Inspection (PDCI) Section that there is no reasonable public road alternative from a construction standpoint. DPW shall review and approve, modify, or deny such a request based on the safety and convenience of the public.

The applicant should submit ~~a temporary road closure application~~a traffic control permit along with the associated temporary road closure and detour plans at least 21 days in advance of the desired start of work to DPW's Traffic Engineering Section. In addition, the request must include the length of time for the proposed closure and an agreement by the applicant to place and adequately maintain all necessary barricades, warning signs, and lights associated with the closure. Signing for temporary road closure detours must be in accordance with the ~~Caltrans Traffic Manual~~current California Manual on Uniform Traffic Control Devices (CA MUTCD) and the Traffic Control Plans located in the Appendix of the San Diego County Regional Standard Drawings.

If the temporary road closure is approved, the applicant shall post informational signs per the approved permit that inform the public of the temporary road closure at least 7 days in advance of the event. The applicant may be required to place ads in local newspapers per the approved permit that inform the public of the temporary road closure at least 7 days in advance of the closure. The applicant shall provide notification to affected emergency services and school districts at least 7 days in advance of the road closure. The applicant shall provide notification of the road closure to affected residents and businesses by means of either a mailed notice or door to door delivery of a doorknob flyer at least 2 weeks prior to the start of the disruptive construction activity.

REFERENCES

County of San Diego~~Traffic References~~

- County Board of Supervisors Policies, Section J - Roads, Streets, and Highways
- County Code of Regulatory Ordinances, Title 7 - Highways and Traffic, Division 2 - County Traffic Code
- County Public Road Standards
- County Department of Public Works, Director's Policies and Letters of Instruction
- County School Traffic Safety Policies and Warrants
- County Residential Traffic Program
- County Road Policy
- DIBBS Suggestion No. 9105-1891 "Facility Owner Replace Blue RPM's," March 5, 1992

State of California~~Traffic References~~

- California Manual on Uniform Traffic Control Devices (CA MUTCD), Caltrans
- Caltrans Standard Plans and Specifications
- Caltrans Traffic Manual, Highway Design Manual, and Maintenance Manual
- Caltrans Traffic Sign Specifications and Policies
- California Vehicle Code (CVC), Department of Motor Vehicles

U.S. Government~~Federal Traffic References~~

- ~~Manual on Uniform Traffic Control Devices (MUTCD), U.S. Department of Transportation~~
- ~~Highway Capacity Manual, Transportation Research Board~~
- "Standard Highway Signs Including Pavement Markings and Standard Alphabets – 2004 Edition," Federal Highway Administration (FHWA)
- "Standard Highway Signs Including Pavement Markings and Standard Alphabets – 2012 Supplement," Federal Highway Administration (FHWA)

Professional Organizations~~Traffic References~~

- "A Policy on Geometric Design of Highways and Streets" a.k.a. "AASHTO Green Book", American Association of State Highways and Transportation Officials (AASHTO)
- "Traffic Engineering Handbook", Institute of Transportation Engineers (ITE)
- "Fundamentals of Traffic Engineering", Institute of Transportation Studies (ITS), University of California at Berkeley
- "~~Realistic~~ Effective Speed Zoning – Why and How", Automobile Club of Southern California (AAA)
- "Highway Capacity Manual," Transportation Research Board (TRB)