



County of Santa Cruz

DEPARTMENT OF PUBLIC WORKS

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THOMAS L. BOLICH
DIRECTOR OF PUBLIC WORKS

TRAFFIC AND ENGINEERING REPORT

MARCH 2009



County of Santa Cruz

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THOMAS L. BOLICH
DIRECTOR OF PUBLIC WORKS

March 11, 2009

SUBJECT: TRAFFIC AND ENGINEERING REPORT MARCH 2009

To Whom It May Concern:

This traffic and engineering report was prepared in accordance with Vehicle Code Section 40803 to allow the use of radar for speed enforcement purposes. The recommended safe speeds were determined utilizing the prevailing 85th percentile speeds combined with traffic engineering judgment to match existing conditions with the traffic safety needs of the community. Accident statistics indicate that unsafe speed is the highest single primary collision factor on roadways, and adherence to safe speeds should result in a substantial reduction in vehicle accidents.

Yours truly,

THOMAS L. BOLICH
Director of Public Works

RR:mh

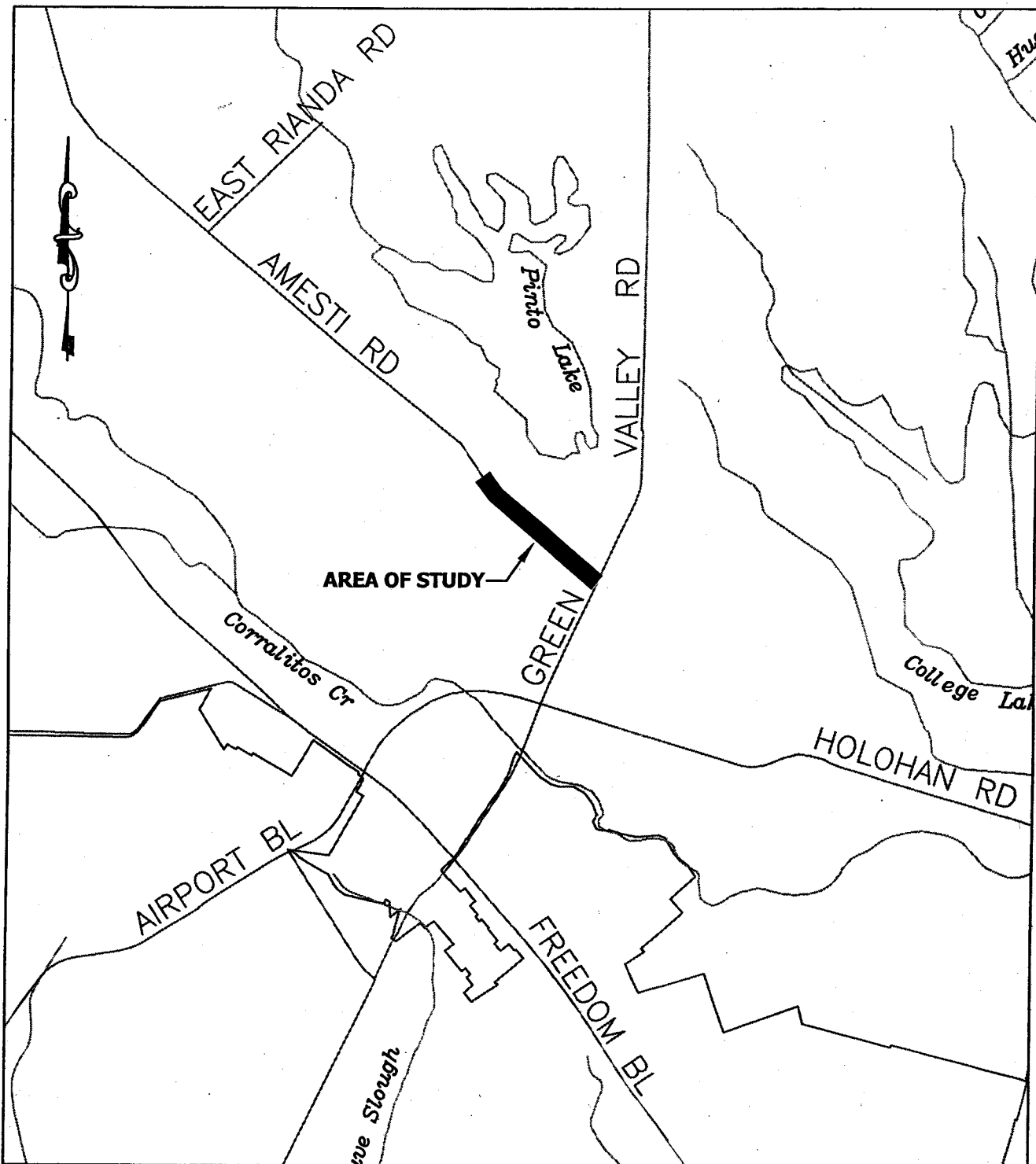
Attachment

TRAFFIC AND ENGINEERING REPORT

March, 2009

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**SANTA CRUZ COUNTY TRAFFIC ENGINEERING
RADAR SPEED SURVEY
AMESTI ROAD
GREEN VALLEY ROAD TO 0.4 MILES NORTH**

MARCH 2009

TRAFFIC AND ENGINEERING REPORT
MARCH 2009

PURPOSE:

This survey is performed in accordance with Vehicle Code Section 40803 to allow the use of radar for enforcement purposes.

LOCATION:

Amesti Road between Green Valley Road and 0.4 miles northwesterly. (Speed Data collected at Amesti Elementary School).

PREVAILING SPEED DATA:

The existing posted speed limit is 25 MPH and is radar enforced.

The prevailing speeds are:

Direction	Westbound	Eastbound
85 th Percentile	31 mph	31 mph
Pace Speed	22-32 mph	22-32 mph
Average Speed	27.11 mph	27.01 mph

ANALYSIS:

The prevailing 85th percentile speeds are 31 MPH in both directions of travel. The safe speed is established at or near the average 85th percentile which is calculated to be 30 MPH. However, in matching existing conditions with the traffic safety needs of the community, engineering judgment as provided for in the California Manual on Uniform Traffic Control Devices indicates a further reduction of five miles per hour to 25 MPH. The factors justifying a further reduction are a prima facie 25 MPH residential district, adjacent to an elementary school and numerous driveways. It is recommended that the existing 25 MPH speed limit remain with enforcement activity taking place at speeds above the safe speed.

RADAR SPEED SURVEY

		<u>MPH</u>	<u># of Vehicles</u>		<u>Percentage</u>
Route:	Amesti Road				
From:	Green Valley Rd.	35	1	◆	100.0%
To:	0.4 miles northwesterly	34	1	◆	98.7%
Direction:	Westbound	33	1	◆	97.4%
Weather:	Sunny/Cloudy	32	6	◆◆◆◆◆◆	96.1%
Posted Speed:	25	31	8	◆◆◆◆◆◆◆◆	88.2%
Begin time:	2:10 PM	30	4	◆◆◆◆	77.6%
End time:	3:00 PM	29	4	◆◆◆◆	72.4%
		28	5	◆◆◆◆◆	67.1%
		27	12	◆◆◆◆◆◆◆◆◆◆◆◆	60.5%
		26	7	◆◆◆◆◆◆◆	44.7%
		25	8	◆◆◆◆◆◆◆◆	35.5%
		24	8	◆◆◆◆◆◆◆◆	25.0%
		23	3	◆◆◆	14.5%
		22	7	◆◆◆◆◆◆◆	10.5%
		21	1	◆	1.3%
CRITICAL SPEED	31	20	0		0.0%
AVERAGE SPEED	27.11	19	0		0.0%
MEDIAN SPEED	27.0	18	0		0.0%
STANDARD DEVIATION	3.37	17	0		0.0%
PACE RANGE	22 - 32	16	0		0.0%
PERCENTAGE IN PACE	86.8%	15	0		0.0%
TOTAL # OF AUTOS	76				

RADAR SPEED SURVEY

		<u>MPH</u>	<u># of Vehicles</u>		<u>Percentage</u>
Route:	Arnesti Road				
From:	0.4 miles northwesterly	38	1	◆	100.0%
To:	Green Valley Rd.	37	0		98.7%
Direction:	Eastbound	36	0		98.7%
Weather:	Sunny/Cloudy	35	3	◆◆◆	98.7%
Posted Speed:	25	34	1	◆	94.8%
Begin time:	2:10 PM	33	2	◆◆	93.5%
End time:	3:00 PM	32	2	◆◆	90.9%
		31	7	◆◆◆◆◆◆◆	88.3%
		30	3	◆◆◆	79.2%
		29	6	◆◆◆◆◆◆	75.3%
		28	7	◆◆◆◆◆◆◆	67.5%
		27	7	◆◆◆◆◆◆◆	58.4%
		26	6	◆◆◆◆◆◆	49.4%
		25	11	◆◆◆◆◆◆◆◆◆◆◆	41.6%
		24	6	◆◆◆◆◆◆	27.3%
CRITICAL SPEED	31	23	6	◆◆◆◆◆◆	19.5%
AVERAGE SPEED	27.01	22	5	◆◆◆◆◆	11.7%
MEDIAN SPEED	27.0	21	4	◆◆◆◆◆	5.2%
STANDARD DEVIATION	3.84	20	0		0.0%
PACE RANGE	22 - 32	19	0		0.0%
PERCENTAGE IN PACE	83.1%	18	0		0.0%
TOTAL # OF AUTOS	77	17	0		0.0%
		16	0		0.0%
		15	0		0.0%

RADAR SPEED SURVEY
Santa Cruz County
Department of Public Works

LOCATION AMESTI ROAD (@ AMESTI ELEM. SCHOOL) BY JGL

ROAD NO _____ DATE 9.15.08 DAY MONDAY BEGIN 2:10 END 3:00

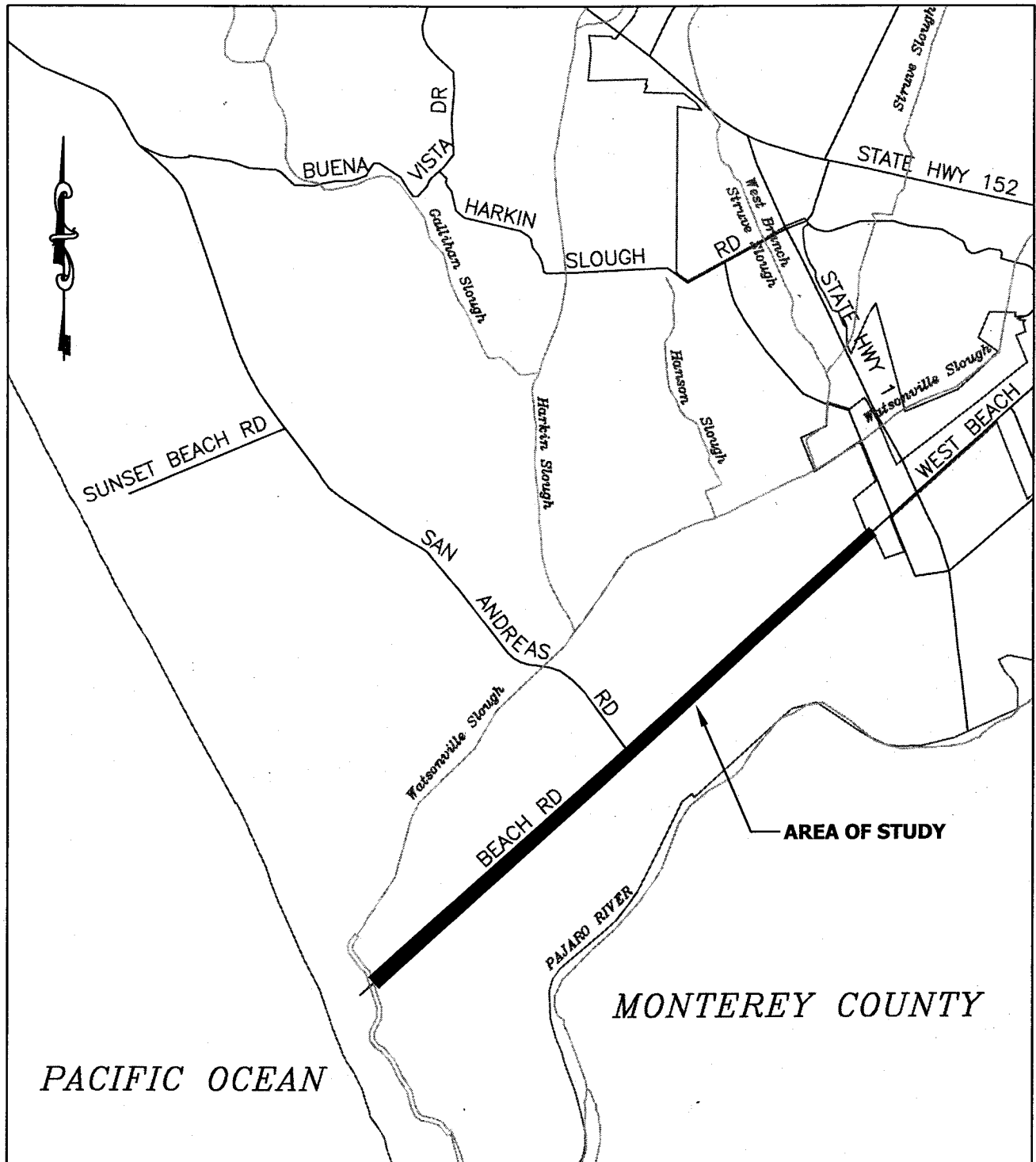
POSTED SPEED 25 MPH WEATHER SUNNY / CLOUDY

NUMBER OF LANES 2 GRADE FLAT CALIBRATED ✓

NUMBER OF VEHICLES

MPH	DIRECTION		TOTAL OF EACH SPEED	DIRECTION		TOTAL OF EACH SPEED
	EAST →	TO GREEN VALLEY		WEST ←	FROM GREEN VALLEY	
60						
59						
58						
57						
56						
55						
54						
53						
52						
51						
50						
49						
48						
47						
46						
45						
44						
43						
42						
41						
40						
39						
38			1			
37			0			
36			0			
35			3			1
34			1			1
33			2			1
32			2	 		6
31	 -		7	 -		8
30			3	 		4
29	 -		6	 		4
28	 -		7	 		5
27	 -		7	 -		12
26	 -		6	 -		7
25	 - -		11	 -		8
24	 -		6	 -		8
23	 		5	 		3
22	 		4	 -		7
21						1
20						
TOTAL			77	TOTAL		76





**SANTA CRUZ COUNTY TRAFFIC ENGINEERING
 RADAR SPEED SURVEY
 BEACH ROAD
 WATSONVILLE CITY LIMITS TO THE END
 AT SUNSET BEACH**

MARCH 2009

TRAFFIC AND ENGINEERING REPORT
MARCH 2009

PURPOSE:

This survey is performed in accordance with Vehicle Code Section 40803 to allow the use of radar for enforcement purposes.

LOCATION:

Beach Road from the Watsonville City Limit to the end at Sunset Beach. (Speed Data collected at Thurwachter Road).

PREVAILING SPEED DATA:

The existing posted speed limit is 45 mph and is radar enforced.

The prevailing speeds are:

Direction	Westbound	Eastbound
85 th Percentile	47 mph	46 mph
Pace Speed	38-48 mph	34-44 mph
Average Speed	41.87 mph	39.93 mph

ANALYSIS:

The prevailing 85th percentile speeds are 47 MPH and 46 MPH depending on the direction of travel. The safe speed is established at or near the average 85th percentile which is calculated to be 45 MPH. However, in matching existing conditions with the traffic safety needs of the community, engineering judgment as provided for in the California Manual on Uniform Traffic Control Devices indicates a further reduction of five miles per hour to 40 MPH. The factors justifying a further reduction are tourist area with State Park beaches, an agricultural area with farm equipment and produce trucks, and bicycle traffic without bike lanes or shoulders. It is recommended that the existing 45 MPH speed limit be decreased to 40 MPH with enforcement activity taking place at speeds above the safe speed.

RADAR SPEED SURVEY

Route: Beach Road
From: Watsonville City Limits
To: End of Beach Road
Direction: Eastbound
Weather: Cloudy
Posted Speed: 45 MPH
Begin time: 9:00AM
End time: 10:15 AM

CRITICAL SPEED
AVERAGE SPEED
MEDIAN SPEED
STANDARD DEVIATION
PACE RANGE
PERCENTAGE IN PACE
TOTAL # OF AUTOS

46
 39.93
 40.0
 5.28
 34 - 44
 67.4%
 86

<u>MPH</u>	<u># of Vehicles</u>	<u>Percentage</u>
52	1 ♦	100.0%
51	1 ♦	98.8%
50	1 ♦	97.7%
49	2 ♦♦	96.5%
48	3 ♦♦♦	94.2%
47	3 ♦♦♦	90.7%
46	3 ♦♦♦	87.2%
45	1 ♦	83.7%
44	5 ♦♦♦♦♦	82.6%
43	8 ♦♦♦♦♦♦♦♦	76.7%
42	9 ♦♦♦♦♦♦♦♦♦	67.4%
41	5 ♦♦♦♦♦	57.0%
40	2 ♦♦	51.2%
39	4 ♦♦♦♦	48.8%
38	7 ♦♦♦♦♦♦♦	44.2%
37	7 ♦♦♦♦♦♦♦	36.0%
36	5 ♦♦♦♦♦	27.9%
35	4 ♦♦♦♦	22.1%
34	7 ♦♦♦♦♦♦♦	17.4%
33	3 ♦♦♦	9.3%
32	1 ♦	5.8%
31	0	4.7%
30	3 ♦♦♦	4.7%
29	0	1.2%
28	1 ♦	1.2%

RADAR SPEED SURVEY

Route: Beach Road
From: Watsonville City Limits
To: End of Beach Road
Direction: Westbound
Weather: Cloudy
Posted Speed: 45 MPH
Begin time: 9:00AM
End time: 10:15 AM

CRITICAL SPEED
AVERAGE SPEED
MEDIAN SPEED
STANDARD DEVIATION
PACE RANGE
PERCENTAGE IN PACE
TOTAL # OF AUTOS

47
 41.87
 42.0
 5.07
 38 - 48
 66.7%
 75

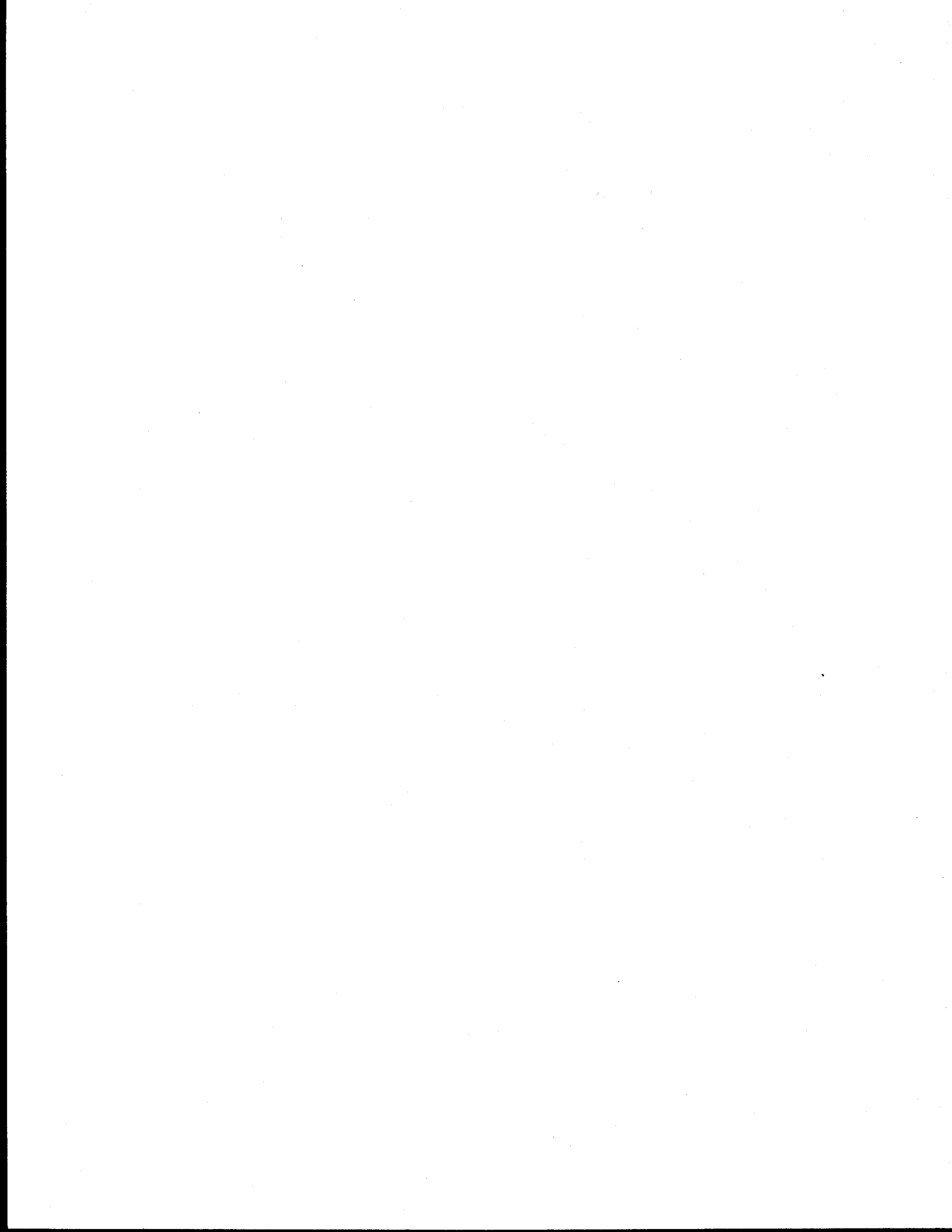
<u>MPH</u>	<u># of Vehicles</u>	<u>Percentage</u>
54	1 ♦	100.0%
53	0	98.7%
52	0	98.7%
51	1 ♦	98.7%
50	2 ♦♦	97.3%
49	3 ♦♦♦	94.7%
48	4 ♦♦♦♦	90.7%
47	4 ♦♦♦♦	85.3%
46	4 ♦♦♦♦	80.0%
45	6 ♦♦♦♦♦♦	74.7%
44	7 ♦♦♦♦♦♦♦	66.7%
43	3 ♦♦♦	57.3%
42	4 ♦♦♦♦	53.3%
41	4 ♦♦♦♦	48.0%
40	7 ♦♦♦♦♦♦♦	42.7%
39	5 ♦♦♦♦♦	33.3%
38	6 ♦♦♦♦♦♦	26.7%
37	1 ♦	18.7%
36	2 ♦♦	17.3%
35	4 ♦♦♦♦	14.7%
34	5 ♦♦♦♦♦	9.3%
33	0	2.7%
32	1 ♦	2.7%
31	1 ♦	1.3%

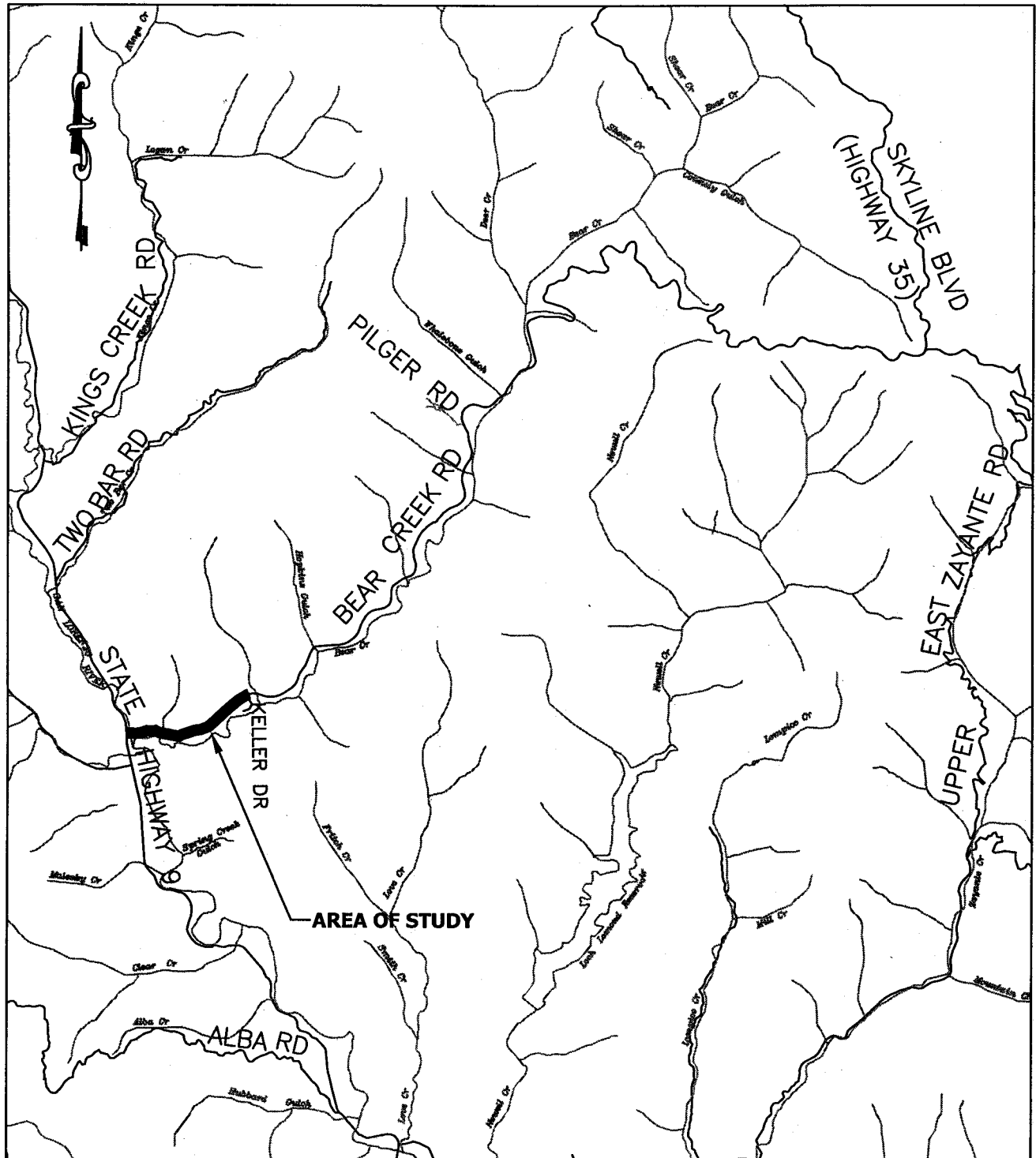
RADAR SPEED SURVEY
 Santa Cruz County
 Department of Public Works

LOCATION BEACH RD (@ THURWACHTER RD) BY JGL
 ROAD NO _____ DATE 6-9-08 DAY WED BEGIN 9:00 AM END 10:15 AM
 POSTED SPEED 45 MPH WEATHER CLOUDY
 NUMBER OF LANES 2 GRADE FLAT CALIBRATED

NUMBER OF VEHICLES

MPH	DIRECTION W ← TO SAN ANDREAS	TOTAL OF EACH SPEED	DIRECTION TO WATSONVILLE → E	TOTAL OF EACH SPEED
60				
59				
58				
57				
56				
55				
54				
53		1		
52		0		
51		0		1
50		1		1
49		2		1
48		3		2
47		4		3
46		4		3
45		4		3
44		6		1
43		7		5
42		3		8
41		4		9
40		4		5
39		7		2
38		5		4
37		6		7
36		1		7
35		2		5
34		4		4
33		2		7
32		0		3
31		1		1
30		1		0
29				3
28				0
27				1
26				
25				
24				
23				
22				
21				
20				
TOTAL		75	TOTAL	86





**SANTA CRUZ COUNTY TRAFFIC ENGINEERING
 RADAR SPEED SURVEY
 BEAR CREEK ROAD
 STATE HIGHWAY 9 TO KELLER DRIVE**

MARCH 2009

TRAFFIC AND ENGINEERING REPORT
MARCH 2009

PURPOSE:

This survey is performed in accordance with Vehicle Code Section 40803 to allow the use of radar for enforcement purposes.

LOCATION:

Bear Creek Road from Highway 9 to Keller Drive (west).
(Speed Data collected at Huckleberry Lane intersection).

PREVAILING SPEED DATA:

The existing speed limit is 30 MPH and is radar enforced.

The prevailing speeds are:

Direction	Northbound	Southbound
85 th Percentile	33 mph	36 mph
Pace Speed	25-35 mph	27-37 mph
Average Speed	29.33 mph	32.79 mph

ANALYSIS:

The prevailing 85th percentile speeds are 36 MPH and 33 MPH depending on the direction of travel. The safe speed is established at or near the average 85th percentile which is calculated to be 35 MPH. However, in matching existing conditions with the traffic safety needs of the community, engineering judgment as provided for in the California Manual on Uniform Traffic Control Devices indicates a further reduction of five miles per hour to 30 MPH. The factors justifying a further reduction are recent accident record, safe stopping sight distance, commute route, major arterial, intersection configurations and shoulder conditions with school children and other pedestrian traffic in the roadway without sidewalks. It is recommended that the existing 30 MPH speed limit remain with enforcement activity taking place at speeds above the safe speed.

RADAR SPEED SURVEY

Route: Bear Creek Rd
From: Hwy 9
To: Keller Dr
Direction: Northbound
Weather: Sunny
Posted Speed: 30 MPH
Begin time: 9:45 AM
End time: 10:15 AM

CRITICAL SPEED 33
AVERAGE SPEED 29.33
MEDIAN SPEED 29.0
STANDARD DEVIATION 2.95
PACE RANGE 25 - 35
PERCENTAGE IN PACE 92.7%
TOTAL # OF AUTOS 55

<u>MPH</u>	<u># of Vehicles</u>	<u>Percentage</u>
37	1 ♦	100.0%
36	0	98.2%
35	2 ♦♦	98.2%
34	0	94.5%
33	6 ♦♦♦♦♦♦	94.5%
32	5 ♦♦♦♦♦	83.6%
31	4 ♦♦♦♦	74.5%
30	7 ♦♦♦♦♦♦♦	67.3%
29	8 ♦♦♦♦♦♦♦♦	54.5%
28	5 ♦♦♦♦♦	40.0%
27	6 ♦♦♦♦♦♦	30.9%
26	7 ♦♦♦♦♦♦♦	20.0%
25	3 ♦♦♦	7.3%
24	0	1.8%
23	1 ♦	1.8%
22	0	0.0%
21	0	0.0%
20	0	0.0%
19	0	0.0%
18	0	0.0%
17	0	0.0%
16	0	0.0%
15	0	0.0%
14	0	0.0%

RADAR SPEED SURVEY

Route: Bear Creek Rd
From: Hwy 9
To: Keller Dr
Direction: Southbound
Weather: Sunny
Posted Speed: 30 MPH
Begin time: 9:45 AM
End time: 10:15 AM

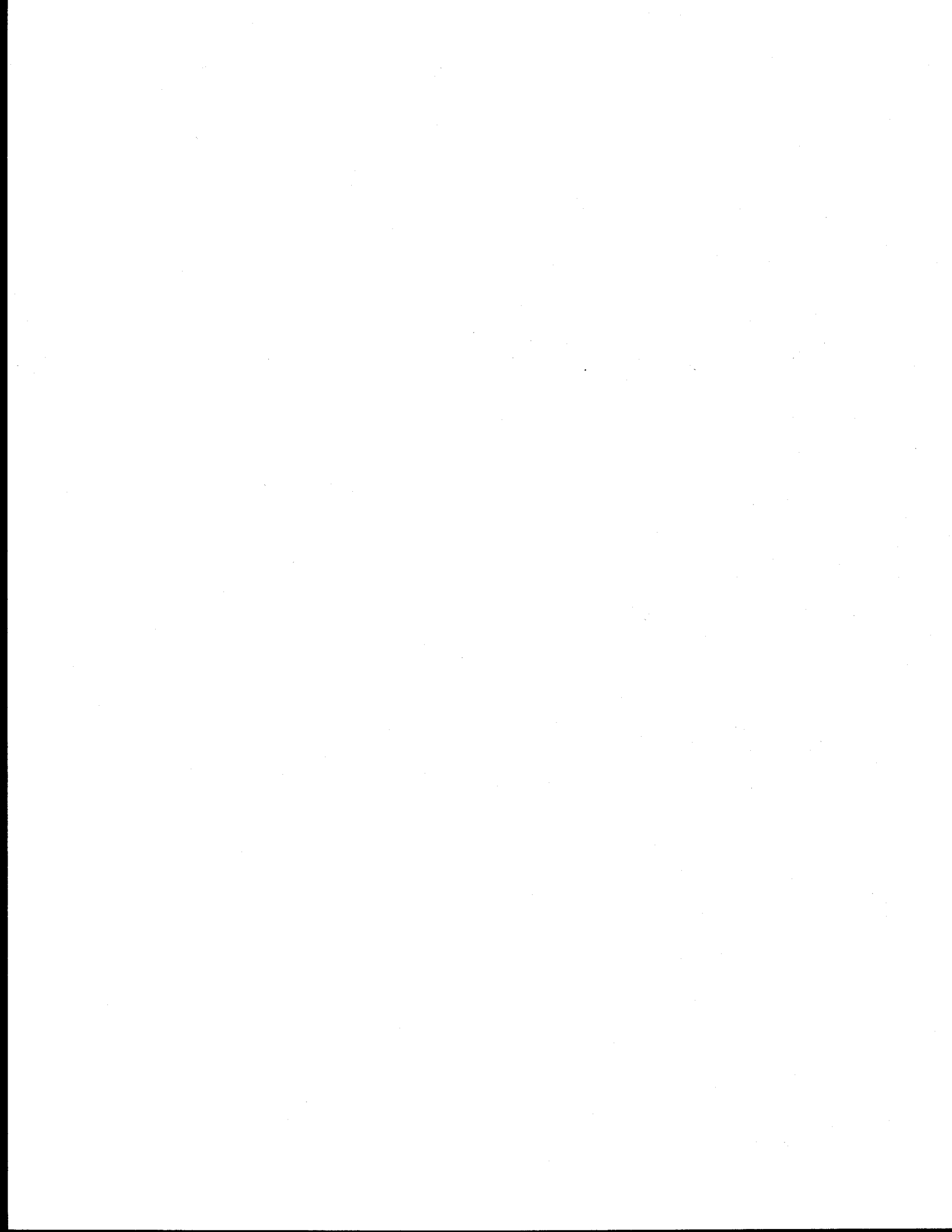
		<u>MPH</u>	<u># of Vehicles</u>		<u>Percentage</u>
		39	1	◆	100.0%
		38	2	◆◆	98.1%
		37	1	◆	94.2%
		36	7	◆◆◆◆◆◆◆	92.3%
		35	3	◆◆◆	78.8%
		34	9	◆◆◆◆◆◆◆◆◆	73.1%
		33	3	◆◆◆	55.8%
		32	9	◆◆◆◆◆◆◆◆◆	50.0%
		31	9	◆◆◆◆◆◆◆◆◆	32.7%
		30	2	◆◆	15.4%
		29	2	◆◆	11.5%
		28	0		7.7%
		27	2	◆◆	7.7%
		26	2	◆◆	3.8%
		25	0		0.0%
CRITICAL SPEED	36	24	0		0.0%
AVERAGE SPEED	32.79	23	0		0.0%
MEDIAN SPEED	32.5	22	0		0.0%
STANDARD DEVIATION	2.97	21	0		0.0%
PACE RANGE	27 - 37	20	0		0.0%
PERCENTAGE IN PACE	88.5%	19	0		0.0%
TOTAL # OF AUTOS	52	18	0		0.0%
		17	0		0.0%
		16	0		0.0%

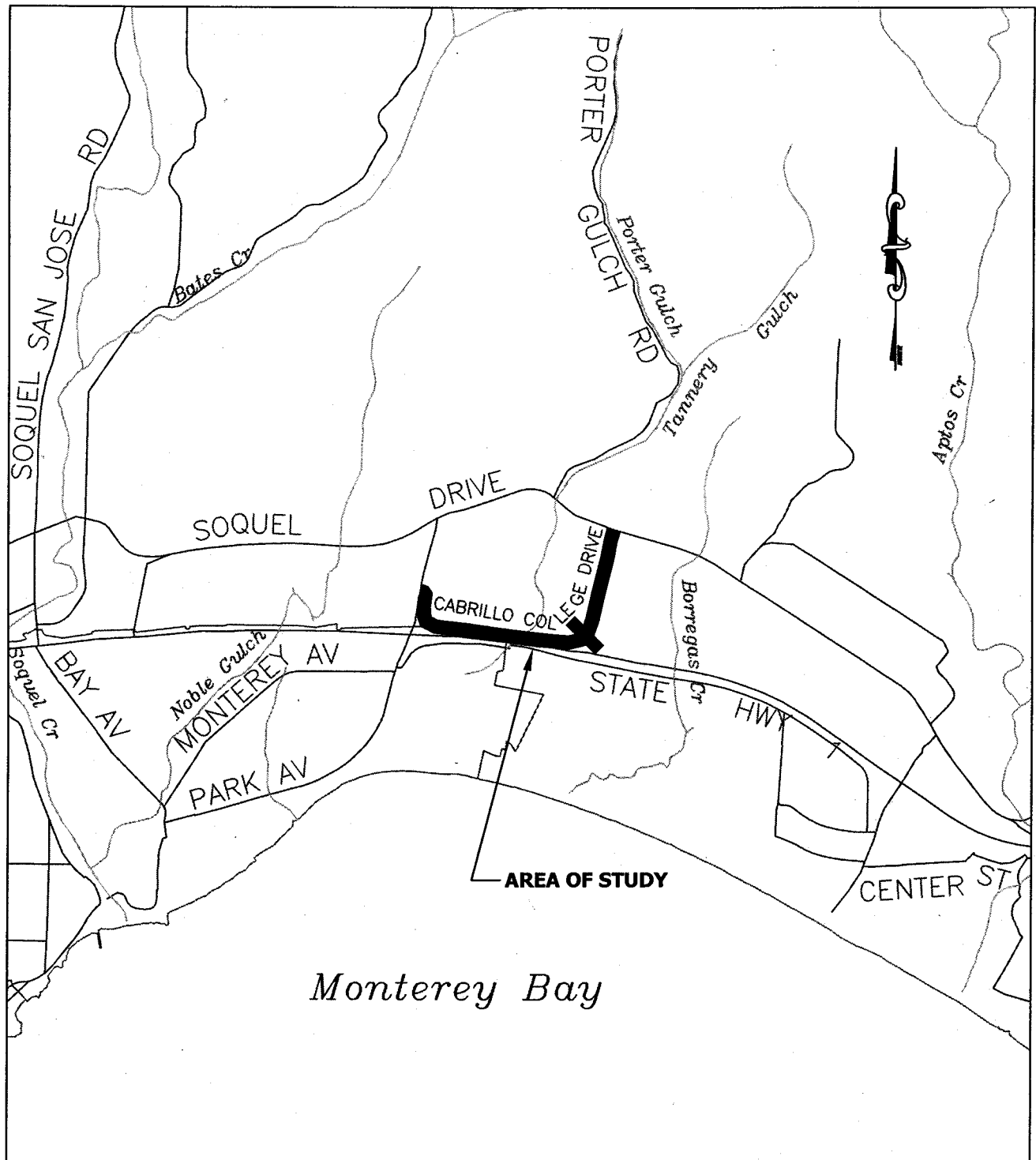
RADAR SPEED SURVEY
 Santa Cruz County
 Department of Public Works

LOCATION Bear Creek Rd @ Huckleberry Ln BY A-M
 ROAD NO _____ DATE 2/2/09 DAY Mon BEGIN 9:45 AM END 10:15 AM
 POSTED SPEED 30 mph WEATHER SUNNY - Clear
 NUMBER OF LANES 2 GRADE 2 % CALIBRATED ✓

NUMBER OF VEHICLES

MPH	DIRECTION	TOTAL OF EACH SPEED	DIRECTION	TOTAL OF EACH SPEED
	<u>South (To Highway 9)</u>		<u>North (To Keller Dr.)</u>	
51				
50				
49				
48				
47				
46				
45				
44				
43				
42				
41				
40				
39		1		
38		2		
37		1		1
36	 	7		0
35		3		2
34	 	9		0
33		3	 	6
32	 	9	 	5
31	 	9		4
30		2	 	7
29		2	 	8
28		0	 	5
27		2	 	6
26		2	 	7
25				3
24				0
23				1
22				
21				
20				
19				
18				
17				
16				
15				
14				
13				
12				
11				
	TOTAL	52	TOTAL	55





**SANTA CRUZ COUNTY TRAFFIC ENGINEERING
 RADAR SPEED SURVEY
 CABRILLO COLLEGE DRIVE
 PARK AVENUE TO SOQUEL DRIVE**

MARCH 2009

TRAFFIC AND ENGINEERING REPORT
MARCH 2009

PURPOSE:

This survey is performed in accordance with Vehicle Code Section 40803 to allow the use of radar for enforcement purposes.

LOCATION:

Cabrillo College Drive from Park Avenue a distance of 0.66 miles south easterly. (Speed Data collected at 2505 Cabrillo College Drive).

PREVAILING SPEED DATA:

The existing posted speed limit is 35 MPH and is radar enforced.

The prevailing speeds are:

Direction	Westbound	Eastbound
85 th Percentile	45 mph	39 mph
Pace Speed	35-45 mph	30-40 mph
Average Speed	39.36 mph	35.20 mph

ANALYSIS:

The prevailing 85th percentile speeds are 45 MPH and 39 MPH depending on the direction of travel. The safe speed is established at or near the average 85th percentile which is calculated to be 40 MPH. However, in matching existing conditions with the traffic safety needs of the community, engineering judgment as provided for in the California Manual on Uniform Traffic Control Devices indicates a further reduction of five miles per hour to 35 MPH. The factors justifying a further reduction are recent accident record, route serving a community college with bicycle traffic without bike lanes and shoulder conditions with pedestrians in the roadway without sidewalks. It is recommended that the existing 35 MPH speed limit remain with enforcement activity taking place at speeds above the safe speed.

RADAR SPEED SURVEY

		<u>MPH</u>	<u># of Vehicles</u>	<u>Percentage</u>
Route:	Cabrillo College Drive			
From:	Park Avenue	48	1 ♦	100.0%
To:	South a distance of 0.66 miles	47	5 ♦♦♦♦♦	98.1%
Direction:	Westbound	46	0	88.7%
Weather:	Sunny	45	3 ♦♦♦	88.7%
Posted Speed:	35 MPH	44	3 ♦♦♦	83.0%
Begin time:	10:25 AM	43	1 ♦	77.4%
End time:	11:55 AM	42	4 ♦♦♦♦	75.5%
		41	2 ♦♦	67.9%
		40	6 ♦♦♦♦♦♦	64.2%
		39	6 ♦♦♦♦♦♦	52.8%
		38	1 ♦	41.5%
		37	3 ♦♦♦	39.6%
		36	4 ♦♦♦♦	34.0%
		35	9 ♦♦♦♦♦♦♦♦♦	26.4%
		34	1 ♦	9.4%
		33	1 ♦	7.5%
CRITICAL SPEED	45	32	1 ♦	5.7%
AVERAGE SPEED	39.36	31	2 ♦♦	3.8%
MEDIAN SPEED	39.0	30	0	0.0%
STANDARD DEVIATION	4.55	29	0	0.0%
PACE RANGE	35 - 45	28	0	0.0%
PERCENTAGE IN PACE	73.6%	27	0	0.0%
TOTAL # OF AUTOS	53	26	0	0.0%
		25	0	0.0%
		24	0	0.0%
		23	0	0.0%
		22	0	0.0%
		21	0	0.0%

RADAR SPEED SURVEY

Route: Cabrillo College Drive
From: Park Avenue
To: South a distance of 0.66 miles
Direction: Eastbound
Weather: Sunny
Posted Speed: 35 MPH
Begin time: 10:25 AM
End time: 11:55 AM

CRITICAL SPEED
AVERAGE SPEED
MEDIAN SPEED
STANDARD DEVIATION
PACE RANGE
PERCENTAGE IN PACE
TOTAL # OF AUTOS

<u>MPH</u>	<u># of Vehicles</u>	<u>Percentage</u>
49	1 ♦	100.0%
48	0	98.2%
47	0	98.2%
46	0	98.2%
45	1 ♦	98.2%
44	0	96.4%
43	3 ♦♦♦	96.4%
42	1 ♦	91.1%
41	1 ♦	89.3%
40	1 ♦	87.5%
39	3 ♦♦♦	85.7%
38	2 ♦♦	80.4%
37	7 ♦♦♦♦♦♦♦	76.8%
36	6 ♦♦♦♦♦♦	64.3%
35	2 ♦♦	53.6%
34	6 ♦♦♦♦♦♦	50.0%
33	7 ♦♦♦♦♦♦♦	39.3%
32	3 ♦♦♦	26.8%
31	5 ♦♦♦♦♦	21.4%
30 - 40	2 ♦♦	12.5%
29	3 ♦♦♦	8.9%
28	1 ♦	3.6%
27	0	1.8%
26	1 ♦	1.8%
25	0	0.0%

RADAR SPEED SURVEY
 Santa Cruz County
 Department of Public Works

LOCATION Cabrillo College Dr, Park Ave to .66 mi SE, RT 2505 BY A-M
 ROAD NO _____ DATE 6/27/08 DAY Friday BEGIN 10:25 AM END 11:55 AM
 POSTED SPEED 35 mph WEATHER cloudy
 NUMBER OF LANES 2 GRADE 2% CALIBRATED L

NUMBER OF VEHICLES

MPH	DIRECTION → W	TOTAL OF EACH SPEED	DIRECTION E ←	TOTAL OF EACH SPEED
	60			
59				
58				
57				
56				
55				
54				
53				
52				
51				
50				
49			1	1
48	1	1		0
47	 	5		0
46		0		0
45		3	1	1
44		3		0
43	1	1		3
42		4	1	1
41		2	1	1
40	 1	6	1	1
39	 1	6		3
38	1	1		2
37		3	 	7
36		4	 1	6
35	 	9		2
34	1	1	 1	6
33	1	1	 	7
32	1	1		3
31		2	 	5
30				2
29				3
28			1	1
27				0
26			1	1
25				
24				
23				
22				
21				
20-				
TOTAL		53	TOTAL 56	

TRAFFIC AND ENGINEERING REPORT
MARCH 2009

PURPOSE:

This survey is performed in accordance with Vehicle Code Section 40803 to allow the use of radar for enforcement purposes.

LOCATION:

Cabrillo College Drive from Soquel Drive to a location south a distance of 0.34 mile. (Speed Data collected at football field).

PREVAILING SPEED DATA:

The existing posted speed limit is 30 MPH and is radar enforced.

The prevailing speeds are:

Direction	Northbound	Southbound
85 th Percentile	35 mph	37 mph
Pace Speed	26-36 mph	28-38 mph
Average Speed	31.66 mph	32.24 mph

ANALYSIS:

The prevailing 85th percentile speeds are 37 MPH and 35 MPH depending on the direction of travel. The safe speed is established at or near the average 85th percentile which is calculated to be 35 MPH. However, in matching existing conditions with the traffic safety needs of the community, engineering judgment as provided for in the California Manual on Uniform Traffic Control Devices indicates a further reduction of five miles per hour to 30 MPH. The factors justifying a further reduction are recent accident record, route serving a community college with bicycle traffic without bike lanes and shoulder conditions with pedestrians in the roadway without sidewalks. It is recommended that the existing 30 MPH speed limit remain with enforcement activity taking place at speeds above the safe speed.

RADAR SPEED SURVEY

Route: Cabrillo College Drive
 From: Soquel Drive
 To: South a distance of 0.34 miles
 Direction: Northbound
 Weather: Sunny
 Posted Speed: 30 MPH
 Begin time: 11:40 AM
 End time: 1:00 PM

<u>MPH</u>	<u># of Vehicles</u>	<u>Percentage</u>
39	1 ◆	100.0%
38	1 ◆	98.4%
37	4 ◆◆◆◆	96.9%
36	2 ◆◆	90.6%
35	3 ◆◆◆	87.5%
34	9 ◆◆◆◆◆◆◆◆◆	82.8%
33	10 ◆◆◆◆◆◆◆◆◆◆	68.8%
32	5 ◆◆◆◆◆	53.1%
31	6 ◆◆◆◆◆◆	45.3%
30	5 ◆◆◆◆◆	35.9%
29	5 ◆◆◆◆◆	28.1%
28	4 ◆◆◆◆	20.3%
27	3 ◆◆◆	14.1%
26	4 ◆◆◆◆	9.4%
25	2 ◆◆	3.1%
24	0	0.0%
23	0	0.0%
22	0	0.0%
21	0	0.0%
20	0	0.0%
19	0	0.0%
18	0	0.0%

CRITICAL SPEED 35
 AVERAGE SPEED 31.66
 MEDIAN SPEED 32.0
 STANDARD DEVIATION 3.41
 PACE RANGE 26 - 36
 PERCENTAGE IN PACE 84.4%
 TOTAL # OF AUTOS 64

RADAR SPEED SURVEY

		<u>MPH</u>	<u># of Vehicles</u>	<u>Percentage</u>
Route:	Cabrillo College Drive			
From:	Soquel Drive	43	1 ◆	100.0%
To:	South a distance of 0.34 miles	42	0	98.7%
Direction:	Southbound	41	1 ◆	98.7%
Weather:	Sunny	40	3 ◆◆◆	97.5%
Posted Speed:	30 MPH	39	2 ◆◆	93.7%
Begin time:	11:40 AM	38	2 ◆◆	91.1%
End time:	1:00 PM	37	4 ◆◆◆◆	88.6%
		36	5 ◆◆◆◆◆	83.5%
		35	3 ◆◆◆	77.2%
		34	8 ◆◆◆◆◆◆◆◆	73.4%
		33	11 ◆◆◆◆◆◆◆◆◆◆	63.3%
		32	7 ◆◆◆◆◆◆◆	49.4%
		31	6 ◆◆◆◆◆◆	40.5%
		30	3 ◆◆◆	32.9%
		29	6 ◆◆◆◆◆◆	29.1%
		28	6 ◆◆◆◆◆◆	21.5%
CRITICAL SPEED	37			
AVERAGE SPEED	32.24	27	2 ◆◆	13.9%
MEDIAN SPEED	33.0	26	3 ◆◆◆	11.4%
STANDARD DEVIATION	4.35	25	4 ◆◆◆◆	7.6%
PACE RANGE	28 - 38	24	1 ◆	2.5%
PERCENTAGE IN PACE	74.7%	23	1 ◆	1.3%
TOTAL # OF AUTOS	79	22	0	0.0%

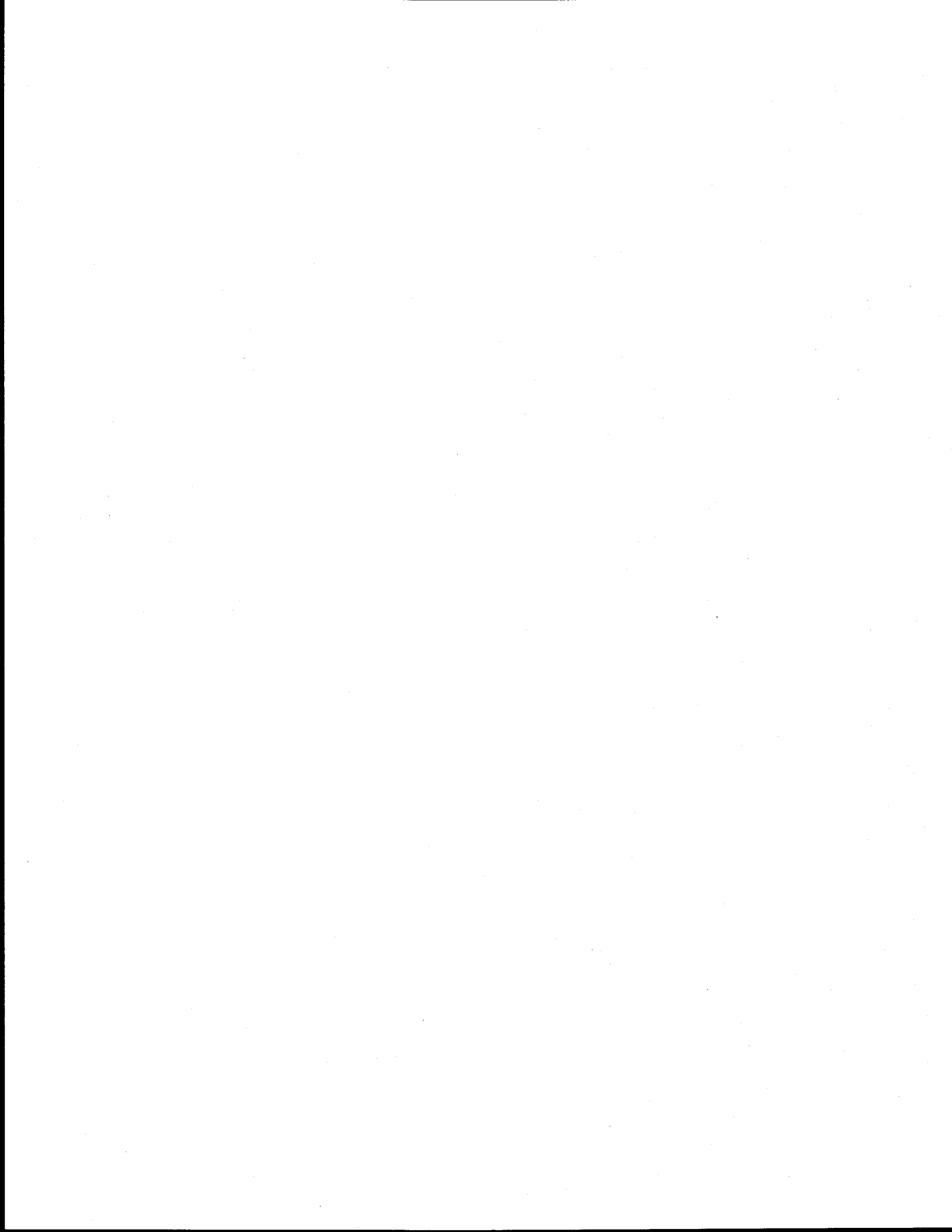
RADAR SPEED SURVEY
 Santa Cruz County
 Department of Public Works

LOCATION CARMEL COLLEGE DRIVE (ACROSS SHERIFFS OFFICE - OUTPOST) BY JGL
 ROAD NO _____ DATE 6-11-08 DAY WED BEGIN 1140 END 1:00 PM
 POSTED SPEED 30 WEATHER SUNNY
 NUMBER OF LANES 2 GRADE 2% CALIBRATED

NUMBER OF VEHICLES

MPH	DIRECTION <u>NE ←</u>	TOTAL OF EACH SPEED	DIRECTION <u>→ SW</u>	TOTAL OF EACH SPEED
60				
59				
58				
57				
56				
55				
54				
53				
52				
51				
50				
49				
48				
47				
46				
45				
44				
43				1
42				0
41				1
40				3
39		1		2
38		1		2
37		4		4
36		2		5
35		3		3
34	-	9	-	8
33	-	10	- - 1	11
32		5	-	7
31	- 1	6	- 1	6
30		5		3
29		5	- 1	6
28		4	- 1	6
27		3		2
26		4		3
25		2		4
24				1
23				1
22				
21				
20				
TOTAL		64	TOTAL	

24



TRAFFIC AND ENGINEERING REPORT
MARCH 2009

PURPOSE:

This survey is performed in accordance with Vehicle Code Section 40803 to allow the use of radar for enforcement purposes.

LOCATION:

Casserly Road from Green Valley Road to State Highway 152. (Speed Data collected at 466 Casserly Road).

PREVAILING SPEED DATA:

The existing posted speed limit is 35 MPH and is radar enforced.

The prevailing speeds are:

Direction	Northbound	Southbound
85 th Percentile	40 mph	41 mph
Pace Speed	29-39 mph	33-43 mph
Average Speed	33.41 mph	35.94 mph

ANALYSIS:

The prevailing 85th percentile speeds are 41 MPH and 40 MPH depending on the direction of travel. The safe speed is established at or near the average 85th percentile which is calculated to be 40 MPH. However, in matching existing conditions with the traffic safety needs of the community, engineering judgment as provided for in the California Manual on Uniform Traffic Control Devices indicates a further reduction of five miles per hour to 35 MPH. The factors justifying a further reduction are a major agricultural area with a high volume of truck traffic, farm equipment, and field workers in addition to bicycle and pedestrian traffic in the roadway without bike lanes or pedestrian facilities. It is recommended that the existing 35 MPH speed limit remain with enforcement activity taking place at speeds above the safe speed.

RADAR SPEED SURVEY

		<u>MPH</u>	<u># of Vehicles</u>	<u>Percentage</u>
Route:	Cassery Road			
From:	Green Valley Road	47	1	◆
To:	State Highway 152	46	1	◆
Direction:	Northbound	45	1	◆
Weather:	Cloudy	44	0	
Posted Speed:	35 MPH	43	2	◆◆
Begin time:	9:00AM	42	1	◆
End time:	10:40 AM	41	2	◆◆
		40	1	◆
		39	1	◆
		38	3	◆◆◆
		37	3	◆◆◆
		36	3	◆◆◆
		35	1	◆
		34	3	◆◆◆
		33	5	◆◆◆◆◆
CRITICAL SPEED	40	32	4	◆◆◆◆
AVERAGE SPEED	33.41	31	4	◆◆◆◆
MEDIAN SPEED	32.5	30	6	◆◆◆◆◆◆
STANDARD DEVIATION	5.75	29	6	◆◆◆◆◆◆
PACE RANGE	29 - 39	28	2	◆◆
PERCENTAGE IN PACE	67.9%	27	1	◆
TOTAL # OF AUTOS	56	26	0	
		25	3	◆◆◆
		24	0	
		23	1	◆
		22	1	◆

RADAR SPEED SURVEY

		<u>MPH</u>	<u># of Vehicles</u>	<u>Percentage</u>
Route:	Cassery Road			
From:	Green Valley Road	50	1 ◆	100.0%
To:	State Highway 152	49	1 ◆	98.6%
Direction:	Southbound	48	2 ◆◆	97.1%
Weather:	Cloudy	47	0	94.2%
Posted Speed:	35 MPH	46	2 ◆◆	94.2%
Begin time:	9:00AM	45	0	91.3%
End time:	10:40 AM	44	0	91.3%
		43	1 ◆	91.3%
		42	1 ◆	89.9%
		41	4 ◆◆◆◆	88.4%
		40	3 ◆◆◆	82.6%
		39	5 ◆◆◆◆◆	78.3%
		38	7 ◆◆◆◆◆◆◆	71.0%
		37	3 ◆◆◆	60.9%
		36	9 ◆◆◆◆◆◆◆◆◆	56.5%
CRITICAL SPEED	41	35	6 ◆◆◆◆◆◆	43.5%
AVERAGE SPEED	35.94	34	5 ◆◆◆◆◆	34.8%
MEDIAN SPEED	36.0	33	2 ◆◆	27.5%
STANDARD DEVIATION	5.82	32	0	24.6%
PACE RANGE	33 - 43	31	4 ◆◆◆◆	24.6%
PERCENTAGE IN PACE	65.2%	30	4 ◆◆◆◆	18.8%
TOTAL # OF AUTOS	69	29	2 ◆◆	13.0%
		28	1 ◆	10.1%
		27	2 ◆◆	8.7%
		26	0	5.8%
		25	3 ◆◆◆	5.8%
		24	0	1.4%
		23	1 ◆	1.4%

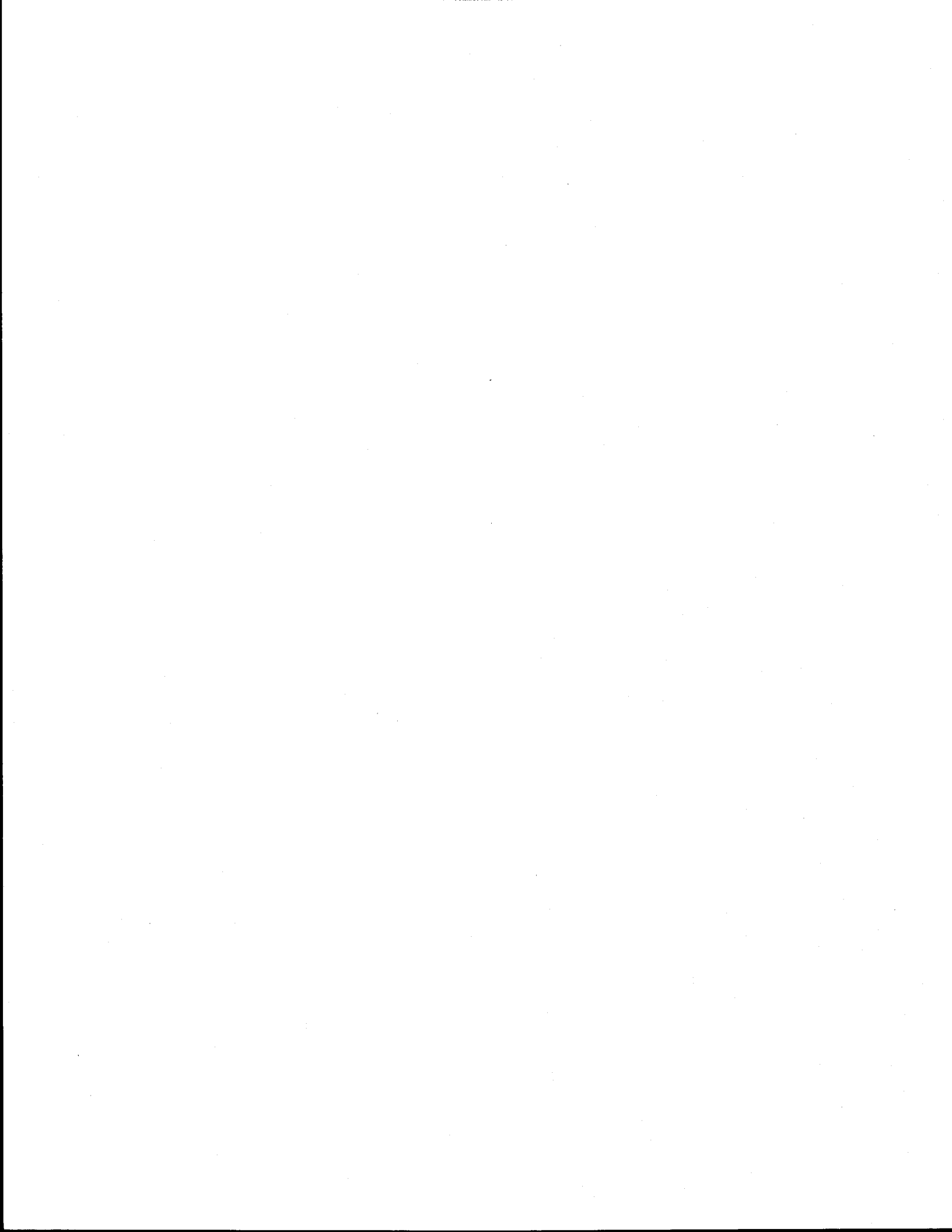
RADAR SPEED SURVEY
Santa Cruz County
Department of Public Works

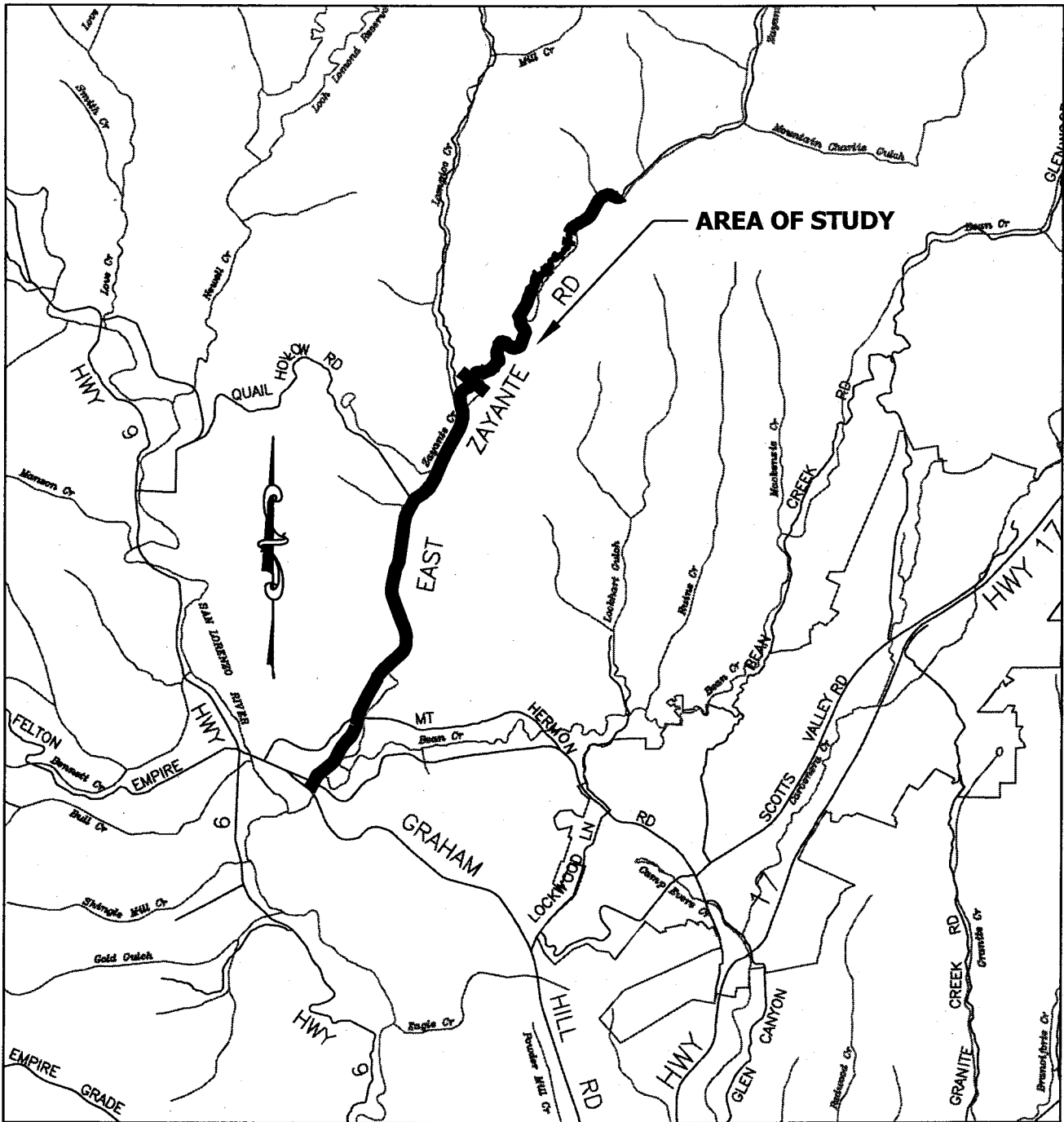
LOCATION CASSELLY RD (@ # 466) BY JGL
 ROAD NO _____ DATE 6-24-08 DAY TUE BEGIN 9:00 END 10:40
 POSTED SPEED 35 MPH WEATHER CLOUDY
 NUMBER OF LANES 2 GRADE Ø CALIBRATED

NUMBER OF VEHICLES

MPH	DIRECTION	TOTAL OF EACH SPEED	DIRECTION	TOTAL OF EACH SPEED
	N →		← S	
60				
59				
58				
57				
56				
55				
54				
53				
52				
51				
50				1
49				1
48				2
47		1		0
46		1		2
45		1		0
44		0		0
43		2		1
42		1		1
41		2		4
40		1		3
39		1	 	5
38		3	 -	7
37		3		3
36		3	 -	9
35		1	 -	6
34		3	 	5
33	 -	5		2
32		4		0
31		4		4
30	 -	6		4
29	 -	6		2
28	/	2		1
27		1		2
26		0		0
25		3		3
24		0		0
23		1		1
22		1		
21				
20				
TOTAL		56	TOTAL 69	

29





**SANTA CRUZ COUNTY TRAFFIC ENGINEERING
 RADAR SPEED SURVEY
 EAST ZAYANTE ROAD
 GRAHAM HILL ROAD TO 0.2 MILES
 NORTHEASTERLY OF WESTWOOD ROAD**

MARCH 2009

TRAFFIC AND ENGINEERING REPORT
MARCH 2009

PURPOSE:

This survey is performed in accordance with Vehicle Code Section 40803 to allow the use of radar for enforcement purposes.

LOCATION:

East Zayante Road from Graham Hill Road to .10 mile north of Lompico Road. (Speed Data collected north of Mt. Hermon Road overpass).

PREVAILING SPEED DATA:

The existing posted speed limit is 35 mph and is radar enforced.

The prevailing speeds are:

Direction	Northbound	Southbound
85 th Percentile	45 mph	43 mph
Pace Speed	37-47 mph	36-46 mph
Average Speed	41.14 mph	39.05 mph

ANALYSIS:

The prevailing 85th percentile speeds are 45 MPH and 43 MPH depending on the direction of travel. The safe speed is established at or near the average 85th percentile which is calculated to be 45 MPH. However, in matching existing conditions with the traffic safety needs of the community, engineering judgment as provided for in the California Manual on Uniform Traffic Control Devices indicates a further reduction of five miles per hour to 40 MPH. The factors justifying a further reduction are safe stopping sight distance, numerous driveways and intersections, and shoulder conditions with pedestrians in the roadway without sidewalks. It is recommended that the existing 35 MPH speed limit be increased to 40 MPH with enforcement activity taking place at speeds above the safe speed.

RADAR SPEED SURVEY

Route: E Zayante Rd
From: Graham Hill Rd
To: 0.1 mi N of Lompico Rd
Direction: Northbound
Weather: Sunny
Posted Speed: 35 mph
Begin time: 11:55 AM
End time: 12:20 PM

CRITICAL SPEED 45
AVERAGE SPEED 41.14
MEDIAN SPEED 41.0
STANDARD DEVIATION 3.53
PACE RANGE 37 - 47
PERCENTAGE IN PACE 88.1%
TOTAL # OF AUTOS 59

<u>MPH</u>	<u># of Vehicles</u>		<u>Percentage</u>
49	1	◆	100.0%
48	0		98.3%
47	3	◆◆◆	98.3%
46	3	◆◆◆	93.2%
45	4	◆◆◆◆	88.1%
44	5	◆◆◆◆◆	81.4%
43	5	◆◆◆◆◆	72.9%
42	7	◆◆◆◆◆◆◆	64.4%
41	4	◆◆◆◆	52.5%
40	5	◆◆◆◆◆	45.8%
39	7	◆◆◆◆◆◆◆	37.3%
38	8	◆◆◆◆◆◆◆◆	25.4%
37	4	◆◆◆◆	11.9%
36	1	◆	5.1%
35	0		3.4%
34	0		3.4%
33	1	◆	3.4%
32	1	◆	1.7%
31	0		0.0%
30	0		0.0%
29	0		0.0%
28	0		0.0%

RADAR SPEED SURVEY

Route: E Zayante Rd
From: Graham Hill Rd
To: 0.1 mi N of Lompico Rd
Direction: Southbound
Weather: Sunny
Posted Speed: 35 mph
Begin time: 11:55 AM
End time: 12:20 PM

CRITICAL SPEED 43
AVERAGE SPEED 39.05
MEDIAN SPEED 40.0
STANDARD DEVIATION 4.37
PACE RANGE 36 - 46
PERCENTAGE IN PACE 76.4%
TOTAL # OF AUTOS 55

<u>MPH</u>	<u># of Vehicles</u>	<u>Percentage</u>
49	1	100.0%
48	1	98.2%
47	0	96.4%
46	0	96.4%
45	2	96.4%
44	2	92.7%
43	7	89.1%
42	4	76.4%
41	5	69.1%
40	7	60.0%
39	4	47.3%
38	3	40.0%
37	3	34.5%
36	5	29.1%
35	2	20.0%
34	1	16.4%
33	4	14.5%
32	1	7.3%
31	0	5.5%
30	3	5.5%
29	0	0.0%
28	0	0.0%

RADAR SPEED SURVEY
 Santa Cruz County
 Department of Public Works

LOCATION E Zayante Rd, Graham Hill Rd to .1 mi N of Lompico (N of Mt. Hermon BY A-M overpass)
 ROAD NO _____ DATE 6/20/08 DAY Fri BEGIN 11:55 AM END 12:20 PM
 POSTED SPEED 35 MPH WEATHER SUNNY - CLEAR
 NUMBER OF LANES 2 GRADE 1% CALIBRATED ✓

NUMBER OF VEHICLES

MPH	DIRECTION	TOTAL OF EACH SPEED	DIRECTION	TOTAL OF EACH SPEED
	→ N		S ←	
51				
50				
49		1		1
48		0		1
47		3		0
46		3		0
45		4		2
44		5		2
43		5		7
42		7		4
41		4		5
40		5		7
39		7		4
38		8		3
37		4		3
36		1		5
35		0		2
34		0		1
33		1		4
32		1		1
31				0
30				3
29				
28				
27				
26				
25				
24				
23				
22				
21				
20				
19				
18				
17				
16				
15				
14				
13				
12				
11				
TOTAL		59	TOTAL 55	

TRAFFIC AND ENGINEERING REPORT
MARCH 2009

PURPOSE:

This survey is performed in accordance with Vehicle Code Section 40803 to allow the use of radar for enforcement purposes.

LOCATION:

East Zayante Road from 0.10 mile north of Lompico Road to 0.20 mile northeasterly of Westwood Road. (Speed Data collected at 9571 E. Zayante Rd.).

PREVAILING SPEED DATA:

The existing posted speed limit is 25 mph and is radar enforced.

The prevailing speeds are:

Direction	Northbound	Southbound
85 th Percentile	30 mph	29 mph
Pace Speed	21-31 mph	21-31 mph
Average Speed	26.12 mph	25.48 mph

ANALYSIS:

The prevailing 85th percentile speeds are 30 MPH and 29 MPH depending on the direction of travel. The safe speed is established at or near the average 85th percentile which is calculated to be 30 MPH. However, in matching existing conditions with the traffic safety needs of the community, engineering judgment as provided for in the California Manual on Uniform Traffic Control Devices indicates a further reduction of five miles per hour to 25 MPH. The factors justifying a further reduction are safe stopping sight distance, numerous driveways, and shoulder conditions with pedestrians in the roadway without sidewalks. It is recommended that the existing 25 MPH speed limit remain with enforcement activity taking place at speeds above the safe speed.

RADAR SPEED SURVEY

Route: E Zayante Rd
From: 0.1 mi N of Lompico Rd
To: 0.2 mi N of Westwood Rd
Direction: Northbound
Weather: Sunny
Posted Speed: 25 mph
Begin time: 11:35 AM
End time: 1:35 PM

CRITICAL SPEED 30
AVERAGE SPEED 26.12
MEDIAN SPEED 25.0
STANDARD DEVIATION 4.21
PACE RANGE 21 - 31
PERCENTAGE IN PACE 80.4%
TOTAL # OF AUTOS 51

<u>MPH</u>	<u># of Vehicles</u>		<u>Percentage</u>
38	1	◆	100.0%
37	0		98.0%
36	1	◆	98.0%
35	0		96.1%
34	2	◆◆	96.1%
33	1	◆	92.2%
32	1	◆	90.2%
31	1	◆	88.2%
30	3	◆◆◆	86.3%
29	3	◆◆◆	80.4%
28	4	◆◆◆◆	74.5%
27	3	◆◆◆	66.7%
26	3	◆◆◆	60.8%
25	6	◆◆◆◆◆◆	54.9%
24	7	◆◆◆◆◆◆◆	43.1%
23	6	◆◆◆◆◆◆	29.4%
22	4	◆◆◆◆	17.6%
21	2	◆◆	9.8%
20	3	◆◆◆	5.9%
19	0		0.0%
18	0		0.0%
17	0		0.0%

RADAR SPEED SURVEY

		<u>MPH</u>	<u># of Vehicles</u>		<u>Percentage</u>
Route:	E Zayante Rd				
From:	0.1 mi N of Lompico Rd	37	1	◆	100.0%
To:	0.2 mi N of Westwood Rd	36	0		98.1%
Direction:	Southbound	35	0		98.1%
Weather:	Sunny	34	0		98.1%
Posted Speed:	25 mph	33	0		98.1%
Begin time:	11:35 AM	32	2	◆◆	98.1%
End time:	1:35 PM	31	1	◆	94.4%
		30	3	◆◆◆	92.6%
		29	3	◆◆◆	87.0%
		28	3	◆◆◆	81.5%
		27	7	◆◆◆◆◆◆◆	75.9%
		26	7	◆◆◆◆◆◆◆	63.0%
		25	5	◆◆◆◆◆	50.0%
		24	5	◆◆◆◆◆	40.7%
		23	5	◆◆◆◆◆	31.5%
CRITICAL SPEED	29	22	3	◆◆◆	22.2%
AVERAGE SPEED	25.48	21	6	◆◆◆◆◆◆	16.7%
MEDIAN SPEED	25.5	20	3	◆◆◆	5.6%
STANDARD DEVIATION	3.56	19	0		0.0%
PACE RANGE	21 - 31	18	0		0.0%
PERCENTAGE IN PACE	87.0%	17	0		0.0%
TOTAL # OF AUTOS	54	16	0		0.0%

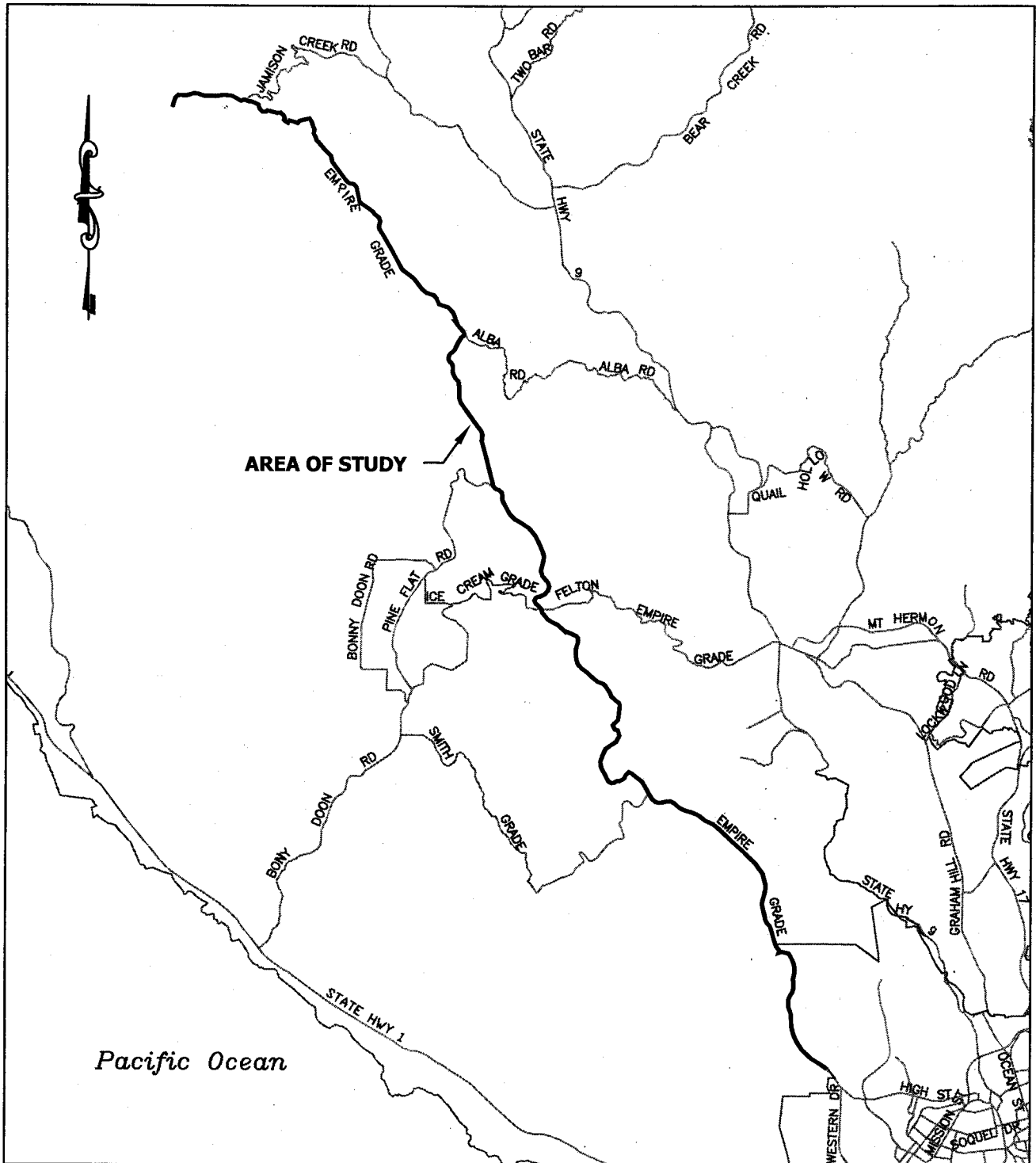
RADAR SPEED SURVEY
Santa Cruz County
Department of Public Works

LOCATION E Zayante Rd, 0.1 mi N. of Lampico Rd to 0.2 mile N. of Westwood Rd BY A-14
 ROAD NO _____ DATE 6-19-08 DAY Thur BEGIN 11:35 AM END 01:35 PM
 POSTED SPEED 25 MPH WEATHER SUNNY
 NUMBER OF LANES 2 GRADE 2% CALIBRATED L

NUMBER OF VEHICLES

MPH	DIRECTION	TOTAL OF EACH SPEED	DIRECTION	TOTAL OF EACH SPEED
	→ S		N ←	
60				
59				
58				
57				
56				
55				
54				
53				
52				
51				
50				
49				
48				
47				
46				
45				
44				
43				
42				
41				
40				
39				
38			1	1
37	1	1		0
36		0	1	1
35		0		0
34		0	1	2
33		0	1	1
32	1	2	1	1
31	1	1	1	1
30	1	3	1	3
29	1	3	1	3
28	1	3	1	4
27	1	7	1	3
26	1	7	1	3
25	1	5	1	6
24	1	5	1	7
23	1	5	1	6
22	1	3	1	4
21	1	6	1	2
20	1	3	1	3
	TOTAL	54	TOTAL	51





**SANTA CRUZ COUNTY TRAFFIC ENGINEERING
 RADAR SPEED SURVEY
 EMPIRE GRADE
 SANTA CRUZ CITY LIMITS TO END OF ROAD
 AT LOCKHEED FACILITY**

MARCH 2009

TRAFFIC AND ENGINEERING REPORT
MARCH 2009

PURPOSE:

This survey is performed in accordance with Vehicle Code Section 40803 to allow the use of radar for enforcement purposes.

LOCATION:

Empire Grade from the Santa Cruz City limits to the end at the Lockheed Facility. (Speed Data collected at the old airport).

PREVAILING SPEED DATA:

The existing posted speed limit is 40 MPH and is radar enforced.

The prevailing speeds are:

Direction	Northbound	Southbound
85 th Percentile	44 mph	46 mph
Pace Speed	36-46 mph	37-47 mph
Average Speed	40.13 mph	40.13 mph

ANALYSIS:

The prevailing 85th percentile speeds are 46 MPH and 44 MPH depending on the direction of travel. The safe speed is established at or near the average 85th percentile which is calculated to be 45 MPH. However, in matching existing conditions with the traffic safety needs of the community, engineering judgment as provided for in the California Manual on Uniform Traffic Control Devices indicates a further reduction of five miles per hour to 40 MPH. The factors justifying a further reduction are stopping sight distance, an abundance of various wildlife crossing the road, numerous grade changes and curves, and the majority of the road having pedestrian and bicycle traffic without bike lanes or sidewalks. It is recommended that the existing 40 MPH speed limit remain with enforcement activity taking place at speeds above the safe speed.

RADAR SPEED SURVEY

		<u>MPH</u>	<u># of Vehicles</u>		<u>Percentage</u>
Route:	Empire Grade				
From:	Santa Cruz City Limits	48	1	◆	100.0%
To:	Lockheed	47	2	◆◆	98.2%
Direction:	Northbound	46	3	◆◆◆	94.6%
Weather:	Sunny	45	2	◆◆	89.3%
Posted Speed:	40 MPH	44	4	◆◆◆◆	85.7%
Begin time:	2:15 PM	43	4	◆◆◆◆	78.6%
End time:	3:21 PM	42	3	◆◆◆	71.4%
		41	4	◆◆◆◆	66.1%
		40	8	◆◆◆◆◆◆◆◆	58.9%
		39	6	◆◆◆◆◆◆	44.6%
		38	3	◆◆◆	33.9%
		37	6	◆◆◆◆◆◆	28.6%
		36	4	◆◆◆◆	17.9%
		35	2	◆◆	10.7%
		34	3	◆◆◆	7.1%
		33	1	◆	1.8%
CRITICAL SPEED	44	33	1	◆	1.8%
AVERAGE SPEED	40.13	32	0		0.0%
MEDIAN SPEED	40.0	31	0		0.0%
STANDARD DEVIATION	3.76	30	0		0.0%
PACE RANGE	36 - 46	29	0		0.0%
PERCENTAGE IN PACE	78.6%	28	0		0.0%
TOTAL # OF AUTOS	56	27	0		0.0%

RADAR SPEED SURVEY

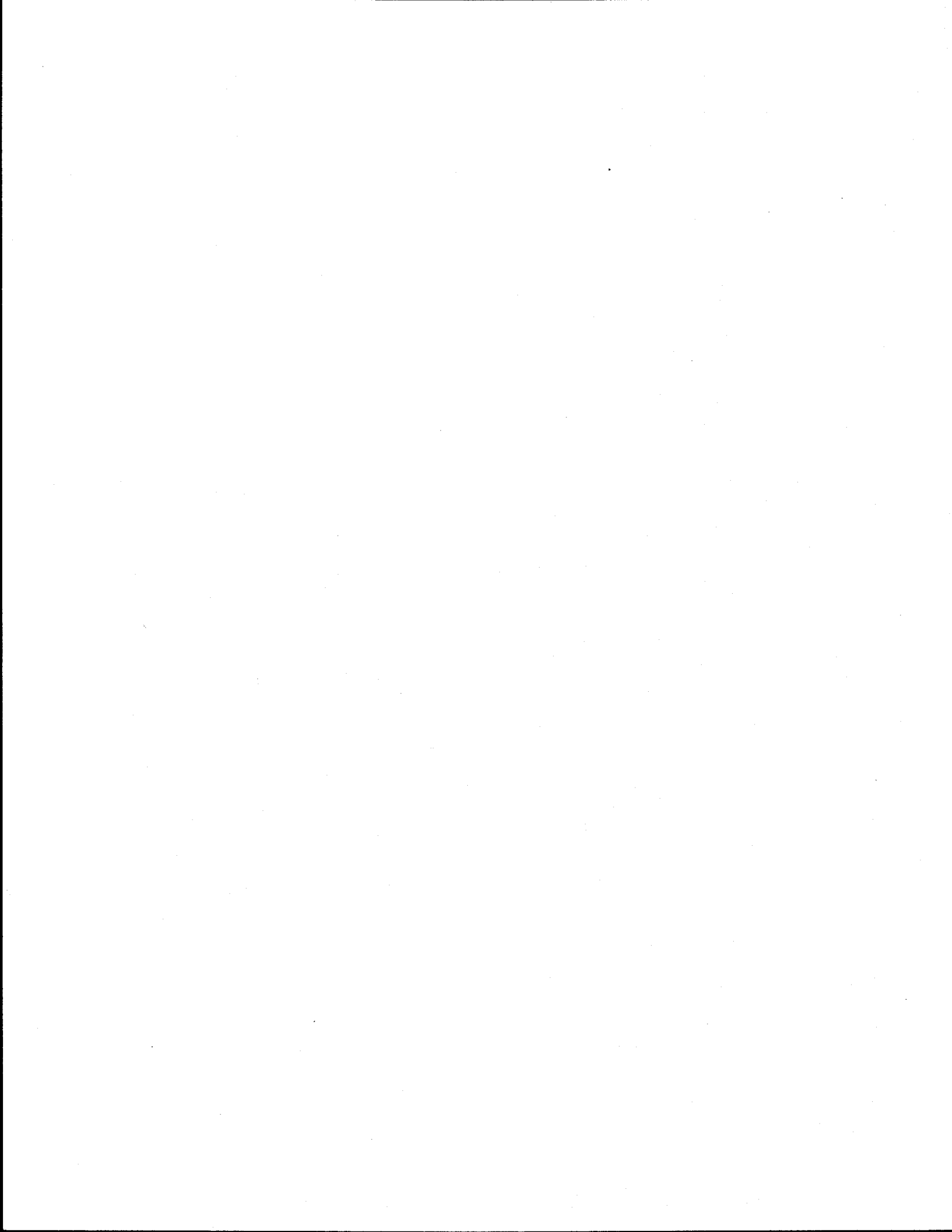
		<u>MPH</u>	<u># of Vehicles</u>		<u>Percentage</u>
Route:	Empire Grade				
From:	Santa Cruz City Limits	50	1	◆	100.0%
To:	Lockheed	49	0		98.4%
Direction:	Southbound	48	4	◆◆◆◆	98.4%
Weather:	Sunny	47	2	◆◆	91.8%
Posted Speed:	40 MPH	46	5	◆◆◆◆◆	88.5%
Begin time:	2:15 PM	45	2	◆◆	80.3%
End time:	3:21 PM	44	3	◆◆◆	77.0%
		43	5	◆◆◆◆◆	72.1%
		42	4	◆◆◆◆	63.9%
		41	3	◆◆◆	57.4%
		40	6	◆◆◆◆◆◆	52.5%
		39	3	◆◆◆	42.6%
		38	4	◆◆◆◆	37.7%
		37	3	◆◆◆	31.1%
		36	4	◆◆◆◆	26.2%
CRITICAL SPEED	46	35	3	◆◆◆	19.7%
AVERAGE SPEED	40.13	34	2	◆◆	14.8%
MEDIAN SPEED	40.0	33	1	◆	11.5%
STANDARD DEVIATION	5.23	32	3	◆◆◆	9.8%
PACE RANGE	37 - 47	31	1	◆	4.9%
PERCENTAGE IN PACE	62.3%	30	0		3.3%
TOTAL # OF AUTOS	61	29	1	◆	3.3%
		28	1	◆	1.6%

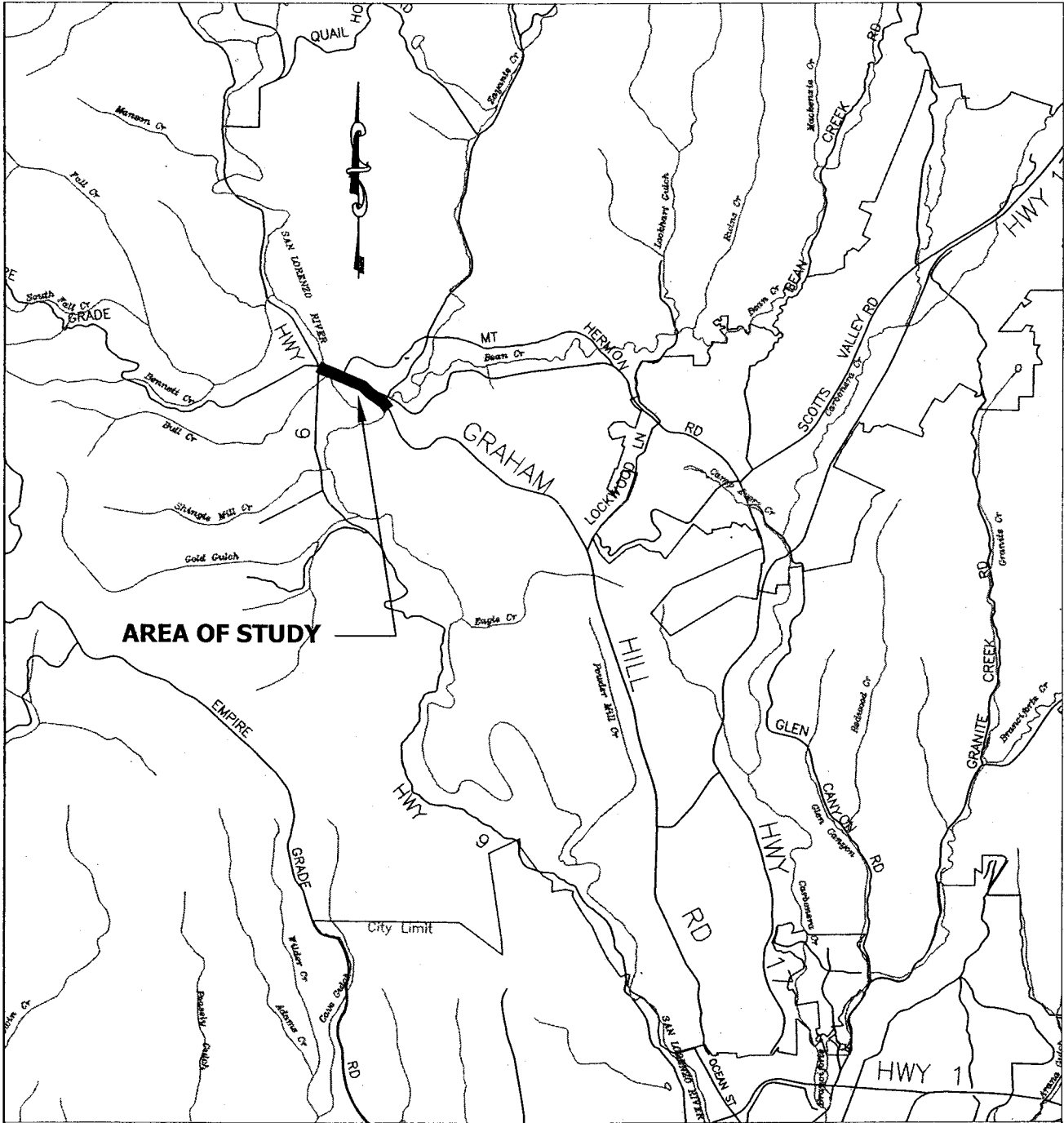
RADAR SPEED SURVEY
Santa Cruz County
Department of Public Works

LOCATION EMPIRE GRADE (@ OLD AIRPORT) BY JGL
 ROAD NO _____ DATE 6.23.08 DAY MON BEGIN 2:15 END 3:21
 POSTED SPEED 40 MPH WEATHER SUNNY
 NUMBER OF LANES 2 GRADE FLAT CALIBRATED

NUMBER OF VEHICLES

MPH	DIRECTION		TOTAL OF EACH SPEED	DIRECTION		TOTAL OF EACH SPEED
	→	N		←	S	
60						
59						
58						
57						
56						
55						
54						
53						
52						
51						
50						
49						1
48						0
47			1			4
46			2			2
45			3			5
44			2			2
43			4			3
42			4			5
41			3			4
40			4			3
39			8	-		6
38			6			3
37			3			4
36			6			3
35			4			4
34			2			3
33			3			2
32			1			1
31						3
30						1
29						0
28						1
27						1
26						
25						
24						
23						
22						
21						
20						
TOTAL			56	TOTAL		61





SANTA CRUZ COUNTY TRAFFIC ENGINEERING
RADAR SPEED SURVEY
GRAHAM HILL ROAD
RAILROAD TRACKS TO HIGHWAY NINE

MARCH 2009

TRAFFIC AND ENGINEERING REPORT
MARCH 2009

PURPOSE:

This survey is performed in accordance with Vehicle Code Section 40803 to allow the use of radar for enforcement purposes.

LOCATION:

Graham Hill Road from the Railroad Tracks to Highway Nine. (Speed Data collected at Conference Drive)

PREVAILING SPEED DATA:

The existing posted speed limit is 25 mph and is radar enforced.

The prevailing speeds are:

Direction	Northbound	Southbound
85 th Percentile	35 mph	36 mph
Pace Speed	26-36 mph	29-39 mph
Average Speed	31.36 mph	31.44 mph

ANALYSIS:

The prevailing 85th percentile speeds are 36 MPH and 35 MPH depending on the direction of travel. The safe speed is established at or near the average 85th percentile which is calculated to be 35 MPH. However, in matching existing conditions with the traffic safety needs of the community, engineering judgment as provided for in the California Manual on Uniform Traffic Control Devices indicates a further reduction of five miles per hour to 30 MPH. The factors justifying a further reduction are high volume of traffic, pedestrian and bicycle traffic, and an arterial route leading to popular commercial and tourist areas. It is recommended that the existing 25 MPH speed limit be increased to 30 MPH with enforcement activity taking place at speeds above the safe speed.

RADAR SPEED SURVEY

		<u>MPH</u>	<u># of Vehicles</u>		<u>Percentage</u>
Route:	Graham Hill Rd				
From:	Railroad Tracks	38	3	◆◆◆	100.0%
To:	Hwy 9	37	0		94.3%
Direction:	Northbound	36	4	◆◆◆◆	94.3%
Weather:	Sunny	35	4	◆◆◆◆	86.8%
Posted Speed:	25 MPH	34	3	◆◆◆	79.2%
Begin time:	2:25 PM	33	8	◆◆◆◆◆◆◆◆	73.6%
End time:	2:45 AM	32	9	◆◆◆◆◆◆◆◆◆	58.5%
		31	3	◆◆◆	41.5%
		30	1	◆	35.8%
		29	3	◆◆◆	34.0%
		28	4	◆◆◆◆	28.3%
		27	4	◆◆◆◆	20.8%
		26	5	◆◆◆◆◆	13.2%
		25	2	◆◆	3.8%
		24	0		0.0%
CRITICAL SPEED	35	23	0		0.0%
AVERAGE SPEED	31.36	22	0		0.0%
MEDIAN SPEED	32.0	21	0		0.0%
STANDARD DEVIATION	3.62	20	0		0.0%
PACE RANGE	26 - 36	19	0		0.0%
PERCENTAGE IN PACE	83.0%	18	0		0.0%
TOTAL # OF AUTOS	53	17	0		0.0%

RADAR SPEED SURVEY

		<u>MPH</u>	<u># of Vehicles</u>		<u>Percentage</u>
Route:	Graham Hill Rd				
From:	Railroad Tracks	40	1	◆	100.0%
To:	Hwy 9	39	2	◆◆	98.4%
Direction:	Southbound	38	2	◆◆	95.2%
Weather:	Sunny	37	3	◆◆◆	91.9%
Posted Speed:	25 MPH	36	5	◆◆◆◆◆	87.1%
Begin time:	2:25 PM	35	2	◆◆	79.0%
End time:	2:45 AM	34	6	◆◆◆◆◆◆	75.8%
		33	3	◆◆◆	66.1%
		32	6	◆◆◆◆◆◆	61.3%
		31	7	◆◆◆◆◆◆◆	51.6%
		30	3	◆◆◆	40.3%
		29	9	◆◆◆◆◆◆◆◆◆	35.5%
		28	2	◆◆	21.0%
		27	1	◆	17.7%
		26	3	◆◆◆	16.1%
CRITICAL SPEED	36	25	3	◆◆◆	11.3%
AVERAGE SPEED	31.44	24	3	◆◆◆	6.5%
MEDIAN SPEED	31.0	23	1	◆	1.6%
STANDARD DEVIATION	4.25	22	0		0.0%
PACE RANGE	29 - 39	21	0		0.0%
PERCENTAGE IN PACE	74.2%	20	0		0.0%
TOTAL # OF AUTOS	62	19	0		0.0%

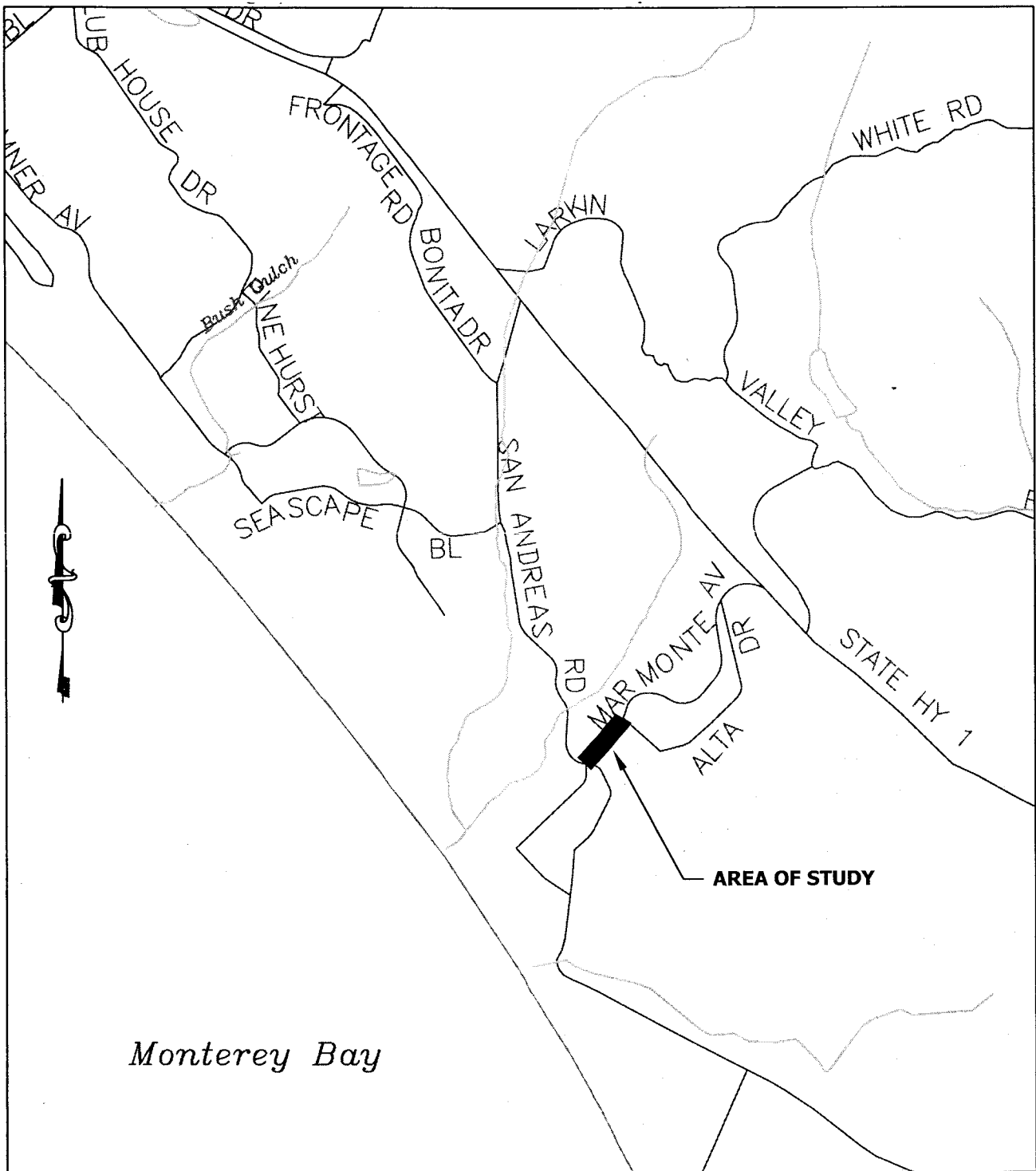
RADAR SPEED SURVEY
 Santa Cruz County
 Department of Public Works

LOCATION Graham Hill Rd, Rail Rd Tracks to Hwy 9 at Conference ^{Dr.} BY A-M
 ROAD NO _____ DATE 6/25/08 DAY Wed BEGIN 2:25 PM END 2:45 PM
 POSTED SPEED 25 MPH WEATHER SUNNY
 NUMBER OF LANES 2 GRADE 3% CALIBRATED ✓

NUMBER OF VEHICLES

MPH	DIRECTION → S	TOTAL OF EACH SPEED	DIRECTION N ←	TOTAL OF EACH SPEED	
	60				
59					
58					
57					
56					
55					
54					
53					
52					
51					
50					
49					
48					
47					
46					
45					
44					
43					
42					
41					
40		1			
39		2			
38		2		3	
37		3		0	
36	 	5		4	
35		2		4	
34	 	6		3	
33		3	 	8	
32	 	6	 	9	
31	 	7		3	
30		3		1	
29	 	9		3	
28		2		4	
27		1		4	
26		3	 	5	
25		3		2	
24		3			
23		1			
22					
21					
20-					
TOTAL		62	TOTAL		53





**SANTA CRUZ COUNTY TRAFFIC ENGINEERING
RADAR SPEED SURVEY
MAR MONTE AVENUE
SAN ANDREAS ROAD TO THE SOUTH
INTERSECTION OF ALTA DRIVE**

MARCH 2009

TRAFFIC AND ENGINEERING REPORT
MARCH 2009

PURPOSE:

This survey is performed in accordance with Vehicle Code Section 40803 to allow the use of radar for enforcement purposes.

LOCATION:

Mar Monte Avenue from San Andreas Road to the south intersection of Alta Drive. (Speed Data collected at 310 Mar Monte Avenue)

PREVAILING SPEED DATA:

The existing posted speed limit is 25 MPH and is radar enforced.

The prevailing speeds are:

Direction	Northbound	Southbound
85 th Percentile	25 mph	32 mph
Pace Speed	18-28 mph	24-34 mph
Average Speed	23.31 mph	28.38 mph

ANALYSIS:

The prevailing 85th percentile speeds are 32 MPH and 25 MPH depending on the direction of travel. The safe speed is established at or near the average 85th percentile which is calculated to be 30 MPH. However, in matching existing conditions with the traffic safety needs of the community, engineering judgment as provided for in the California Manual on Uniform Traffic Control Devices indicates a further reduction of five miles per hour to 25 MPH. The factors justifying a further reduction are prima-facie residential district, children and other pedestrians along with bicycle traffic in the roadway without sidewalks or paved shoulders. It is recommended that the existing 25 MPH speed limit remain with enforcement activity taking place at speeds above the safe speed.

RADAR SPEED SURVEY

		<u>MPH</u>	<u># of Vehicles</u>	<u>Percentage</u>
Route:	Mar Monte Ave			
Location:	South of Alta Dr	35	2 ♦♦	100.0%
Direction:	Southbound	34	1 ♦	96.2%
Weather:	Sunny	33	4 ♦♦♦♦	94.3%
Posted Speed:	25	32	4 ♦♦♦♦	86.8%
Begin time:	2:35 PM	31	2 ♦♦	79.2%
End time:	3:35 PM	30	4 ♦♦♦♦	75.5%
		29	9 ♦♦♦♦♦♦♦♦♦	67.9%
		28	3 ♦♦♦	50.9%
		27	8 ♦♦♦♦♦♦♦♦	45.3%
		26	3 ♦♦♦	30.2%
		25	9 ♦♦♦♦♦♦♦♦♦	24.5%
		24	2 ♦♦	7.5%
		23	2 ♦♦	3.8%
		22	0	0.0%
		21	0	0.0%
CRITICAL SPEED	32	20	0	0.0%
AVERAGE SPEED	28.38	19	0	0.0%
MEDIAN SPEED	28.0	18	0	0.0%
STANDARD DEVIATION	3.15	17	0	0.0%
PACE RANGE	24 - 34	16	0	0.0%
PERCENTAGE IN PACE	90.6%	15	0	0.0%
TOTAL # OF AUTOS	53	14	0	0.0%

RADAR SPEED SURVEY

Route: Mar Monte Ave
Location: South of Alta Dr
Direction: Northbound
Weather: Sunny
Posted Speed: 25
Begin time: 2:35 PM
End time: 3:35 PM

	<u>MPH</u>	<u># of Vehicles</u>		<u>Percentage</u>
	29	1	◆	100.0%
	28	3	◆◆◆	98.2%
	27	2	◆◆	92.7%
	26	2	◆◆	89.1%
	25	5	◆◆◆◆◆	85.5%
	24	9	◆◆◆◆◆◆◆◆◆	76.4%
	23	13	◆◆◆◆◆◆◆◆◆◆◆◆◆◆◆	60.0%
	22	8	◆◆◆◆◆◆◆◆◆	36.4%
	21	7	◆◆◆◆◆◆◆◆◆	21.8%
	20	5	◆◆◆◆◆	9.1%
	19	0		0.0%
	18	0		0.0%
	17	0		0.0%
	16	0		0.0%
	15	0		0.0%
CRITICAL SPEED	25	14	0	0.0%
AVERAGE SPEED	23.31	13	0	0.0%
MEDIAN SPEED	23.0	12	0	0.0%
STANDARD DEVIATION	2.22	11	0	0.0%
PACE RANGE	18 - 28	10	0	0.0%
PERCENTAGE IN PACE	92.7%	9	0	0.0%
TOTAL # OF AUTOS	55	8	0	0.0%

RADAR SPEED SURVEY
 Santa Cruz County
 Department of Public Works

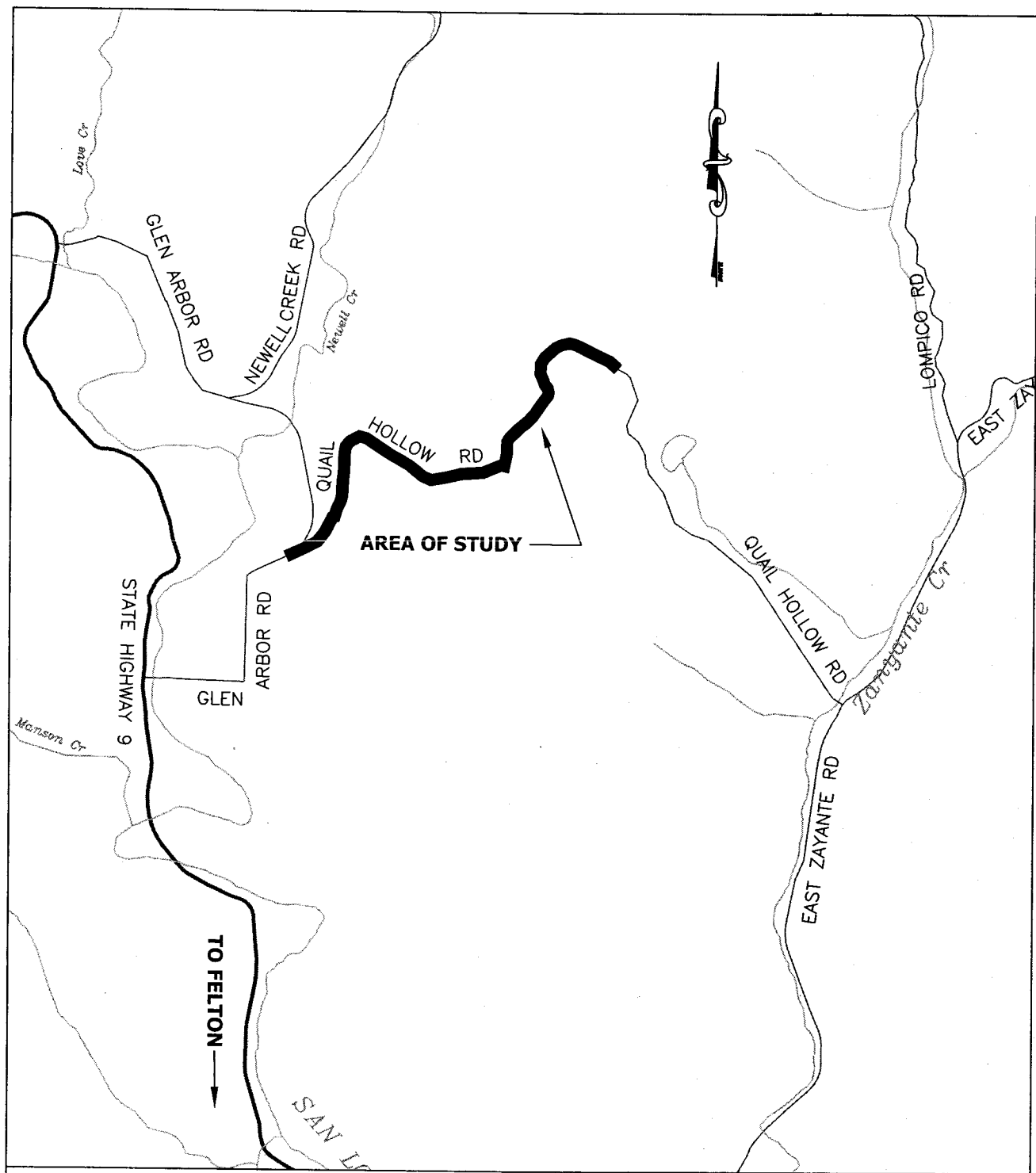
✓

LOCATION Mar Monte Ave, South of Alta Drive at 310 Mar Monte Ave BY A-M
 ROAD NO _____ DATE 6/12/08 DAY Thursday BEGIN 2:35 PM END 3:25 PM
 POSTED SPEED 25 MPH WEATHER Sunny
 NUMBER OF LANES 2 GRADE 3% CALIBRATED ✓

NUMBER OF VEHICLES

MPH	DIRECTION	TOTAL OF EACH SPEED	DIRECTION	TOTAL OF EACH SPEED
	→ S		N ←	
60				
59				
58				
57				
56				
55				
54				
53				
52				
51				
50				
49				
48				
47				
46				
45				
44				
43				
42				
41				
40				
39				
38				
37				
36				
35		2		
34		1		
33		4		
32		4		
31		2		
30		4		
29	 	9		1
28	()	3		3
27	 	8		2
26		3		2
25	 	9	 	5
24		2	 	9
23		2	 	13
22			 	8
21			 	7
20			 	5
	TOTAL	53	TOTAL	55





**SANTA CRUZ COUNTY TRAFFIC ENGINEERING
 RADAR SPEED SURVEY
 QUAIL HOLLOW ROAD
 GLEN ARBOR ROAD TO A POINT
 1.2 MILES EAST OF GLEN ARBOR ROAD**

MARCH 2009

TRAFFIC AND ENGINEERING REPORT
MARCH 2009

PURPOSE:

This survey is performed in accordance with Vehicle Code Section 40803 to allow the use of radar for enforcement purposes.

LOCATION:

Quail Hollow Road from Glen Arbor Road to a point 1.2 miles east of Glen Arbor Road. (Speed Data collected south of Marion Avenue).

PREVAILING SPEED DATA:

The existing posted speed limit is 30 MPH and is radar enforced.

The prevailing speeds are:

Direction	Northbound	Southbound
85 th Percentile	32 mph	34 mph
Pace Speed	24-34 mph	24-34 mph
Average Speed	29.51 mph	30.63 mph

ANALYSIS:

The prevailing 85th percentile speeds are 34 MPH and 32 MPH depending on the direction of travel. The safe speed is established at or near the average 85th percentile which is calculated to be 35 MPH. However, in matching existing conditions with the traffic safety needs of the community, engineering judgment as provided for in the California Manual on Uniform Traffic Control Devices indicates a further reduction of five miles per hour to 30 MPH. The factors justifying a further reduction are safe stopping sight distance, residential district with numerous driveways and private roads, and shoulder conditions with pedestrians in the roadway without sidewalks. It is recommended that the existing 30 MPH speed limit remain with enforcement activity taking place at speeds above the safe speed.

RADAR SPEED SURVEY

Route:	Quail Hollow Rd	MPH	# of Vehicles		Percentage
From:	Glen Arbor Rd	35	1	◆	100.0%
To:	1.2 mi E of Glen Arbor Rd	34	2	◆◆	98.0%
Direction:	Northbound	33	3	◆◆◆	94.1%
Weather:	Sunny	32	2	◆◆	88.2%
Posted Speed:	30 mph	31	9	◆◆◆◆◆◆◆◆◆	84.3%
Begin time:	10:25 AM	30	6	◆◆◆◆◆◆	66.7%
End time:	11:25 AM	29	13	◆◆◆◆◆◆◆◆◆◆◆	54.9%
		28	6	◆◆◆◆◆◆	29.4%
		27	3	◆◆◆	17.6%
		26	4	◆◆◆◆	11.8%
		25	2	◆◆	3.9%
		24	0		0.0%
		23	0		0.0%
		22	0		0.0%
		21	0		0.0%
CRITICAL SPEED	32	20	0		0.0%
AVERAGE SPEED	29.51	19	0		0.0%
MEDIAN SPEED	29.0	18	0		0.0%
STANDARD DEVIATION	2.31	17	0		0.0%
PACE RANGE	24 - 34	16	0		0.0%
PERCENTAGE IN PACE	94.1%	15	0		0.0%
TOTAL # OF AUTOS	51	14	0		0.0%

RADAR SPEED SURVEY

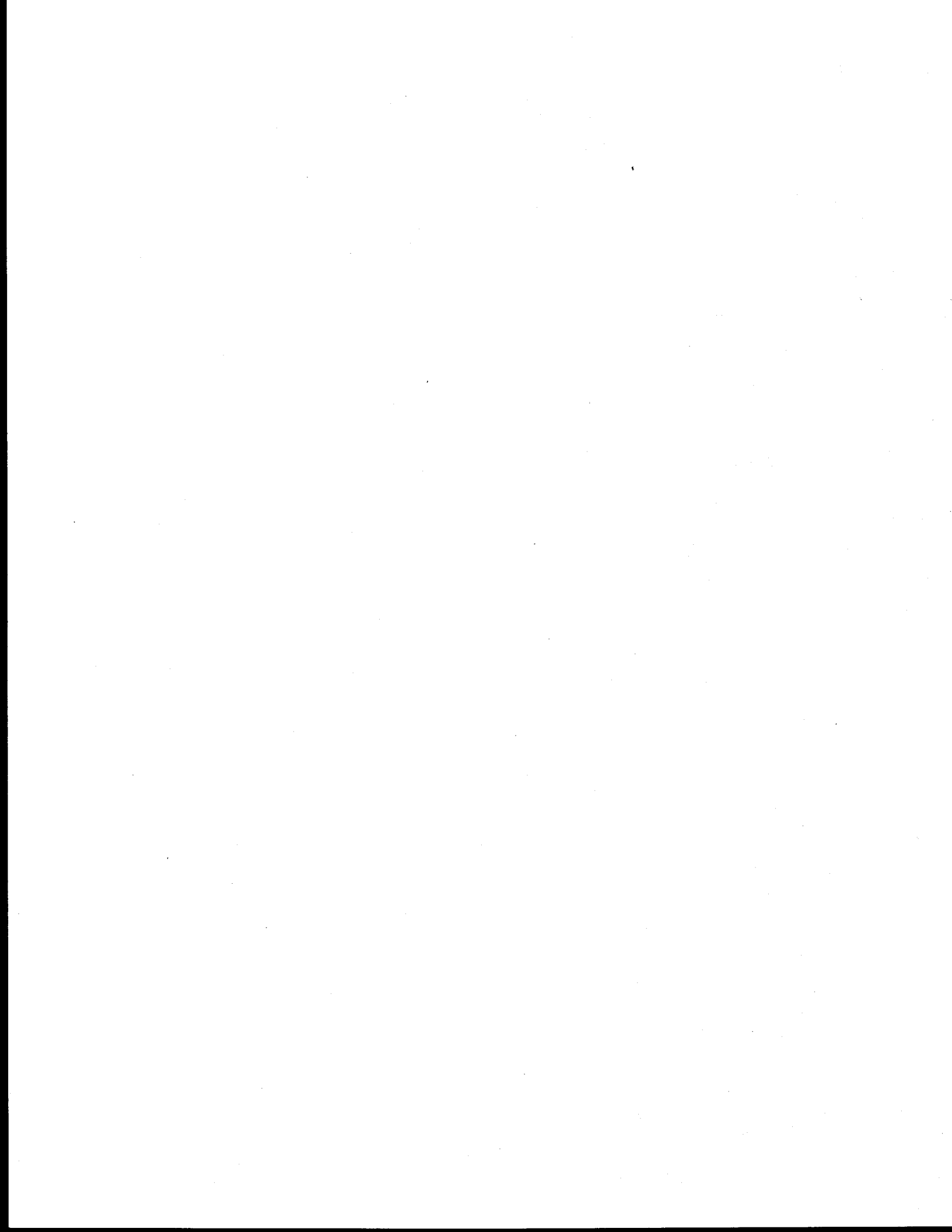
		<u>MPH</u>	<u># of Vehicles</u>		<u>Percentage</u>
Route:	Quail Hollow Rd	35	4	◆◆◆◆	100.0%
From:	Glen Arbor Rd	34	3	◆◆◆	92.9%
To:	1.2 mi E of Glen Arbor Rd	33	10	◆◆◆◆◆◆◆◆◆◆	87.5%
Direction:	Southbound	32	9	◆◆◆◆◆◆◆◆◆	69.6%
Weather:	Sunny	31	4	◆◆◆◆	53.6%
Posted Speed:	30 mph	30	9	◆◆◆◆◆◆◆◆◆	46.4%
Begin time:	10:25 AM	29	4	◆◆◆◆	30.4%
End time:	11:25 AM	28	5	◆◆◆◆◆	23.2%
		27	3	◆◆◆	14.3%
		26	2	◆◆	8.9%
		25	1	◆	5.4%
		24	1	◆	3.6%
		23	1	◆	1.8%
		22	0		0.0%
		21	0		0.0%
CRITICAL SPEED	34	20	0		0.0%
AVERAGE SPEED	30.63	19	0		0.0%
MEDIAN SPEED	31.0	18	0		0.0%
STANDARD DEVIATION	2.86	17	0		0.0%
PACE RANGE	24 - 34	16	0		0.0%
PERCENTAGE IN PACE	85.7%	15	0		0.0%
TOTAL # OF AUTOS	56	14	0		0.0%

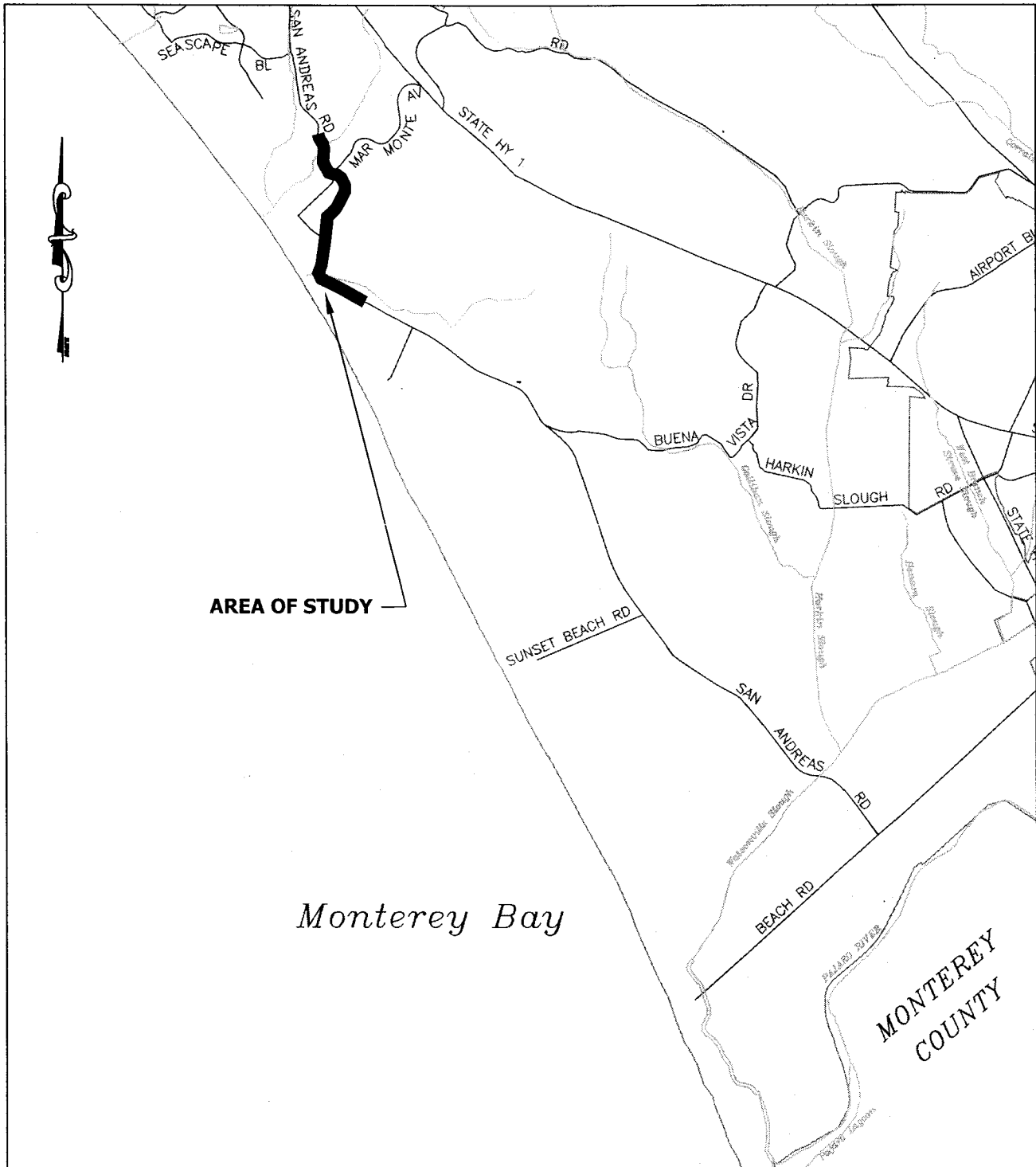
RADAR SPEED SURVEY
 Santa Cruz County
 Department of Public Works

LOCATION Quail Hollow Rd from Glen Arbor to a point 1.2 mi E of Glen Arbor ^(S. of Marion Ave) BY A-M
 ROAD NO _____ DATE 6/23/08 DAY Mon BEGIN 10:25 AM END 11:25 AM
 POSTED SPEED 30 MPH WEATHER Clear
 NUMBER OF LANES 2 GRADE 3% CALIBRATED

NUMBER OF VEHICLES

MPH	DIRECTION → S	TOTAL OF EACH SPEED	DIRECTION N ←	TOTAL OF EACH SPEED
60				
59				
58				
57				
56				
55				
54				
53				
52				
51				
50				
49				
48				
47				
46				
45				
44				
43				
42				
41				
40				
39				
38				
37				
36				
35		4		1
34		3		2
33	 	10		3
32	 	9		2
31		4	 	9
30	 	9	 	6
29		4	 	13
28	 	5	 	6
27		3		3
26		2		4
25		1		2
24		1		
23		1		
22				
21				
20				
TOTAL		56		51





AREA OF STUDY

Monterey Bay

**MONTEREY
COUNTY**

**SANTA CRUZ COUNTY TRAFFIC ENGINEERING
RADAR SPEED SURVEY
SAN ANDREAS ROAD
0.25 MILES NORTHWESTERLY OF MAR MONTE-PLAYA
BOULEVARD TO 0.34 MILES SOUTHEASTERLY
OF SPRR UNDERPASS AT MANRESA BEACH**

MARCH 2009

TRAFFIC AND ENGINEERING REPORT
MARCH 2009

PURPOSE:

This survey is performed in accordance with Vehicle Code Section 40803 to allow the use of radar for enforcement purposes.

LOCATION:

San Andreas Road from 0.25 miles northwesterly of Mar Monte Avenue-Playa Boulevard to 0.35 miles southeasterly of SPPR underpass at Manresa Beach. (Speed Data collected at # 1587 San Andreas Road).

PREVAILING SPEED DATA:

The existing posted speed limit is 30 MPH and is radar enforced.

The prevailing speeds are:

Direction	Northbound	Southbound
85 th Percentile	38 mph	32 mph
Pace Speed	30-40 mph	24-34 mph
Average Speed	35.29 mph	29.00 mph

ANALYSIS:

The prevailing 85th percentile speeds are 38 MPH and 32 MPH depending on the direction of travel. The safe speed is established at or near the average 85th percentile which is calculated to be 35 MPH. However, in matching existing conditions with the traffic safety needs of the community, engineering judgment as provided for in the California Manual on Uniform Traffic Control Devices indicates a further reduction of five miles per hour to 30 MPH. The factors justifying a further reduction are prima facie residential district, recent accident record, a tourist area with main access to beaches and parks, and shoulder conditions with pedestrians in the roadway without sidewalks. It is recommended that the existing 30 MPH speed limit remain with enforcement activity taking place at speeds above the safe speed.

RADAR SPEED SURVEY

		<u>MPH</u>	<u># of Vehicles</u>		<u>Percentage</u>
Route:	San Andreas Rd				
From:	.25 mi northwesterly of Mar Monte Ave- Playa Blvd	45	1	◆	100.0%
To:	.35 mi southeasterly of SPRR underpass at Manressa Beach	44	0		98.2%
		43	1	◆	98.2%
		42	0		96.4%
Direction:	Northbound	41	1	◆	96.4%
Weather:	Sunny	40	2	◆◆	94.5%
Posted Speed:	30 MPH	39	2	◆◆	90.9%
Begin time:	2:15 PM	38	4	◆◆◆◆	87.3%
End time:	2:45 PM	37	10	◆◆◆◆◆◆◆◆◆◆	80.0%
		36	4	◆◆◆◆	61.8%
		35	6	◆◆◆◆◆◆	54.5%
		34	7	◆◆◆◆◆◆◆	43.6%
		33	5	◆◆◆◆◆	30.9%
		32	7	◆◆◆◆◆◆◆	21.8%
		31	1	◆	9.1%
CRITICAL SPEED	38	30	4	◆◆◆◆	7.3%
AVERAGE SPEED	35.29	29	0		0.0%
MEDIAN SPEED	35.0	28	0		0.0%
STANDARD DEVIATION	3.23	27	0		0.0%
PACE RANGE	30 - 40	26	0		0.0%
PERCENTAGE IN PACE	90.9%	25	0		0.0%
TOTAL # OF AUTOS	55	24	0		0.0%

RADAR SPEED SURVEY

		<u>MPH</u>	<u># of Vehicles</u>		<u>Percentage</u>
Route:	San Andreas Rd				
From:	.25 mi northwesterly of	35	1	◆	100.0%
	Mar Monte Ave- Playa Blv.	34	4	◆◆◆◆	98.4%
To:	.35 mi southeasterly of SPRR	33	2	◆◆	91.8%
	underpass at Manressa Beach	32	5	◆◆◆◆◆	88.5%
Direction:	Southbound	31	10	◆◆◆◆◆◆◆◆◆◆	80.3%
Weather:	Sunny	30	4	◆◆◆◆	63.9%
Posted Speed:	30 MPH	29	4	◆◆◆◆	57.4%
Begin time:	2:15 PM	28	13	◆◆◆◆◆◆◆◆◆◆◆◆◆◆◆◆	50.8%
End time:	2:45 PM	27	7	◆◆◆◆◆◆◆	29.5%
		26	2	◆◆	18.0%
		25	7	◆◆◆◆◆◆◆	14.8%
		24	0		3.3%
		23	2	◆◆	3.3%
		22	0		0.0%
		21	0		0.0%
CRITICAL SPEED	32	20	0		0.0%
AVERAGE SPEED	29.00	19	0		0.0%
MEDIAN SPEED	28.0	18	0		0.0%
STANDARD DEVIATION	2.89	17	0		0.0%
PACE RANGE	24 - 34	16	0		0.0%
PERCENTAGE IN PACE	88.5%	15	0		0.0%
TOTAL # OF AUTOS	61	14	0		0.0%

RADAR SPEED SURVEY

Santa Cruz County

Department of Public Works

LOCATION San Andreas Rd, 2.5 mi northwesterly of Mar-Monte Ave-Playa Blvd to 3.5 mi southeasterly of SRR underpass at Manress Beach at 1587 BY A-M

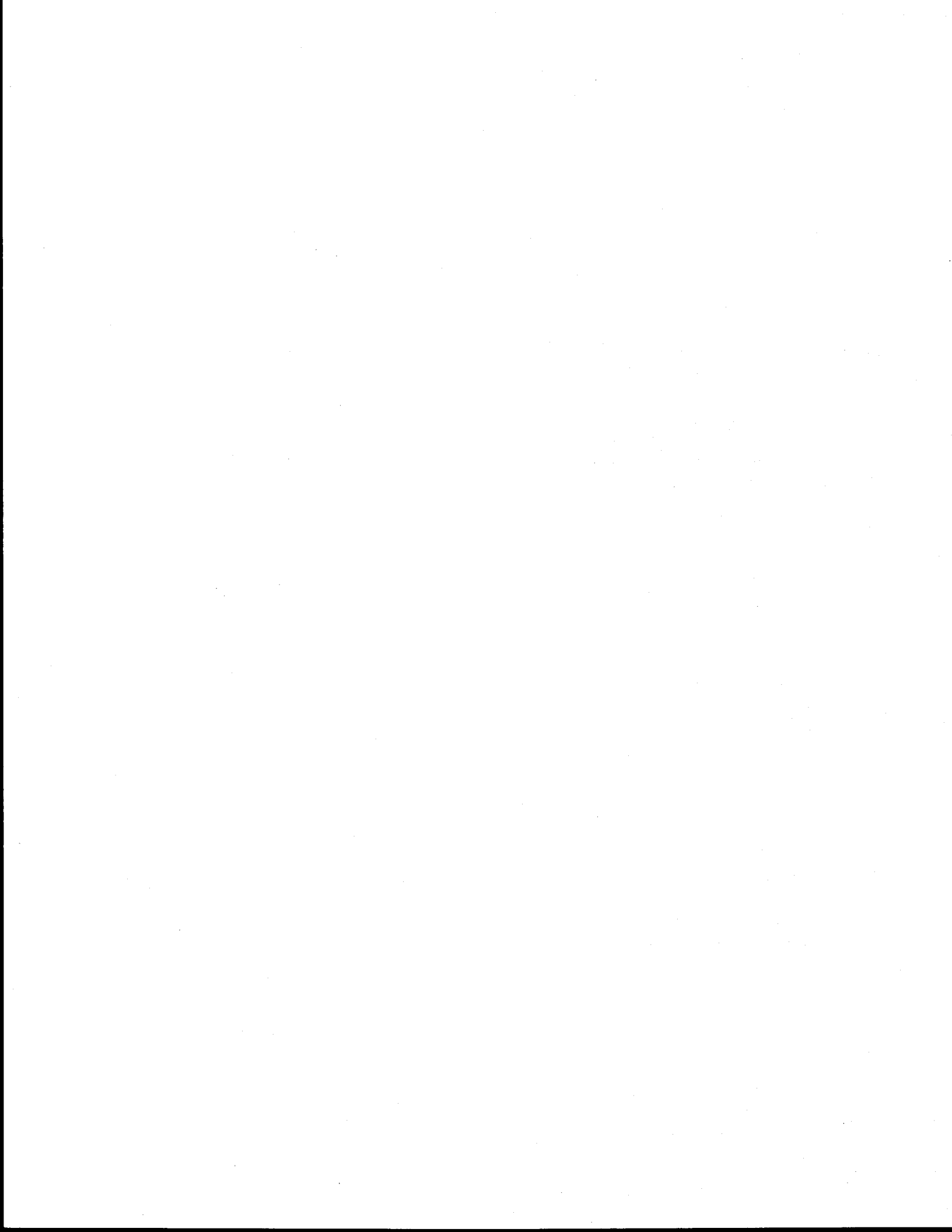
ROAD NO _____ DATE 6/16/08 DAY Mon, Wed BEGIN 2:15 PM END 2:45 PM

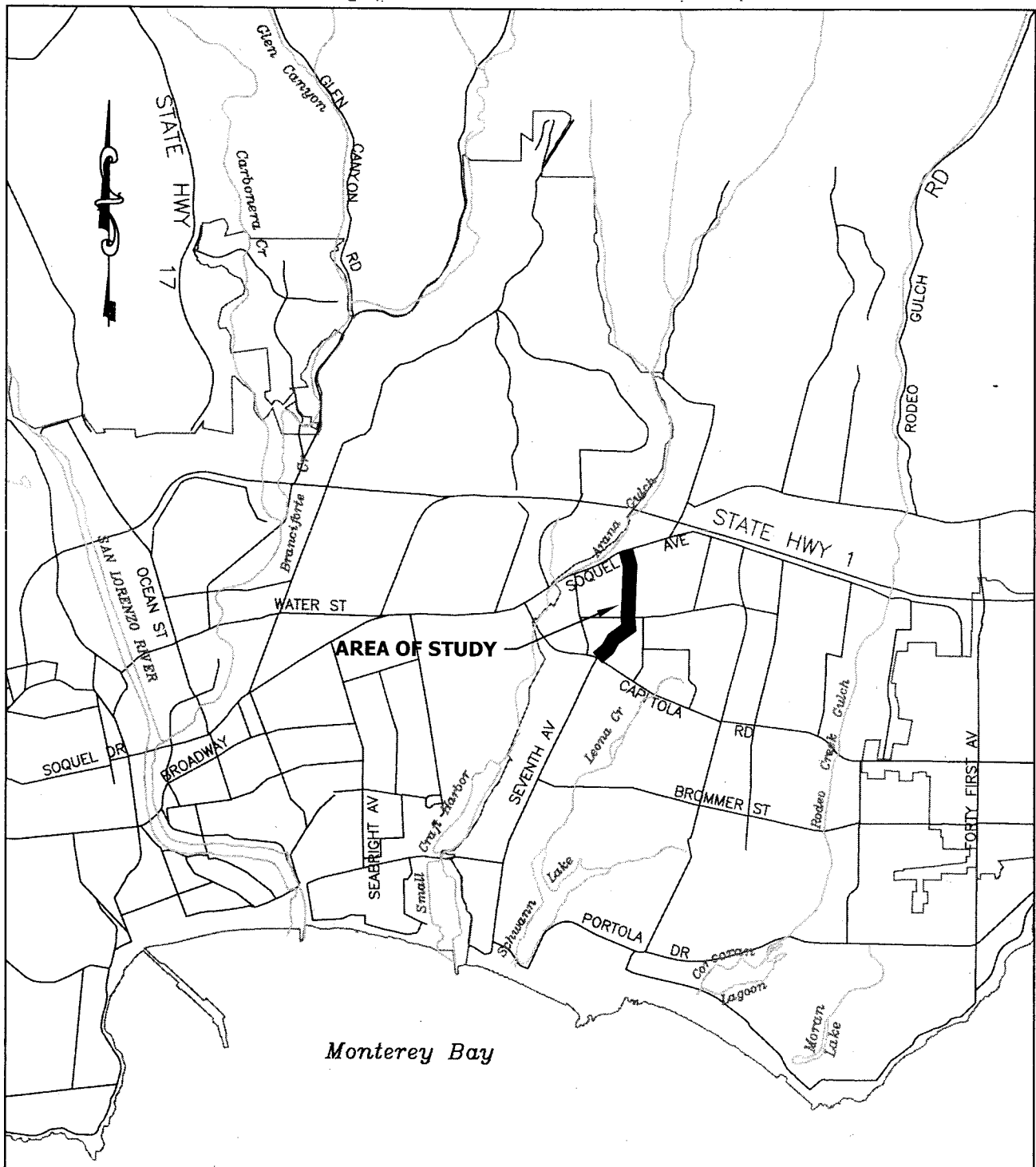
POSTED SPEED 30 MPH WEATHER SUNNY

NUMBER OF LANES 2 GRADE 2% CALIBRATED ✓

NUMBER OF VEHICLES

MPH	DIRECTION → S	TOTAL OF EACH SPEED	DIRECTION N ←	TOTAL OF EACH SPEED
60				
59				
58				
57				
56				
55				
54				
53				
52				
51				
50				
49				
48				
47				
46				
45				1
44				0
43				1
42				0
41				1
40			==	2
39			==	2
38			===	4
37			=== N	10
36			===	4
35		1	===	6
34		4	===	7
33		2	===	5
32	===	5	===	7
31	=== N	10		1
30		4		4
29		4		
28	=== N	13		
27	===	7		
26		2		
25	===	7		
24		0		
23		2		
22				
21				
20				
TOTAL		61	TOTAL 55	





**SANTA CRUZ COUNTY TRAFFIC ENGINEERING
 RADAR SPEED SURVEY
 SEVENTH AVENUE
 SOQUEL AVENUE TO CAPITOLA ROAD**

MARCH 2009

TRAFFIC AND ENGINEERING REPORT
MARCH 2009

PURPOSE:

This survey is performed in accordance with Vehicle Code Section 40803 to allow the use of radar for enforcement purposes.

LOCATION:

Seventh Avenue from Capitola Road to Soquel Avenue. (Speed Data collected north of Rodriguez Street)

PREVAILING SPEED DATA:

The existing posted speed limit is 25 MPH and is radar enforced.

The prevailing speeds are:

Direction	Northbound	Southbound
85 th Percentile	31 mph	31 mph
Pace Speed	23-33 mph	23-33 mph
Average Speed	27.31 mph	27.63 mph

ANALYSIS:

The prevailing 85th percentile speeds are 31 MPH in both directions of travel. The safe speed is established at or near the average 85th percentile which is calculated to be 30 MPH. However, in matching existing conditions with the traffic safety needs of the community, engineering judgment as provided for in the California Manual on Uniform Traffic Control Devices indicates a further reduction of five miles per hour to 25 MPH. The factors justifying a further reduction are prima-facie residential district, a route to and from area schools, high volume of pedestrian and bicycle traffic, numerous driveways, and pedestrian and bicycle access route to adjacent schools. It is recommended that the existing 25 MPH speed limit remain with enforcement activity taking place at speeds above the safe speed.

RADAR SPEED SURVEY

		<u>MPH</u>	<u># of Vehicles</u>		<u>Percentage</u>
Route:	Seventh Ave				
From:	Soquel Ave	36	1	◆	100.0%
To:	Capitola Rd	35	0		98.9%
Direction:	Northbound	34	1	◆	98.9%
Weather:	Sunny	33	2	◆◆	97.7%
Posted Speed:	25 MPH	32	7	◆◆◆◆◆◆◆	95.5%
Begin time:	2:10 PM	31	7	◆◆◆◆◆◆◆	87.5%
End time:	2:40 PM	30	7	◆◆◆◆◆◆◆	79.5%
		29	5	◆◆◆◆◆	71.6%
		28	5	◆◆◆◆◆	65.9%
		27	14	◆◆◆◆◆◆◆◆◆◆◆◆◆◆◆◆	60.2%
		26	10	◆◆◆◆◆◆◆◆◆◆◆	44.3%
		26	9	◆◆◆◆◆◆◆◆◆◆	33.0%
		24	6	◆◆◆◆◆◆	22.7%
		23	8	◆◆◆◆◆◆◆◆	15.9%
		22	5	◆◆◆◆◆	6.8%
		21	1	◆	1.1%
CRITICAL SPEED	31	21	1	◆	1.1%
AVERAGE SPEED	27.31	20	0		0.0%
MEDIAN SPEED	27.0	19	0		0.0%
STANDARD DEVIATION	3.27	18	0		0.0%
PACE RANGE	23 - 33	17	0		0.0%
PERCENTAGE IN PACE	88.6%	16	0		0.0%
TOTAL # OF AUTOS	88	15	0		0.0%

RADAR SPEED SURVEY

		<u>MPH</u>	<u># of Vehicles</u>		<u>Percentage</u>
Route:	Seventh Ave				
From:	Soquel Ave	35	1	◆	100.0%
To:	Capitola Rd	34	2	◆◆	98.2%
Direction:	Southbound	33	1	◆	94.6%
Weather:	Sunny	32	2	◆◆	92.9%
Posted Speed:	25 MPH	31	6	◆◆◆◆◆◆	89.3%
Begin time:	2:10 PM	30	6	◆◆◆◆◆◆	78.6%
End time:	2:40 PM	29	5	◆◆◆◆◆	67.9%
		28	4	◆◆◆◆	58.9%
		27	4	◆◆◆◆	51.8%
		26	8	◆◆◆◆◆◆◆◆	44.6%
		25	8	◆◆◆◆◆◆◆◆	30.4%
		24	4	◆◆◆◆	16.1%
		23	3	◆◆◆	8.9%
		22	1	◆	3.6%
		21	1	◆	1.8%
CRITICAL SPEED	31	20	0		0.0%
AVERAGE SPEED	27.63	19	0		0.0%
MEDIAN SPEED	27.0	18	0		0.0%
STANDARD DEVIATION	3.26	17	0		0.0%
PACE RANGE	23 - 33	16	0		0.0%
PERCENTAGE IN PACE	89.3%	15	0		0.0%
TOTAL # OF AUTOS	56	14	0		0.0%

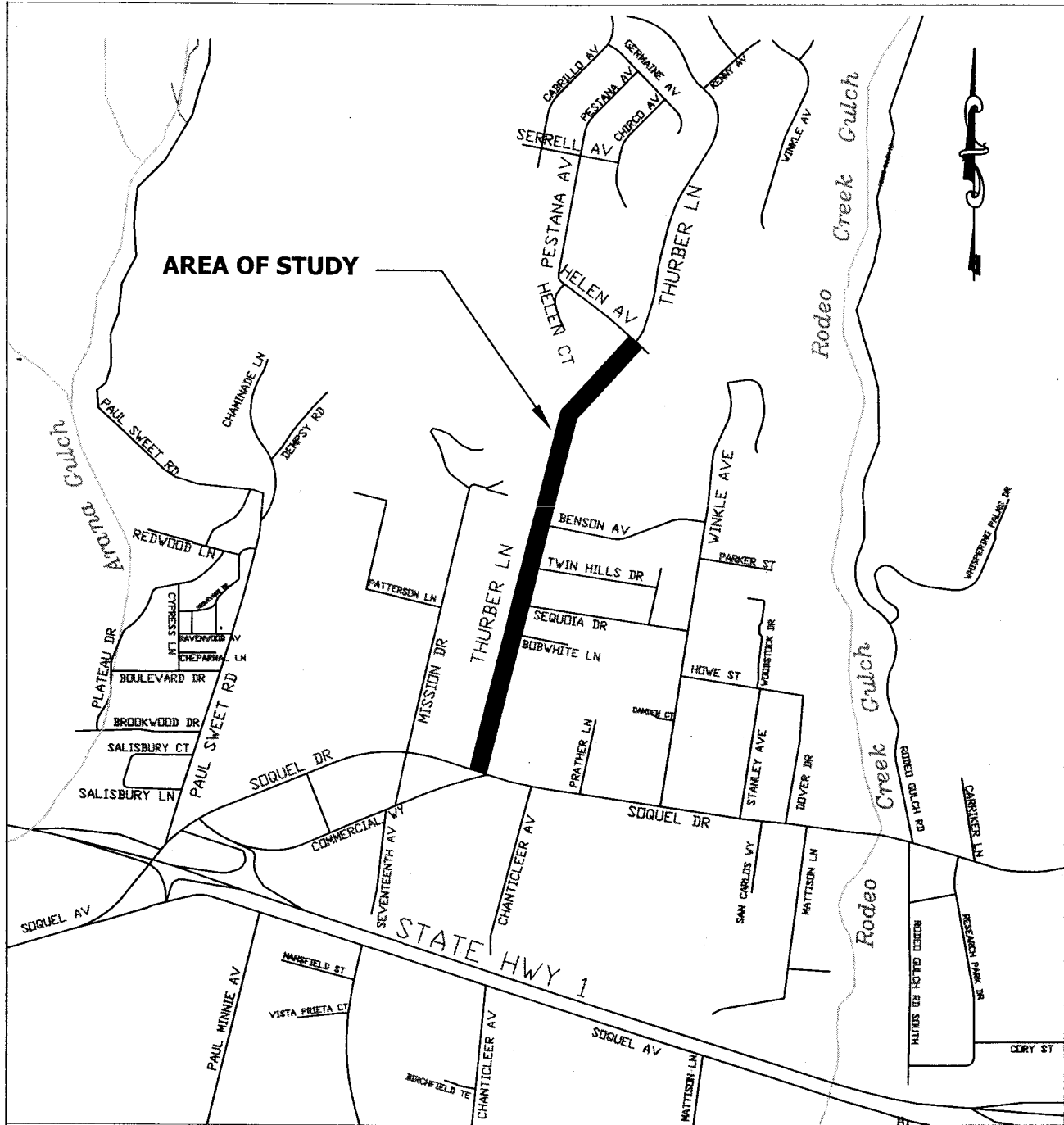
RADAR SPEED SURVEY
 Santa Cruz County
 Department of Public Works

LOCATION Seventh Ave. (Soquel Ave to Capitola Rd) N. of Rodriguez St. BY A-M
 ROAD NO _____ DATE 6/10/08 DAY Tuesday BEGIN 2:10 PM END 2:40 PM
 POSTED SPEED 25 mph WEATHER Sunny
 NUMBER OF LANES 2 GRADE 2% CALIBRATED ✓

NUMBER OF VEHICLES

MPH	DIRECTION	TOTAL OF EACH SPEED	DIRECTION	TOTAL OF EACH SPEED
	→ N		S ←	
60				
59				
58				
57				
56				
55				
54				
53				
52				
51				
50				
49				
48				
47				
46				
45				
44				
43				
42				
41				
40				
39				
38				
37				
36		1		
35		0		1
34		1		2
33		2		1
32		2		2
31		4		6
30		4		6
29		4		5
28		4		4
27		5		4
26		5		8
25		5		8
24		5		4
23		5		3
22		5		1
21		1		1
20-				
TOTAL		88	TOTAL 56	





AREA OF STUDY

**SANTA CRUZ COUNTY TRAFFIC ENGINEERING
 RADAR SPEED SURVEY
 THURBER LANE
 SOQUEL DRIVE TO HELEN AVENUE**

MARCH 2009

TRAFFIC AND ENGINEERING REPORT
MARCH 2009

PURPOSE:

This survey is performed in accordance with Vehicle Code Section 40803 to allow the use of radar for enforcement purposes.

LOCATION:

Thurber Lane from Soquel Drive to Helen Avenue. (Speed Data collected north of Twin Hills Drive)

PREVAILING SPEED DATA:

The existing posted speed limit is 30 mph and is radar enforced.

The prevailing speeds are:

Direction	Northbound	Southbound
85 th Percentile	37 mph	38 mph
Pace Speed	30-40 mph	29-39 mph
Average Speed	33.74 mph	34.68 mph

ANALYSIS:

The prevailing 85th percentile speeds are 38 MPH and 37 MPH depending on the direction of travel. The safe speed is established at or near the average 85th percentile which is calculated to be 35 MPH. However, in matching existing conditions with the traffic safety needs of the community, engineering judgment as provided for in the California Manual on Uniform Traffic Control Devices indicates a further reduction of five miles per hour to 30 MPH. The factors justifying a further reduction are residential neighborhood with significant pedestrian and bicycle traffic with an adjacent fire station and a nearby park and elementary school. It is recommended that the existing 30 MPH speed limit remain with enforcement activity taking place at speeds above the safe speed.

RADAR SPEED SURVEY

Route: Thurber Ln From: Soquel Dr To: Helen Ave Direction: Northbound Weather: Sunny Posted Speed: 30 Begin time: 2:00 PM End time: 2:25 PM	MPH # of Vehicles Percentage
	42 1 ♦ 100.0% 41 0 40 2 ♦♦ 98.1% 39 2 ♦♦ 94.4% 38 3 ♦♦♦ 90.7% 37 2 ♦♦ 85.2% 36 5 ♦♦♦♦♦ 81.5% 35 4 ♦♦♦♦ 72.2% 34 7 ♦♦♦♦♦♦♦ 64.8% 33 6 ♦♦♦♦♦♦ 51.9% 32 10 ♦♦♦♦♦♦♦♦♦♦ 40.7% 31 5 ♦♦♦♦♦ 22.2% 30 3 ♦♦♦ 13.0% 29 1 ♦ 7.4% 28 3 ♦♦♦ 5.6% 27 0 26 0 0.0% 25 0 0.0% 24 0 0.0% 23 0 0.0% 22 0 0.0% 21 0 0.0%
CRITICAL SPEED 37 AVERAGE SPEED 33.74 MEDIAN SPEED 33.0 STANDARD DEVIATION 3.20 PACE RANGE 30 - 40 PERCENTAGE IN PACE 87.0% TOTAL # OF AUTOS 54	

RADAR SPEED SURVEY

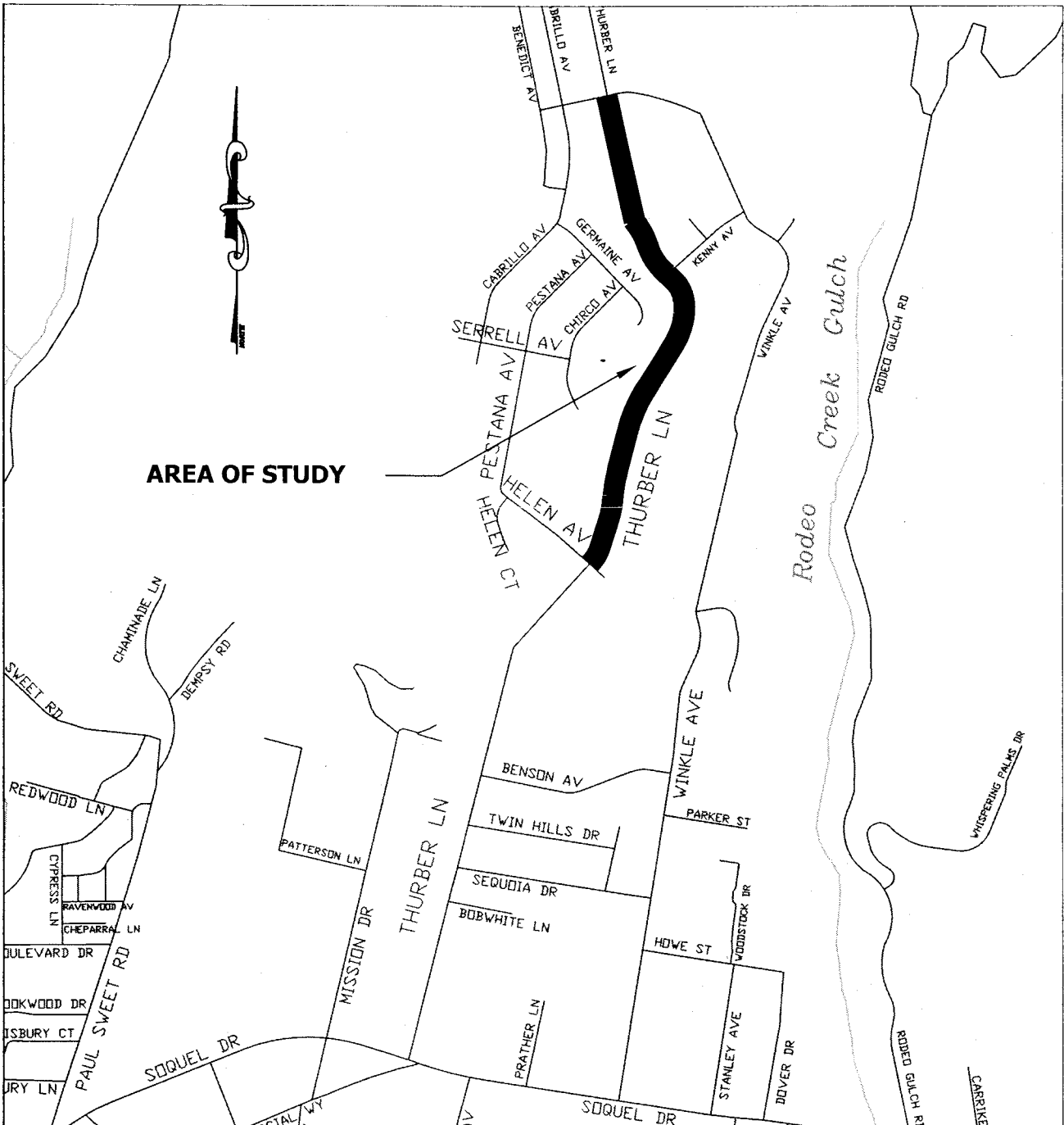
		<u>MPH</u>	<u># of Vehicles</u>	<u>Percentage</u>
Route:	Thurber Ln			
From:	Soquel Dr	48	1 ♦	100.0%
To:	Helen Ave	47	0	98.4%
Direction:	Southbound	46	0	98.4%
Weather:	Sunny	45	1 ♦	98.4%
Posted Speed:	30	44	1 ♦	96.8%
Begin time:	2:00 PM	43	0	95.2%
End time:	2:25 PM	42	1 ♦	95.2%
		41	1 ♦	93.5%
		40	1 ♦	91.9%
		39	1 ♦	90.3%
		38	4 ♦♦♦♦	88.7%
		37	5 ♦♦♦♦♦	82.3%
		36	7 ♦♦♦♦♦♦♦	74.2%
		35	9 ♦♦♦♦♦♦♦♦♦	62.9%
		34	3 ♦♦♦	48.4%
CRITICAL SPEED	38	33	8 ♦♦♦♦♦♦♦♦	43.5%
AVERAGE SPEED	34.68	32	6 ♦♦♦♦♦♦	30.6%
MEDIAN SPEED	35.0	31	5 ♦♦♦♦♦	21.0%
STANDARD DEVIATION	3.99	30	3 ♦♦♦	12.9%
PACE RANGE	29 - 39	29	4 ♦♦♦♦	8.1%
PERCENTAGE IN PACE	87.1%	28	1 ♦	1.6%
TOTAL # OF AUTOS	62	27	0	0.0%

RADAR SPEED SURVEY
 Santa Cruz County
 Department of Public Works

LOCATION Turber Ln, from Sequel Dr to Helen Ave (N. of Twin Hills Dr) BY A-M
 ROAD NO _____ DATE 6/5/08 DAY Thursday BEGIN 2:00 PM END 2:25 PM
 POSTED SPEED 30 MPH WEATHER SUNNY
 NUMBER OF LANES 2 GRADE 2% CALIBRATED

NUMBER OF VEHICLES

MPH	DIRECTION		TOTAL OF EACH SPEED	DIRECTION		TOTAL OF EACH SPEED
	→	S		N	←	
60						
59						
58						
57						
56						
55						
54						
53						
52						
51						
50						
49						
48			1			
47			0			
46			0			
45			1			
44			1			
43			0			
42			1	1		1
41			1			0
40			1	1		2
39			1	1		2
38			4	1		3
37			5	1		2
36			7	1		5
35			9	1		4
34			3	1		7
33			8	1		6
32			6	1		10
31			5	1		5
30			3	1		3
29			4	1		1
28			1	1		3
27						
26						
25						
24						
23						
22						
21						
20-						
TOTAL			62	TOTAL		54



AREA OF STUDY

**SANTA CRUZ COUNTY TRAFFIC ENGINEERING
 RADAR SPEED SURVEY
 THURBER LANE
 HELEN AVENUE TO WINKLE AVENUE**

MARCH 2009

TRAFFIC AND ENGINEERING REPORT
MARCH 2009

PURPOSE:

This survey is performed in accordance with Vehicle Code Section 40803 to allow the use of radar for enforcement purposes.

LOCATION:

Thurber Lane from Helen Avenue to Winkle Avenue. (Speed Data collected north of Helen Avenue)

PREVAILING SPEED DATA:

The existing posted speed limit is 30 mph and is radar enforced.

The prevailing speeds are:

Direction	Northbound	Southbound
85 th Percentile	36 mph	38 mph
Pace Speed	28-38 mph	29-39 mph
Average Speed	32.63 mph	33.46 mph

ANALYSIS:

The prevailing 85th percentile speeds are 38 MPH and 36 MPH depending on the direction of travel. The safe speed is established at or near the average 85th percentile which is calculated to be 35 MPH. However, in matching existing conditions with the traffic safety needs of the community, engineering judgment as provided for in the California Manual on Uniform Traffic Control Devices indicates a further reduction of five miles per hour to 30 MPH. The factors justifying a further reduction are prima-facie residential district, safe stopping sight distance, extreme road profile conditions, wildlife area, and children walking and bicycling to school. It is recommended that the existing 30 MPH speed limit remain with enforcement activity taking place at speeds above the safe speed.

RADAR SPEED SURVEY

		<u>MPH</u>	<u># of Vehicles</u>	<u>Percentage</u>
Route:	Thurber Ln			
From:	Helen Ave	44	1 ♦	100.0%
To:	Winkle Ave	43	0	98.1%
Direction:	Northbound	42	1 ♦	98.1%
Weather:	Sunny	41	0	96.3%
Posted Speed:	30	40	0	96.3%
Begin time:	2:40 PM	39	0	96.3%
End time:	3:00 PM	38	1 ♦	96.3%
		37	3 ♦♦♦	94.4%
		36	6 ♦♦♦♦♦♦	88.9%
		35	4 ♦♦♦♦	77.8%
		34	3 ♦♦♦	70.4%
		33	7 ♦♦♦♦♦♦♦	64.8%
		32	6 ♦♦♦♦♦♦	51.9%
		31	4 ♦♦♦♦	40.7%
		30	7 ♦♦♦♦♦♦♦	33.3%
CRITICAL SPEED	36	29	6 ♦♦♦♦♦♦	20.4%
AVERAGE SPEED	32.63	28	3 ♦♦♦	9.3%
MEDIAN SPEED	32.0	27	2 ♦♦	3.7%
STANDARD DEVIATION	3.55	26	0	0.0%
PACE RANGE	28 - 38	25	0	0.0%
PERCENTAGE IN PACE	90.7%	24	0	0.0%
TOTAL # OF AUTOS	54	23	0	0.0%

RADAR SPEED SURVEY

Route: Thurber Ln
From: Helen Ave
To: Winkle Ave
Direction: Southbound
Weather: Sunny
Posted Speed: 30
Begin time: 2:40 PM
End time: 3:00 PM

	<u>MPH</u>	<u># of Vehicles</u>	<u>Percentage</u>
	41	2 ♦♦	100.0%
	40	3 ♦♦♦	96.8%
	39	3 ♦♦♦	92.1%
	38	3 ♦♦♦	87.3%
	37	3 ♦♦♦	82.5%
	36	4 ♦♦♦♦	77.8%
	35	4 ♦♦♦♦	71.4%
	34	8 ♦♦♦♦♦♦♦♦	65.1%
	33	6 ♦♦♦♦♦♦	52.4%
	32	7 ♦♦♦♦♦♦♦	42.9%
	31	3 ♦♦♦	31.7%
	30	7 ♦♦♦♦♦♦♦	27.0%
	29	6 ♦♦♦♦♦♦	15.9%
	28	1 ♦	6.3%
	27	3 ♦♦♦	4.8%
CRITICAL SPEED	38	26	0
AVERAGE SPEED	33.46	25	0
MEDIAN SPEED	33.0	24	0
STANDARD DEVIATION	3.73	23	0
PACE RANGE	29 - 39	22	0
PERCENTAGE IN PACE	81.0%	21	0
TOTAL # OF AUTOS	63	20	0

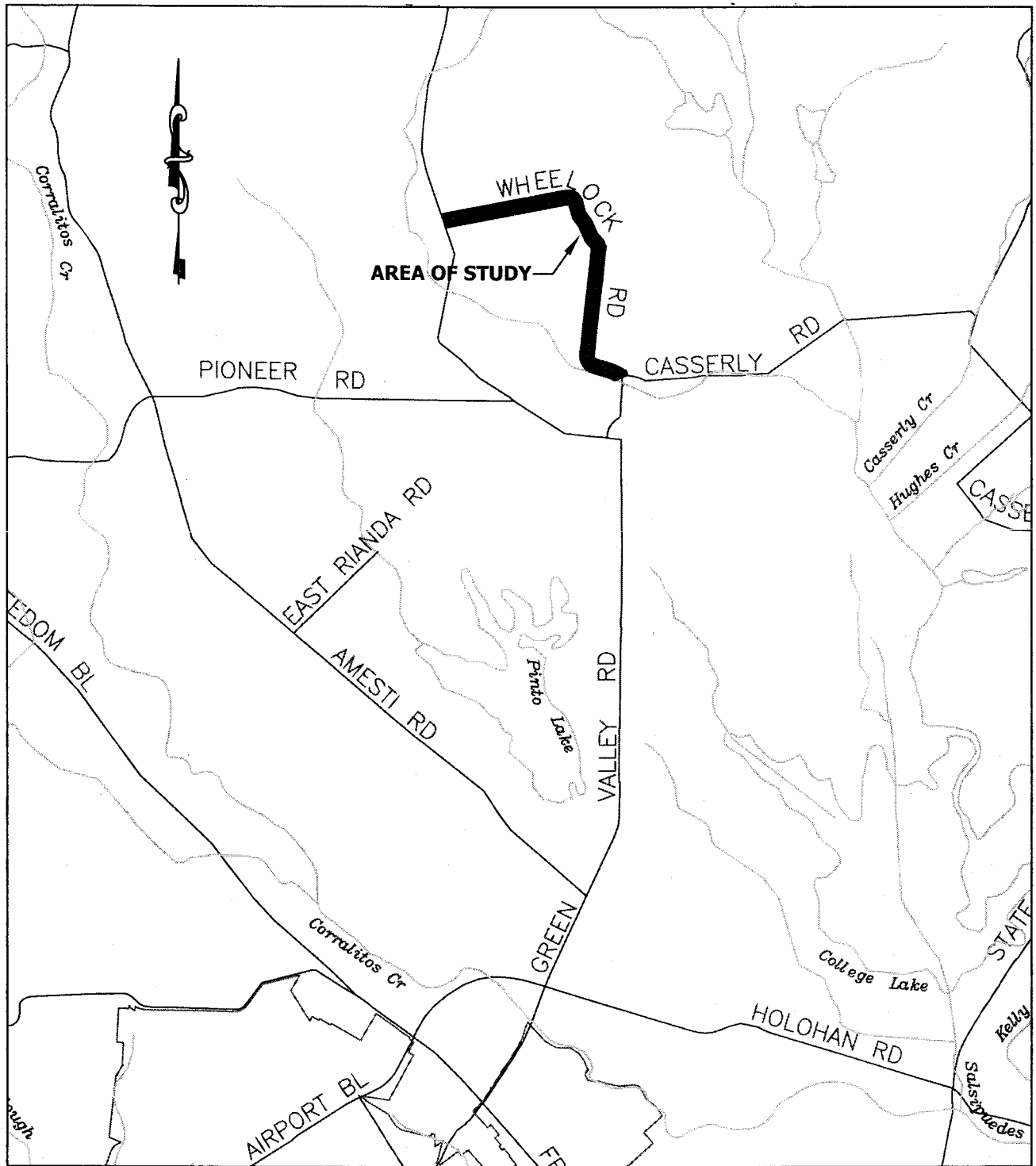
RADAR SPEED SURVEY
 Santa Cruz County
 Department of Public Works

LOCATION Thurber Ln from Helen Ave to Winkle Ave (N. of Helen Ave) BY A-M
 ROAD NO _____ DATE 6/5/08 DAY Thursday BEGIN 2:40 PM END 3:00 PM
 POSTED SPEED 30 mph WEATHER SUNNY
 NUMBER OF LANES 2 GRADE 3% CALIBRATED ✓

NUMBER OF VEHICLES

MPH	DIRECTION	TOTAL	DIRECTION	TOTAL
	→ N	OF EACH SPEED	S ←	OF EACH SPEED
60				
59				
58				
57				
56				
55				
54				
53				
52				
51				
50				
49				
48				
47				
46				
45				
44		1		
43		0		
42		1		
41		0		2
40		0		3
39		0		3
38		1		3
37		3		3
36		6		4
35		4		4
34		3		8
33		7		6
32		6		7
31		4		3
30		7		7
29		6		6
28		3		1
27		2		3
26				
25				
24				
23				
22				
21				
20				
TOTAL		54	TOTAL 63	





**SANTA CRUZ COUNTY TRAFFIC ENGINEERING
 RADAR SPEED SURVEY
 WHELOCK ROAD
 GREEN VALLEY ROAD TO CASSERLY ROAD**

MARCH 2009

TRAFFIC AND ENGINEERING REPORT
MARCH 2009

PURPOSE:

This survey is performed in accordance with Vehicle Code Section 40803 to allow the use of radar for enforcement purposes.

LOCATION:

Wheelock Road from Casserly Road to Green Valley Road. (Speed Data collected north of Casserly Road).

PREVAILING SPEED DATA:

The existing posted speed limit is 35 mph and is radar enforced.

The prevailing speeds are:

Direction	Northbound	Southbound
85 th Percentile	38 mph	38 mph
Pace Speed	27-37 mph	29-39 mph
Average Speed	32.81 mph	33.55 mph

ANALYSIS:

The prevailing 85th percentile speeds are 38 MPH in both directions of travel. The safe speed is established at or near the average 85th percentile which is calculated to be 40 MPH. However, in matching existing conditions with the traffic safety needs of the community, engineering judgment as provided for in the California Manual on Uniform Traffic Control Devices indicates a further reduction of five miles per hour to 35 MPH. The factors justifying a further reduction are numerous driveways, a route to and from Monte Vista School and shoulder conditions with pedestrians in the roadway without sidewalks. It is recommended that the existing 35 MPH speed limit remain with enforcement activity taking place at speeds above the safe speed.

RADAR SPEED SURVEY

		<u>MPH</u>	<u># of Vehicles</u>		<u>Percentage</u>
Route:	Wheelock Road				
From:	Cassery Road	43	2	◆◆	100.0%
To:	Green Valley Road	42	0		96.9%
Direction:	Northbound	41	3	◆◆◆	96.9%
Weather:	Sunny	40	0		92.2%
Posted Speed:	35 MPH	39	4	◆◆◆◆	92.2%
Begin time:	2:27PM	38	1	◆	85.9%
End time:	3:45 PM	37	3	◆◆◆	84.4%
		36	6	◆◆◆◆◆◆	79.7%
		35	6	◆◆◆◆◆◆	70.3%
		34	3	◆◆◆	60.9%
		33	2	◆◆	56.3%
		32	2	◆◆	53.1%
		31	9	◆◆◆◆◆◆◆◆◆	50.0%
		30	7	◆◆◆◆◆◆◆	35.9%
		29	6	◆◆◆◆◆◆	25.0%
CRITICAL SPEED	38	28	3	◆◆◆	15.6%
AVERAGE SPEED	32.81	27	4	◆◆◆◆	10.9%
MEDIAN SPEED	31.5	26	1	◆	4.7%
STANDARD DEVIATION	4.61	25	1	◆	3.1%
PACE RANGE	27 - 37	24	0		1.6%
PERCENTAGE IN PACE	75.0%	23	0		1.6%
TOTAL # OF AUTOS	64	22	1	◆	1.6%

RADAR SPEED SURVEY

		<u>MPH</u>	<u># of Vehicles</u>		<u>Percentage</u>
Route:	Wheelock Road				
From:	Casserly Road	44	1	◆	100.0%
To:	Green Valley Road	43	0		98.0%
Direction:	Southbound	42	0		98.0%
Weather:	Sunny	41	3	◆◆◆	98.0%
Posted Speed:	35 MPH	40	0		92.2%
Begin time:	2:27PM	39	3	◆◆◆	92.2%
End time:	3:45 PM	38	5	◆◆◆◆◆	86.3%
		37	0		76.5%
		36	6	◆◆◆◆◆◆	76.5%
		35	5	◆◆◆◆◆	64.7%
		34	1	◆	54.9%
		33	7	◆◆◆◆◆◆◆	52.9%
		32	2	◆◆	39.2%
		31	3	◆◆◆	35.3%
		30	5	◆◆◆◆◆	29.4%
		29	5	◆◆◆◆◆	19.6%
CRITICAL SPEED	38	29	0		9.8%
AVERAGE SPEED	33.55	28	0		9.8%
MEDIAN SPEED	33.0	27	2	◆◆	9.8%
STANDARD DEVIATION	4.50	26	1	◆	5.9%
PACE RANGE	29 - 39	25	1	◆	3.9%
PERCENTAGE IN PACE	76.5%	24	1	◆	2.0%
TOTAL # OF AUTOS	51	23	0		0.0%

RADAR SPEED SURVEY
Santa Cruz County
Department of Public Works

LOCATION WHEELLOCK (NORTH OF CASSELL) BY JGL
 ROAD NO _____ DATE 6-17-08 DAY TUE BEGIN 2:27 END 3:45
 POSTED SPEED 35 MPH WEATHER SUNNY
 NUMBER OF LANES 2 GRADE _____ CALIBRATED

NUMBER OF VEHICLES

MPH	DIRECTION	TOTAL OF EACH SPEED	DIRECTION	TOTAL OF EACH SPEED
	→ S		N ←	
60				
59				
58				
57				
56				
55				
54				
53				
52				
51				
50				
49				
48				
47				
46				
45				
44		1		
43		0		2
42		0		0
41		3		3
40		0		0
39		3		4
38	-	5		1
37		0		3
36	-	6	-	6
35	-	5	-	6
34		1		3
33	-	7		2
32		2		2
31		3	-	9
30	-	5	-	7
29	-	5	-	6
28		0		3
27		2		4
26		1		1
25		1		1
24		1		0
23				0
22				1
21				
20				
TOTAL		51	TOTAL 64	

