CITY OF REDDING
ENGINEERING AND TRAFFIC SURVEY
OF
CYPRESS AVENUE

JULY 31, 2010

For the determination of safe and reasonable speed zoning as required by Sections 22358 and 40802 of the California Vehicle Code (CVC), as defined by Section 627 of the CVC and in accordance with Section 2B. 13 of the California Manual on Uniform Traffic Control Devices, this Engineering and Traffic Survey (ETS) was initiated to verify or modify speed zones on Cypress Avenue.

Based on the results of this ETS (attached) and adoption of Ordinance Number 2465 by the City Council of the City of Redding amending Redding Municipal Code Section 11.12.010, the following speed zones on Cypress Avenue are established;

- **35 MPH from Pine Street to Hartnell Avenue.**
- **35 MPH from Hartnell Avenue to Churn Creek Road.**
- **40 MPH from Churn Creek Road to Victor Avenue.**

In accordance with Redding Municipal Code 11.08.010, appropriate signs giving notice of the above speed zoning shall be placed and the stated speed limit(s) shall be effective upon the placement of such signs.

3/26/2012

Brian Crane, P. E.
Director of Public Works

ATTEST:

8/26/12

PAMELA MIZE, City Clerk

City of Redding
Cypress Avenue
Engineering and Traffic Survey (ETS) for Speed Zoning

	Speed Zone Limits	Speed Zone Limits	Speed Zone Limits
	PINE STREET TO HARTNELL AVENUE	HARTNELL AVENUE TO CHURN CREEK ROAD	CHURN CREEK ROAD TO VICTOR AVENUE

ROADSIDE CONDITIONS

LAND USE DISTRICT	RESIDENTIAL/BUSINESS	BUSINESS	RESIDENTIAL
PEDESTRIANS USE	NUMEROUS	NUMEROUS	FEW
PERCENT SIDEWALKS	100%	95%	60%
BIKE LANE or ROUTE	NO	YES	YES
DRIVEWAYS PRESENT	FEW	NUMEROUS	SOME

ROADWAY GEOMETRY

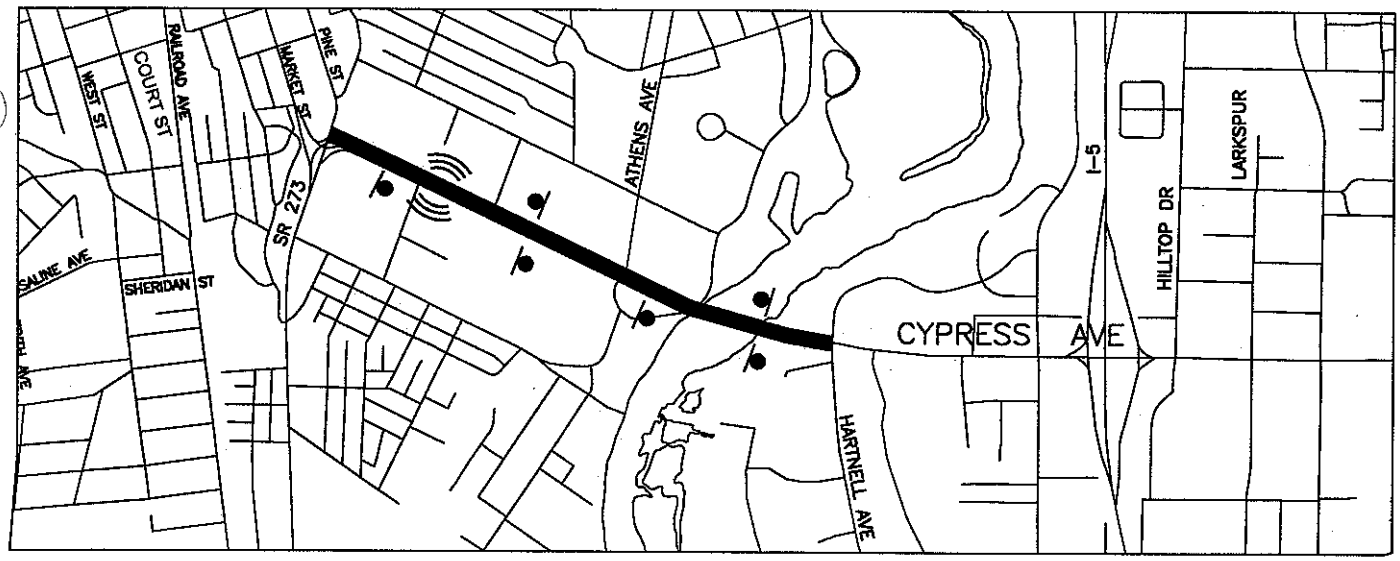
LENGTH OF ROADWAY SEGMENT (FEET)	4,300	4,600	4,000
NUMBER OF THRU LANES	2 (1 WB,1 EB)	6 (3 WB, 3 EB)	5 (3 WB, 2 EB)
WIDTH (FEET)			
MEDIAN TYPE	DBL YELLOW STRIPE & CONCRETE & TURN LANE	DBL YELLOW STRIPE & TURN LANE	DBL YELLOW STRIPE & CONCRETE & TURN LANE
HORIZONTAL ALIGNMENT	STRAIGHT	STRAIGHT	STRAIGHT
VISIBILITY	GOOD	GOOD	GOOD
VERTICAL ALIGNMENT	FLAT	GENTLE HILL / FLAT	FLAT/ GENTLE HILL

OBSERVED TRAFFIC CONDITIONS

DATE OF RADAR SURVEY	January 26, 2009	January 27, 2009	January 27, 2009
AVERAGE DAILY TRAFFIC (ADT)	37,700	31,700	14,850
EXISTING POSTED SPEED	35 MPH	35 MPH	40 MPH
CRITICAL SPEED (85th PERCENTILE)	41 MPH	38 MPH	41 MPH
MEDIAN SPEED (50th PERCENTILE)	37 MPH	34 MPH	36 MPH
10 MPH PACE RANGE	33 - 43 MPH	28 - 38 MPH	32 - 42 MPH
TOTAL COLLISIONS IN 2 YEARS	32	191	17
COLLISIONS PER MILLION VEHICLE MILES (MVM)	1.43 PER MVM	9.49 PER MVM	2.09 PER MVM
ROUNDING APPLIED TO OBSERVED CRITICAL SPEED (85th PERCENTILE) PER GUIDANCE OF MUTCD SECTION 2B.13	40 MPH	40 MPH	40 MPH
RECOMMENDATION			
POST SPEED LIMIT	35 MPH	35 MPH	40 MPH
JUSTIFICATION FOR ESTABLISHING SPEED LIMIT 5 MPH BELOW CRITICAL SPEED (85th PERCENTILE)	THE COLLISION RATE AND NUMBER OF COLLISIONS INDICATE THAT THE CONDITIONS OF THE ROADWAY ARE NOT READILY APPARENT TO THE DRIVER. POSTING THE SPEED LIMIT 5 MPH LOWER IS JUSTIFIED.	THE COLLISION RATE AND NUMBER OF COLLISIONS INDICATE THAT THE CONDITIONS OF THE ROADWAY ARE NOT READILY APPARENT TO THE DRIVER. POSTING THE SPEED LIMIT 5 MPH LOWER IS JUSTIFIED.	N/A

Gary Otremba — 7/7/10

REGISTERED CIVIL ENGINEER — DATE



			Day	Monday	
Posted Speed:	35		Date:	1/26/09	
Weather:	Clear & Dry		Time:	1:35 - 2:15 PM	
Observer:	Hogue		Calcs:	Otremba	
	Critical Speed :		41	mph	
	Average Speed :		37.1	mph	
	Median Speed :		37	mph	
	Standard Deviation:		4.2	mph	
	Pace Range :		33 - 43	mph	
	Percent in Pace :		77.9%		
	Total # Vehicles :		145		

MPH	# of Veh.	Both Directions	%
53			100.0%
52			100.0%
51	1	◆	100.0%
50			99.3%
49	1	◆	99.3%
48			98.6%
47	3	◆◆◆	98.6%
46			96.6%
45	2	◆◆	96.6%
44	2	◆◆	95.2%
43	5	◆◆◆◆◆	93.8%
42	7	◆◆◆◆◆◆◆	90.3%
41	11	◆◆◆◆◆◆◆◆◆◆◆	85.5%
40	7	◆◆◆◆◆◆◆	77.9%
39	13	◆◆◆◆◆◆◆◆◆◆◆◆◆	73.1%
38	10	◆◆◆◆◆◆◆◆◆◆	64.1%
37	16	◆◆◆◆◆◆◆◆◆◆◆◆◆◆◆◆	54.5%
36	16	◆◆◆◆◆◆◆◆◆◆◆◆◆◆◆◆	46.2%
35	7	◆◆◆◆◆◆◆	35.2%
34	14	◆◆◆◆◆◆◆◆◆◆◆◆◆◆	30.3%
33	12	◆◆◆◆◆◆◆◆◆◆◆◆	20.7%
32	7	◆◆◆◆◆◆◆	12.4%
31	5	◆◆◆◆◆	7.6%
30	4	◆◆◆◆	4.1%
29	1	◆	1.4%
28			0.7%
27	1	◆	0.7%
26			0.0%

LEGEND

- SPEED LIMIT SIGN
- RADAR LOCATION
- 35 MPH SPEED ZONE

CITY OF REDDING PUBLIC WORKS DEPARTMENT

MAY 2010

CYPRESS AVE SPEED STUDY

PINE ST TO HARTNELL AVE

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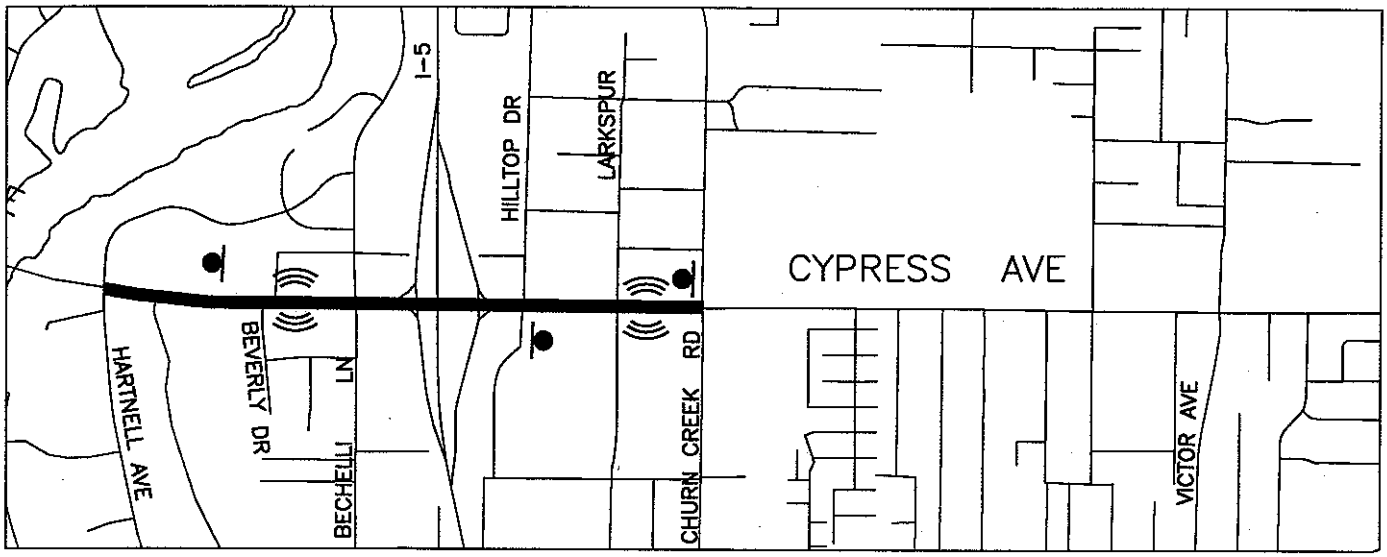

		Day :	Tuesday	
Posted Speed:	35	Date:	1/27/09	
Weather:	Clear & Dry	Time:	9:25 AM - 2:15 PM	
Observer:	Hogue	Calcs:	Otremba	
	Critical Speed :	38	mph	
	Average Speed :	33.2	mph	
	Median Speed :	34	mph	
	Standard Deviation:	5.1	mph	
	Pace Range :	28 - 38	mph	
	Percent in Pace :	72.7%		
	Total # Vehicles :	282		

MPH	# of Veh.	Both Directions	%
53			100.0%
52	1	◆	100.0%
51			99.6%
50			99.6%
49			99.6%
48			99.6%
47			99.6%
46	1	◆	99.6%
45	2	◆◆	99.3%
44	2	◆◆	98.6%
43	2	◆◆	97.9%
42	5	◆◆◆◆◆	97.2%
41	7	◆◆◆◆◆◆◆	95.4%
40	7	◆◆◆◆◆◆◆	92.9%
39	7	◆◆◆◆◆◆◆	90.4%
38	12	◆◆◆◆◆◆◆◆◆◆◆◆	87.9%
37	15	◆◆◆◆◆◆◆◆◆◆◆◆◆◆◆	83.7%
36	31	◆◆◆◆◆◆◆◆◆◆◆◆◆◆◆◆◆◆◆◆◆◆◆◆◆◆◆	78.4%
35	25	◆◆◆◆◆◆◆◆◆◆◆◆◆◆◆◆◆◆◆◆◆◆◆◆◆	67.4%
34	26	◆◆◆◆◆◆◆◆◆◆◆◆◆◆◆◆◆◆◆◆◆◆◆◆◆◆	58.5%
33	[illegible]	[illegible]	[illegible]
32	21	◆◆◆◆◆◆◆◆◆◆◆◆◆◆◆◆◆◆◆◆◆	41.5%
31	14	◆◆◆◆◆◆◆◆◆◆◆◆◆◆	34.0%
30	23	◆◆◆◆◆◆◆◆◆◆◆◆◆◆◆◆◆◆◆◆◆◆◆	29.1%
29	14	◆◆◆◆◆◆◆◆◆◆◆◆◆◆	20.9%
28	14	◆◆◆◆◆◆◆◆◆◆◆◆◆◆	16.0%
27	9	◆◆◆◆◆◆◆◆◆	11.0%
26	2	◆◆	7.8%
25	4	◆◆◆◆	7.1%
24	2	◆◆	5.7%
23	4	◆◆◆◆	5.0%
22	3	◆◆◆	3.5%
21	2	◆◆	2.5%
20	5	◆◆◆◆◆	1.8%
19			0.0%

LEGEND

- SPEED LIMIT SIGN
- RADAR LOCATION
- 35 MPH SPEED ZONE

CITY OF REDDING PUBLIC WORKS DEPARTMENT

MAY 2010

CYPRESS AVE SPEED STUDY

HARTNELL AVE TO CHURN CREEK RD

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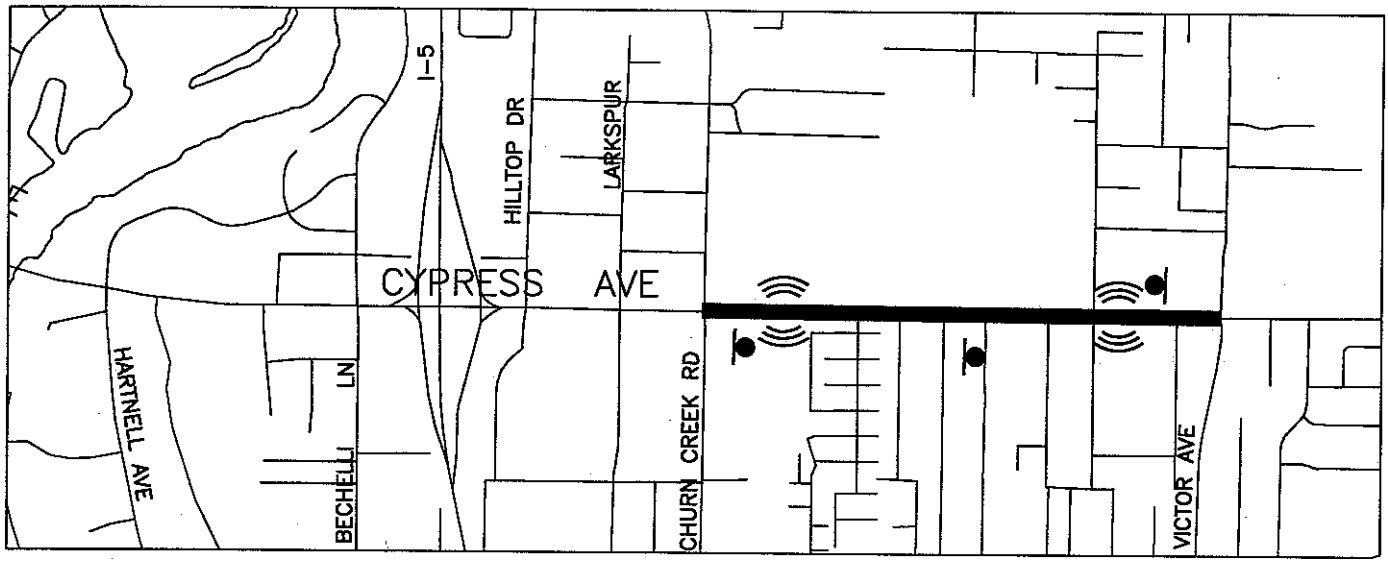

			Day :	Tuesday	
Posted Speed:	40		Date:	1/27/09	
Weather:	Clear & Dry		Time:	1:45 - 2:40 PM	
Observer:	Hogue		Calcs:	Otremba	
	Critical Speed :	41	mph		
	Average Speed :	36.7	mph		
	Median Speed :	36	mph		
	Standard Deviation:	4.1	mph		
	Pace Range :	32 - 42	mph		
	Percent in Pace :	82.1%			
	Total # Vehicles :	319			

MPH	# of Veh.	Both Directions	%
52			100.0%
51			100.0%
50	1	◆	100.0%
49	1	◆	99.7%
48	1	◆	99.4%
47	2	◆◆	99.1%
46	2	◆◆	98.4%
45	2	◆◆	97.6%
44	8	◆◆◆◆◆◆◆◆	97.2%
43	6	◆◆◆◆◆◆	94.7%
42	13	◆◆◆◆◆◆◆◆◆◆◆◆◆	92.8%
41	22	◆◆◆◆◆◆◆◆◆◆◆◆◆◆◆◆◆◆◆◆◆◆	88.7%
40	19	◆◆◆◆◆◆◆◆◆◆◆◆◆◆◆◆◆◆	81.8%
39	24	◆◆◆◆◆◆◆◆◆◆◆◆◆◆◆◆◆◆◆◆◆◆◆◆	75.9%
38	27	◆◆◆◆◆◆◆◆◆◆◆◆◆◆◆◆◆◆◆◆◆◆◆◆◆◆◆	68.3%
37		[illegible]	[illegible]
36	28	◆◆◆◆◆◆◆◆◆◆◆◆◆◆◆◆◆◆◆◆◆◆◆◆◆◆	59.2%
35	32	◆◆◆◆◆◆◆◆◆◆◆◆◆◆◆◆◆◆◆◆◆◆◆◆◆◆◆◆◆◆◆◆	41.4%
34	34	◆◆◆◆◆◆◆◆◆◆◆◆◆◆◆◆◆◆◆◆◆◆◆◆◆◆◆◆◆◆◆◆◆◆◆◆	31.3%
33	27	◆◆◆◆◆◆◆◆◆◆◆◆◆◆◆◆◆◆◆◆◆◆◆◆◆◆◆	20.7%
32	18	◆◆◆◆◆◆◆◆◆◆◆◆◆◆◆◆◆◆	12.2%
31	7	◆◆◆◆◆◆◆	6.6%
30	5	◆◆◆◆◆	4.4%
29	2	◆◆	2.8%
28	3	◆◆◆	2.2%
27	1	◆	1.3%
26			0.9%
25			0.9%
24			0.9%
23	2	◆◆	0.9%
22	1	◆	0.3%
21			0.0%

LEGEND

- SPEED LIMIT SIGN
- RADAR LOCATION
- 40 MPH SPEED ZONE

CITY OF REDDING PUBLIC WORKS DEPARTMENT

MAY 2010

CYPRESS AVE SPEED STUDY

CHURN CREEK RD TO VICTOR AVE

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