




Compiled by: EJL  
Date: August 2022

**Engineering and Traffic Survey**

- I. Road: Cement Hill Road (Segment 1)  
From: Nevada City Limits  
To: West Piper Lane
- II. Reason for Study: Five-Year Update
- III. Roadway Characteristics:
  - a. Width - 18 to 20 feet
  - b. Surface - Asphaltic Concrete
  - c. Striping - Double yellow centerline
  - d. ADT - 1,218
  - e. Length - 0.4 miles
- IV. Roadside Characteristics: Rural residential
- V. Existing Speed Zone: 25 miles per hour
- VI. Prevailing Speed:
  - a. 10-mile-per-hour pace - 27-36 miles per hour
  - b. Average speed - 31 miles per hour
  - c. 85th percentile - 37 miles per hour
- VII. Accident History: There has been one reported accident on this segment in the last five years.
- VIII. Other Factors of Significance: The segment of Cement Hill Road from the Nevada City Limit to West Piper Lane has two T intersections that approach Cement Hill Road at a sharp angle that limits sight distance for vehicles turning onto Cement Hill Road. This segment of Cement Hill Road is also on a steep angle creating a longer stopping distance for vehicles traveling downhill.
- IX. Is a Speed Zone Warranted: Yes
- X. Recommendations: The California Manual of Uniform Traffic Control Devices indicates that when a speed limit is to be posted, it should be established at the nearest 5 mph increment of the 85<sup>th</sup> percentile speed. California Vehicle Code Section 22358.6 Allows for the 85<sup>th</sup> percentile speed to be rounded down to the nearest 5 mph increment and then reduced by 5 mph if conditions exist that are not readily apparent to drivers.

  
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 Patrick Perkins P.E, CCM  
 Principal Civil Engineer

It is recommended that the existing speed limit of 25 MPH be changed to 30 MPH

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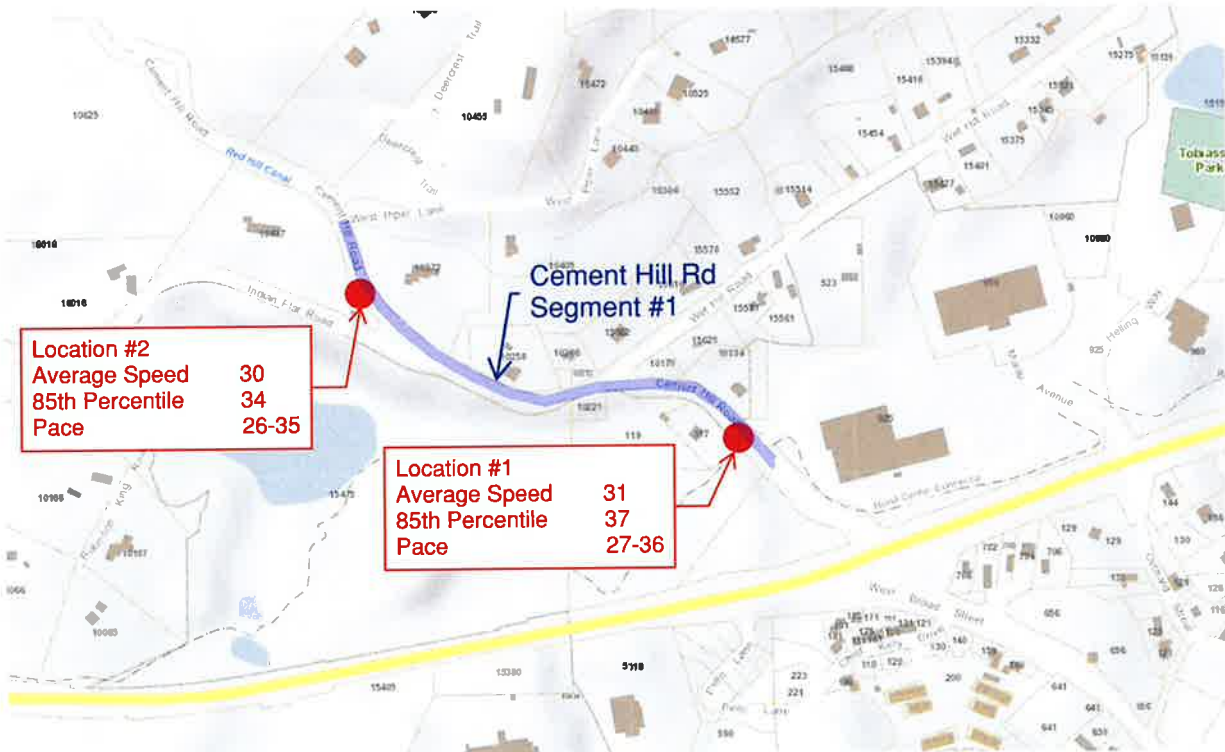


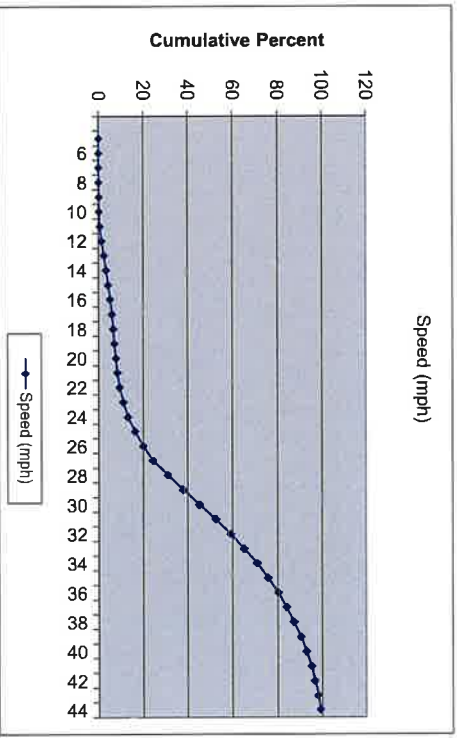
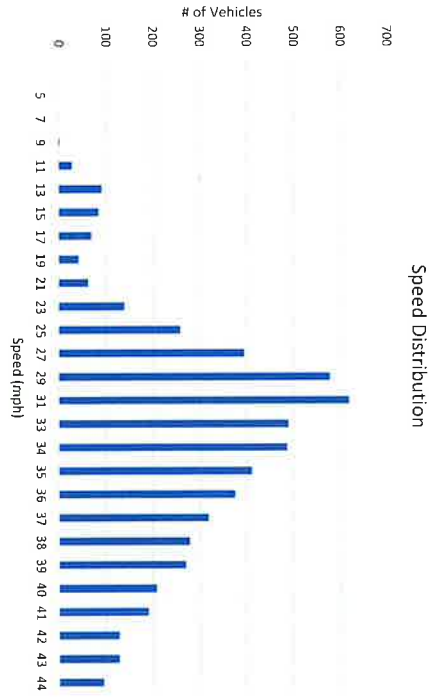
Figure 1: Radar Study Locations

Road: Cement Hill Rd Segment Nevada City Corp Limit - W Piper

Speed	# of cars	Cumulative	Avg speed calc	Pace calc	Pace Range
5	0	0	0		
6	0	0	0		
7	0	0	0		
8	1	0	8		
9	3	0	27		
10	11	0	110		
11	28	1	308		
12	65	1	780		
13	91	2	1183		
14	84	3	1176	283 5 - 14	
15	84	4	1260	367 6 - 15	
16	71	5	1136	438 7 - 16	
17	69	6	1173	507 8 - 17	
18	45	7	810	551 9 - 18	
19	42	7	798	590 10 - 19	
20	53	8	1060	632 11 - 20	
21	62	8	1302	666 12 - 21	
22	82	9	1804	683 13 - 22	
23	138	11	3197	731 14 - 23	
24	170	13	4080	817 15 - 24	
25	258	16	6450	991 16 - 25	
26	308	20	8008	1228 17 - 26	
27	394	24	10638	1553 18 - 27	
28	574	31	16072	2082 19 - 28	
29	577	38	16733	2617 20 - 29	
30	589	45	17670	3153 21 - 30	
31	618	53	19158	3709 22 - 31	
32	569	59	18208	4196 23 - 32	
33	488	65	16104	4545 24 - 33	
34	486	71	16524	4861 25 - 34	
35	410	76	14350	5013 26 - 35	
36	375	80	13500	5080 27 - 36	
37	318	84	11766	5004 28 - 37	
38	278	87	10564	4708 29 - 38	
39	270	90	10530	4401 30 - 39	
40	207	93	8280	4019 31 - 40	
41	190	95	7790	3591 32 - 41	
42	127	97	5334	3149 33 - 42	
43	127	98	5461	2788 34 - 43	
44	94	99	4136	2396 35 - 44	
45	57	100	2565	2043 36 - 45	
Total	8414	260053			

	Previous	Current	Rounded	# of cars
Average Speed	27	31		318
85th Percentile	25	37.28		
Pace	27 - 36	27 - 36		

Posted Speed: 25  
 AC Width: 20  
 Weather: Sunny  
 Location of Survey: Hirschman Trailhead  
 Date: 4/5/22 to 4/11/22  
 Observer: Pat Day



Road: Cement Hill Rd Segment: Nevada City Corp Limit - W Piper

Speed	# of cars	Cumulative	Avg speed calc	Pace calc	Pace Range
5	0	0	0		
6	0	0	0		
7	0	0	0		
8	0	0	0		
9	0	0	0		
10	1	0	10		
11	2	0	22		
12	3	0	36		
13	10	0	130		
14	8	0	112	24.5 - 14	
15	5	0	75	29.6 - 15	
16	9	1	144	38.7 - 16	
17	11	1	187	49.8 - 17	
18	18	1	324	67.9 - 18	
19	29	1	551	96.10 - 19	
20	43	2	860	138.11 - 20	
21	58	3	1218	194.12 - 21	
22	71	4	1562	262.13 - 22	
23	119	5	2737	371.14 - 23	
24	187	8	4488	550.15 - 24	
25	268	12	6700	813.16 - 25	
26	320	16	8320	1124.17 - 26	
27	462	22	12474	1575.18 - 27	
28	556	30	15568	2113.19 - 28	
29	649	39	18821	2733.20 - 29	
30	732	49	21960	3422.21 - 30	
31	732	59	22692	4096.22 - 31	
32	681	68	21792	4706.23 - 32	
33	622	77	20526	5209.24 - 33	
34	531	84	18054	5553.25 - 34	
35	380	89	13300	5665.26 - 35	
36	278	93	10008	5623.27 - 36	
37	209	96	7733	5370.28 - 37	
38	137	98	5206	4951.29 - 38	
39	69	99	2691	4371.30 - 39	
40	45	99	1800	3684.31 - 40	
41	33	100	1353	2985.32 - 41	
42	14	100	588	2318.33 - 42	
43	6	100	258	1702.34 - 43	
44	5	100	220	1176.35 - 44	
45	3	100	135	799.36 - 45	
Total	7306		222655		

	Previous	Current	Rounded	# of cars
Average Speed	27	30	30	531
85th Percentile	25	34.2	34	
Pace	27-36	26 - 35		

Posted Speed: 25  
 AC Width: 20  
 Weather: Sunny  
 Date: 8/16/22 to 8/22/22  
 Observer: E Larimer  
 Location of Survey: 1037Z Cement Hill Rd

