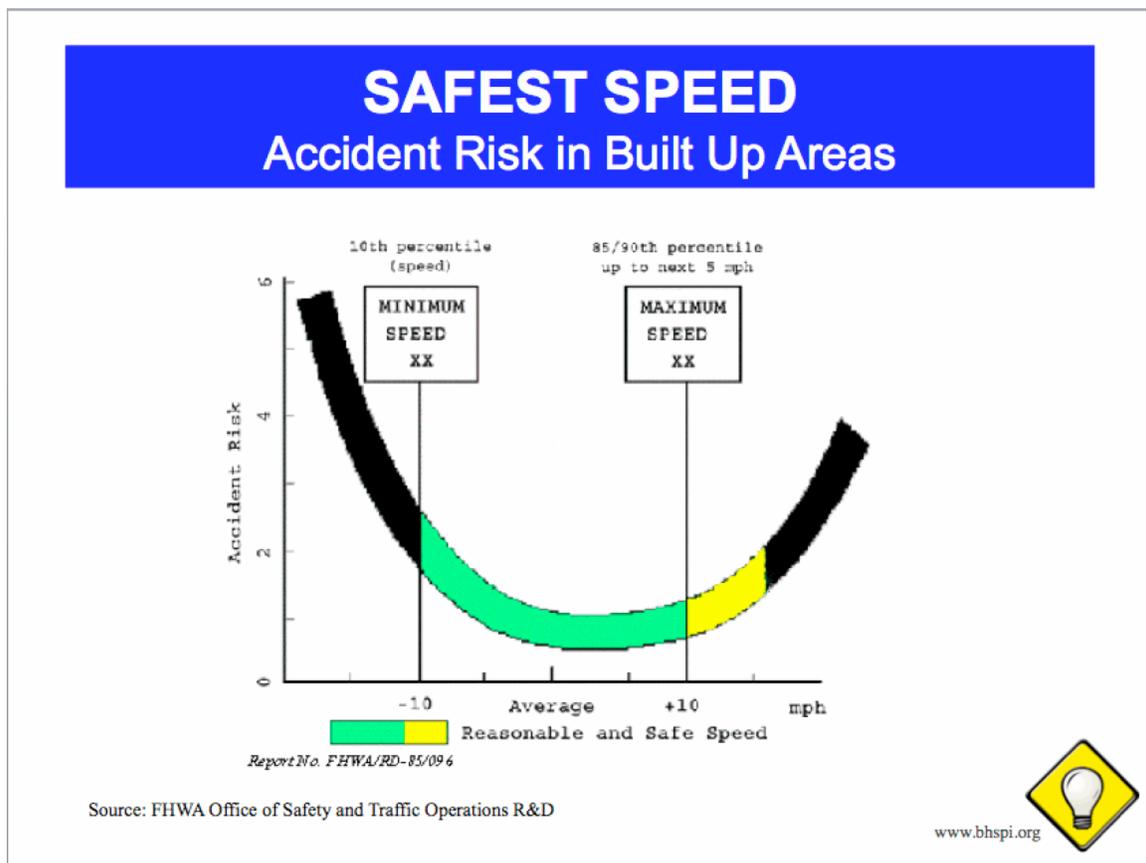


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To be compliant:

1. Must be 24 hour free-flowing speeds by either 1 or 2 hour increments.
2. Spot speed surveys do not meet due process or safety requirements of an ETS
Typical speed varies 4-8 miles per hour over 24hr day
Speed variance can be even greater by day, and time of year
Safe speed (85th) documented in some instances to vary more than 30 mph
3. Discrete by direction, vehicle classification and lane on interstates, combined data does not meet due process requirements
4. Must state or use chart below to quantify range of safe speeds per ETS



5. Officer must be able to discern the safe for condition speed as noted by the study during for the conditions then present. Range in chart according to FHWA mean plus 16 mph. The engineering study must be consistent with the following;

A FUNDAMENTAL REVIEW OF SPEED ZONING AND ENFORCEMENT:

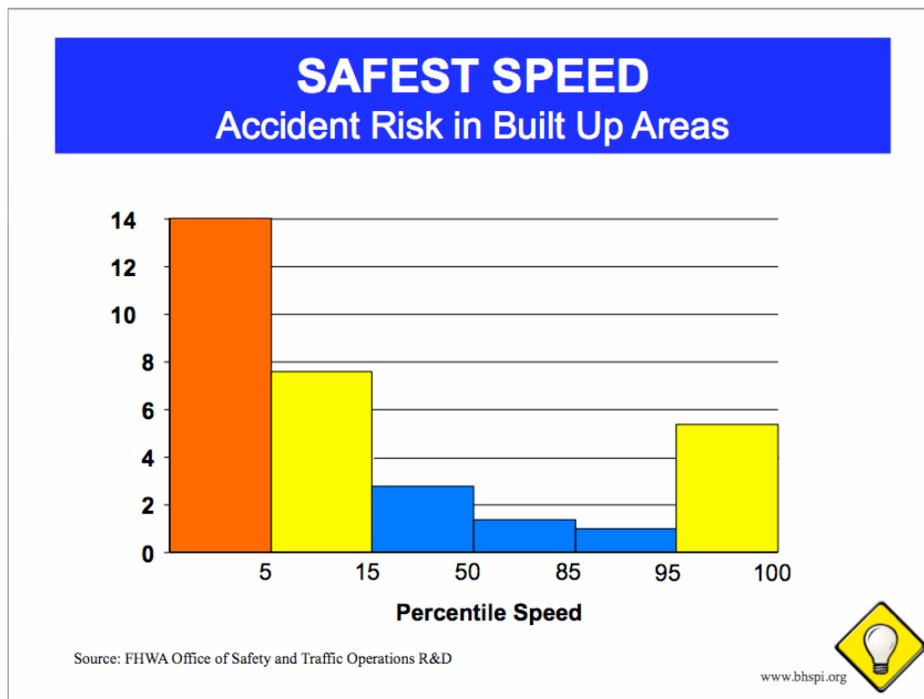
Speed not in excess of those posted is presumed to be lawful unless clearly proven to be in violation of the basic speed law (22351a CVC). The fact that a speed was less than the posted limit is, in itself, adequate to establish a fact or presumption that it was reasonable and prudent, unless, there is evidence

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presented to refute it.

Conversely, speed in excess of that which is posted or set forth in the Code as prima facie speed is, on its face, unlawful unless the defendant established by competent evidence that it did not constitute a violation of the basic speed law (22351b CVC). It is extremely important, however, that the enforcement officer possess the training and background to be able to establish a violation of the basic speed law in the first place.

If the enforcement officer is to do a competent job of speed enforcement, he must be well trained in how to apply the variable conditions to a "norm" (the engineering and traffic survey) to arrive at a speed that is reasonable and prudent for the location, time, and conditions. The engineering and traffic survey must be competent and must document conditions that support a discrepancy of more than 4 mph difference between the 85th percentile and the posted limit.



In every case, certain elements need to be proven by the prosecution:

- 1. Defendant was driving;*
- 2. Engineering and Traffic Survey completed within five years (for radar use);*
- 3. maximum safe speed for time and conditions;*
- 4. and, defendant's speed was in excess thereof.*

Under the above interpretation, it has been suggested that the fine assessed a speed violator be based upon the difference between the officer's opinion as to the maximum safe speed and the alleged speed, rather than the difference between the posted speed and the alleged speed.

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Factors that must also be considered:

1. Speed of traffic best indicator of reasonable and safe speed
2. Spot speed survey does not meet due process or safety requirements of a study
Typical speed varies 4-8 miles per hour over 24hr day
Speed variance can be even greater by day, and time of year
Safe speed (85th) documented in some instances to vary more than 30 mph
3. Must be 24 hour free-flowing speeds
4. Measuring all vehicles in queues results in a lower than actual speed distribution
5. Vehicles entering or leaving the stream shall be excluded
4. At least 500 feet from junctions, convergence zones and curves
5. No active enforcement prior to or during study
6. Measurement methods must not impede traffic or influence results
7. Radar devices have shown to result in 3 mph plus reduction in speed - "Detectible" measurements methods influence results
8. Measurement cosine angles greater than 15 degrees results not reliable
9. New roadway surface increases speed 4-5 mph
10. Trucks on average are 3 mph slower
11. Prevailing speed - 85th percentile speed rounded up to next 5 mph
12. Higher speeds are found where higher speeds are safe
13. Highest speed roadways safest
14. Every 5 years or when there is a substantive change in use
15. Surveyor must be trained in all aspects of both engineering and due process requirements.
16. Absent a physical site review of all factors and findings, the traffic engineer has no factual foundation to certify findings.

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What is the safe for conditions speed range, and what would you post?

Site 1 – Roadside farmers market in day, rural county highway at night

Appendix 'A'

Time period	Tuesday 25th April 2006			Tuesday 11th July 2006			Tuesday 5th December 2006			Tuesday 16th January 2007			Tuesday 13th March 2007		
	No of Vehicles	Mean Speed	85th Percentile Speed	No of Vehicles	Mean Speed	85th Percentile Speed	No of Vehicles	Mean Speed	85th Percentile Speed	No of Vehicles	Mean Speed	85th Percentile Speed	No of Vehicles	Mean Speed	85th Percentile Speed
00:00 - 01:00	18	33.8	43.5	19	45.7	55.9	25	44.2	52.9	19	44.3	54.2	23	46.4	56.1
01:00 - 02:00	8	42.3	49.0	10	46.8	56.3	8	42.2	54.9	11	48.5	58.0	4	50.5	58.5
02:00 - 03:00	2	37.9	40.8	6	43.4	47.5	3	36.9	37.7	2	27.6	35.6	4	54.7	76.5
03:00 - 04:00	10	34.3	41.2	9	42.4	49.6	8	46.2	52.8	1	52.5	52.5	7	47.9	51.5
04:00 - 05:00	11	40.9	51.7	12	48.6	59.6	16	46.3	50.5	12	48.9	53.0	9	50.8	61.9
05:00 - 06:00	55	39.1	44.9	45	48.3	56.5	49	45.8	54.7	37	45.6	53.7	53	44.0	49.6
06:00 - 07:00	161	38.0	44.5	145	46.3	52.2	137	43.9	50.0	157	44.8	51.3	165	44.8	50.9
07:00 - 08:00	542	33.6	38.5	503	42.6	48.6	481	40.3	46.4	531	41.9	48.5	529	43.8	49.0
08:00 - 09:00	737	32.0	36.6	620	41.6	47.2	658	40.3	46.7	616	41.3	48.7	592	43.3	49.0
09:00 - 10:00	295	33.4	38.5	286	41.2	48.1	270	42.8	49.3	284	42.2	49.1	256	41.8	48.7
10:00 - 11:00	255	31.9	37.3	217	41.2	47.2	218	42.0	48.9	211	40.4	48.0	217	41.2	47.6
11:00 - 12:00	242	31.8	37.5	235	41.1	47.8	209	41.4	47.9	220	40.6	48.5	192	41.3	47.5
12:00 - 13:00	293	32.3	38.4	260	40.8	46.8	236	42.3	49.6	261	41.2	49.2	261	38.9	44.7
13:00 - 14:00	303	33.4	38.7	264	40.9	47.2	222	41.1	48.9	238	41.2	48.8	250	39.6	48.0
14:00 - 15:00	314	34.2	40.1	266	40.7	47.0	292	40.5	47.4	268	40.8	50.2	279	39.3	45.7
15:00 - 16:00	403	33.0	38.6	292	42.0	47.6	305	40.5	46.5	355	41.3	49.7	309	40.6	47.3
16:00 - 17:00	514	34.1	39.4	484	42.3	47.5	407	40.8	46.5	466	40.5	47.8	394	41.7	48.1
17:00 - 18:00	682	33.1	38.2	558	42.3	47.3	518	40.8	45.9	536	40.1	48.6	480	42.5	47.8
18:00 - 19:00	306	34.7	40.4	285	44.6	50.1	284	42.2	49.4	262	42.5	51.3	234	43.4	50.8
19:00 - 20:00	211	35.5	42.7	184	44.2	51.1	169	43.1	49.7	158	42.6	51.0	142	42.9	48.7
20:00 - 21:00	154	34.3	41.3	141	42.0	48.5	128	42.9	51.7	123	42.1	49.2	101	42.6	49.5
21:00 - 22:00	110	35.1	41.5	140	42.7	49.6	102	45.2	52.3	105	43.9	50.7	83	43.6	50.1
22:00 - 23:00	71	36.7	45.7	82	44.6	51.0	57	43.6	50.0	60	42.5	52.0	60	42.7	49.6
23:00 - 00:00	34	36.4	44.6	37	44.7	52.0	39	41.8	50.3	34	45.8	52.9	34	44.9	51.4
Total Vehicles	5,731			5,100			4,841			4,967			4,678		
Averages	239	35.1	41.4	213	43.4	50.1	202	42.4	49.2	207	42.6	50.1	195	43.9	51.2

Site 2 – large range despite the limited survey period.

Posted 45 mph, traffic speeds consistent up to 65 mph.

Is measurement too close to intersection therefore influenced by signal? What are the safe car speeds; survey says 39% were trucks? How would the signal and grade affect the truck speed distribution curve compared to the passenger vehicles?

