

**TRANSPORTATION BROCHURE SERIES
"WHAT YOU SHOULD KNOW ABOUT:"**

- 1) Children at Play
- 2) Stop Signs and Traffic Signals
- 3) How Speed Limits Are Set
- 4) Adult School Crossing Guards
- 5) Marked Pedestrian Crosswalks

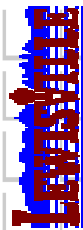
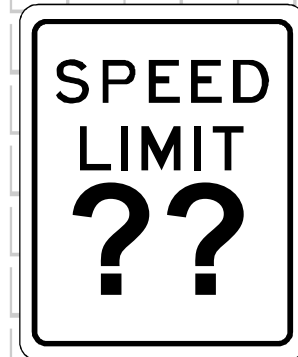
The Following Are Being Developed:

- 6) Suggested School Routes
- 7) Traffic Flow Modifications and Street Closures
- 8) Traffic Safety Tips
- 9) A Clear View: Vegetation and Traffic Safety
- 10) Flashing Beacons
- 11) Parking Pointers
- 12) Pedestrian Signals
- 13) Left-turns at Traffic Signals
- 14) Driveway and Curb Access Policy
- 15) Bicycle Safety
- 16) Neighborhood Traffic Safety
- 17) Street Lights
- 18) Neighborhood Traffic Management



***What You Should
Know About:***

***How Speed
Limits Are Set***



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HOW SPEED LIMITS ARE SET

Fundamental to most laws in America is the thought that the behavior of a majority of people is reasonable. Laws are written to single out the unreasonable behavior of a minority of the population. Speed limit laws are based on this same premise. The Texas speed law is written so that the reasonable actions of the majority are considered legal.

What The Law States

"No person shall drive a vehicle on a highway at a speed greater than is reasonable and prudent under the circumstances then existing."

Reasonable people want to get to their destination as quickly as possible, but they also are careful drivers and do not wish to endanger themselves or anybody else. On any section of road, reasonable drivers will select a speed they are comfortable with, not too slow and not too fast, but one that will get them to where they want to go without delay. In selecting their speed, they will intuitively consider things like the condition of the roadway and traffic, weather, visibility, pedestrians, etc. Research shows that the number posted on a speed limit sign has little to do with the speed drivers choose.

The main reason speed limits are posted is to inform motorists of the speed which is considered reasonable by the majority of drivers on a particular roadway. Motorists, especially those unfamiliar with the road, can use this information to evaluate how they should drive that road. Speed limits are not intended to force reasonable motorists to speeds that they consider are unreasonable.

Setting Speed Limits By the 85th Percentile

Most people are familiar with the process of "averaging numbers". You add the numbers, then divide the total by the number of items. This average (or 50th percentile) cannot be used to set speed limits because doing so would assume that only 50% of the people are driving reasonably. Therefore, most states use what is known as the 85th percentile speed to set speed limits. The posted speed limit is set to the nearest 5 mph increment closest to the 85th percentile speed to insure that 85% of the motorists will be driving at or below the posted speed limit.



Texas speed zone procedures also allow a municipality to set speed limits 5 mph below the 85th percentile speed when enforcement is adequate. The City of Lewisville passed an ordinance in 1998 lowering speed limits in residential areas from 30 mph to 25 mph using this

variance in the Texas speed zone procedure. Setting speed limits more than 5 mph does not reduce speeding and only serves to antagonize the public by creating a "speed trap" for the majority of drivers.

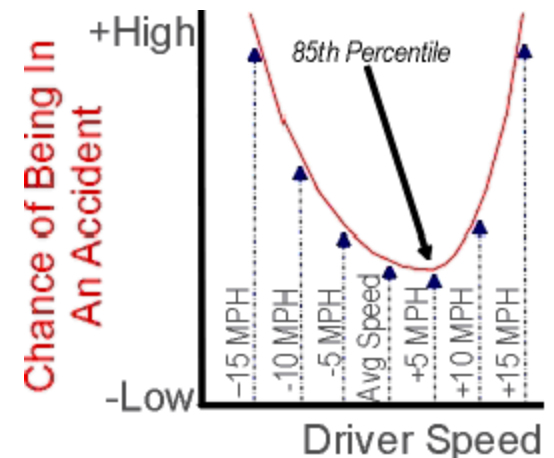
Common Misconceptions

Speed zoning is just one traffic control "tool" for improving the driving environment on highways. Very often, however, speed zoning is seen as a solution to traffic problems it cannot address. When emotion overrides logic and reason, misconceptions about speed zoning become difficult to refute. The two most common misconceptions are that lower speed zones reduce speeds and reduce accidents.

Many years of research have proven again and again that lower speed limits do not appreciably alter traffic speeds. These studies support the assumption that drivers select their speed intuitively based on the environment around them and the speed at which they feel comfortable and safe. Other research studies have shown that speed limits set below the reasonable

speed of the majority do not cause a significant reduction in roadway accidents. In fact, accidents tend to increase with unreasonably low speed limits. The safest traffic condition is when everybody drives at the same speed. Studies have shown that the minority of people who choose to drive faster **or slower** than the majority of traffic around them have a greater chance of being in an accident.

As shown in the graph below, the possibility for an accident is lowest for speeds near the 85th percentile. If everyone drove the same speed, no one would need to pass, the possibility of rear end collisions would be reduced, and the roadway would be much safer.



Conclusion

Traffic problems are not simple nor do they have simple solutions. Citizen demands for speed zoning are sometimes made as a "quick fix" to a problem that cannot be controlled with signing. Hopefully, this pamphlet has shown what speed zoning can and cannot do. The final responsibility for controlling speeds will always rest with the driver.

The City of Lewisville would like to thank the Texas Department of Transportation and the Federal Highway Administration for much of the information and content used in this brochure.