



STOP SIGNS



Why Are Stop Signs Needed?

The City receives many requests for stop signs as a way to reduce speeding, minimize driver delay, and curtail traffic accidents. Stop signs are needed to assign right-of-way at an intersection, not to control speeding. Right-angle accidents can also be reduced by the installation of stop signs when warranted, but additional stops also increase the frequency of rear-end accidents. The need for stop signs involves a trade-off between safety and delay.

Due to misinformation on traffic control, public opinion can often justify the use of these devices when they are not needed. The purpose of this narrative is intended to eliminate confusion regarding Texas State Law, when stop signs should be installed and when not, and the requirements that determine when stop signs are needed.

Texas Traffic Law

Not every intersection must have an official traffic-control device controlling traffic movement through the intersection. Texas law states that, “An operator approaching an intersection of a street or highway that is not controlled by an official traffic-control device shall stop, yield, and grant immediate use of the intersection to a vehicle that has entered the intersection ... or is approaching the intersection from the operator’s right... and after stopping, may proceed when the intersection can be safely entered without interference...” There are many intersections that do not have stop signs, yield signs, or traffic signals, particularly in residential areas.

What Harm Can Arise From Unnecessary Stops?

Stop signs should be installed at an intersection only when a careful evaluation of existing conditions indicates that their installation is warranted and appropriate. But, what harm can arise from unnecessary stops when unwarranted stop signs are installed?

1. Overuse of stop signs reduces their effectiveness because drivers tend to speed up between stop sign controlled intersections rather than slow down. In fact, studies have shown that at residential speeds, drivers accelerate to their original speed prior to the stop sign in less than 200 feet (that is less than 3 house lots from the intersection). Driver acceleration and deceleration only adds to noise levels that can turn a quiet neighborhood into a race track.
2. Stop compliance is poor at unwarranted multi-way stop signs. Studies have determined that drivers see little reason to stop and yield the right-of-way when there is no traffic on the minor street. Unwarranted stop signs foster disrespect and disregard of the law.
3. Studies have found that pedestrian safety, particularly small children, is decreased at unwarranted multi-way stop sign locations. Pedestrians expect vehicles to stop at the stop signs but many vehicles “run” the unnecessary stop sign.
4. The cost of installing stop signs is relatively low, but enforcement costs are not. In addition, enforcement cannot be provided “24/7” and at best, can only have limited effectiveness.
5. Finally, placement of stop signs not warranted by engineering studies may violate State of Texas law.

When are Stop Signs Warranted?

Installation Policies and Warrants

The Federal and Texas MUTCD (Manual of Uniform Traffic Control Devices) dictates the size, shape, and color of all traffic control devices. The City of Lewisville is required by State law to comply with the guidelines of the TMUTCD when warranting stop signs. If stop signs are installed when they are not warranted, traffic safety is not improved and may actually be impaired. Unnecessary stops may result in rear-end accidents while increasing fuel consumption and adding to environmental concerns.

Stop signs must only be installed when an engineering study provides justification for their installation at the subject location. The Texas MUTCD provides the following warrants for the use of stop signs. A stop sign *may* be warranted at an intersection where one or more of the following conditions occur:

- Intersection of a less important road where application of the normal right-of-way rule is unduly hazardous;
- Street entering a through highway or street;
- Unsignalized intersection in a signalized area; and
- Other intersections where a combination of high speed, restricted view, and serious accident record indicates a need for control by a stop sign.

Most T-intersections in residential neighborhoods are not signed because when sight distance is adequate, these signs contribute little to traffic safety. Texas law states that at T-intersections drivers “shall stop, yield, and grant immediate use of the intersection to another vehicle that has

entered the intersection from the other street ... or is approaching the intersection on the other street ... in a proximity that is a hazard; and after stopping, may proceed when the intersection can be safely entered without interference...”

The MUTCD warrants for all-way stops (4-way and 3-way at T-intersections) are typically not met in residential areas because traffic volumes must be roughly equal on both streets and exceed 500 vehicles per hour for at least eight (8) hours per day. These conditions are typically only found where two (2) major streets intersect and a traffic signal is not warranted.

Conclusion

We hope that this information has illustrated some of the pros and cons associated with stop signs. These devices can produce negative impacts on the environment and waste unnecessary tax reserves; therefore, they should only be installed when warranted by a competent engineering study.

If you have questions or concerns regarding traffic, please call the City Traffic Engineering Section at 972.219.3703.

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