

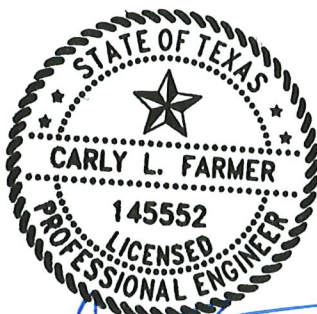
Traffic Study Summary

Date: July 2, 2025
Recommendation: Increase the speed limit on W Klein Road between FM 725 and FM 1044 to 35 mph
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Reviewed By: Garry L Ford, PE, PTOE

Background

An engineering study was completed to evaluate the appropriate speed limit on W Klein Road between FM 725 and FM 1044. The study was completed due to the completion of a roadway widening project on W Klein Road. The statutory maximum speed limit in the City of New Braunfels is 30 miles per hour (mph) except where otherwise established by ordinance and posted by official traffic signs. The city may alter speed limits based on the result of an engineering study.

W Klein Road is an approximately 3-mile-long minor arterial that spans from FM 725 to FM 1044. It is primarily a four-lane roadway with turn lanes from FM 725 to Klein Meadows/Calandra Lark, providing access to commercial and residential uses, schools, and the city's new sports park and library. The posted speed limit on W Klein Road is 30 mph from FM 725 to a point 2,000 feet east of the intersection with FM 1044. The speed limit is then posted at 35 mph up to the intersection with FM 1044. There is a school zone on W Klein Road at Klein Way for Klein Road Elementary School and New Braunfels Middle School. During the active hours of the school zone, the speed limit is 20 mph. W Klein Road is currently signalized at the intersections of FM 725, Walnut Avenue, and FM 1044. There is a pedestrian hybrid beacon installed across W Klein Road at Klein Way. Additionally, there are two uncontrolled and marked crosswalks crossing W Klein Rd at Dove Crossing Drive and Legend Park. The current speed limits, school zone, traffic signals, and crosswalks are shown in Figure 1.



Carly L. Farmer
7/2/2025



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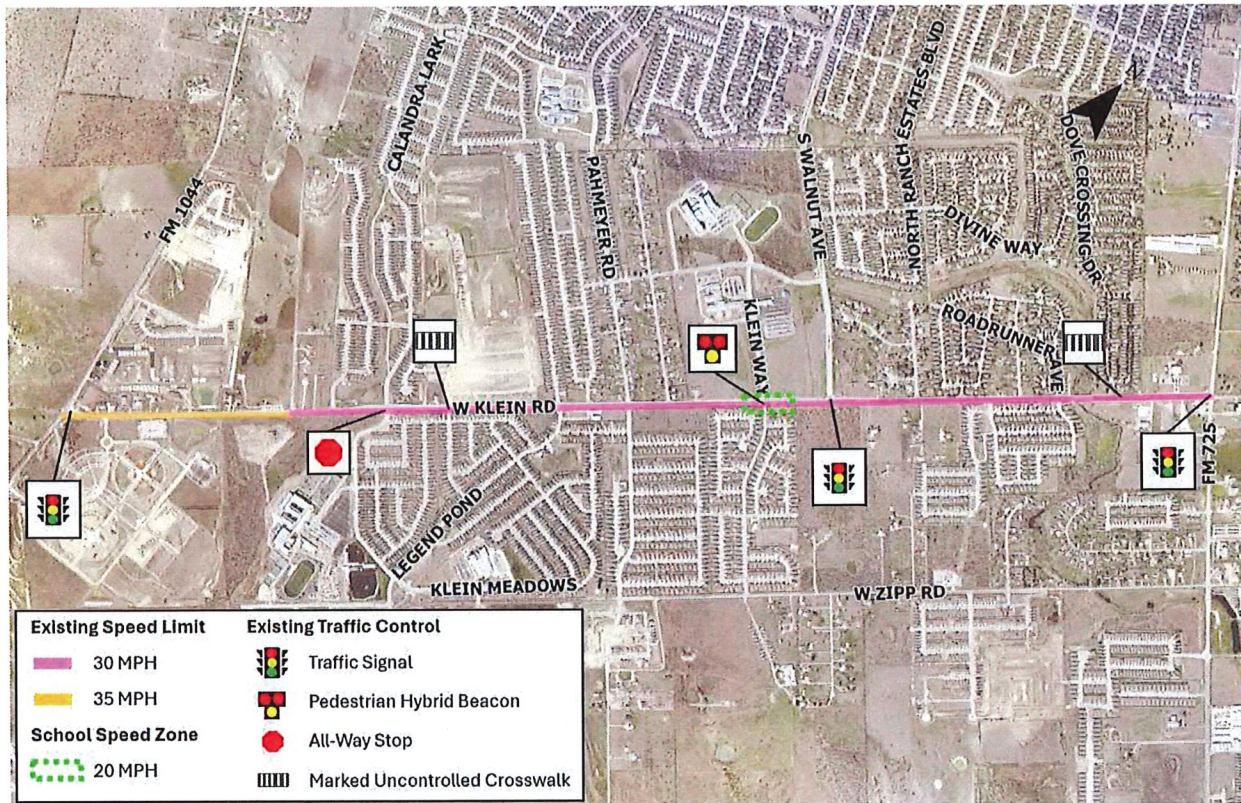


Figure 1. W Klein Road Traffic Conditions

A future traffic signal and school zone are planned for W Klein Road at Klein Meadows/Calandra Lark as shown in Figure 2. The new traffic signal is under design by NBISD, and the intersection is currently all-way stop-controlled in anticipation of the signal. A future school zone for Long Creek High School is planned at the intersection and is planned to have a speed limit of 20 mph during active hours.

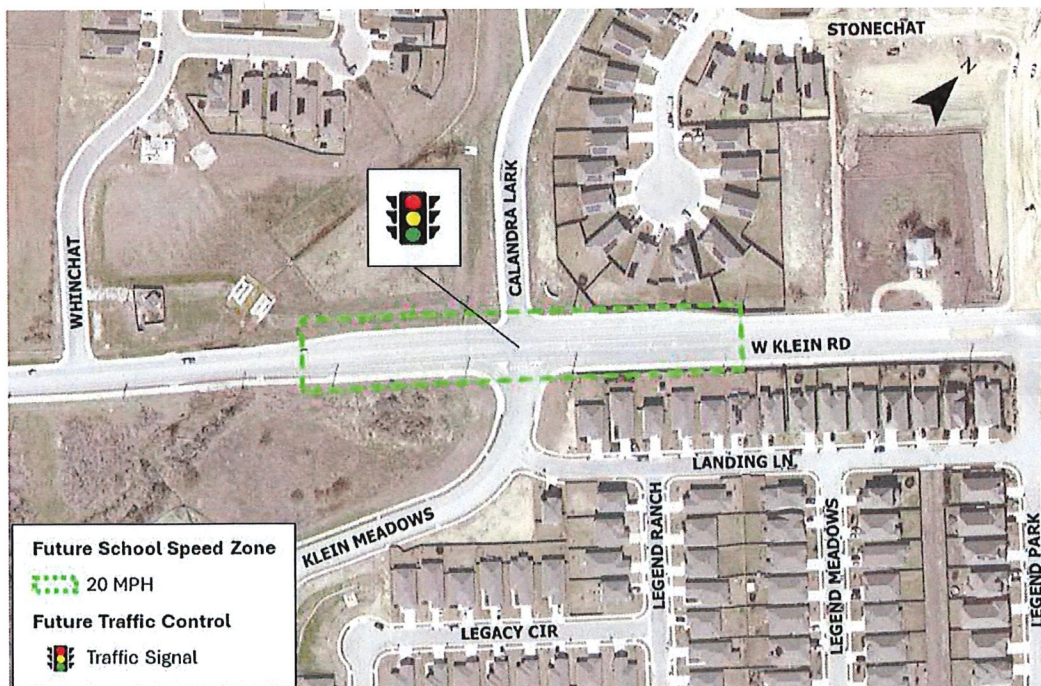


Figure 2. Future Improvements on W Klein Road at Klein Meadows/Calandra Lark

The city recently completed the second of a two-phase road widening project on W Klein Road between FM 725 and FM 1044. The project expanded the roadway from a narrow, two-lane road to a multi-lane facility, including turn lanes at key intersections and pedestrian improvements such as sidewalks and a continuous shared use path on the south side of the roadway. The completion of the project and the shift in traffic patterns due to development in the area warrant reevaluating the speed limit.

Guidance

Speed limits applicable to public streets are established:

- Statutorily- a maximum speed limit applicable to a particular class of road that is established by State law; or
- As altered speed zones - based on engineering studies.

Engineering studies for recommending speed limits utilized by the city's Transportation and Capital Improvements Department are based on the Texas Manual on Uniform Traffic Control Devices (TMUTCD) and new speed limit setting guidance in the latest federal Manual on Uniform Traffic Control Devices and Speed Limit Setting Handbook. The primary factors considered in the engineering study include:

- **Roadway environment** (such as roadside development, number and frequency of driveways and access points, and land use), functional classification, public transit volume and location or frequency of stops, parking practices, and pedestrian and bicycle facilities and activity;
- **Roadway characteristics** (such as lane widths, shoulder condition, grade, alignment, median type, and sight distance);
- **Geographic context** (such as urban district, rural town center, non-urbanized rural area, or suburban area) and multimodal trip generation;
- **Reported crash experience** for at least a 12-month period;
- **Speed distribution of free-flowing vehicles**, including the pace, median (50th-percentile), and 85th-percentile speeds;
- **Review of past speed studies** to identify any trends in operating speeds.

Other relevant factors may also be considered depending on the specific needs of the study approach and study area.

A city may declare a lower speed limit of not less than 25 miles per hour if the governing body determines that the prima facie speed limit on the streets is unreasonable or unsafe. By State Law, a traffic engineering study is required in order for a city to lower a speed limit below 25 mph.

Site Investigation

Site investigations and a traffic study were completed for W Klein Road in the Spring of 2025. W Klein Road provides direct access to multiple commercial businesses and churches, as well as the Zipp Family Sports Park. Many residential subdivisions connect to W Klein Road, but there are some homes with driveways fronting the roadway that require backing into W Klein Road.

City staff determined that the current posted speed limit of 35 mph on the western end of W Klein Road is not supported by ordinance. This is likely because that portion of W Klein Road was once county-maintained before it was annexed by the city. Any posted speed limit other than 30 mph is required to be documented in the City of New Braunfels Code of Ordinances.

Two site factors, roadway environment and characteristics, inform the engineering to a considerable extent. The roadway environment encourages pedestrian and bicycle activity, with access noted previously, and a shared-use path on the corridor. A shared-use path is a facility that accommodates both pedestrians and bicycles, designed for use by individuals of all abilities. Due to right-of-way constraints associated with the project, the shared-use path is adjacent to the curb and travel lane with no continuous street lighting. It is preferred that a shared-use path be separated from the curb and travel lane by a minimum of four feet.

Additionally, there are pedestrian crossings across Klein Road at the traffic signals, pedestrian hybrid beacon, and unmarked crosswalks. One is associated with a community need at Klein Way, which is also a school zone. An upcoming crossing will be at Calandra Lark, connecting to another shared-use path in the Voss Farms subdivision that is part of the city's overall hike and bike network, with the Zipp Family Sports Park as a destination.

Crash History

Traffic crash data for April 2022 through April 2025 was found through TxDOT's Crash Records Information System. There were 31 reported crashes on W Klein Road during this time, of which five were speeding-related.

Data Collection

Traffic speed and volume data were collected in April 2025 for multiple locations along W Klein Road. The data collection points were selected to represent the differing adjacent land uses along different segments of these roadways. The average daily traffic (ADT) and the pace, 50th percentile (median), and 85th percentile speeds for each collection point are documented in Table 1.

Table 1. Traffic Speed and Volume Data on W Klein Road

Limits	Direction	ADT (vpd)	*Pace speed (mph)	50 th % speed (mph)	85 th % speed (mph)
Dove Crossing Dr to Roadrunner Ave	Eastbound	4,639	30-40	37	43
	Westbound	3,782	30-40	35	41
Ranch Estates Blvd to Walnut Ave	Eastbound	4,454	30-40	37	43
	Westbound	3,610	30-40	35	41
Klein Way to Savannah Hill Cir	Eastbound	4,757	30-40	33	40
	Westbound	4,667	30-40	34	41
Legend Pond to Legend Park	Eastbound	3,163	30-40	35	40
	Westbound	3,261	30-40	37	43
Whinchat to FM 1044	Eastbound	3,310	30-40	35	40
	Westbound	3,368	30-40	36	43

*Pace speed is derived from speed data binned in 5mph increments

Recommendation

Based on the site investigation and collected speed data, it is recommended that the regulatory speed limit on W Klein Road be revised to 35 mph from the intersection with FM 725 to the intersection with FM 1044. The measured 85th percentile speeds in the 40-43 mph range do not support a speed limit of 30 mph. However, the direct residential driveway access and pedestrian activity around the multiple schools in the area are conditions for which a 40-mph speed limit is not suitable. The median and pace speeds are indicative that a 35-mph speed limit is appropriate and in line with traffic speeds for the majority of vehicles traveling on W Klein Road. The 35-mph speed limit is also consistent with the regulatory speed limits posted on Walnut Avenue and County Line Road, both multi-lane arterials with similar functionality and in the same region of the city as W Klein Road.