

Traffic Study Summary

Date:	February 11, 2021
Prepared By:	Carly Farmer, E.I.T., Engineer
Request:	Install "No Thru Trucks" signs on Lake Front Avenue between the IH 35 Frontage Road and Freiheit Road and Freiheit Road from Lake Front Avenue to SH 46.
Recommendation:	"No Thru Trucks" signs are recommended

Background

Lake Front Avenue is controlled by a two-way stop at the IH 35 Frontage Road and an all-way stop at Freiheit Road. The posted speed limit on Lake Front Avenue is 30 miles per hour (mph). Freiheit Road is controlled by an all-way stop at Lake Front Avenue and a traffic signal at SH 46. The posted speed limit on Freiheit Road is 30 mph.

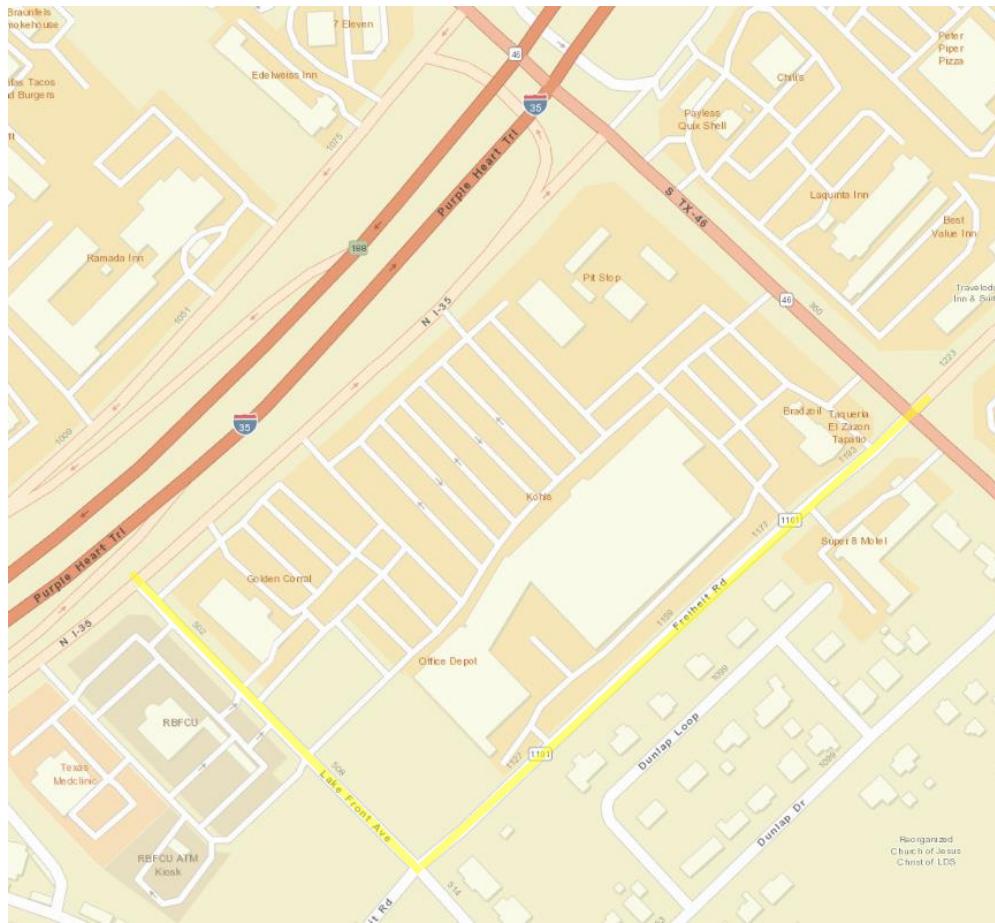


Figure 1. Traffic Study Area on Lake Front Avenue and Freiheit Road

There are plans to restripe both Lake Front Avenue and Freiheit Road in the study area in the future. The proposed striping plan is attached to this report.

An engineering study was completed in November 2020 and January 2021 to evaluate the installation of “No Thru Trucks” signs on Lake Front Avenue between the IH 35 Frontage Road and Freiheit Road and Freiheit Road between Lake Front Avenue and SH 46. The study was completed due to a complaint associated with through trucks. There is concern about large trucks turning onto Lake Front off of the IH 35 Frontage Road and using Freiheit Road to avoid the intersection of IH 35 and SH 46.

Guidance

Sections 2B.39 and 5B.04 of the Texas Manual on Uniform Traffic Control Devices (TMUTCD) provide support and guidance for the application of “No Trucks” (R5-2) signs. “No Trucks” signs are used to give notice to road users that State or local statutes or ordinances exclude designated types of traffic from using particular roadways or facilities. There is no specific guidance for when this sign should be installed. Therefore, engineering judgment should be used.

Section 126-1 of the City of New Braunfels Code of Ordinances provides a definition for “trucks”:

Truck means any motor vehicle designed, used or maintained primarily for the transport of property. For purposes of this section, the following are not included within the definition of a truck: (1)Light trucks, including any truck with a manufacturer's rated carrying capacity not to exceed 2,000 pounds and including those trucks commonly known as pickup trucks, panel delivery trucks, vans and carryall trucks.(2)Recreational vehicles and passenger buses.

Site Investigation

Vehicle classification data was collected on Wednesday, November 4, 2020 for both eastbound and westbound Lake Front Avenue between the IH 35 Frontage Road and Freiheit Road.

Multiple site investigations were conducted along Lake Front Avenue and Freiheit Road at multiple times throughout the day – during AM, midday and PM peak times – over the course of January 22–January 26, 2021. The investigation included a review of the road characteristics and through truck activity.

The segment of Lake Front Avenue in the study area is located within a commercial area with several driveways to various businesses and a shopping center. The segment of Freiheit Road in the study area borders a commercial and residential area. No homes front this segment of Freiheit Road but there are driveways for accessing the loading area of a shopping center, a hotel, and a restaurant.

Crash History

Traffic crash data for 2018 through 2021 was found through TxDOT’s Crash Records Information System. There were zero crashes reported for both Lake Front Avenue and Freiheit Road in the study area.

Data Collection

Traffic data was collected on Wednesday, November 4, 2020 for both eastbound and westbound Lake Front Avenue between the IH 35 Frontage Road and Freiheit Road. Vehicle classification was determined using the Federal Highway Administration vehicle classifications and the City of New Braunfels Code of Ordinances definition of a truck.

Through truck activity was observed during the timeframe of January 22-26, 2021 along Lake Front Avenue and Freiheit Road. Staff conducted observations for the morning peak (7:15-8:15 AM), the afternoon peak (12:00-1:00 PM), and the evening peak (4:30-5:30 PM). The data collection occurred during the Covid-19 pandemic, but otherwise represents typical traffic conditions.

The average daily traffic (ADT) for Lake Front Avenue is 5855 vehicles per day, of which an average of 1% are trucks. Based on through truck observations, between 60%-100% of trucks on Lake Front Avenue during the three peak study periods are through trucks utilizing eastbound Lake Front Avenue and northbound Freiheit Road to bypass the intersection of IH 35 and SH 46.

The results of this study show that “No Trucks” or “No Thru Trucks” signs are warranted. The high ADT on Lake Front Avenue does not benefit from larger, slower trucks coming through the area, and the proposed striping plan on Lake Front Avenue and Freiheit Road will reduce the lane widths on Lake Front Avenue and reduce the size of the intersection of Lake Front Avenue and Freiheit Road. These improvements will not properly accommodate large through trucks.

Recommendation

A thru truck restriction on Lake Front Avenue and Freiheit Road is recommended by staff at this time.