ORDINANCE NO. 20220203-032

AN ORDINANCE AMENDING CITY CODE SECTION 12-4-64(D) *(TABLE OF SPEED LIMITS)* TO MODIFY EXISTING SPEED LIMITS ON SLAUGHTER LANE (WEST) FROM RANCH TO MARKET (R.M.) 1826 TO ESCARPMENT BOULEVARD.

BE IT ORDAINED BY THE CITY COUNCIL OF THE CITY OF AUSTIN:

PART 1. City Code Section 12-4-64(D) (*Table of Speed Limits*) is amended to delete:

Slaughter Lane (West) from Escarpment to R.M. 1826. (50 MPH)

PART 2. City Code Section 12-4-64(D) (*Table of Speed Limits*) is amended to add:

Slaughter Lane (West) from Escarpment Boulevard to R.M. 1826. (45 MPH)

PART 3. The amendments made in this ordinance are based on the results of a traffic engineering investigation, or "speed study," referenced in the Memorandum attached as Exhibit "A."

PART 4. The amendments made in this ordinance shall be incorporated in alphabetical order and the existing entries reordered accordingly.

PART 5. This ordinance takes effect on February 14, 2022.

PASSED AND APPROVED

§
§
February 3, 2022 §

Steve Adler
Mayor

APPROVED: _____
Anne L. Morgan
City Attorney

ATTEST: _____
Myrna Rios
City Clerk

EXHIBIT A

MEMORANDUM

To: Traffic Study Files

From: Alison Mills, P.E., South Area Transportation Engineer
Transportation Engineering Division
Austin Transportation Department

STATE OF TEXAS
ALISON F. MILLS
120503
LICENSED
PROFESSIONAL ENGINEER
12/27/21

Date: December 27, 2021

Subject: SPEED ZONE INVESTIGATION

Location: W. Slaughter Lane – Ranch to Market (RM) 1826 to Escarpment Boulevard

Date(s) of Previous Investigation: None

A traffic engineering investigation has been conducted by the Transportation Engineering Division (TED) to determine the appropriate speed limit on W. Slaughter Lane from RM 1826 to Escarpment Boulevard. Currently, the speed limit on W. Slaughter Lane in this section of roadway is 50 MPH. Figure 1 represents a map of the study area.

Location Conditions:

W. Slaughter Lane from RM 1826 to Escarpment Boulevard is a divided, two-way, four-lane, arterial roadway. The roadway is approximately 1.6 miles and treated as a single segment due to similar land use and functional classification along the length of the roadway. W. Slaughter Lane from RM 1826 to Escarpment Boulevard is 50 MPH with no front facing homes. There is one school and a park along this segment.

Table 1 presents more information of each street segment studied, while Figures 2 and 3 present maps of the street segments studied.

Table 1: Location Information

Street Segment	Segment Length (Miles)	Number of Unsignalized Access Points	Number of Signalized Intersections	Width (ft)
W. Slaughter Lane – RM 1826 to Escarpment Blvd.	1.6	10	3	80-90

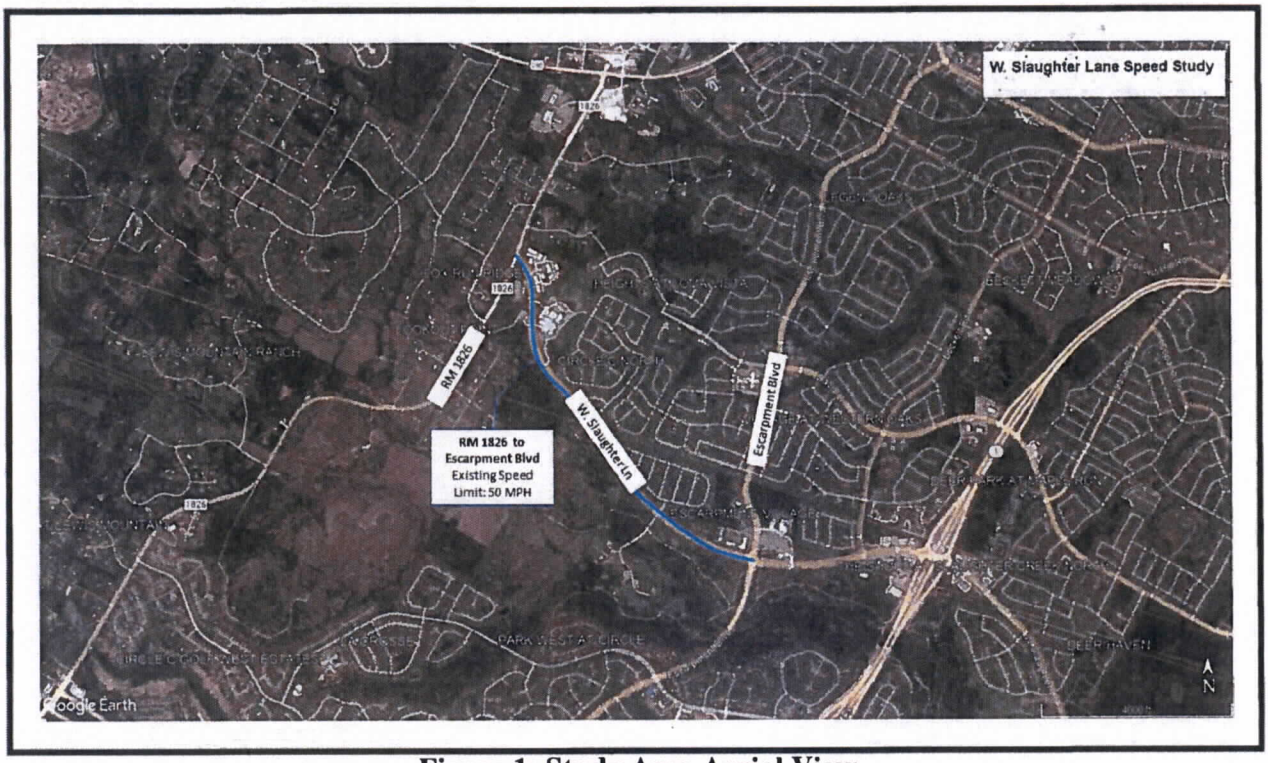


Figure 1: Study Area Aerial View

Investigation Data

TED's investigation was conducted in accordance with the TxDOT's "Procedures for Establishing Speed Zones," which focuses on a traditional methodology of 85th percentile speeds.

This investigation also utilized FHWA's USLIMITS2 tool to evaluate speed limits from a safe systems approach, which includes the following inputs to consider in setting reasonable, safe, and consistent speed limits based on the context and operating characteristics on the study segment:

- 85th percentile speed
- 50th percentile speed
- Statutory speed limit
- Section length
- Road alignment
- Median treatment
- Number of through lanes
- Adjacent land use
- Driveway density

- Traffic control devices
- Bicycle, pedestrian, and parking activity
- Daily vehicular volume
- Crash rate

Speed and volume data were collected in December 2021 to determine the appropriate posted speed limit for W. Slaughter Lane. It is important to note that data collection points were limited due to the presence of a work zone at the southern end of the segment and a school zone at the northern end of the study segment.

Table 2 summarizes the 85th percentile speed, 50th percentile speed, and daily traffic volumes collected on W. Slaughter Lane at various points.

Table 2: W. Slaughter Lane Speed and Volume Data

Street	Data Collection Points	Existing Speed Limit	85% Speed		50% Speed		Traffic Volumes (ADT)
			EB	WB	EB	WB	
W. Slaughter Ln	West of Barstow Ave	50	54	53	50	46	7716

Crash data was obtained from the City of Austin's Vision Zero database. This database obtains crash data from the Texas Department of Transportation (TxDOT) Crash Record Information System (CRIS) database. Total number of crashes and total number of fatal or injury crashes from November 30, 2016 to November 30, 2021 were obtained for the extents of this project limits and summarized in Table 3. A crash was determined to be within the study area if the primary address was along the W Slaughter Lane street segments.

Table 3: W. Slaughter Lane Crash Data

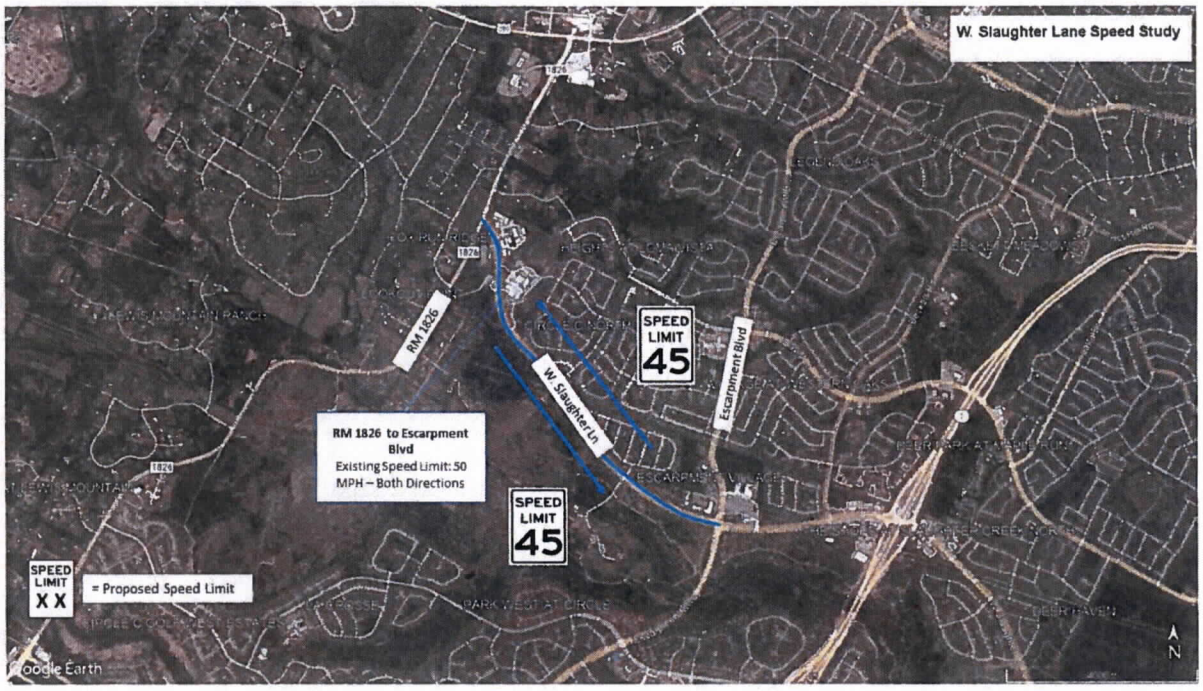
Street	Limits	Crashes	
		Total	Injury/ Fatal
W. Slaughter Ln	RM 1826 to Escarpment Blvd	98	31

A USLIMITS2 study was run in both directions for all identified data point on W. Slaughter Lane. In accordance with the "Texas Procedures for Establishing Speed Zones," the speed limit can be set at different values by direction of travel on divided roadways. However, City of Austin prefers setting speed limits at the same value for both directions of travel to aid in enforcement and meeting drivers' expectations in an urban environment. Therefore, the recommended speed limit is to be 45 MPH in the westbound and eastbound directions of W. Slaughter Lane. In addition, on W Slaughter Lane, the land use and functional classification is maintained for the length of the segment. Speed recommendations at each point were considered to select one consistent speed limit for the length of the segment. The results of the USLIMITS2 Speed Zoning Report are summarized in Table 4 below.

Table 4: USLIMITS2 Speed Zoning Report Results

Street	Data Location	Existing Speed Limit (mph)	USLIMITS2 Recommended Speed Limit (mph)		**Recommended Speed Limit – Both Directions (mph)**
			WB	EB	
W. Slaughter Ln	West of Barstow Ave	50	45	50	**45**

Figure 2 presents a map of the study area and the proposed speed limit based on the collected data and analysis.



Austin Transportation Department

Speed Zone Map

W. Slaughter Lane

Figure 2: Proposed Speed Limits Along W. Slaughter Lane

Recommendation

TED has determined a speed limit of 45 mph for westbound and eastbound traffic is appropriate for the study segments, based on the two methodologies used for setting speed limits and particularly these considerations.

Appendix

USLIMITS2 Speed Zoning Report

Project Overview

Project Name: W. Slaughter Lane Speed Study

Analyst: Cody Stone

Date: 2021-12-18

Basic Project Information
Route Name: W. Slaughter Lane
From: RM 1826
To: Escarpment Blvd
State: Texas
County: Travis County
City: Austin city
Route Type: Road Section in Developed Area
Route Status: Existing

Crash Data Information
Crash Data Years: 5.00
Crash AADT: 7716 veh/day
Total Number of Crashes: 98
Total Number of Injury Crashes: 31
Section Crash Rate: 435 per 100 MVM
Section Injury Crash Rate: 138 per 100 MVM
Crash Rate Average for Similar Roads: 250
Injury Rate Average for Similar Roads: 78

Roadway Information
Section Length: 1.6 mile(s)
Statutory Speed Limit: None
Existing Speed Limit: 50 mph
Adverse Alignment: No
One-Way Street: No
Divided/Undivided: Divided
Number of Through Lanes: 4
Area Type: Residential-Collector/Arterial
Number of Driveways: 10
Number of Signals: 3

Traffic Information
85th Percentile Speed: 54 mph
50th Percentile Speed: 50 mph
AADT: 7716 veh/day
On Street Parking and Usage: Not High
Pedestrian / Bicyclist Activity: Not High

Recommended Speed Limit:

Note: The section crash rate of 435 per 100 MVM is above the critical rate (306). The injury crash rate for the section of 138 per 100 MVM is above the critical rate (111). A comprehensive crash study should be undertaken to identify engineering and traffic control deficiencies and appropriate corrective actions. The speed limit should only be reduced as a last measure after all other treatments have either been tried or ruled out.

Disclaimer: The U.S. Government assumes no liability for the use of the information contained in this report. This report does not constitute a standard, specification, or regulation.

Equations Used in the Crash Data Calculations

Exposure (M)
M = (Section AADT * 365 * Section Length * Duration of Crash Data) / (100000000)
M = (7716 * 365 * 1.6 * 5.00) / (100000000)
M = 0.2253

Crash Rate (Rc)
Rc = (Section Crash Average * 100000000) / (Section AADT * 365 * Section Length)
Rc = (19.60 * 100000000) / (7716 * 365 * 1.6)
Rc = 434.96 crashes per 100 MVM

Injury Rate (Ri)
Ri = (Section Injury Crash Average * 100000000) / (Section AADT * 365 * Section Length)
Ri = (6.20 * 100000000) / (7716 * 365 * 1.6)
Ri = 137.59 injuries per 100 MVM

Critical Crash Rate (Cc)
Cc = Crash Average of Similar Sections + 1.645 * (Crash Average of Similar Sections / Exposure) ^ (1/2) + (1 / (2 * Exposure))
Cc = 249.53 + 1.645 * (249.53 / 0.2253) ^ (1/2) + (1 / (2 * 0.2253))
Cc = 306.50 crashes per 100 MVM

Critical Injury Rate (Ic)
Ic = Injury Crash Average of Similar Sections + 1.645 * (Injury Crash Average of Similar Sections / Exposure) ^ (1/2) + (1 / (2 * Exposure))
Ic = 77.94 + 1.645 * (77.94 / 0.2253) ^ (1/2) + (1 / (2 * 0.2253))
Ic = 110.75 injuries per 100 MVM

USLIMITS2 Speed Zoning Report

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Analyst: Cody Stone

Date: 2021-12-18

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Route Status: Existing

Crash Data Information
Crash Data Years: 5.00
Crash AADT: 7716 veh/day
Total Number of Crashes: 98
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Section Crash Rate: 435 per 100 MVM
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Crash Rate Average for Similar Roads: 250
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Roadway Information
Section Length: 1.6 mile(s)
Statutory Speed Limit: None
Existing Speed Limit: 50 mph
Adverse Alignment: No
One-Way Street: No
Divided/Undivided: Divided
Number of Through Lanes: 4
Area Type: Residential-Collector/Arterial
Number of Driveways: 10
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Traffic Information
85th Percentile Speed: 53 mph
50th Percentile Speed: 46 mph
AADT: 7716 veh/day
On Street Parking and Usage: Not High
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Recommended Speed Limit:

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