

## MEMORANDUM

**TO:** Claire Powell, City Manager

**FROM:** Sirwan Shahooei, P.E., City Traffic Engineer

**VIA:** David Salmon, P.E., City Engineer  
Jim Proce, ICMA-CM, Assistant City Manager

**DATE:** October 23, 2023

**SUBJECT:** **Consideration of an Ordinance Amending the Lewisville City Code, Chapter 15, Article II, Section 15-35, Maximum Speed Limits on Specific Streets, Establishing a Speed Limit of 35 mph on North Summit Avenue From 200 ft South of the Canadian Pacific Kansas City Railroad Crossing to FM 407 (Justin Rd); Providing for a Repealer, Severability, a Penalty, and an Effective Date; and Declaring an Emergency.**

### **BACKGROUND**

Staff hired a consultant to conduct a comprehensive traffic study in 2020 to evaluate a road diet along North Summit Avenue between FM 407 (Justin Road) and Grandy's Lane in response to development along North Summit Avenue. The corridor was evaluated as a 2-lane divided roadway with one lane in each direction dedicated for on-street parking to accommodate future development in the vicinity. The analysis concluded that a road diet on North Summit Avenue between FM 407 and Grandy's Lane along with the surrounding development can be successfully implemented. The study also concluded that the road diet along North Summit Avenue would potentially promote safe speeds along the corridor, provide adequate vehicular capacity, provide a more pedestrian-oriented design, and repurpose excess roadway. The City's Public Services Department restriped North Summit Avenue to convert the outer lanes to on-street parking in August 2023. With the change in the North Summit Avenue geometry and reduction of the number of travelling lanes, a new speed study was conducted to determine the safe travelling speed and assure the safety of the residents and road users.

### **ANALYSIS**

To determine the speed limit in North Summit Avenue, the staff used the Federal Highway Administration (FHWA) USLIMITS2 Speed Limit Tool to determine the recommended speed limit on North Summit Avenue after eliminating a travel lane and striping the parking lane. This is the first time staff has used this tool to determine an appropriate speed limit. Previously only 85<sup>th</sup> percentile speeds were considered to determine speed limits. Although setting speed limits by the 85<sup>th</sup> percentile speed is widely accepted, this tool is much more detailed and takes many other factors into account. USLIMITS2 is a well-known tool developed by the FHWA and designed to

help practitioners with conducting an engineering study for setting reasonable, safe, and consistent speed limits for specific segments of roads. This tool considers all major factors used by practitioners to make engineering judgment in determining an appropriate speed limit. This includes operating speed (50th and 85th percentile), annual average daily traffic, roadway characteristics and geometric conditions, level of development in the area around the road, crash and injury rates, presence of on-street parking, and extent of ped/bike activity, as well as several others depending on the road type. The existing speed limit throughout North Summit Avenue is 40 mph. After analyzing all data, the recommended speed limit in the two-lane divided section of North Summit Avenue between Grandy's Lane and FM 407 (Justin Road) is determined to be 35 mph. The report from the FHWA USLIMITS2 tool is also provided in this package.

The original ordinance entry for North Summitt Avenue being deleted included the segment from FM 407 to Moccasin Trail. North Summit Avenue is currently a 275-foot-long dead end north of FM 407 and does not extend to Moccasin Trail. That segment is not included in the new ordinance entry which means the established speed limit on North Summit Avenue north of FM 407 will revert to the prima facie speed of 25 mph. Given that it is a short dead-end street, that is an appropriate speed limit. Once the street is extended to Moccasin Trail, a new speed study will be conducted, and a new speed limit established for that segment.

#### **CITY STAFF'S RECOMMENDATION**

That the City Council approve the ordinance as set forth in the caption above.