

Introduction

This study was conducted to evaluate existing speeds along the roadway segments of Coleman Rd, 11th Avenue, and 12th Avenue. The reason for this evaluation is due to multiple citizen complaints regarding speeding, parking, and safety issues within the residential neighborhood.

Prevailing Speeds

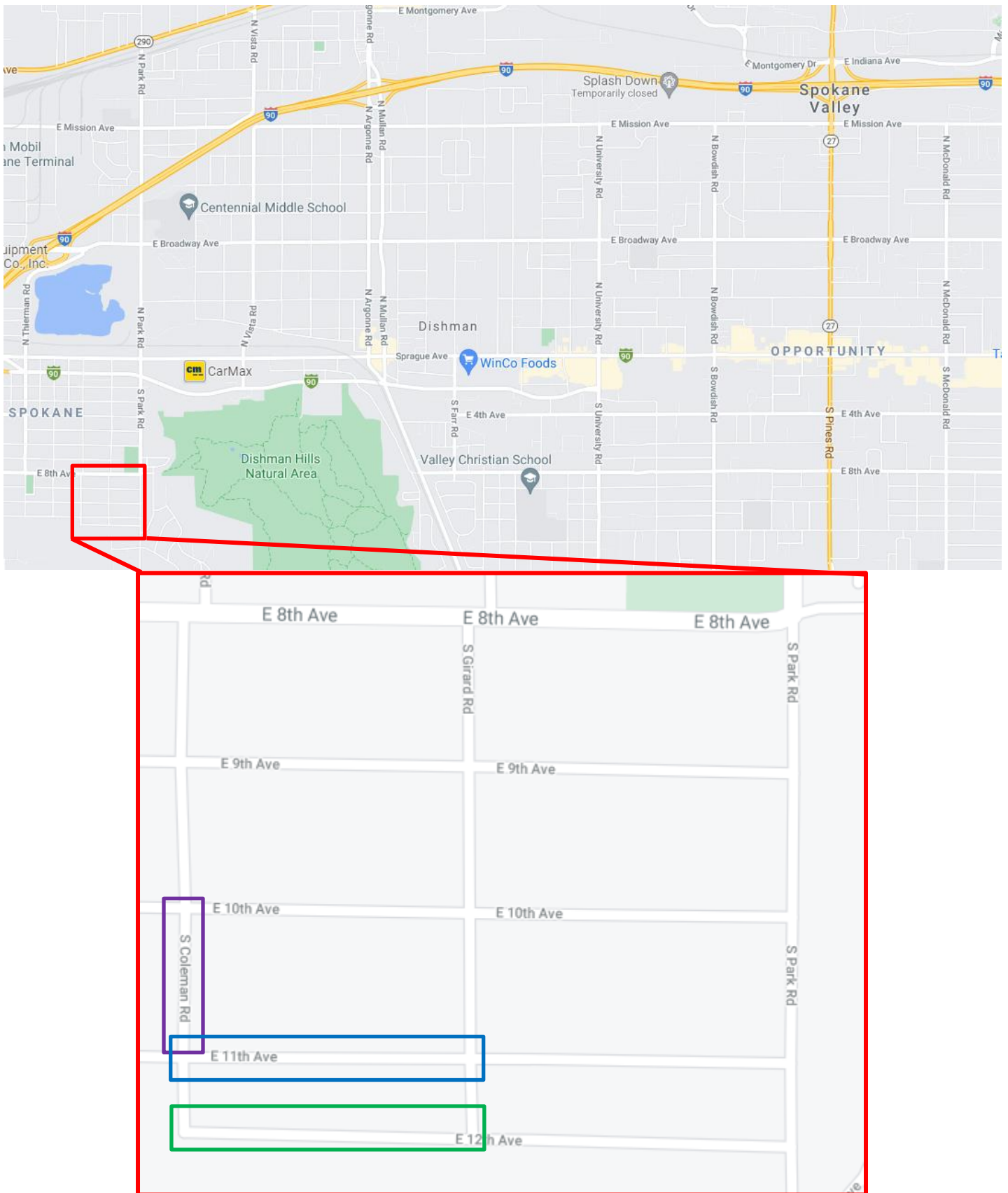
Posted speed limits are primarily established to protect the general public from unreasonable behavior of reckless, unreliable, or otherwise dangerous drivers. The majority of drivers comply with the basic speed law (RCW 46.61.400) and maximum limits. These posted limits provide law enforcement with the means to identify and cite those that violate what is accepted by the majority. RCW 46.61.400 states that, *"No person shall drive a vehicle on a highway at a speed greater than is reasonable and prudent under the conditions and having regard to the actual and potential hazards then existing. In every event speed shall be so controlled as may be necessary to avoid colliding with any person, vehicle or other conveyance on or entering the highway in compliance with legal requirements and the duty of all persons to use due care."*

Washington Administrative Code (WAC) 468-95-045 lists several criteria for consideration when establishing the speed limit, including: 85th percentile speed, roadway characteristics, pace speed, and roadside development and environment. The speed limit is generally set at the nearest 5 mph increment at or below the 85th percentile. This document summarizes the evaluation of the existing speeds along Coleman Rd between 11th and 12th Ave, 11th Ave between Coleman Rd and Girard Rd, and 12th Avenue between Coleman Rd and Girard Rd.

Study Area

The study area is located in a low-density residential area (Zoning – R3) with a neighborhood feel. Coleman Rd between 11th and 12th Ave is an unclassified local road with no pavement markings, approximately 32' wide, with curb on both sides and no sidewalk. 11th Ave between Coleman Rd and Girard Rd is an unclassified local road with no pavement markings, approximately 32-35 feet wide, with curb on both sides and no sidewalk. 12th Avenue is an unclassified local road with no pavement markings, approximately 23 feet wide, with curb on both sides and no sidewalk. The study area is broken down into three segments, all with a speed limit of 25 MPH and in a residential area. The roads within the study area are intended for residential access and speeds are reflective of that. See Figure 1 for the vicinity map.

Figure 1. Vicinity Map



Data Collection

An Engineering and Traffic Survey was prepared for each of the 3 segments studied. Significant measures reported are summarized below:

- **The 50th percentile is the median speed of the observed data set.** The 50th percentile speed represents the speed at which half of the observed vehicles are below and half of the observed vehicles are above. The 50th percentile of speed represents the average speed of the traffic stream.
- **The critical speed, or 85th percentile speed, is the speed at or below which 85 percent of the traffic is moving.** This speed is the primary guide in determining the voluntary compliance of the greater majority of drivers. A speed limit set higher than the critical speed is not considered reasonable and safe. Speed limits set a great deal lower than the critical speed would not elicit respect from the public.
- **The 10 mph Pace is the 10 mph range of speed which contains the most vehicles.** It is a measure of the dispersion of speeds within the samples surveyed. This 10 mph range is that which contains the greatest number of speed measurements. The establish speed limit is typically within the 10 mph pace.

For this analysis, roadway segment tube counts were conducted at three (3) locations along Coleman Rd, 11th Ave, and 12th Ave during the week of May 25 to May 28, 2021 to obtain prevailing speeds in the study area. Traffic in both directions was recorded during the survey period.

Speed Study Results

This section provides a summary of the results of the speed survey along roadway segments of Coleman Rd, 11th Ave, and 12th Ave. A 3-day weighted average during the typical weekdays of Tuesday, Wednesday, and Thursday was calculated for this analysis.

The 50th percentile speeds are summarized in Figure 2, which illustrates a range of 15-19 MPH. The 85th percentile speeds resulting from the speed survey are shown in Figure 3. The 85th percentile speeds range from 23-27 MPH through the study area.

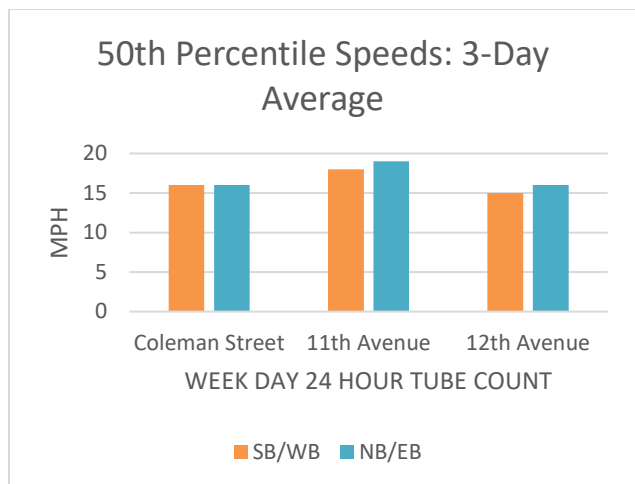


Figure 2. 50th Percentile Speeds

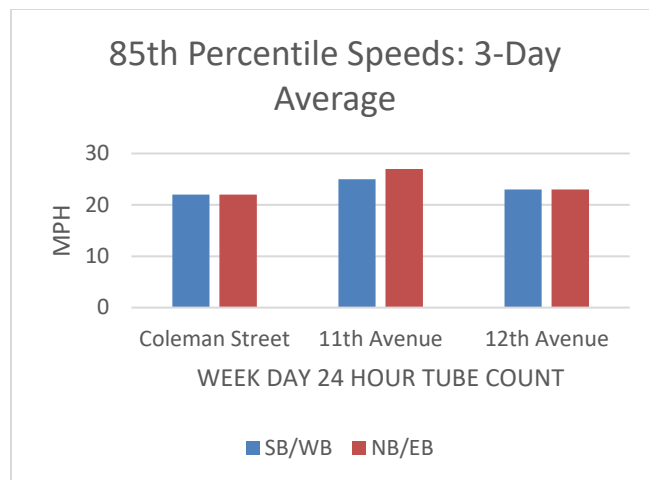


Figure 3. 85th Percentile Speeds

As previously stated, an established speed limit is typically within the 10 MPH pace. As shown in Figure 4 the 10 MPH pace for each direction is typically between 16-25 MPH. The 85th percentile speed is near the upper limit of the 10 MPH pace for each day of the study.

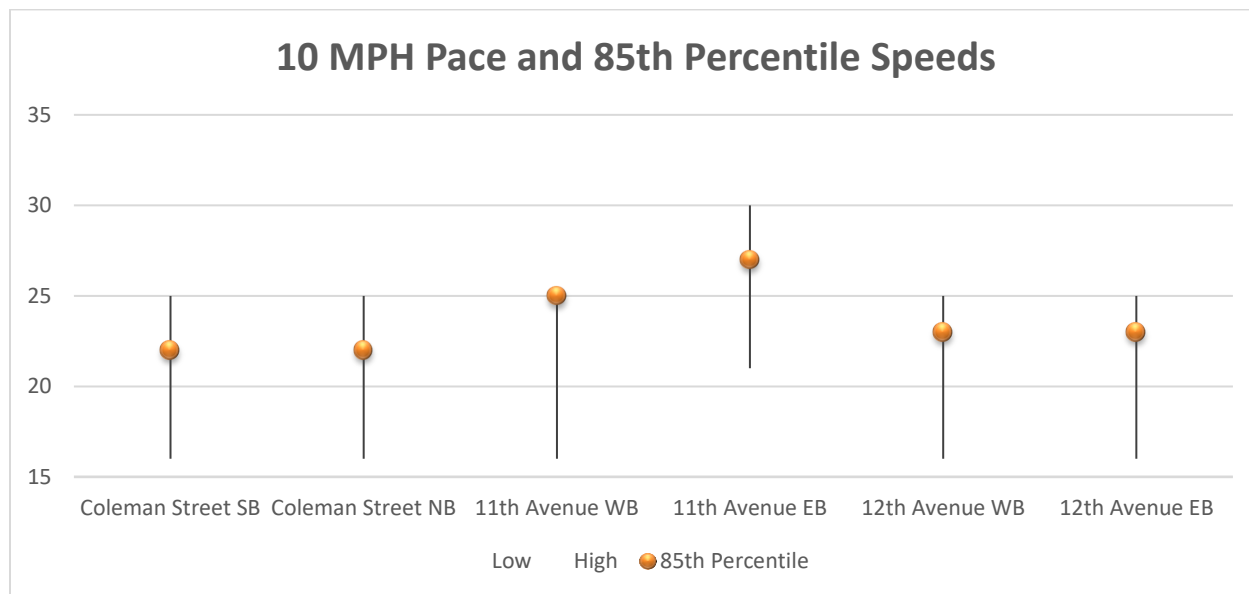


Figure 4. 10 MPH Pace Speeds

Speed Study Results

Based on the data collected for evaluated this study, the measured speeds and environmental context were used to estimate the current speeds on the three study segments. As shown in Table 1, the measured 50th percentile and 85th percentile are either below or within a 5 MPH range of the 25 MPH speed limit.

Table 1. Speed Survey Results

Segment	Posted Speed Limit (mph)	Speed Survey 50 th Percentile Speeds		Speed Survey 85 th Percentile Speeds	
		SB/WB	NB/EB	SB/WB	NB/EB
Coleman Rd	25	16	16	22	22
11 th Ave	25	18	19	25	27
12 th Ave	25	15	16	23	23