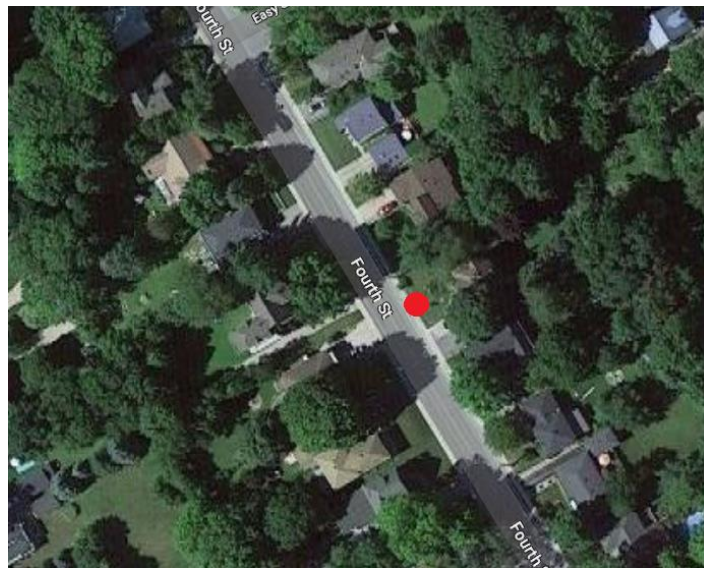


Traffic Data Analysis

Fourth Street

Northbound



Town of Midland

Engineering Department

April 27, 2023

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1.0 Introduction

A traffic count was conducted from March 1, 2023 to April 27, 2023 on Fourth Street in the northbound direction. Vehicle speeds and traffic volume were collected by a traffic shield (model ATS 12). The purpose is to see if there are any speeding issues, raise safety awareness, and help calm traffic by displaying speeds of vehicles approaching.

1.1 Location

The traffic trailer was placed on Fourth Street for northbound direction. Table 1 below shows the location of the traffic trailer and data collection period.

Table 1- Locations of Traffic Trailer

Direction	Location	Period
Northbound	335 Fourth Street, Midland, ON	8:30am March 1, 2023 to 9:00am April 27, 2023

1.2 Traffic Shield

The traffic shield used was model ATS 12 as shown in Figure 1. The traffic shield is able to show the speed of the approaching vehicle or display short messages depending on the speed. For this time period, the speed was shown.



Figure 1- Traffic Shield

2.0 Speed Summary

The posted speed limit on Fourth Street is 40km/h; however, generally it is accepted that vehicles that are travelling up to 10km/h above the posted speed limit are not considered to be speeding. Table 2 shows an overall speed summary of the data collected.

Table 2- Speed Summary

Direction	Average Speed (km/h)	85 th Percentile Speed (km/h)	Minimum Speed (km/h)	Maximum Speed(km/h)
Northbound	34.67	40.96	10	69

2.1 Speed Analysis

Figure 2 to 4 below show the speed summary for the traffic.

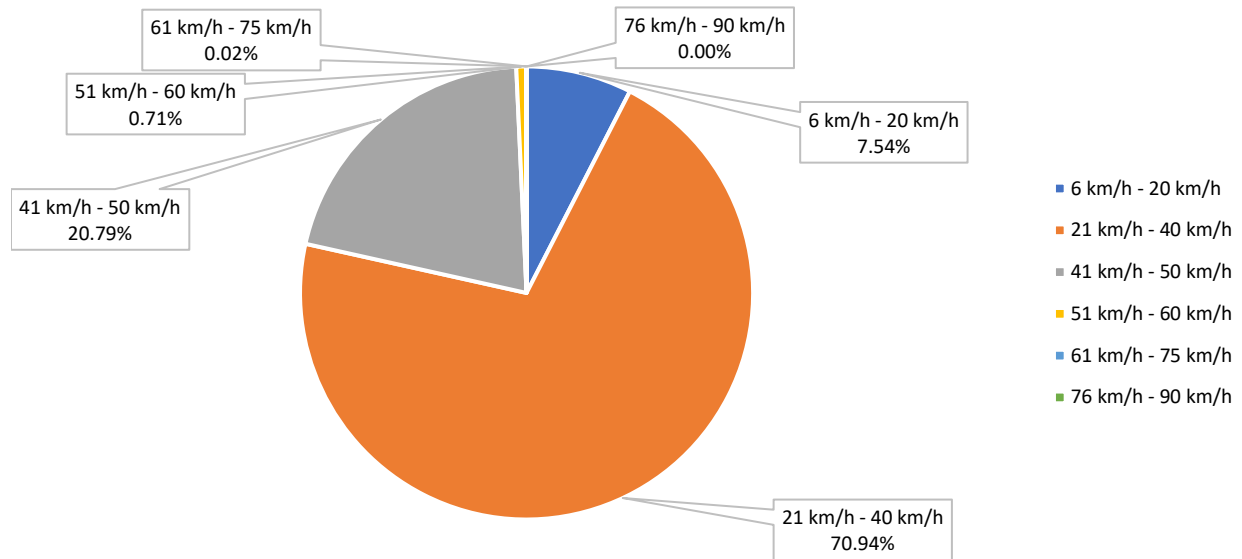


Figure 2- Fourth Street Speed Breakdown

Figure 2 above shows that 78.48% of vehicles were travelling below the posted speed limit, 20.79% of vehicles were travelling between 41-50 km/h, and 0.73% of vehicles were travelling above 50km/h. Considering the accepted speed limit is 10km/h over the posted speed limit, a total of 99.27% of vehicles were travelling within the accepted speed limit.

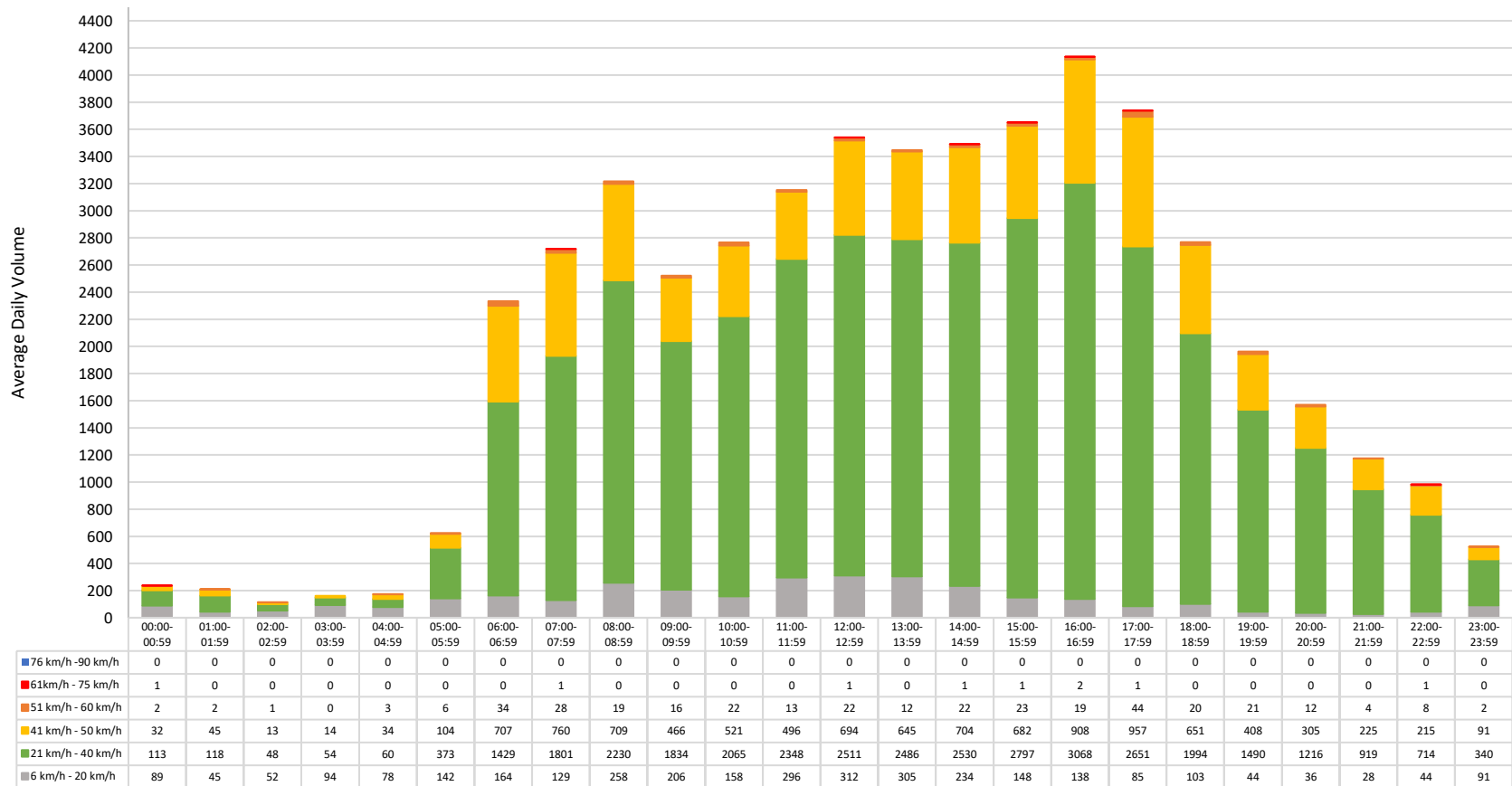


Figure 3- Speed by Hour Analysis for Weekdays

Figure 3 above is the speed by hour graph used to determine the time where most speeding occurs on weekdays. The data shows that speeding formed a curve as it increased throughout the day with a spike from 8:00am to 8:59am until it reached its peak from 16:00pm to 16:59pm and begins to decline again.

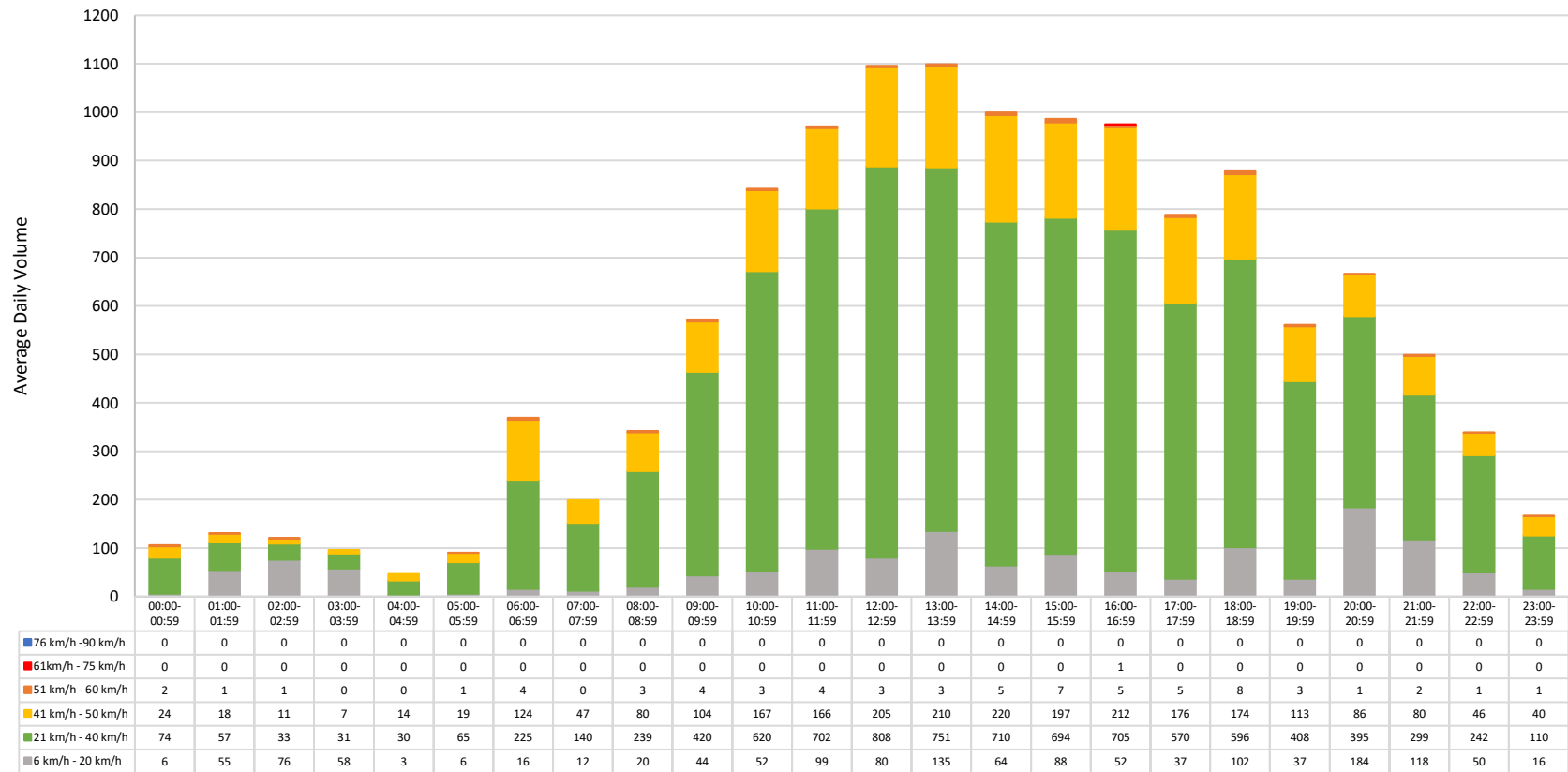


Figure 4 Speed by Hour Analysis for Weekends

Figure 4 above is the speed by hour graph used to determine the time where most speeding occurs on the weekend. The data shows that speeding was low at night and began to increase around 6:00am before beginning to decline again at 7:00pm. The speeding reached a peak from 12:00 to 13:59.

In addition, during this time period, the traffic trailer detected that 29.9% of vehicles slowed down when approaching the sign. This shows that the sign is influencing traffic calming to a greater extent than when the display was off, thus supporting the notion that the signs have a traffic calming effect.

3.0 Traffic Volume

Table 3 shows the average daily volume on Fourth Street in the northbound direction.

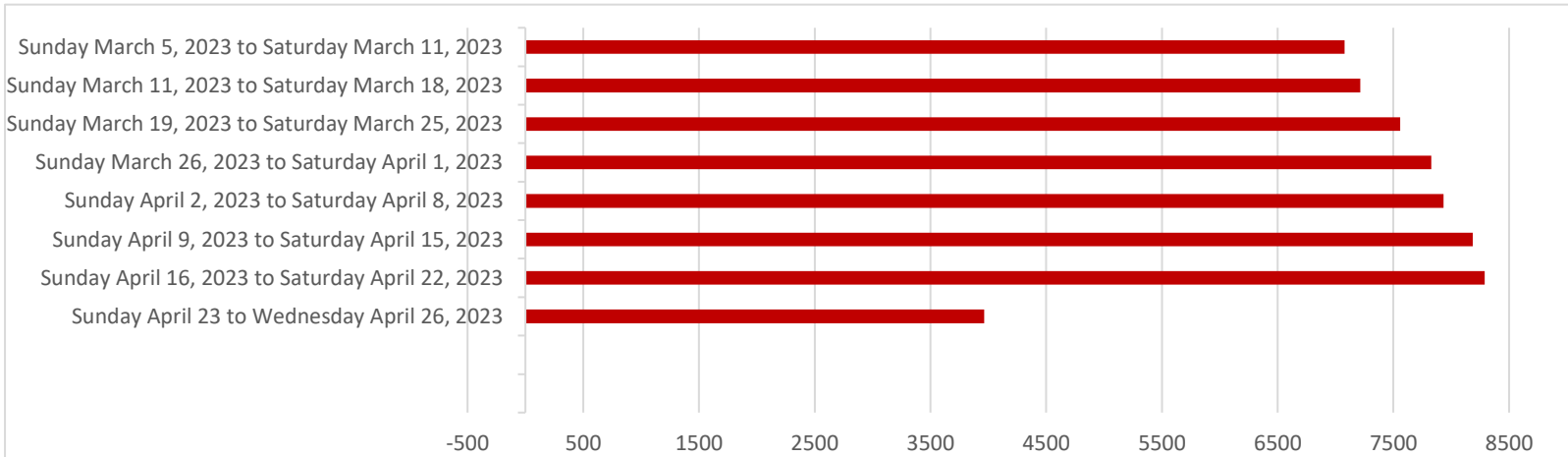


Table 3- Volume Summary

Direction	Period	Average Daily Traffic Volume
Northbound	Weekdays	1200.4
Northbound	Weekends	808.9

Figure 5 Total Volume per Day

3.1 Volume by Hour

The data collected is used to analyze the average traffic volume at different times of the day as shown in Figure 6.

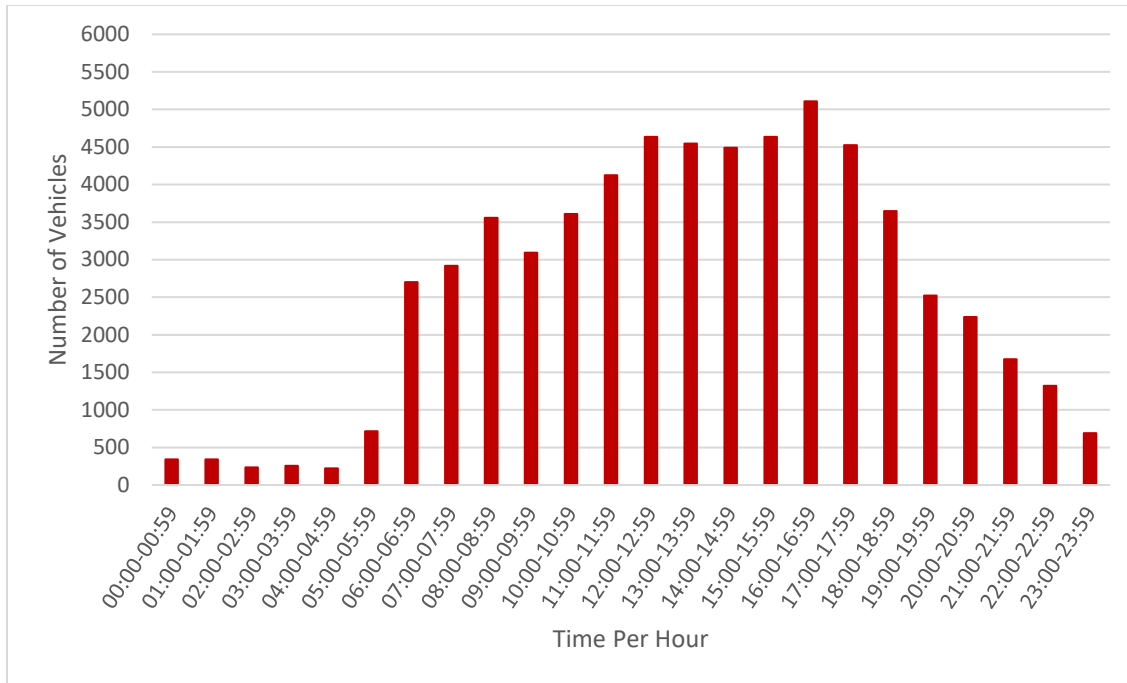


Figure 6 Total Volume per Hour

As shown in Figure 6, the traffic volume forms a curve in which traffic flow is low at night and begins to increase at 6:00am. Peak traffic occurs from 16:00 to 16:59pm before the volume begins to decrease again.

4.0 Conclusion

The traffic study conducted on Fourth Street in the northbound direction from March 1st, 2023 to April 26th, 2023. From the speed analysis, it was determined that 99.27% of vehicles were travelling within the accepted speed limit. In addition, from the volume analysis, it was also determined that the peak traffic occurred in the early afternoon.