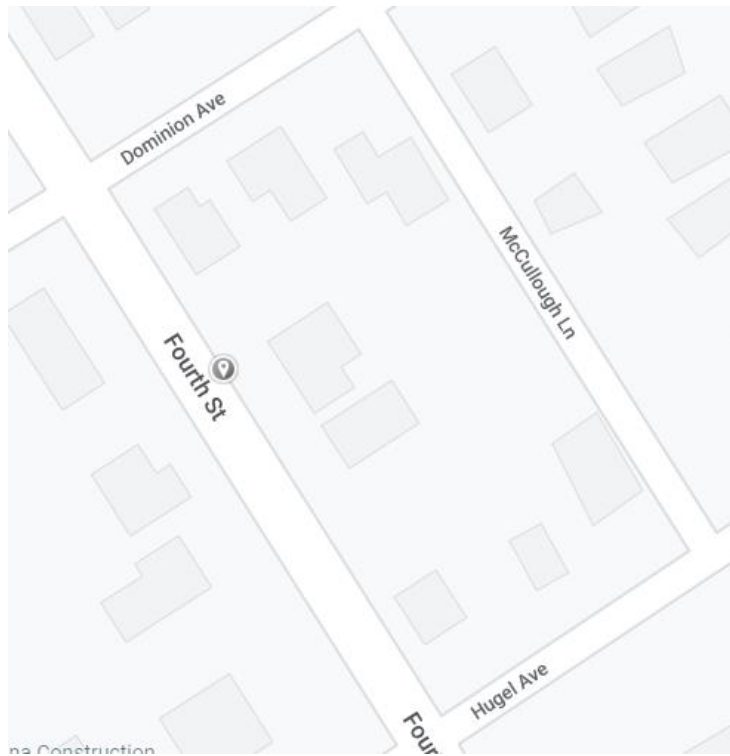


Traffic Data Analysis

Fourth Street

Northbound



Town of Midland

Engineering Department

May 12th, 2022,

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1.0 Introduction

A traffic count was conducted from April 18th, 2022, to May 9th, 2022, 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 shield was placed on Fourth Street for northbound direction. Table 1 below shows the location of the traffic trailer and data collection period.

Table 1- Traffic Shield Information

Direction	Location	Period
Northbound	257 Fourth Street, Midland, ON	12:00 am on April 18 th – 12:00 pm on May 9 th , 2022

1.2 Traffic Shield

The traffic shield used was model ATS 12 as shown in Figure 1. The traffic shield can 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 Volume by Speed

The posted speed limit on Fourth Street is 50km/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	33.71	43.61	5.00	76.00

2.1 Volume by Speed Analysis

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

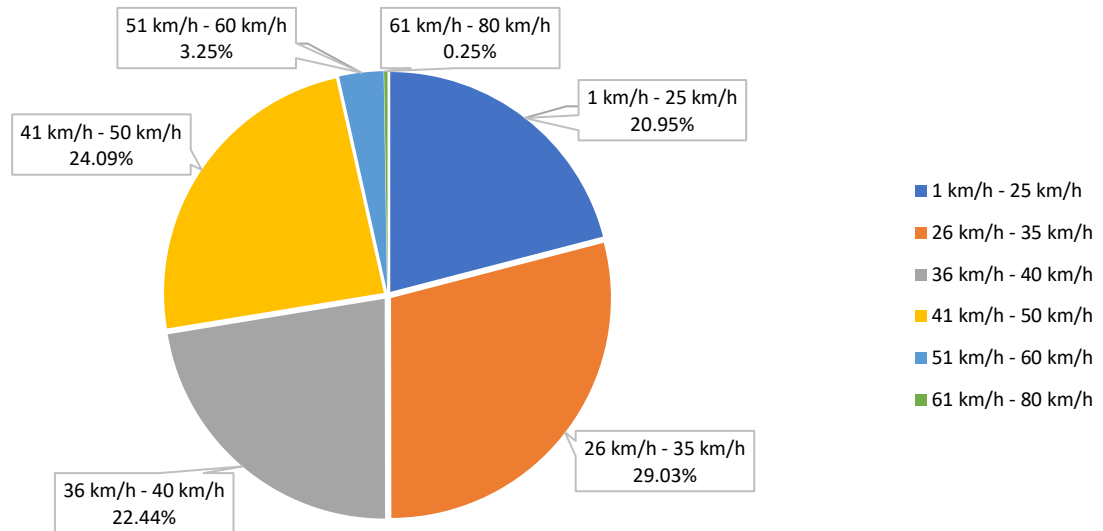


Figure 2- Total Volume Breakdown Based on Speed per Hour Intervals

Figure 2 above shows that 96.51% of vehicles were travelling below the posted speed limit and 3.50% of vehicles were travelling above 50km/h. Considering the accepted speed limit is 10 km/h over the posted speed limit, a total of 99.75% of vehicles were travelling within the accepted speed limit.

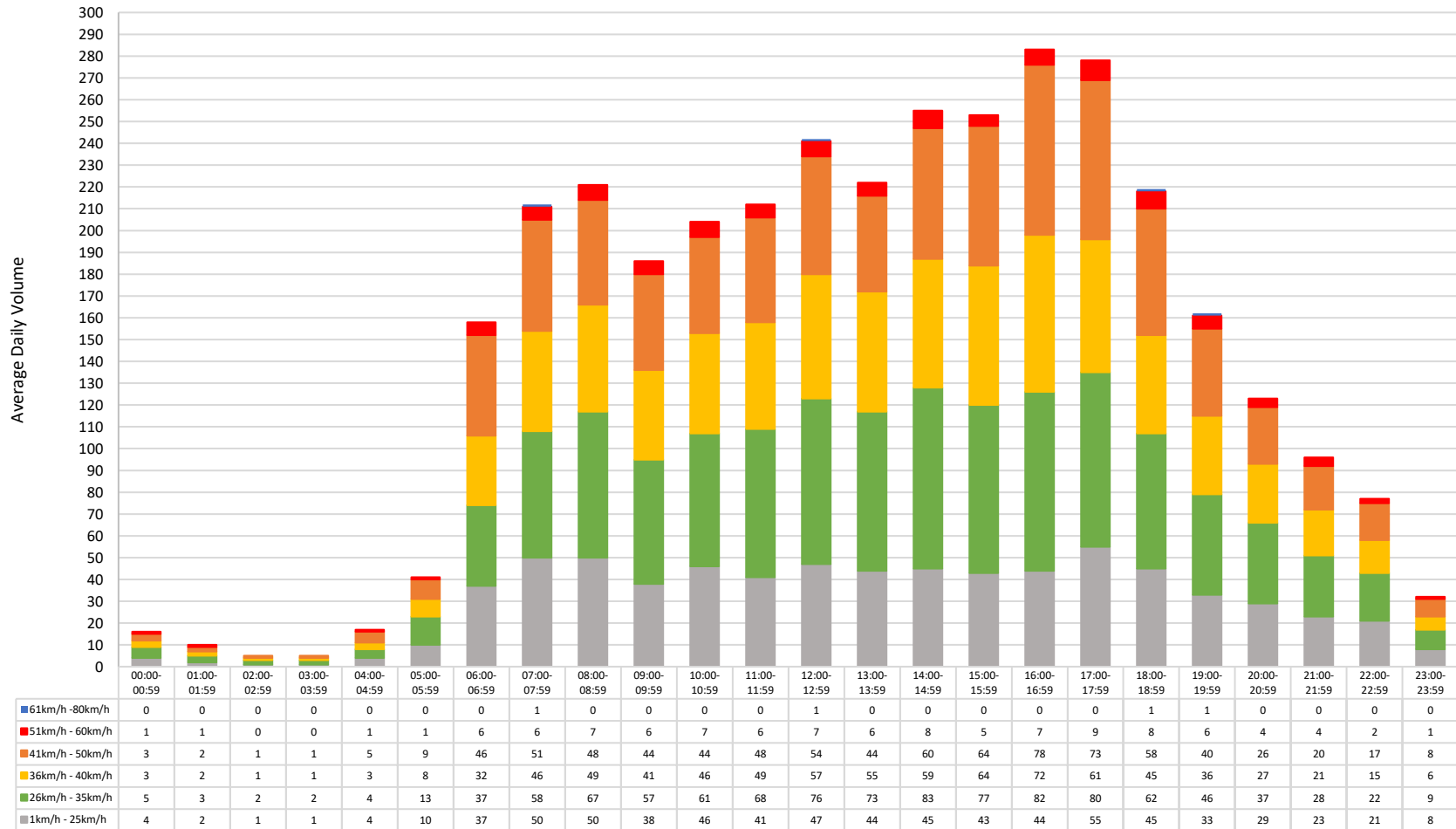


Figure 3- Traffic Volume Speeds for Each Hour on Weekdays

Figure 3 above is the graph used to determine the time when most speeding occurs on weekdays. Generally, the data shows that speeds formed a curve as traffic volumes increased throughout the day with a spike from 6:00 – 6:59 until it reached its peak at 16:00 – 16:59 and begins to decline again. Speeds greater than the speed limit were recorded in every hour except for between 02:00 and 03:59. The highest speeds which are greater than the acceptable speeding of 10 km/h above speed limit were recorded between 7:00 - 7:59, 12:00 - 12:59, and between 18:00 – 19:59.

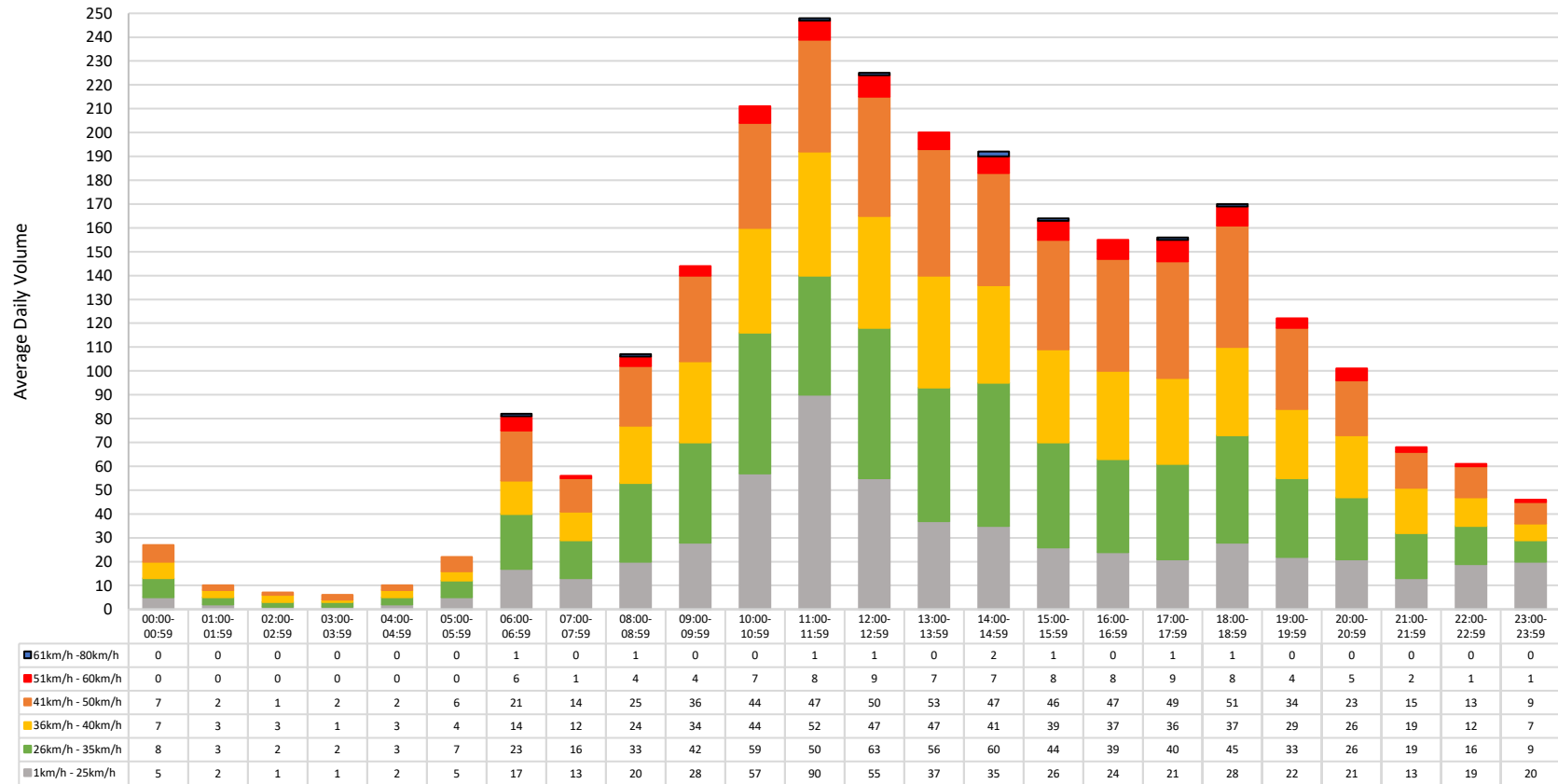


Figure 4 Traffic Volume Speeds for Each Hour on Weekends

Figure 4 above is the graph used to determine the time when most speeding occurs on weekends. Generally, the data shows that speeds formed a curve as traffic volumes increased throughout the day with a spike from 6:00 – 6:59 until it reached its peak at 11:00 – 11:59 and begins to decline again. Between 00:00 to 05:59, they were no speeding vehicles. The highest speeds which are greater than the acceptable speeding of 10 km/h above speed limit were recorded between 6:00 - 6:59, 8:00 – 8:59, 11:00 – 13:59, 14:00 - 15:59, and between 17:00 – 18:59.

3.0 Volume by Time

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	3458
Northbound	Weekends	2580

3.1 Volume by Time Analysis

Figure 5 shows the total volumes of traffic for each day data was collected.

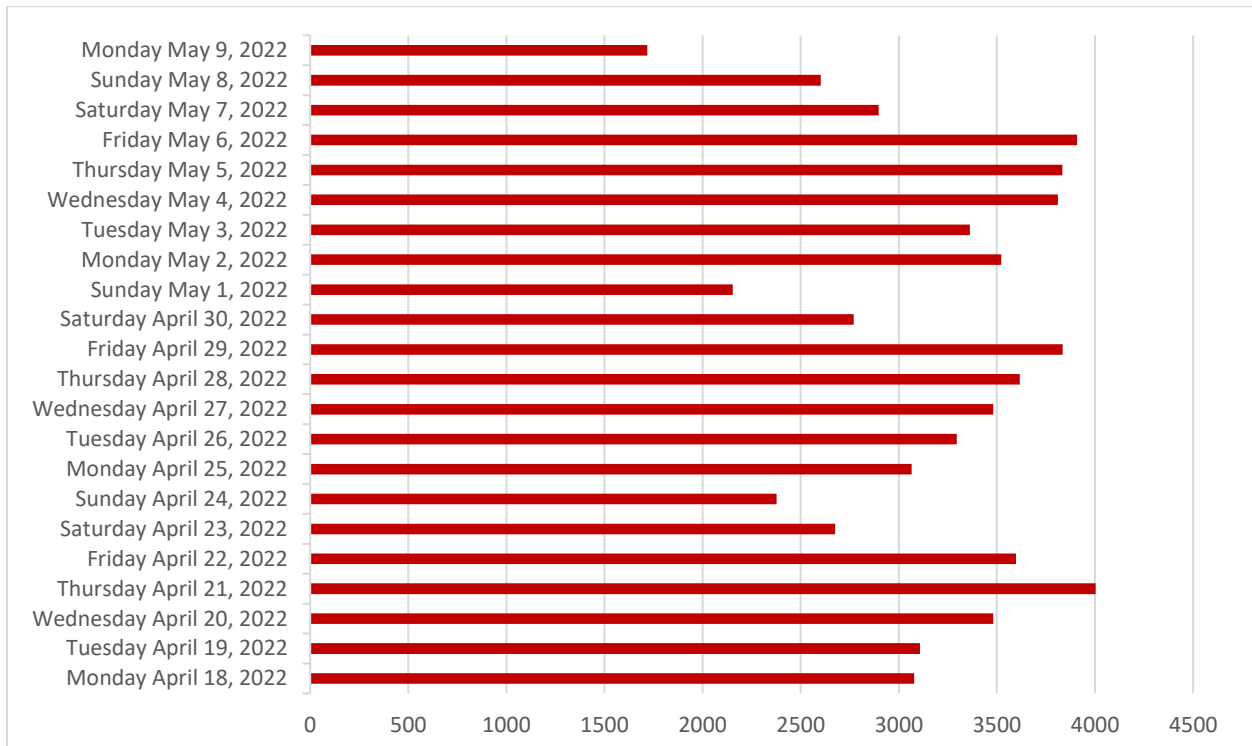


Figure 5 Total Volume per Day

The most traffic was recorded on Thursday April 21, 2022. Thursdays and Fridays seem to have had the most traffic. Low volumes were recorded on Sundays, the lowest being Sunday May 1, 2022, discounting Monday May 9, 2022, whereby data was not collected for the whole day.

The total volumes of traffic at different hours of the day are shown in Figure 6 below.

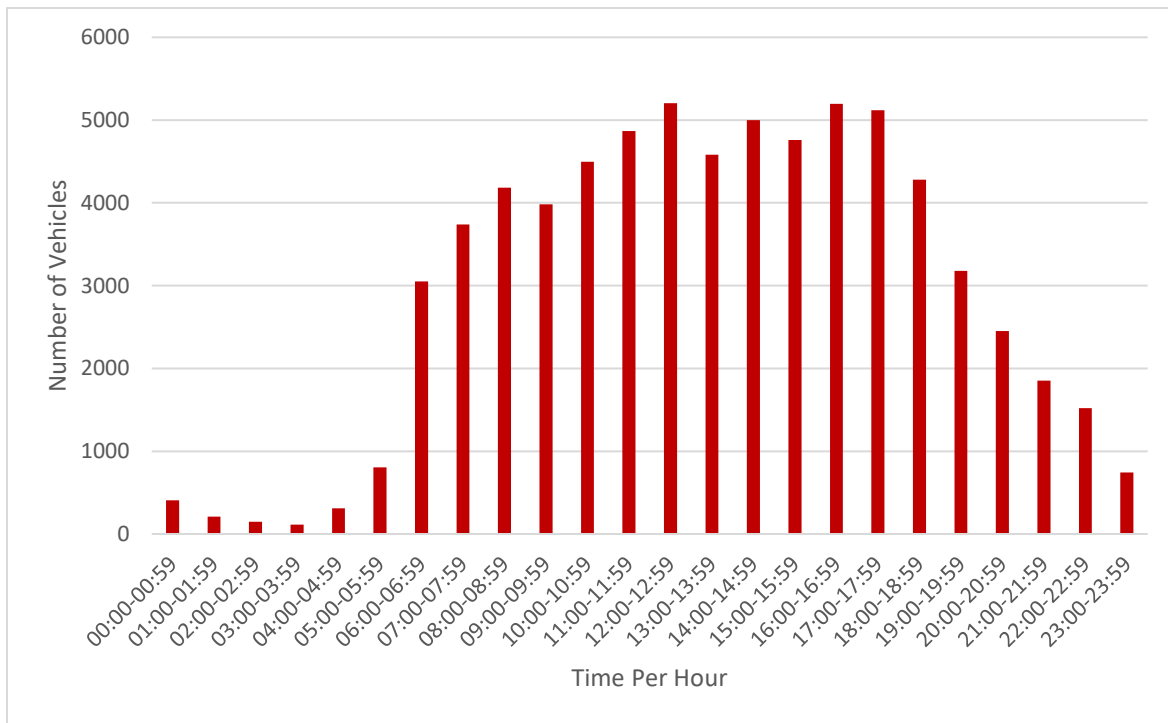


Figure 6 Total Volume per Hour

As shown in Figure 6, the traffic volume forms a curve in which traffic flow is low at night and begins to increase at 6:00 – 6:59. Peak traffic volume occurs from 12:00 – 12:59. The next peak times are 16:00 to 17:59 before the volume begins to decrease again.

4.0 Conclusion

The traffic study was conducted on Fourth Street in the northbound direction from April 18th to May 9th, 2022. From the speed analysis, it was determined that 99.75% of vehicles were travelling within the accepted speed limit with most people traveling below it. This could be due to the stop sign right before the traffic shield and slowing down from noticing it. There was more speeding traffic during the weekends than on weekdays in terms of average traffic volume. In addition, peak volumes occurred on later days of the week and during early morning, midday and evening times.