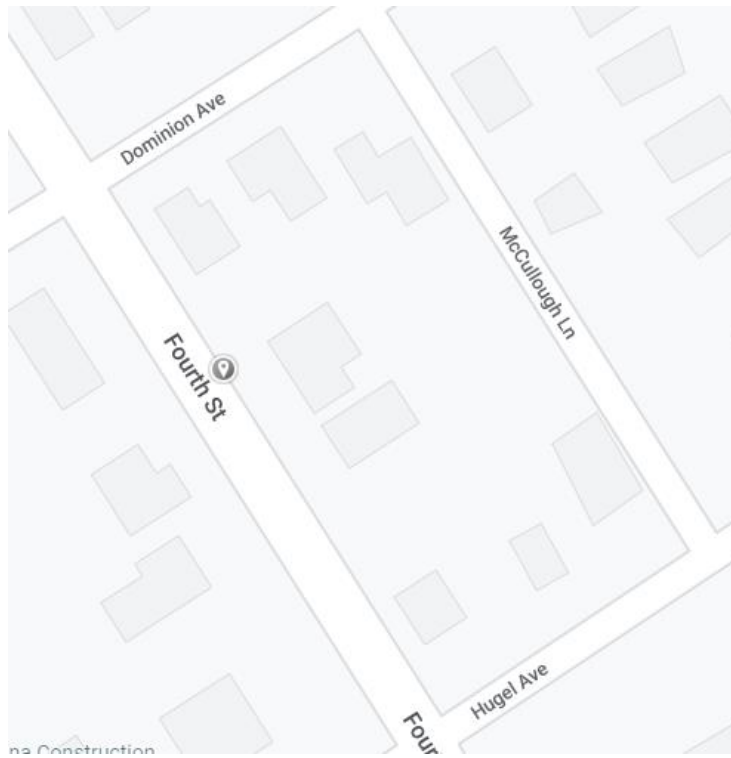


# Traffic Data Analysis

Fourth Street

Northbound



Town of Midland

Engineering Department

June 10<sup>th</sup>, 2022,

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## 1.0 Introduction

A traffic count was conducted from May 24<sup>th</sup>, 2022, to June 8<sup>th</sup>, 2022, on Fourth Street in the northbound direction. Vehicle speeds and traffic volumes 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	16:00 pm on May 24 <sup>th</sup> – 13:00 pm on June 8 <sup>th</sup> , 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

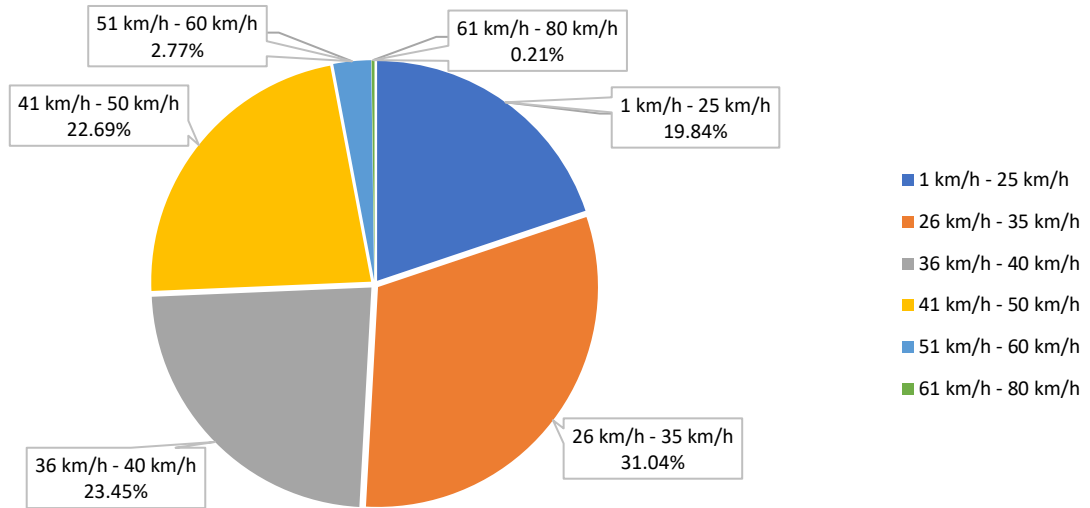
The posted speed limit on Fourth Street is 50 km/h; however, generally it is accepted that vehicles that are travelling up to 10 km/h above the posted speed limit are not considered to be speeding. Table 2 shows an overall speed summary of the data collected.

**Table 2- Speed Summary**

Direction	Average Speed (km/h)	85 <sup>th</sup> Percentile Speed (km/h)	Minimum Speed (km/h)	Maximum Speed (km/h)
Northbound	33.76	43.09	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 97.02% of vehicles were travelling below the posted speed limit and 2.98% of vehicles were travelling above 50km/h. Considering the accepted speed limit is 10 km/h over the posted speed limit, a total of 99.79% of vehicles were travelling within the accepted speed limit.

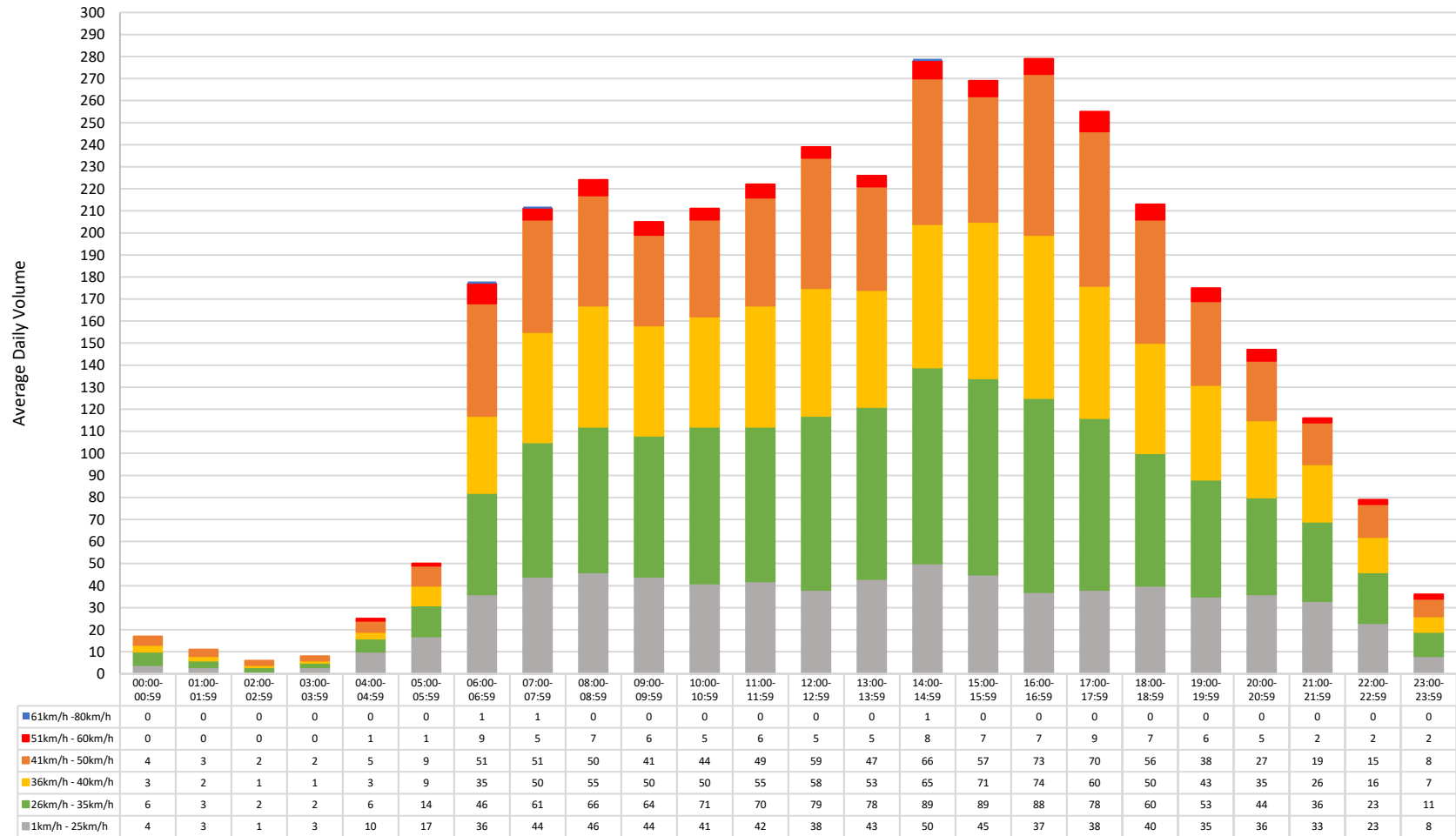


Figure 3 - Traffic Volume Speeds for Each Hour on Weekdays

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 06:00 – 06:59 until it reached its peak at 14:00 – 14:59 and again at 16:00 – 16:59 and begins to decline. Between 00:00 and 03:59, there were no speeding vehicles. The highest speeds which are greater than the acceptable speeding of 10 km/h above speed limit were recorded between 06:00 - 07:59 and 14:00 – 14:59.

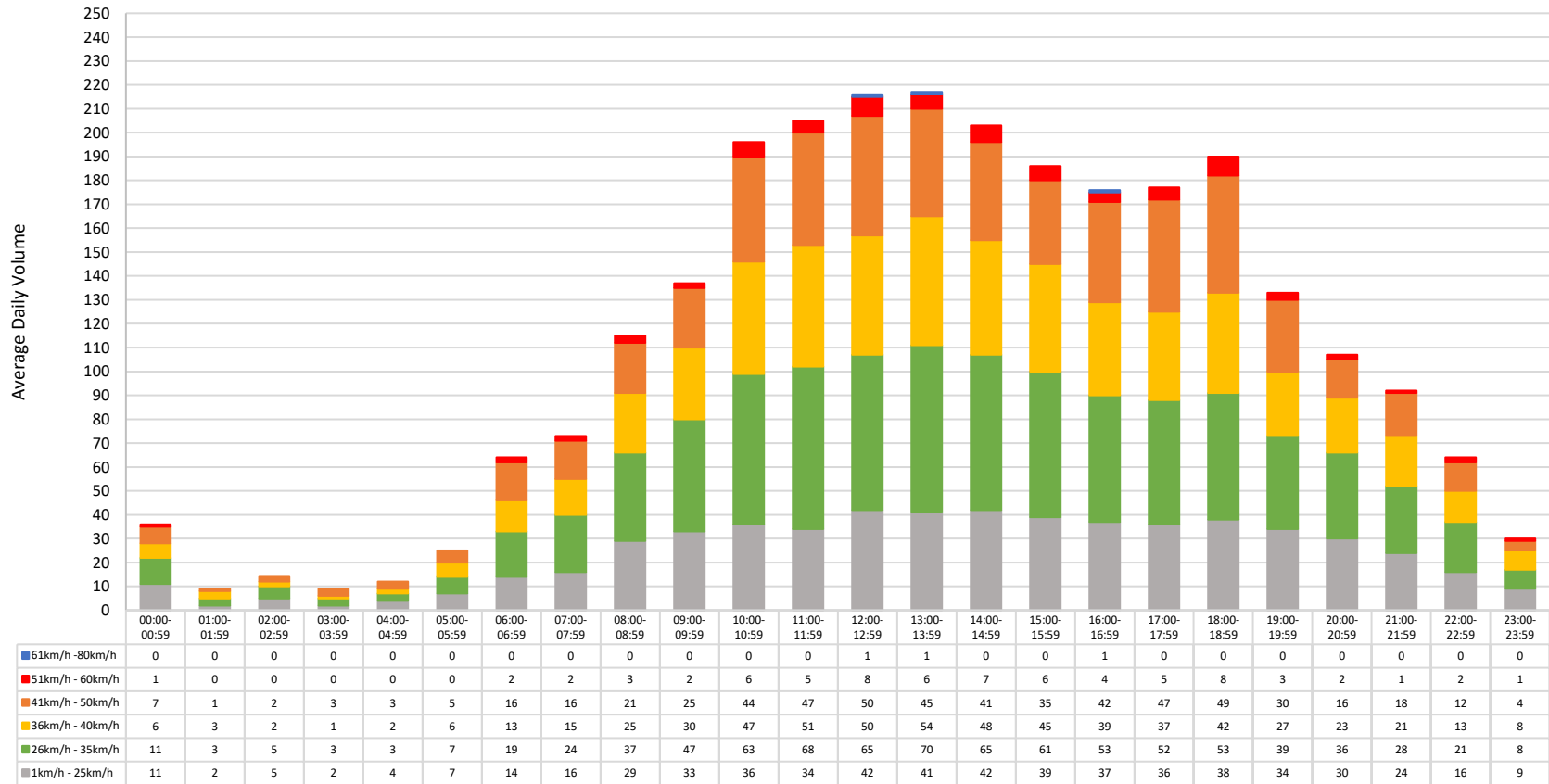


Figure 4 - Traffic Volume Speeds for Each Hour on Weekends

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 06:00 – 06:59 until it reached its peak at 13:00 – 13:59 and begins to decline. Speeds greater than the speed limit were recorded in all hour periods except for between 01:00 and 05:59. The highest speeds which are greater than the acceptable speeding of 10 km/h above speed limit were recorded between 12:00 - 13:59, and between 16:00 – 16:59.

### 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	3558
Northbound	Weekends	2662

### 3.1 Volume by Time Analysis

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

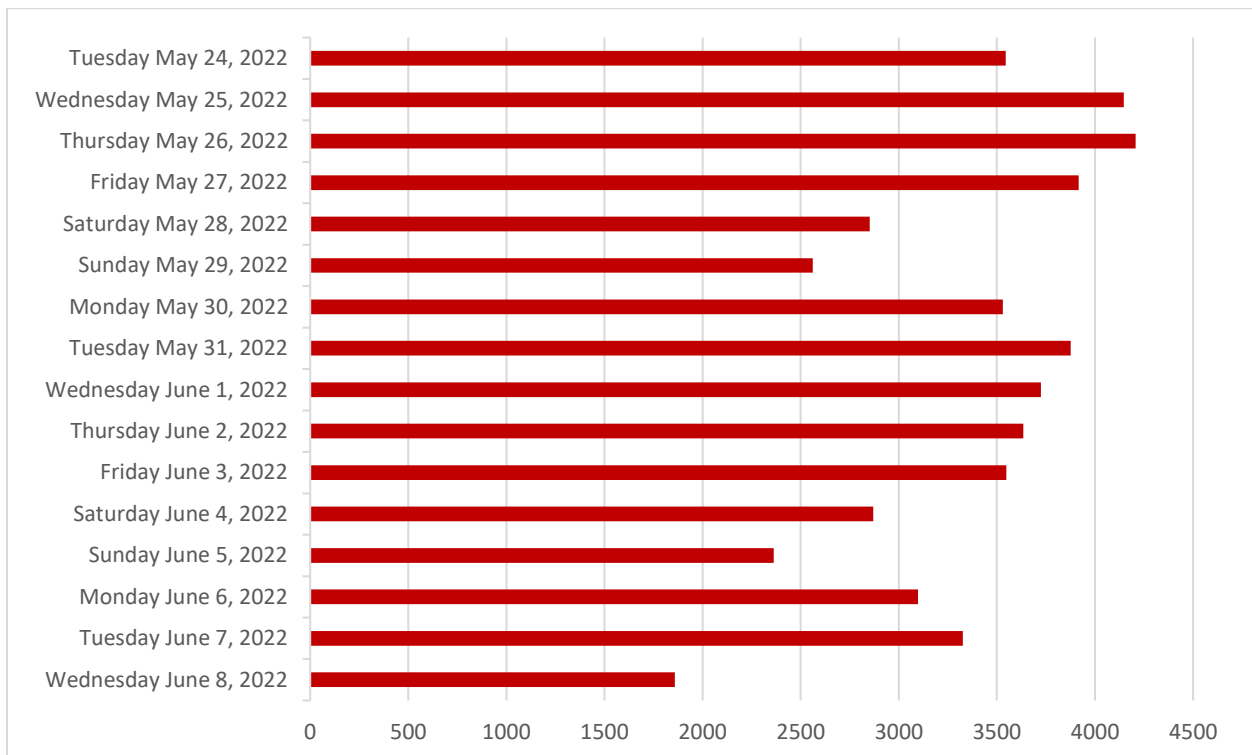
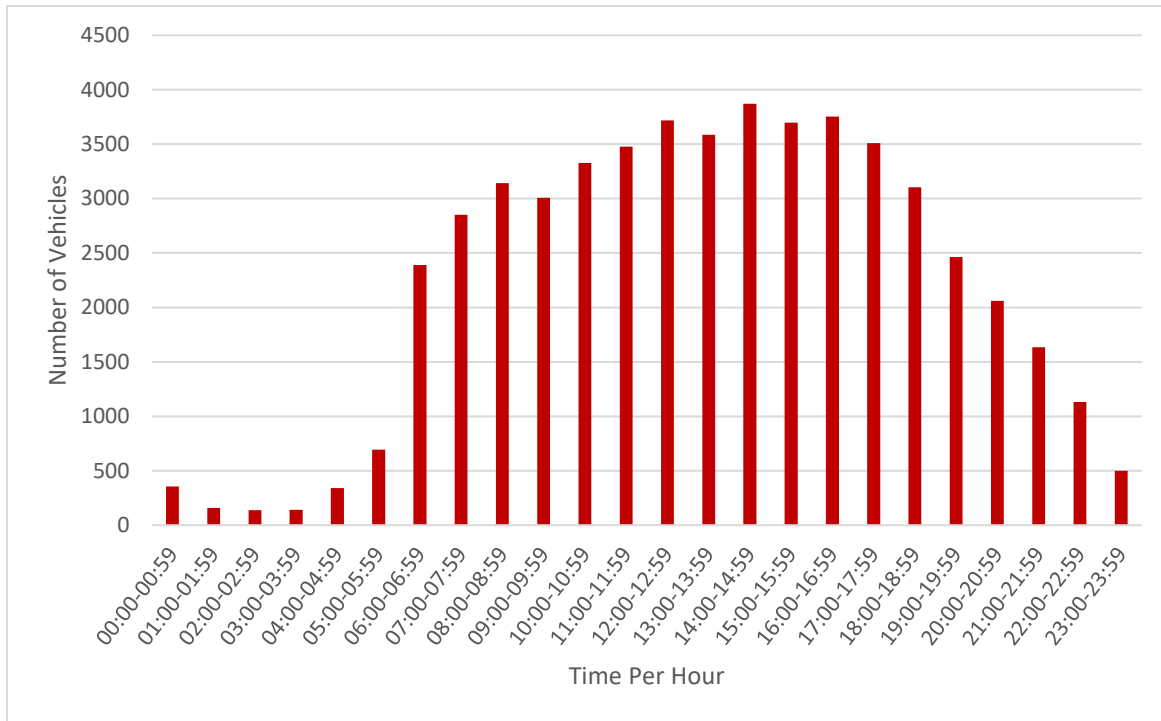


Figure 5 Total Volume per Day

The most traffic was recorded on Thursday May 26, 2022. Largest traffic volumes were on all weekdays especially from Tuesday through to Friday. Lowest volumes were recorded on Sundays, discounting Wednesday June 8, 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 06:00 – 06:59. Peak traffic volume occurs from 14:00 – 14:59 and it begins to decrease after. The least number of vehicles is recorded between 03:00 to 03:59.

#### 4.0 Conclusion

The traffic study was conducted on Fourth Street in the northbound direction from May 24<sup>th</sup> to June 8<sup>th</sup>, 2022. From the speed analysis, it was determined that 99.79% of vehicles were travelling within the accepted speed limit with most people traveling below the actual limit. 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 weekdays than on weekends.