

# Traffic Data Analysis

Galloway Boulevard  
Eastbound and Westbound



Town of Midland  
Engineering Department  
June 16<sup>th</sup>, 2022

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## 1.0 Introduction

A traffic count was conducted from June 1<sup>st</sup>, 2022, to June 15<sup>th</sup>, 2022, on Galloway Blvd for both eastbound and westbound directions. Vehicle speeds and traffic volumes were collected by a traffic trailer (model ATS-3). 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 Galloway Blvd for both eastbound and westbound directions. Table 1 below shows the location of the traffic trailer and data collection period.

**Table 1- Locations of Traffic Trailer**

Direction	Location	Period
Eastbound	295 Galloway Blvd, Midland, ON	June 1 <sup>st</sup> , 2022 – June 8 <sup>th</sup> , 2022
Westbound	300 Galloway Blvd, Midland, ON	June 8 <sup>th</sup> , 2022 – June 15 <sup>th</sup> , 2022

## 1.2 Traffic Trailer

The traffic trailer used was model ATS-3 as shown in Figure 1. The traffic trailer is set to show the speed of the approaching vehicle and display short messages depending on the speed. The data is collected and grouped into one-hour intervals.



**Figure 1 - Traffic Trailer**

## 2.0 Speed Summary

The posted speed limit on Galloway Blvd 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 for eastbound and westbound directions.

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)
Eastbound	50.49	61.31	10.00	107.00
Westbound	55.18	65.71	10.00	107.00

2.1 Eastbound Speed Analysis

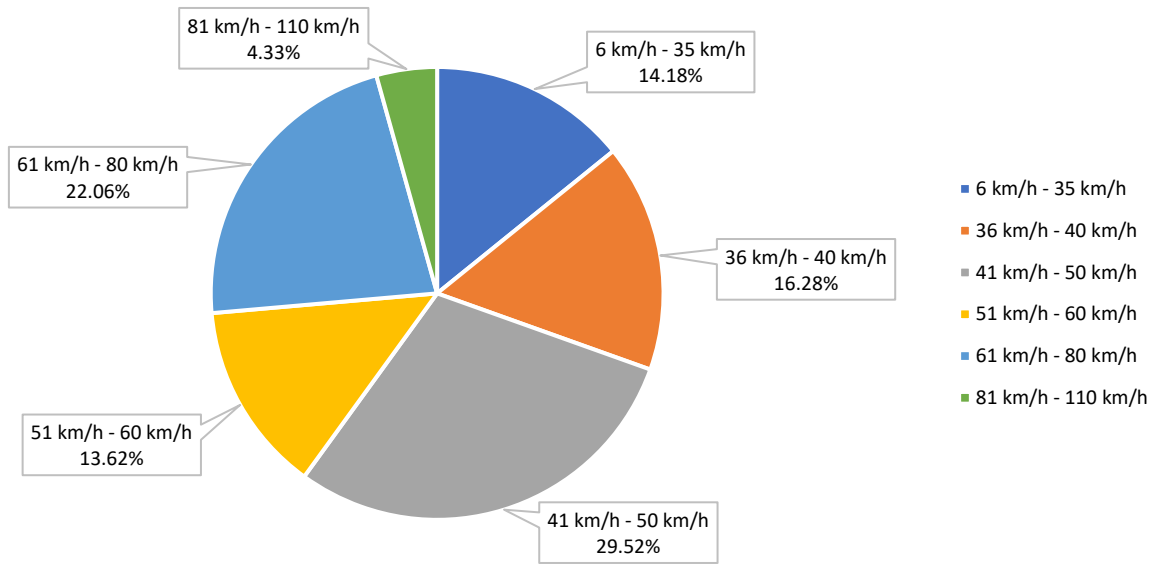
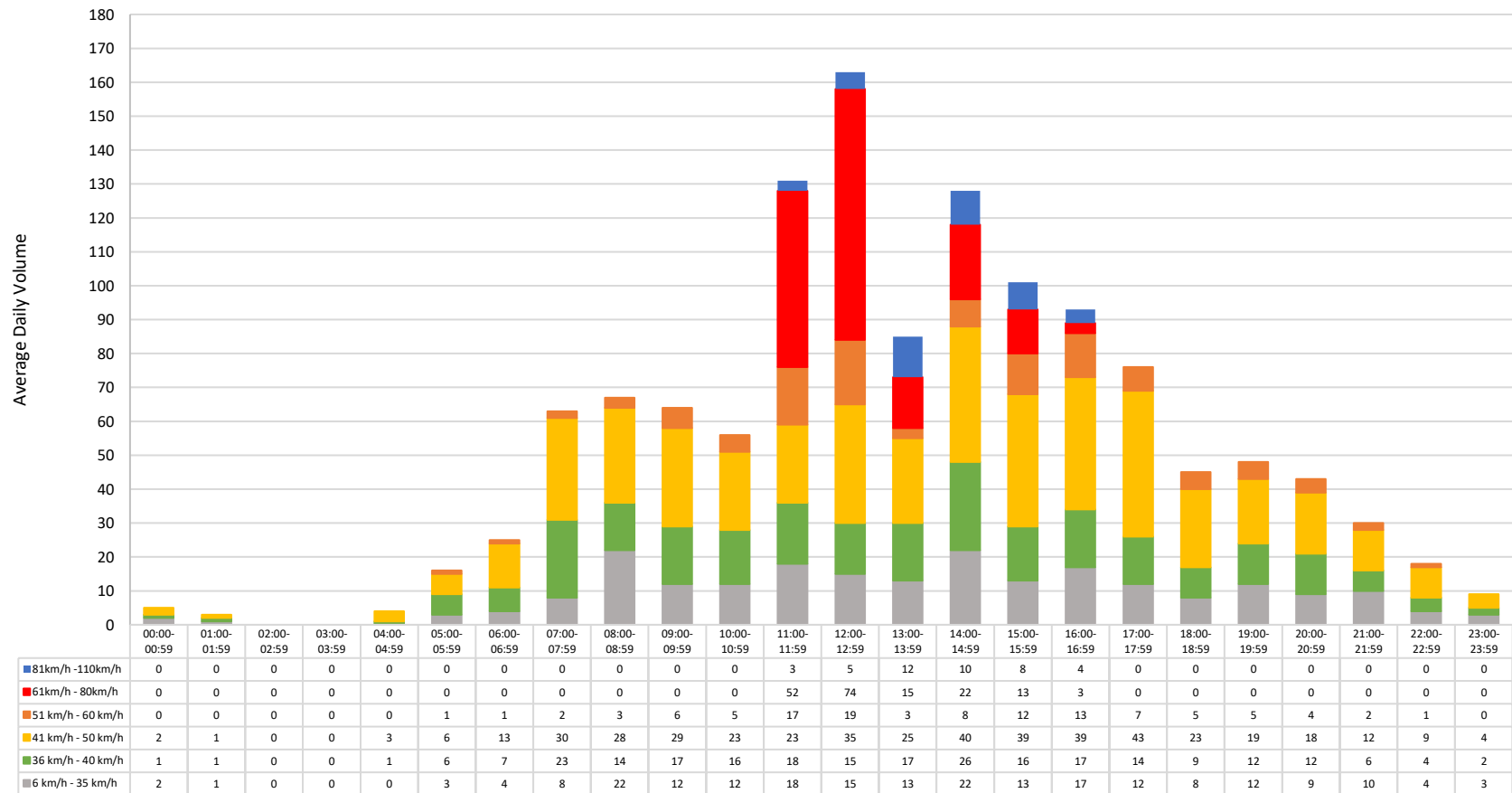


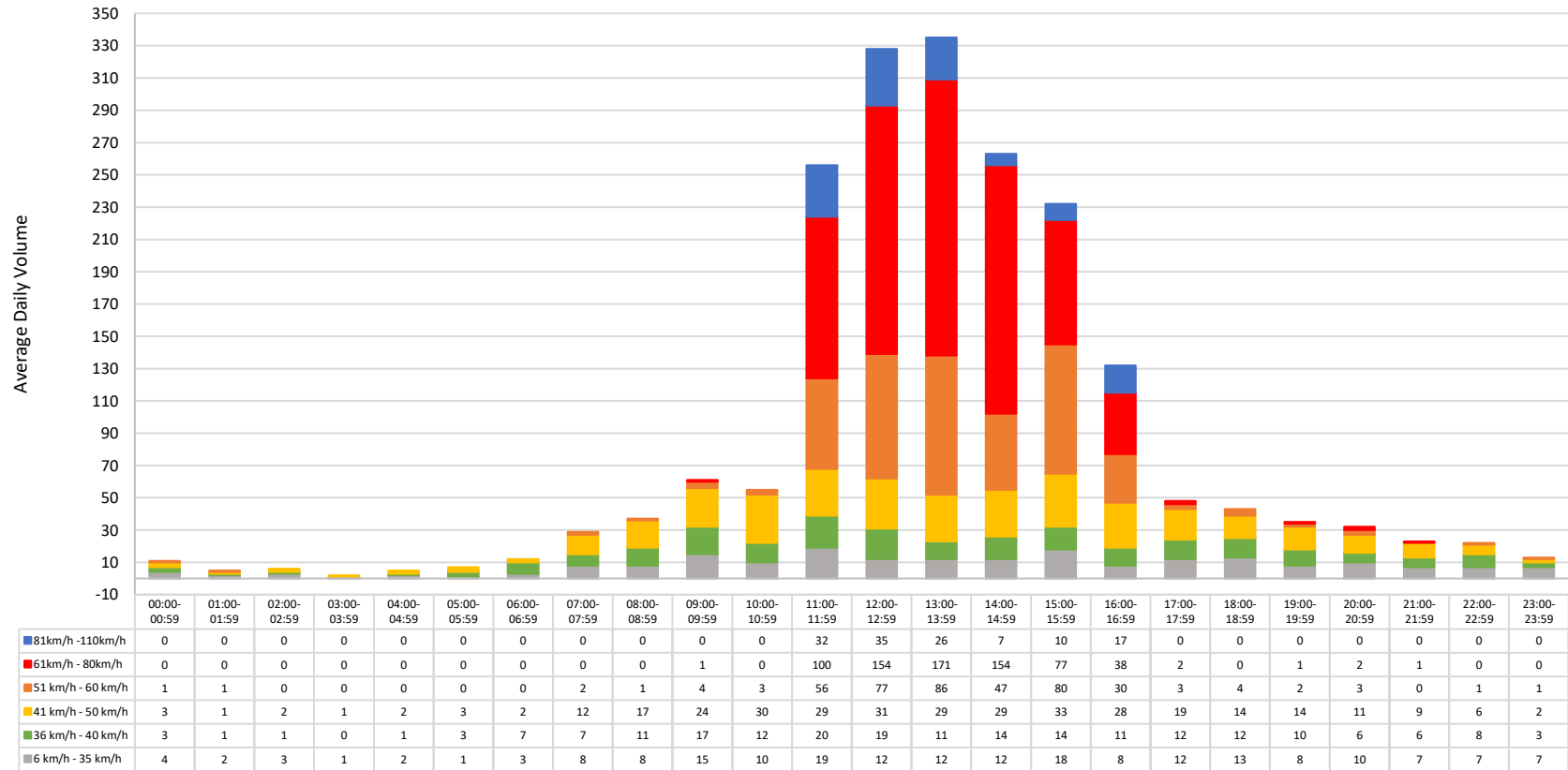
Figure 2- Total Volume Breakdown Based on Speed per Hour Intervals (Eastbound)

Figure 2 above shows that 59.98% of vehicles were travelling below the posted speed limit, 13.62% of vehicles were travelling between 51-60 km/h, and 26.39% of vehicles were travelling above 60 km/h. Considering the accepted speed limit is 10 km/h over the posted speed limit, a total of 73.60% of vehicles were travelling within the accepted speed limit in the eastbound direction.



**Figure 3 - Traffic Volume Speeds for Each Hour on Weekdays (Eastbound)**

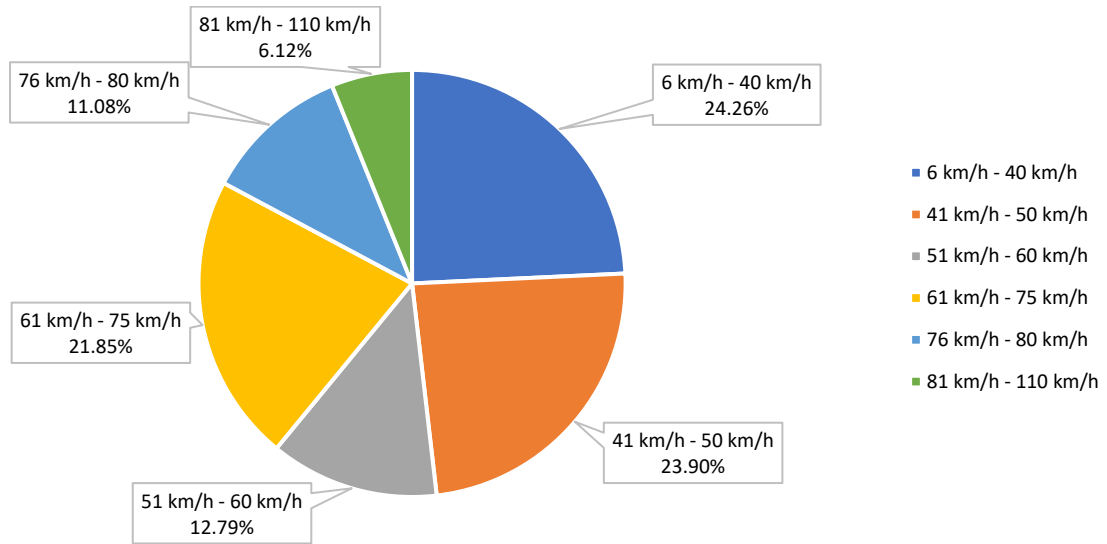
Figure 3 above is the graph used to determine the time when most speeding occurs on weekdays (June 1<sup>st</sup>, June 2<sup>nd</sup>, June 3<sup>rd</sup>, June 6<sup>th</sup>, June 7<sup>th</sup>, June 8<sup>th</sup>). The data does not have a definite curve shape but, the volume spikes at 07:00 – 07:59, again between 11:00 – 11:59, and peaks at 12:00 – 12:59. There is a volume decline at 13:00 – 13:59, then it increases at 14:00 – 14:59 and after it begins declining into the night. On average, there were no vehicles recorded between 02:00 – 03:59. Speeds greater than the speed limit were recorded between 11:00 – 16:59. The largest volume of traffic traveling at speeds beyond the acceptable limit were recorded from 11:00 to 12:59.



**Figure 4 - Traffic Volume Speeds for Each Hour on Weekends (Eastbound)**

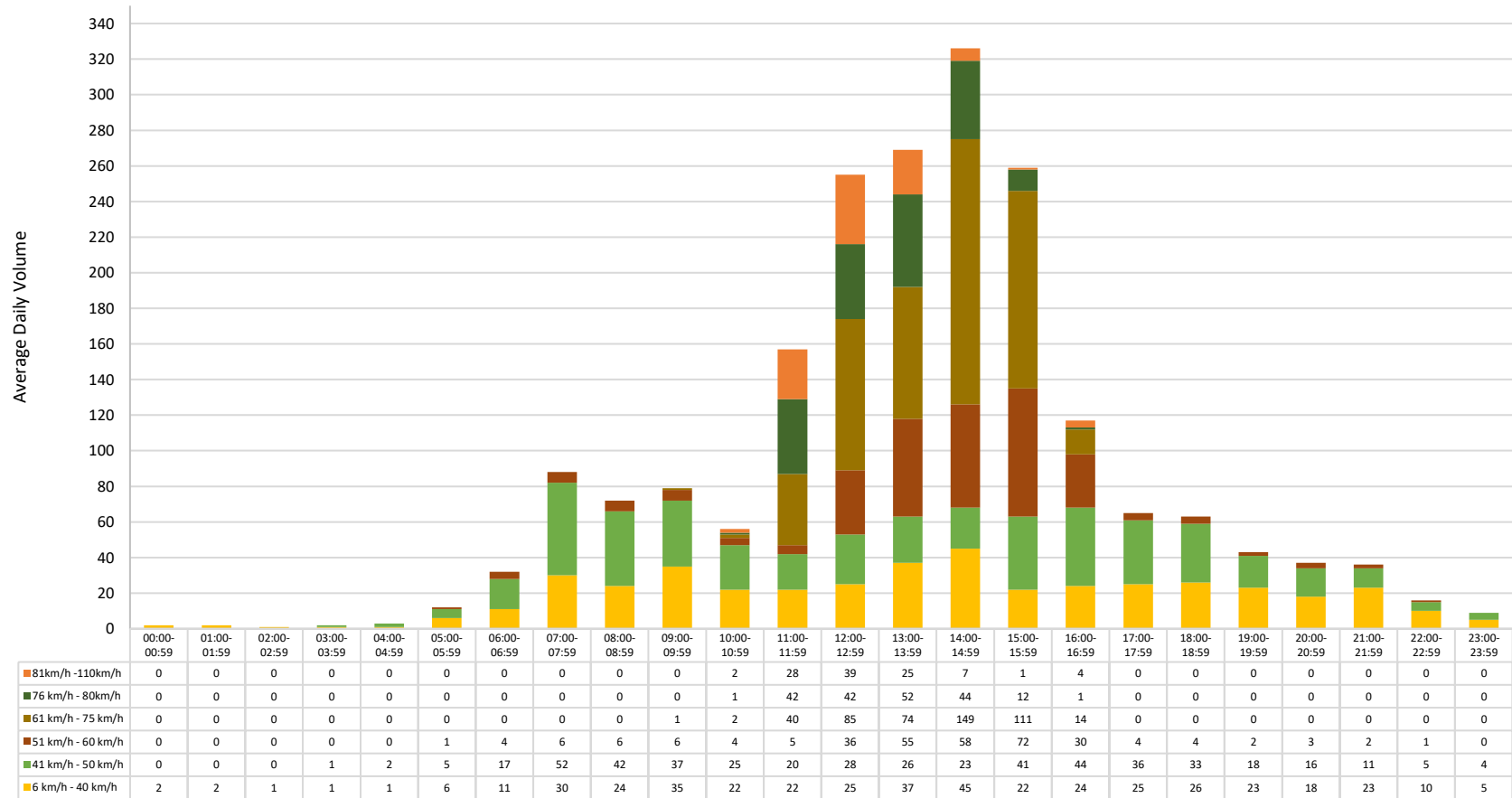
Figure 4 above is the graph used to determine the time when most speeding occurs on weekends (June 4<sup>th</sup> and June 5<sup>th</sup>). Traffic volume spikes at 11:00 – 11:59, peaks at 12:00 – 12:59, begins to decline. Between 11:00 – 16:59, are large volumes of traffic compared to other hours of the day and most vehicles are traveling beyond the acceptable speed limit.

## 2.2 Westbound Speed Analysis



**Figure 5 - Total Volume Breakdown Based on Speed per Hour Intervals (Westbound)**

Figure 5 shows that 48.16% of the vehicles were travelling below the posted speed limit, 12.79% of vehicles were travelling between 51-60 km/h, and 39.05% of vehicles were travelling above 60 km/h. Considering the accepted speed limit is 10 km/h over the posted speed limit, a total of 60.95% of vehicles were driving within the accepted speed limit.



**Figure 6 - Traffic Volume Speeds for Each Hour on Weekdays (Westbound)**

Figure 6 above is the graph used to determine the time when most speeding occurs on weekdays (June 8<sup>th</sup>, June 9<sup>th</sup>, June 10<sup>th</sup>, June 13<sup>th</sup>, June 14<sup>th</sup>, June 15<sup>th</sup>). The data does not have a definite curve shape but, the volume spikes at 07:00 – 07:59, again between 11:00 – 11:59, and peaks at 14:00 – 14:59. There is a volume decline at 10:00 – 10:59, then it increases to its peak, and after it begins declining into the night. Speeds greater than the speed limit were not recorded between 23:00 – 04:59. The largest volumes of traffic traveling at speeds beyond the acceptable limit were recorded from 11:00 to 15:59.



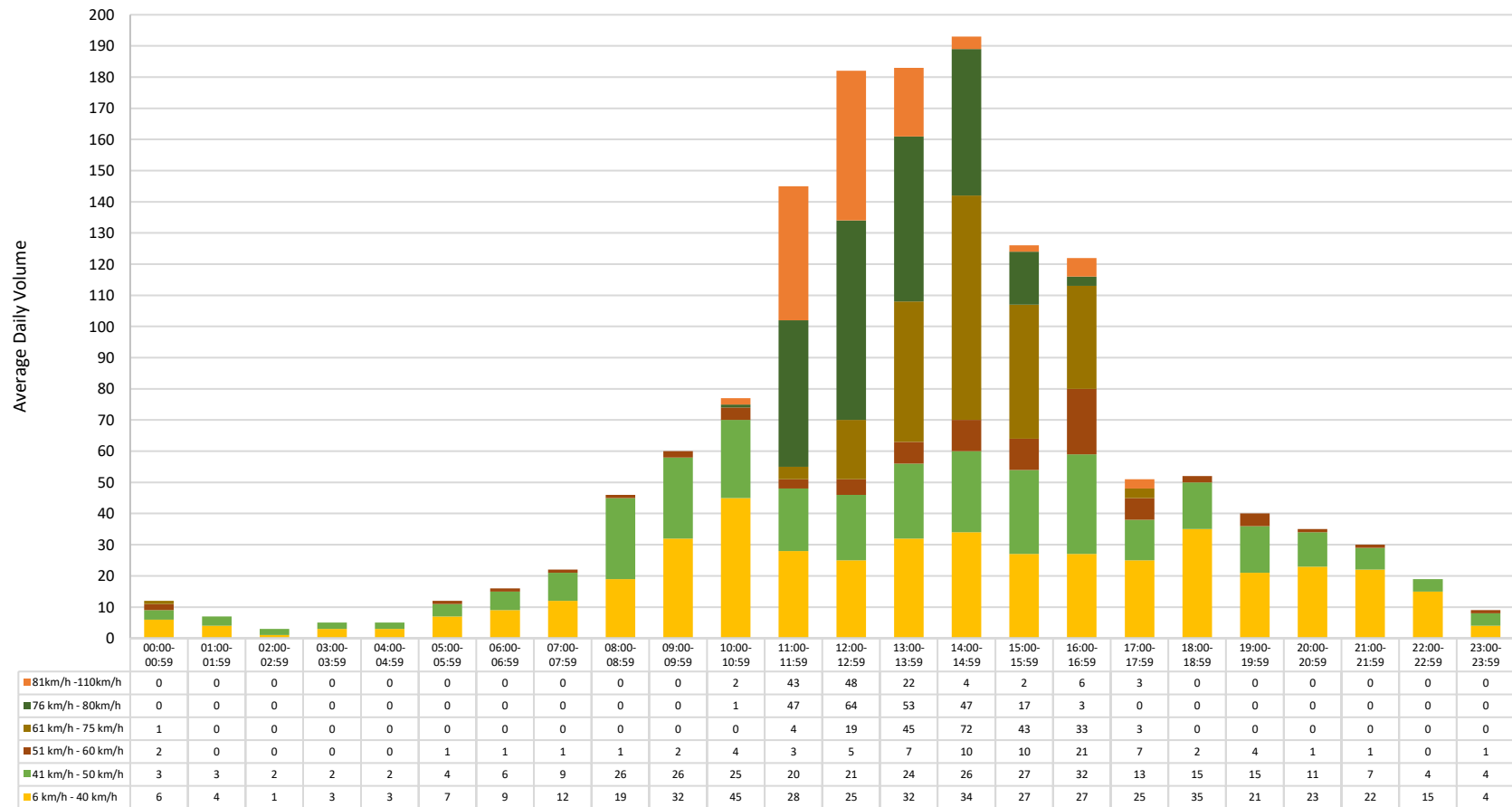


Figure 7 - Traffic Volume Speeds for Each Hour on Weekends (Westbound)

Figure 7 above is the graph used to determine the time when most speeding occurs on weekends (June 11<sup>th</sup> and June 12<sup>th</sup>). Generally, the data shows that speeds formed a curve as traffic volumes increased throughout the day peaking at 12:00 – 12:59, begins to decline. Speeds greater than the speed limit were not recorded between 01:00 – 04:59 and 22:00 – 22:59. On average, speeds greater than 80 km/h were recorded during eight time periods, between 10:00 – 17:59.

### 3.0 Traffic Volume

Table 3 shows the average daily volume on Galloway Blvd for eastbound and westbound directions.

Table 3 - Volume Summary

Direction	Period	Average Daily Traffic Volume
Eastbound	Weekday	1073
Eastbound	Weekend	1926
Westbound	Weekday	1774
Westbound	Weekend	1385

### 3.1 Eastbound Volume by Hour

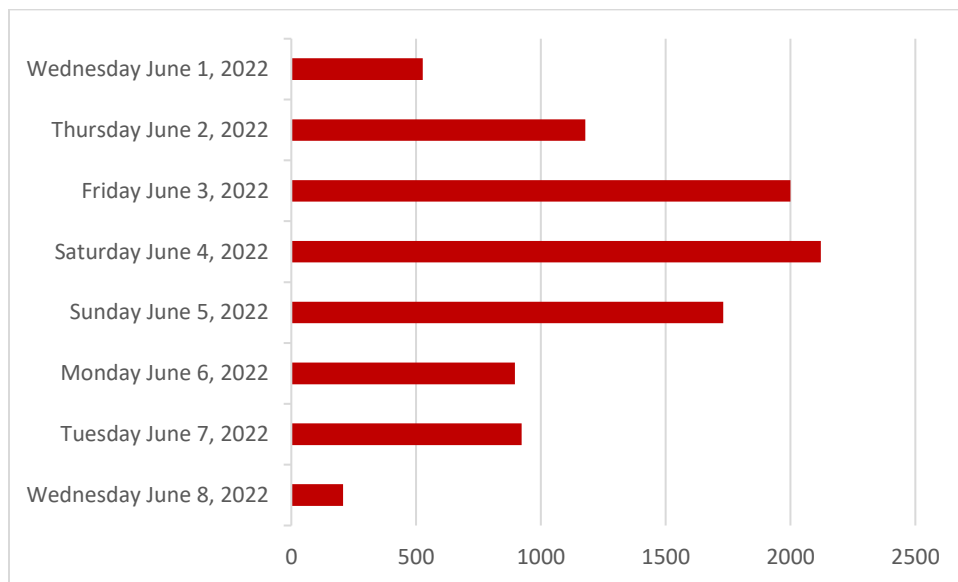
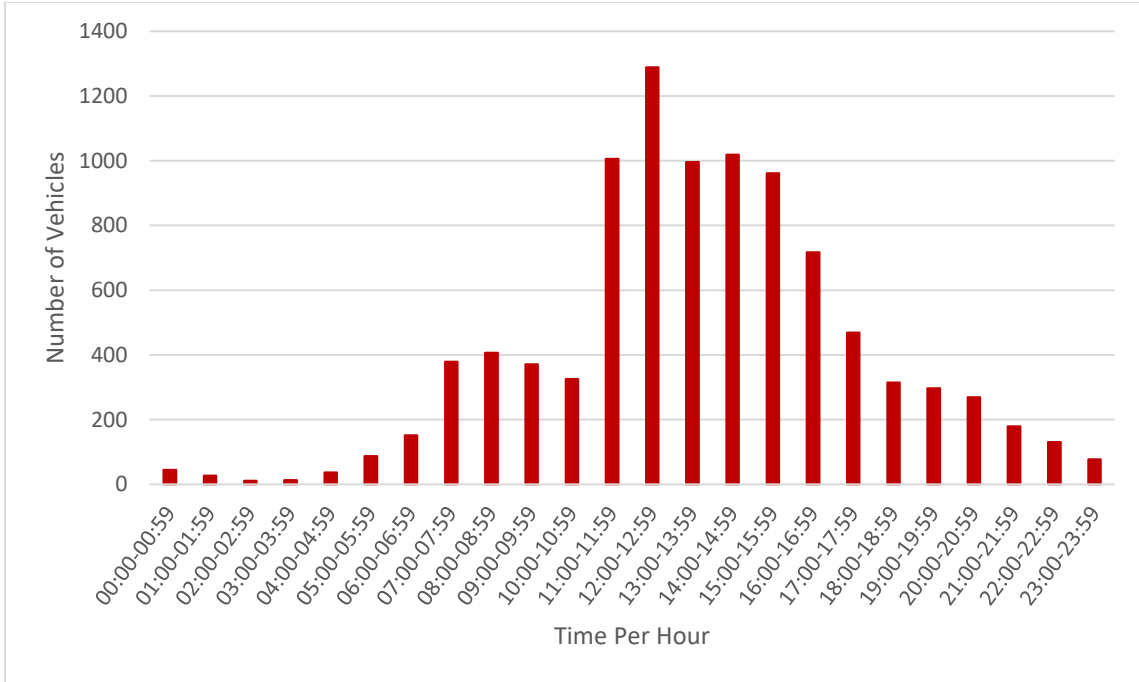


Figure 8 - Total Volume per Day (Eastbound)

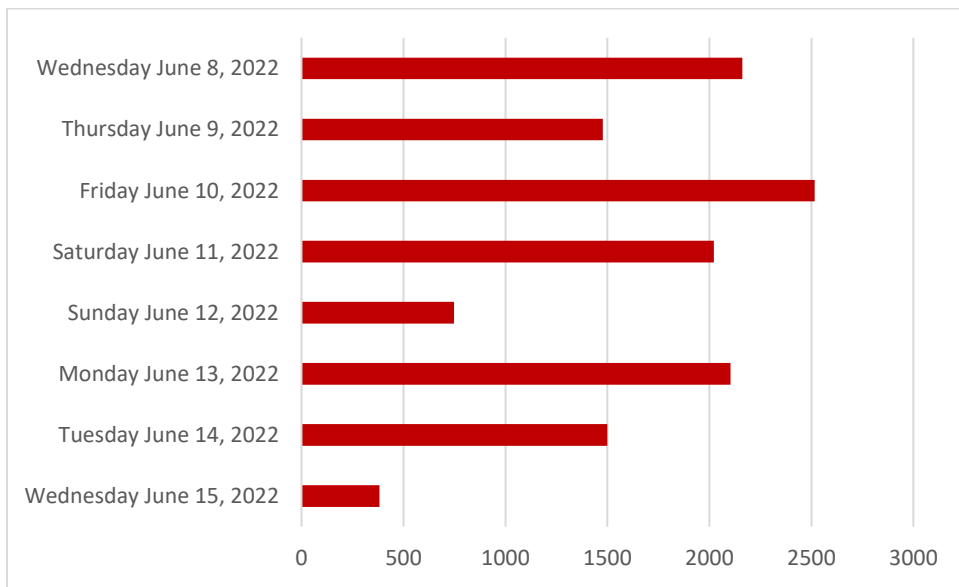
Figure 8 above shows the total volumes of each day data was collected in the eastbound direction. Saturday June 4<sup>th</sup> had the largest traffic volume, while Monday June 6<sup>th</sup> had the lowest discounting Wednesday June 1<sup>st</sup> and Wednesday June 8<sup>th</sup>, whereby data was not collected for the full day. Generally, more traffic was recorded on weekends than weekdays.



**Figure 9 - Total Volume per Hour (Eastbound)**

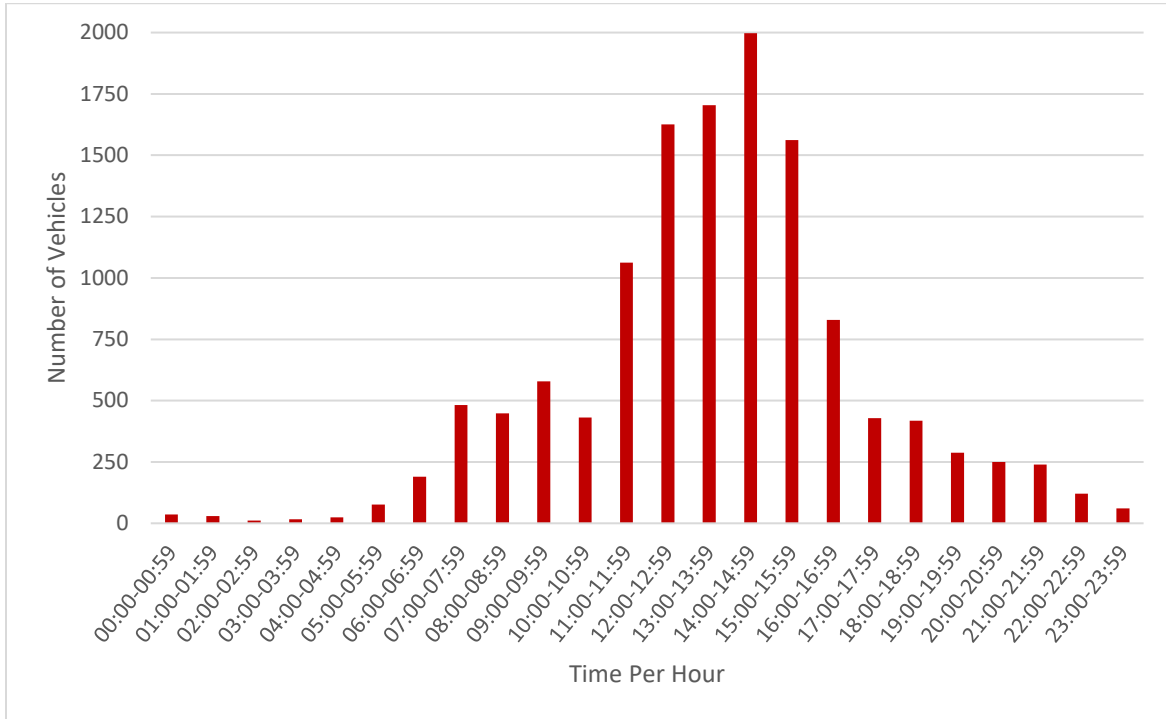
As shown in Figure 9 above, the traffic volume forms a curve in which traffic flow is low at night and begins to increase at 05:00 – 05:59, spikes at 11:00 – 11:59. Peak traffic volume occurs at 12:00 – 12:59 and it begins to decline into the night.

### 3.2 Westbound Volume by Hour



**Figure 10 - Total Volume per Day (Westbound)**

Figure 10 above shows the daily total traffic volumes in the westbound direction. Friday June 10<sup>th</sup> had the largest traffic volume, while Sunday June 12<sup>th</sup> had the lowest discounting Wednesday June 15<sup>th</sup>, whereby data was not collected for the full day. Generally, more traffic was recorded on weekdays than weekends.



**Figure 11 - Total Volume per Hour (Westbound)**

The total volumes of traffic at different hours of the day in the westbound direction are shown in Figure 11 above. The volume of traffic over time forms a curve which spikes from 06:00 – 06:59 and reaches a peak at 14:00 – 14:59.

#### 4.0 Conclusion

The traffic study conducted on Galloway Blvd for both eastbound and westbound directions was carried out from June 1<sup>st</sup> to June 15<sup>th</sup>, 2022. From the speed analysis, it was determined that 73.60% and 60.95% of vehicles were travelling within the accepted speed limit for the eastbound and westbound directions, respectively. Sundays had the least traffic, while most was recorded on Fridays. The highest speeds were recorded during weekends.