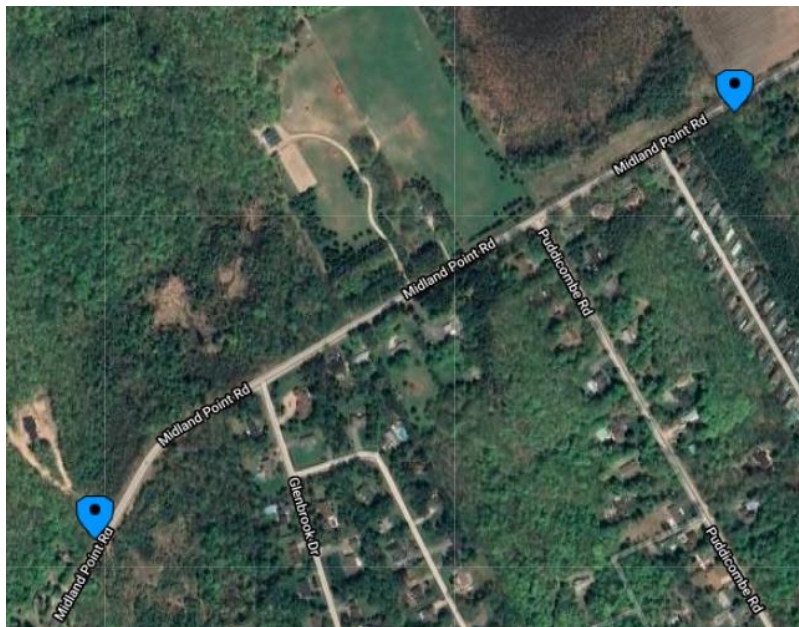


Traffic Data Analysis

Midland Point Road
Eastbound and Westbound



Town of Midland
Engineering Department

June 16th, 2021

1.0	Introduction	3
1.1	Location.....	3
1.2	Traffic Trailer	3
2.0	Speed Summary	4
2.1	Eastbound Speed Analysis	4
2.2	Westbound Speed Analysis.....	7
3.0	Traffic Volume.....	10
3.1	Eastbound Volume by Hour	11
3.2	Westbound Volume by Hour	12
4.0	Conclusion.....	13
	Figure 1- Traffic Trailer.....	3
	Figure 2- Midland Point Road Eastbound	4
	Figure 3- Speed by Hour Analysis for Eastbound Weekdays	5
	Figure 4 Speed by Hour Analysis for Eastbound Weekends	6
	Figure 5- Midland Point Road Westbound	7
	Figure 6- Speed by Hour Analysis for Westbound (June 10 th to June 11 th and June 13 th to June 14 th , 2021)	8
	Figure 7- Speed by Hour Analysis for Westbound (June 12 th to June 13 th , 2021).....	9
	Figure 8- Total Volume per Day (Eastbound).....	10
	Figure 9- Total Volume per Day (Westbound)	11
	Figure 10 Average Volume per Hour from June 3 rd to June 4 th and June 7 th to June 8 th (Eastbound).....	11
	Figure 11- Average Volume by Hour from June 5 th to June 6 th (Eastbound)	12
	Figure 12- Average Volume by Hour from June 10 th to June 11 th and June 13 th to June 14 th , 2021 (Westbound)	12
	Figure 13- Average Volume by Hour from June 11 th to June 12 th (Westbound).....	13
	Table 1- Locations of Traffic Trailer	3
	Table 2- Speed Summary	4
	Table 3- Volume Summary.....	10

1.0 Introduction

A traffic count was conducted from June 2nd, 2021, to June 2nd, 2021, on Midland Point Road for both eastbound and westbound directions. Vehicle speeds and traffic volume 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 Midland Point Road 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	555 Midland Point Road, Midland, ON	10:00am on June 2 nd – 11:00am on June 9 th , 2021
Westbound	764 Midland Point Road, Midland, ON	11:00am June 9 th , 2021 - 9:30am on June 16 th , 2021

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 Midland Point Road is 60km/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 for eastbound and westbound directions.

Table 2- Speed Summary

Direction	Average Speed (km/h)	85 th Percentile Speed (km/h)	Minimum Speed (km/h)	Maximum Speed(km/h)
Eastbound	56.3	64.71	10	106.0
Westbound	56.99	63.55	10	89.0

2.1 Eastbound Speed Analysis

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

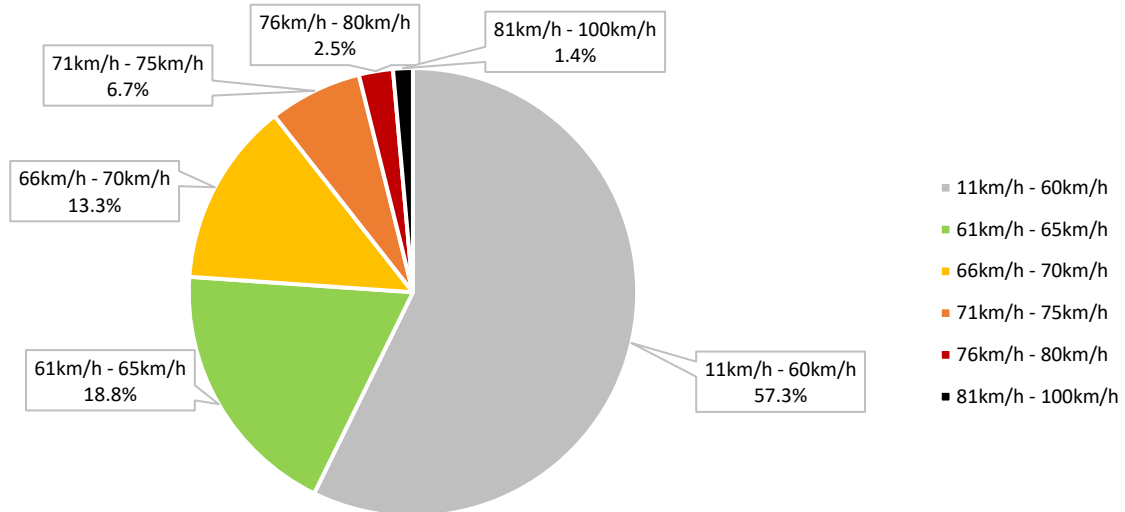


Figure 2- Midland Point Road Eastbound

Figure 2 above shows that 57.3% of vehicles were travelling below the posted speed limit, 32.1% of vehicles were travelling between 61-70 km/h, and 10.6% of vehicles were travelling above 70km/h. Considering the accepted speed limit is 10km/h over the posted speed limit, a total of 89.4% of vehicles were travelling within the accepted speed limit in the eastbound direction.

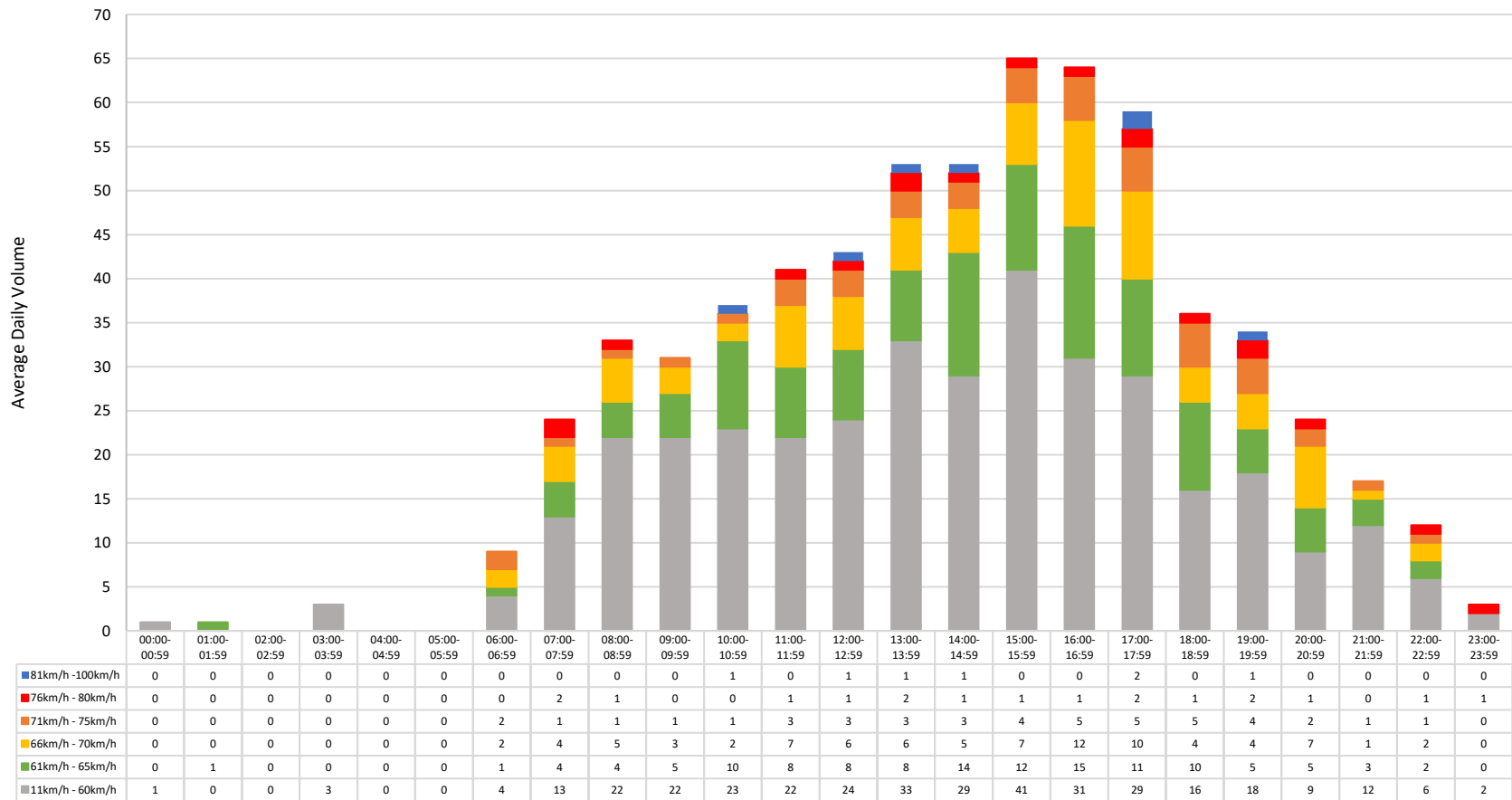


Figure 3- Speed by Hour Analysis for Eastbound Weekdays

Figure 3 above is the speed by hour graph used to determine the time where most speeding occurs on weekdays (June 3rd to June 4th and June 7th to June 8th). The data shows that speeding was consistent throughout the day and into the late evening, being between 6:00am to 8:59pm. The data shows that speeding begins to increase around noon and reaches a peak at 5:00pm before it begins to decline again.

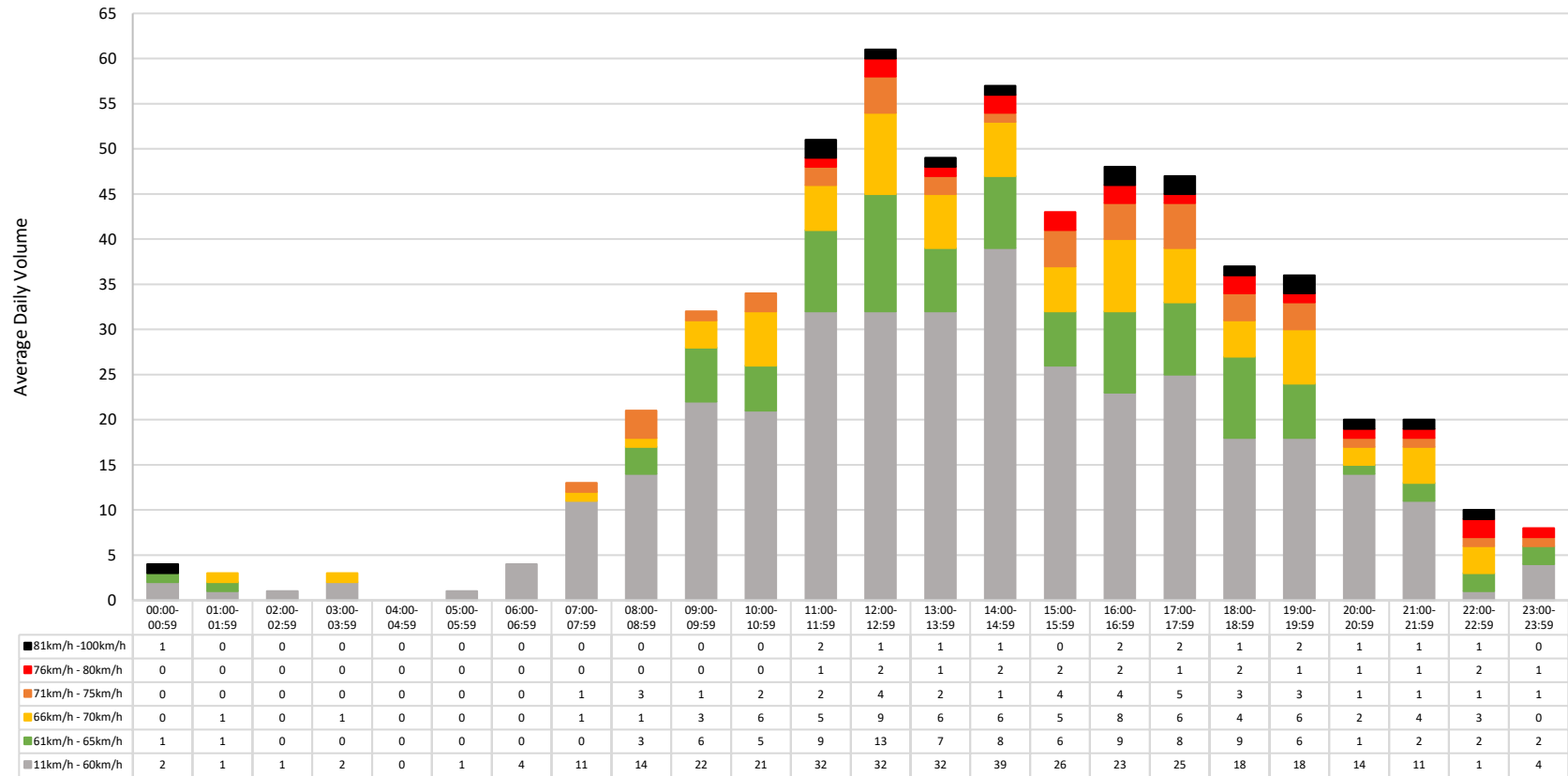


Figure 4 Speed by Hour Analysis for Eastbound Weekends

Figure 4 above is the speed by hour graph used to determine the time where most speeding occurs on the weekend (June 5th to June 6th). The data shows that speeding was low in the morning and began to increase around 11:00 am before beginning to decline again at 11:00pm. The data shows an initial spike in speeding at noon as well as from 5:00pm until 6:59pm.

2.2 Westbound Speed Analysis

Figure 5 to 7 below is the speed summary for the westbound traffic.

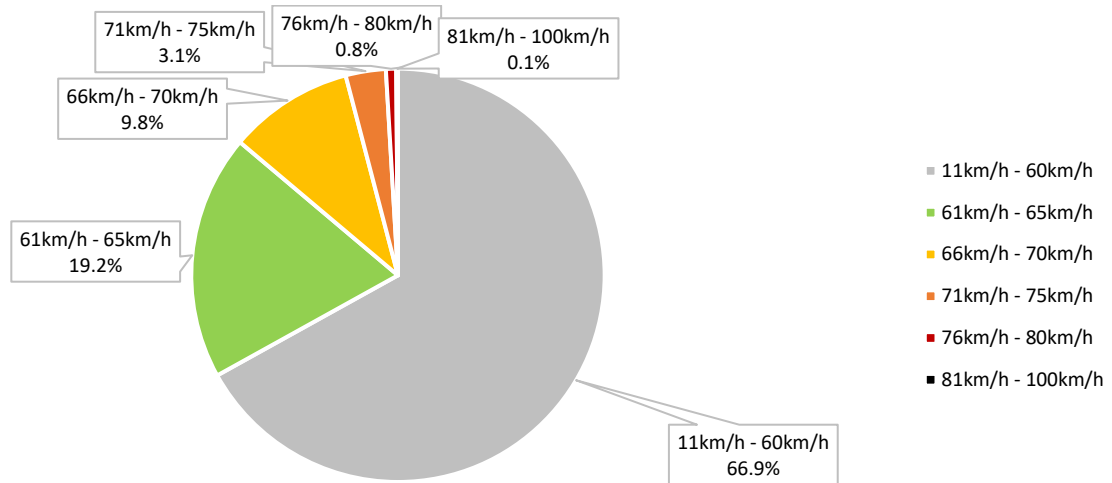


Figure 5- Midland Point Road Westbound

Figure 5 shows that 66.9% of the vehicles were travelling below the posted speed limit, 29% of vehicles were travelling between 61-70 km/h, and 4% of vehicles were travelling above 70km/h. Considering the accepted speed limit is 10km/h over the posted speed limit, a total of 95.9% of vehicles were driving within the accepted speed limit.

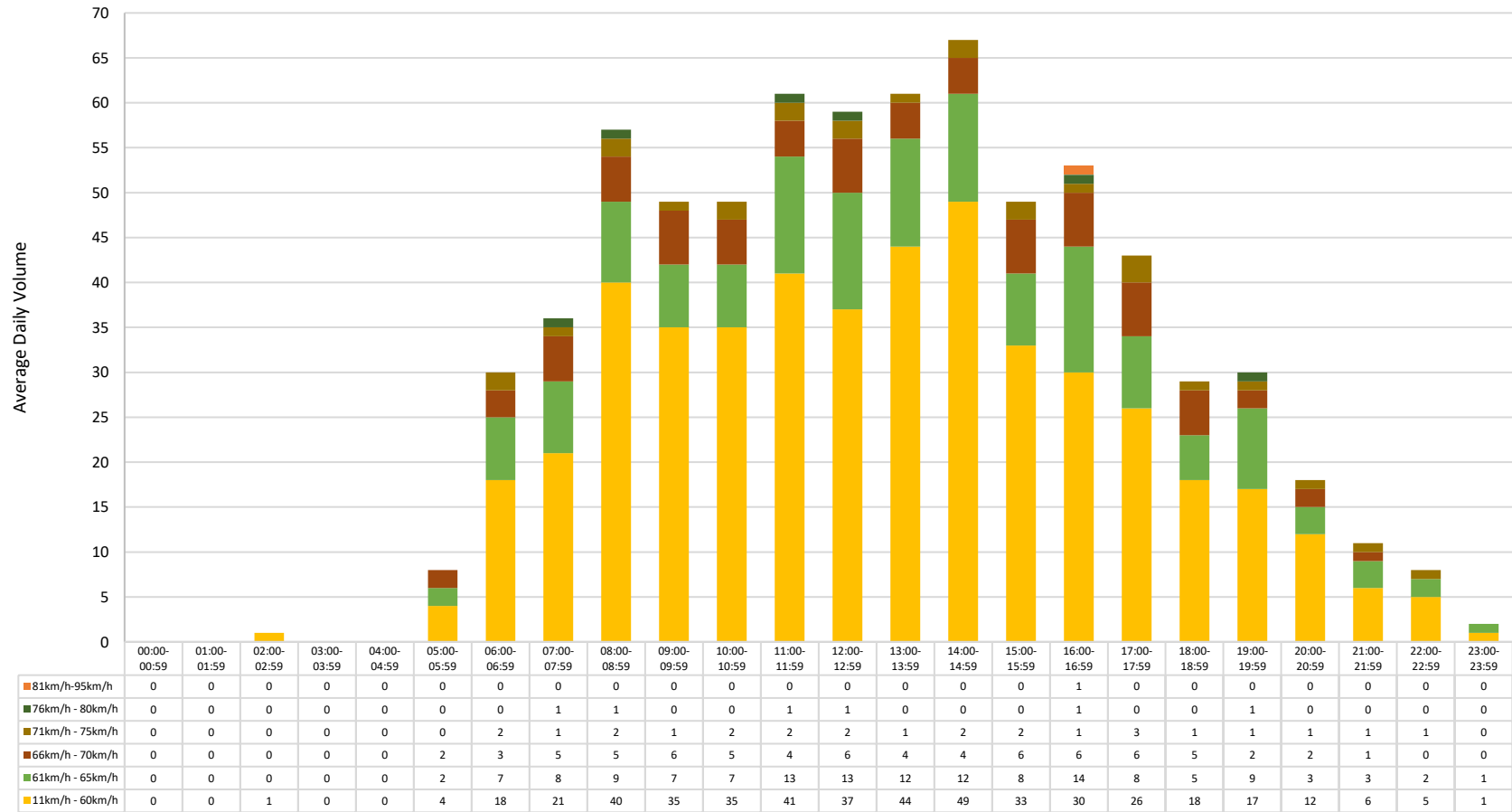


Figure 6- Speed by Hour Analysis for Westbound (June 10th to June 11th and June 13th to June 14th, 2021)

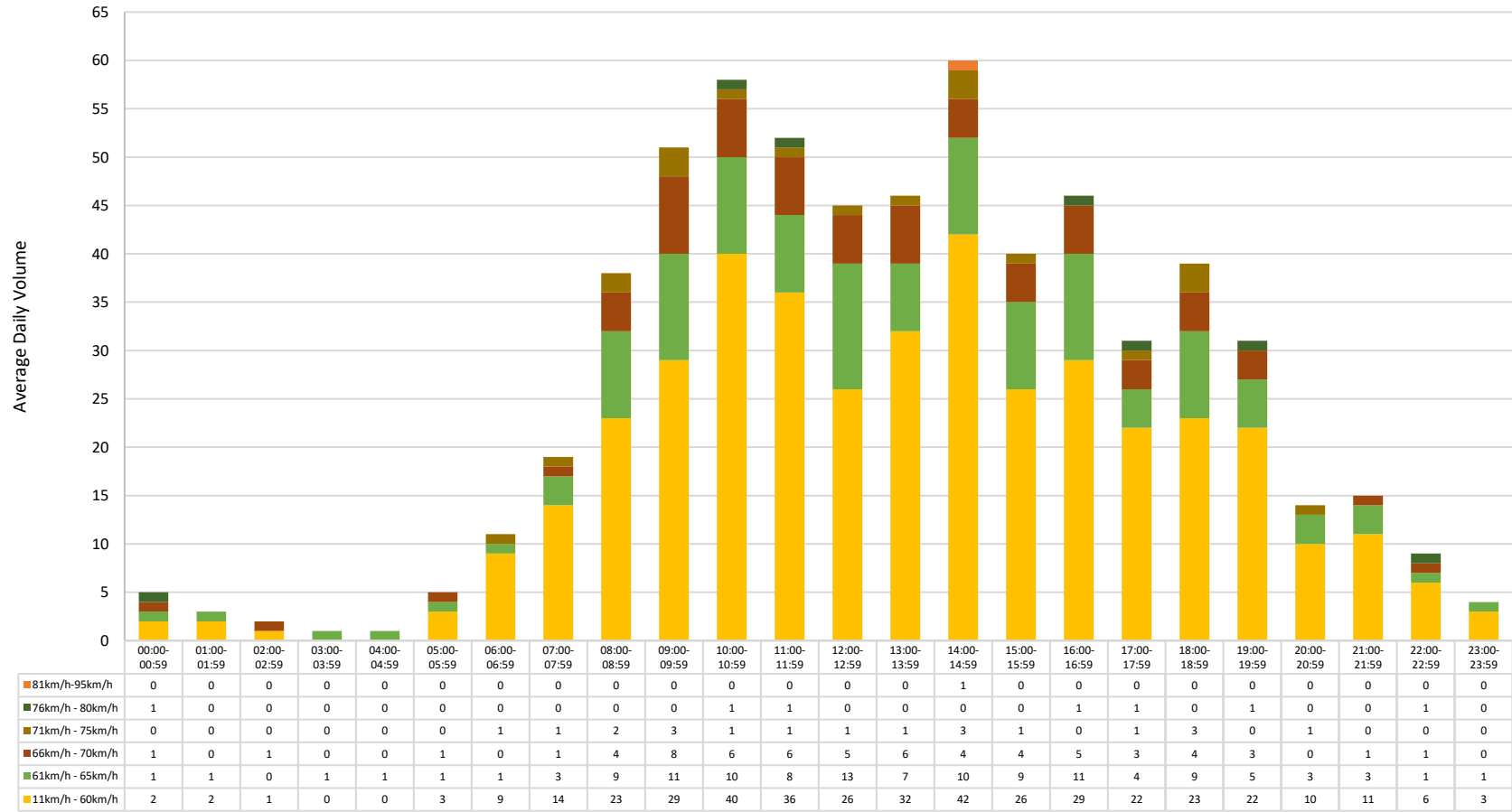


Figure 7- Speed by Hour Analysis for Westbound (June 12th to June 13th, 2021)

Figure 6 (weekday) and Figure 7 (weekend) above are the speed by hour graphs used to determine the time where most speeding occurs. The data shows that speeding was relatively inconsistent as there was very little speeding overall and so many periods had no speeding at all. On the weekdays, there were spikes in speeding during typical rush hours from 8:00-8:59am, 11:00am-12:59pm and 4:00-5:59pm. On the weekend, there were peaks in speeding from 9:00-9:59am, 2:00-2:59pm and 6:00-6:59pm.

In addition, the traffic trailer detected that 41.8% of vehicles slowed down when approaching the trailer in the eastbound direction and only 24.8% slowed down in westbound direction. These percentages show that the trailer is influencing traffic calming. However, the percentages of vehicles that slowed down are relatively low when compared to the results on other streets.

3.0 Traffic Volume

Table 3 shows the average daily volume on Midland Point Road for eastbound and westbound directions.

Table 3- Volume Summary

Direction	Period	Average Daily Traffic Volume
Eastbound	June 3 rd to June 4 th and June 7 th to June 8 th (Monday, Tuesday, Thursday, Friday)	617.3
Eastbound	June 5 th to June 6 th (Saturday, Sunday)	560.0
Westbound	June 9 th -10 th and June 13 th -14 th (Monday, Tuesday, Thursday, Friday)	709.8
Westbound	June 11 th - 12 th (Saturday, Sunday)	576.5

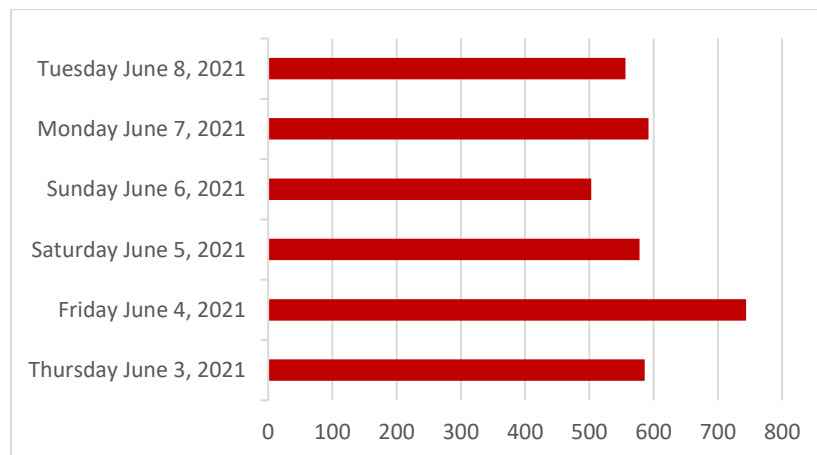


Figure 8- Total Volume per Day (Eastbound)

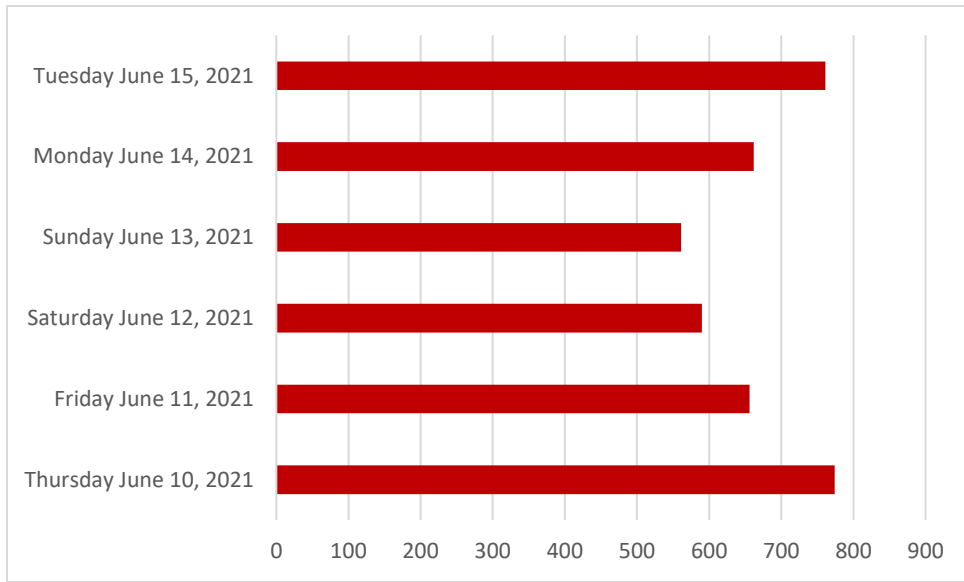


Figure 9- Total Volume per Day (Westbound)

3.1 Eastbound Volume by Hour

The data collected from June 3rd to June 4th and June 7th to June 8th (weekdays) and June 5th to June 6th (weekend) are used to analyze the average traffic volume at different times of the day as shown in Figure 10 and Figure 11, respectively.

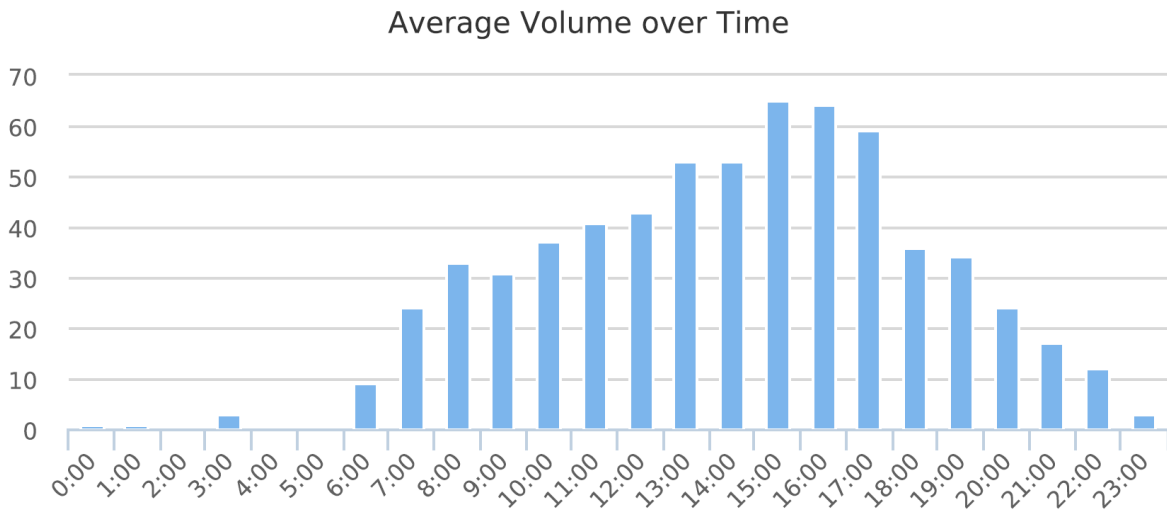


Figure 10 Average Volume per Hour from June 3rd to June 4th and June 7th to June 8th (Eastbound)

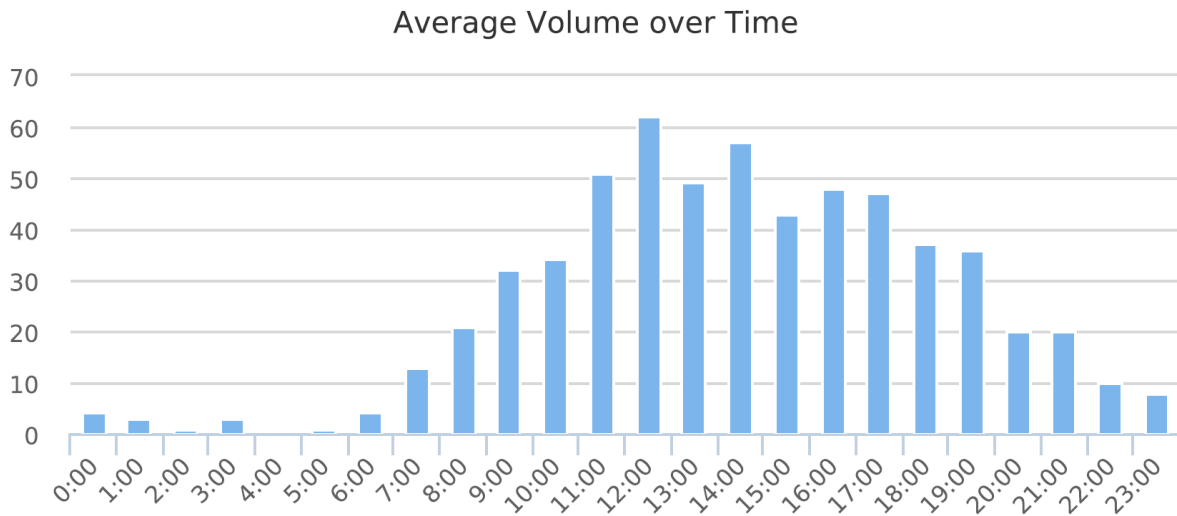


Figure 11- Average Volume by Hour from June 5th to June 6th (Eastbound)

As shown in Figure 10, on weekdays, peak traffic occurs from 3:00pm to 5:59pm in the eastbound direction. Figure 11 shows that on weekends, the peak occurs between 12:00pm and 12:59pm in the eastbound direction.

3.2 Westbound Volume by Hour

The data collected from June 9th-10th and June 13th-14th (weekdays) and June 11th-June 12th (weekend) are used to analyze the average traffic volume at different times of the day as shown in Figure 12 and Figure 13, respectively.

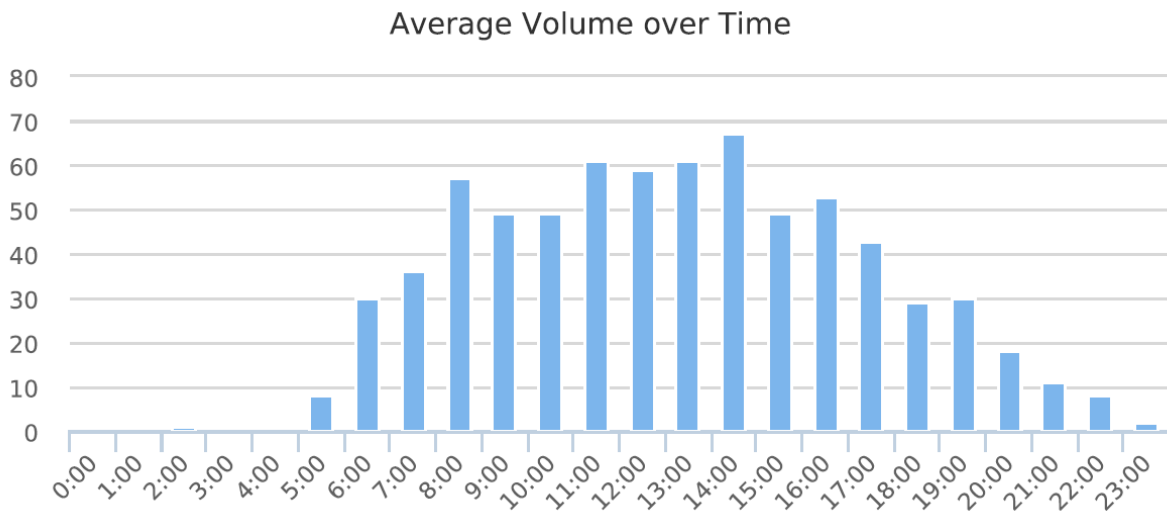


Figure 12- Average Volume by Hour from June 10th to June 11th and June 13th to June 14th, 2021 (Westbound)

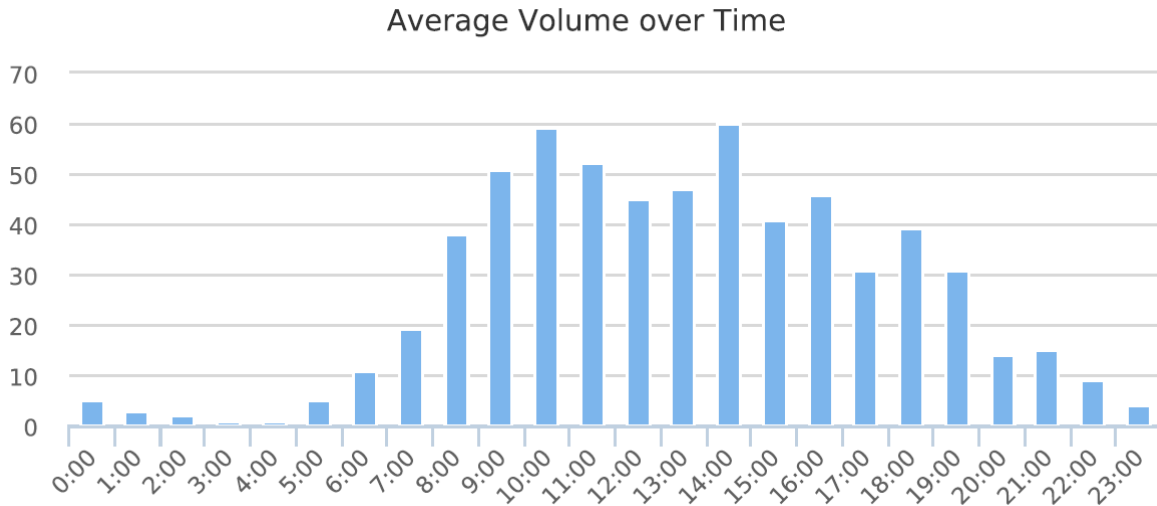


Figure 13- Average Volume by Hour from June 11th to June 12th (Westbound)

As shown in Figure 12, peak traffic occurs in the middle of the afternoon from 2:00pm to 2:59pm on the weekday in the westbound direction. On the weekend shown in Figure 13, there was a spike from 10:00am to 10:59pm and the peak was reached from 2:00pm to 2:59pm.

4.0 Conclusion

The traffic study conducted on Midland Point Road for both eastbound and westbound directions was carried out from June 2nd to June 15th, 2021. From the speed analysis, it was determined that 89.4% and 95.9% of vehicles were travelling within the accepted speed limit for the eastbound and westbound directions, respectively. In addition, from the volume analysis, it was determined that the peak traffic hours were around midday and mid-afternoon in the eastbound direction. It was also determined that the peak traffic occurred around the middle of the afternoon in the westbound direction on weekdays and weekends as well as the midmorning on weekends.