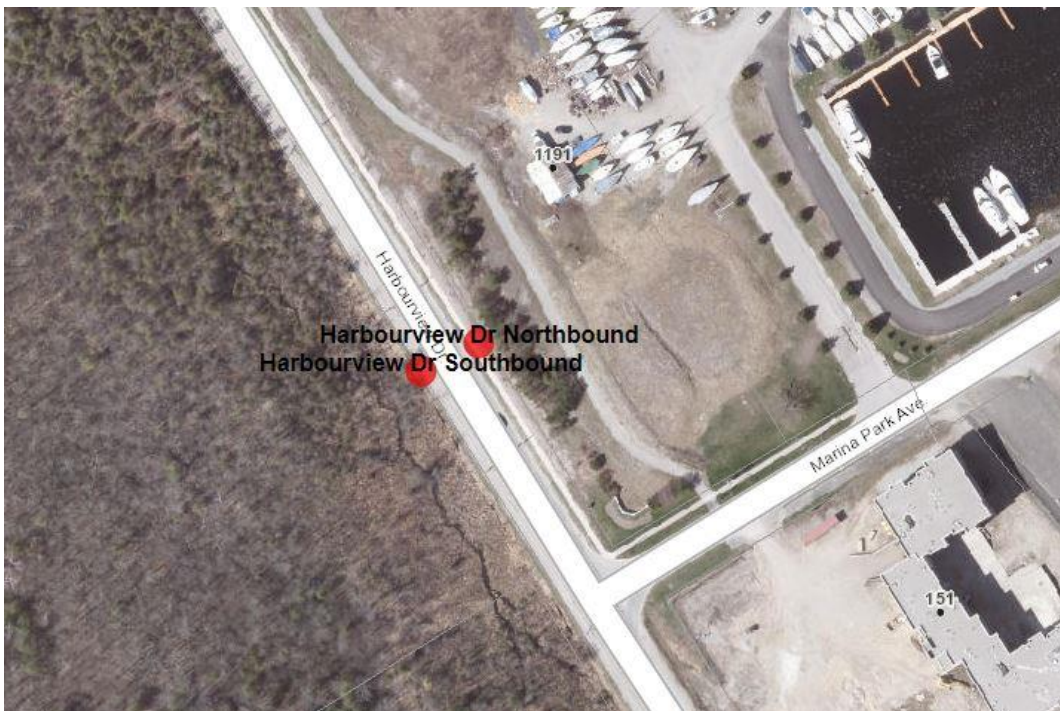


Traffic Data Analysis

Harbourview Dr.
Northbound and Southbound



Town of Midland
Engineering Department

July 15th, 2019

1.0 Introduction

A traffic count was conducted from July 8th, 2019 to July 15th, 2019 on Harbourview Dr for both northbound and southbound directions. Vehicle speeds and traffic volume were collected by a traffic trailer (model ATS-3). The purpose is to see if there is any speeding issue and raise safety awareness and help calm traffic by displaying speeds of vehicles approaching.

1.1 Location

The traffic trailer was placed on Harbourview Dr for both northbound and southbound directions. The trailer was placed at side of road to record the speed and volume of vehicles passing by. Table 1 below shows the location of the traffic trailer and data collection period.

Table 1. Locations of Traffic Trailer

Direction	Location	Period
Northbound	175 Harbourview Dr, Midland, ON	16:00 on July 8 th , 2019 – 09:00 on July 11 th , 2019
Southbound	175 Harbourview Dr, Midland, ON	09:00 on July 11 th , 2019 – 09:00 on July 15 th , 2019

1.2 Traffic Trailer

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



Figure 1. Traffic Trailer

2.0 Speed Summary

The posted speed limit on Harbourview Dr 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 for northbound and southbound directions.

Table 2. Speed Summary

Direction	Average Speed (km/h)	Minimum Speed (km/h)	Maximum Speed(km/h)
Northbound	51.3	10	115
Southbound	52.3	10	97

2.1 Northbound Speed Analysis

Figure 2 and 3 below show the speed summary for the northbound traffic.

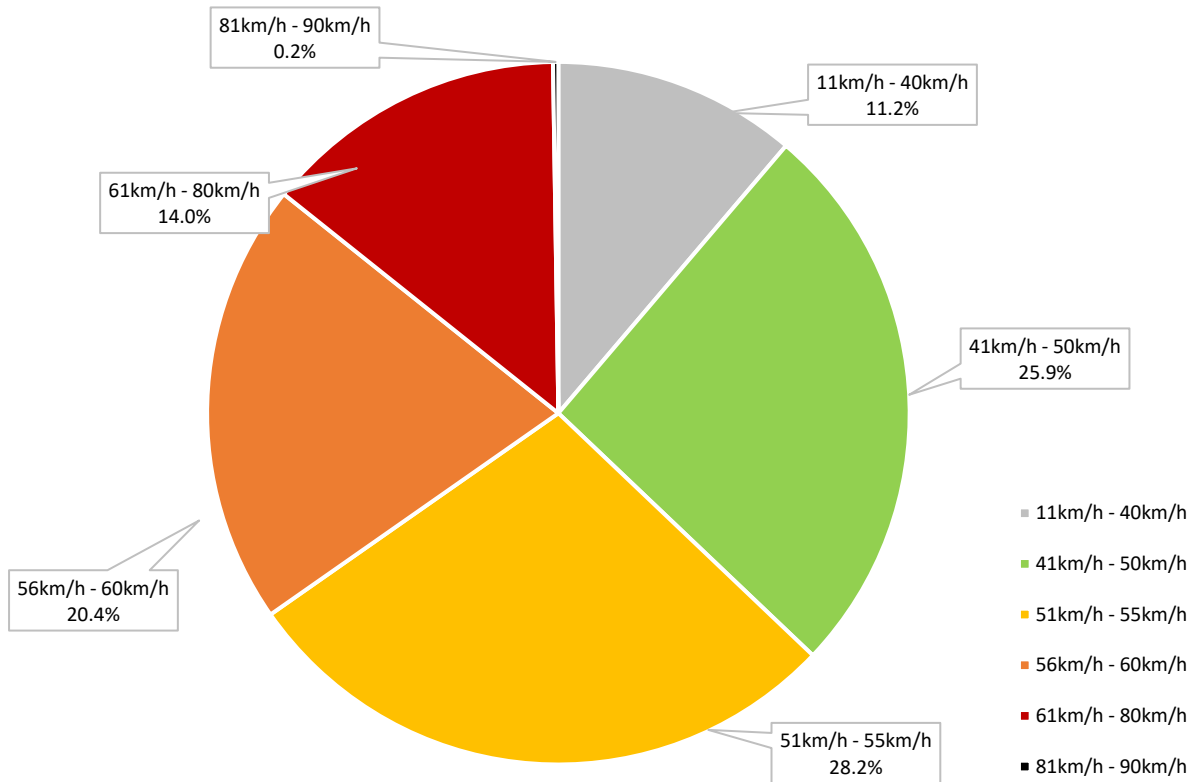


Figure 2. Harbourview Dr. Northbound

From this summary we can see that 37% of vehicles were travelling below the posted speed limit, 49% of vehicles were travelling between 51-60 km/h, and 14% of vehicles were travelling above 60km/h. When we consider the accepted speed limit is 10km/h over the posted speed limit, we find that a total of 86% of vehicles were travelling within the accepted speed limit in the northbound direction. It is also noticed that there are more vehicles speeding during early morning rush hour.

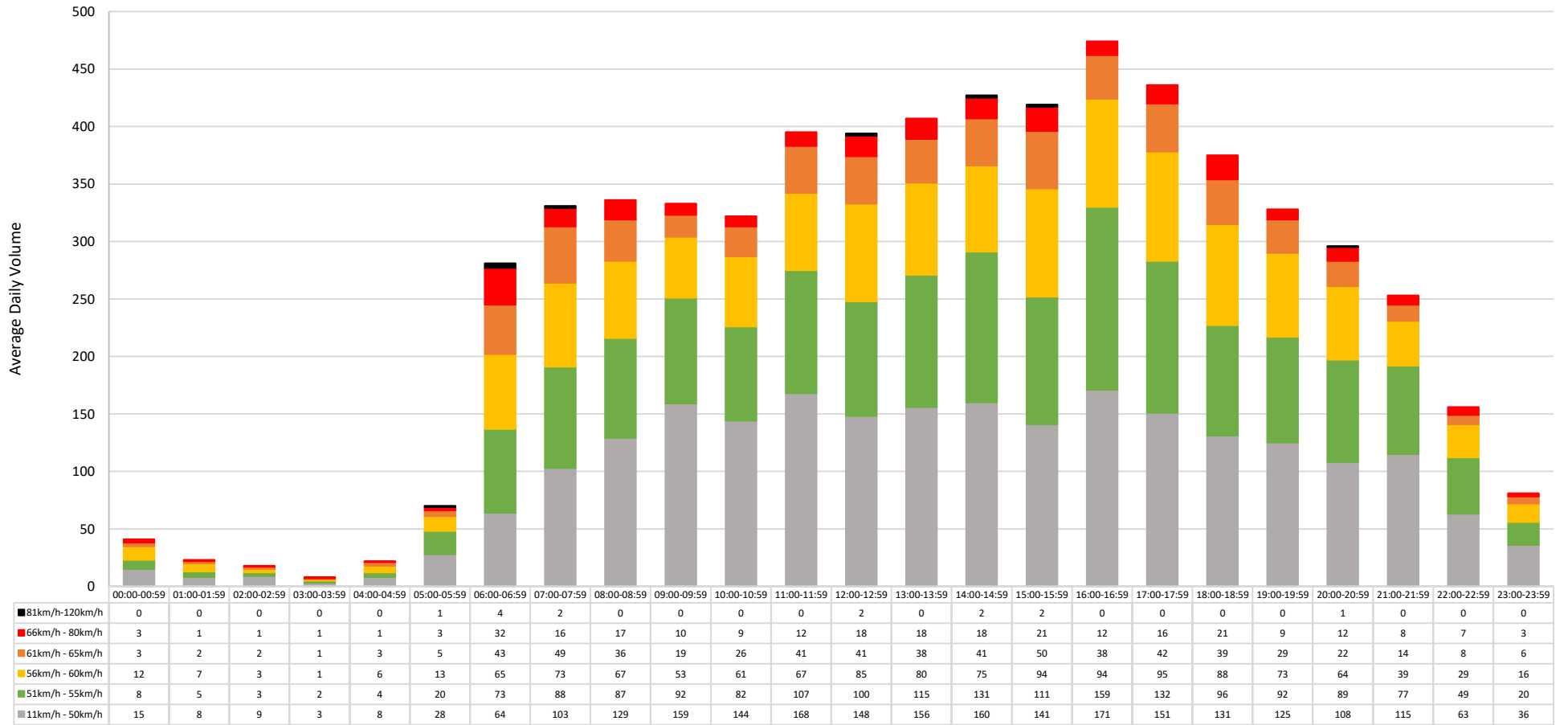


Figure 3. Speed by Hour Analysis for Northbound

2.2 Southbound Speed Analysis

Figure 4 to 6 are the speed summary for the southbound traffic.

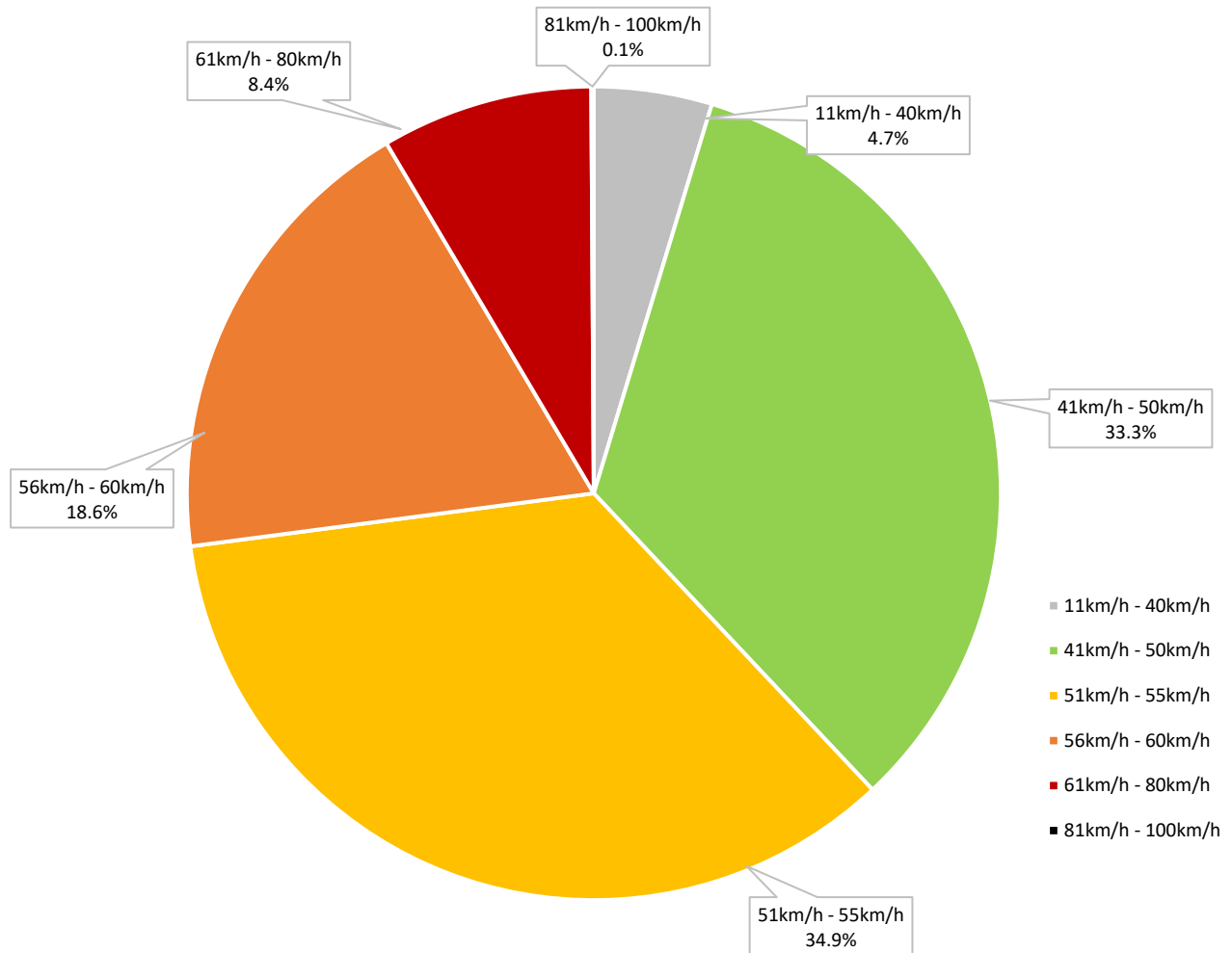


Figure 4. Harbourview Dr. Southbound

From this summary we can see that 38% of the vehicles were travelling below the posted speed limit, 54% of vehicles were travelling between 51-60 km/h, and 8% of vehicles were travelling above 60km/h. When we consider the accepted speed limit is 10km/h over the posted speed limit, we find that a total of 92% of vehicles were driving within the accepted speed limit. It is also noticed that there were more vehicles speeding in the afternoon.

Furthermore, the traffic trailer detected that 56% of vehicles slowed down in northbound direction and 65% slowed down in southbound direction when approaching the trailer. These percentages could include the vehicles slowed down to make a turn; however, it also shows that the trailer is having an effect on traffic calming.

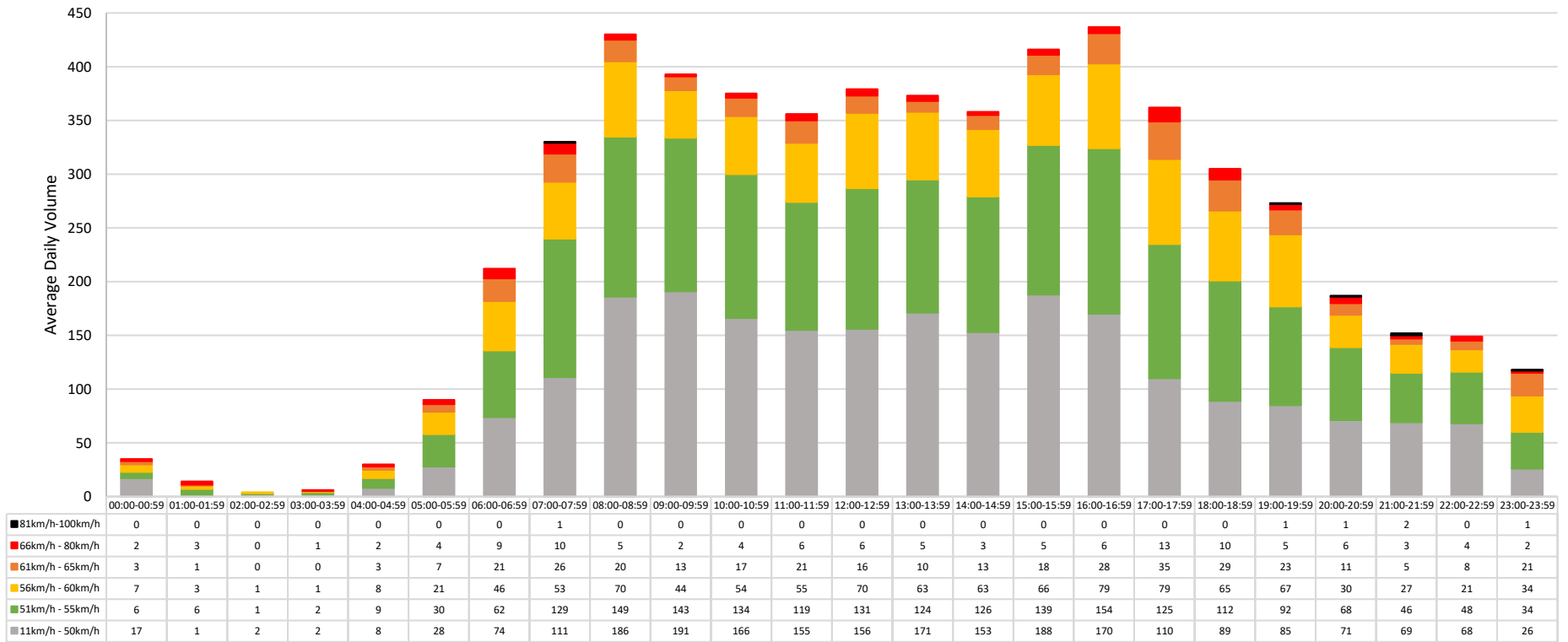


Figure 5. Speed by Hour Analysis for Southbound (July 11th to July 12th, 2019)

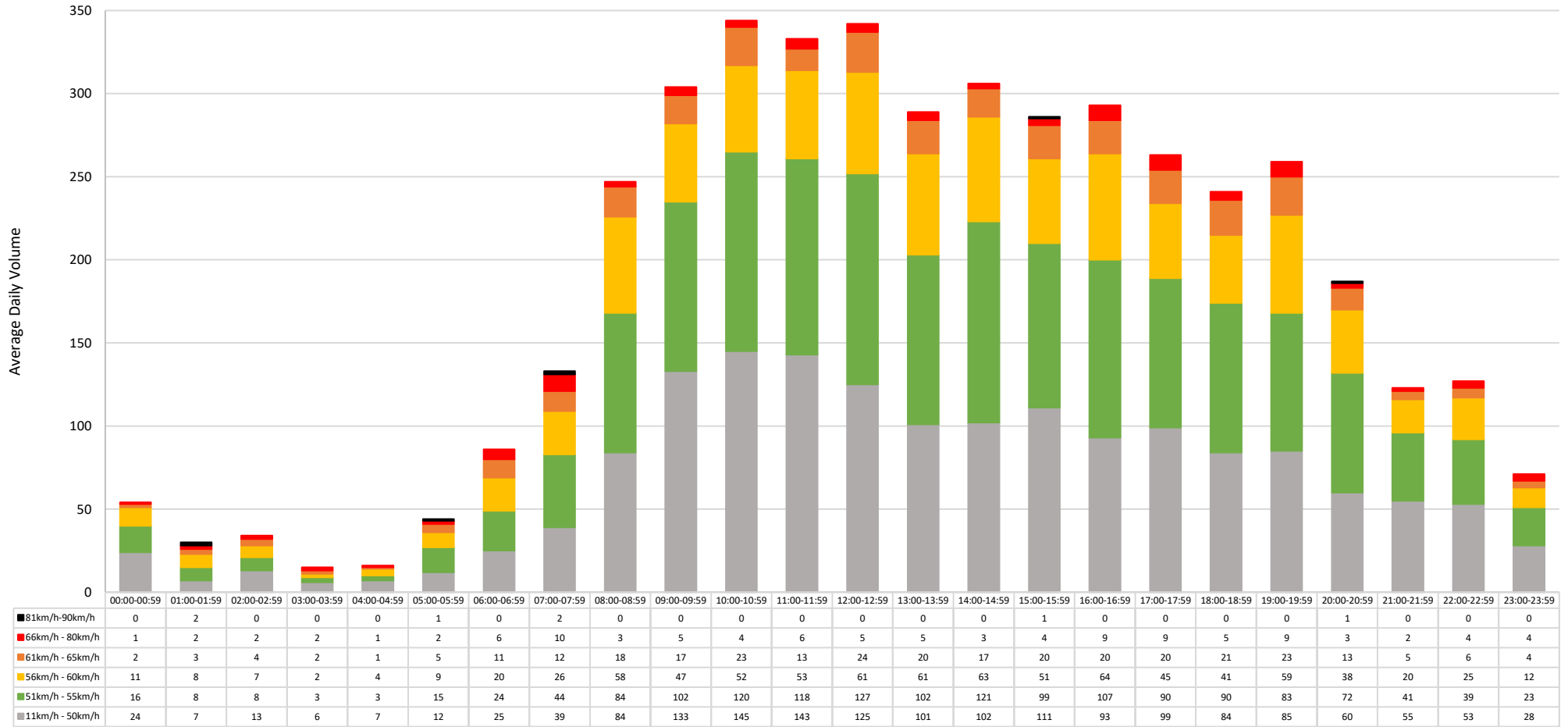


Figure 6. Speed by Hour Analysis for Southbound (July 13th to July 14th, 2019)

3.0 Traffic Volume

Table 3 shows the average daily volume on Harbourview Dr for northbound and southbound directions. Only the days when the traffic trailer was placed there for the full 24 hours are used in traffic volume analysis.

Table 3. Volume Summary

Direction	Period	Average Daily Traffic Volume
Northbound	July 9 th to July 10 th (Tuesday to Wednesday)	6,268
Southbound	July 12 th (Friday)	5,725
Southbound	July 13 th to July 14 th (Saturday to Sunday)	4,356

3.1 Northbound Volume by Hour

The data collected for two full days (July 9th and July 10th) is used to analyze the average traffic volume at different time of a day (Figure 7). From the graph, Harbourview Dr has peak traffic during the typical evening rush hour.

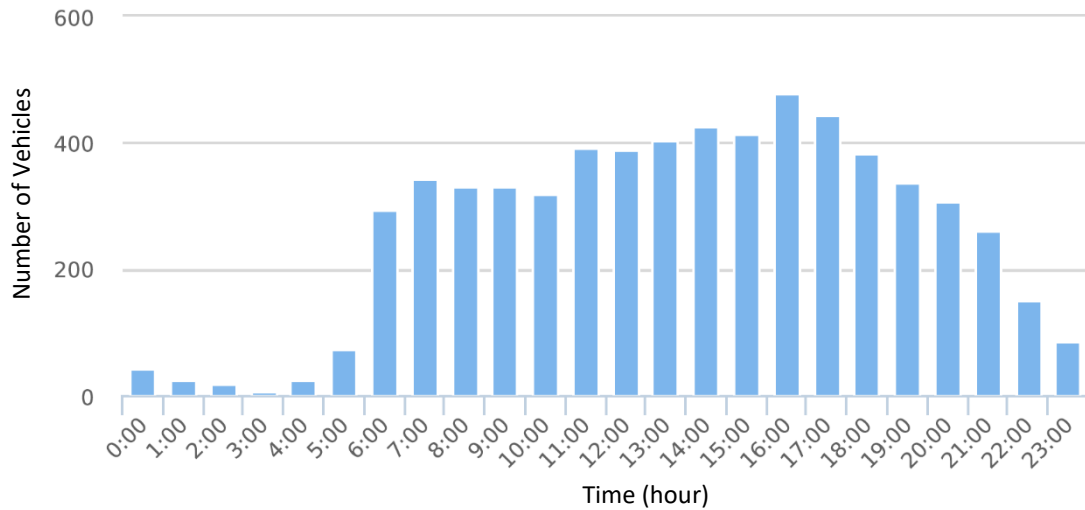


Figure 7. Average Volume by Hour from July 9th to July 10th (Northbound)

3.2 Southbound Volume by Hour

The data collected on July 12th is used to analyze the average traffic volume at different time of a day on a weekday (Figure 8). From the graph, Harbourview Dr has peak traffic during the typical rush hour.

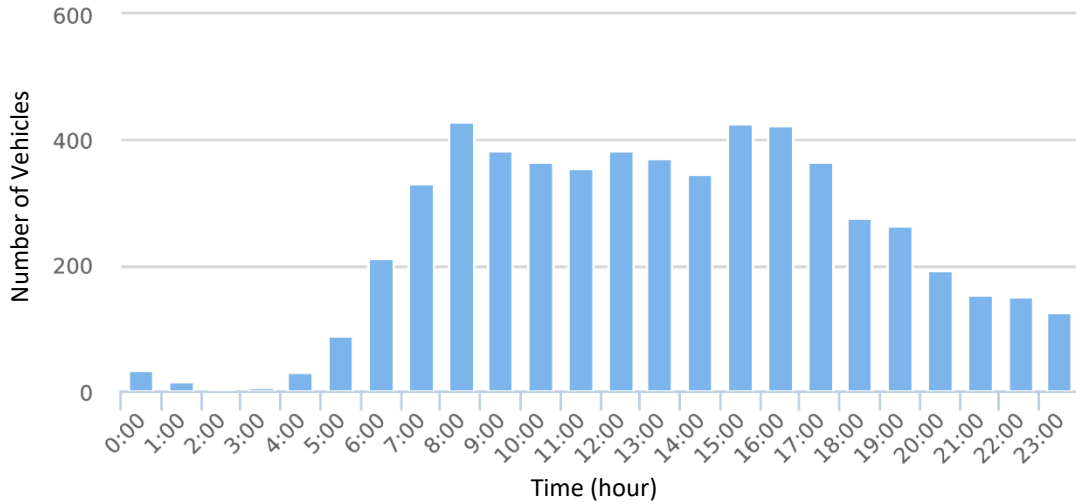


Figure 8. Volume by Hour on July 12th (Southbound)

The data collected from July 13th to July 14th (weekends) are used to analyze the average traffic volume at different time of the day as shown in Figure 9. From the graph, the traffic on the weekend in the southbound direction has a peak volume during noon.

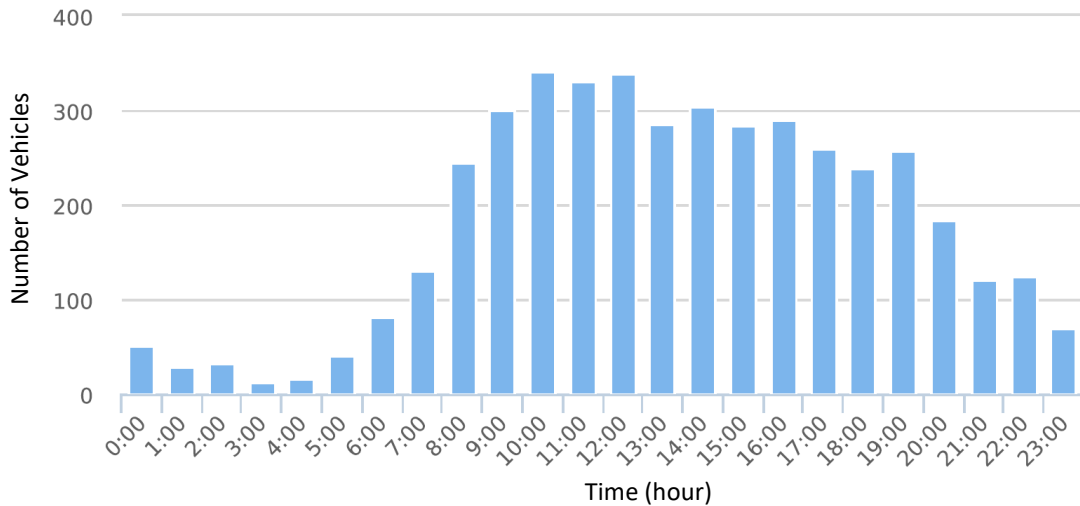


Figure 9. Average Volume by Hour on July 13th to July 14th (Southbound)

4.0 Conclusion

The traffic study conducted on Harbourview Dr for both northbound and southbound directions was successfully carried out from July 8th to July 15th, 2019. From the speed analysis, it was determined that 86% of vehicles travelling in the northbound direction were travelling within the accepted speed limit. It was also determined that 92% of vehicles travelling in the southbound direction were travelling within the accepted speed limit.

In addition, from the volume analysis, it was determined that the peak traffic hours were at the typical evening rush hour for northbound direction on a weekday. It was also determined that the peak traffic hours were at typical morning and evening hours in the southbound direction. The southbound traffic was monitored over the weekend and it was noted that it has peak volume during noon.