

Traffic Data Analysis

Bayview Drive

Southbound and Northbound



Town of Midland

Engineering Department

August 19th, 2019

1.0 Introduction

A traffic count was conducted from August 6th, 2019 to August 13th, 2019 on Bayview Drive for both southbound and northbound 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 Bayview Drive for both southbound and northbound directions. Table 1 below shows the location of the traffic trailer and data collection period.

Table 1. Locations of Traffic Trailer

Direction	Location	Period
Southbound	679 Bayview Dr, Midland, ON	9:00 on Aug 06 th , 2019 – 14:00 on Aug 09 th , 2019
Northbound	684 Bayview Dr, Midland, ON	14:00 on Aug 09 th , 2019 – 9:00 on Aug 13 th , 2019

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 Bayview Drive 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 southbound and northbound directions.

Table 2. Speed Summary

Direction	Average Speed (km/h)	Minimum Speed (km/h)	Maximum Speed(km/h)
Southbound	30.4	10	55
Northbound	24.1	10	58

2.1 Southbound Speed Analysis

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

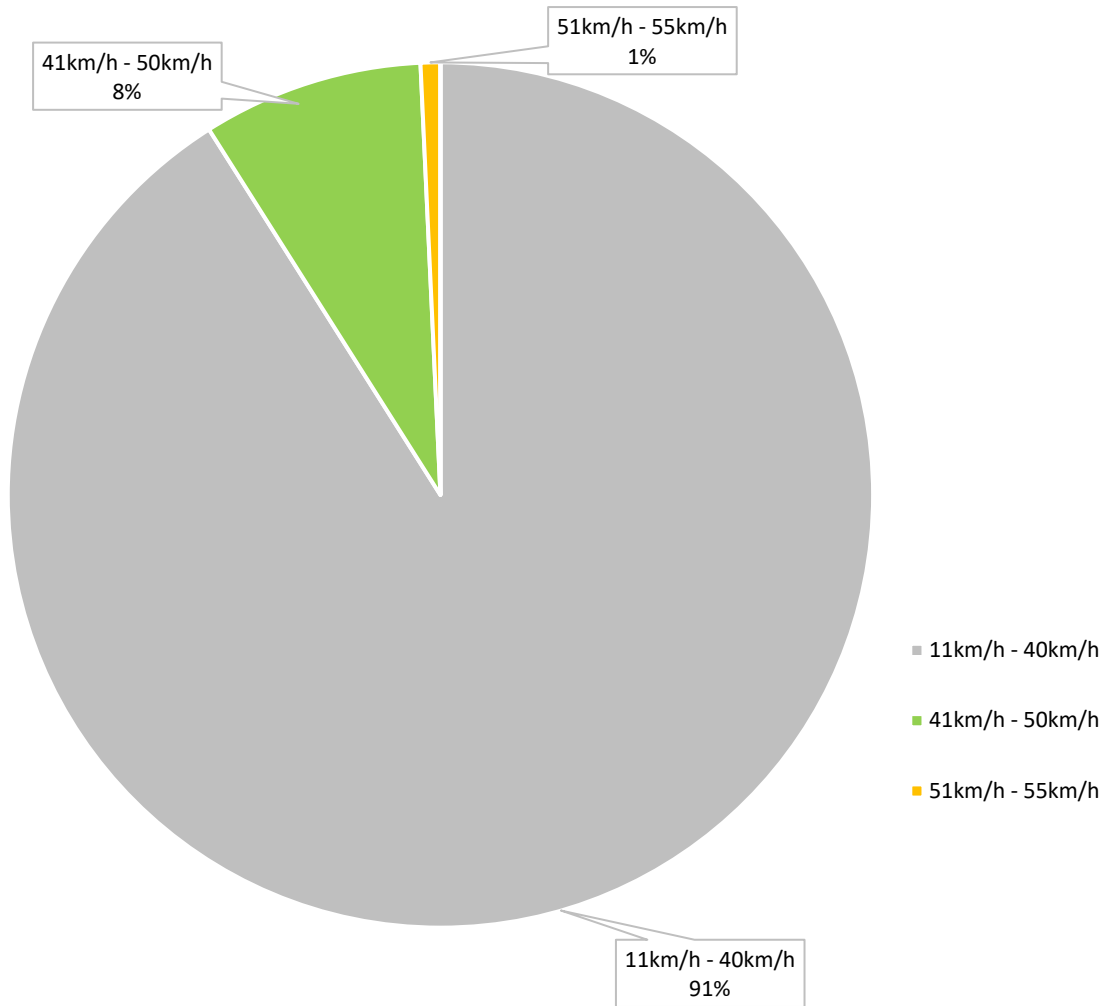


Figure 2. Bayview Dr. Southbound

Figure 2 shows that 99% of vehicles were travelling below the posted speed limit and 1% of vehicles were travelling above 50km/h. Considering the accepted speed limit is 10km/h over the posted speed limit, all vehicles were travelling within the accepted speed limit in the southbound direction.

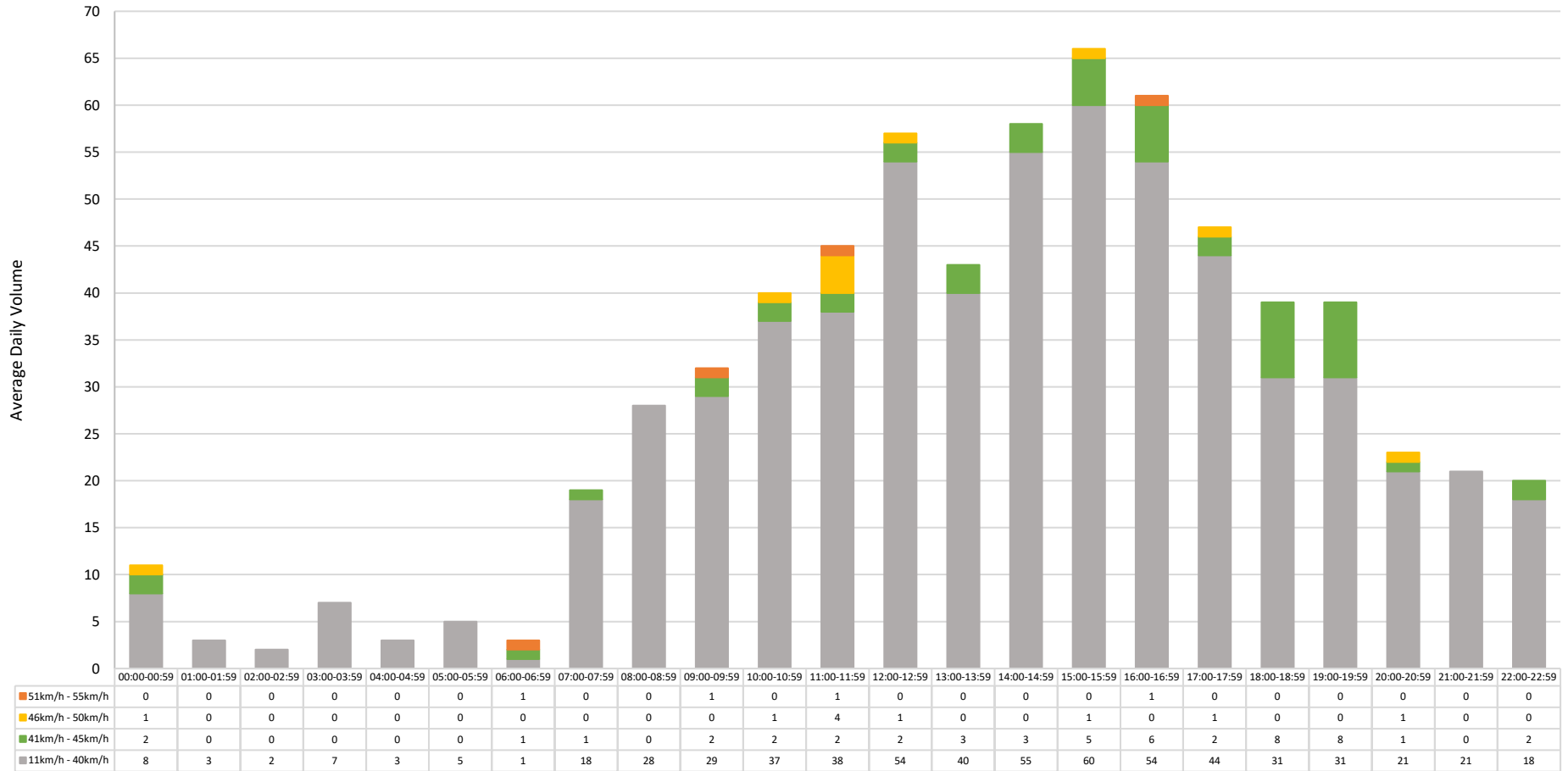


Figure 3. Speed by Hour Analysis for Southbound

Figure 3 is the speed by hour graph used to determine the time where most speeding occurs. This graph highlights that although speeding peaked from 11:00am to 12:00pm, there are no speeding concerns throughout the collection period.

2.2 Northbound Speed Analysis

Figure 4 to 6 below is the speed summary for the northbound traffic.

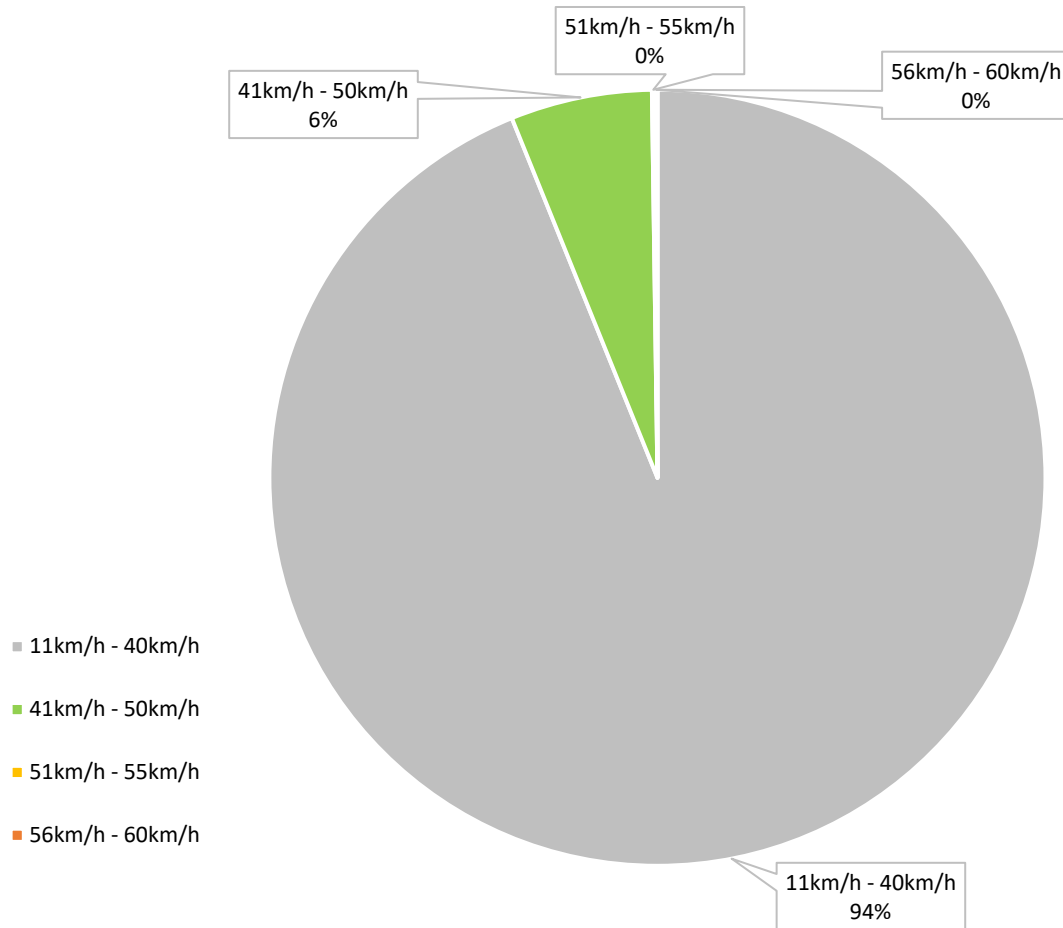


Figure 4. Bayview Dr. Northbound

Figure 4 shows that all vehicles were travelling below the posted speed limit.

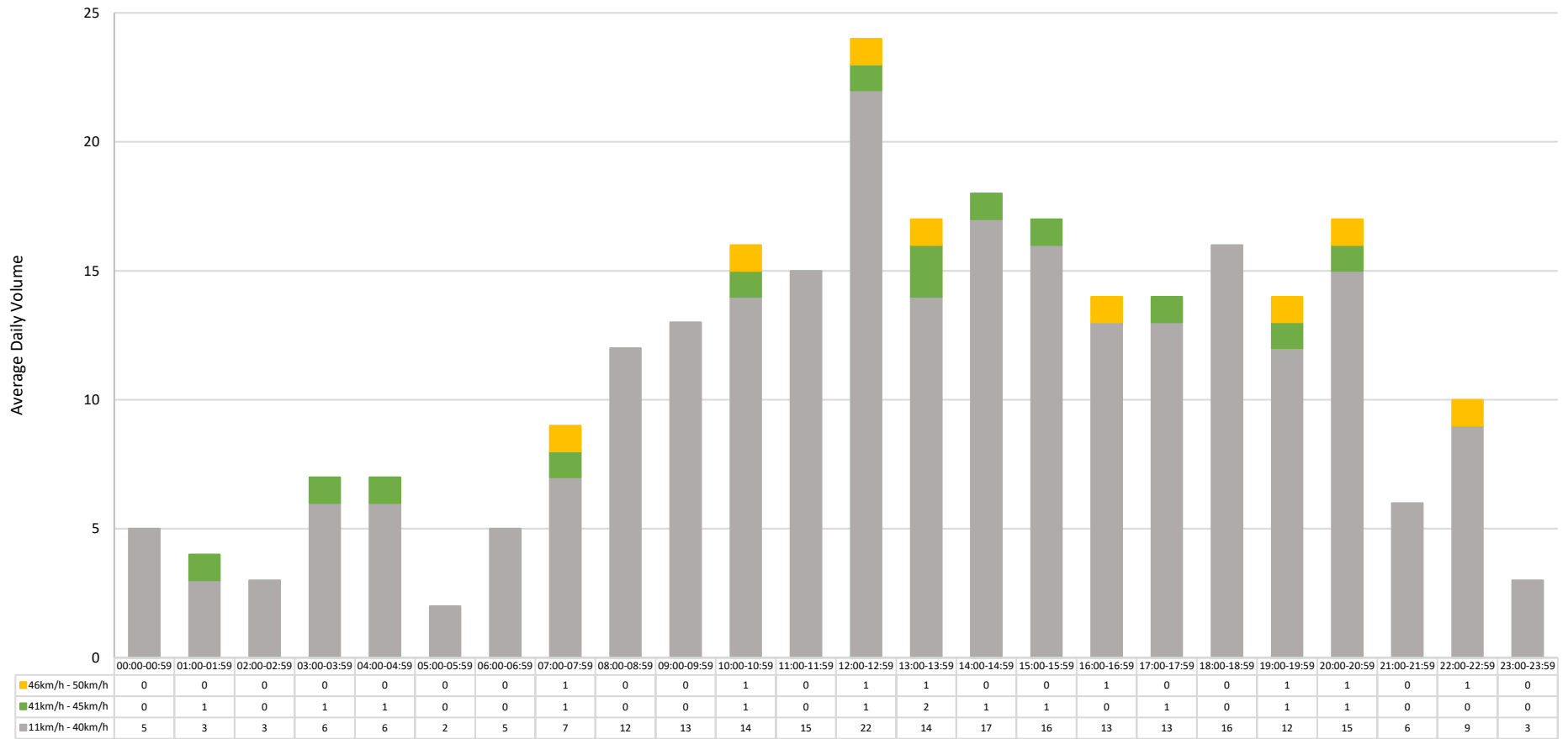


Figure 5. Speed by Hour Analysis for Northbound (August 10th to August 11th, 2019)

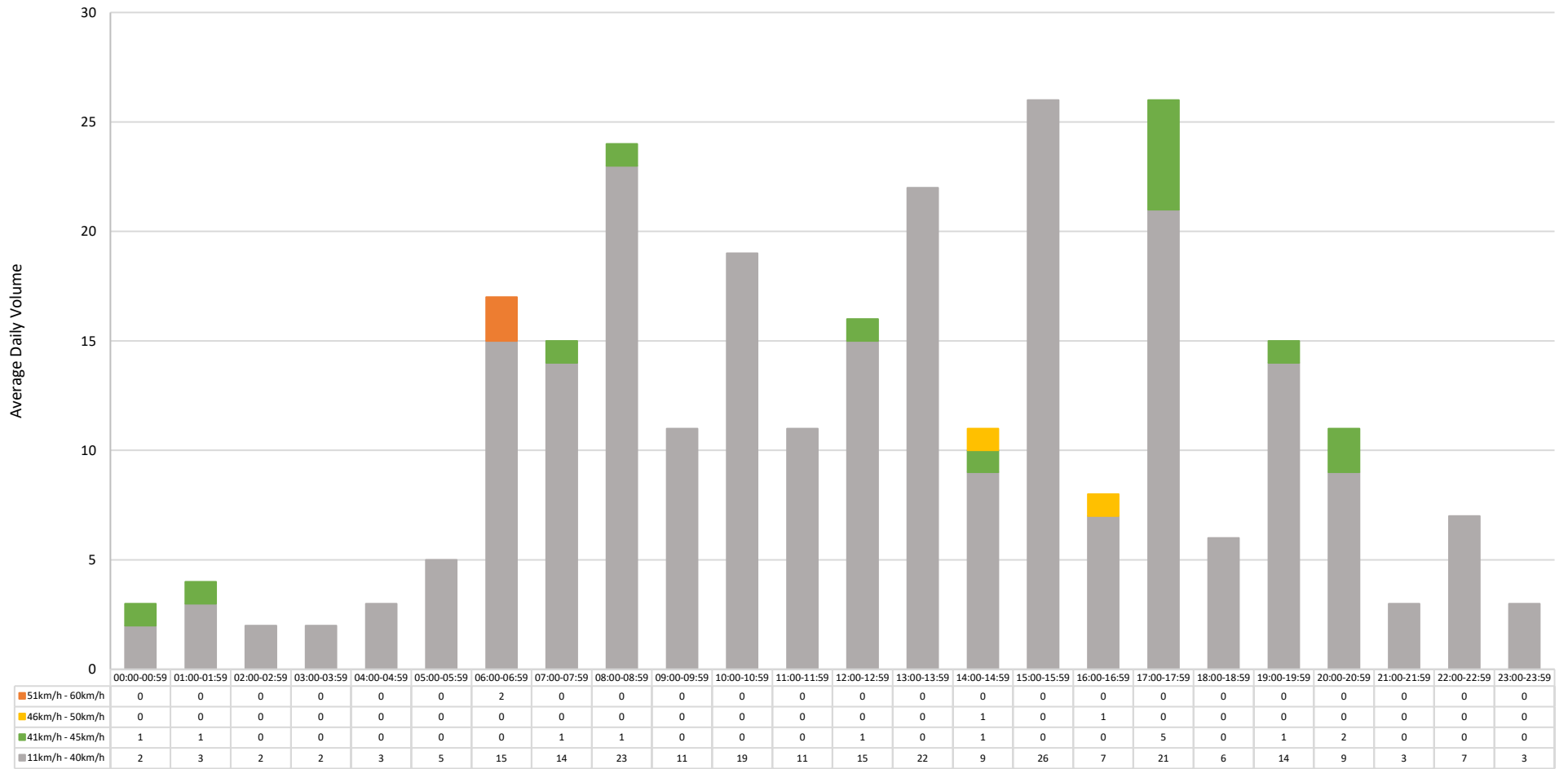


Figure 6. Speed by Hour Analysis for Northbound (August 12th to August 13th, 2019)

Figure 5 (weekend) and Figure 6 (weekday) above are the speed by hour graphs used to determine the time where most speeding occurs. The graphs highlight that there are no speeding concerns throughout the collection period.

In addition, the traffic trailer detected that 35% of vehicles slowed down when approaching the trailer in the southbound direction and 40% slowed down in the northbound direction. Since the majority of vehicles were already travelling within the accepted speed limit, not many vehicles slowed down when approaching the trailer.

3.0 Traffic Volume

Table 3 shows the average daily volume on Bayview Drive for the southbound and northbound directions. The data indicates there is more traffic in the northbound direction than in the southbound direction.

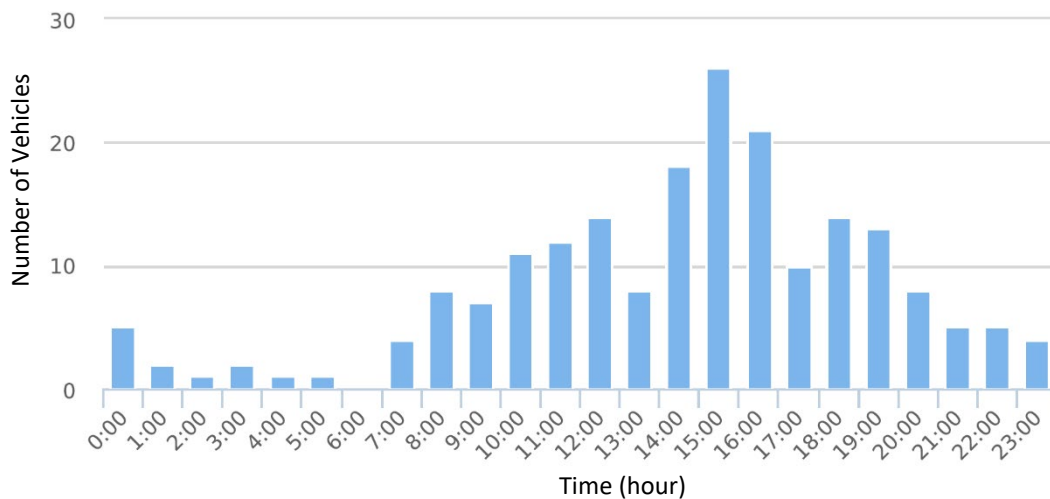
Table 3. Volume Summary

Direction	Period	Average Daily Traffic Volume
Southbound	Aug 7 th to Aug 8 th (Wednesday to Thursday)	194
Northbound	Aug 10 th to Aug 11 th (Saturday to Sunday)	225
Northbound	Aug 12 th (Monday)	248

3.1 Southbound Volume by Hour

The data collected for two full days (August 7th to August 8th) is used to analyze the average traffic volume at different times of a day (Figure 7). From the graph, Bayview Drive has peak traffic during the typical evening commute time, which is 3:00pm to 6:00pm, and especially from 3:00pm to 4:00pm.

Figure 7. Average Volume by Hour on August 7th to August 8th (Southbound)



3.2 Northbound Volume by Hour

The data collected from August 10th to August 11th (weekend) and on Aug 12th (weekday) are used to analyze the average traffic volume at different times of the day as shown in Figure 8 and Figure 9 respectively. The peak traffic occurred during noon hour on the weekend in the northbound direction. The peak traffic on a weekday is at the typical evening commute time.

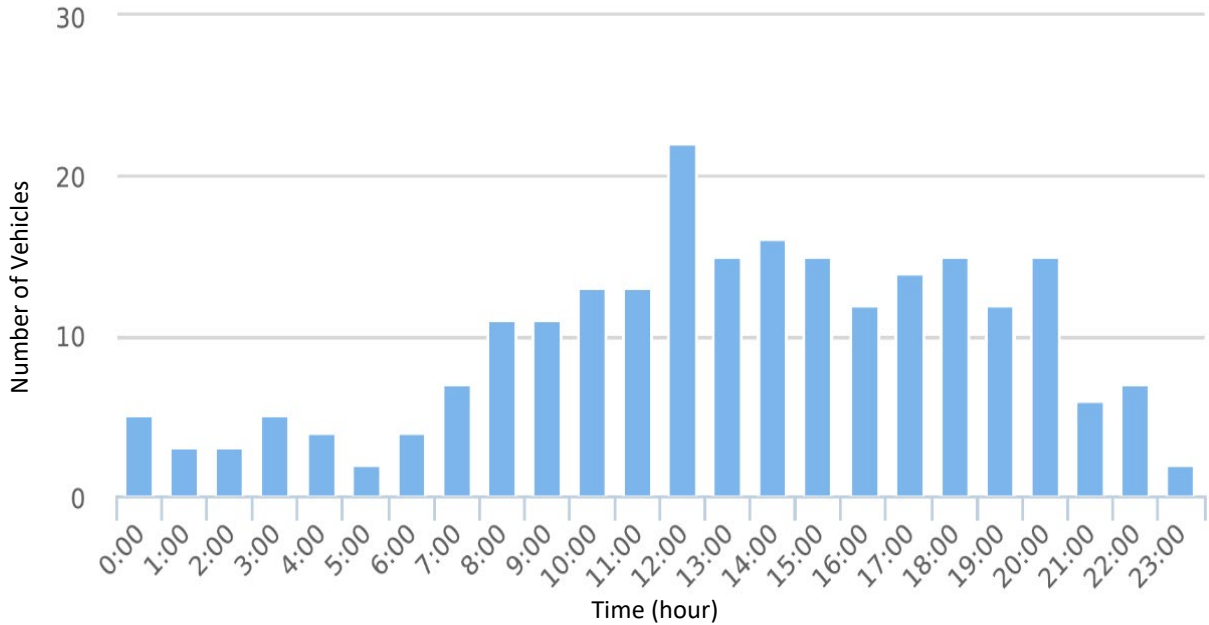


Figure 8. Average Volume by Hour from August 10th to August 11th (Northbound)

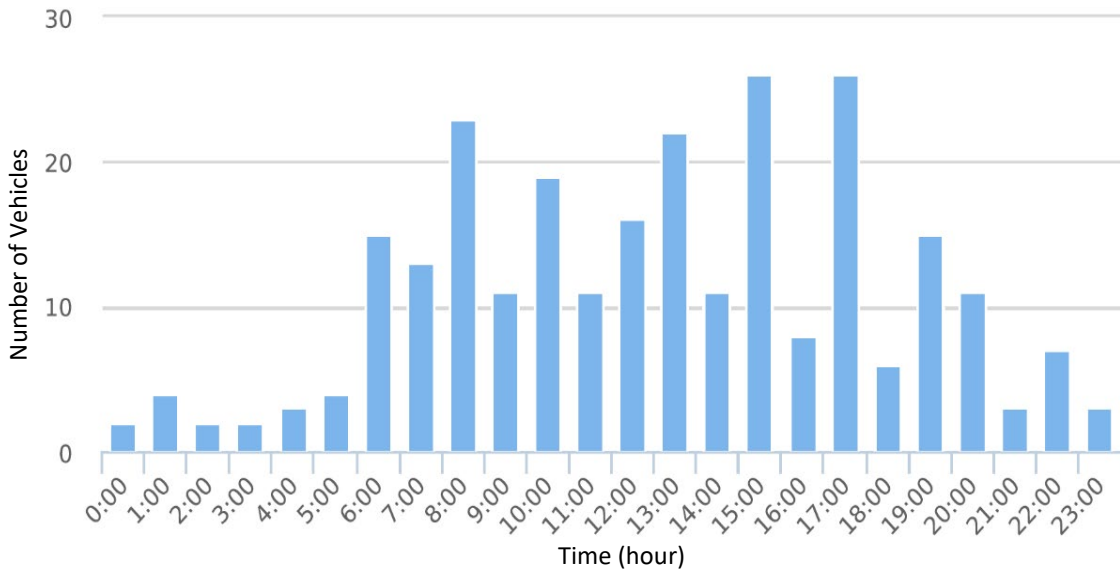


Figure 9. Average Volume by Hour on August 12th (Northbound)

4.0 Conclusion

The traffic study conducted on Bayview Drive for both southbound and northbound directions was successfully carried out from August 6th, 2019 to August 13th, 2019. From the speed analysis, it was determined that both directions have 100% of vehicles travelling within the accepted speed limit. In addition, from the volume analysis, it was determined that the peak traffic hours were in the afternoon on a weekday in the southbound direction. It was also determined that the peak traffic occurred during noon hour in the northbound direction over the weekend. On a weekday, the peak traffic occurred during typical evening commute time in the northbound direction.