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# Hortons Creek

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## Traffic Data Summary

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## Hortons Creek Traffic Data Summary

### Introduction

Hortons Creek Road is a collector street with marked bike lanes and a 25-mph posted speed limit located in northwestern Cary, NC. The street is located between Green Level Church Road on the east and Yates Store Road on the west. The surrounding land uses are primarily residential with some institutional uses on the north side of the street. The Horton's Creek and Amberly neighborhoods are residential communities located on the eastern and southern portions of the street with the UNC Wellness Center and Hortons Creek Elementary School also located on the road.

Based on concerns shared by the local residents along Hortons Creek Road about unsafe driving behaviors and speeding in the school zone, Town staff conducted traffic data collection to determine need for traffic calming along the street. The following summary provides results from a 2018 traffic count data which was collected at three locations along Hortons Creek Road. The data and resulting findings are to be used for analysis of potential traffic calming measures along this street. The count locations are displayed below in red.

In 2014, counts were collected on Hortons Creek Road between Peach Orchard Place and Rye Ridge Road, near the 2018 count location referred to as Central. This map is included as a reference for comparing study locations.

### 2014 traffic study area map



For the 2018 study, traffic data was collected on Horton's Creek Road at three locations. To easier reference this data we have identified these locations as the Western, Central and Eastern location. Please see those locations below:

**Eastern** : 270 feet west of Green Level Church Road

**Central** : 75 feet west of Peach Orchard Place

**Western** : 95 feet east of Finnbar Drive

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### 2018 traffic study area map



#### Average Daily Traffic

Average Daily Traffic (ADT) is the total vehicle volume during a given time (in whole days), greater than one day and less than one year, divided by the number of days in that time period. It is common to see a fluctuation in the average daily traffic along a road. Therefore, these values listed below are averages of the 24 hour counts that are comprised in the data sets. The ADT data is presented below for the traffic counts that were conducted along Hortons Creek Road. This ADT is considered appropriate for the level current development along the street and the classification of the street.

Road	Year	ADT (vehicles per day)
Hortons Creek	2014	947
Hortons Creek Eastern	2018	1,339
Hortons Creek Central	2018	1,415
Hortons Creek Western	2018	1,274

#### Roadway and Speed Data

Speed data was collected along Hortons Creek Road from midnight on May 1, 2018 until midnight on May 3, 2018. Hortons Creek Road is classified as Collector Street with a posted speed limit of 25 mph. The count locations were determined based on field analysis and reviewed by Town staff. The results of the data collection effort are given below.

Road	Date	Mean (Average) Speed (mph)		
		EB	WB	Average
Hortons Creek	2014	24	24	24
Hortons Creek Eastern	2018	30	30	30
Hortons Creek Central	2018	21	21	21
Hortons Creek Western	2018	24	24	24

## Hortons Creek Traffic Data Summary

Road	Date	50 <sup>th</sup> Percentile Speed (mph)		
		EB	WB	Average
<b>Hortons Creek</b>	<b>2014</b>	24	24	24
<b>Hortons Creek Eastern</b>	<b>2018</b>	29	30	29.5
<b>Hortons Creek Central</b>	<b>2018</b>	20	20	20
<b>Hortons Creek Western</b>	<b>2018</b>	23	24	23.5

Road	Date	85 <sup>th</sup> Percentile Speed (mph)		
		EB	WB	Average
<b>Hortons Creek</b>	<b>2014</b>	31	32	31.5
<b>Hortons Creek Eastern</b>	<b>2018</b>	34	35	34.5
<b>Hortons Creek Central</b>	<b>2018</b>	28	28	28
<b>Hortons Creek Western</b>	<b>2018</b>	31	32	31.5

Based on the data collected, the 2018 speed results for the Western and Central locations are typical for what has been observed along most collector streets in Cary, but higher than the posted speed limit of 25 mph. Generally, the 85<sup>th</sup> percentile speed should closely resemble the posted speed limit. Traffic data speeds shows moderately higher speeds than the posted speed limit of 25 mph.

However, for the Eastern location, the speeds do indicate travel speeds that are concerning to staff and require attention. Please note that this street was originally posted for 35 mph with a design speed of 40 mph, due to safety concerns, design constraints, and operational continuity, the speed limit was dropped to 25 mph. Therefore, it is not unexpected that the travel speeds are high compared to the current posted speed limit since it is considered artificially low.

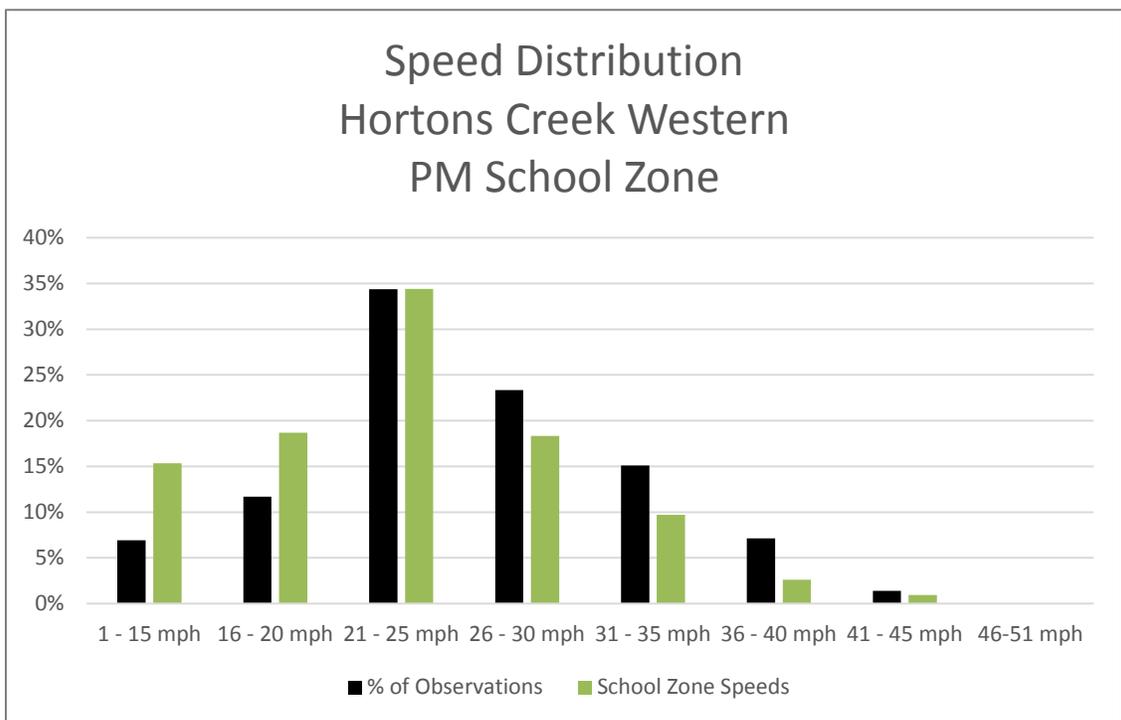
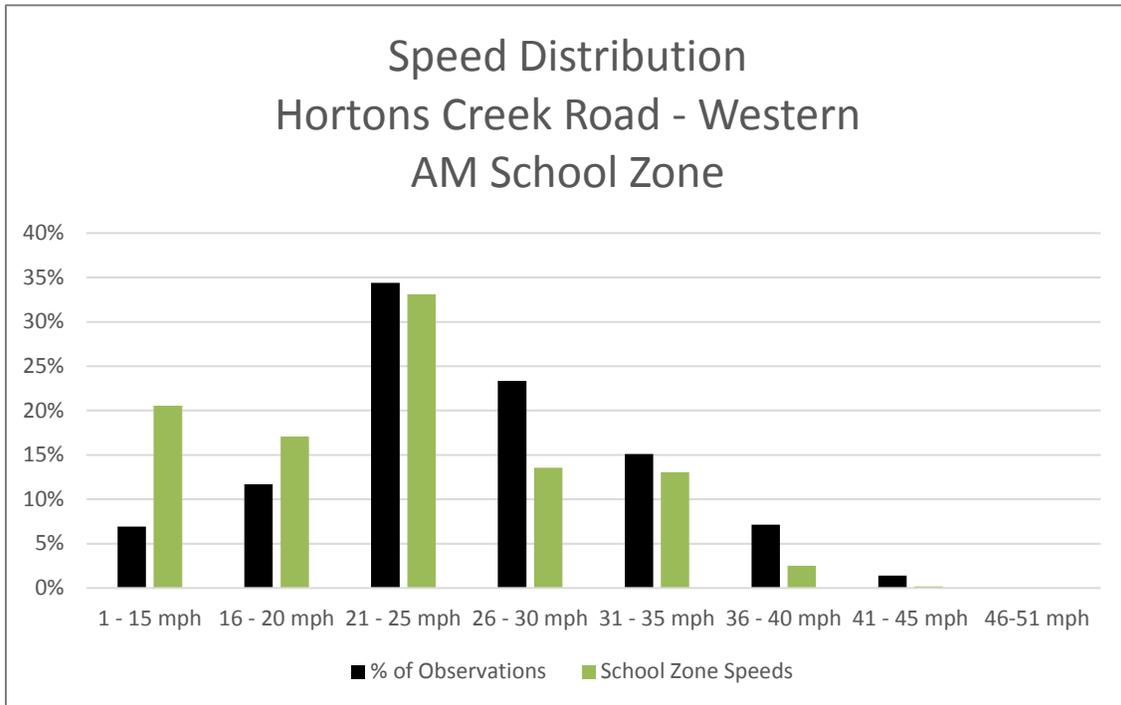
### **Percentage of Vehicles in Each Speed Bin**

The resulting data shown above is for the total traffic along Hortons Creek Road throughout the entire day. It should be noted that there is a school speed zone located on the western portion of the street; the Western counting location is located within the school speed zone.

To understanding the impact of the school zone on speeds, we have pulled out the traffic data that was collected during the school zone times and placed it alongside the data for the entire day to gauge the impact of the school zone flashers and to see how drivers are behaving during the time of day that the requestors are most concerned – when students are present.

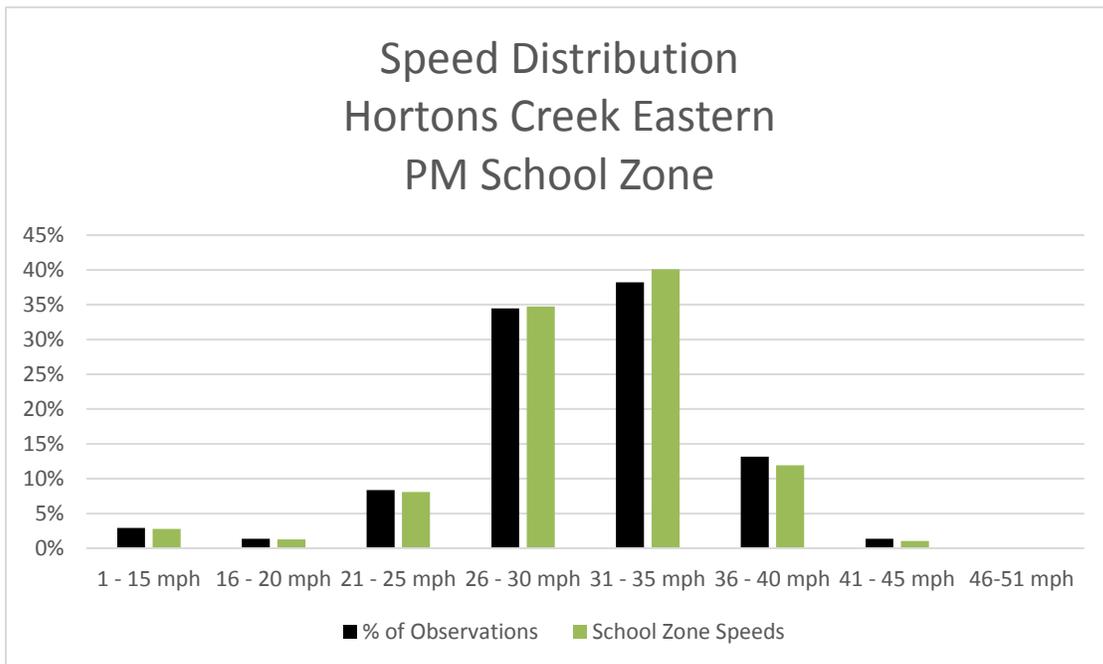
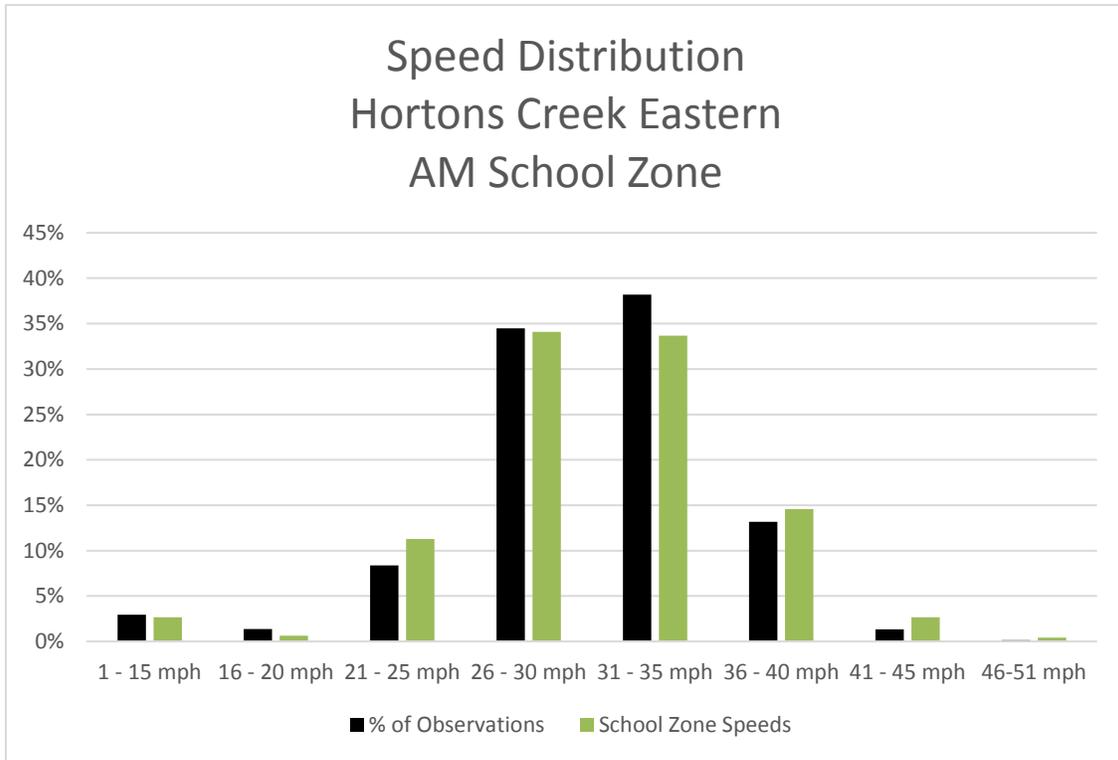
The figures shown on the following pages show the comparison of the percentage of observations detected in each speed bin for all locations:

## Hortons Creek Traffic Data Summary



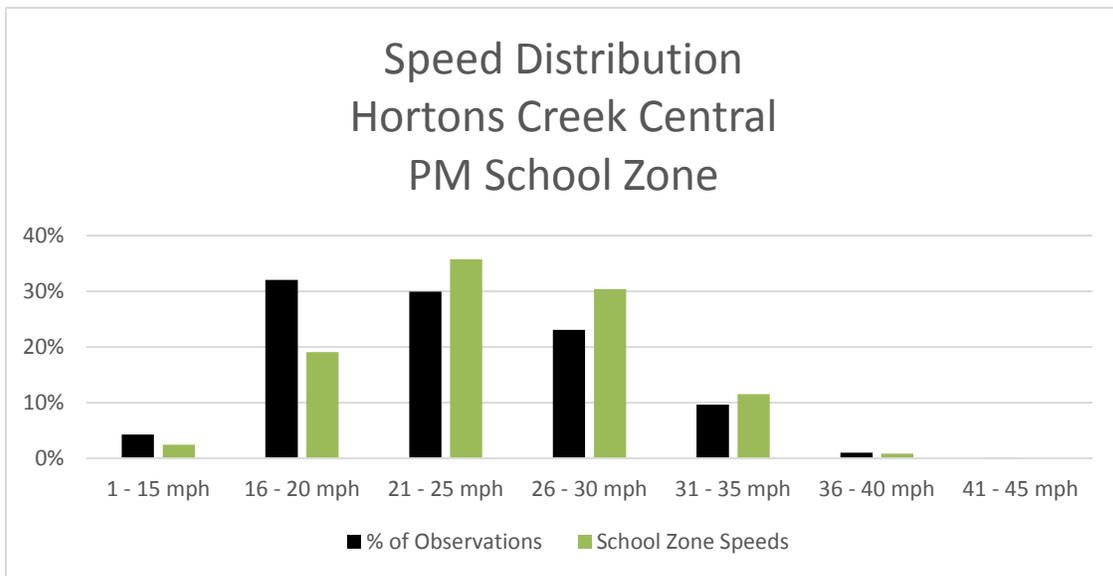
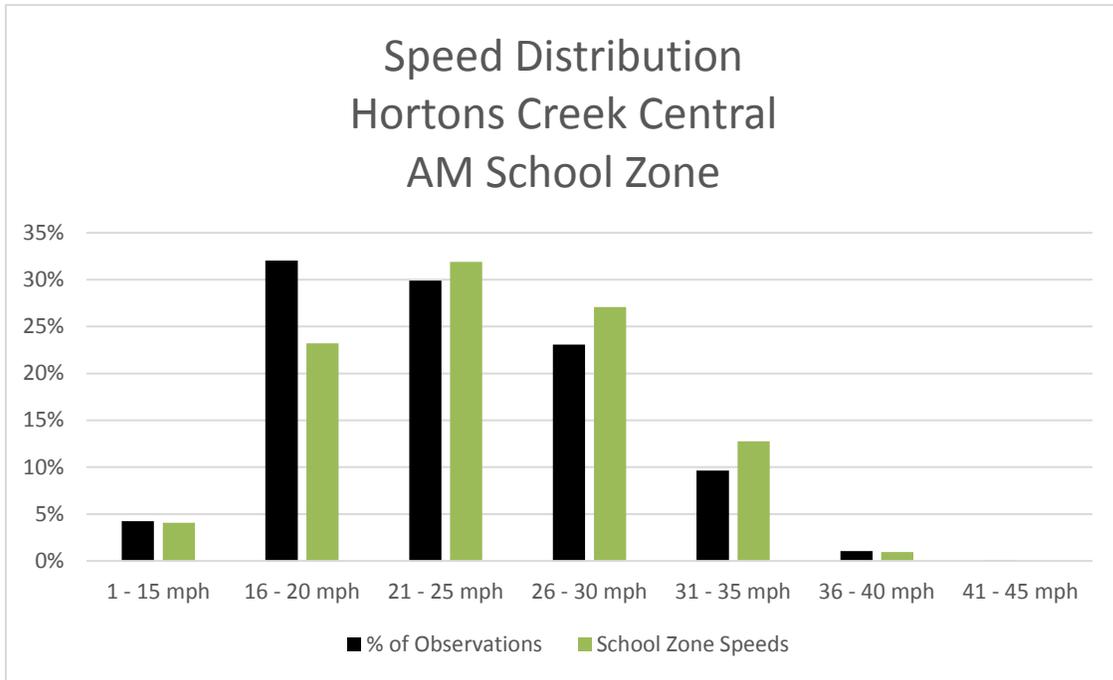
The Western location is the only one that contains a school speed zone. As can be seen from the graphs above, the treatments used to slow traffic do appear to be having a positive impact. The lowest speeds are likely an indicator of the impact of the crossing guard as traffic is stopped for crossing students. The overall reduction in speeds, indicated by most of the green columns being located to the left side of the chart, is likely due to the presence of the flasher beacons and students on the sidewalks and bikes.

## Hortons Creek Traffic Data Summary



Unlike the Western location, the travel speeds for the Eastern location are much more evenly distributed for all times of the day.

## Hortons Creek Traffic Data Summary

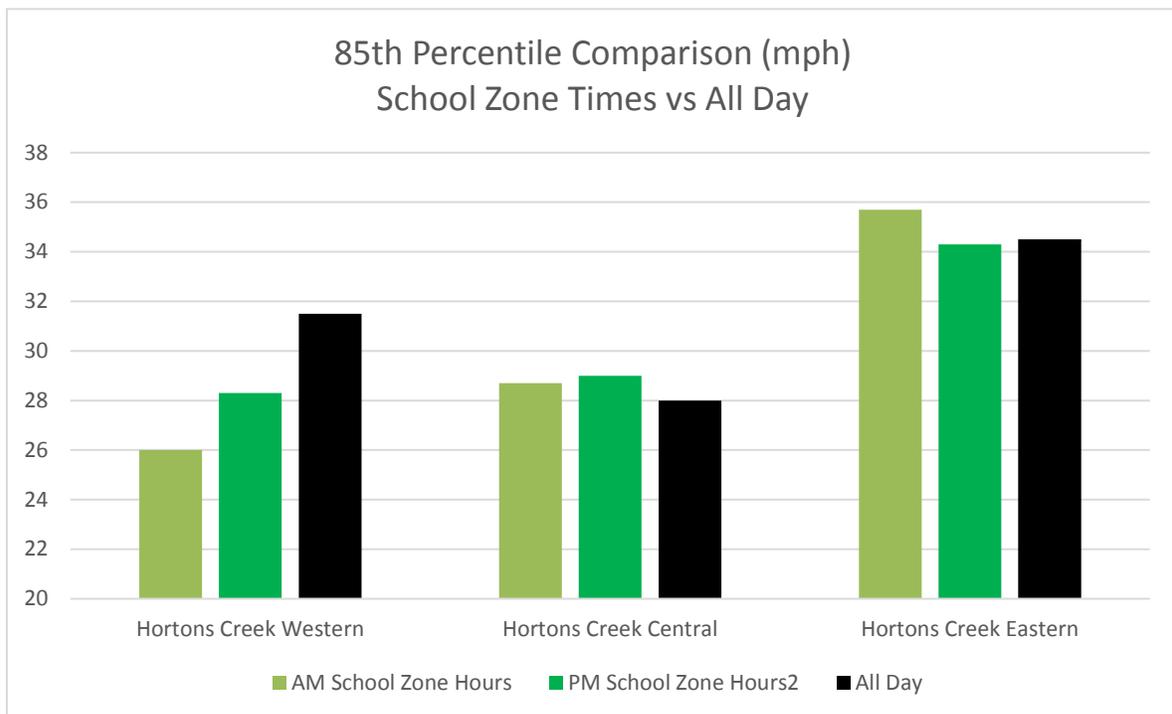


The Central location appears to have a mix of travel patterns. There may be some influence of the UNC Wellness driveway on this data. Speeds are, overall, much lower than the other two locations and the speeds during the school zone times are higher than the rest of the day.

## Hortons Creek Traffic Data Summary

As a comparison to the actual travel speeds along the corridor, the below table and chart illustrate the 85<sup>th</sup> percentile speeds for the morning and afternoon school zone times as well as the 85<sup>th</sup> percentile speeds for the entire day.

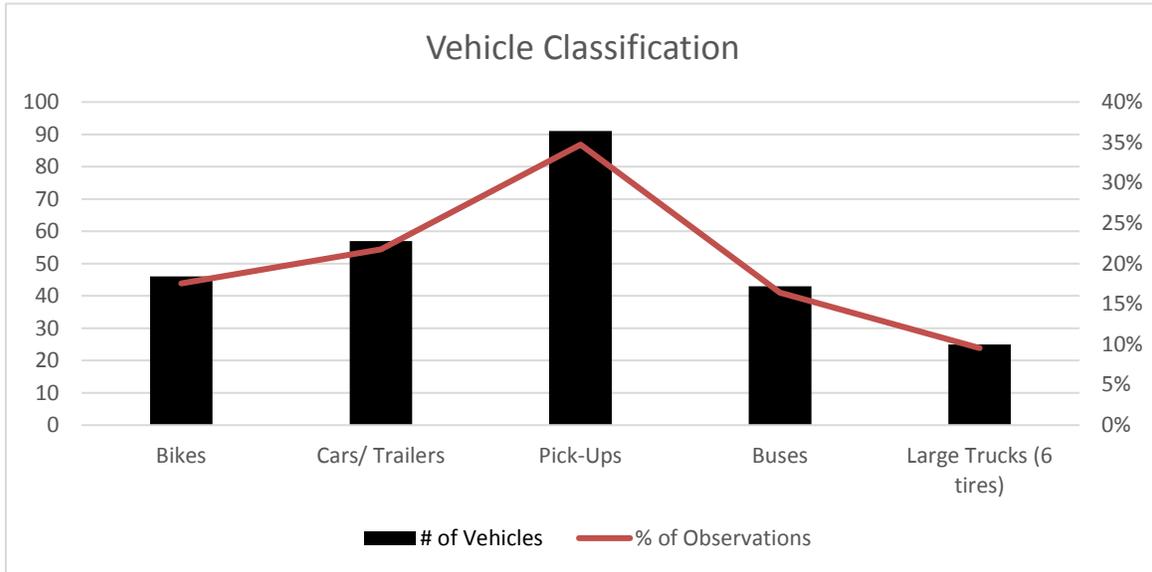
Section	85th percentile comparison (mph)		
	Morning During School Zone hours	Afternoon During School Zone hours	All Day
<b>Hortons Creek Eastern</b>	35.7	34.3	34.5
<b>Hortons Creek Central</b>	28.7	29	28
<b>Hortons Creek Western</b>	26	28.3	31.5



The above chart clearly shows the impact of the school zone on the Western location. It can also be discerned from the above data that the main area of concern is the eastern portions of Hortons Creek Road.

## Hortons Creek Traffic Data Summary

Data provide as part of the vehicle classification shows typical vehicular types and percentages for this type of roadway. This can be used as a baseline in comparison to future studies.



### Conclusion

Overall, travel speeds along Hortons Creek Road appear to be consistent with the expectation of travel along a Collector Street. However, the Eastern portion of study area did show a higher occurrence of unacceptable levels of speeding. This area should be reviewed for traffic calming measures.

The Central and Western portions did not indicate travel speeds that would necessitate immediate action to address speeding; however, the speeds outside of the school hours on the Western portion should be monitored for any needs in the future.

Within the school zone area, speed bin ranges indicate during morning and afternoon release, vehicles traveling on the Horton's Creek corridor were found to comply with the posted speed limit.

The Town is currently meeting and collaborating with the community and will discuss options to address any issues indicated along Hortons Creek Road.

As a side note, Town staff noticed several vehicles parking in the marked bicycle lanes on Hortons Creek in the eastern and central section's causing bicyclists to cross against opposing traffic. As a reminder, residents need to be reminded of the importance of not parking vehicles in these lanes.