



North Greenbush Police Department

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Bloomingrove Drive Traffic Study

By Chief David M. Keevern

Following many years of complaints from residents along the Bloomingrove Dr. corridor, the North Greenbush Public Safety Committee discussed the issue again at their May, 2023 meeting. It was agreed that there was sufficient anecdotal evidence regarding the problem but a lack of solid data to support the assertion that vehicle speeds and volume had increased significantly over the last decade or that they had become problematic to public safety.

The North Greenbush Police embarked on the mission of data collection relative to vehicle speeds and traffic counts at several points along the corridor between U.S. Route 4 (North Greenbush Rd.) and Winter St. Ext. This was accomplished through the deployment of the department's radar trailer which collects both factors along with times of day that each were observed. The data is downloaded following each deployment and charts are created to display the data.

The following data was collected for each deployment location. Chief Keevern's analysis and conclusion can be found below the data. It should be noted that the deployment and removal at each location occurred between 8:30 AM and 9:00 AM on the indicated day. Had a deployment or removal occurred mid-day or late at night, the total number of days used for averaging would be incorrect. Since all occurred at the same time of day, the total number of days is accurate.

Each data set includes speeds at the 50th and 85th Percentiles. This is automatically calculated by the software. Per the U.S. Department of Transportation, the 85th percentile speed is the speed at or below which 85 percent of the drivers travel on a road segment.

Raw Data

Location #1- Bloomingrove Dr. at Sharpe Homestead Apartments, 6/9/23 to 6/14/23= 5 days
Northbound traffic captured

Total cars counted= 8,395

Average car count per day = 1,679

Total at or above 41 MPH= 2,557, 511 per day, 30%

Total at or above 46 MPH= 510, 102 per day, 6%

Total at or above 51 MPH= 70, 14 per day, 0.8%

50th Percentile= 38 MPH
85th Percentile= 43 MPH

Volume is highest between 9:00 AM and 10:00 AM
Heavy volume hours are between 7:00 AM and 8:00 PM

Location #2- Bloomingrove Dr. near Teliska Ave, 6/14/23 to 6/27/23= 13 days
Southbound traffic captured

Total cars counted= 16,153
Average car count per day = 1,242
Total at or above 41 MPH= 4,972, 283 per day, 30%
Total at or above 46 MPH= 629, 48 per day, 4%
Total at or above 51 MPH= 86, 6.6 per day, 0.5%

50th Percentile= 39 MPH
85th Percentile= 43 MPH

Volume is highest between 4:00 PM and 5:00 PM
Heavy volume hours are between 10:00 AM and 7:00 PM

Location #3- Bloomingrove Dr. at National Grid Substation, 6/27/23 to 7/11/23= 14 days
Southbound traffic captured

Total cars counted= 25,105
Average car count per day = 1,793
Total at or above 41 MPH= 11,763, 840 per day, 46%
Total at or above 46 MPH= 2,226, 159 per day, 8%
Total at or above 51 MPH= 228, 16 per day, 0.9%

50th Percentile= 40 MPH
85th Percentile= 44 MPH

Volume is highest between 4:00 PM and 5:00 PM
Heavy volume hours are between 7:00 AM and 8:00 PM

Location #4- Bloomingrove Dr. at Reynolds Rd., 7/11/23 to 7/19/23= 8 days
Northbound traffic captured

Total cars counted= 12,746
Average car count per day= 1,593
Total at or above 41 MPH= 5,071, 633 per day, 39.7%
Total at or above 46 MPH= 722, 90 per day, 5.6%
Total at or above 51 MPH= 75, 9.3 per day, 0.5%

50th Percentile= 40 MPH

85th Percentile= 44 MPH

Volume is highest between 12:00 PM and 8:00 PM

Heavy volume hours are between 7:00 AM and 8:00 PM

Location #5- Bloomingrove Dr. at Jordan Rd. 7/19/23 to 7/25/23= 6 days

Southbound traffic captured

Total cars counted= 8,469

Average car count per day= 1,411

Total at or above 41 MPH= 3,530, 588 per day, 41%

Total at or above 46 MPH= 751, 125 per day, 8.8%

Total at or above 51 MPH= 121, 20 per day, 1.4%

50th Percentile= 40 MPH

85th Percentile= 44 MPH

Volume is highest between 7:00 AM and 8:00 PM

Heavy volume hours are between 12:00 PM and 5:00 PM

Location #6- Bloomingrove Dr. at Jordan Rd., 7/25/23 to 8/1/23= 7 days

Northbound traffic captured

Total cars counted= 11,638

Average car count per day= 1,662

Total at or above 41 MPH= 6,408, 914 per day, 55%

Total at or above 46 MPH= 1,835, 262 per day, 15.7%

Total at or above 51 MPH= 256, 36 per day, 2.2%

50th Percentile= 41 MPH

85th Percentile= 46 MPH

Volume is highest between 11:00 AM and 7:00 PM

Heavy volume hours are between 7:00 AM and 7:00 PM

Analysis

Prior to any analysis based on the above data, it is important to keep in mind that the presence of the radar trailer will effect a change in driver behavior. As most of the traffic likely takes that same route each day, they will slow down prior to reaching that point each day after first seeing it at a location. Due to this, the speed counts can be assumed to be lower

than what is actually present when the radar trailer is not there. The degree of this impact is not known but is not believed to be tangibly significant.

Immediately before the deployment to Location #1, NGPD published a social media post regarding speeds on Bloomingrove Dr. in a public education effort. This post reached 84,864 views. There is no way to know how many of those viewers actually travel that route or modified their behavior due to it but it is hoped that there was a reduction in both volume and speeds following it.

Volume-

The first of the concerns to be explored was total traffic volume. Figure A shows the total traffic counts, including both northbound and southbound, at each location.

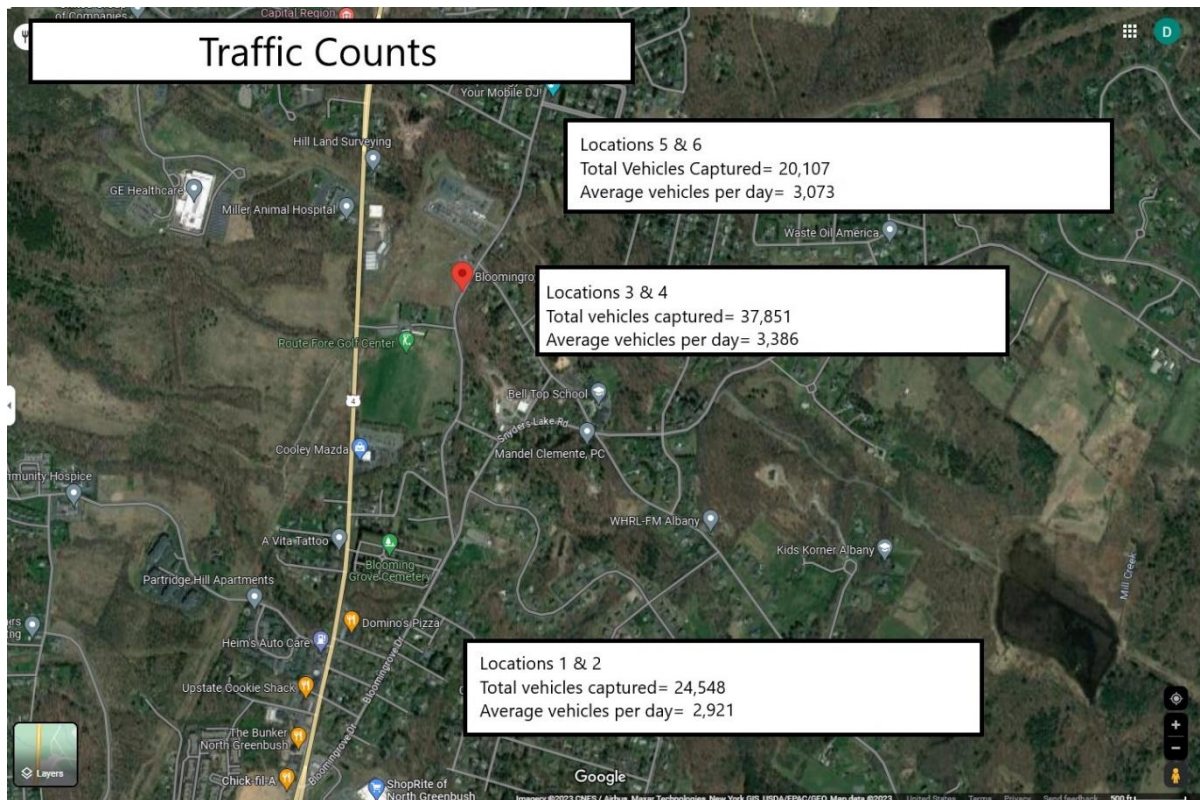


Figure A

It is clear that the data set being used for the analysis would be valid considering the high number of vehicles captured across multiple days at each location. The averages would not be affected by weekends or abnormal traffic patterns. It can be agreed, however, that this endeavor lasted almost two months which began when school was in session and ended long afterward. Additionally, the opening of Chick-Fil-A at 502 North Greenbush Rd. on July 20th, 2023 likely contributed to some increase in traffic volume. That increase would have

begun when the radar trailer was deployed at Location 5. As the average traffic count per day at that location was not abnormal, it can be assumed that any increase was insignificant.

The totals at Locations 1 and 2 on Figure A appear to be counterintuitive as that is expected to be the main way traffic reaches the other locations while traveling northbound. The discrepancy can perhaps be explained by looking at the total count for each direction as shown on Figure B.

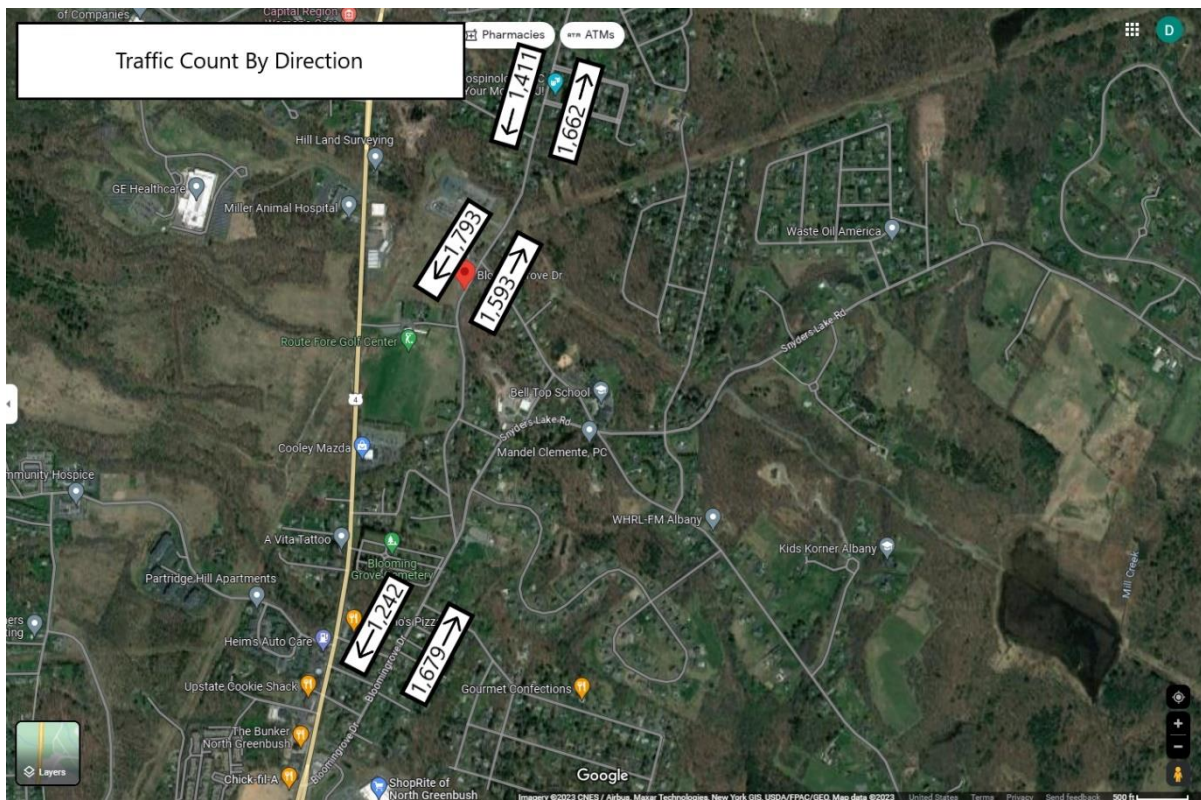


Figure B

Southbound traffic count averages per day are lower than either direction anywhere else. This is likely due to the morning backup from the traffic signal at the intersection with U.S. Route 4. Many motorists seem to choose a different route for the morning commute but likely take Bloomingrove Dr. for their return trip as the traffic count for northbound is more consistent with the other locations.

Given the fact that Snyder's Lake Rd. is an easy access point to many neighborhoods inside and outside North Greenburgh, it would be reasonable to believe that traffic counts at Locations 1 and 2 would be higher than the others. The difference between the daily averages of northbound traffic at Locations 1 and 4 can likely be attributed to traffic either going into

the Teliska Ave. neighborhood or onto Snyder's Lake Rd. Southbound traffic appears to be anomalous as it is unlikely that many vehicles exit Bloomingrove Dr. between Locations 3 and 2. There is no clear explanation as to why the daily totals appear to be so far off. It can be suspected, however, that a large volume of traffic comes from Jordan Rd. onto Bloomingrove Dr. southbound, where they wouldn't be registered by Location 5, and then turn onto Reynolds Rd. As they approached that side street, they would have been registered at Location 3 just before turning off of Bloomingrove Dr. This is a hypothesis only and would need more studying to be verified.

Speeds-

Speeding vehicles was a predominant complaint that led to this study. The posted speed limit is 35 MPH along the entire length of the area being studied. Traditionally, law enforcement will not consider anything less than 5 MPH over the limit as being problematic, with some exceptions such as curvy roads, school zones, lower speed limit areas, etc. For this analysis, any vehicles traveling at 45 MPH or less were disregarded as "speeding". This is not to minimize the danger of those speeds; it is only to allow for the focus to be on the two highest ranges of speeds which saw significant totals at all locations. Figure C illustrates the average speeds per day for each of the three deployment locations.

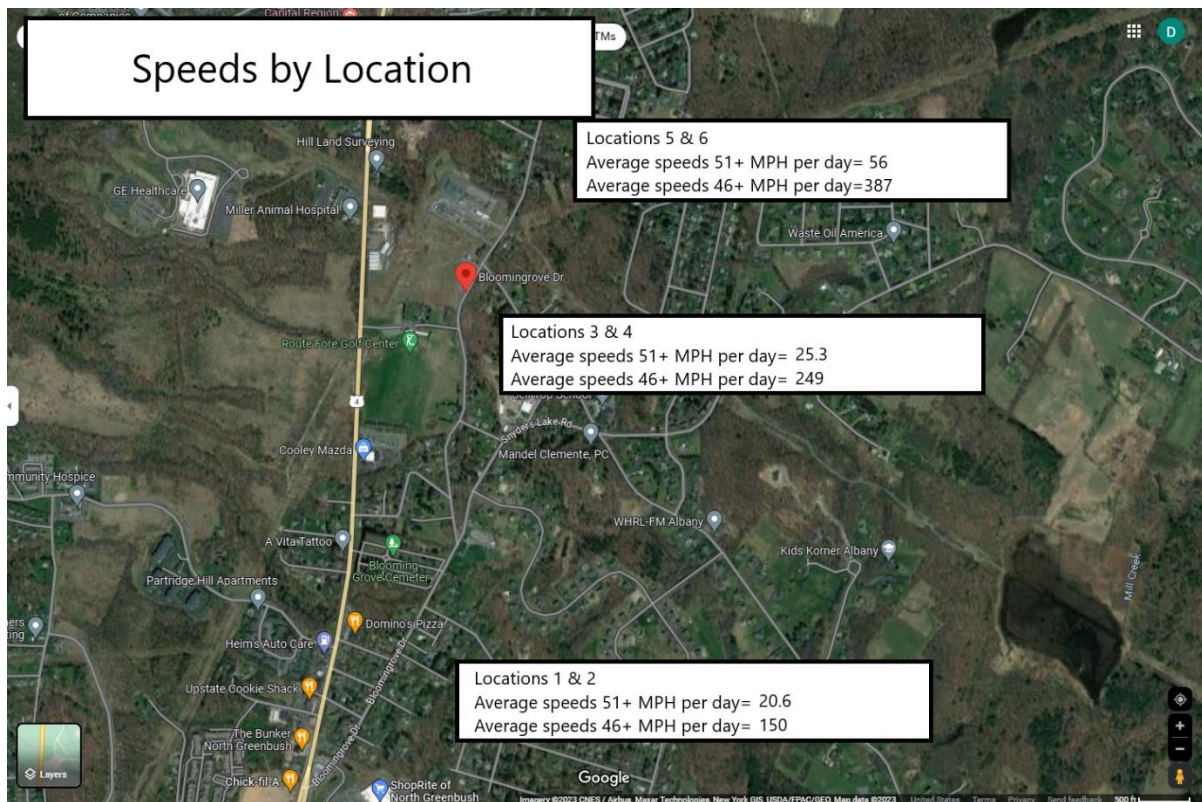


Figure C

The average daily speeds for both northbound and southbound at each of the three locations were added to find the total for that stretch of roadway. Figure C shows, at a glance, where the issues were found to be.

It is believed that Locations 1 and 2 saw less speeders due to the several hours in the morning where traffic is at a standstill due to the traffic light at the intersection with U.S. Route 4. This is confirmed by northbound having more than twice the daily average of speeds that southbound had. The fact that there were more cars on average traveling 46 MPH or more in the southbound direction than northbound leveled the playing field and resulted in the 85th Percentile being the same for both directions.

Digging deeper, it was found that one out of every 141 vehicles per day were traveling at 51+ MPH. (2,921 vehicles per day average \div 20.6 vehicles per day at 51+ MPH = 141)

Locations 3 and 4 were relatively similar to Locations 1 and 2 with regard to average speeds. It was found that one out of every 133 vehicles were traveling at 51+ MPH. (3,386 vehicles per day average \div 25.3 vehicles per day at 51+ MPH = 133)

Locations 5 and 6 saw significantly higher daily average speeders. In fact, more than double the average traveling at 51+ MPH than Locations 3 and 4. At this location, one out of every 54 vehicles per day were at or exceeding that speed. (3,073 vehicles per day average \div 56 vehicles per day at 51+ MPH = 54)

Unfortunately, the software does not show the times of the 51+ MPH speeds. Considering all locations typically have a higher volume for only 12 hours of the day, it is a safe assumption that most or all had occurred during those higher volume hours. However, without knowing the actual traffic counts per hour, we wouldn't be able to accurately calculate the hourly average or how many vehicles out of the total were at those speeds.

Collisions-

Any analysis regarding roadway safety would be incomplete without exploring data from collisions. The following statistics were collected from the NGPD call cards. It is acknowledged that some collisions are never reported to the police but they would be very minor and would not meet the threshold of significance for this report.

Only collisions along Bloomingrove Dr. between Cumberland Farms and Jordan Rd. were counted for this search as anything else would be irrelevant. Deer/ Auto collisions were also excluded for the same reason.

2021 PDAA

None

PIAA

None

2022- PDAA

3/13/22- Bloomingrove Dr. At Snyder's Lake Rd.- Failure to Stop for Stop Sign

5/26/22- Bloomingrove Dr. at Dixon Rd.- Following Too Closely

9/2/22 Snyder's Lake Rd. at Bloomingrove Dr. - Following Too Closely

10/23/22 Bloomingrove Dr. at Reynolds Rd- Following Too Closely

12/11/22 Bloomingrove Dr. at Dixon Rd.- Single vehicle into pole, inclement weather

PIAA

7/11/22 Bloomingrove Dr. at Nicholas Ave.- Ped/ Auto- Passing Too Closely. Minor injury

2023- PDAA

1/22/23- 452 Bloomingrove Dr.- Single vehicle into a pole, inclement weather

5/25/23- Bloomingrove Dr. at Jordan Rd.- Single vehicle off roadway, no damage

PIAA

None

The reportable collisions in the area studied do not indicate any trends. None were attributed to speed. Though the vehicles that had left the roadway during inclement weather were likely driving too fast for the conditions, there is no indication that they were exceeding the posted limit. Driver Inattention and Following Too Closely appeared predominantly however both are typical issues everywhere else and are not specific to this location.

Conclusion

From the analysis of both volume and speeds, there can be no doubt that both are problematic for the residents along that corridor, however the lack of collisions along that segment would indicate that the high volume is passing safely through.

The question of volume is certainly answered with this data. However, the totals don't necessarily indicate a trend that would show where traffic is flowing to and from. Ideally, there would be more volume at the southern end of the roadway and less at the northern end which would indicate that there is a feeder route in the middle. It was previously thought that Snyder's Lake Rd. was a feeder route that was doing just that. We know from watching it happen that this does happen, however the data suggests that the total volume using that route is relatively small.

It would appear that most vehicles are using this route as a "shortcut" from State Route 4 to Winter St. Ext. While the distance and travel times are similar, throughout most of the day, State Route 4 is faster, as seen in Figure D.

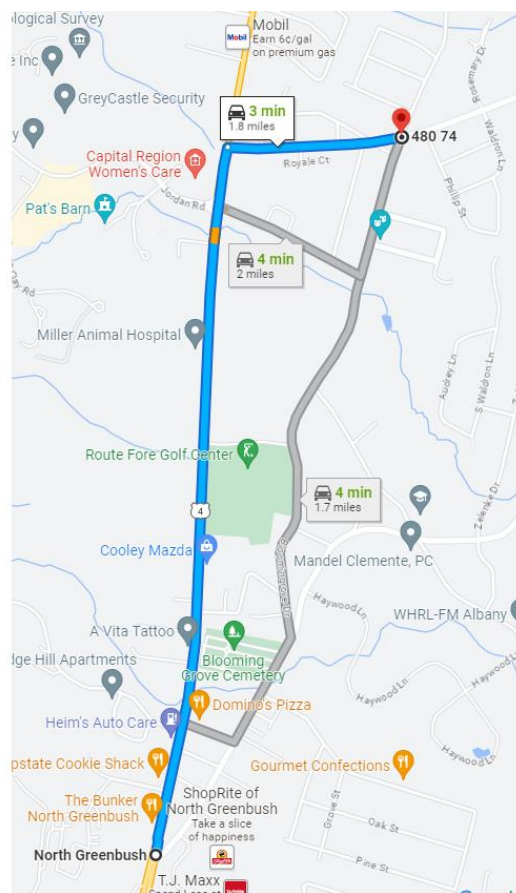


Figure D

Bloomingrove Dr. is clearly not a “shortcut” but this may be a new development since the Route 4 Corridor Project which was designed to keep traffic on State Route 4 and was completed last year. Additionally, these travel times are based on driving the speed limit along each route. Congestion on State Route 4 typically makes speeding unlikely whereas it is more likely along Bloomingrove Dr. If a driver has the opportunity to speed, Bloomingrove Dr. may actually be a faster route. Theoretically, volume could be reduced if that route actually took longer and the general public was aware of that fact.

As to the matter of speeding, there is a distinction to be made between the two ways to define “speeding”. Law enforcement considers it to be anything above the posted limit, though there is some latitude given by officers to allow for a margin of error with the radar equipment, the target vehicle’s speedometer, or other factors. This is usually only about 5- 10 MPH. The public considers speeding to be anything that they feel to be unsafe, regardless of the fact that there is a posted limit. So, most drivers going 50 MPH in a 35 MPH zone are doing so because they don’t see it as being dangerous, though they do recognize that it is illegal. Often, they are overestimating their own driving ability while underestimating the risk associated with it.

From the above data, it can be seen that the speeding problem is similar to most other roadways in the country. A small margin of drivers are traveling at the higher speeds while most are relatively close to the posted limit. On average, only about .675% of vehicles each day are going 51+ MPH at Locations 1-4. Locations 5 and 6 see an average of 1.8% at those speeds; about three times as many as the other locations.

One solution residents have asked for is a speed limit reduction along this route. The current speed limit of 35 MPH is consistent with most other similar roadways throughout town. Bloomingrove Dr. is controlled by Rensselaer County Highway so any such request would need to be made through them. While their criteria for such a decision isn’t known at this time, it is likely to be similar to how New York State Department of Transportation does it with their roadways. The 85th Percentile is the largest factor considered. Counterintuitively, the speed limit could be reduced if 85% of traffic is traveling at or below the speed limit. If that number is higher than the speed limit, a reduction in the speed limit would be unlikely to change anything since many are already disregarding the posted limit. The result would only be that those speeding motorists are exceeding the limit by a larger margin.

An increase in traffic enforcement by the police would likely bring compliance shortly after beginning but would only last a few days after the enforcement period ended; the same as when the radar trailer is parked on a roadway versus when it is not. As most drivers likely use that route every day, they would see the increase in traffic enforcement and travel at the speed limit going forward. In just a couple of days, most of those drivers would have seen the enforcement happening at least once so most would likely be complying fairly quickly. As long as motorists are seeing the enforcement continuing, they will continue to obey the limit on that roadway. However, after traveling through a couple of times after the

enforcement period ended, they would likely return to their original habit of driving at the speed that they did before the enforcement period. This means that the enforcement was only effective while it was happening so it would need to continue for a very long time.

Since the radar trailer likely brings some compliance, it was suggested that a permanent radar sign, or many, be placed along this route. Unfortunately, these would likely be effective at first but would then become nothing more than just another part of the landscape to most motorists. Knowing there are no repercussions only exacerbates the issue. If a motorist sees the same sign every day and it tells them that they're speeding but they know they won't get a ticket for doing so, they're unlikely to slow down during that trip or any future trips. Following that, they will completely ignore the sign. The radar trailer is more effective because it is never at a location long enough to be ignored but still only gets limited results. The unpredictable nature of it is what gets motorists' attention but compliance is still questionable.

Another solution presented by some residents would be the installation of stop signs or speed bumps at strategic locations. The scope of this study didn't include any research into these being deployed elsewhere in the country or whether they were found to be effective. These would also depend on Rensselaer County Highway agreeing to them.

Any discussion on the speed problem would need to be multi-faceted as there is no singular solution that would address this issue. These would include both public education and mechanical controls. These remedies would certainly also affect the volume along this route, though the volume elsewhere would increase and would need to be monitored. Further research and discussion with stakeholders and a traffic engineer would be needed to determine which would be most appropriate for this area.

Until a more formal discussion can occur on this matter, the North Greenbush Police will increase their efforts with traffic engagement along this route to discourage speeders.