



ACCREDITED LAW ENFORCEMENT AGENCY

COUNTY OF ALBEMARLE POLICE DEPARTMENT



MEMORANDUM

To: Doug Walker
From: Chief Ron Lantz
Date: July 26, 2017
Subject: All Traffic Solutions Speed Indicator Signs

At the request of the Albemarle County Board of Supervisors, the Albemarle County Police Department (ACPD) has evaluated the purchase and use of twelve additional speed indicator signs. Currently, the department possesses and operates two speed signs (All Traffic Solutions model Shield 15).

History

The Shield 15 Speed Signs were first considered as a replacement to the police department's aging speed trailers, which were cumbersome, difficult to set up and could only be used in areas with ample roadside shoulder space. The speed trailers did not collect and report any data. The Shield 15 Speed Signs were a solution to all of the shortcomings of the speed trailers. Due to the advancement in technology and need for new equipment, the police department purchased two Shield 15 Speed Signs in early spring 2016.

Purchase Cost and Use

The two Shield 15 signs currently in use were purchased from All Traffic Solutions for \$5,280.00 per sign, at a total cost of \$10,560.00. The initial cost included a one-year cloud maintenance fee of \$1500.00 per sign. The cloud maintenance fee must be renewed each year at a cost of \$1,500.00 per sign. This year, All Traffic Solution reduced the fee to \$1,000.00 (per sign per year) with significantly reduced cloud features. Both "Shield 15" signs are capable of operating with a lithium rechargeable battery source and solar-rechargeable source. The lithium batteries are charged at police headquarters; these batteries power the sign for approximately two weeks before needing to be recharged. The solar option powers the sign continuously. The solar option has been deployed by ACPD for a maximum length of 10 weeks.

Traffic Safety and the Community

The Shield 15 signs have proven to be a good traffic safety tool for the police department, and have yielded specific contributions to the overall Traffic Safety Program strategy for the ACPD. These signs promote traffic safety while also providing comprehensive reports on traffic flow, vehicle volume and speed data. This data is used to identify areas in need of additional police resources, an important feature when faced with limited resources. Currently, both the ACPD Traffic

and Patrol Units are understaffed. These signs have been used to provide a police presence in an area without having to place a physical police officer. This has been beneficial in allowing the ACPD to be responsive to citizen complaints and has resulted in positive feedback from the community on the installation of the speed signs.

While the use of two Shield 15 signs has proved satisfactory to date, going forward, staff is not able to recommend the procurement of ten additional signs. Aside from the issues surrounding inventory management (outlined in the paragraph below), there are significant future equipment and program needs related to traffic enforcement in the County that are also being considered by the ACPD, including an aging radar inventory that will need replacement in the next four to five years.

Inventory Management

Twelve Shield 15 signs would pose significant issues for the police department:

- The cost of 12 Shield 15 signs (with solar capability) would be \$63,360.00; the maintenance fees would be \$21,000 per year, including the two signs already in use. These funds are not currently in the ACPD budget.
- The process to install, monitor, produce reports and uninstall would place a significant burden on the Traffic Unit staff. Although quicker and easier to deploy than the speed trailers, it takes approximately two staffing hours to deploy a sign with lithium batteries and 2.5 hours for a solar powered sign. The signs must be monitored regularly to view traffic trends as well as ensure the sign is working properly and has not been damaged or vandalized. One sign has already been shot, but is still operating at this time.
- The storage of the signs (while not in use or while batteries are charging) presents another challenge. Each sign is approximately 2' x 2' with larger solar panels and attached mounting poles. Each sign comes with lithium batteries, a charger and solar rechargeable batteries. Each sign requires considerable space in the Traffic Unit area; twelve signs would require a sizeable space that is currently not available in the Traffic Unit area or Department.

Conclusion

ACPD staff has weighed the overall benefits and costs (both in human capital and available financial resources) and has concluded that six signs is ideal in terms of management and maximization of traffic safety benefits. This number would ensure that these tools are optimized while also not taxing staff hours in their use.

Having taken into consideration the benefits of the signs and the capacity of resources, ACPD staff is putting forth a recommendation that the Board of Supervisors approve the appropriation of \$23,110 from the General Fund Fund Balance to purchase four Shield 15 Speed Signs. Ongoing costs for cloud maintenance would be built into the FY 19 budget.