

Memorandum



Date: July 9, 2014

To: Honorable Commissioner Xavier L. Suarez
District 7

From: Carlos A. Gimenez
Mayor 

Subject: Cost Estimate to Implement Speed Limit Technology to Enforce Speed Limits Along the Rickenbacker Causeway and Crandon Boulevard

Pursuant to your request regarding the feasibility of implementing an Automated Speed Enforcement System (ASE) along the Rickenbacker Causeway and Crandon Boulevard, Public Works and Waste Management Department (PWWM) staff conducted a review of the attached "Speed Enforcement Camera Systems Operational Guidelines" published by the U.S. Department of Transportation, Federal Highway Administration. As such, a summary of findings is offered.

ASE systems can be an effective countermeasure to prevent speeding related crashes. All ASE systems have three basic components: a speed measuring component, a data processing and storage component, and an image capture component. An ASE system has two types of platforms:

- *Mobile* ASE systems can be transported to conduct ASE in any geometrically feasible location. Most mobile ASE units are based in vans or other vehicles that contain a full suite of system components.
- *Fixed* ASE systems are installed at locations where they can operate for up to 24 hours per day without an operator present. Fixed units are typically pole-mounted on the roadside and can use either above-ground or in-ground speed-measuring equipment. Some fixed units are installed at intersections to conduct both ASE and red light camera enforcement simultaneously.

It is possible to use a combination of different types of ASE units. However, to achieve the broadest possible effect of ASE, mobile units should be the cornerstones of an ASE program under most circumstances. Combination units that conduct both ASE and red light enforcement can be used at intersections, but the effectiveness of these units has not yet been evaluated in a controlled study. Although each type of ASE system has the potential to reduce speeds and improve safety, the actual effectiveness of these systems is dependent upon how they are used.

Evaluations of ASE, both internationally and in the United States have identified some advantages over traditional speed enforcement methods. These include:

- *High rate of violation detection.* ASE units can detect and record multiple violations per minute. These can provide a strong deterrent effect by increasing drivers' perceived likelihood of being cited for speeding.
- *Physical safety of ASE operators and motorists.* ASE can be implemented at locations where roadside traffic stops are dangerous or infeasible, and where traffic conditions are unsafe for police vehicles to enter the traffic stream and stop suspected violators since with ASE, there is normally no vehicle pursuit or confrontation with motorists. ASE might also reduce the occurrence of traffic congestion due to driver distraction caused by traffic stops on the roadside.

- *Fairness of operation.* Violations are recorded for all vehicles traveling in excess of the enforcement speed threshold.
- *Efficient use of resources.* ASE can act as a “force multiplier,” enhancing the influence of limited traffic enforcement staff and resources.

Although ASE has some advantages, the aforementioned evaluations of ASE systems have also identified some limitations. These include:

- *ASE does not immediately stop speeding drivers.* Unlike traditional enforcement, ASE does not intercept speeding drivers. This allows the driver to possibly continue at unsafe speeds.
- *Limited scope of enforcement and lack of direct contact with motorists.* ASE units typically only enforce speeding violations; other illegal activities are not enforced simultaneously. Although photo enforcement has the potential to enforce certain violations such as driving without a seatbelt as a secondary offense, the lack of direct contact between police and motorists means that police may not have the opportunity to observe suspicious activities and identify additional offenses such as impaired driving.
- *Specialization of ASE services.* In many jurisdictions where ASE is used, ASE operators and vehicles cannot perform any task other than ASE. Often the person monitoring the system is a civilian, or the vehicle used is not suitable for enforcement activities. This restricts the ability to conduct other law enforcement duties and responding to emergencies.
- *Time lag between violation and penalty.* When an ASE violation is recorded, the alleged violator might not be aware of the violation until the citation arrives in the mail days or weeks later, which may dissociate the violating behavior from the penalty. The immediate specific deterrence effect on the violator is therefore lost.

Please note that ASE programs must start with a sound legal basis if they are to be stable and successful. The State of Florida must approve legislation in order to allow the use of ASE systems.

Some states such as Oregon, North Carolina, Colorado and Arizona initially passed legislation to allow a temporary ASE demonstration project. Legislators could then decide whether to support the continuation of ASE based on demonstrated results.

Startup of an ASE program should also consider stake-holder support, and careful planning has to be conducted to develop a strategic plan with identification of program requirements.

Startup of an ASE system includes:

- site selection
- system procurement
- resource and personnel management
- revenue management
- planning for program evaluation
- marketing and media relations
- program rollout

The following table shows where ASE has been used:

Jurisdiction	Population (year 2000)*	Land area (mi ²)	Program start	ID type	Fixed or mobile
Mesa, AZ	448,000	125	1996	Driver	Both
Paradise Valley, AZ	14,000	16	1987	Driver	Both
Pinal County, AZ	271,059	5,3704	2007	Driver	Both
Phoenix, AZ	1,321,000	475	2001	Driver	Mobile
Prescott Valley, AZ	33,068	32	??	Driver	??
Scottsdale, AZ	203,000	184	1996	Driver	Both
Tempe, AZ	159,000	40	1997	Driver	Mobile
San Jose, CA	895,000	175	1997	Driver	Mobile
Boulder, CO	95,000	24	1998	Driver	Mobile
Denver, CO	555,000	153	1998	Driver	Mobile
Fort Collins, CO	119,000	47	1996	Driver	Mobile
Washington, DC	572,000	61	2001	Vehicle	Both
Chicago State Police District, IL**	5,377,000	946	2006	Driver	Mobile
Davenport, IA	98,000	63	2006	Vehicle	Both
Montgomery County, MD	922,000	496	2007	Vehicle	Both
Charlotte-Mecklenburg, NC***	827,445	526.28	2003	Vehicle	Both
Albuquerque, NM	471,856	181	2004	Driver	Both
Akron, OH	217,000	62	2005	Vehicle	Mobile
Cleveland, OH	478,000	78	2006	Vehicle	Both
Northwood, OH	5,000	8	2005	Vehicle	Both
Toledo, OH	314,000	81	2004	Vehicle	Both
Trotwood, OH	27,000	31	2005	Vehicle	Fixed
Beaverton, OR	76,000	16	1996	Driver	Mobile
Medford, OR	63,000	22	2002	Driver	Mobile
Jackson, TN	62,099	49	?		
Portland, OR	529,000	134	1996	Driver	Mobile

* Census estimate to nearest 1,000 population

** District encompasses Cook County, IL; ASE is conducted only on interstate highways

*** The population and land area is for Mecklenburg County – The program is currently suspended due to a legal challenge.

The research found that there are three (3) basic options for a jurisdiction to acquire ASE equipment and services from a vendor. These options include the purchase, lease or use of equipment at no cost in exchange for a share of revenues. There are countless possible variations on these basic options and each jurisdiction has a unique arrangement worked out between program managers and vendor representatives to meet the needs of the jurisdiction. However, most jurisdictions pay a contractually obligated recurring fee in addition to compensation based on the number of citations processed by the vendor.

The table below shows comprised jurisdictions that participated in an expert panel convened to assist in the development of the Speed-Enforcement Camera Systems Operational Guidelines published by the U.S. Department of Transportation Federal Highway Administration.

Organization	Location	Phone
San Jose Department of Transportation	San Jose, CA	408-975-3725
Charlotte-Mecklenburg Police Department	Charlotte, NC	704-336-4197
Portland Police Bureau	Portland, OR	503-823-2151
California Highway Patrol	Sacramento, CA	916-657-9090 ext 4022
Tempe Police Department	Tempe, AZ	480-350-8065
City of Boulder – Transportation Division	Boulder, CO	303-441-4054
Scottsdale Police Department	Scottsdale, AZ	480-312-7014
Metropolitan Police Department	Washington, DC	202-576-9260
Chevy Chase Village Police Department	Chevy Chase, MD	301-654-7300
Montgomery County Police Department	Montgomery County, MD	301-840-2881

PWWM staff has contacted all jurisdictions above in order to obtain information about their experiences with the ASE program. However, we only received one response. Please note that staff also met with one of the vendors regarding the feasibility of installing these devices. As such, we will continue to contact the rest of the organizations to obtain pertinent information regarding their ASE programs. Once we have all the information, we will conduct an analysis and will report our findings and recommendations within twelve (12) weeks.

- c: Alina T. Hudak, Deputy Mayor/ Interim Director PWWM
- Antonio Cotarelo, P.E., County Engineer/Assistant Director, PWWM
- Joan Shen, Ph.D., P.E., PTOE, Chief, Traffic Engineering Division, PWWM
- Alejandro Martinez-Esteve, RA, LEED AP, PTP Coordinador, PWWM

From: "Padron, Joanne (DIST7)" <joanep@miamidade.gov>
Date: February 13, 2014 11:09:10 AM EST
To: "Gimenez, Carlos A. (Office of the Mayor)"
<Carlos.Gimenez@miamidade.gov>
Cc: "Iglesias, Genaro \"Chip\" (Office of the Mayor)"
<chipiglesias@miamidade.gov>
Subject: FW: Draft - Memo to mayor

Good morning Mayor,

In anticipation of today's meeting, I would like to share this information with you. In Italy, speed limit technology is used to enforce speed limits along highways and country roads. I would like to get an estimate of the cost of implementing this type of technology along the Rickenbacker Causeway and Crandon Boulevard to assist in the enforcement of speed limits. With that being said, I respectfully request a report outlining the feasibility of implementing this type of technology along the Rickenbacker Causeway and Crandon Boulevard.

Sincerely,
Xavier L. Suarez

Commissioner
District 7