

REPORT TO THE TWENTY SECOND LEGISLATURE

OF

THE STATE OF HAWAII

REGULAR SESSION OF 2004

ON

SENATE RESOLUTION NO. 26

**SUBJECT: “FEASIBILITY STUDY OF ESTABLISHING A PHOTO
RED LIGHT ENFORCEMENT PILOT PROJECT”**

**STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
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TITLE: REPORT TO THE TWENTY SECOND LEGISLATURE

OF THE STATE OF HAWAII, REGULAR SESSION 2004
ON SENATE RESOLUTION 26, S.D. 1

SUBJECT: STUDY REGARDING THE FEASIBILITY OF ESTABLISHING A PHOTO RED
LIGHT ENFORCEMENT PILOT PROJECT TO ENHANCE SAFETY

The Department of Transportation based its findings on research and past experience with a Hawaii photo enforcement program.

A 2003 National Cooperative Highway Research Program (NCHRP) report entitled, "Impact of Red Light Camera Enforcement on Crash Experience" presents the results of a review and evaluation of information from published literature, various websites, and responses to a questionnaire distributed to jurisdictions known to have installed red light running (RLR) camera systems. This study searches out and synthesizes useful knowledge from all available sources and presents a concise, documented report. The results suggest that photo red light enforcement can be an effective safety countermeasure. However, the authors believe that there is currently insufficient empirical evidence based on statistically rigorous experimental design to state this conclusively.

The primary objective of the NCHRP research was to determine exactly what is known about the topic so the information can be put to use. Another objective was to provide guidance for accumulating additional information. Both the Insurance Institute for Highway Safety (IIHS) and the NCHRP did an evaluation of the Oxnard, California red light photo enforcement project – one of the most exemplary in the country. Although the agencies differed somewhat regarding the degree of effectiveness of the project, both agreed that the project changed driver behavior. The IIHS researchers concluded that the placement of cameras at 11 of the city's 125 intersections with traffic signals in 1997 produced a 29 percent decrease in injury crashes at intersections with traffic signals four years later. Front-into-side crashes (the type of crash that is most closely associated with red light running) involving injury were reduced 68 percent. If crashes without injury are included, this type of crash was reduced 32 percent. The number of crashes declined throughout Oxnard, even though only 8.8 percent of the signalized intersections were equipped with cameras. Regarding violations, the IIHS study indicated that they dropped in about the same proportions at intersections with and without cameras.

Some research conclusions may be challenged under more rigorous scrutiny. However, there seems to remain a fairly widespread intuitive belief that red light photo enforcement can be effective. Even NCHRP acknowledges that although nearly every crash analysis it evaluated had an experimental design or analysis flaw, "there is considerable 'evidence' that RLR cameras do have an overall positive effect." With this "evidence", the Federal Highway Administration produced a document in March of 2003 entitled, "Guidance for Using Red Light Cameras" that contains comprehensive information that is intended to help agencies implement a successful program. Also, the National Committee of Uniform Traffic Laws and Ordinances has developed a model State statute.

Based on public input regarding the speed limit photo enforcement project that was recently tested in Hawaii, it is probable that photo red light running enforcement will be more acceptable to the public. Early in the photo enforcement project, drivers made it clear that they had no desire to change their speeding behavior and that they thought photo enforcement was too aggressive. That is, it was like shooting ducks in a barrel when two violations per second could be captured and later cited. The drivers were frustrated, because they were unaware of a way to "beat" the photo laser method of enforcement. They preferred officers that issued individual tickets to violators. Drivers could follow a speeder at a safe distance and adjust their speed in timely manner if an officer stopped the lead driver for speeding.

Since the photo speed-measuring units are very mobile, drivers had difficulty anticipating camera locations, even when advance roadway warning signs were posted. The results were frustration and paranoia caused by a desire to speed and a fear of a good probability of being caught. Driver aggravation no doubt increased as the length of a trip increased.

Photo red light enforcement requires an easier driver mind set adjustment. Once a camera and associated equipment are installed at an intersection, it stays put. Drivers can easily anticipate the fixed location of a red light photo enforcement camera. If the number of intersections gets so great that drivers cannot easily remember them, drivers can avoid a citation by programming their minds in advance to discontinue the practice of trying to beat a red light in tight situations. Although the inconvenience of this modified behavior can cost a driver about 90 seconds, it is more apt to be perceived as a relatively minor inconvenience compared to discontinuing the practice of speeding. Linearly, an intersection is infinitesimal compared to the total distance of a trip. The department concludes, therefore, that a red light photo enforcement pilot project would be publicly accepted and useful in the state.

SR 26 allows the pilot project on only Oahu. The department agrees that this will minimize logistical problems and maximize the probability of success. The department recommends gleaned elements from Act 234, SLH 1998, Act 263, SLH 1999 and Act 240, SLH 2000 when developing enabling legislation. In addition, the following suggestions are intended to contribute toward the project's success.

- The program would be most effective under the direction of the Honolulu Police Department;
- Include in the enabling legislation the authority for the contractor to access both the driver licensing and motor vehicle registration files (the citations must be issued to the drivers), or classify the project violations under Hawaii Revised Statutes chapter 291D rather than Hawaii Revised Statutes chapter 291C.
- Require a fixed price contract, regardless of the number of citations issued by the contractor and fines paid by violators;
- Fines and any fees associated specifically with the project should be used to offset the cost of the project.
- Provide funding to cover costs that may arise during the implementation of the project. For example, State and County engineers will be needed to review requests for permits to install the project hardware; a County officer will be needed to review all pictures prior to issuing citations; and if a large number of citations is produced, there may be a need for the Judiciary

to use overtime employees or hire additional personnel to process the increase in a timely manner. In addition, if total costs exceed the amount of fines paid, the deficit must be funded.

- Consider the possibility of allowing the contractor to tap into government electricity at the signals so the contractor does not need to obtain separate access.