

From: James Pierson
Date: Friday, June 21, 2013
Subject: Red Light Cameras in Fremont
To: ----@gmail.com>

Dear Mr. ----:

I was asked to respond to your email to Councilmember Chan regarding the effectiveness of the City's red light camera system and the option of simply increasing yellow phase timing instead. I will address the issue of yellow light timing first and then discuss red light cameras.

In California, minimum yellow light timing standards are codified in law. California Vehicle Code section §21455.7 mandates that, "at an intersection at which there is an automated enforcement system in operation, the minimum yellow light change interval shall be established in accordance with the Traffic Manual of the Department of Transportation." These are minimum standards, and the law does allow cities to exceed those minimum intervals if they choose.

The yellow light timing in the City of Fremont is determined by our Traffic Engineering Department in accordance with the California Uniform Traffic Manual of Control Devices (CA MUTCD) referenced above. The CA MUTCD uses/adopts a generally accepted method in the transportation industry, as outlined by the Institute of Transportation Engineers, a professional organization of traffic and transportation engineers. The method used to establish this standard takes into consideration the following: vehicle speed, vehicle deceleration rate, and driver reaction time, otherwise known as "kinematics." Our Traffic Engineering Department uses this standard method, then rounds up to the nearest second up to four seconds, and the nearest half-second after four seconds. Therefore, the City's yellow light timing already exceeds the minimum standards established therein at all intersections with red light camera enforcement.

In addition to an extended yellow light setting, our practice is to also add an "all-red" interval (where all directions are red simultaneously) of one full second in order to provide an extra buffer for the intersection to clear. This holds back the on-set of green for an opposing direction of traffic for an extra second after the end of the yellow. We feel it is safer to use this extra time in an all-red phase than to arbitrarily add even more yellow time.

At signalized intersections, the City has to balance the amount of time between the various competing directions of travel. A goal of the City is to move the most traffic possible in the safest manner possible. Therefore, rather than use some of the time arbitrarily extending the yellow times, we believe it is safer to use some extra time in an all-red phase to completely clear the intersection before giving a green to the opposing traffic.

The purpose of the red light camera program is to reduce crashes, deter motorists from running red lights and increase the overall safety on the streets of Fremont. In a study published in the Traffic Injury Prevention Journal, the researchers note that "during 1992-98, almost 6,000 people (about 850 each year) died in red light running crashes in the United States, and another 1.4 million were injured in crashes that involved red light running." Life-altering injuries are the real result of red light-related crashes, and nearly all of us have either been the victim or near victim of a red-light runner, or knows someone injured in such a crash.

The number of red light runners at the intersections in Fremont that have red light cameras was initially high (thus the reason for installing cameras at these intersections), but has since settled to a relatively steady level after many years of red light enforcement. This is exactly the intended result as the residents of Fremont become aware of camera placement, adjusting their behavior accordingly. This claim is supported by the fact that those living in areas with a Fremont zip code make up only 31% of red light citations. Additionally, once a driver has been issued a citation, only a small fraction reoffends, less than 2%. Red light systems do change behavior, and encourage drivers to stop for red lights. This, in our opinion, is clear evidence that the City's red light camera system is effective.

Further evidence that red light cameras are effective can easily be found on the internet. I have attached a summary and links to six scholarly research studies, all of which concluded that red light camera do decrease red light running.

I believe, as does our Police Department, that Fremont's red light program does influence driver behavior in the manner intended. If only one life is saved, or one or two major injury accidents are avoided every year, then I believe the red light program is successful.

Jim Pierson
Public Works Director
City of Fremont