

DATE: March 5, 2013
TO: Mayor and City Council
FROM: Chief of Police
SUBJECT: Approval of Phase-Out of the City's Red Light Camera Program

RECOMMENDATION

That Council adopts the attached resolution approving a phase-out of the City's red light camera system over the next two years as the respective contract period for each of the various red light camera sites expires.

SUMMARY

According to information from the U.S. Department of Transportation and the Insurance Institute for Highway Safety, more than 900 people are killed and over 200,000 injured in the United States each year by drivers running red lights. On July 17, 2007, the City Council adopted Resolution 07-110 authorizing staff to enter into an agreement with Redflex Traffic Systems, Inc. to install, support, and maintain a red light photo enforcement system at various intersections in Hayward; and the first of ten red light camera approaches was installed and operational at the intersection of Industrial Boulevard and Huntwood Avenue on June 30, 2008.

Various studies conducted over the past seven years present somewhat of a consensus that agencies using red light camera systems experience anything from negligible to substantial reductions of broadside accidents in light-controlled intersections with cameras. However, these same studies also revealed a concern regarding increases of rear-end collisions at camera-equipped intersections. To date, thirty-four California cities have decided to drop their red light camera programs citing a variety of concerns ranging from substandard evidence of traffic safety to the cost prohibitive burden of running an expensive system with little to no evidence of effectiveness.

In October 2011, the Hayward Police Department initiated a more interactive and reliable approach. Staff used data analysis to identify the top five intersections in Hayward where crashes of all types had been occurring. Led by this data, especially after the implementation of the new records management system, traffic officers were then deployed almost exclusively to in-person enforcement activities within each of the five intersections and also within a two-mile radius of each. These strategy considerations, combined with the added benefits of police officer visibility and human contact with motorists, made an early success of the pilot effort. Almost immediately, the City realized a near thirty-five percent plummet of reported accidents at each site. The in-person interaction between motorists and officers lends an advantage to officers' discretion as to the best way to correct driver behavior beforehand and actually prevent accidents from occurring. As a result, staff is recommending phasing out the red light camera program as described herein.

BACKGROUND

Red light running is a significant public safety concern. According to information from the U.S. Department of Transportation and the Insurance Institute for Highway Safety, more than 900 people are killed and over 200,000 injured in the United States each year by this driver behavior. About half of the deaths are pedestrians and occupants in other vehicles who are hit by the red light runners. In an effort to reduce injuries and fatalities from crashes associated with red light running, scores of jurisdictions around the country turned to red light camera systems as a way to bring about exponential reductions of accidents at intersections where incidents of red-light related accidents were frequent.

As these systems flourished across the nation, they became the subject of both praise and rancorous debates as to their legitimacy as safety tools and whether their usefulness in reducing crashes had taken a back seat to their potential for generating revenue. In Hayward, the goal in implementing the system has always been focused on increasing traffic safety.

On July 17, 2007, the City Council adopted Resolution 07-110 authorizing staff to enter into an agreement with Redflex Traffic Systems, Inc. to install, support, and maintain a red light photo enforcement system at various intersections in Hayward. A contract with Redflex was subsequently executed November 9, 2007 and the first of ten red light camera approaches was installed and operational at the intersection of Industrial Boulevard and Huntwood Avenue on June 30, 2008. Three subsequent approaches were installed and operational at other intersections in 2008, one in 2009, and five in 2010. Currently, there are a total of ten red light cameras spanning eight intersections throughout the City (two intersections are each equipped with cameras capturing two different approaches, and the others are each equipped with a single installation). The ten intersection sites are shown in *Table 1*.

TABLE 1
Installation Sites of Red-Light Cameras

CAMERA INSTALLATION	INSTALLED
Industrial & Huntwood (Eastbound)	6/30/2008
B & Second (Westbound)	7/30/2008
W Winton & Hesperian (Westbound)	7/30/2008
W Winton & Hesperian (Eastbound)	9/30/2008
A & Hesperian (Northbound)	6/25/2009
Industrial Pkwy SW & Whipple (Northbound)	1/31/2010
Mission & Industrial (Northbound)	1/31/2010
I-880 & A Street (Eastbound)	2/28/2010
I-880 & A Street (Westbound)	2/28/2010
Santa Clara & Jackson (Northbound)	2/28/2010

The primary goal for implementing a red light camera system in Hayward was to address the issue of traffic safety by reducing dangerous collisions at the ten intersections where red light cameras were ultimately installed. These ten intersections had been statistically known for higher incidences of crashes as a result of red-light violations than other less traveled intersections in the City.

Much has occurred within the past eighteen months regarding the Hayward Police Department's (HPD) ability to accurately measure and assess traffic accident data. The January 2012 implementation of a new Computer Aided Dispatch (CAD) and Records Management System (RMS) is providing staff with data that is useful in assessing the effectiveness of the red light camera system and its relationship to the goal of increased traffic safety.

Based on the installation dates as reflected in *Table 1* above, service provider contract durations for each of Hayward's ten red light camera installations will begin to expire in the fall of 2013. The contract term for each installation is five years from the date each was installed, thus the first four approaches installed in 2008 will come to term during the second half of calendar year 2013.

DISCUSSION

How red light cameras work-- Sensors in the roadway are connected to a red light camera and the traffic light controller. The camera is activated when a vehicle enters the intersection after the light turns red. Most systems use a digital medium that produces both still images and full motion video technology. In most configurations, both the front and the back of the violating vehicle are each simultaneously captured by two separate cameras, which are aligned with the approach to the intersection in question. The image of the front-facing camera captures the position of the vehicle before it enters the intersection against a red light, and a frontal view of the driver. The rear-facing camera also confirms the vehicle's precise position in the intersection at the moment the violation occurs, and it captures the rear license plate of the vehicle. The device also records the date, time of day, and the duration of time the light had been red before the violation.

The digital evidence of the violation is transported over secure high speed data links to the vendor, where vehicle registration information is collected and assembled with the photographic evidence. The assembled information is then presented to the agency of jurisdiction for verification, where a duly-appointed staff member reviews the evidence, validates the identity of the driver through a comparison process, and either approves or rejects the citation prepared by the vendor. If approved, the vendor sends a hard copy of the citation by mail to the violator, and an electronic copy directly to the local court. The vendor also provides an opportunity for the violator to view all of the electronic evidence online, including still and video images. The violator then satisfies the ticket as he or she would pay or contest a traditional citation through the court.

Do red light cameras reduce accidents-- Some jurisdictions using the system realized no appreciable decrease of the most dangerous of all red light-related crashes—the right angle (broadside) collision. Other jurisdictions report stark decreases in collisions immediately following the installation of a red light camera system, followed by an eventual resurgence of collisions over time.

Of primary concern in enhancing traffic safety is reducing the volume of injury collisions; of secondary concern is reducing the volume of non-injury collisions. Collisions at intersections controlled by red light traffic signals generally fall into three categories: (1) broadside collisions (where the at-fault motorist runs a red light and collides into the side of another vehicle entering the intersection with the green light); (2) rear-end collisions (where the at-fault motorist does not stop in time for the red light and collides with the vehicle directly in front in the same lane who has stopped for the red light); and (3) rear-end collisions involving motorists who, upon approaching an intersection and seeing the signs for red light cameras, panic and try to stop, thus causing a rear-end collision.

Of these three categories, the broadside collision usually results in greater number of injuries or more serious injuries than rear end collisions. Greater injury and property damage are typically caused by broadside and rear end collisions for traffic travelling straight through the intersection or making a left hand turn in the intersection as opposed to less serious collisions involving motorists making a right hand turn. Various studies conducted over the past seven years present somewhat of a consensus that agencies using red light camera systems experience anything from negligible to substantial reductions of broadside accidents in light-controlled intersections with cameras. However, these same studies have also revealed a concern regarding increases of rear-end collisions at camera-equipped intersections.

For example, in a 2005 report, *Safety Evaluation of Red Light Cameras*, the Federal Highway Administration summarizes its multijurisdictional study representing different locations across the United States. The study focuses on the collective effects over all red light camera sites in all jurisdictions. Consistent among jurisdictions in the study is data reflecting negligible to moderate

decreases in right-angle (broadside) crashes after the implementation of red light cameras, but also moderate to significant increases in rear-end collisions—upwards of fifteen percent.¹

In a 2010 audit conducted by the Controller of the City of Los Angeles, the effectiveness of the city's 32-intersection red light camera program was analyzed. The audit found no significant data or conclusions that suggest a reduction or increase in fatalities due to red light cameras. The report concludes, "We found that the program cannot conclusively demonstrate that it has reduced traffic collisions, thereby increasing public safety." As a result of these findings, and the fact the costs for maintaining red light cameras in Los Angeles seemed to outweigh the effectiveness in reducing accidents, the City of Los Angeles approved and initiated a phase-out of its red light camera system in August 2010.²

Following a 2009 report to its city council regarding the shortcomings of its red light camera system, the city of Costa Mesa, California scrapped its program based on a recommendation by the police chief to return to traditional enforcement with live police officers. This recommendation stems from a thirteen percent increase of the total number of accidents at red light camera intersections, and a twenty percent jump in rear end collisions at the same intersections.³

To date, thirty-four California cities have decided to drop their red light camera programs citing a variety of concerns ranging from substandard evidence of traffic safety to the cost prohibitive burden of running an expensive system with little to no evidence of effectiveness. Eight of the thirty-four cities deciding to phase out their programs are the Bay Area cities of Berkeley, Burlingame, Cupertino, Emeryville, Fairfield, San Jose, San Carlos, and Union City.⁴ Following are cumulative observations of local governments across the nation:

- ⇒ Intersections with photo enforcement tend to experience a measurable reduction of red light running violations.
- ⇒ Decreases of violations tend to be significant when red light enforcement is installed, with diminishing rates of decrease over time.
- ⇒ There is evidence that extending yellow signal intervals may reduce violations, independent of enforcement.
- ⇒ Right angle (broadside) collisions are reduced moderately to significantly following the implementation of most photo red light projects.
- ⇒ Rear-end crashes increase significantly following photo enforcement implementation.
- ⇒ Attention to the avoidance of rear-end crashes through advance warning signage and engineering are a necessary part of a successful photo enforcement program.
- ⇒ Specific locations with relatively low crash rates but high levels of continued violations suggest the need for traffic-engineering solutions.

¹ U.S. Department of Transportation, (2005). *Safety evaluation of red-light cameras* (FHWA-HRT-05-048). McLean, Virginia: Federal Highway Administration.

² Greuel, W. City of Los Angeles, Office of the Controller. (2010). *Audit of the photo red light program*. Retrieved from City of Los Angeles website: http://controller.lacity.org/stellent/groups/electedofficials/@ctr_contributor/documents/contributor_web_content/lacity_011808.pdf

³ Costa Mesa red light cameras increased accidents. (2009, September 03). *The newspaper.com: A journal of the politics of driving*. Retrieved from <http://thenewspaper.com/news/28/2888.asp>

⁴ California: Red light camera company offers cut rate deals to city in a desperate bid to keep program alive. (2012, July 03). *The newspaper.com: A journal of the politics of driving*. Retrieved from <http://www.thenewspaper.com/news/38/3834.asp>

A Successful Alternative Strategy for Accident Reduction -- In October 2011, the Hayward police department initiated an alternative strategy for reducing accidents. Rather than relying solely on the incongruent relationship between crash data at red light camera intersections and the camera system's ability to reduce accidents, staff identified a more interactive and reliable approach. Without regard to the presence or absence of red light cameras, staff used data analysis to identify the top five intersections in Hayward where crashes of all types had been occurring.

Led by this data, especially after the implementation of the new records management system, traffic officers were then deployed almost exclusively to in-person enforcement activities within each of the five intersections and also within a two-mile radius of each. The premise of this strategy is that concentrated enforcement efforts of live officers allows for a broader assessment of drivers' accident-prone behaviors as traffic ingresses to and egresses from the actual high accident intersection. Speeding cars, motorists with obscured visibility windshields, cellular phone users, and other distracted driving behaviors as drivers approach an intersection are often a factor as to why they are at risk of running a red light or otherwise driving inappropriately through the intersection at the time of a crash.

These strategy considerations, combined with the added benefits of police officer visibility and human contact with motorists, made early success of the pilot effort. Almost immediately, the City realized a near thirty-five percent plummet of reported accidents at each site. As a result of significant staffing strains in the Traffic Unit, staff continued the strategy at the top three intersections where accidents occur and, during the past twelve months, have averaged a twenty-five to forty percent reduction of accidents. This strategy is clearly of benefit as a strong alternative to reliance on red light cameras, and it will continue as a priority tactic. The in-person interaction between motorists and officers lends an advantage to officers' discretion as to the best way to correct driver behavior beforehand and actually prevent accidents from occurring. In the true spirit of community policing, during these face-to-face interactions, officers may decide if it is best to educate the driver, issue a citation, or both.

Hayward Red Light Camera Citation Trends-- Through data furnished by Redflex Traffic Systems, the City's red light camera service provider, and through a hand check of pre-2012 records of reported collisions, staff was able to extrapolate enough data to compare and analyze Hayward's red light system as a whole—particularly the nature and number of red light camera citations issued and the number and type of crashes associated with each Hayward intersection equipped with red light cameras before and after installation.

Although this analysis is prompted in part by the fact the vendor contracts will soon begin to expire, it also serves as a timely opportunity to compare and contrast Hayward's trend data to the aggregate observations and conclusions of the previously cited studies from around the state and nation.

From the go-live date of the first red light camera installation in 2008 through the end of calendar year 2012, a total of 62,987 citations were issued to red light runners captured by Hayward cameras. In 2008, only four installations had been completed (five by 2009); thus the number of citations issued is proportionately smaller than in 2010 and beyond, when all ten approaches in the City were up and running.

TABLE 2
Total Citations per Program Year

INTERSECTION		2008	2009	2010	2011	2012
Industrial/Huntwood	TOTAL	471	2,145	979	786	660
	Right on Red				250	430
B/Second	TOTAL	896	1,302	765	724	736
	Right on Red				190	234
Winton/Hesperian W.	TOTAL	632	1,658	1285	1,409	1,576
	Right on Red				314	839
Winton/Hesperian E.	TOTAL	196	964	682	346	733
	Right on Red					
A/Hesperian	TOTAL		2,095	2,038	1,869	1,745
	Right on Red				641	1183
Industrial/Whipple	TOTAL			2,936	880	830
	Right on Red				216	602
Mission/Industrial	TOTAL			551	725	485
	Right on Red					
A St. /I-880 E.	TOTAL			6,153	3,667	3,683
	Right on Red				1328	2914
A St./I-880 W.	TOTAL			6,254	4,614	3,651
	Right on Red				1864	2047
Santa Clara/Jackson	TOTAL			725	704	437
	Right on Red				85	264
AGGREGATE TOTALS ⇒		2,195	8,164	22,368	15,724	14,536

Table 2 illustrates the gradual increase of total citations per year, but it is important to note 58.6% of the citations issued in 2012 were for right-turn-on-red violations. While California law requires drivers to make a complete stop before turning right at a red light, right turn violations are rarely involved as a factor in collisions.

Many cities actually elect not to equip their red light camera systems to detect right-turn-on-red violations to avoid the appearance of their system being revenue driven as opposed to safety driven. Drivers who do not stop completely before turning right at a red light are in fact violating the law and may be cited accordingly, but much of the rancor points to the assertion that many red light camera systems rely heavily on right-turn-on-red

violations to fiscally sustain the program. Challengers claim a heavy focus on this less-dangerous violation is in contrast to the assertion red light cameras exist to decrease accidents and danger. In Hayward, reducing right-turn-on-red violations was never asserted as a primary focus when the system was installed. Capturing all red-light violations to reduce accidents was the goal, but the right turn violations are clearly a preponderance of the total. Frustrations of motorists in jurisdictions all over the nation point to this as a central issue of their concern.

As reflected in Table 2, the vendor, Redflex Traffic Systems, did not begin to segregate the proportion of right-turn-on-red violations until mid 2011. Cameras at two Hayward approaches (Eastbound Winton & Hesperian and the intersection of Mission & Industrial) are not positioned to accurately capture right-turn violations and are activated only by through traffic violators. Darker shaded areas represent the sequence in which red light cameras were installed at the various approaches between 2008 and 2010.

Of the total number of potential violations the vendor submits to HPD each month for review and approval, the review officer must reject some of the cases for a variety of criteria (images too grainy; the evidence does not support a violation occurred; the motorist was actually within the law; unable to see or identify the driver, etc.). The total numbers of violations shown in Table 2 (above) reflect only the cases where the reviewing HPD officer approved the citation after reviewing the evidence. The rate at which cases are rejected was high at the initial stages of program installation in 2008, and then tapered off to an average of twenty-one percent in preceding years. The rejection rate was at its lowest in 2012, but the number of cases submitted for review tapered as well. Shown in Table 3 are the rejection percentages for each year of the program.

	Vio Presented	Vio Rejected	Cites Issued	Difference
2008	3,721	1,526	2,195	41%
2009	10,405	2,241	8,164	22%
2010	28,135	5,767	22,368	20%
2011	20,021	4,297	15,724	21%
2012	16,169	1,633	14,536	10%

Cases for which citations were approved and issued have also been subject to significant scrutiny. In 2009, nearly 4.8% of Hayward's red light camera citations were challenged by the recipient through the traffic court. The trend followed in 2010 at 4.2%, then increased sharply in 2011 to 7.9%. In 2012, despite the fact there were fewer cases submitted for citation, the rate by which recipients challenged their citation rose to 8.24%. This trend is consistent with the experiences of other California jurisdictions, and it coincides with more aggressive legal challenges in recent years.

Last year, the California Supreme Court agreed to review two different red light camera cases where the motorist was convicted of the violation and subsequently appealed the case to a higher court. In both cases, the motorist argued that red light camera images should not be admissible because their credibility and reliability cannot be authenticated as evidence in court. The two appellate courts, each of a different district of the state, rendered opposite conclusions as to the foundation necessary to admit photographs taken by red light cameras. In one case originating from a Redflex ticket issued by the Inglewood Police Department, the appellate court found that the images were presumed to be accurate, the motorist had not cast sufficient doubt on their reliability, and the photographs and the information printed on them were not hearsay.⁵

The other appeal case stems from a conviction of a citation issued by the Beverly Hills Police Department and is based on a similar argument about admissibility of a red light camera image under blind assumption the image is reliable and authentic. In that case, a camera belonging to Redflex Traffic Systems captured a woman entering a Beverly Hills intersection 0.28 seconds after the light turned red. The woman, a former public defender, fought the citation vigorously but was still found guilty in traffic court. She appealed the citation to California's second highest appeals court, arguing the validity of the photographic evidence as inadmissible hearsay. In February 2012, the appellate court agreed and struck down the evidence as insufficient to convict a motorist.⁶ In taking these two cases under review, the highest court of California will likely issue a ruling in the near future that could substantially impact the viability of red light camera programs one way or the other.

During the sixty-day period of October and November 2012, a total of fifty (42.7%) of the 117 citations challenged in Hayward Traffic Court rendered a guilty finding. The traffic commissioner dismissed the remaining sixty-seven citations (57.3%). Most cases were dismissed because in the court's opinion, evidence was either insufficient or lacking foundation—even in cases where the photo image and other evidence point to a driver and the driver admits he is the person depicted in the image. Many magistrates are uncomfortable with red light camera cases, citing hearsay problems as their basis for frequently discarding the evidence. This trend is not exclusive to Hayward and is occurring in traffic courts all over the nation.

Court cases, red-light running studies, and the sentiment of frustrated motorists have each contributed to the need for cities to include traffic engineering as an alternative to enforcement alone. Most of the focus rests on whether the duration of yellow traffic lights at some intersections are too short and perhaps a causative factor of red light running. California law establishes a standard for the minimum duration of a yellow traffic signal. The standard varies according to the speed limit of the approach to the light. Three to four second durations are most common. Some cities, including Hayward, have been responsive to the complaints of motorists when their perception is that a traffic signal cycle is too short and perhaps contributed to a photo red light violation. Several studies point to the impact responsive traffic engineering can have on reducing accidents at intersections, including improvements of signage,

⁵ People v. Goldsmith, 203 Cal. App. 4th 1515, 1518 (2012); Court of Appeals of California, Second District, Division Three.

⁶ People v. Borzakian; 203 Cal.App.4th 525 (2012); Court of Appeals of California, Second District, Division Seven.

moving or removal of objects that obscure drivers' reaction time, changing of speed limits, and examination of light cycle durations.

In the Bay Area city of San Carlos, for example, the City Council voted in April 2010 to cancel its red light camera contract with Redflex Traffic Systems when the city increased the duration of yellow signals at accident prone intersections. The City realized an instant drop to almost zero red light violations at an intersection that had earlier been one of its most frequent light-running problems.⁷ Loma Linda, California, experienced the same phenomenon in February 2010. Tweaking the yellow light at their high accident intersections gave the city enough pause to terminate early its red light camera contract with Redflex Traffic Systems. Under the threat of a half-million dollar early termination penalty, the city elected to instead let the contract expire and handle red light running through conventional enforcement since the accident rate had fallen.⁸

To ensure compliance with state standards, Hayward's Traffic Engineering staff surveyed the cycle durations of the yellow and red signals at all Hayward intersections equipped with red light cameras. Yellow lights were examined for their duration before switching to red, and red lights were checked to

ensure adequate standing time for signals in all directions to stay red before a new green cycle begins in any direction. *Table 4* reflects current yellow light engineering at each location. The highlighted durations represent City engineers' planned adjustment of yellow light cycles in response to public complaints and frustrations. At each of these three approaches, the yellow light cycle was already timed slower than required by law, although it is anticipated an even slower cycle at these particular locations will add an extra layer of safety for motorists without congesting the traffic flow.

TABLE 4

Location and Direction	Required yellow time	Existing Yellow Time	Proposed Yellow Time	All-Red Existing	All-Red Proposed
B/2 nd EB	2.7 sec	3.2 sec	3.5 sec	1.0 sec	1.0 sec
Industrial/Huntwood EB	4.24 sec	4.5 sec	4.5 sec	1.5 sec	1.5 sec
Industrial/Huntwood	2.08 sec	3.0 sec	3.0 sec	1.5 sec	1.5 sec
Hesperian/A NB	3.52 sec	4.0 sec	4.0 sec	1.0 sec	1.0 sec
Hesperian/A NBLT	2.08 sec	3.0 sec	3.0 sec	1.0 sec	1.0 sec
Winton/Hesperian EB	3.52 sec	3.8 sec	4.0 sec	1.5 sec	1.5 sec
Winton/Hesperian EBLT	2.08 sec	3.0 sec	3.0 sec	1.5 sec	1.5 sec
Winton/Hesperian WB	3.52 sec	3.8 sec	4.0 sec	1.5 sec	1.5 sec
Winton/Hesperian WBLT	2.08 sec	3.0 sec	3.0 sec	1.5 sec	1.5 sec
Industrial/Mission NB	3.88 sec	4.0 sec	4.0 sec	1.0 sec	1.0 sec
Industrial/Mission NBLT	2.08 sec	3.0 sec	3.0 sec	1.0 sec	1.0 sec

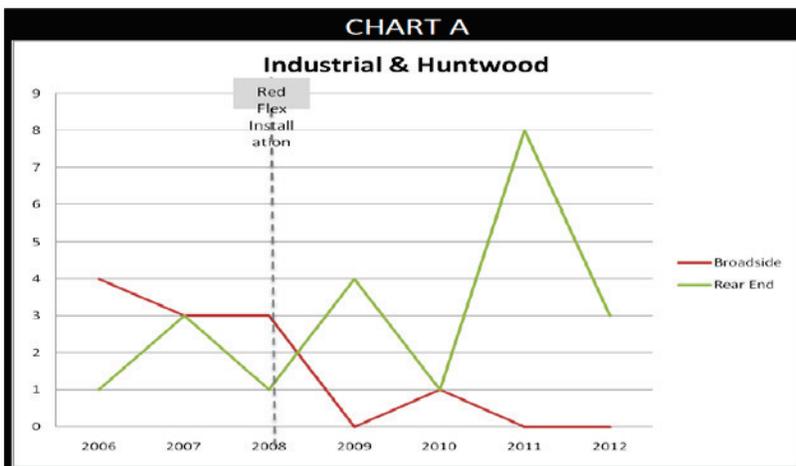
Hayward Crash Trends -- Only four of the eight Hayward intersections equipped with light cameras realized any before-and-after decrease of broadside collisions. The most noteworthy drop, fifty-seven percent, occurred at Industrial Boulevard and Huntwood Avenue, followed by fifty percent decrease at Mission and Industrial Boulevards and thirty-three percent at Santa Clara and Jackson Streets. The intersections of B and Second Streets, Industrial Parkway SW and Whipple, and A Street at the 880 freeway each realized an increase of broadside collisions within the two year period following the installation of cameras. The intersection of Santa Clara and Jackson Streets saw no change during the first year after installation, then realized a fifty percent increase in year two. Although most studies cite a typical reduction of broadside collisions following the installation of cameras, some jurisdictions occasionally do experience marginal to no change in broadside collisions, and sometimes even increases in right-angle collisions when cameras are present. There is debate about the possible reasons why post-installation collision data is inconsistent, but there is no definitive explanation.

⁷ California city dumps red light camera after increasing yellow. (2010, April 14). *The newspaper.com: A journal of the politics of driving*. Retrieved from <http://www.thenewspaper.com/news/31/3110.asp>

⁸ California: Longer yellows nearly eliminate violations: Straight through violations drop 92 percent after yellow lights are extended by one second in Loma Linda, California. (2010, February 19). *The newspaper.com: A journal of the politics of driving*. Retrieved from <http://www.thenewspaper.com/news/30/3055.asp>

Data on rear-end crashes tell a different story. All but three of the intersections in the system suffered increases in rear-end collisions, the highest of which was seventy-five percent at B and Second Streets. The intersection of Winton Avenue and Hesperian Boulevard followed closely with a sixty-seven percent increase, and a fifty-seven percent spike occurred once cameras were installed on A Street at the I-880 freeway.

Also compelling is the fact some of the red light intersections examined for crash trends bore an even more significant spike in rear-end collisions outside of the two year before-and-after period encompassing the scope of this analysis. For example, as shown in *Chart A*, the intersection of Industrial Boulevard and Huntwood Avenue suffered a 700 percent spike of rear-end crashes in 2010. This substantial spike began almost precisely two years after the 2008 installation of red light cameras at the intersection, and it followed a smaller initial increase and eventual decline of rear-end crashes between 2008 and 2010.



FISCAL IMPACT

Although the goal of red light camera program is not revenue driven, significant costs are incurred in maintaining the program. The City’s contract with Redflex Traffic Systems provides that the City pay a monthly maintenance fee (\$5,879 for each of the ten approaches). This fee, combined with the staffing costs and overhead necessary to run the program, equates to \$962,976 in annual operating costs for the City to run the red light camera program (*Table 5*).

Table 5

Annual contract costs (\$5,879 per approach x 10 approaches x 12 mo):	\$705,480
Community Service Officer annual salary & benefits (\$107,748 x 2):	\$215,496
Monthly PG&E (Average \$3,500 per month)	\$42,000
ANNUAL OPERATING COST	\$962,976

Two FTE community service officers assigned to the Traffic Unit handle the operational volume of red light camera cases. The two positions were authorized one each in FY 2010 and FY 2011 as a result of the volume of staff work overwhelming a full-time traffic officer, who was simply deployed from other traffic duties. FY 2010 is when the last of the ten installations was installed and the system began running at full capacity. Approximately 100 to 120 staff hours per week are required to adequately run the red light camera program. This involves handling all reviews, approvals, and rejections of violations presented by the vendor, all follow up investigations to determine identity and when registered owners disavow the identity of the driver, courtroom testimony preparation and delivery, correspondence to and from registered owners of vehicles, collaboration with the city’s traffic engineers, handling walk-in inquiries from citation recipients, and compiling historical documentation pursuant to discovery motions filed in court. The community service officer added in 2011 was based on increased red light camera revenues.

Fine revenues peaked at \$1.3 Million during FY 2011 when all ten red light approaches were up and running. At that time, the County of Alameda was accurately tracking fines and fees from the traffic court and dispersing those revenues to the jurisdictions of origin. From FY 2011 to FY 2012, fine revenues disbursed to the City of Hayward dropped 63%—about the same time the County’s financial database was revamped. The type of transmittal information provided by the County was dramatically altered with the implementation of their new system, resulting in a poor, and likely inaccurate, distribution of revenues.

While the photo red light program indicates a considerable drop in revenues in FY 2012 and FY 2013 year-to-date, revenues allocated toward other Vehicle Code Fines has increased during this same time period. While not yet confirmed, staff is considering whether red light photo revenue is being incorrectly allocated toward vehicle fines and forfeitures by the County. Discussions with County officials have fallen short of identifying the exact reason for the drop in disbursements (or possible inaccurate disbursements), and staff continues to work through the issue to identify whether revenues are misplaced in the county system. Also being considered is the degree to which the decline in citations and increase in judicial dismissals may be a factor in revenue decline.

Table 6 enumerates the annual revenues received by the City for the past three years, plus revenue received so far in FY 2013 that is known to be derived from red light camera fines. FY 2012 and FY 2013 reflect the estimated amount of revenue that would be attributed to the red light program if Alameda County corrects its revenue distribution error. Staff believes that on-going conversations with the County will clearly demonstrate that revenue due the City (and probably received under another category) will be much closer to that identified for FY 2011.

TABLE 6
RED LIGHT CAMERA REVENUE

	FY 2010	FY 2011	FY 2012*	FY 2013 YTD*	Program Total YTD
Gross Revenue	\$ 631,193	\$ 1,302,895	\$ 885,643	\$ 505,083	\$ 3,324,814
Operating Costs	\$ 855,228	\$ 962,976	\$ 962,976	\$ 595,617	\$ 3,376,797
Net Gain/(Loss)	(\$224,035)	\$339,919	(\$77,333)	(\$90,534)	(\$51,983)

**Assumes allocation errors made by County are corrected*

FY 2011 revenues supported the costs associated with running the photo red light program, but even if undisbursed revenues are identified by Alameda County officials, there exists a possibility the trend data signifying a decline in program performance may not reconcile with the City’s cost in running the program. Based on confirmable revenue data for FY 2012 and the mid-year prorated amount for the current fiscal year, program costs exceed offsetting revenues. Staff is currently engaged with counterparts at Alameda County to resolve the issue of possible outstanding revenue as quickly as possible, regardless of City Council’s decision about the fate of the red light camera program.

While staff’s recommendation to phase out the red light camera program is based on safety and crash-reduction concerns, there are three fiscal alternatives for Council to consider should the decision be to shut down all or part of the program.

- Option one, staff’s recommendation, is to simply allow the five-year terms to expire over the next two years, according to the installation dates of each approach.
- Option two is for the City to terminate the entire contract and discontinue the whole red light camera system at once.

- Option three is to continue the contract for the whole system—including extending the terms for the approaches due to expire—and wait until the five-year term is reached for the location installed last onto the system.

Option One, Two-Year Phase Out-- A gradual phase out would occur over an approximate two year period, beginning June 2013 through February 2015, as the five-year expiration is reached for each installation/location. Fiscal impact for this option is somewhat uncertain because staff is still attempting to resolve a significant discrepancy in the amount of red light camera revenue disbursements from the County. Staff believes fines received by the County for FY 2012 and FY 2013 are likely consistent with those disbursed to the City in FY 2011, and that the drop in disbursements in FY 2012 will soon be resolved as an accounting error. Staff anticipates this reconciliation will result in the red light camera program achieving a net gain of approximately \$100,000 for FY 2013, decreasing incrementally as the system is phased out. Assuming staff rectifies the accounting issues with Alameda County, it is unlikely a phase out over the next two years would cost the City more than it recovers in fine revenue. Staff is recommending the phase out approach to allow the Police Department time to fill its staffing vacancies (caused by attrition). The time it will take to properly staff the traffic bureau coincides with the phase-out approach for the red light camera system. The phase-out option also assumes the pending California Supreme Court decision will not legally nullify the use of red light camera evidence. If the Supreme Court holds that the use of red light camera evidence is inadmissible, then the City's entire contract with Redflex, and the corresponding automated traffic enforcement at all ten intersections, terminates for cause.

Option Two, System Wide Termination-- If the City were to unilaterally terminate the entire contract without cause in June 2013 (five years from the date of the first installation), the City would incur an immediate cost based on the unexpired term for the later installations (i.e., those approaches that have not yet been in place for five years). According to calculations provided by Redflex's legal counsel based on costs of installation, if the City terminates the entire contract in June 2013, the City may have to pay approximately \$108,000 in unamortized costs. This option does not allow for an incremental reduction of the red light camera system to coincide with an incremental increase in staffing of traffic officers. With this option, operating costs associated with the program would cease (the two community service officer positions dedicated to the program would be cut and overhead costs eliminated), with the exception of the unamortized cost payment described above. While doable, staff does not recommend a system-wide termination, unless it is compelled by a Supreme Court determination that automated red light camera evidence is inadmissible.

Option Three, Extending the System to 2015-- This alternative would involve keeping the all the installations live until the last installation has been operational for five years. With this approach, the contract term for approaches set to expire before February 2015 would be extended and kept operational, and annual contract costs would continue as they have been previously described unless Redflex agrees to renegotiate compensation. Redflex prefers this alternative and has indicated an openness to retool compensation elements of the contract if the City Council prefers this option. Similar to what would likely occur under Option One, staff estimates the operational net gain/loss for continuing the program would at least break even during FY 2014 or result in about a \$100,000 net gain, but there is an increasing risk of contract costs exceeding revenues if all ten approaches are kept live and the contract rates remain the same. Though difficult to predict actual net gain/loss amounts, this assessment includes the assumption that the overhead costs required to manage the system, combined with the declining conviction rates, would likely contribute to operational net losses. *Table 7* displays the cost of each of the options as discussed.

TABLE 7

ALTERNATIVE FISCAL ESTIMATIONS			
		FY2014*	FY2015**
OPTION ONE <i>Two-Year Phase Out</i>	EST. GROSS REVENUE	\$663,000 ^A	\$497,250 ^C
	EST. OPERATING COSTS	\$556,236 ^B	\$417,177 ^D
	EST. NET GAIN/(LOSS)	\$106,764	\$ 80,073
		FY2014	FY2015
OPTION TWO <i>System Wide Termination</i>	EST. GROSS REVENUE	\$0	--
	EST. OPERATING COSTS	\$108,000	--
	EST. NET GAIN/(LOSS)	(\$108,000)	--
		FY2014***	FY2015****
OPTION THREE <i>Extend the System to 2015</i>	EST. GROSS REVENUE	\$1,100,000 ^A	\$825,000 ^C
	EST. OPERATING COSTS	\$962,976 ^B	\$722,232 ^D
	EST. NET GAIN/(LOSS)	\$137,024	\$102,768

^A Revenues for remaining 6 approaches assuming reconciliation with county and based on FY11 revenues reduced by 15% to factor in dismissal trends, and full program operating costs
^B Contract fees and operational overhead for 6 approaches and personnel costs for only one community service officer
^C Revenues for 6 approaches that expire 9 months into FY15, thus revenues prorated to 75% of FY14
^D Fees and overhead for 6 approaches that expire 9 months into FY15, thus fees and overhead prorated to 75% of FY14

^A Revenues for 10 approaches assuming reconciliation with county treasurer and based on FY11 revenues reduced by 15% to factor in dismissal trends, and full program operating costs
^B Contract fees and operational overhead for 10 approaches and personnel costs for two community service officers
^C Revenues for 10 approaches that would expire 9 months into FY15, thus revenues prorated to 75% of FY14
^D Contract fees and operational overhead for 6 approaches that expire 9 months into FY15, thus fees and overhead prorated to 75% of FY14

PUBLIC CONTACT

Whether prompted by a decision to renew or phase out red light cameras, the Police Department will provide updated information to the community at large through public service announcements, print media, and at community forums such as Neighborhood Partnership Meetings and crime prevention events. Information updates would also coincide with the announcements of new traffic enforcement initiatives, such as the Data Driven Approach to Crime and Traffic Safety initiative explained below under Next Steps.

NEXT STEPS

If City Council approves staff's recommendation to phase out the red light camera program, (Option One), the system would be decommissioned and the equipment removed serially as each approach reaches the five-year mark. To accomplish this:

- ⇒ Due notice will be provided to Redflex Traffic Systems about the decision not to renew contract terms at expiration.
- ⇒ Staff currently committed to the program will continue until the phase out process begins in the fall of 2013.

- ⇒ As staff time committed to the red light program is lessened by the incremental phase out, the Police Department would prefer to incrementally redeploy the community service officer workload to handle other identified and under resourced needs within the police department. However, this approach is not cost neutral, as these two positions were acquired based on red light camera revenues that will diminish incrementally over the approximate two-year period of a phase out of the program. Therefore, as the phase out occurs, the Police Chief and the Finance Director will determine the suitability and pace of attrition for these two positions, according to diminishing revenues as cameras are shut down over the two year period.
- ⇒ Whether or not a phase-out of red light cameras occurs, the Police Department will continue deployment of a new strategy to better address crime and traffic safety. This initiative, *Data Driven Approaches to Crime and Traffic Safety* (DDACTS)⁹, is a national law enforcement operational model that integrates location-based crime and traffic crash data to determine the most effective methods for deploying law enforcement and other resources. Drawing on the deterrent value of highly visible traffic enforcement and the knowledge that crimes often involve motor vehicles, the goal of DDACTS is to reduce crime, crashes, and traffic violations across the country.

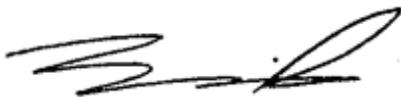
In preparation for adopting DDACTS as a crime and accident reduction tool in Hayward, members of the Police Department's command, administrative, and supervisory staff attended a DDACTS implementation training sponsored by these federal agencies. Armed with an increased ability to mine data with the new Records Management System, staff anticipates the rollout of this program by the start of the FY 2014, once enough staffing is in place to support the initiative. Staff is optimistic the DDACTS strategy will reduce crime and traffic accidents in Hayward.

- ⇒ Police officers assigned to the traffic unit will continue to focus their in-person enforcement at intersections known for a high number of accidents.

Prepared by: Captain Darryl C. McAllister, Field Operations Division Commander

Recommended by: Diane E. Urban, Chief of Police

Approved by:



Fran David, City Manager

Attachment 1: Draft Resolution

⁹ To facilitate DDACTS initiatives across the country, the Department of Transportation, National Highway Traffic Safety Administration, and the Department of Justice, Bureau of Justice Assistance, and National Institute of Justice, have developed the DDACTS Operational Guidelines for law enforcement executives. The program outlines procedures and highlights operational considerations based on best practices in the field. Detailed information about the DDACTS strategy can be found by visiting the National Highway Traffic Safety Administration website at www.nhtsa.gov then entering DDACTS in the search tool.

HAYWARD CITY COUNCIL

RESOLUTION NO. 13-

Introduced by Council Member _____

RESOLUTION AUTHORIZING THE CITY MANAGER TO PHASE OUT THE CITY’S USE OF THE RED LIGHT CAMERA SYSTEM AS THE EXISTING CONTRACT WITH THE CURRENT VENDOR, REDFLEX TRAFFIC SYSTEMS, INC., EXPIRES

WHEREAS, on July 17, 2007, the City Council authorized the implementation of an automated traffic enforcement system as a means to reduce collisions and traffic-related injuries in the City of Hayward, and further authorized and directed the City Manager to negotiate and execute an agreement with Redflex Traffic Systems (“Redflex”) to install, support, and maintain a red light photo enforcement system at various intersections throughout the City; and

WHEREAS, the City and Redflex entered into an agreement dated November 7, 2007, for the red light photo enforcement system, which agreement shall expire in phases for the monitored intersections, beginning in the fall of 2013; and

WHEREAS, Redflex, as a contract provision, has installed, supported, and maintained ten red light camera installations at intersections identified by Police Department and Public Works staff as most appropriate for said installations; and

WHEREAS, the Police Department has evaluated the efficiency of the red light camera system and has determined the overall goal of reducing accidents has not been sustained and that other traffic enforcement alternatives are available and prudent for implementation; and

WHEREAS, the Chief of Police is recommending that the traffic camera system be phased out as the contract term for each monitored intersection expires.

NOW, THEREFORE, BE IT RESOLVED that the City Manager is authorized and directed to initiate a phase out of the red light camera system as the contract term for each intersection monitored by Redflex Traffic Systems expires, in accordance with the provisions of the agreement.

IN COUNCIL, HAYWARD, CALIFORNIA _____, 2013

ADOPTED BY THE FOLLOWING VOTE:

AYES: COUNCIL MEMBERS:
MAYOR:

NOES: COUNCIL MEMBERS:

ABSTAIN: COUNCIL MEMBERS:

ABSENT: COUNCIL MEMBERS:

ATTEST: _____
City Clerk of the City of Hayward

APPROVED AS TO FORM:

City Attorney of the City of Hayward