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**ITEM 9**

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**CITY OF WALNUT**

November 23, 2005

CITY COUNCIL AGENDA: DECEMBER 14, 2005

TO: CITY COUNCIL

VIA: CHRISTINE F. LONDO, INTERIM CITY MANAGER *CFL*  
TONY RAMOS, ASSISTANT CITY MANAGER *R*

FROM: NATHAN HAMBURGER, SENIOR MANAGEMENT ANALYST *NH*

SUBJECT: RED LIGHT FLASH CAMERAS – PRELIMINARY REVIEW

SUMMARY

Staff has reviewed red light "flash cam" products on the market and is bringing forth this information to determine whether or not the City Council would like to pursue the studies necessary to move forward with the installation of these cameras at designated intersections.

BACKGROUND

One of Mayor King's goals was to explore the option of red light flash cameras at various intersections throughout the City to improve safety. These traffic cameras (cams) would be utilized to reduce traffic collisions and red light violations at these intersections as well as increase safety throughout all of the City's thoroughfares.

**Problem:** Drivers who fail to stop for red signals cause 260,000 collisions per year in the United States. As a result, 750 people per year are killed, thousands more injured, and hundreds of billions of dollars is lost due to property damage and lost work productivity (Insurance Institute for Highway Safety). The estimated cost in California alone is more than twenty billion dollars. Surveys reveal that two out of three drivers witness other drivers run red lights on a daily basis. 95 percent of Californians fear that a red light violator will collide with them when they enter an intersection and one in three personally know someone who has been injured or killed in a red light collision.

Technology has advanced to the point that companies have effectively developed systems that enable intersections to be monitored by cameras and computers to enforce red light violations. The purpose of this year round and constant enforcement is to increase voluntary compliance of motorists to the red traffic signals and to prevent traffic collisions caused by the failure to obey the dedicated signals. These systems offer 24-hour enforcement at designated intersections while at the same time

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red traffic signals and to prevent traffic collisions caused by the failure to obey the dedicated signals. These systems offer 24-hour enforcement at designated intersections while at the same time increasing public awareness of the dangers and punitive expense associated with failing to stop for red light traffic signals. This report is meant to provide an overview of traffic cameras, the products and vendors that provide these services, how the City of Walnut could benefit from these products, and what steps are needed to implement this safety program if so desired.

Based upon an informal review by the City's engineering staff and risk management staff, the following intersections may meet the necessary criteria to have red light flash cams installed should the City Council decide to move forward with the preliminary review (other intersections could be added for the preliminary review at the desire of the City Council):

- 1) Valley Boulevard and Grand Avenue (Walnut boundary areas)
- 2) La Puente Road and Grand Avenue
- 3) Amar Road/Temple Avenue and Grand Avenue
- 4) La Puente Road and Lemon Avenue
- 5) Valley Boulevard and Lemon Avenue
- 6) Amar Road and Nogales Street

**Legal and Legislative Issues:** The California Vehicle Code has permitted photo enforcement of intersections since 1996. The requirements for these systems are detailed in 21455.5 V.C. Below are the list of general requirements:

- The system is identified by signs, clearly indicating the system's presence, visible to traffic approaching from all directions, or if signs are posted at all major entrances to the city, including, at a minimum, freeways, bridges, and state highway routes **AND**,
- The system is located at an intersection that meets the criteria specified for minimum yellow light change interval (21455.7 V.C.). This section states that the set yellow light time must conform to standard set by the Traffic Manual of the Department of Transportation. Generally, this standard is 1 second of yellow time per 10 mph of the posted speed limit on the roadway. Thus if a system were installed on a roadway with a speed limit of 40 mph, the minimum yellow interval time would be 4 seconds.
- Prior to utilizing an automated enforcement system, warnings shall be issued for a period of 30 days and a public announcement shall be made 30 days prior to any enforcement beginning. (21455.5(a) V.C.)
- Only a government agency in cooperation with a law enforcement agency may operate an automated enforcement system. (21455.5(a) V.C.)
- A city council shall conduct a public hearing on the proposed use of automated enforcement systems prior to that city entering into a contract for the use of those systems. (21455.6(a) V.C.).

Recently court challenges have been filed against red light camera systems. The most widely publicized cases were in San Diego. The San Diego Court threw out 290 citations since the City of San Diego did not directly "operate" the automated enforcement system in use. In addition the contingent fee paid to Lockheed Martin (ACS Corp.) did not meet the requirements of the current law. This decision was made on September 4, 2001 and resulted in the writing of Assembly Bill 1022 to correct these defects.

AB 1022 was signed into law by Governor Davis on September 24, 2003 and became effective on January 1, 2004. In summary, AB 1022 modified sections 21455.5, 21455.6, and 21455.7 of the vehicle code regarding automated photo enforcement systems and clarified the definition of "operate". The major changes are listed below:

- Prohibits suppliers or manufacturers from being paid based on the number of citations issued, or as a percentage of the revenue generated as a result of the system.
- Prohibits system providers from selecting the location for cameras
- Prohibits system providers from changing the timing of signal phases
- Prohibits system providers from reviewing and approving tickets
- Continues the present confidential treatment for the photos, so that only the designated law enforcement, the registered owner, and an identified driver of the car, can look at them
- Requires the destruction of the photos after 6 months.

### EFFECTIVENESS OF FLASH CAMS

**Effectiveness (Statewide):** Red light enforcement systems have been shown to be very effective at reducing collisions both at the intersection where they are installed and at other intersections in the area. The California State Auditor, Bureau of Audits and most recently, the Orange County Grand Jury released reports detailing the effectiveness of red light camera systems

The results at those locations were also compiled and the results are impressive. Overall, collisions decreased substantially at the locations where the cameras were installed. The results cited are:

- Culver City: 65% decline @ Enforced Intersections
- Oxnard: 55% decline @ Enforced Intersections
- Venture: 19% Citywide
- Fremont: 40% decline @ Enforced Intersections
- Santa Ana: 45% decline @ Enforced Intersections

Compared to a 54% increase in comparable cities like Anaheim that did not originally utilize cameras.

**Effect on rear-end collision rate:** In a recent year long study conducted by the Institute for Transportation Research and Education and North Carolina State University, results across programs in Wake County, including Raleigh demonstrated the following:

- Angle accidents were reduced by 42% at red-light
- Rear-end accidents went down 25%, and
- The total red-light related accidents decreased by 22%.

Only collisions that were caused by drivers traveling at an unsafe speed or following too close should be considered as an "average" rear-end collision at an intersection. This is due to the fact that those type collisions occur when a vehicle is slowing for or stopped at a red traffic signal. Unsafe start collisions occur after a vehicle has stopped for a red signal and then the signal has changed to green. Generally, a vehicle waiting behind another car, anticipates the first vehicle starting to move and when it doesn't, a collision occurs.

## FLASH CAM VENDORS

Nestor Traffic Systems has been installing and operating photo enforcement equipment in California for several years. Nestor has systems installed in Fresno, Rancho Cucamonga, Montclair, Cerritos, and several others. Nestor offers red light enforcement systems in only video formats.

Nestor recently had their contract in the City of Fresno terminated as a result of poor program performance. Rancho Cucamonga decided to remove their cameras (2 intersections) installed by Nestor due to the fact that they did not feel that the cameras were meeting their needs of reducing accidents at these intersections and that a large number of tickets were not be processed, which created a financial issue with the operation of these cameras. Although Nestor never returned the multiple calls made by staff, their products were researched via the Internet and by talking to other cities that currently use Nestor products. The comments received from the cities were that they were not 100% satisfied with the products and that there have been issues with service.

Redflex Traffic Systems Inc. has been installing and operating photo enforcement systems nationwide since the mid-1980s. Redflex has photo enforcement systems in place locally in Culver City, Santa Clarita, Maywood, Gardena, Inglewood, and in over 35 cities across the State of California. Redflex offers red light enforcement systems using digital formats including both full motion video and high resolution still images.

Based on staff's research, it is recommended that the City utilize Redflex Traffic Systems Inc., should the City Council decide to move forward with this program based on the following:

- Redflex Traffic Systems is the only vendor to provide dual formats, including full motion video and high resolution color still images. Still-only systems provide greater resolution and video-only systems have poor resolutions, but provide full context evaluation with the latest proven technology (3 digital still cameras and 1 digital video camera in each housing).
- All cameras must be synchronized to a single time clock, as to protect the integrity of the violation images
- Have a strong background and positive rating from other cities contacted. Redflex has a strong understanding of California programs which need to operate with strict compliance to the CVC.
- Have not suffered a program being shut-down as a result of operational issues.
- Have not suffered a negative legal judgment or has to refund citation fines. The City of Costa Mesa had to refund approximately 1,000 tickets, as the vendor did not comply with vehicle code requirements (Nestor)

It is staff's opinion that the use of digital video in combination with digital still images significantly increases a City's total citation yield rate, reduces the number of red light violations that are contested and dismissed, and ultimately provides the greatest compliance to the applicable state laws, resulting in the greatest collision reduction statistics. In addition, Redflex is the only company that provides a full range of services that includes research and development, camera manufacture, system installation, system maintenance and repair, and citation processing. Because of the full range of services provided, there are no chain-of-custody issues, and full system integrity and reliability is maintained.

## ISSUES TO BE RESOLVED

Should the City Council choose to move forward with this safety program, there are several issues which will need to be addressed. The issues are as follows:

- 1) Conduct traffic count and accident history study at designated intersections (To be completed by Redflex). This is to insure that the intersections meet qualifications.
- 2) Conduct financial analysis and revenue collection study relating to traffic violations in Walnut.
- 3) Form an agreement with Los Angeles County Sheriff's Department as to which staff would be assigned to traffic ticket review and management of the program including reviewing recorded violations via secure Internet connection, deciding whether to issue a citation based on the evidence viewed, meeting with and/or reviewing photographs with cited violators (scheduled times), and testifying in court about the system and evidence during traffic trials of violators (Looking at Cities of comparable size, this effort could take between 15-40 hours a week, depending of the volume of violations. These internal costs could be subsidized by revenue generated by the system (would be reviewed during a full financial analysis). The State allows these responsibilities to be conducted by either a sworn peace officer or a qualified employee of a law enforcement agency).
- 4) Should the flash cameras be installed and not meet financial obligations over a certain period of time, there may be a negotiation period required to add another intersection with the vendor to meet financial goals. The wording for this would be part of the contract negotiations with the vendor. This is explained further in the "Financial Cost" section of this report.

## FINANCIAL COST

The contract that could be established with Redflex is for a **comprehensive program fully funded** by violator citations, and by which Redflex is willing to **contractually guarantee that the City will operate a fully violator funded program that at a minimum would be cost neutral.**

The cost per system will be a minimum of \$5,000 and not to exceed \$6,000 per month with a cost neutral condition that ensures **the City will never pay Redflex more then the amount collected.** At program start-up, invoices will be paid on 90 days arrears, which will ensure sufficient citations collections have been achieved to support the Redflex payments. If citation collections are insufficient to cover the Redflex payments, Redflex will adjust its pricing to ensure cost neutrality and refund the difference to the City.

Should an intersection not produce an agreed upon violation number, Redflex may have the right to ask the City to look at having the vendor install equipment at an additional location (at cost to the vendor). Redflex has made it clear that it is not their intention to remove any of the equipment nor cease any of the established operations even if an intersection has a low amount of violations on a monthly basis. Redflex understands that the City's goal is to enhance safety at these intersections and throughout the community and that the removal of equipment once installed would be detrimental to any progress that has been made.

One administrative cost that staff would like the City Council to be aware of, that may not be cost

neutral is the cost for either a deputy or Community Service Officer to manage the day to day operations as described earlier in regards to this safety program. To give a rough estimate, the annual cost for a Community Service Officer is \$43,246.94/year without a vehicle and \$51,895.48/year with a vehicle (both of these costs includes liability insurance cost). This cost will be the responsibility of the City to fund. Once a determination is made regarding which intersections will be equipped with flash cams, staff can give a more precise cost estimate of time, salary, and possible revenue offsets related to the operation of this program. It may include shifting duties of an existing deputy/staff or exploring the option of adding a sheriff staff member to operate the program full time. Volunteers on Patrol are not allowed to operate this type of program according to California code.

#### STEPS TO BE TAKEN TOWARDS IMPLEMENTATION

Should the City Council decide to move forward with this safety program staff would prepare a letter to Redflex to be signed by the Mayor inviting them to complete a full traffic and accident study at the designated intersections. Staff would simultaneously conduct a financial review of traffic violation fines and collections for the intersections mentioned and start talks with the Los Angeles County Sheriff's Department in regards to how the program could be run efficiently for Walnut.

Once these steps are completed, (expected to be within 60 days) staff would bring a full report back to the City Council along with a contract with Redflex Traffic Systems for review and possible acceptance. Should the safety program not meet the financial and traffic/accident requirements, staff would bring back a report with alternative options.

#### CITY COUNCIL OPTIONS

- 1) Instruct staff to commence with the necessary reviews to look at traffic camera implementation at the so mentioned intersections (along with any further intersections that the City Council would like to consider) and report back with findings; or
- 2) Instruct staff not to pursue this type of safety program any further and receive and file this report.

#### RECOMMENDATION

Staff is recommending that the City Council:

- 1) Choose City Council Option (1) Instruct staff to commence with the necessary reviews to look at traffic camera implementation at the so mentioned intersections (along with any further intersections that the City Council would like to consider) and report back with findings.