



AGENDA REPORT

Traffic & Public Safety Commission

MEETING DATE: July 23, 2018

PREPARED BY: Abraham Bandegan,
City Traffic Engineer

REVIEWED BY: Chris Magdosku, City Engineer

DEPARTMENT: Development Services

SUBJECT:

City of Encinitas Red Light Camera (RLC) Photo Enforcement System

RECOMMENDED ACTION:

Receive and discuss the information about City's RLC system provided by staff, receive and discuss public input on the subject and provide input to staff on how to proceed with the program.

BACKGROUND:

In an effort to reduce the number of vehicles running red lights, the City entered into a contract with Redflex Inc. in February 2004 to operate red light camera systems at two key City intersections. Red light cameras have been operational at the intersections of El Camino Real/Encinitas Boulevard and El Camino Real/Olivenhain Road since June 2004 and November 2005, respectively. At El Camino Real and Encinitas Boulevard intersection, these cameras monitor the two eastbound left turn lanes and two eastbound through lanes on Encinitas Boulevard, including the shared right turn onto southbound El Camino Real. Also in the southbound direction, the cameras monitor the two left turn lanes and two inside through lanes on El Camino Real. The red light cameras at El Camino Real/Olivenhain Road-Leucadia Boulevard monitor the two westbound left turn lanes on Olivenhain Road.

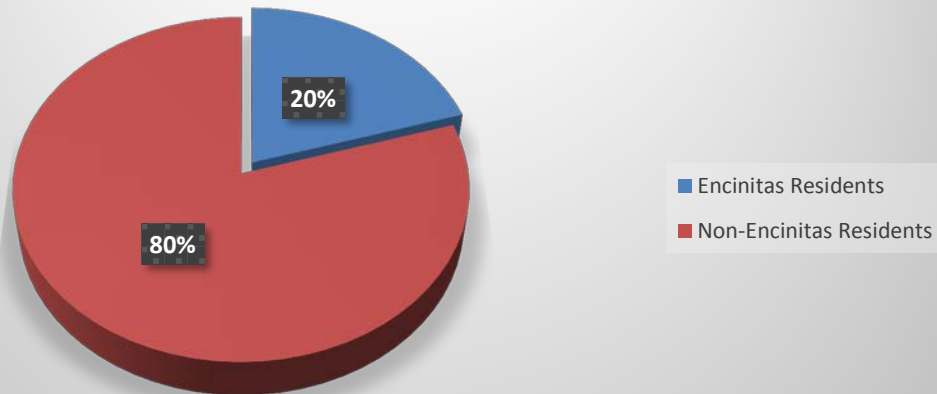
ANALYSIS:

Operation

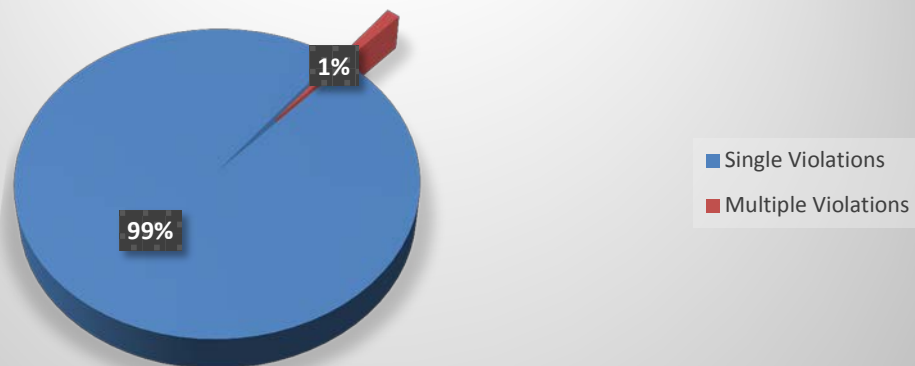
Nearly one million vehicle movements are detected by the cameras at the three approaches each month. Approximately 0.05% of those are flagged as red light violations. However, each detected violation is reviewed and records show that on average, notices are only issued for approximately one third of the violations that are detected (multiple reasons such as cases with very small or fraction of a second violations or cases that stop soon after crossing the stop bar of the intersection).

During the past 5 years, 80% of the violations were for non-residents and only 20% were for Encinitas residents. Also 99% of the notices were issued to first-time violators and only 1% had multiple such violations on their records which can be considered a measure of effectiveness meaning after being detected by the system and receiving their first notices, most regular red-light violators have not repeated the violation at these locations.

Notices Issued to Encinitas Residents vs. Non-Residents



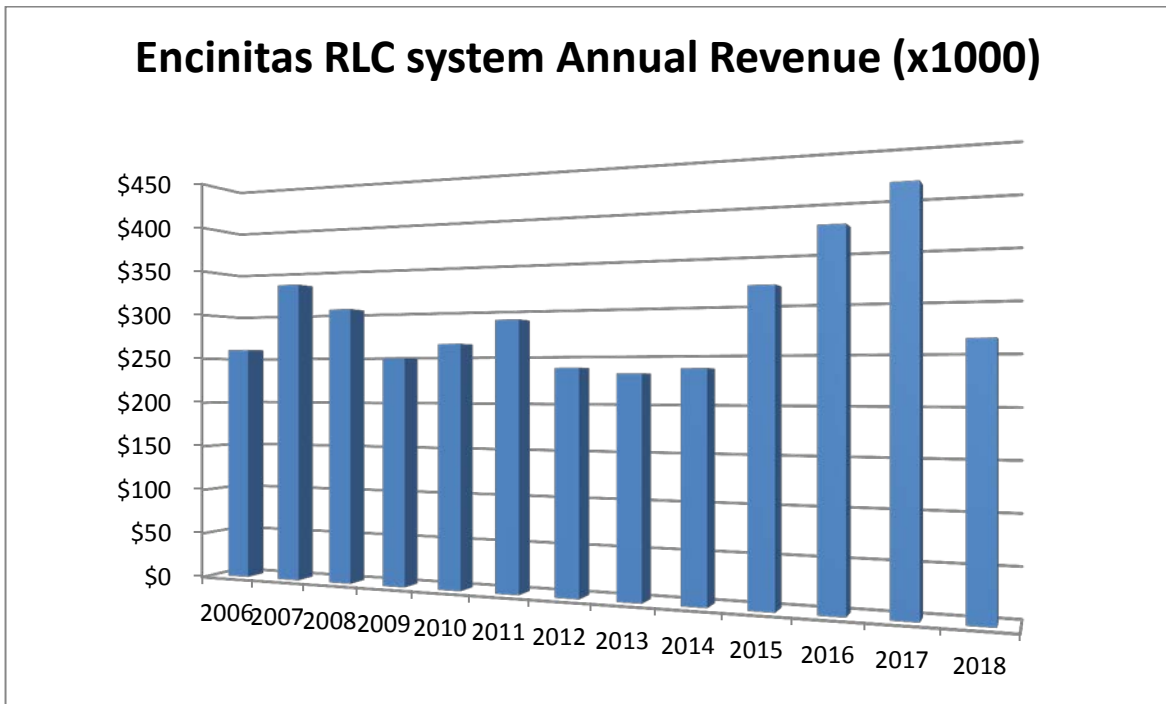
Encinitas Repeat Offenders



Operating the RLC system will cost the City \$3,000.00 per camera system approach per month which equates to an annual cost of \$108,000.00. The \$3,000 per approach per month fee is a fixed amount and independent of the number of violations detected or notices printed.

There is also a per-month communication fee of \$155 for all cameras for all approaches. An additional cost associated with the program is for a one-half time Community Service Officer (CSO) at \$3,696.83 per month to process the citations and appear in court. Attorney fees for processing subpoenas on red light cameras are approximately \$3,350 per month. Total cost to operate the program is approximately \$194,000.00 per year. During the past 13 years, the total annual cost has been covered by the revenue generated from ticket receipts. A summary of the costs are outlined in the following table:

Type of expense	Monthly Cost	Annual Cost
Operating the 3 cameras by the contractor	\$9,000	\$108,000
Community Service Officers (CSO) processing fee	\$3,697	\$44,364
Attorney fees for processing subpoenas	\$3,350	\$40,200
Communication fee	\$155	\$1,860
Total	\$16,202	\$194,424



Collision history

The traffic collision history from January 1, 2000 through December 31, 2016 has been reviewed at these two intersections prior to and after installation of the cameras. All traffic collision reports have been individually reviewed and the types of collisions were documented. Of particular interest was the number of collisions involving red light violators before and after the cameras were installed and any rear end collisions that may have been the result of drivers stopping early on the yellow (possibly induced by fear of the red light camera).

Based on the collision history available, the intersection of El Camino Real/Encinitas Blvd had a total of 39 collisions in the 4.5 year period prior to installation of the camera. Of these, 9 were red light running collisions. In the 12.5 year period after camera installation, there were a total of 60 collisions. Of these, only 4 were red light violators and 6 were rear ends due to a driver stopping early on the yellow. Standardized per year, the above data reflects 8.7 accidents per year prior to camera installation versus 4.8 accidents per year after. This is a 45 percent reduction in the total number of accidents. The red light related accidents were reduced from a rate of 2 accidents per year to 0.32 accidents per year or 84 percent reduction. It should be noted that based on the Caltrans statewide expected collision rate, this intersection should have approximately 10 collisions per year.

Based on the collision history available, the intersection of El Camino Real/Olivenhain Rd.-Leucadia Blvd had a total of 54 collisions in the 5.9 year period prior to the camera. Of these, 11 were red light related collisions. In the 11.1 year period after the camera, there were a total of 70 collisions. Of these, 13 were red light running and 4 were rear ends due to a driver stopping early on the yellow. Standardized per year, the above data reflects 9.2 accidents per year prior to camera installation versus 6.3 accidents per year after. This is a 32 percent reduction in the total number of accidents. The red light related accidents were reduced from a rate of 1.9 accidents per year to 1.2 accidents per year or 37 percent reduction. It should be noted that based on the Caltrans statewide expected collision rate, this intersection should have approximately 10 collisions per year. A summary of accident history at both intersections is outlined in the following table:

Intersection	Accident Rate Prior to Installation of the RLC system	Accident Rate After Installation of the RLC system	Change in Accident Rate
El Camino Real/ Encinitas Blvd	8.7 accidents per year	4.8 accidents per year	45% reduction
El Camino Real/ Olivenhain Rd.- Leucadia Blvd	9.2 accidents per year	6.3 accidents per year	32% reduction

Some Public Questions and Concerns

Staff has received public comments, questions and concerns regarding the City's RLC system through different sources. Below is a summary of those concerns and staff's responses associated with those that were applicable.

1. The RLC program is a profit scheme

Considering the revenue generated and the cost to operate the system, RLC cannot be a profit scheme and the revenue (after reducing the approximate \$200k cost of the program) is negligible.

2. It's to the benefit of the contractor to issue more and more tickets

The contractor provides the information (photos and videos) and the decision to issue a notice is made by CSOs. Since January 1, 2004, the law prohibits contracts with vendors based on a percentage or number of red light violations. So the number of citations issued would not have any impact on the operating company's revenue.

3. RLC systems can increase crashes

Some studies exist that show RLC systems can increase back-end collisions. However, overall and considering all different types of collisions, studies have shown relative effectiveness of RLC programs.

4. Yellow and all-red times need to be increased

The California Manual on Uniform Traffic Control Devices (CA-MUTCD) has a standard methodology to calculate yellow times and all-red times and the cities need to implement the yellow and all-red intervals per national and state standards. Yellow and all-red times are not selected at the discretion of the City Traffic Engineer.

5. Local Economy will suffer

This comment is subjective in nature and cannot be appropriately evaluated or analyzed. There's no clear proof or study that would suggest a negative economic impact associated with RLC programs.

6. Less than one second into red should not be ticketed

CSOs who review each case consider several different aspects of the violation before issuing the citation including but not limited to speed of the vehicle, how soon after the red light the vehicle enters the intersection, condition of traffic, when and where the vehicle slows down, stops or makes certain maneuvers.

7. Other Cities have removed their RLC systems

In the last five years, some cities in California have ended their photo enforcement programs. There were a variety of reasons, including a marked reduction in violations creating a financial burden on cities, little or no conclusive evidence of a reduction in collisions due to the presence of the cameras, public referendums to ban red light cameras, and Los Angeles County courts not reporting tickets to the DMV. Locally, the City of San Diego, El Cajon, Poway, Oceanside, Escondido, and Vista ended their programs. Solana Beach, Del Mar and Encinitas are the cities in San Diego County with red light cameras.

Summary and Conclusion

In summary, the camera systems have been in operation for approximately 13 years at the intersections of El Camino Real/Encinitas Boulevard and El Camino Real/Olivenhain Rd.-Leucadia Blvd. The City has documented a reduction in the total number of collisions at the two intersections. The number of red light running violations at both of these intersections has been relatively constant during the past couple of years but 2017/2018 year shows a significant reduction. In addition, the system has not been a financial burden on the City's finances as its revenues cover expenditures. The City has met with the CSOs reviewing violations and they have provided positive feedback regarding the program and have expressed concerns that eliminating the program can lead to a dramatic increase in red light violation and collisions at the two locations.

Overall, staff considers the RLC system to be contributory and beneficial to the transportation and public safety in the city. It has reduced violations and collisions. The reductions in the number of violations and collisions might not be very significant. However, the program is self-sustaining and there is no clear disadvantage to the program.

ENVIRONMENTAL CONSIDERATIONS:

The action being considered by the City Council is exempt from the California Environmental Quality Act (CEQA) because it is not a "project" under Section 15378(b)(5) of CEQA Guidelines.

ATTACHMENT:

1. Federal Highway Administration Research and Technology, "Safety Evaluation of Red-Light Cameras Executive Summary", <https://www.fhwa.dot.gov/publications/research/safety/05049>