

MEMORANDUM - CITY OF PASADENA
DEPARTMENT OF TRANSPORTATION
POLICE DEPARTMENT

DATE: December 5, 2011

TO: Public Safety Committee

FROM: Frederick C. Dock, Director of Transportation *F.C. Dock*
Phillip L. Sanchez, Police Chief *(P)*

RE: Red Light Camera Program

Summary:

Based on recent analysis, which included a review of collision rates, citation trends, court practices, actions in surrounding cities and current traffic safety programs in Pasadena, staff has concluded that the Red Light Camera (RLC) Program will not be extended beyond the current contract period, which ends June 2012.

Upon termination of the program, sworn safety personnel currently dedicated to the RLC program will be returned to in-field enforcement duty, Transportation Department staff will continue to implement signal timing adjustments to reduce red light running and the Police Department will continue to seek grant funding for expanded enforcement operations.

Background:

Pasadena's Automated Red Light Camera (RLC) program was first activated in 2003 via a contract agreement with Nestor Traffic Systems, now American Traffic Systems (ATS, Inc.) that had an initial expiration date of June 30, 2011. On June 20, 2011, the City Council approved a one-year extension of the RLC program to provide for a more thorough evaluation of whether the program should be continued for another five years and whether changes in the program should occur if it is continued. The evaluation has considered the following:

- Changes in the adjudication of RLC cites in Los Angeles County,
- Practices in other cities with equivalent RLC systems,
- The history of collisions and the factors involved at intersections with RLC systems, and
- The time commitments of sworn personnel to the RLC program.

Los Angeles County Courts:

In Los Angeles County, unlike other counties, the courts have elected to treat non-payment of red light camera violations differently than similar citations issued in person by sworn personnel. The net result of this action is that there is no effective penalty for non-payment of red light camera violations in Los Angeles County. As the lack of

consequences has become better known by violators, the rate of non-payment has increased, thereby eroding the program's deterrent effect against red light running. Recent actions by the Transportation Commission in the City of Los Angeles have further increased the public awareness that there is not a legal way to compel payment of red light violations.

City of Los Angeles Program:

The City of Los Angeles's RLC program (which shares Pasadena's vendor, ATS, Inc.) has come under scrutiny by the Los Angeles Transportation Commission for several technical inconsistencies related to widespread issuing of citations for right turn on red practice, under-reporting of certain collision types and increased cost of operation from the non-payment of fines. As a result, the City of Los Angeles has decided to terminate their program.

Public Reaction to RLC Program:

While the City of Pasadena RLC program is structured differently and has successfully addressed the technical issues encountered in Los Angeles, the overall result of the Los Angeles issues is heightened scrutiny of all RLC programs in LA County including the City of Pasadena's program. This in turn has led to increased criticism from the public of Pasadena's RLC Program. Comments received subsequent to the latest Council action on the RLC Program question the collision data presented at the Council meeting as being too simplistic to provide a complete view of whether the RLC program is the primary cause of the crash reductions at the camera-equipped intersections in the City. Specifically, challenges have been raised about the effect of increased yellow time at the RLC intersections and whether the comparison intersections used in the analysis were appropriate.

Regarding the yellow light timing, City staff set the yellow timing 0.3 to 0.4 seconds above the required minimum for all RLC locations. The primary purpose of this increased yellow time was to provide for inadvertent red light running violators, i.e., those that may have been caught in an "indecision" (or dilemma) zone and cannot stop in time.

Individuals involved in opposing the use of RLC programs contend that the lengthened yellow may have contributed to the crash reduction as much as the Red Light Camera itself. There was also a criticism that we compared the RLC locations to dissimilar intersections. To enable the City Council to take appropriate action regarding this program, staff has undertaken a more rigorous review of the program's performance that takes these criticisms into account.

Yellow Timing and Collision Rates:

A 1985 Institute of Transportation Engineer publication, "Effects of Clearance Interval Timing on Traffic Flow and Crashes at Signalized Intersections," indicates that longer yellow intervals (up to a certain point) can reduce crashes at signalized intersections. In

the case of the City's program, determining the effects of the lengthened yellow timing is difficult since it was implemented concurrent with the RLC program.

However, since the lengthened yellow was set only once at the activation of the RLC system, the best way to filter its effect is to show the trend of collision rates on a year by year basis and compare them with collision rates for non-RLC locations for the same period. If the lengthened yellow timing plays a role in accident crashes, it should only be reflected on the first year of program. After the first year, continued collision reduction may be attributed to the RLC system. To normalize the data, staff aggregated or averaged the annual crash rates for broadside collisions at all seven RLC approaches and did so for the non-RLC locations.

The results of the analysis are shown in the two charts in Attachment A. As indicated in the upper chart, a decline in broadside collision rates occurred in the first year of the RLC program, but in subsequent years, the collision rate at the RLC locations is similar to the rate at the non-RLC locations and does not show a consistent pattern of continued decline as the rates at the RLC and non-RLC intersections climb and fall at different times.

However, the trend line for the RLC intersections does show a steeper overall decline than the non-RLC intersections over the entire analysis period. The lower chart in Attachment A shows the same trend lines but excludes the first year's changes. When the effect of the initial year is removed, the rate of decline for non-RLC intersections is shown to be similar to the trend in the upper chart, but the trend for the RLC intersections is not as steep. With the initial year removed, the trend in collision reduction at the RLC intersections is also shown to be better than at the non-RLC intersections over time, which indicates that there is a residual effect of the RLC system in addition to the effect of the yellow timing. However, without the initial decline in collisions at the RLC intersections, the long term trends at both types of intersections are shown to be similar, which then brings into question the long-term utility of continuing to use the RLC system or to shift the enforcement activities to sworn personnel in the field.

Citation Rates, Impact to Traffic Officers Review, and Other Implications:

As anticipated at the inception of the RLC program, the numbers of red light running citations issued have steadily declined over the years. Conversely the fines, which are set by the state, have increased over the years. The high cost of a citation and greater awareness of how LA County courts have been treating RLC citations has led to an increase in court challenges for RLC citations. The effect on Pasadena of these changes has been an increased number of court appearances for our officers to defend red light running citations. Overall, even with a reduced number of citations, sworn personnel are spending a greater proportion of their time testifying in court because of the increased challenges. The combined monthly rate for issuing citations at all RLC approaches now roughly compares with the issuance rate of a single officer for a variety of vehicle code violations including red light running. Consequently, if the officers currently dedicated to supporting the RLC system returned to duty in the field, overall enforcement would increase.

Existing Traffic Safety Programs:

The City has many existing safety programs including but not limited to selective traffic enforcement, ongoing signal synchronization to provide more regular traffic flow, implementation of longer yellows and "all-red" clearance intervals that will maintain our level of continuing efforts to improve traffic safety throughout the City. The City has been fortunate to have received many traffic safety grants, from the Office of Traffic Safety, Safe Routes to School and Highway Safety Programs which allow a more intensified and systemic police enforcement in violation prone areas in the City. Staff acknowledges that while the RLC program is an important tool targeting the specific safety concern of red light running, the city has an array of other safety initiatives in the engineering, education and enforcement arenas to continue, if not maintain, improvement of traffic safety at our signalized intersections. As an example, staff has now adopted the yellow timing settings for RLC locations for all signalized intersection in the City and is updating timing at all signalized intersections over the next 18 - 24 months.

The above findings support a recommendation to terminate the RLC program and to return the sworn personnel currently dedicated to the RLC program to enforcement duty in the field.

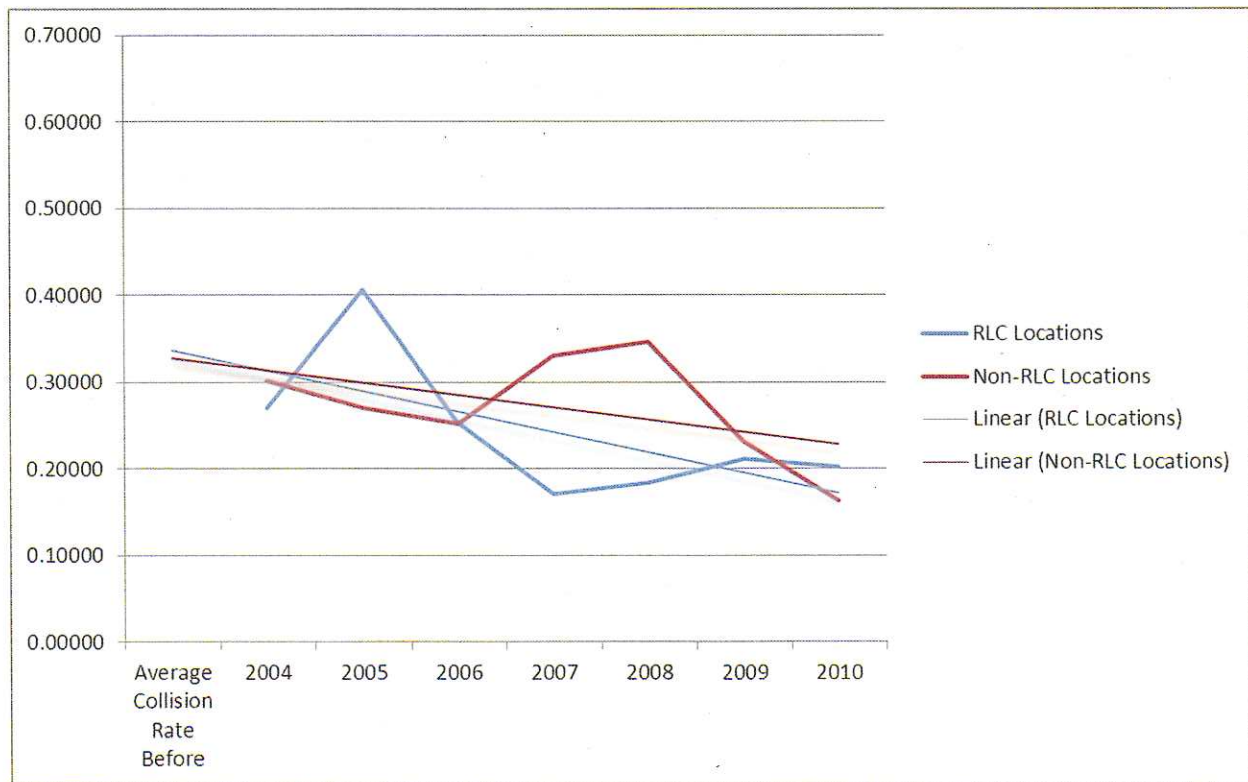
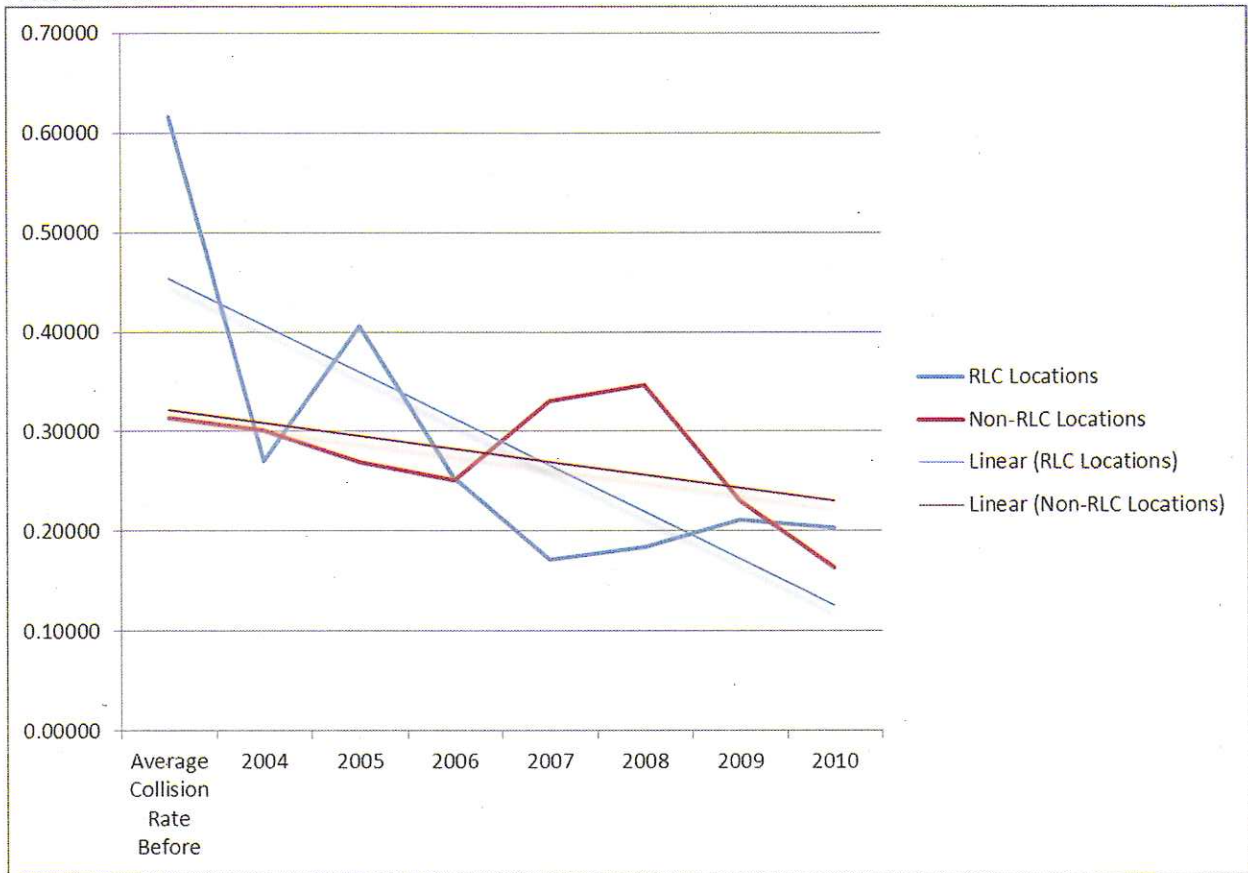
ENVIRONMENTAL ANALYSIS:

The removal of RLC equipment is categorically exempt under CEQA. Under the current contract terms, ATS, Inc. is responsible for removing all above ground equipment and restoring the sidewalk to its original condition.

FISCAL IMPACT:

The Red Light Camera Program is funded annually by General Fund and is offset by City's share of revenue of every paid Red Light Running Program. The annual cost of the contract with ATS, Inc. is approximately \$274,100. In fiscal year 2010-2011, revenue for this program was \$344,013. Additional costs of running this program include electrical charges for all locations and personnel costs for the PPD and DOT staff to manage and operate the program. Those annual costs are approximately \$74,400 which yields an annual deficit to the City of approximately \$4,487. Termination of this program will be a direct savings to the City's General Fund.

Attachment A



Charts represent Annualized Broadside Collision Rates for Red Light Camera locations and Control (Non-RLC) locations. Vertical axis represents accident rates in accidents per million entering vehicles, horizontal axis represents the year "after" RLC activation.