City of Marysville
Red Light Camera Program

Summary:

This Grand Jury report describes an investigation of safety and accounting issues of the Marysville red light camera (RLC) use.

Although red light cameras can improve safety when appropriately utilized, it appears that their use in the City of Marysville may not meet these conditions.

The City of Marysville currently utilizes seven RLCs at five intersections. Of these, three intersections are subject to California Department of Transportation (Caltrans) directives and two are not. City officials have asserted that intersections were selected on the basis of accident statistics, and further asserted safety improvements as a result of camera usage.

The cost of a red light violation is a minimum of $479 which includes fine, fees, and court costs. These fees are collected by Yuba County Superior Court and divided among the City of Marysville, the County of Yuba, and the State of California as determined by the California Penal and Government Codes. Fees may be reduced for a right-turn-on-red violation but the offender must first pay the fine and appeal after the fine has been paid.

Red light cameras are provided through a contract with Redflex Traffic Solutions ("Redflex"). Redflex has a history of political contributions in the State of California, as well as a strong lobbying presence with respect to red light camera-related legislation.

This investigation found that generally the City of Marysville has provided conflicting, non-relevant, and/or unsupportable data to justify the use of RLCs within city boundaries. Data provided by the City of Marysville do not correspond to data available through State-maintained collision databases.

Prior collision data did support installation of red light cameras at one of five intersections. However, it is questionable whether collision data supported installation of red light cameras at the remaining four intersections.

Data provided by the City of Marysville showed that collisions at the first three intersections with RLCs account for an increasing percentage of total collisions citywide for the period 2007-2012.

At the two RLC approaches controlled by the City of Marysville (that is, not on State Highways and therefore not subject to Caltrans directives), essentially all RLC violations have been right-turn-on-red violations. At two of the remaining RLC approaches on State Highways, approximately half of all RLC violations have been right-turn-on-red violations.

This is important because right-turn-on-red violations can be addressed through alternative engineering countermeasures such as right-turn arrows or eliminating the need to stop on a right

turn. This is also important because right-turn-on-red violations have not been shown to result in the kinds of collisions that would be reduced through use of RLCs.

This Grand Jury investigation also found issues with respect to RLC accounting procedures. These included lack of transparency, potential conflicts with contract stipulations and current vehicle code, and conflicts within the current contract regarding effects of RLC inactivity due to construction.

Based on the findings revealed in this investigation, the Grand Jury proposes several recommendations. These recommendations include removal of RLCs at intersections with predominantly right-turn-on-red violations, and use of engineering countermeasures to minimize such violations at other intersections. Recommendations also include complete transparency of RLC operation, to include listing monthly accident, citation, revenue, and expense figures on the City of Marysville Police Red Light Camera web page. The Grand Jury further recommends that City of Marysville seek legal counsel to resolve conflicting contractual statements, and consider utilizing engineering countermeasures to enhance safety instead of Redflex RLCs upon termination of the current contract.

Subject of Investigation:

Redflex Traffic Red Light Camera (RLC) Operations by the City of Marysville

Reasons for Investigation:

In response to citizen requests:

1) To quantify RLC safety effects
2) To examine RLC accounting practices

Definitions:

- **Approach.** The entrance to an intersection (in this case, monitored by RLCs). There are three cameras at each approach. There are seven approaches in Marysville (described below).
- **Event.** When a vehicle proceeds through an intersection after the light has turned red and the vehicle is traveling in excess of a predetermined speed, four photos are taken (described below).
- **Loops.** Magnetic loops of wire, three feet apart, located under the pavement. The first one is 11 feet from the limit line. These loops are used to compute the speed of the vehicle.

- **CVC.** Abbreviation for "**C**alifornia **V**ehicle **C**ode."
- **DOT-FHWA**. Abbreviation for "U.S. **D**epartment **o**f **T**ransportation, **F**ederal **H**ighway **A**dministration."
- **DOT-NHTSA**. Abbreviation for "US **D**epartment **o**f **T**ransportation, **N**ational **H**ighway **T**raffic **S**afety **A**dministration."
- **IIHS**. Abbreviation for "**I**nsurance **I**nstitute for **H**ighway **S**afety."
- **NMVCCS**. Abbreviation for "**N**ational **M**otor **V**ehicle **C**rash **C**ausation **S**urvey."
- **PRLE**. Abbreviation for "**P**hoto **R**ed **L**ight **E**nforcement."
- **RLC.** Abbreviation for "**R**ed **L**ight **C**amera."
- **SWITRS.** Abbreviation for "**S**tatewide **I**ntegrated **T**raffic **R**ecords **S**ystem."
- **TASAS.** Abbreviation for "**T**raffic **A**ccident **S**urveillance and **A**nalysis **S**ystem."

Methodology:

The City of Marysville, Yuba County, State of California, and Redflex personnel were contacted to gather information pertaining to RLC accounting, RLC safety data, and Redflex political activity. Information was also requested from Caltrans. In addition, peer-reviewed studies and relevant internet sources were reviewed.

Red Light Camera Background:

Reason for investigation. Red light cameras (RLCs) are computer-controlled cameras that act as an automated photo enforcement system. Marysville currently has RLCs at five intersections within city limits.

The 2005 Yuba County Grand Jury report included an investigation "City of Marysville Red Light Camera System." The reason for the 2005 Grand Jury investigation was to determine if cameras were cost-effective and increased auto safety by reducing traffic accidents.

At that time the Grand Jury found that it was not possible to determine any effect on traffic safety, and that it would be necessary to monitor accident statistics for at least five years to determine any effect on safety.

In addition, citizen complaints were received by the Yuba County Grand Jury pertaining to the Marysville red-light camera program.

Vendor. All RLCs in Marysville are provided by Redflex Traffic Solutions ("Redflex"). Redflex, founded in 1997, is based in Phoenix, Arizona, and operates under the Australian parent company Redflex Holdings. Redflex, a publicly traded corporation (ASX:RDF), has been the subject of corruption investigations at multiple locations worldwide.

Vendor political contribution and lobbying activity. Redflex has made donations to a number of political candidates in California. Redflex has also lobbied extensively in support of legislation to support RLC use. This information is available online at http://cal-access.ss.ca.gov/Campaign/. Screenshots of Redflex political contribution and lobbying activity are provided in Appendix RLC1. Further information on Redflex political contribution and lobbying activity is available at this website by entering the word "Redflex" into the search box.

RLCs in Marysville. The Marysville Police Department web page for Photo Enforcement states (*http://www.marysvillepd.org/redflex.html*):

> *"A Red Light Photo Enforcement System consists of a high-speed camera mounted in a bullet-resistant housing at signalized intersections. The camera is aimed at an approach to the intersection and can be used for multiple lanes. The system is connected to the traffic signal controller and is able to monitor the changing of the traffic signal light. Sensors are placed in the pavement behind the limit line and are activated at a preset time after the signal turns red for the monitored approach.*
>
> *When a vehicle enters the intersection during the red cycle after the preset time has elapsed, the sensor triggers the camera, which then takes four overall photographs with 12 seconds of digital video. The first photograph shows the vehicle behind the limit line on the red light. The second photograph shows the vehicle proceeding through the intersection on the red light. The third photograph is of the driver. The fourth photograph is of the vehicle and license plates. Other visible environmental conditions are also recorded in each photograph. The use of a flash produces clear images under a wide range of light and weather conditions."*

RLCs have been in use in Marysville since 2005. The first RLC was a single approach installed at 3rd and F Streets, activated 5/2/2005. This was followed by two approaches at 10th and G Streets activated 10/1/2005, and a single approach at 3rd and E Streets activated 10/12/2005. Therefore, at the time of the 2005 Grand Jury report, the city had four cameras at three intersections.

Since that time, RLCs for two approaches have been installed at 9th and E, activated 4/29/2011. A RLC has been installed at 10th and Ramirez (one approach), activated 5/1/2012. In 2013, the Marysville City Council declined a request to install an additional RLC at 10th and Ramirez and a RLC at 5th and J Streets. A map containing current approaches and activation dates for each approach is shown in **Figure 1**.

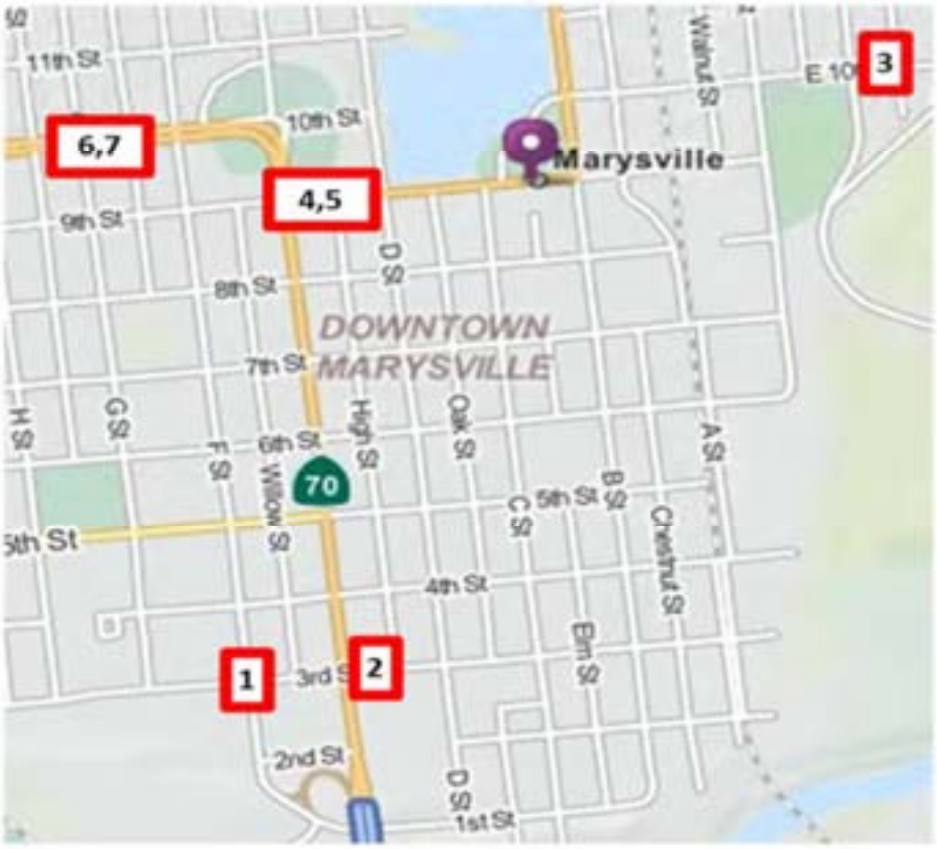
The RLC at 3rd and F also has a Halo system installed. The Halo system is a collision prevention system that extends the all-red phase for cross-traffic when it detects that a vehicle could run a red light (www.redflex.com).

RLC contracts. The original RLC contract with Redflex was a five-year contract dated December 2004. It was renewed for an additional five years in February 2011, and will expire in February 2016. The equipment belongs to Redflex, and Marysville pays a fixed amount each month to Redflex.

Costs per approach. The two approaches at 10th and G, the approach at 3rd and E, and the approach at 3rd and F Streets are $5,658/month each. The two approaches at E and 9th and the approach at 10th and Ramirez Streets are $6,203 each. The Halo system is an additional $250/month. As of August 2013, monthly payment to Redflex for the current approaches was $41,491. A sample invoice from March 2013 is provided in **Figure 2**.

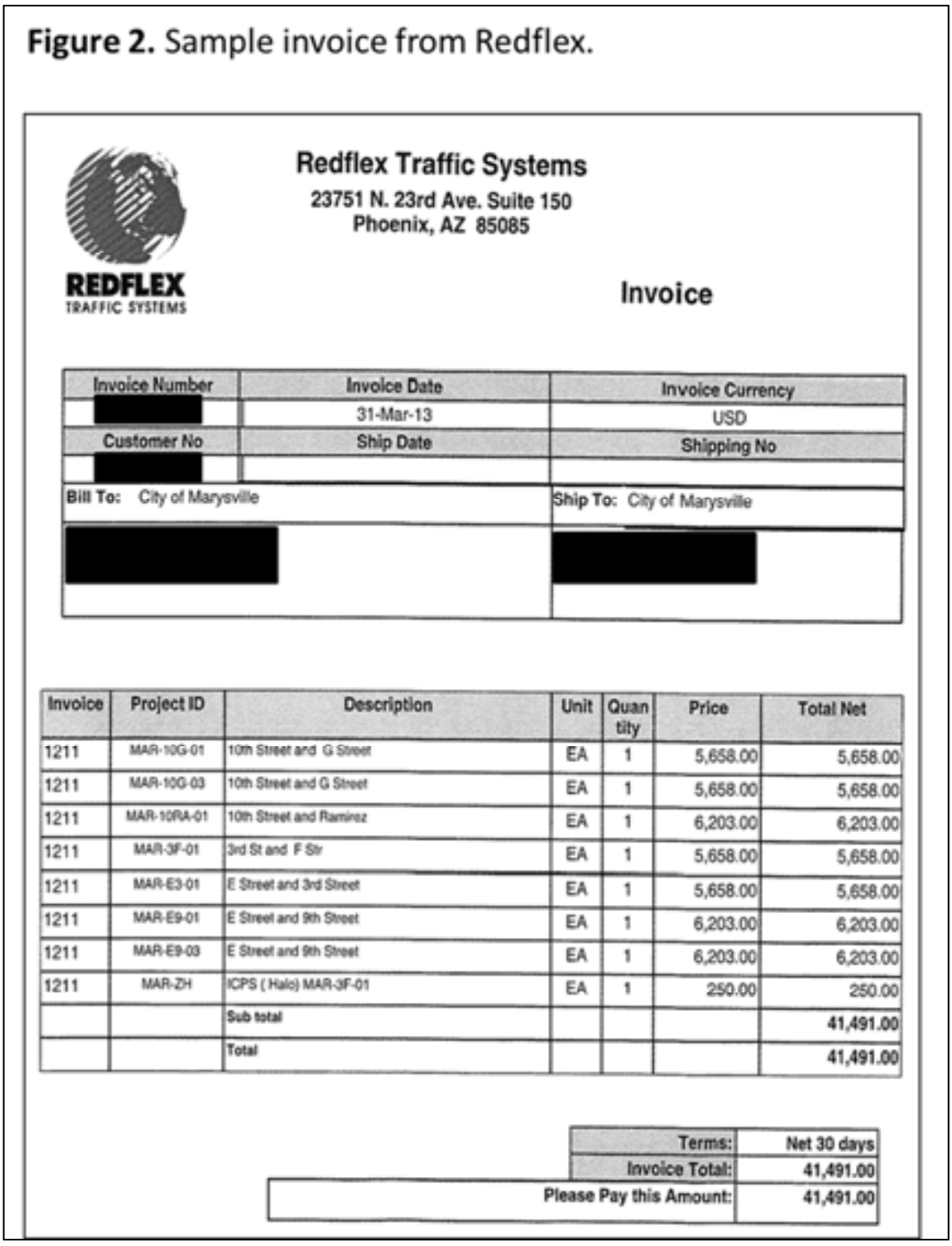
Additional costs for each approach are electricity and Digital Subscriber Lines (DSL) internet, paid separately from the monthly payment to Redflex. Redflex is responsible for all maintenance and upkeep of RLCs.

Figure 1. Map showing location of current RLC installations in Marysville, with list of RLC locations and date of activation shown in parentheses. * indicates RLC installations on State highways.



1. 3rd & F, eastbound (05/02/2005)
2. *3th & E, northbound (10/12/2005)
3. 10 & Ramirez, eastbound (05/01/2012)
4. *9th & E, northbound (04/29/2011)
5. *9th & E, southbound (04/29/2011)
6. *10th & G, eastbound (10/01/2005)
7. *10th & G, westbound (10/01/2005)

Figure 2. Sample invoice from Redflex.



Redflex Traffic Systems
23751 N. 23rd Ave. Suite 150
Phoenix, AZ 85085

REDFLEX TRAFFIC SYSTEMS

Invoice

Invoice Number	Invoice Date	Invoice Currency
[redacted]	31-Mar-13	USD
Customer No	**Ship Date**	**Shipping No**
[redacted]		

Bill To: City of Marysville	Ship To: City of Marysville
[redacted]	[redacted]

Invoice	Project ID	Description	Unit	Quantity	Price	Total Net
1211	MAR-10G-01	10th Street and G Street	EA	1	5,658.00	5,658.00
1211	MAR-10G-03	10th Street and G Street	EA	1	5,658.00	5,658.00
1211	MAR-10RA-01	10th Street and Ramirez	EA	1	6,203.00	6,203.00
1211	MAR-3F-01	3rd St and F Str	EA	1	5,658.00	5,658.00
1211	MAR-E3-01	E Street and 3rd Street	EA	1	5,658.00	5,658.00
1211	MAR-E9-01	E Street and 9th Street	EA	1	6,203.00	6,203.00
1211	MAR-E9-03	E Street and 9th Street	EA	1	6,203.00	6,203.00
1211	MAR-ZH	ICPS (Halo) MAR-3F-01	EA	1	250.00	250.00
		Sub total				**41,491.00**
		Total				**41,491.00**

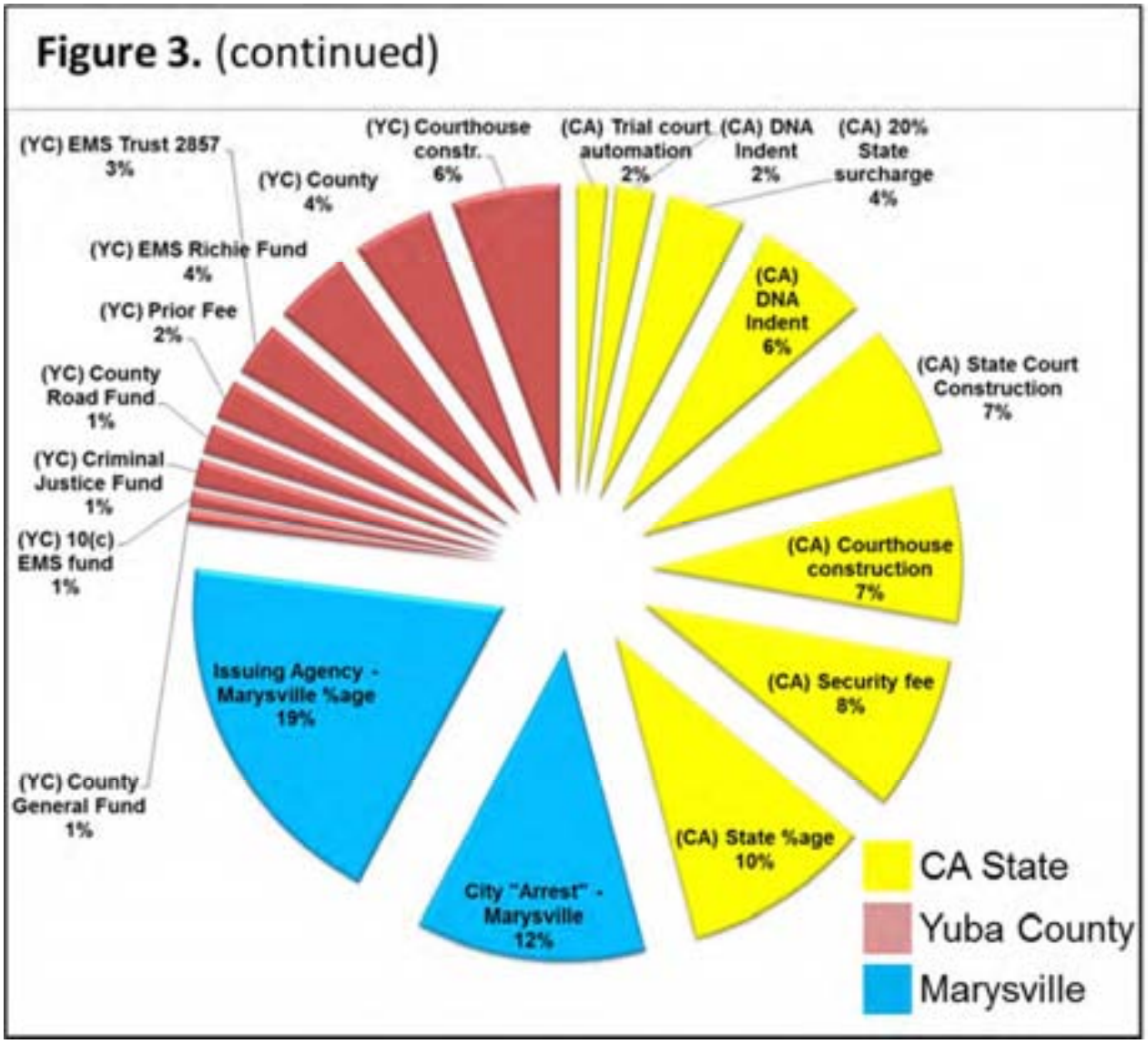
Terms:	**Net 30 days**
Invoice Total:	**41,491.00**
Please Pay this Amount:	**41,491.00**

Annual increase. The monthly amount increases annually. According to the current contract, "Each year, on the anniversary date of the contract, the pricing will increase by the Consumer Price Index (CPI)".

RLC penalty for failure to stop. Failing to stop at a red traffic signal is a violation of CVC Sections 21453 (a) (c), with a total current fine of either $479 for motorists with no prior tickets on their DMV record, or $489 for motorists with prior tickets. Of that, the City of Marysville receives $152.39, or 31%. The remainder is distributed to Yuba County (23%) and the state of California (46%). A breakdown of costs by amount, percentage, and recipient is provided in **Figure 3**.

Figure 3. Distribution of $489 fine currently assessed for running a red light. Table shows recipient, description and amount of each fee. Pie chart shows relative amounts of each fee as a percent of the total $489 fee.

Paid to	Description	Amount ($)	Subtotal
CA	Trial court automation	7.60	
CA	DNA Indent	9.80	
CA	20% State surcharge	20.00	
CA	DNA Indent	29.40	
CA	State Court Construction	34.30	
CA	Courthouse construction	35.00	
CA	Security fee	40.00	
CA	State percentage	48.02	224.12 (46%)
YC	County General Fund	2.98	
YC	10(c) EMS fund	4.00	
YC	Criminal Justice Fund	6.86	
YC	County Road Fund	7.31	
YC	Prior Fee	10.00	
YC	EMS Trust 2857	13.72	
YC	EMS Richie Fund	19.60	
YC	County	20.58	
YC	Courthouse construction	27.44	112.49 (23%)
City	City "Arrest" - Marysville	58.31	
City	Marysville percentage	94.08	152.39 (31%)
	Total	**489.00**	**489.00 (100%)**



RLC violation revenues. The cameras have provided a substantial revenue source for the City of Marysville (**Figure 4**). The Marysville City Manager's mid-year report and budget outlook for fiscal year 2012-2013 (Thursday, December 13, 2012) stated that "The largest revenue source in the General Fund continues to be sales taxes, property taxes, motor vehicle license fees, and red light camera revenue." The accompanying figure in this report showed that during fiscal year 2011-2012, red light camera revenue was the fourth largest revenue source for City of Marysville (**Figure 5**).

Figure 4. Revenue, expenses, and difference from September 2010 through September 2013 from RLCs. Amounts shown are in dollars.

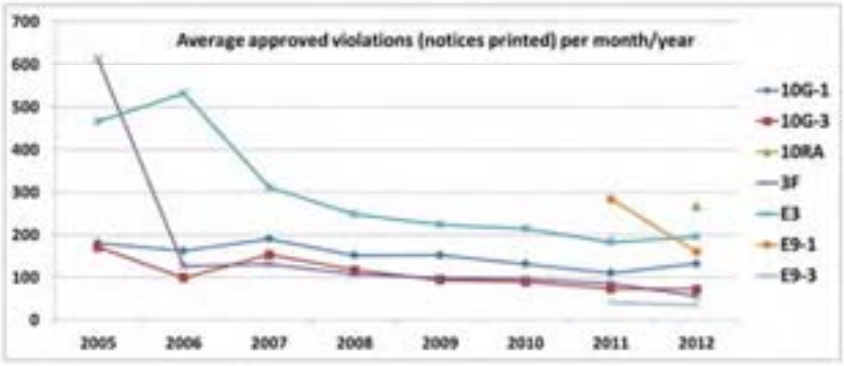
	REVENUE	EXPENSE	DIFFERENCE
Sep-10	60,286.01	22,999.06	37,286.95
Oct-10	51,275.32	22,899.53	28,375.79
Nov-10	48,079.49	22,858.86	25,220.63
Dec-10	47,071.04	22,928.86	24,142.18
Jan-11	40,689.97	22,921.02	17,768.95
Feb-11	38,336.71	22,800.00	15,536.71
Mar-11	48,133.46	21,772.74	26,360.72
Apr-11	55,158.56	22,268.68	32,889.88
May-11	47,772.41	22,259.80	25,512.61
Jun-11	41,503.61	20,780.32	20,723.29
Jul-11	39,483.98	24,814.00	14,669.98
Aug-11	48,331.50	22,000.00	26,331.50
Sep-11	43,404.56	28,427.78	14,976.78
Oct-11	61,774.52	28,280.00	33,494.52
Nov-11	58,062.25	31,504.80	26,557.45
Dec-11	59,996.29	34,310.00	25,686.29
Jan-12	65,043.56	30,419.68	34,623.88
Feb-12	71,936.85	34,310.00	37,626.85
Mar-12	71,044.02	27,696.45	43,347.57
Apr-12	64,207.70	33,310.00	30,897.70
May-12	62,707.62	35,288.00	27,419.62
Jun-12	77,596.32	35,470.52	42,125.80
Jul-12	70,407.80	40,946.00	29,461.80
Aug-12	67,406.97	42,036.00	25,370.97
Sep-12	87,118.54	41,491.00	45,627.54
Oct-12	109,003.62	41,491.00	67,512.62
Nov-12	64,956.85	41,491.00	23,465.85
Dec-12	70,544.18	41,491.00	29,053.18
Jan-13	54,698.41	41,491.00	13,207.41
Feb-13	75,435.27	41,491.00	33,944.27
Mar-13	65,413.31	41,491.00	23,922.31
Apr-13	43,854.35	41,491.00	2,363.35
May-13	45,248.32	41,491.00	3,757.32
Jun-13	35,178.26	41,491.00	-6,312.74
Jul-13	26,608.54	41,491.00	-14,882.46
Aug-13	31,689.69	41,491.00	-9,801.31
Sep-13	33,517.20	17,769.00	15,748.20

Figure 5. (a) RLCs provide third or fourth greatest revenue source for Marysville. (b) Average monthly violations from 2005-2012. (c) Chart and text from 2011 Marysville Police Department Annual Report (red outline added for emphasis).

(a)

Figure from Appendix of City Manager's Mid-Year Report and Budget Outlook Fiscal Year 2012-2013, December 13, 2012

(b)



(c)

Year	2006	2007	2008	2009	2010	2011	*2010-2011 % Change*
Traffic citations (including Redflex)	3185	4287	2938	3315	2960	7245	*144%*

Increase due in part to added RLCs

In 2011, the PRLE program:

- Screened 8,701 incidents
- Determined 8,081 of these incidents were violations
- Sent 4,889 violations to the Yuba County Superior Court for processing
- Made in excess of 500 court appearances regarding red light violations

RLC revenue reduced due to Caltrans construction. Revenue from RLCs has been reduced due to Caltrans construction. During Caltrans construction, RLCs at 3rd & E, 9th & E, and 10th & G have been deactivated. The decrease in revenue can be seen as a net loss from RLC expenses during June, July, and August 2013 (**Figure 4**). Payment to Redflex for September 2013 was

reduced below the full invoice amount, so that for September 2013 there was a net profit from RLC revenue. This will be discussed further in "Accounting Practices" later in this report.

Red Light Camera Discussion:

Background and discussion, findings, recommendations, and commendations are presented separately for 1) safety effects and 2) accounting practices.

1) Red Light Camera Safety Effects

Background - RLCs AND COLLISIONS:

Accident types. Not all accidents are the same, and RLCs may decrease the probability of some types of accidents while increasing the probability of other types of accidents.

> ***Right-angle collisions.*** Right-angle collisions occur when two vehicles approaching from non-opposing angular directions collide. Right-angle collisions typically result when one vehicle either failed to stop at the red light or was not out of the intersection when the other directional signal turned green. Right-angle collisions might happen when vehicles are turning left at an intersection or proceeding straight through an intersection.
>
> A National Motor Vehicle Crash Causation Survey (NMVCCS), conducted by the US Department of Transportation, National Highway Traffic Safety Administration (DOT-NHTSA), evaluated nationwide collisions from 2005-2007. The NMVCCS found that proceeding straight through an intersection and turning left at an intersection accounted for 22.2% and 12.6%, respectively, of all collisions.
>
> ***Rear end collisions.*** Rear end collisions occur when two vehicles are traveling in the same direction, and the vehicle in the front is struck by the vehicle in the rear. This may occur at an intersection when a driver suddenly applies brakes in order to stop at the signal and is struck by the vehicle behind.
>
> The NMVCCS found that collisions resulting from the front vehicle stopping accounted for 12.2% of all collisions.

*Findings generally agree that RLCs can **reduce** right-angle collisions and **increase** rear end collisions.*

Statewide Integrated Traffic Records System (SWITRS). SWITRS is a statewide records system that serves as a centralized means to collect collision data (http://iswitrs.chp.ca.gov/Reports/jsp/OTSReports.jsp). Data include fatal and injury accidents as well as a large proportion of property damage only accidents.

Traffic Accident Surveillance and Analysis System (TASAS). TASAS is a statewide records system used by Caltrans to analyze accident, traffic, and highway data for State highway related collisions (http://www.dot.ca.gov/hq/traffops/signtech/signdel/chp3/chap3.htm). SWITRS collision data pertaining to State highway related data are provided to Caltrans weekly. Accident data received by Caltrans do not include names, driver license numbers, addresses, vehicle license numbers, or data on age and sex of drivers and victims.

RLC Safety research. There are numerous studies both supporting and refuting safety effects of RLCs. In 2009 a meta-analysis of RLC studies was published, finding that overall RLCs did not affect safety (Erke, 2009). A response refuting the findings of this study was then published by the Insurance Institute for Highway Safety (IIHS) (Lund, Kyrychenko, & Retting, 2009). However a recent study replicated the Erke's 2009 findings that overall RLCs did not affect safety (Høye, 2013).

The IIHS, funded by auto insurers and insurance associations, strongly supports the use of RLCs (http://www.iihs.org/iihs/topics/t/red-light-running/topicoverview). A bibliography of their work in support of RLCs is provided on their webpage. It should be noted that at least 1/3 of the literature referenced in their bibliography has only been published on their website and is therefore not peer-reviewed. The IIHS's 2011 study "Effect of red light camera enforcement on fatal crashes in large US cities" is often cited in support of RLC use (Hu, McCartt, & Teoh, 2011). Their methods were questioned and their conclusions were refuted in a subsequent study "Counterpoint: The Insurance Institute for Highway Safety study actually found cities using red light cameras had higher red light running fatality rates" (Langland-Orban, Pracht, & Large, 2012). The IIHS response to the Langland-Orban is provided on their website.

The IIHS has also emphasized the importance of not only RLCs, but additional engineering strategies such as longer yellow signal timing and all-red periods of traffic signals (Retting, Ferguson, & Farmer, 2008; Retting & Greene, 1997). The importance of engineering strategies is supported by additional peer-reviewed research (e.g., Sharma, Vanajakshi, Girish, & Harshitha, 2012; Yang, Han, & Cherry, 2013).

A recent study examined driver behavior after RLCs were removed, and found that red light running increased following RLC removal (Porter, Johnson, & Bland, 2013). Overall, the conflicting studies, public perception that RLCs serve as a revenue source rather than a safety measure, and issues such as signal timing manipulation emphasize "divergent motivations of RLC vendors, municipalities, policy makers and safety advocates" (Yang et al., 2013).

U.S. Department of Transportation, Federal Highway Administration. Red light running is considered a serious problem by the U.S. Department of Transportation, Federal Highway Administration (DOT-FHWA) (http://safety.fhwa.dot.gov/intersection/redlight/). They note that red light runners should be characterized as either unintentional or intentional.

According to DOT-FHWA, engineering countermeasures are most effective for unintentional red light runners. Also according to DOT-FHWA, enforcement countermeasures are most effective for intentional red light runners. It is the position of the DOT that comprehensive approaches should be taken for most effective intervention, and engineering countermeasures should be evaluated before enforcement measures.

Engineering Countermeasures. RLCs are considered enforcement countermeasures. In contrast, examples of engineering countermeasures to minimize red light runners include:

- improved signal visibility
- improved line of sight for signalized intersections
- improved signal timing such as longer yellow intervals and all-red intervals
- elimination of the need to stop.

Countermeasure: Yellow signal interval timing. In California, minimum yellow interval times are stipulated by California Vehicle Code (CVC) 21455.7 and based on posted approach speeds. It is important to note that 21455.7 CVC mandates minimum yellow light intervals, and subdivision c states "A yellow light change interval may exceed the minimum interval established pursuant to subdivision (a) (http://www.dmv.ca.gov/pubs/vctop/d11/vc21455_7.htm)."

It is also important to note that 21455.7 CVC minimums are established based on posted speeds. The DOT-FHWA states that studies show:

- most speed limits are in general 8-12 miles per hour below the prevailing speed
- yellow intervals should be based on speed limit plus 10 miles per hour
- an additional 0.5 second of yellow time should be considered for locations with significant truck traffic
- yellow intervals should be based on a more complex formula incorporating the 85th percentile speed in miles per hour, deceleration in feet per second squared, grade, and acceleration due to gravity in feet per second squared.

The DOT-FHWA also states that yellow times less than those recommended by this equation result in more red light violations and higher crash rates.

Therefore the DOT-FHWA suggested engineering countermeasure for longer yellow intervals may be a relevant and important countermeasure for red light runners. The importance of longer yellow intervals and all-red intervals as a countermeasure to red light running is strongly supported by research; according to the DOT-FHWA a 1 second increase in yellow time results in a 40% decrease in severe red light crashes.

Yellow signal intervals in the City of Marysville are set as follows:

Approach	Approach Posted Speed (mph)	Yellow Light Interval (secs)	21455.7 CVC minimum
9th & E Northbound	25	3.0	3.0
9th & E Southbound	25	3.0	3.0
3rd & F	35	4.0	3.6
10th & G Eastbound	35	3.6	3.6
10th & G Westbound	35	3.6	3.6
3rd & E	25	3.6	3.0
10th & Ramirez	no posted speed	3.6	

Countermeasure: Eliminating the need to stop. The DOT-FHWA also includes the removal of unneeded traffic signals as an important countermeasure to red light runners. Notably they indicate that this countermeasure results in a reduction of crashes, including a 24% reduction in right-angle crashes and a 29% reduction in rear-end crashes.

Encroachment permit. In order to install a RLC at a signalized intersection on a State highway, local agencies must submit an encroachment permit application to Caltrans for approval.

On July 7, 2000 Caltrans issued a policy directive #00-01 stating that automated red-light enforcement systems may be permitted at Caltrans owned and operated intersections if…"the compelling need for said systems is demonstrated."

On June 15, 2009 Caltrans issued policy directive #09-03 superseding policy directive #00-01. The new policy directive required local agencies to include a traffic engineering study with an encroachment permit application for RLC installation on a State highway. The need for RLCs at that intersection would then be determined by Caltrans according to information provided in the traffic engineering study, such as:

- Analysis of collision data and identification of collision patterns
- Comparison of collision frequency and rates to other similar type intersections in the area
- Evaluation of previous countermeasure(s) implemented to address collision or driver behavior pattern
- Identification and evaluation of possible countermeasure(s) to address collision or driver behavior patterns

Therefore, for current approaches, the City of Marysville submitted encroachment permit applications for RLCs at 10th & G, 9th & E, and 3rd and E Streets. A traffic engineering study was

required with encroachment permits for RLCs at 9th & E Streets. Neither an encroachment permit nor a traffic engineering study was required for RLCs at 3rd & F or at 10th & Ramirez, because these intersections are not subject to Caltrans regulations.

Discussion: MARYSVILLE RLC PROGRAM

The stated purpose of the RLCs in Marysville is to improve traffic safety (*http://www.marysvillepd.org/redflex.html*): "The Marysville Police Department Red Light Photo Enforcement Program was implemented in 2005 with the purpose of providing 24-hour automated intersection enforcement and increasing traffic safety by reducing accidents resulting from red-light-running violations."

The initial installation of RLCs in Marysville required a public hearing. The August 2004 public hearing notice referenced "…an automated traffic enforcement system in Marysville…" but did not specifically state that the public hearing was to consider red light cameras.

Selection of initial RLC intersection. Exhibit A of the original contract contains a table assembled by Redflex listing all signal intersections and the number of collisions at those intersections during 2003 (**Figure 6a**). **Figure 6b** shows this table re-ordered by number of collisions in 2003, and includes two intersections (shaded) with approaches that were rejected by Marysville City Council in 2013.

According to the text accompanying the Exhibit A table, "Intersections with the greatest historical number of collisions will be utilized to determine designated intersections that warrant photo enforcement; these intersections are outlined in the table below."

However, the first RLC installed was located at 3rd & F Streets, although only 9 accidents were reported for this intersection during 2003 (rank 12th out of 18 intersections) (**Figure 6**).

Summary: ***Accident frequencies prior to RLC installation have not been the sole consideration for RLC usage.***

Discussion: CONFLICTING COLLISION DATA IN SUPPORT OF RLC PROGRAM

The City of Marysville has provided conflicting collision data in support of the RLC program.

1) Conflicting collision investigation data have been published in the 2011 Marysville Police Department Annual Report and the 2012 Marysville Police Department Annual Report (**Figure 7**). For years 2007 through 2011, conflicting values are provided for total accidents (2007 - 2011), injury accidents (2010, 2011), non-injury accidents (2010, 2011), and fatal accidents (2011). Values for Total collisions are incorrect for years 2006-2009; corrected values are provided in boxes outlined in red in **Figure 7**.

2) Conflicting collision investigation data were provided when comparing the 2012 Marysville Police Department Annual Report with the City of Marysville City Council Staff Report, prepared May 5, 2013, titled "Completion of the Photo Red-light Enforcement Program contract and declaration of commitment to traffic safety" (**Figure 8**). Both **Figure 8(a)** and **Figure 8(b)** appear in the Staff Report, so that conflicting data appear in the same publication.

3) Injury collision data in Figure 7 do not agree with those provided in a line graph in the 2011 MPD Annual Report. Data points shown in the 2011 line graph do not correspond with values provided in the report (**Figure 9**).

Figure 6. (a) Appendix A table (2004 contract between Marysville and Redflex), showing number of collisions at signal intersections in 2003. (b) Same table, ordered by number of collisions, showing current number of RLCs. Additional approaches for shaded intersections were rejected by City Council.

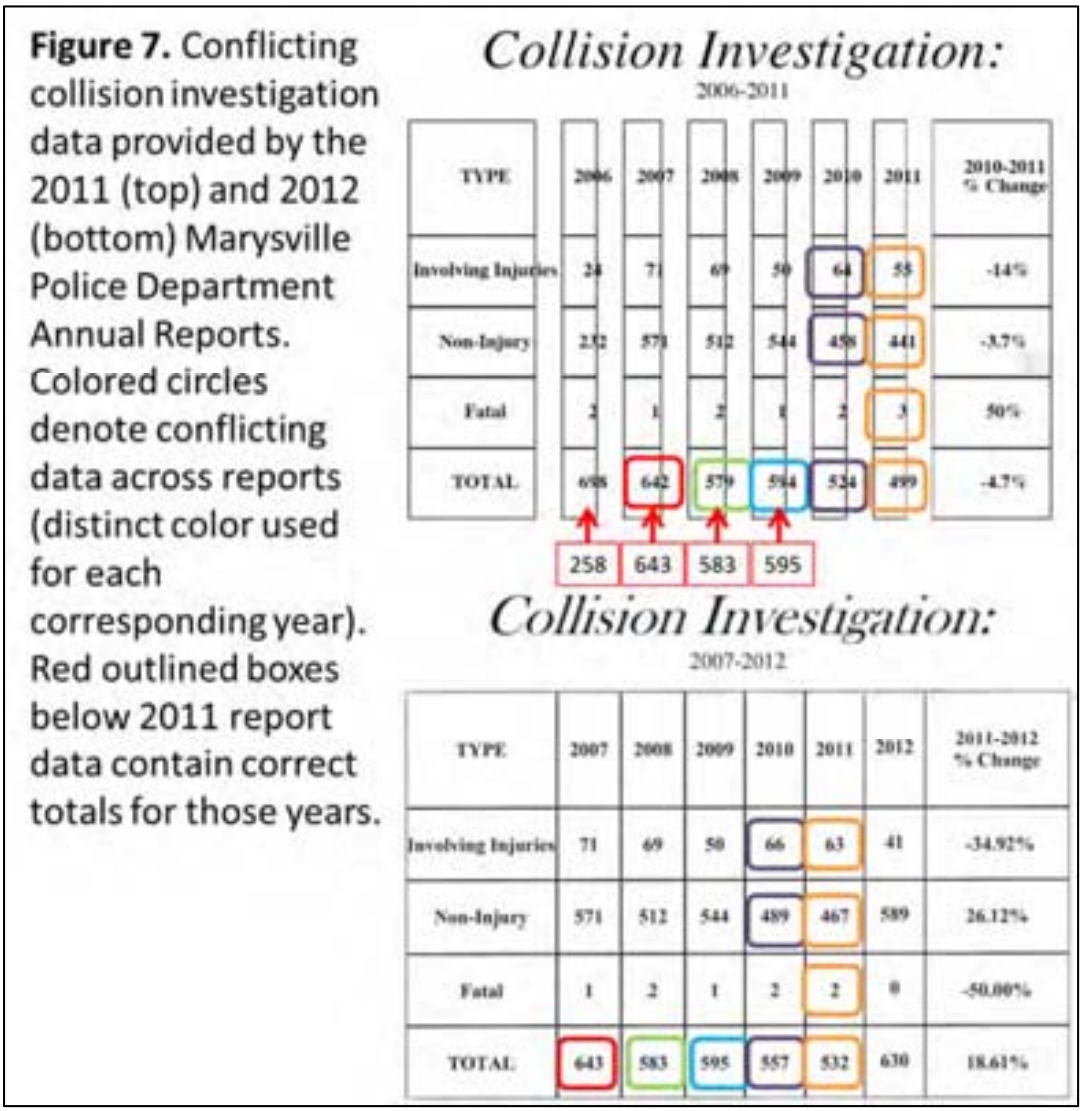
(a)

Location	Number of Collisions in 2003
E Street and 3rd Street	**24**
E Street and 4th Street	10
E Street and 5th Street	15
E Street and 6th Street	8
E Street and 7th Street	10
E Street and 8th Street	8
E Street and 9th Street	**24**
9th Street and D Street	7
9th Street and B Street	11
B Street and E.12th Street	**20**
E.12th Street and Ramirez Street	1
14th Street and E Street	2
5th Street and J Street	11
3rd Street and F Street	9
10th Street and F Street	14
10th Street and G Street	**22**
10th Street and H Street	**16**
14th Street and B Street	7
Total Collisions at signal intersections	219

(b)

Location	# Collisions	# RLC
3E	24	1
9E	24	2
10G	22	2
12B	20	0
10H	16	0
5E	15	0
10F	14	0
9B	11	0
5J	11	0
4E	10	0
7E	10	0
3F	9	1
6E	8	0
8E	8	0
9E	7	0
14B	7	0
14E	2	0
12Ramirez	1	0
10Ramirez		1

Figure 7. Conflicting collision investigation data provided by the 2011 (top) and 2012 (bottom) Marysville Police Department Annual Reports. Colored circles denote conflicting data across reports (distinct color used for each corresponding year). Red outlined boxes below 2011 report data contain correct totals for those years.



Collision Investigation:

2006-2011

TYPE	2006	2007	2008	2009	2010	2011	2010-2011 % Change
Involving Injuries	24	71	69	50	64	55	-14%
Non-Injury	232	570	512	544	458	441	-3.7%
Fatal	2	1	2	1	2	3	50%
TOTAL	698	642	579	594	524	499	-4.7%

258 643 583 595

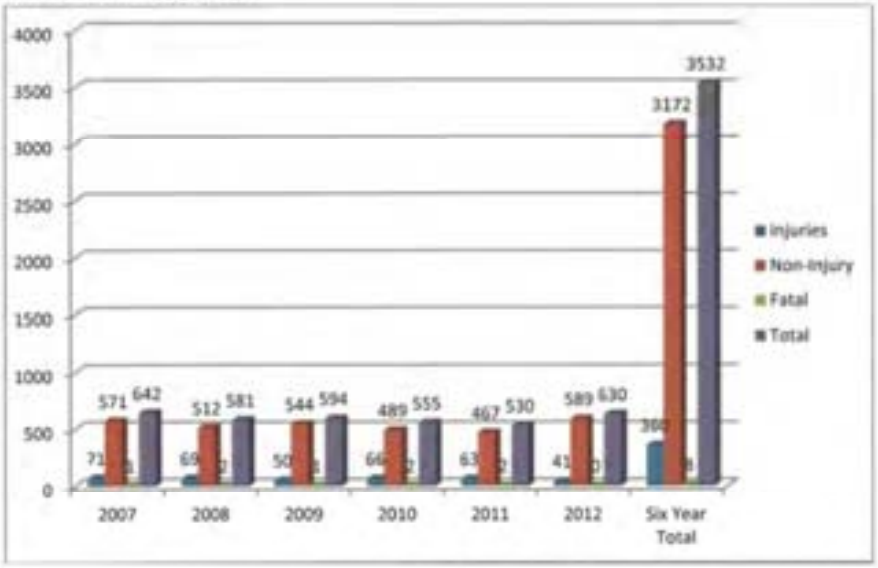
Collision Investigation:

2007-2012

TYPE	2007	2008	2009	2010	2011	2012	2011-2012 % Change
Involving Injuries	71	69	50	66	63	41	-34.92%
Non-Injury	571	512	544	489	467	589	26.12%
Fatal	1	2	1	2	2	0	-50.00%
TOTAL	643	583	595	557	532	630	18.61%

Figure 8. Figure from (a) 2012 Marysville Police Department Annual Report and (b) 2013 City Council Staff Report. Values for 2010, 2011, and 2012 do not agree.

(a)



Three Year Traffic Collision Assessment

(b)

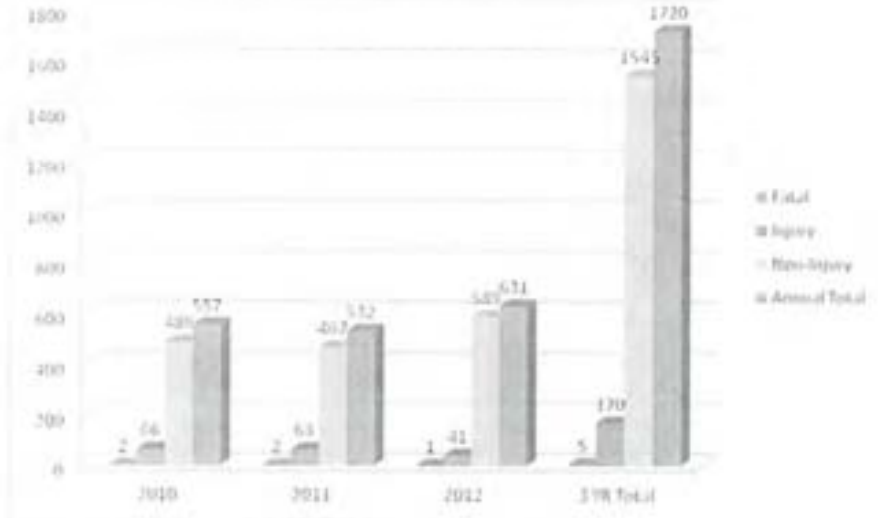
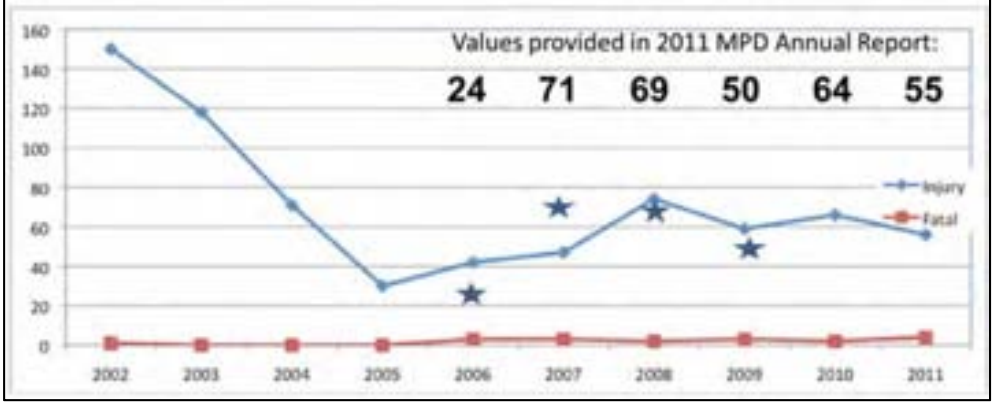


Figure 9. Figure from 2011 Marysville Police Department Annual Report. Chart shows city-wide injury and fatal accident data. However, data points on the chart do not agree with values provided in the report. Red stars have been added to show data points that would correspond to values provided in the report (see Figure 7a for values from the report).



4) Statistics cited by city officials regarding the RLC program are not supported by available data. The City of Marysville Fiscal Year 2013-2014 Proposed Budget, p. 5.2 states:

"During the first full year of photo red light enforcement implementation, the City experienced an immediate reduction of 78.7% in traffic collisions at the initial four monitored intersections."

There are issues with this statement, as follows:

- **Data have been purged.** Non-injury accident data prior to 2007 reportedly have been purged. Marysville cannot provide data to support this assertion, specifically for the initial four monitored intersections.

- **Alternative causes for reductions are possible.** Because this statement does not describe the types of collisions that were allegedly reduced, it is unclear whether the reduction in collisions represents reductions in types of collisions that could be attributed to RLC usage. It is also possible that other factors contributed to a decline in traffic collisions, including a decrease in traffic volume, motorist avoidance of RLC intersections, or additional use of engineering countermeasures.

- **Available data do not support statement.** This statement appears to reference the first full year of implementation following installation of the first four RLCs, which would be the period from October 12, 2005 through October 12, 2006 (see **Figure 1** for activation dates); that is, primarily the year 2006. Although the City of Marysville intersection accident data are not available, it is possible to consider total collision data in the City of Marysville provided in public documents. A review of the figure from the 2011 Marysville Police Department Annual Report (provided in **Figure 9**) shows a citywide steep decline in injury accident data from 2002 through 2005, prior to implementation of the RLC program. In contrast, a citywide increase in injury accidents begins in 2005, the year the RLC program began (**Figure 9**).

- **Injury accidents have been increasing.** The available data do not support the assertion of a 78.7% reduction. They indicate an increase in injury accidents citywide. It is possible that accident data at the *monitored* intersections might indicate a decrease, or that total collision data might reflect a reduction. There is no way to ascertain this with data provided by the City of Marysville, and available data suggest otherwise.

5) A statement similar to the italicized statement shown in #4 above was made in the City of Marysville City Council Staff Report, prepared May 5, 2013, titled "Completion of the Photo Red-light Enforcement Program contract and declaration of commitment to traffic safety." The additional claim was made:

"During the next full year of PRLE enforcement of those same intersections, the City experienced an additional reduction in collisions of 16.67%."

There are issues with this statement, as follows:

- **Citywide accident data versus RLC intersection data.** Although the statement from the City of Marysville Fiscal Year 2013-2014 Proposed Budget references accident data at the monitored intersections, the statement from the City of Marysville City Council Staff Report refers to citywide accident data. Therefore the comparison for the first year and the second year of photo red light enforcement (PRLE) references different datasets that may or may not be related or comparable.

- **Spillover effects not empirically confirmed.** It is unclear whether citywide collision data provide support for benefits of RLCs in accident reduction. There are claims that RLCs result in "spillover effects;" that is, drivers are more cautious at non-RLC intersections as a result of RLC monitoring at other intersections. However these claims are generally not supported by research (Erke, 2009; Høye, 2013).

- **Corrected values indicate increase in collisions.** More importantly, the statement from the City of Marysville City Council Staff Report references the period from October 12, 2006 through October 12, 2007; that is, primarily the year 2007. According to the 2011 Marysville Police Department Annual Report, if corrected Total Collision values provided in red-outlined boxes (**Figure 7**) are used, then from 2006 to 2007 there was a 149% increase in Total collisions, a 146% increase in non-injury accidents, and a 196% increase in injury accidents.

- **More recent data not referenced.** Finally, it is unclear why only data from 2006 and 2007 would be used to justify enforcement measures in 2013 reports, particularly when many additional years of data would have been currently available.

6) The Staff Report does reference more recent data, stating that:

"With the exception of 2012 we have experienced a steady downward trend in overall collisions."

There are issues with this statement, as follows:

- **Selective use of data.** It is unclear why it would be appropriate to selectively ignore the most recent year of data.

- **Citywide versus RLC intersection reference unclear.** It is unclear whether this statement references citywide data or RLC intersections.

- **Other factors may contribute to reduction.** It is unclear whether factors other than RLC enforcement might have contributed to the decline.

- **Contribution of RLC data to citywide data not clear.** It is unclear whether there have been changes to overall collision rates at RLC intersections during this period.

Summary: ***It appears that overall, statements by the City of Marysville officials to support effects of RLCs on safety sometimes reference citywide collision figures and sometimes reference collision figures at RLC intersections, use data that cannot be substantiated, provide conflicting figures, and omit reference to data that do not support the assertion of safety improvement.***

Discussion: ENCROACHMENT PERMIT APPLICATION COLLISION DATA

As described above, an encroachment permit is required by Caltrans for local agencies to install RLCs at signalized intersections on state highways. The RLCs at 10th & G, 9th & E, and 3rd & E are on State highways, and therefore subject to the requirement for an encroachment permit.

A. 3rd & E Encroachment permit application. The City of Marysville did not provide accident data for years prior to 2007. However 3rd & E encroachment permit application-related documents included both SWITRS and TASAS collision data for this intersection. These data covered the 36-month period 01-01-2001 through 12-31-2003. In contrast to summary data provided by Redflex (**Figure 6**), review of these data showed a total of one broadside accident attributed to red-light running by a northbound driver (i.e., a driver who might have stopped had the northbound RLC been installed).

B. 10th & G Encroachment permit application. The City of Marysville did not provide accident data prior to 2007. However 10th & G encroachment permit application-related documents included both SWITRS and TASAS collision data for this intersection. These data covered the 36-month period 01-01-2001 through 12-31-2003. In contrast to summary data provided by Redflex (**Figure 6**), review of these data showed a total of two broadside accidents attributed to red-light running by an eastbound or westbound driver (i.e., a driver who might have stopped had the eastbound and westbound RLCs been installed).

C. 9th & E Encroachment permit application. RLC required a traffic engineering study. The 9th & E RLC was installed after issuance of 2009 Caltrans policy directive #09-03 and therefore a traffic engineering study was required. An encroachment permit was submitted in 2010 for a RLC at 9th & E. Caltrans evaluated data provided in this study as well as information in the TASAS database and determined that this intersection met the criteria for RLC installation. That is, Caltrans found that there was a history of accidents occurring within the intersection that could be attributed to red-light running in the directions that would be controlled by the RLCs.

D. An encroachment permit application was also submitted in 2010 for a RLC at 12th & B. When the encroachment permit application for 9th & E was submitted, an encroachment permit application was also submitted for RLC installation at 12th & B.

The Caltrans analysis of collision data identified issues with the traffic engineering report:

- Although the traffic engineering report stated that both 9th & E and 12th & B had the highest number of collisions when compared with other intersections, the report did not

consider the higher traffic volume (approximately 2X) at these intersections when compared with other intersections. Although the traffic engineering study reported 41 collisions, 23 were rear-end collisions and five were broadside at 12th & B over the six-year period. None of the collisions, including the five broadside accidents, occurred within the 12th & B intersection and none of them were related to red light running. Subsequent analysis of TASAS data showed only eight collisions for the same time period. An additional six collisions were identified following discussion with Marysville Police Department. However these 14 collisions were predominantly rear-end collisions, with no broadside collisions occurring within the intersection.

- In response, the City of Marysville stated that they do not report most non-injury collisions to SWITRS, and therefore Caltrans did not have access to a high percentage of collision data either through SWITRS or TASAS. The City of Marysville further stated that a detailed review of every collision occurring at 12th & B over the previous five years had been conducted, and noted that "the City did not have a single documented collision resulting from someone stopping at a red light and being rear ended" (March 8, 2011 communication from City of Marysville Police Department to Caltrans).

- However, despite requests by Caltrans, the data for this detailed review were never submitted by the City of Marysville in support of the encroachment permit request. The City of Marysville did provide Caltrans with a non-peer reviewed lay publication issued by IIHS that did not include any statistics for the City of Marysville specifically. The City of Marysville also provided a non-peer reviewed manuscript describing effects of red light camera enforcement on fatal crashes in large US cities, but again not including any statistics for the City of Marysville specifically.

In December 2011 Caltrans issued three-year conditional approval for RLC installation at 12th & B. For three years, City of Marysville would be required to submit an annual report to include type of collision, where collision occurred, and cause of collision. If the collision trend for the three year period was increasing, the 12th & B RLC would be removed.

However, in August 2012 the permit for the RLC installation at 12th & B was suspended until January 2015 due to Caltrans roadway construction. Moreover, construction included installation of roadway surface that would not allow installation of the roadway sensors required for RLC installation and operation. Therefore the City of Marysville would need to resubmit an encroachment permit application utilizing alternative detection and layout measures for RLC installation and operation.

The traffic engineering study had recommended engineering countermeasures, including utilization of larger signal heads and a signal backplate for the westbound approach, left side signal head. Caltrans has implemented those recommendations.

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Discussion: CONFLICTING COLLISION DATA BETWEEN CITY OF MARYSVILLE AND TASAS DATABASE

As described above, collision data provided by City of Marysville do not agree with collision data available in TASAS. The Grand Jury obtained TASAS data for all signalized intersections on State highways within the City of Marysville for the years 2003 - 2011.

The City of Marysville provided the Grand Jury with collision data for all signalized intersections for the years 2007-2013. The City of Marysville did not provide any information about accidents prior to 2007 because "…all non-fatal data prior to calendar year 2007 has been purged from the MPD system in accordance with department policy" (January 9, 2014 response to Grand Jury subpoena issued December 17, 2013).

There are discrepancies between TASAS and Marysville collision datasets. In part this would be due, as described above, to the City of Marysville's lack of reporting most non-injury collisions to SWITRS, and therefore neither SWITRS nor TASAS would reflect those collisions.

Appendix RLC2 contains TASAS and City of Marysville data for intersections with RLCs.
Appendix RLC3 contains TASAS and City of Marysville data for signalized intersections on State highways that do not have RLCs.
Appendix RLC4 contains City of Marysville data for signalized intersections not on State highways within the City of Marysville.

Summary: ***Caltrans found that collision data from the City of Marysville conflicted with available reported data. The City of Marysville did not provide data to Caltrans to support their collision numbers. Caltrans has implemented engineering countermeasures recommended by the traffic engineering study.***

Summary Note: Examination of data for these intersections suggests that simply listing total number of all accidents in or near an intersection does not provide appropriate justification for installation of RLCs.

Summary: ***The City of Marysville collision data do not agree with the State of California collision data. Collision data provided as part of the Redflex 2004 contract do not agree with the State of California collision data.***

Discussion: GRAND JURY EVALUATION OF RLC EFFECTS ON COLLISIONS.

It is challenging to comprehensively evaluate safety effects resulting from RLC usage. Such evaluation requires sophisticated statistical modeling. Models should include accident types (all, right-angle, those caused by red-light running), designation of comparison sites, treatment types (RLCs only, RLCs plus warning signs, use of countermeasures), traffic volume and traffic volume changes over time. Conducting such statistical modeling is beyond the scope of this Grand Jury report.

To provide additional insight into possible safety effects resulting from RLC usage, the Grand Jury therefore considered:

1. accident data available for RLC intersections;
2. whether the reduction in citywide collisions was reflected in accident statistics available for RLC intersections;
3. for more recently approved intersections, whether there was any decrease in collisions between the year prior to RLC installation and the year following RLC installation;
4. whether citation types were for red-light running behavior that might be reduced by use of RLCs.

Varying activation dates for RLC approaches and the lack of relevant Marysville-provided data prior to 2007 provided challenges to data analysis. In order to conduct a consistent and meaningful analysis, for items #1 and #2, analyses utilized accident data provided by the City of Marysville for the three intersections having the original four RLC approaches (10^{th} & G, 3^{rd} & E, 3^{rd} & F Streets) for 2007 through 2012. Analyses utilized citywide collision data for the same period of time provided in the 2012 Marysville Police Department Annual Report. This enabled evaluation of accident data for the original four approaches with respect to citywide collision data for the period 2007 - 2012.

1) Accident Data for original RLC approaches: Summarized accident data (provided by the City of Marysville) for the original four RLC approaches for 2007-2012 are shown in **Figure 10**. There were no fatal accidents at these intersections during this period. The number of injury accidents at these intersections fluctuated over this time period. There was an increase in the number of non-injury accidents at these intersections over the same time period.

Summary: ***The number of non-injury accidents has been increasing at three RLC intersections for the period 2007-2012.***

2) Percent of citywide accidents accounted for by the original RLC approaches: The Grand Jury considered what percent of citywide accidents were accidents at RLC intersections. Over the 2007-2012 period, accidents at RLC intersections accounted for an increasing percent of total accidents in the City of Marysville (**Figure 11**). For years 2007 through 2012, accidents at these three RLC intersections accounted for 4% (2007), 7% (2008, 2009, and 2010), and 9% (2011 and 2012) of total accidents in the City of Marysville.

Summary: ***Accidents at three RLC intersections account for an increasing percent of total collisions in the City of Marysville. Therefore citywide collision data may not reflect accident trends at RLC intersections. Use of citywide collision data to justify RLC usage may not be appropriate.***

3) Decrease in collisions following RLC installation: The Grand Jury considered whether there was a decrease in collisions following RLC installation at 9th & E or at 10th & Ramirez intersections.

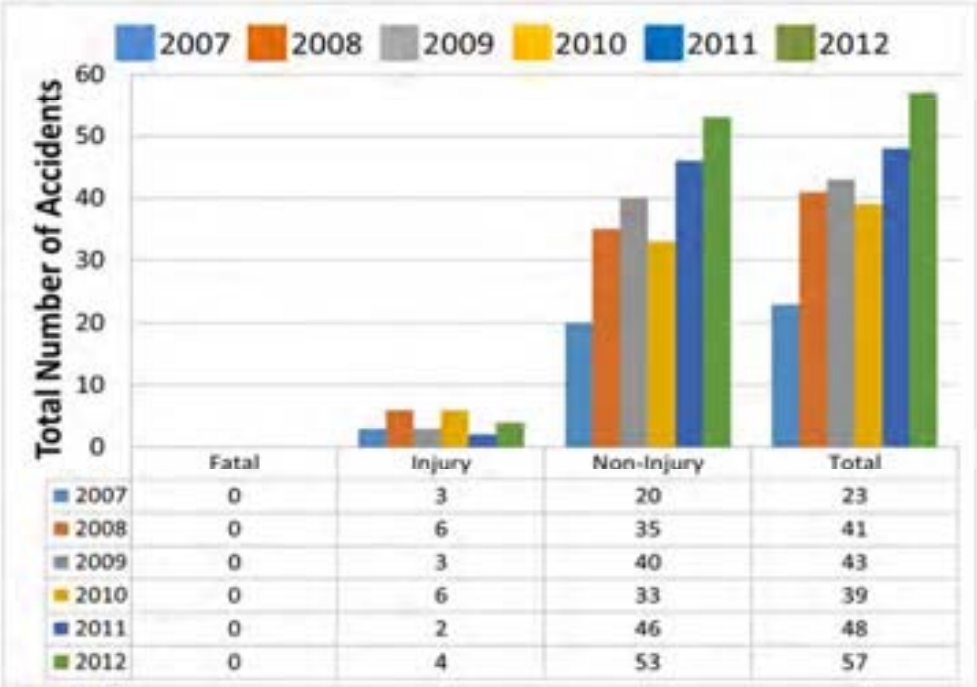
According to data provided by the City of Marysville, during the 12 months prior to RLC installation at 10th & Ramirez (May 2011 through May 2012), there were a total of 2 non-injury collisions at 10th & Ramirez (one during 2011 and one during 2012). In 2012 following RLC installation, there was one injury accident. There were no accidents through October 2013 when data was submitted for this report.

No information was provided regarding the types of accidents or whether they occurred within the intersection.

Caltrans found that the accident pattern at 9th & E was appropriate to merit RLC installation. According to TASAS data provided to the Grand Jury, there were a total of seven broadside accidents within the intersection between 2003 and 2011. TASAS data for this intersection was not available for 2012 and 2013.

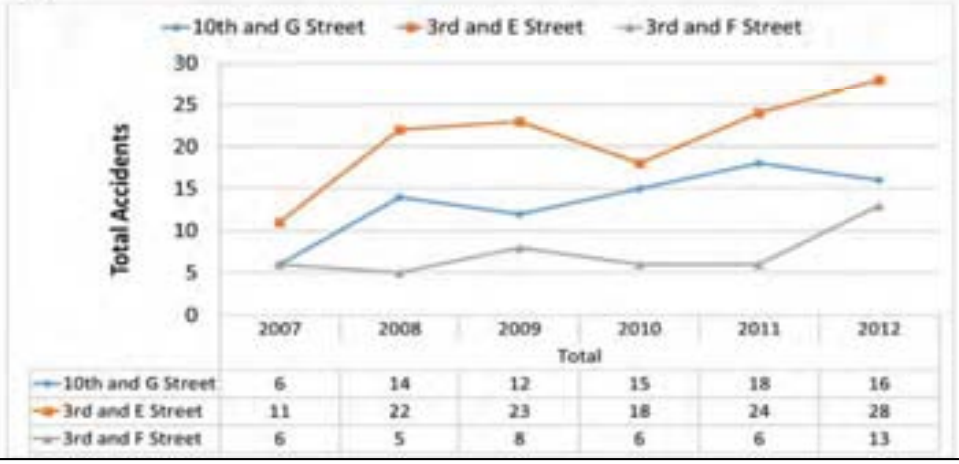
Figure 10. (a) Summarized and (b) separated by intersection total collision data for intersections 3rd & E, 3rd & F, and 10th & G Streets provided by the City of Marysville for years 2007-2012.

(a)



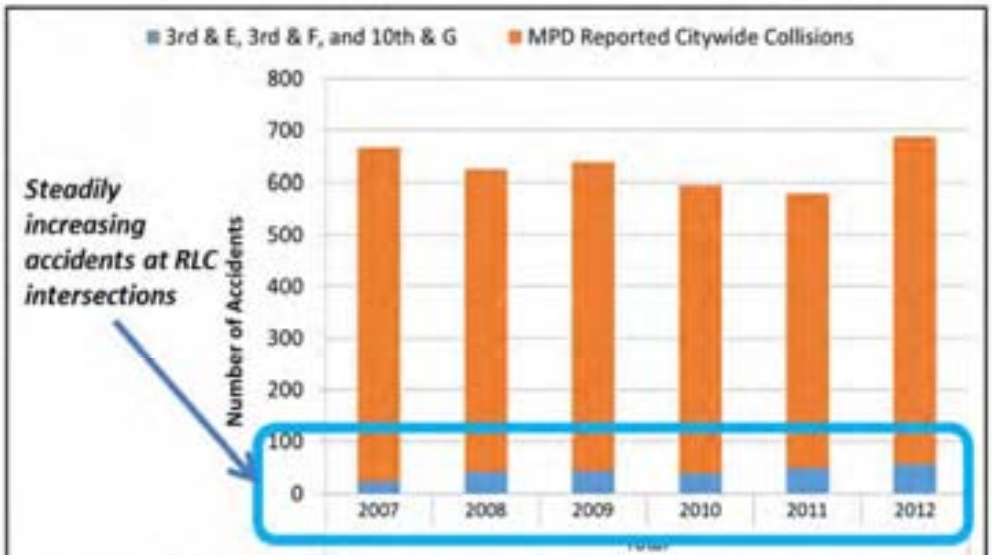
	Fatal	Injury	Non-Injury	Total
2007	0	3	20	23
2008	0	6	35	41
2009	0	3	40	43
2010	0	6	33	39
2011	0	2	46	48
2012	0	4	53	57

(b)



	2007	2008	2009	2010	2011	2012
10th and G Street	6	14	12	15	18	16
3rd and E Street	11	22	23	18	24	28
3rd and F Street	6	5	8	6	6	13

Figure 11. Total citywide collisions in Marysville (red bars) and collisions at RLC intersections 3rd & E, 3rd & F, and 10th & G (blue bars) for years 2007 – 2012. During this time, accidents at RLC intersections (blue bars) account for an increasing percent of total accidents (red bars) in the City of Marysville.



	2007	2008	2009	2010	2011	2012
MPD Reported Citywide Collisions	643	583	595	557	532	630
3rd & E, 3rd & F, and 10th & G	23	41	43	39	48	57
% of MPD citywide collisions accounted for by collisions at 3 RLC intersections	3.6	7.0	7.2	7.0	9.0	9.0

According to data provided by the City of Marysville, 9th & E had a total of 10 non-injury accidents during the 12 months preceding RLC installation (June 2010 through June 2011), a total of 12 non-injury accidents during 2011, 22 non-injury accidents in 2012, and 11 non-injury accidents through October 2013 when data were submitted for this report.

No information was provided regarding the types of accidents or whether they occurred within the intersection.

Summary: ***It is unclear whether collision frequency for 10th & Ramirez would meet criteria established by Caltrans for installation of RLCs on State highways (see discussion for RLC encroachment permit for 12th & B, above).***

The data provided do not support a decrease in accident frequency at 9th & E following RLC installation. Analysis of types of accidents might be instructive in determining whether broadside accidents were reduced or rear-end collisions were increased.

4) Right-turn-on-red violations: Data were provided by the City of Marysville that indicated whether citations were issued for right-turn-on-red violations or other violations. This is important for two reasons.

1) RLCs have not been shown to be effective at increasing safety for right-turn-on-red violations.
2) Relatively simple and effective countermeasures would include eliminating the need to stop on right turns through use of a) a right-turn merge lane as found when entering Marysville from Yuba City on 5th Street or b) a right-turn signal, where the yellow signal interval is the same as that for the straight through yellow signal interval.

Data provided were incomplete. Data were provided for all approaches for years 2005-2013. Data included date of violation, a YES/NO field indicating whether violation was for a right-turn-on-red, and a YES/NO field indicating whether a Courtesy Notice was issued or whether a citation was issued. However, the right-turn-on-red data field was not completed for most entries from 2005-2010. The Courtesy Notice/citation field was also intermittently blank. Therefore the following analyses and discussion only reflect citations where relevant data were provided.

Figure 12a shows percent of violations issued for right-turn-on-red versus other violations for each RLC approach. **Figure 12b** shows number of Courtesy Notices versus Citations for each RLC approach, separated by type of violation (right-turn-on-red or not).

Violations at both 10th & Ramirez and 3rd & F Streets are almost exclusively for right-turn-on-red violations.

There are approximately as many violations for right-turn-on-red violations at 3rd & E and at 9th & E (northbound) as for all other red light violations combined (i.e., both left-turn violations and straight-through violations).
Only the 10th & G and the 9th & E (Southbound) approaches show violations primarily for non-right-turn-on-red violations.

***Summary*: Right-turn-on-red violations at four of seven approaches suggest that engineering countermeasures should be applied to minimize violations for right turns.**

5. Examination of contribution of collisions at RLC and signaled intersections to overall citywide collision data. The Grand Jury considered whether signaled intersections without RLCs showed the same pattern of increased percentage of citywide collisions seen in RLC intersections.

Figure 12a. For each RLC approach, percent of right-turn-on-red violations (red bars) and other violations (blue bars). Violations at 10th and Ramirez and 3rd and F Streets are primarily right-turn-on-red violations. There are approximately the same number of right-turn-on-red violations as other violations at 3rd and E and at 9th and E (northbound).

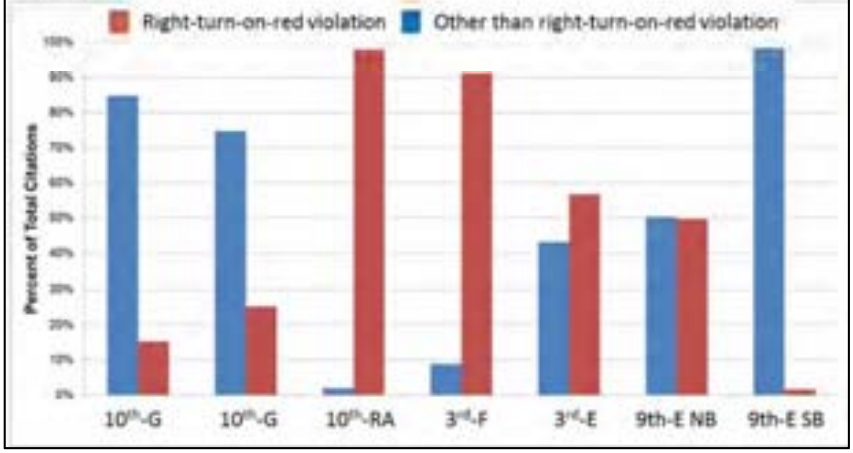
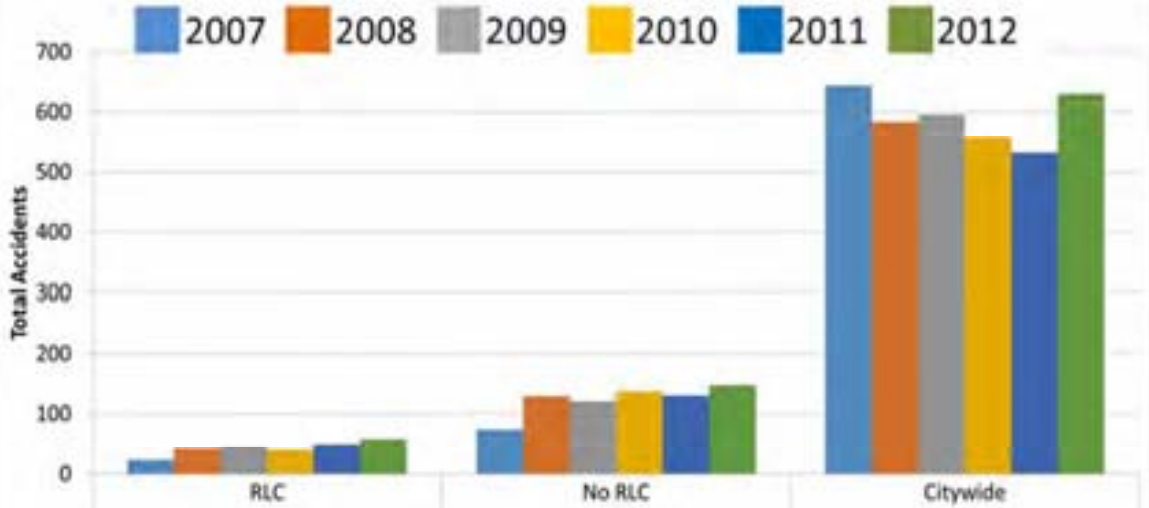


Figure 13. Total accidents occurring at all red light camera intersections (RLC), signaled intersections without a RLC, and citywide for the years 2007-1012. There is a steady increase in accidents at RLC intersections. This is not evident for non-RLC signaled intersections. Overall signaled intersections account for a relatively small percent of accidents citywide.



	Total		
2007	23	73	643
2008	41	129	583
2009	43	120	595
2010	39	137	557
2011	48	130	532
2012	57	147	630

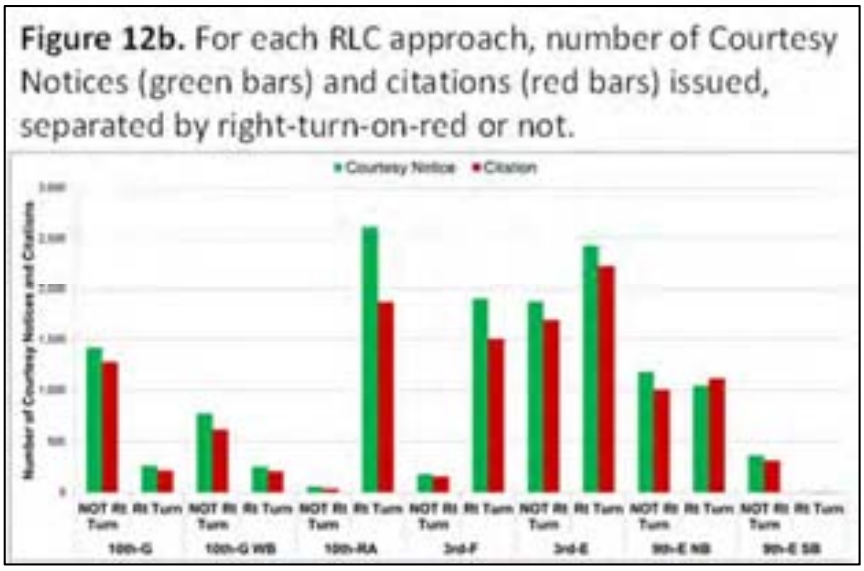


Figure 13 shows total accidents occurring at RLC intersections 10th & G, 3rd & E, 3rd & F Streets, signaled intersections without a RLC, and citywide for the years 2007-1012. Although there is a steady increase in accidents at these RLC intersections, this is not evident for non-RLC signaled intersections. Overall signaled intersections account for a relatively small percent of accidents citywide.

***Summary*: Because a different pattern of accident occurrence over time is shown for RLC versus non-RLC signaled intersections, the use of citywide collision data to justify safety effects of RLC usage may not be appropriate.**

Findings - SAFETY

The 2013-2014 Yuba County Grand Jury finds that:

F1. Accident frequencies have not been the sole consideration for RLC usage.

F2. 2003 accident data used to justify initial RLC installations cannot be substantiated by City of Marysville due to data purging.

F3. 2003 accident data used to justify initial RLC installation conflict with TASAS collision data.

F4. TASAS collision data did not justify RLC installation at 10th & G or at 3rd & E.

F5. TASAS collision data did not justify City of Marysville's request for RLC installation at 12th & B.

F6. TASAS collision data did justify City of Marysville's request for RLC installation at 9th & E.

F7. The City of Marysville data do not justify RLC installation at 3rd & F or at 10th & Ramirez.

F8. Statements by the City of Marysville officials to support claims of effects of RLCs on safety sometimes refer to citywide collision data and sometimes refer to collisions at RLC intersections.

F9. Statements by the City of Marysville officials to support claims of effects of RLCs on safety cite data that cannot be substantiated.

F10. Statements by the City of Marysville officials to support claims of effects of RLCs on safety cite conflicting data.

F11. Statements by the City of Marysville officials to support claims of effects of RLCs on safety omit reference to data that do not support the assertion of safety improvement.

F12. During the time period 2007-2012, number of accidents at RLC intersections (the City of Marysville data) account for an increasing percentage of total accidents in Marysville.

F13. During the time period 2007-2012, number of accidents at non-RLC intersections (the City of Marysville data) account for a stable percentage of total accidents in Marysville.

F14. Number of accidents at RLC intersections account for a relatively small percentage of total accidents in Marysville, so that use of citywide collision data to justify safety effects of RLC usage appears to be inappropriate.

F15. During the time period 2007-2012, there were no fatal accidents at RLC intersections.

F16. There are broad discrepancies between the City of Marysville collision data and the State of California collision data available through TASAS.

F17. RLCs at 3rd & F and at 10th & Ramirez result in citations almost exclusively for right-turn-on-red violations, and safety would be better served by engineering countermeasures.

F18. RLCs at 3rd & E and at 9th & E result in approximately half of citations for right-turn-on-red violations, and safety would be better served by engineering countermeasures.

Recommendations - SAFETY

The 2013-2014 Yuba County Grand Jury recommends that the City of Marysville:

R1. Remove the RLC at 3rd & F and utilize engineering countermeasures to minimize right turn violations.

R2. Remove the RLC at 10th & Ramirez and utilize engineering countermeasures to minimize right-turn-on-red violations.

R3. Utilize engineering countermeasures to minimize right-turn-on-red violations at 3rd & E and 9th & E.

R4. Post a speed limit sign approaching the RLC at 10th & Ramirez Streets intersection.

R5. Ensure that any traffic signal right-turn arrows or left-turn arrows utilized at RLC approaches have the same yellow light interval as straight-through yellow light intervals.

R6. Increase yellow light intervals at all RLC intersections to at least one second longer than legally required minimums in order to minimize violations.

R7. Post complete statistical data for RLC approaches on the City of Marysville Police Department webpage. These data should include past and current accident statistics that are consistent with TASAS, including data for types of accidents. These data should also include number of citations issued for right-turn violations, left-turn violations, and straight-through violations.

R8. Not install further RLCs without providing complete collision data for the intersection in question. These data should include traffic volumes, types of collision, whether collisions were in the intersection or not, and any other material to provide information consistent with TASAS.

R9. Not install further RLCs without providing complete information about engineering countermeasures that have been used.

R10. Utilize volunteers to assist with the submission of all collision data on state highways within the City of Marysville to SWITRS, so that state databases accurately reflect accident volumes within the City of Marysville.

R11. Ensure that SWITRS and the City of Marysville data, particularly for injury and fatal collisions, are concordant.

Commendations - SAFETY

C1. Caltrans provided a wide array of critical information for this report. This included information pertaining to collision recording and history within the City of Marysville, traffic signal operation, and encroachment permit background data. The Grand Jury greatly appreciates the time and effort provided by many individuals at Caltrans.

C2. Caltrans has consistently questioned the need for RLC installation based on collision histories. This has included thoughtful and complete evaluation of TASAS data for relevant intersections. The Grand Jury would like to recognize and appreciate their dedication to safety.

Request for Responses:

Pursuant to Penal Code (PC) section 933.05, the Grand Jury requests responses as follows:

From the following governing bodies: Responses to all findings and recommendations.

- Marysville Senior Accountant
- Marysville City Manager
- Marysville City Council
- Marysville Chief of Police

The governing bodies indicated above should be aware that the comment or response of the governing body must be conducted in accordance with Penal Code section 933(c) and subject to the notice, agenda and open meeting requirements of the Brown Act.

2) Red Light Camera Accounting Practices

Background

California Government Code Section 30200 requires the State Controller to prescribe uniform accounting procedures for counties. These accounting principles are designed to ensure conformity with Generally Accepted Accounting Principles (GAAP) and Generally Accepted Government Auditing Standards (GAGAS). As stated in the March 2013 Accounting Standards and Principles for Counties, "Where legal requirements conflict with GAAP, the basic financial statements should be prepared in conformity with GAAP."

These guidelines are intended to provide uniform accounting principles for California counties as well as local governments. A governmental accounting system must make it possible "To present fairly and with full disclosure the financial position and results of financial operations of the governmental unit..."

Discussion - LACK OF TRANSPARENCY IN ACCOUNTING PRACTICES:

This element of transparency is lacking for revenues and expenses associated with Redflex operations in the City of Marysville. Specifically, review of the publically available city budget will not provide insight into how Redflex-associated monies are handled.

Revenues from RLC violations appear in the account "General Fund Police - Vehicle Code Fines" (Fund 101, Account 212), co-mingled with funds for any other vehicle code fines (see below).

Monthly payments to Redflex are from the account "General Fund Traffic Safety Outside Service" and "General Fund Traffic Safety Outside Services - Signal Maintenance" (Accounts 661 and 665 respectively).

Discussion - CONTRACT VIOLATIONS - ACCOUNTING REQUIREMENTS:

In addition to lacking the required transparency, the city accounting practices are in violation of the contract with Redflex. According to the contract dated February 15, 2011, Exhibit "D", Compensation and Pricing, Item #10, "Customer to open a special revenue account and payments to Redflex will come only from the available balance in that account up to the amount currently due, including any unpaid prior invoice amounts."

Special revenue accounts are required to account for the use of revenue earmarked by law for a particular purpose. According to a Marysville city official the use of a special revenue account for Redflex-related revenues would be illegal. Therefore this provision of the contract might be unenforceable.

Monies for citations resulting from RLC violations are paid to the City of Marysville from the Yuba County Superior Court. Payments include RLC violation revenues, as well as revenues for any other City of Marysville vehicle code violations.

The entire amount tendered each month is credited to a single account "General Fund Police - Vehicle Code Fines." According to statements made by a Marysville official to Grand Jurors, it is not possible to identify specific amounts collected for RLC violations.

Further, it is not possible to identify the number of citations issued for RLC violations and simply multiply that by $152 (the City of Marysville portion of the RLC violation fine). A partial list of causes includes: some violations have reduced penalties assigned in court, some violations have reduced penalties due to being right-turn violations or other reasons, and some violations are paid on an installment basis. Therefore the City of Marysville cannot identify revenues specifically resulting from RLC violations.

Finally, although the contract stipulates that payments to Redflex will come only from the available balance in that account, monthly Redflex charges are shown as debits to the account "General Fund Outside Service Traffic Safety."

Discussion - COST NEUTRALITY:

According to the contract dated February 15, 2011, Exhibit "D", Compensation and Pricing, Item #8, "Payment will only be made by the Customer up to the amount of cash received by the

Customer from the California Superior Court, Yuba County, through collection of red light citations up to the amount currently due" and Item #9, "Cost neutrality is assured to the Customer using this methodology as Customer will never pay Redflex more than the actual cash received."

There are issues with this clause of the contract, as follows:

- California Vehicle Code Section 21455.5 (instituted in 2004) prohibits "pay per ticket" contracts. 21455.5(h) states "A contract [with a red light camera supplier]... may not include... payment... based on the number of citations generated, or as a percentage of the revenue generated..."

- Section 11.14 of the contract states: "COST NEUTRALITY. This provision shall not apply if … (2) the City or Police waives more than 10 percent of valid violations forwarded to the Police for acceptance according to mutually agreed upon business rules." As described above, this may be in violation of CVC 21455.5.

- Section 11.14 of the contract states: "COST NEUTRALITY. This provision shall not apply if … (2) the City or Police waives more than 10 percent of valid violations forwarded to the Police for acceptance according to mutually agreed upon business rules." This also conflicts with section 3.3.5 of the contract which states "REDFLEX HEREBY ACKNOWLEDGES AND AGREES THAT THE DECISION TO ISSUE A CITATION SHALL BE THE SOLE, UNILATERAL AND EXCLUSIVE DECISION OF THE AUTHORIZED EMPLOYEE AND SHALL BE MADE IN SUCH AUTHORIZED EMPLOYEE'S SOLE DISCRETION (A "CITATION DECISION"), AND IN NO EVENT SHALL REDFLEX HAVE THE ABILITY OR AUTHORIZATION TO MAKE A CITATION DECISION."

- Because the cost neutral clause stipulates that Redflex will receive less money if fewer citations are issued, this clause may be in violation of CVC 21455.5.

- Because revenues specifically attributable to RLC violations are, according to city officials, impossible to determine, the cost neutrality clause of the contract may be essentially unenforceable.

RLCs at 3rd & E, 9th & E, and 10th & G have been disabled due to Caltrans construction. Therefore at the time this report was prepared, revenue from RLCs is not sufficient to pay the monthly Redflex amount due (see sample invoice **Figure 2**). The deficit is illustrated by the months June - August 2013 in **Figure 4**.

The City of Marysville contacted Redflex to request execution of the cost neutral clause and obtain refunds for those months. The response from Redflex stated that:

> *"Our interpretation of cost neutrality centers on revenue for the life of the contract, commencing from 02/15/2011. In other words we will require a full accounting from Feb 2011 to present to determine the revenue levels acquired from the RLP. If the total of the revenues from the beginning fall short then you may indeed avail yourself of the protection defined in the business assumptions.*
>
> *Your program has been in operation for slightly over 32 months (under the current contract). That would represent $1,327,744.00 in invoicing. If the total collected by your agency during the aforementioned time period has not met that goal you may begin to avail yourself of the cost neutrality referred to in the contract. Again, RTS would require an accounting from Marysville and the court to make that determination."*

Therefore the Redflex description of requirements to execute the cost neutral clause does not reflect simple monthly revenue shortfalls. Rather, Redflex requires detailed accounting of revenues from the beginning of the contract to determine whether the cost neutrality clause can be utilized by the City of Marysville.

Again, because revenues specifically attributable to RLC violations are impossible to determine, the cost neutrality clause of the contract may be essentially unenforceable.

Discussion - CONSTRUCTION EFFECTS ON REVENUE:

The effect of State Highway construction on revenue is also addressed in conflicting fashion elsewhere in the current contract with Redflex. Exhibit D Business Assumption 17 states that "If a system is deactivated at the Customer's request due to roadway construction, the monthly fee will continue."

Business Assumption 17 conflicts with section 3.9 of the contract: "ROAD REPAIRS AND CONSTRUCTION PROJECTS. The term of an installed camera shall be temporarily suspended as a result of any Customer-authorized road repairs, street improvements or stop work order that interrupts, impedes, obstructs or interferes with the successful performance of the installed camera for a period of fourteen (14) or more calendar days."

Discussion - ACCOUNTING FOR AUDIT FINDINGS:

There are additional questionable accounting practices with respect to Redflex revenues and expenditures.

In 2011, a Yuba County State Controller's Traffic Fine Audit discovered that the Yuba County Superior Court miscalculated the court revenue distributions. Those miscalculations resulted in over-remittance from the County to the City of Marysville of approximately $222,000 in traffic fines. According to the terms of the repayment agreement between the County of Yuba and the City of Marysville, Marysville would make an annual payment of $22,238.60 to Yuba County for ten years, payable in monthly installments from Marysville's monthly fine distribution.

Subsequently, in June 2013, a California Supreme Court ruling pertaining to property taxes resulted in Yuba County owing the City of Marysville $419,664. An agreement was reached wherein the amount still owed by Marysville to Yuba County for Traffic Fines would be used to offset the amount owed to the City of Marysville for the Property Tax Administration Fees. The net amount then owed to the City of Marysville was $234,342.32.

At the time this agreement was reached, the outstanding balance owed to the County for traffic fines was $185,321.68.

The City of Marysville did not account for this outstanding balance by debiting the revenue account "General Fund Police - Vehicle Code Fines" for the amount of the outstanding balance. Although this was an auditor-approved accounting method, it appears to suggest that Vehicle Code Fine revenues have been overstated by a total of $185,321.68.

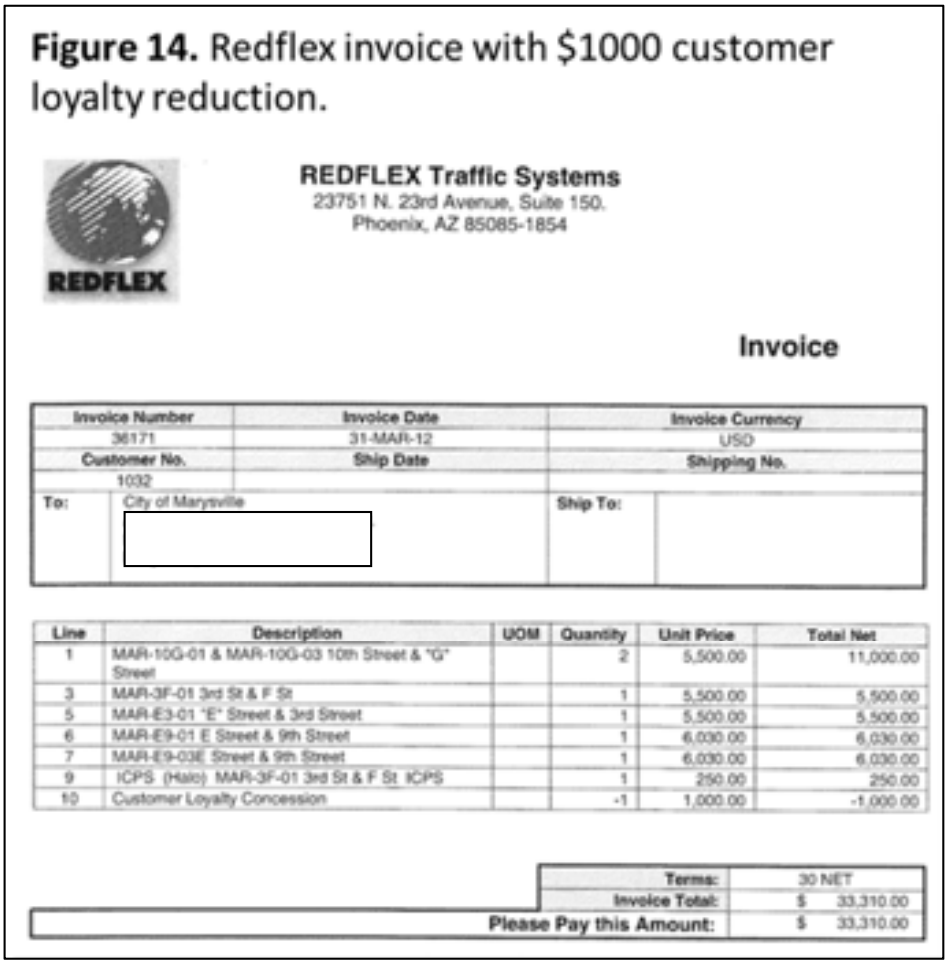
It is unclear whether such an overstatement would impact further negotiations with Redflex regarding activation of the cost-neutral clause.

Discussion - GIFTS FROM REDFLEX:

According to the contract dated February 15, 2011, Exhibit "D", Compensation and Pricing, Item #13, "On March first of each year of this agreement the customer will receive a $1000 customer loyalty from Redflex. This is payment to be applied once annually and shall not exceed $1000 per calendar year."

This amount was deducted from the Redflex invoice on March 1, 2012 (**Figure 14**). No reduction was provided in 2013 (**Figure 2**).

Figure 14. Redflex invoice with $1000 customer loyalty reduction.



REDFLEX Traffic Systems
23751 N. 23rd Avenue, Suite 150,
Phoenix, AZ 85085-1854

REDFLEX

Invoice

Invoice Number	Invoice Date	Invoice Currency
36171	31-MAR-12	USD
Customer No.	**Ship Date**	**Shipping No.**
1032		
To: City of Marysville		**Ship To:**

Line	Description	UOM	Quantity	Unit Price	Total Net
1	MAR-10G-01 & MAR-10G-03 10th Street & "G" Street		2	5,500.00	11,000.00
3	MAR-3F-01 3rd St & F St		1	5,500.00	5,500.00
5	MAR-E3-01 "E" Street & 3rd Street		1	5,500.00	5,500.00
6	MAR-E9-01 E Street & 9th Street		1	6,030.00	6,030.00
7	MAR-E9-03E Street & 9th Street		1	6,030.00	6,030.00
9	ICPS (Halo) MAR-3F-01 3rd St & F St ICPS		1	250.00	250.00
10	Customer Loyalty Concession		-1	1,000.00	-1,000.00

Terms:	30 NET
Invoice Total:	$ 33,310.00
Please Pay this Amount:	$ 33,310.00

Therefore it is unclear whether this gift was improper as provided in 2012, or whether this gift should have also been provided in 2013 per terms of the contract.

Findings - ACCOUNTING PRACTICES

The 2013-2014 Yuba County Grand Jury finds that:

F1. The City of Marysville demonstrates a lack of transparency in accounting practices where revenues and expenses for RLC-related monies are concerned.

F2. The current contract with Redflex contains a cost-neutral clause, which may be questionable under CVC 21455.5.

F3. It appears that Redflex's interpretation of the cost-neutral clause is different than the City of Marysville's interpretation of the cost-neutral clause.

F4. The contract appears to contain multiple conflicting statements regarding cost neutrality and effect of roadway construction on revenues.

F5. The contract appears to contain conflicting statements regarding effect of citation decision making on cost neutrality.

F6. Accounting methods to resolve audit issues appear to leave prior year traffic fine revenues overstated. This may impact the ability to execute the cost-neutral clause of the Redflex contract, according to Redflex's interpretation of this clause.

F7. Because the City of Marysville is unable to specifically identify RLC-related revenues, it may be difficult for Marysville to execute the no-cost clause within the Redflex contract.

F8. The City of Marysville appears to be in violation of the contract with Redflex requiring a specific account for Redflex revenues and expenses.

F9. The current Redflex contract includes an annual gift provision. This gift was provided by Redflex to City of Marysville in 2012 but not in 2013.

Recommendations - ACCOUNTING PRACTICES

The 2013-2014 Yuba County Grand Jury recommends that the City of Marysville:

R1. Provide clear naming of accounts for RLC revenues and expenses in the annual budget.

R2. Post monthly revenues and expenses for RLCs on the City of Marysville Police Department webpage for RLC enforcement.

R3. Obtain legal clarification regarding legality and use of the cost-neutral clause of the current contract.

R4. Obtain legal clarification to determine whether the current contract should have been approved given the cost-neutral clause, the gift provision, the requirement of the special account, and the vague interpretation possible for financial resolution when cameras are disabled due to State Highway construction.

R5. Obtain legal clarification to determine whether the annual gift provision in the current contract is legal. If it is, then it should be provided annually as stipulated. If it is not, then any gifts received should be returned.

R6. Consider termination of business agreements with Redflex either immediately or upon completion of the current contract, and utilize more advanced engineering countermeasures to enhance traffic safety within the City of Marysville.

Request for Responses:

Pursuant to Penal Code (PC) section 933.05, the Grand Jury requests responses as follows:

From the following governing bodies: Responses to all findings and recommendations.

- Marysville Senior Accountant
- Marysville City Manager
- Marysville City Council
- Marysville Chief of Police

The governing bodies indicated above should be aware that the comment or response of the governing body must be conducted in accordance with Penal Code section 933(c) and subject to the notice, agenda and open meeting requirements of the Brown Act.

References

Erke, A. (2009). Red light for red-light cameras? A meta-analysis of the effects of red-light cameras on crashes. *Accident Analysis and Prevention, 41*(5), 897-905. doi: DOI 10.1016/j.aap.2008.08.011

Høye, A. (2013). Still red light for red light cameras? An update. *Accident Analysis & Prevention, 55*(0), 77-89. doi: http://dx.doi.org/10.1016/j.aap.2013.02.017

Hu, W., McCartt, A. T., & Teoh, E. R. (2011). Effects of red light camera enforcement on fatal crashes in large US cities. *Journal of Safety Research, 42*, 277-282.

Langland-Orban, B., Pracht, E. E., & Large, J. T. (2012). Counterpoint: The Insurance Institute for Highway Safety study actually found cities using red light cameras had higher red light running fatality rates. *Florida Public Health Review, 9*, 1-8.

Lund, A. K., Kyrychenko, S. Y., & Retting, R. A. (2009). Caution: A comment on Alena Erke's red light for red-light cameras? A meta-analysis of the effects of red-light cameras on crashes. *Accident Analysis & Prevention, 41*(4), 895-896. doi: http://dx.doi.org/10.1016/j.aap.2009.03.018

Porter, B. E., Johnson, K. L., & Bland, J. F. (2013). Turning off the cameras: Red light running characteristics and rates after photo enforcement legislation expired. *Accident Analysis & Prevention, 50*(0), 1104-1111. doi: http://dx.doi.org/10.1016/j.aap.2012.08.017

Retting, R. A., Ferguson, S. A., & Farmer, C. M. (2008). Reducing red light running through longer yellow signal timing and red light camera enforcement: Results of a field investigation. *Accident Analysis & Prevention, 40*(1), 327-333. doi: http://dx.doi.org/10.1016/j.aap.2007.06.011

Retting, R. A., & Greene, M. A. (1997). Influence of traffic signal timing on red-light running and potential vehicle conflicts at urban intersections. *Transportation Research Record, August*.

Sharma, A., Vanajakshi, L., Girish, V., & Harshitha, M. S. (2012). Impact of Signal Timing Information on Safety and Efficiency of Signalized Intersections. *Journal of Transportation Engineering-Asce, 138*(4), 467-478. doi: 10.1061/(asce)te.1943-5436.0000343

Yang, Q., Han, L. D., & Cherry, C. R. (2013). Some measures for sustaining red-light camera programs and their negative impacts. *Transport Policy, 29*, 192-198. doi: 10.1016/j.tranpol.2013.06.006

Appendix RLC2. Collision data for intersections with **red light cameras**. *Data purged by City of Marysville. ◊Information not available from TASAS. ♦Information not provided by City of Marysville. **Intersection not monitored by Caltrans, therefore data not available through TASAS. Highlights indicate data discrepancies.

Intersection	Year	Redflex Contract 2004	Marysville Total	TASAS Total	Marysville Fatalities	TASAS Fatalities	Marysville Injuries	TASAS Injuries	Marysville Non-Injury	TASAS Non-Injury
3rd&E	2003	24	*	6	0	0	*	5	*	1
	2004		*	1	0	0	*	1	*	0
	2005		*	6	0	0	*	6	*	0
	2006		*	1	0	0	*	0	*	1
	2007		11	1	0	0	1	1	10	0
	2008		22	8	0	0	5	6	17	2
	2009		23	3	0	0	2	2	21	1
	2010		18	3	0	0	3	1	15	2
	2011		24	0	0	0	0	0	24	0
	2012		28	◊	0	◊	0	◊	28	◊
	2013		20	◊	0	◊	4	◊	16	◊
10th&G	2003	22	*	3	0	0	*	3	*	0
	2004		*	2	0	0	*	2	*	0
	2005		*	1	0	0	*	1	*	0
	2006		*	1	0	0	*	1	*	0
	2007		6	0	0	0	0	0	6	0
	2008		14	0	0	0	1	0	13	0
	2009		12	0	0	0	0	0	12	0
	2010		15	2	0	0	2	2	13	0
	2011		18	2	0	0	2	1	16	1
	2012		16	◊	0	◊	3	◊	13	◊
	2013		11	◊	1	◊	2	◊	8	◊
9th&E	2003	24	*	7	0	0	*	3	*	4
	2004		*	2	0	0	*	2	*	0
	2005		*	2	0	0	*	2	*	0
	2006		*	0	0	0	*	0	*	0
	2007		♦	1	0	0	♦	1	♦	0
	2008		♦	3	0	0	♦	2	♦	1
	2009		♦	2	0	0	♦	2	♦	0
	2010		♦	0	0	0	♦	0	♦	0
	2011		12	0	0	0	0	0	12	0
	2012		22	◊	0	◊	0	◊	22	◊
	2013		11	◊	0	◊	0	◊	11	◊
3rd&F	2003	9	*	**	0	**	*	**	*	**
	2004		*	**	0	**	*	**	*	**
	2005		*	**	0	**	*	**	*	**
	2006		*	**	0	**	*	**	*	**
	2007		6	**	0	**	2	**	4	**
	2008		5	**	0	**	0	**	5	**
	2009		8	**	0	**	1	**	7	**
	2010		6	**	0	**	1	**	5	**
	2011		6	**	0	**	0	**	6	**
	2012		13	**	0	**	1	**	12	**
	2013		9	**	0	**	0	**	9	**
10th&Ramirez	2003	n.s.	*	**	0	**	*	**	*	**
	2004		*	**	0	**	*	**	*	**
	2005		*	**	0	**	*	**	*	**
	2006		*	**	0	**	*	**	*	**
	2007		*	**	0	**	*	**	*	**
	2008		♦	**	0	**	♦	**	♦	**
	2009		♦	**	0	**	♦	**	♦	**
	2010		♦	**	0	**	♦	**	♦	**
	2011		1	**	0	**	0	**	1	**
	2012		2	**	0	**	1	**	1	**
	2013		0	**	0	**	0	**	0	**

Appendix RLC3. Collision data for intersections without red light cameras. *Data purged by City of Marysville. ◊Information not available from TASAS. Highlights indicate data discrepancies.

Intersection	Year	Redflex Contract 2004	Marysville Total	TASAS Total	Marysville Fatalities	TASAS Fatalities	Marysville Injuries	TASAS Injuries	Marysville Non-Injury	TASAS Non-Injury
9th&B	2003	11	*	2	0	0	*	1	*	1
	2004		*	1	0	0	*	1	*	0
	2005		*	0	0	0	*	0	*	0
	2006		*	0	0	0	*	0	*	0
	2007		10	0	0	0	0	0	10	0
	2008		11	1	0	0	2	1	9	0
	2009		10	1	1	0	0	1	9	0
	2010		15	3	0	0	2	2	12	1
	2011		7	1	0	0	0	0	7	1
	2012		6	◊	0	◊	0	◊	6	◊
	2013		5	◊	0	◊	0	◊	5	◊
10th&B	2003	n.s.	*	3	0	0	*	1	*	2
	2004		*	0	0	0	*	0	*	0
	2005		*	1	0	0	*	1	*	0
	2006		*	0	0	0	*	0	*	0
	2007		3	2	0	0	1	2	2	0
	2008		8	0	0	0	0	0	8	0
	2009		1	0	0	0	0	0	1	0
	2010		6	0	0	0	0	0	6	0
	2011		9	1	0	0	1	1	8	0
	2012		8	◊	0	◊	0	◊	8	◊
	2013		3	◊	0	◊	0	◊	3	◊
14th&B	2003	7	*	4	0	0	*	2	*	2
	2004		*	2	0	0	*	2	*	0
	2005		*	0	0	0	*	0	*	0
	2006		*	0	0	0	*	0	*	0
	2007		3	0	0	0	0	0	3	0
	2008		13	0	0	0	0	0	13	0
	2009		9	1	0	0	0	0	9	1
	2010		7	0	0	0	0	0	7	0
	2011		7	0	0	0	0	0	7	0
	2012		5	◊	0	◊	1	◊	4	◊
	2013		10	◊	0	◊	0	◊	10	◊
12&Ramirez	2003	1	*	2	0	0	*	2	*	0
	2004		*	0	0	0	*	0	*	0
	2005		*	1	0	0	*	1	*	0
	2006		*	0	0	0	*	0	*	0
	2007		5	1	1	0	3	1	1	0
	2008		5	0	0	0	0	0	5	0
	2009		6	1	0	0	1	1	5	0
	2010		10	0	0	0	1	0	9	0
	2011		6	2	0	0	1	1	5	1
	2012		8	◊	0	◊	1	◊	7	◊
	2013		5	◊	0	◊	1	◊	4	◊
12th&B	2003	20	*	4	1	0	*	4	*	0
	2004		*	6	1	0	*	5	*	1
	2005		*	0	0	0	*	0	*	0
	2006		*	2	1	0	*	2	*	0
	2007		8	3	0	0	2	2	6	1
	2008		13	2	1	0	2	2	11	0
	2009		12	0	0	0	1	0	11	0
	2010		15	2	0	0	1	1	14	1
	2011		10	1	0	0	1	0	9	1
	2012		24	◊	0	◊	1	◊	23	◊
	2013		21	◊	0	◊	1	◊	20	◊

Appendix RLC3 (continued).

Intersection	Year	Redflex Contract 2004	Marysville Total	TASAS Total	Marysville Fatalities	TASAS Fatalities	Marysville Injuries	TASAS Injuries	Marysville Non-Injury	TASAS Non-Injury
4th&E	2003	10	*	4	0	0	*	3	*	1
	2004		*	2	0	0	*	2	*	0
	2005		*	0	0	0	*	0	*	0
	2006		*	0	0	0	*	0	*	0
	2007		1	0	0	0	0	0	1	0
	2008		5	1	1	1	0	0	4	0
	2009		4	0	0	0	1	0	3	0
	2010		8	1	0	0	1	1	7	0
	2011		14	0	0	0	0	0	14	0
	2012		9	◊	0	◊	1	◊	8	◊
	2013		5	◊	0	◊	0	◊	5	◊
5th&E	2003	15	*	2	0	0	*	1	*	1
	2004		*	2	0	0	*	1	*	1
	2005		*	1	0	0	*	0	*	1
	2006		*	0	0	0	*	0	*	0
	2007		10	1	1	0	1	1	8	0
	2008		15	0	0	0	0	0	15	0
	2009		16	3	0	0	3	3	13	0
	2010		11	0	0	0	0	0	11	0
	2011		10	0	0	0	0	0	10	0
	2012		13	◊	0	◊	2	◊	11	◊
	2013		5	◊	0	◊	0	◊	5	◊
6th&E	2003	8	*	2	0	0	*	1	*	1
	2004		*	1	0	0	*	1	*	0
	2005		*	0	0	0	*	0	*	0
	2006		*	1	0	0	*	1	*	0
	2007		3	1	0	1	0	0	3	0
	2008		3	0	0	0	0	0	3	0
	2009		10	1	0	0	1	1	9	0
	2010		2	0	0	0	0	0	2	0
	2011		4	2	0	0	1	0	3	2
	2012		9	◊	0	◊	1	◊	8	◊
	2013		11	◊	0	◊	1	◊	10	◊
7th&E	2003	10	*	1	0	0	*	0	*	1
	2004		*	2	0	0	*	2	*	0
	2005		*	2	0	0	*	2	*	0
	2006		*	0	0	0	*	0	*	0
	2007		4	0	0	0	0	0	4	0
	2008		8	2	0	0	2	2	6	0
	2009		6	0	0	0	0	0	6	0
	2010		9	2	0	0	2	2	7	0
	2011		14	1	0	0	2	0	12	1
	2012		10	◊	0	◊	1	◊	9	◊
	2013		8	◊	0	◊	0	◊	8	◊
8th&E	2003	8	*	2	0	0	*	2	*	0
	2004		*	0	0	0	*	0	*	0
	2005		*	1	0	0	*	1	*	0
	2006		*	1	1	1	*	0	*	0
	2007		6	2	0	0	0	1	6	1
	2008		8	1	0	0	1	1	7	0
	2009		7	0	0	0	0	0	7	0
	2010		9	0	0	0	0	0	9	0
	2011		10	2	0	0	0	1	10	1
	2012		7	◊	0	◊	0	◊	7	◊
	2013		6	◊	0	◊	0	◊	6	◊

Appendix RLC3 (continued).

Intersection	Year	Redflex Contract 2004	Marysville Total	TASAS Total	Marysville Fatalities	TASAS Fatalities	Marysville Injuries	TASAS Injuries	Marysville Non-Injury	TASAS Non-Injury
9th&D	2003	**7**	*	1	0	0	*	1	*	0
	2004		*	1	0	0	*	1	*	0
	2005		*	3	0	0	*	3	*	0
	2006		*	0	0	0	*	0	*	0
	2007		2	1	0	0	0	0	2	1
	2008		10	4	0	0	0	4	10	0
	2009		5	1	0	0	0	1	5	0
	2010		10	1	0	0	0	1	10	0
	2011		10	0	0	0	0	0	10	0
	2012		7	◊	0	◊	0	◊	7	◊
	2013		6	◊	0	◊	0	◊	6	◊
10th&F	2003	14	*	6	0	0	*	6	*	0
	2004		*	5	0	0	*	4	*	1
	2005		*	2	0	0	*	2	*	0
	2006		*	1	1	1	*	0	*	0
	2007		4	2	0	0	1	2	3	0
	2008		7	2	0	0	1	2	6	0
	2009		4	1	0	0	1	1	3	0
	2010		7	1	0	0	1	1	6	0
	2011		10	1	0	0	2	1	8	0
	2012		8	◊	1	◊	0	◊	7	◊
	2013		6	◊	0	◊	0	◊	6	◊
18th&B	2003	n.s.	*	1	0	0	*	1	*	0
	2004		*	0	0	0	*	0	*	0
	2005		*	0	0	0	*	0	*	0
	2006		*	0	0	0	*	0	*	0
	2007		2	0	0	0	0	0	2	0
	2008		3	0	0	0	0	0	3	0
	2009		4	1	0	0	1	1	3	0
	2010		5	0	0	0	0	0	5	0
	2011		5	1	0	0	0	0	5	1
	2012		7	◊	0	◊	0	◊	7	◊
	2013		4	◊	0	◊	1	◊	3	◊
10th&H	2003	16	*	3	0	0	*	3	*	0
	2004		*	6	0	0	*	4	*	2
	2005		*	2	0	0	*	2	*	0
	2006		*	0	0	0	*	0	*	0
	2007		5	2	0	0	3	2	2	0
	2008		11	2	0	0	2	2	9	0
	2009		14	0	0	0	2	0	12	0
	2010		13	3	0	0	2	2	11	1
	2011		7	0	0	0	1	0	6	0
	2012		9	◊	0	◊	0	◊	9	◊
	2013		6	◊	0	◊	1	◊	5	◊

Appendix RLC4. Collision data for non-Caltrans intersections. *Data purged by City of Marysville. ◊Information not available from TASAS. **Intersection not monitored by Caltrans, therefore data not available through TASAS.

Intersection	Year	Redflex Contract 2004	Marysville Total	TASAS Total	Marysville Fatalities	TASAS Fatalities	Marysville Injuries	TASAS Injuries	Marysville Non-Injury	TASAS Non-Injury
5th&H	2003	n.s.	*	**	0	**	*	**	*	**
	2004		*	**	0	**	*	**	*	**
	2005		*	**	0	**	*	**	*	**
	2006		*	**	0	**	*	**	*	**
	2007		2	**	0	**	0	**	2	**
	2008		1	**	0	**	0	**	1	**
	2009		3	**	0	**	1	**	3	**
	2010		4	**	0	**	2	**	2	**
	2011		2	**	0	**	1	**	1	**
	2012		5	**	0	**	0	**	5	**
	2013		5	**	0	**	1	**	4	**
5th&J	2003	11	*	**	0	**	*	**	*	**
	2004		*	**	0	**	*	**	*	**
	2005		*	**	0	**	*	**	*	**
	2006		*	**	0	**	*	**	*	**
	2007		5	**	0	**	0	**	5	**
	2008		8	**	0	**	1	**	7	**
	2009		9	**	0	**	0	**	9	**
	2010		6	**	0	**	1	**	5	**
	2011		5	**	0	**	1	**	4	**
	2012		12	**	0	**	1	**	11	**
	2013		5	**	0	**	1	**	4	**

Appendix RLC1a. Redflex Lobbying 2009-2010. Screenshots from http://cal-access.ss.ca.gov/Campaign/

RESPONSIBLE OFFICER	REGISTRATION DATE	STATUS
AARON ROSENBERG, EXECUTIVE VICE PRESIDENT	12/07/2009	Active

EMPLOYER'S FIRMS		
NAME	START DATE	TERMINATION DATE
GREENBERG TRAURIG, LLP	12/07/2009	
PLATINUM ADVISORS, LLC	01/15/2010	
PLATINUM ADVISORS, LLC	02/15/2009	08/21/2009

As disclosed in quarterly reports filed with the Secretary of State, payments made by an organization to its own in-house lobbyists or to lobbying firms are reported here. Links to legislative bills or state agencies lobbied also are available.

2009-2010 LEGISLATIVE SESSION

LOBBYING PAYMENTS MADE			
SESSION	QUARTER	GENERAL LOBBYING	P.U.C. LOBBYING
2009-2010	8th	$52,625.00	$0.00
2009-2010	7th	$72,431.11	$0.00
2009-2010	6th	$75,475.29	$0.00
2009-2010	5th	$94,102.79	$0.00
2009-2010	4th	$0.00	$0.00
2009-2010	3rd	$15,000.00	$0.00
2009-2010	2nd	$31,250.00	$0.00
2009-2010	1st	$5,000.00	$0.00

BILLS AND AGENCIES LOBBIED		
SESSION	QUARTER	BILLS/AGENCIES LOBBIED (AS FILED)
2009-2010	8th	None
2009-2010	7th	Legislature: AB 987, SB 1362, AB 909, issueing concerning traffic light camera's, Vendor Fees Governor's Office: Budget
2009-2010	6th	California State Legislature: Issues concering redlight cameras, Budget, AB 987, AB 909, SB 1362, Vendor Fees Governor's Office: SB 1362, Vendor Fees, Budget
2009-2010	5th	Legislature & Governor's Office: AB 987, Budget, red light camera issues
2009-2010	4th	California State Legislature: Issues concering traffic light cameras
2009-2010	3rd	Legislature: AB 987
2009-2010	2nd	Legislature: AB 987
2009-2010	1st	None

Appendix RLC1b. Redflex Lobbying 2009-2010 cont. Screenshots from http://cal-access.ss.ca.gov/Campaign/

ELECTRONIC FILINGS	
REPORT OF LOBBYIST EMPLOYER AND REPORT OF LOBBYING COALITION (F635)	
FILING PERIOD: 10/01/2010 - 12/31/2010	FILED ON: 1/31/2011 9:22:59 AM
FILING NUMBER: 1570268	ORIGINAL FILING
REPORT OF LOBBYIST EMPLOYER AND REPORT OF LOBBYING COALITION (F635)	
FILING PERIOD: 07/01/2010 - 09/30/2010	FILED ON: 11/1/2010 2:35:40 PM
FILING NUMBER: 1540696	ORIGINAL FILING
REPORT OF LOBBYIST EMPLOYER AND REPORT OF LOBBYING COALITION (F635)	
FILING PERIOD: 04/01/2010 - 06/30/2010	FILED ON: 7/22/2010 11:52:15 AM
FILING NUMBER: 1502297	ORIGINAL FILING
REPORT OF LOBBYIST EMPLOYER AND REPORT OF LOBBYING COALITION (F635)	
FILING PERIOD: 01/01/2010 - 03/31/2010	FILED ON: 6/16/2010 3:32:20 PM
FILING NUMBER: 1484898	AMENDMENT #1
REPORT OF LOBBYIST EMPLOYER AND REPORT OF LOBBYING COALITION (F635)	
FILING PERIOD: 10/01/2009 - 12/31/2009	FILED ON: 2/1/2010 4:00:38 PM
FILING NUMBER: 1465312	ORIGINAL FILING
REPORT OF LOBBYIST EMPLOYER AND REPORT OF LOBBYING COALITION (F635)	
FILING PERIOD: 07/01/2009 - 09/30/2009	FILED ON: 10/27/2009 9:32:03 AM
FILING NUMBER: 1449972	ORIGINAL FILING
REPORT OF LOBBYIST EMPLOYER AND REPORT OF LOBBYING COALITION (F635)	
FILING PERIOD: 04/01/2009 - 06/30/2009	FILED ON: 7/31/2009 10:55:28 AM
FILING NUMBER: 1437733	ORIGINAL FILING
REPORT OF LOBBYIST EMPLOYER AND REPORT OF LOBBYING COALITION (F635)	
FILING PERIOD: 01/01/2009 - 03/31/2009	FILED ON: 7/21/2009 10:07:18 AM
FILING NUMBER: 1431821	AMENDMENT #1

Appendix RLC1c. Redflex Campaign Contributions 2011-2012. Screenshots from http://cal-access.ss.ca.gov/Campaign/

DATE	PAYEE	CONTEST	POSITION	PAYMENT TYPE	AMOUNT
07/31/2012	MARK DESAULNIER FOR SENATE 2012	STATE SENATOR	SUPPORT	MONETARY	$2,500.00
07/05/2012	FRIENDS OF JIMMY GOMEZ FOR ASSEMBLY	STATE ASSEMBLY PERSON	SUPPORT	MONETARY	$2,000.00
07/31/2012	JEFF MILLER FOR SENATE 2012	STATE SENATOR	SUPPORT	MONETARY	$2,000.00
07/31/2012	BOB WIECKOWSKI FOR ASSEMBLY 2012	STATE ASSEMBLY PERSON	SUPPORT	MONETARY	$2,000.00
07/05/2012	GAINES FOR SENATE 2012, TED	STATE SENATOR	SUPPORT	MONETARY	$2,000.00
04/17/2012	SENATOR WYLAND 2010 OFFICEHOLDER, MARK	STATE SENATOR	SUPPORT	MONETARY	$1,500.00
07/06/2012	BONNIE LOWENTHAL FOR ASSEMBLY 2012	STATE ASSEMBLY PERSON	SUPPORT	MONETARY	$1,500.00
10/04/2012	TROY EDGAR FOR ASSEMBLY 2012	STATE ASSEMBLY PERSON	SUPPORT	MONETARY	$1,000.00
10/22/2012	BATEY FOR ASSEMBLY 2012, BILL	STATE ASSEMBLY PERSON	SUPPORT	MONETARY	$1,000.00
03/09/2012	STEVEN BRADFORD FOR ASSEMBLY 2012	STATE ASSEMBLY PERSON	SUPPORT	MONETARY	$1,000.00
04/17/2012	BRIAN MAIENSCHEIN FOR STATE ASSEMBLY 2012	STATE ASSEMBLY PERSON	SUPPORT	MONETARY	$1,000.00
03/22/2012	BONNIE LOWENTHAL FOR ASSEMBLY 2012	STATE ASSEMBLY PERSON	SUPPORT	MONETARY	$1,000.00
07/05/2012	DR. RICHARD PAN FOR ASSEMBLY 2012	STATE ASSEMBLY PERSON	SUPPORT	MONETARY	$1,000.00
07/31/2012	ROGER DICKINSON FOR ASSEMBLY 2012	STATE ASSEMBLY PERSON	SUPPORT	MONETARY	$1,000.00
10/04/2012	RUDY SALAS FOR ASSEMBLY 2012	STATE ASSEMBLY PERSON	SUPPORT	MONETARY	$1,000.00
10/04/2012	SUSAN TALAMANTES EGGMAN FOR ASSEMBLY 2012	STATE ASSEMBLY PERSON	SUPPORT	MONETARY	$1,000.00
10/22/2012	MIKE STOKER FOR ASSEMBLY 2012	STATE ASSEMBLY PERSON	SUPPORT	MONETARY	$1,000.00
12/26/2012	NORMA TORRES FOR SENATE 2014	STATE SENATOR	SUPPORT	MONETARY	$1,000.00

Appendix RLC1d. Redflex Lobbying 2011-12. Screenshots from http://cal-access.ss.ca.gov/Campaign/.

RESPONSIBLE OFFICER	REGISTRATION DATE	STATUS
ANDREJS BUNKSE, MANAGER, GOVERNMENT AFFAIRS	01/01/2011	Active

EMPLOYER'S FIRMS		
NAME	START DATE	TERMINATION DATE
GREENBERG TRAURIG, LLP	01/01/2011	

As disclosed in quarterly reports filed with the Secretary of State, payments made by an organization to its own in-house lobbyists or to lobbying firms are reported here. Links to legislative bills or state agencies lobbied also are available.

2011-2012 LEGISLATIVE SESSION

LOBBYING PAYMENTS MADE			
SESSION	QUARTER	GENERAL LOBBYING	P.U.C. LOBBYING
2011-2012	8th	$31,694.74	$0.00
2011-2012	7th	$30,000.00	$0.00
2011-2012	6th	$60,307.32	$0.00
2011-2012	5th	$30,000.00	$0.00
2011-2012	4th	$45,000.00	$0.00
2011-2012	3rd	$45,137.83	$0.00
2011-2012	2nd	$45,000.00	$0.00
2011-2012	1st	$45,000.00	$0.00

BILLS AND AGENCIES LOBBIED		
SESSION	QUARTER	BILLS/AGENCIES LOBBIED (AS FILED)
2011-2012	8th	None
2011-2012	7th	California State Legislature: Registration-hold issue, SB 1303; Administrative Office of the Courts: SB 1303; Department of Finance: SB 1303, Governor's Office: SB 1303
2011-2012	6th	California State Legislature: Registration-hold issue, SB 1570, SB 1303, AB 2128; Administrative Office of the Courts: SB 1303
2011-2012	5th	California State Legislature: Registration-hold issue, SB 1330, SB 1570, SB 1303, AB 2128, AB 1657; Administrative Office of the Courts: SB 1303
2011-2012	4th	California State Legislature: SB 29, AB 432; Department of Finance: SB 29; Governor's Office: SB 29
2011-2012	3rd	California State Legislature: SB 29, AB 432; Department of Finance: SB 29; Governor's Office: SB 29
2011-2012	2nd	California State Legislature: SB 29, AB 1008, AB 1311, AB 432, evidence code bill
2011-2012	1st	California State Legislature: SB 29, SB 1362, AB 1008, AB 1311, speed zone enforcement, evidence code bill

Appendix RLC1e. Redflex Lobbying 2011-12 cont. Screenshots from http://cal-access.ss.ca.gov/Campaign/

ELECTRONIC FILINGS	
REPORT OF LOBBYIST EMPLOYER AND REPORT OF LOBBYING COALITION (F635)	
FILING PERIOD: 10/01/2012 - 12/31/2012	FILED ON: 1/29/2013 12:00:18 PM
FILING NUMBER: 1734681	ORIGINAL FILING
REPORT OF LOBBYIST EMPLOYER AND REPORT OF LOBBYING COALITION (F635)	
FILING PERIOD: 07/01/2012 - 09/30/2012	FILED ON: 10/30/2012 11:40:48 AM
FILING NUMBER: 1707318	ORIGINAL FILING
REPORT OF LOBBYIST EMPLOYER AND REPORT OF LOBBYING COALITION (F635)	
FILING PERIOD: 04/01/2012 - 06/30/2012	FILED ON: 7/31/2012 1:46:06 PM
FILING NUMBER: 1679353	ORIGINAL FILING
REPORT OF LOBBYIST EMPLOYER AND REPORT OF LOBBYING COALITION (F635)	
FILING PERIOD: 01/01/2012 - 03/31/2012	FILED ON: 4/27/2012 2:38:23 PM
FILING NUMBER: 1656026	ORIGINAL FILING
REPORT OF LOBBYIST EMPLOYER AND REPORT OF LOBBYING COALITION (F635)	
FILING PERIOD: 10/01/2011 - 12/31/2011	FILED ON: 1/30/2012 12:16:41 PM
FILING NUMBER: 1634217	ORIGINAL FILING
REPORT OF LOBBYIST EMPLOYER AND REPORT OF LOBBYING COALITION (F635)	
FILING PERIOD: 07/01/2011 - 09/30/2011	FILED ON: 10/31/2011 1:10:38 PM
FILING NUMBER: 1622457	ORIGINAL FILING
REPORT OF LOBBYIST EMPLOYER AND REPORT OF LOBBYING COALITION (F635)	
FILING PERIOD: 04/01/2011 - 06/30/2011	FILED ON: 8/1/2011 2:18:04 PM
FILING NUMBER: 1608452	ORIGINAL FILING
REPORT OF LOBBYIST EMPLOYER AND REPORT OF LOBBYING COALITION (F635)	
FILING PERIOD: 01/01/2011 - 03/31/2011	FILED ON: 8/1/2011 1:55:25 PM
FILING NUMBER: 1608397	ORIGINAL FILING

Appendix RLC1f. Redflex Lobbying Activity 2013-2014. Screenshots from http://cal-access.ss.ca.gov/Campaign/

RESPONSIBLE OFFICER	REGISTRATION DATE	STATUS
TAMARA DIETRICH, DIRECTOR, GOVERNMENT AFFAIRS	01/01/2013	Active

EMPLOYER'S FIRMS		
NAME	START DATE	TERMINATION DATE
GREENBERG TRAURIG, LLP	01/01/2013	
CARTER, WETCH & ASSOCIATES	01/17/2013	07/09/2013

As disclosed in quarterly reports filed with the Secretary of State, payments made by an organization to its own in-house lobbyists or to lobbying firms are reported here. Links to legislative bills or state agencies lobbied also are available.

2013-2014 LEGISLATIVE SESSION

LOBBYING PAYMENTS MADE			
SESSION	QUARTER	GENERAL LOBBYING	P.U.C. LOBBYING
2013-2014	3rd	$50,000.00	$0.00
2013-2014	2nd	$137,778.15	$0.00
2013-2014	1st	$93,765.71	$0.00

BILLS AND AGENCIES LOBBIED		
SESSION	QUARTER	BILLS/AGENCIES LOBBIED (AS FILED)
2013-2014	3rd	California State Legislature: AB 666, AB 612
2013-2014	2nd	California State Legislature: AB 666, AB 612; Dept. of Finance: AB 612; Administrative Office of the Courts: AB 666
2013-2014	1st	California State Legislature: AB 666; Administrative Office of the Courts: AB 666

To Search For The Full Text Of Bills, Resolutions, And Constitutional Amendments Click Here.

ELECTRONIC FILINGS	
REPORT OF LOBBYIST EMPLOYER AND REPORT OF LOBBYING COALITION (F635)	
FILING PERIOD: 07/01/2013 - 09/30/2013	FILED ON: 10/31/2013 8:31:27 AM
FILING NUMBER: 1800145	ORIGINAL FILING
REPORT OF LOBBYIST EMPLOYER AND REPORT OF LOBBYING COALITION (F635)	
FILING PERIOD: 04/01/2013 - 06/30/2013	FILED ON: 7/26/2013 1:51:42 PM
FILING NUMBER: 1778809	ORIGINAL FILING
REPORT OF LOBBYIST EMPLOYER AND REPORT OF LOBBYING COALITION (F635)	
FILING PERIOD: 01/01/2013 - 03/31/2013	FILED ON: 4/29/2013 1:57:30 PM
FILING NUMBER: 1763599	ORIGINAL FILING
LOBBYING FIRM ACTIVITY AUTHORIZATION (F602)	
FILING PERIOD: 01/18/2013 - 01/18/2013	FILED ON: 1/18/2013 9:56:55 AM
FILING NUMBER: 1728803	ORIGINAL FILING
LOBBYING FIRM ACTIVITY AUTHORIZATION (F602)	
FILING PERIOD: 12/31/2012 - 12/31/2012	FILED ON: 12/31/2012 2:21:54 PM
FILING NUMBER: 1721864	ORIGINAL FILING


YUBA COUNTY
CALIFORNIA