

Red Light Cameras Audit September 2011

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Red Light Cameras Audit



Office of the City Auditor
Patrice Randle, CPA
City Auditor

Project # 11-04

September 30, 2011

Executive Summary

***Both parties have
complied with contract
requirements***

***The program is in
compliance with Texas
Transportation Code
regarding installation
and operations,
reporting, issuing
violations, hearings and
appeals***

***Operating expenses are
appropriate***

***The program has met the
City's goal of reducing
red light crashes and
injuries***

Opportunities for Improvement

- ***Periodic risk
assessment***

As part of the Fiscal Year 2011 Annual Audit Plan, the City Auditor's Office conducted an audit of the City of Arlington's red light camera program. The audit was conducted in accordance with generally accepted government auditing standards, except for peer review. Those standards require that we plan and perform the audit to obtain sufficient, appropriate evidence to provide a reasonable basis for our findings and conclusions based on our audit objectives. We believe that the evidence obtained provides a reasonable basis for our findings and conclusions based on our audit objectives. The objectives of the audit were to determine whether:

- the City of Arlington and American Traffic Solutions, Inc. (ATS) were in compliance with the contract;
- the red light camera program was in compliance with the State of Texas Transportation Code;
- fees were properly received, accounted for and safeguarded;
- controls were in place to adequately protect operations; and,
- the City achieved its objective of reducing the number of red light running crashes and reducing the severity of injuries caused by these crashes.

During this review, the City Auditor's Office noted that both parties were in compliance with the contract. The City was in compliance with the Texas Transportation Code; operating expenses were appropriate; the collection process was effective; and the City had met its program objectives. However, the City has not performed a risk assessment of the vendor's operating system to ensure that it is functioning as intended.

This finding and recommendation is discussed in the Detailed Audit Finding section of this report.

Audit Scope and Methodology

The audit was conducted in accordance with generally accepted government auditing standards, except for peer review. The following methodology was used in completing the audit.

- Interviewed various individuals involved with the program, including the program coordinator, accounting aide, cashier, reviewing officers and administrative hearing officer
- Reviewed contract between ATS and the City of Arlington
- Reviewed Title 7, Subtitle I, Chapter 707 of the State of Texas Transportation Code
- Reviewed Article IX of the Traffic and Motor Vehicles Code of the City of Arlington Code of Ordinances
- Reviewed the City's policies and procedures relating to the program
- Reviewed the process for receipting and depositing of payments, along with the account reconciliation process
- Reviewed the collection process after unpaid notices are sent to a collection agency
- Reviewed expenses associated with the program
- Reviewed numerous videos and camera still shots of violations
- Reviewed Texas Department of Transportation (TxDOT) annual red light camera reports

Background

Article IX of the Traffic and Motor Vehicles Code of the City of Arlington Code of Ordinances established the automated red light enforcement program. This Ordinance is based on Title 7, Subtitle I, Section 707 of the State of Texas Transportation Code. The main purpose of the red light camera program is to reduce the number of serious accidents caused by drivers running red lights. Running a red light is described as "a vehicle that proceeds into an intersection when the traffic control signal for that vehicle's direction of travel is emitting a steady red signal." When this occurs, the vehicle is in violation of City Ordinance, as well as the State of Texas Transportation Code.

When a driver commits a red light enforcement violation, the person is liable for a civil penalty. The automated red light camera system takes two photos of the rear of the vehicle (one showing the vehicle behind the stop line and the other showing the vehicle after it has entered the intersection). The system also retains an approximate 12-second video of the violation. This information is used to verify that a violation has actually occurred.

ATS personnel review all events. Depending on whether a notice can be issued, ATS makes a determination to either accept or reject each event. If the event is rejected (unclear photo, vehicle stopped beyond the designated line, no registered owner information, etc.), the event data (date, time, location, reject reason) is kept and stored by ATS. However, ATS destroys the photo and video after 14 days. If the event is accepted, it is placed in a queue on ATS's secure website for the Arlington Police Department (APD) to review.

Once accepted by ATS, the APD may also accept or reject an event for various reasons. The APD has several “reviewing officers” who review all events that are placed in the queue. If the event is rejected by the reviewing officer, it is then reviewed by a second person (an APD Sergeant) to verify the status. The Sergeant’s review and decision is final. If the Sergeant also rejects the event, it is considered a non-violation and no other action is taken. If an event is accepted by the APD, either on the first or second review, it is placed in the print queue. ATS then prints a Notice of Violation which is sent to the registered owner of the vehicle. ATS is authorized, through the City of Arlington, to access the Texas Department of Motor Vehicles owner registration database for the purpose of issuing notices.

The registered vehicle owner is sent a paper copy which includes a photo of the vehicle’s license plate. On the notice, there is a website link for the person to view the 12-second video of the incident, along with additional photos of the vehicle committing the violation. The notice also contains information as to how the notice may be paid and information concerning what to do if the defendant does not believe that a violation has occurred. The notice of violation is in the amount of \$75.00 which is due within 30 days of the date issued. The person can pay the fee on-line, by mail, by phone or in person at the Ott Cribbs Law Enforcement Center. If the person does not believe that a violation has occurred, he/she may request an administrative hearing. The hearing officer reviews the case with the defendant to discuss the violation. If still found liable, the defendant may then appeal to a Municipal Court Judge for a trial de novo (new trial). If the person fails to pay the fee or does not request, in writing, an administrative hearing to contest the violation within the 30-day period, a late penalty of \$25.00 is assessed. If the defendant pays after the notice has been sent to the collection agency, the City receives the fee and penalty amounts, then pays the collection agency 23% of the total collected. Also, the failure to pay or to contest the violation within the 30-day time frame constitutes a waiver of the person’s right of appeal.

The automated red light camera enforcement program began on May 28, 2007 with a 15-day warning period during which time red light runners were given a courtesy warning notice. As of June 12, 2007, motorists who ran red lights were sent a notice of violation as part of the Safe Stop Arlington initiative. The current red light camera locations and the date that each was placed into operation are shown in the following chart.

City of Arlington Automated Red Light Cameras

<u>Camera ID</u>	<u>Red Light Camera Location</u>	<u>Date Operational</u>
AR01	North bound Matlock @ Arbrook	June 12, 2007
AR02	South bound Collins @ Sublett	June 12, 2007
AR03	North bound Cooper @ Pioneer (303)	July 1, 2007
AR04	West bound Pioneer (303) @ Cooper	July 1, 2007
AR05	South bound Watson (Hwy 360) @ Six Flags Dr.	July 1, 2007
AR06	West bound West Park Row @ Watson (Hwy 360)	July 1, 2007
AR07	North bound Cooper @ SW Green Oaks	July 1, 2007
AR08	North bound Watson (Hwy 360) @ Avenue H	July 1, 2007
AR09	West bound Pioneer (303) @ Collins	March 1, 2008
AR10	East bound Pioneer (303) @ Collins	March 1, 2008
AR16	South bound Little Road @ West Poly Webb	September 1, 2008
AR19	North bound Cooper @ Road to Six Flags	September 1, 2008
AR11	West bound Division @ Collins	October 15, 2008
AR14	South bound Cooper @ Division	October 15, 2008
AR15	North bound Cooper @ Main	October 15, 2008
AR21	South bound Cooper @ West Park Row	October 15, 2008
AR24	North bound Cooper @ West Park Row	October 15, 2008

Source: ATS website

Between October 2008 and the end of this audit fieldwork, there were no additional red light cameras installed. However, in May 2011, there were three cameras installed (US Hwy 287 @ Sublett, Collins @ Lamar, and Pioneer @ Browning). According to the Program Coordinator, the lack of personnel necessary to handle the additional workload was the main reason for not installing any additional cameras since 2008. At the beginning of the program, only two office staff handled phone calls, walk-in payments, reporting, etc. APD did not anticipate the large number of walk-in customers received. Therefore, a first-floor cashier was added to the program, relieving office staff. Currently, interviews are being conducted to hire two additional employees – an office assistant and a senior clerk to handle the Scofflaw Program. The Scofflaw Program consists of an inter-local agreement with the Texas Department of Motor Vehicles which requires that all notices be paid before the defendant renews his/her vehicle registration. This additional staff will allow APD to better perform the duties necessary for program operations.

APD is required to report information related to red light camera intersections annually to TxDOT. Report information includes the total number of crashes and injuries (red light related or non-red light related) at each red light camera intersection. The total number of crashes and injuries are also reported as whether they were right-angle, rear-end or other crashes/injuries. This information is reported to TxDOT who then places the information on their website. As shown in the following charts, TxDOT indicates that the total number of red light camera intersection crashes in Arlington has decreased, as well as related injuries (when comparing FY 2009 and FY 2010 data). Some intersections did show a slight increase in the number of crashes and/or injuries. However, overall the number of red light related crashes and injuries decreased. The most significant decrease is in the number of right-angle crashes (34.9%) and injuries (31.3%). The Texas House of

Representatives House Research Organization indicates that right-angle crashes tend to result in more severe injuries. These decreases are fairly consistent with figures shown by other cities, state-wide, as well as nation-wide figures.

Automated Red Light Camera Enforcement									
Comparison of the Number of Red Light Related Crashes - 2009/2010									
(TxDOT fiscal year July 1 through June 30)									
	2009			2010			% Change		
	Right Angle	Rear- End	Other	Right Angle	Rear- End	Other	Right Angle	Rear- End	Other
Matlock @ Arbrook	2	2	0	2	9	0	0.0%	350.0%	0.0%
Collins @ Sublett	1	2	0	4	0	0	300.0%	-100.0%	0.0%
Cooper @ Pioneer (303) *	7	9	0	4	4	1	-42.9%	-55.6%	100.0%
Hwy 360 @ Road to Six Flags	12	23	0	8	17	0	-33.3%	-26.1%	0.0%
West Park Row @ Hwy 360	5	5	0	1	1	0	-80.0%	-80.0%	0.0%
Cooper @ SW Green Oaks	5	5	1	0	7	0	-100.0%	40.0%	-100.0%
Hwy 360 @ Avenue H	1	3	0	0	1	0	-100.0%	-66.7%	0.0%
Pioneer (303) @ Collins *	1	9	0	4	7	0	300.0%	-22.2%	0.0%
Little Rd @ West Poly Webb	0	2	0	0	1	0	0.0%	-50.0%	0.0%
Cooper @ Road to Six Flags	0	5	0	1	1	0	100.0%	-80.0%	0.0%
Division @ Collins	4	4	0	2	3	0	-50.0%	-25.0%	0.0%
Cooper @ Division	3	0	0	1	2	0	-66.7%	100.0%	0.0%
Cooper @ Main	1	0	0	0	1	0	-100.0%	100.0%	0.0%
Cooper @ West Park Row *	1	5	0	1	5	0	0.0%	0.0%	0.0%
TOTALS	43	74	1	28	59	1	-34.9%	-20.3%	0.0%

* Indicates intersections with cameras in two directions

Source: Texas Department of Transportation

Automated Red Light Camera Enforcement									
Comparison of the Number of Red Light Related Crash Injuries - 2009/2010									
(TxDOT fiscal year July 1 through June 30)									
	2009			2010			% Change		
	Right Angle	Rear- End	Other	Right Angle	Rear- End	Other	Right Angle	Rear- End	Other
Matlock @ Arbrook	3	2	0	1	3	0	-66.7%	50.0%	0.0%
Collins @ Sublett	0	2	0	1	0	0	100.0%	-100.0%	0.0%
Cooper @ Pioneer (303) *	4	5	0	2	3	1	-50.0%	-40.0%	100.0%
Hwy 360 @ Road to Six Flags	11	13	0	4	8	0	-63.6%	-38.5%	0.0%
West Park Row @ Hwy 360	5	1	0	0	0	0	-100.0%	-100.0%	0.0%
Cooper @ SW Green Oaks	2	2	0	0	1	0	-100.0%	-50.0%	0.0%
Hwy 360 @ Avenue H	0	2	0	0	1	0	0.0%	-50.0%	0.0%
Pioneer (303) @ Collins *	2	7	0	5	8	0	150.0%	14.3%	0.0%
Little Rd @ West Poly Webb	0	1	0	0	1	0	0.0%	0.0%	0.0%
Cooper @ Road to Six Flags	0	2	0	1	1	0	100.0%	-50.0%	0.0%
Division @ Collins	2	1	0	5	3	0	150.0%	200.0%	0.0%
Cooper @ Division	2	0	0	2	1	0	0.0%	100.0%	0.0%
Cooper @ Main	1	0	0	0	1	0	-100.0%	100.0%	0.0%
Cooper @ West Park Row *	0	3	0	1	3	0	100.0%	0.0%	0.0%
TOTALS	32	41	0	22	34	1	-31.3%	-17.1%	100.0%
* Indicates intersections with cameras in two directions									

Source: Texas Department of Transportation

The following chart shows Notices of Violations processed by ATS from the beginning of the program (June 2007) through February 2011. The chart also includes the number of notices that were paid in a timely manner and those that were sent to the collection agency. The chart indicates that 63.7% of the notices were paid in a timely manner. Of the 36.3% sent to the collection agency, 19.6% were paid. In total, approximately 70.8% of the Notices of Violation, since program inception, have been paid.

**Automated Red Light Camera Program
Notices of Violation
June 2007 through February 2011 (by Calendar Year)**

	<u>2007</u>	<u>2008</u>	<u>2009</u>	<u>2010</u>	<u>2011</u>	<u>Total</u>
Total Notices Issued/Year	14,004	53,270	95,284	87,798	10,225	260,581
Notices Paid	8,829	34,655	60,047	55,428	6,935	165,894
Notices sent to Collection	5,175	18,615	35,237	32,370	3,290	94,687
Collection Notices Paid	1,626	4,615	6,908	4,977	121	18,247
Collection Notices Dismissed	28	78	159	71	14	350
Total Notices Paid	10,455	39,270	66,955	60,405	7,056	184,141
Total Outstanding Notices	3,521	13,922	28,170	27,322	3,155	76,090

Source: ATS website

For notices that have not been paid, ATS is required to keep electronic records of the Notices of Violation for a period of three years. The vendor's collection agency continues to work notices that have not been paid. At the current time, APD is planning to enter into an inter-local agreement with the Texas Department of Motor Vehicles relating to motor vehicle registration refusal pursuant to Section 702.003 of the Texas Transportation Code. This Scofflaw Program states that if the owner of a vehicle has an outstanding notice, the owner may not register the vehicle until all notices are paid in full. The Scofflaw Program is planned to be implemented by September 2011.

Summary of Audit Results

For the past two fiscal years, the City has reported the following revenue and expenditures for the Red Light Camera program, per State Comptroller Form 40-146 “Photographic Enforcement Systems – Regional Trauma Account” submittals.

CITY OF ARLINGTON		
RED LIGHT CAMERA PROGRAM		
FY 2009 - FY 2010		
	2009	2010
Calculation of Amount Due to State:		
Gross Revenue	\$ 5,004,469.63	\$ 5,271,107.57
Allowable Expenses:		
Payments to ATS	\$ 932,168.80	\$ 969,000.00
Police Administrative Salaries	\$ 151,889.14	\$ 134,936.52
Police Review	\$ 39,801.05	\$ 37,668.80
Collections	\$ 103,398.37	\$ 131,333.89
Appeals	\$ 10,880.00	\$ 7,200.00
Refunds	\$ 16,582.37	\$ 5,885.00
Other Purchases	<u>\$ 1,126.13</u>	<u>\$ 1,051.83</u>
Total Allowable Expenses	\$ 1,255,845.86	\$ 1,287,076.04
Net Receipts	\$ 3,748,623.77	\$ 3,984,031.53
Amount Due to State (50%)	\$ 1,874,311.89	\$ 1,992,015.77
Amount to be Retained by City (50%)	\$ 1,874,311.89	\$ 1,992,015.77

Source: FY 2009 and FY 2010 State Reports

Section 707.008 of Title 7, Subtitle I, Chapter 707 of the State of Texas Transportation Code states:

“DEPOSIT OF REVENUE FROM CERTAIN TRAFFIC PENALTIES.

(a) Not later than the 60th day after the end of a local authority’s fiscal year, after deducting amounts the local authority is authorized by Subsection (b) to retain, the local authority shall:

1) send 50 percent of the revenue derived from civil or administrative penalties collected by the local authority under this section to the comptroller for deposit to the credit of the regional trauma account established under Section 782.002, Health and Safety Code; and

- 2) *deposit the remainder of the revenue in a special account in the local authority's treasury that may be used only to fund traffic safety programs, including pedestrian safety programs, public safety programs, intersection improvements, and traffic enforcement.*
- (b) *A local authority may retain an amount necessary to cover the costs of:*
- 1) *purchasing or leasing equipment that is part of or used in connection with the photographic traffic signal enforcement system in the local authority;*
 - 2) *installing the photographic traffic signal enforcement system at sites in the local authority, including the costs of installing cameras, flashes, computer equipment, loop sensors, detectors, utility lines, data lines, poles and mounts, networking equipment, and associated labor costs;*
 - 3) *operating the photographic traffic signal enforcement system in the local authority, including the costs of creating, distributing, and delivering violation notices, review of violations conducted by employees of the local authority, the processing of fine payments and collections, and the costs associated with administrative adjudications and appeals; and*
 - 4) *maintaining the general upkeep and functioning of the photographic traffic signal enforcement system. ...”*

The City Auditor's Office noted that the reported revenue and expenditures were fairly stated and reconciled within material limits to amounts recorded on the City's financial system. Expenditures were supported with adequate documentation and were allowable per State requirements. Also, the amount due to the State was calculated accurately and submitted to the State within 60 days of the end of the City's fiscal year, as required by State law.

The City retained the remainder of their share of the net revenue in a revenue source code associated with the City's general fund. According to the Assistant Director of Financial and Management Resources, a separate special revenue fund was neither required nor desired to account for red light camera revenue and expenditures.

Even though the law requires that the net remaining revenue be spent on traffic safety programs, the City Auditor's Office was unable to find any specific reporting requirements related to disclosing how the remaining funds were actually spent. In addition, because the City did not establish a separate special revenue fund or accounting unit to account for the expenditures, it was not readily evident to the City's Auditor's Office how the City's share of the remaining net revenue was spent. Police management stated during subsequent discussions that the City's share of the remaining net revenue was spent on the following public safety programs, as authorized by the Mayor and City Council through the budget process.

- **DWI Special Enforcement** – The goal of this program is to reduce DWI accidents and increase compliance through enforcement. This program established a dedicated unit to reduce drunken driving accidents. The original new program request was for eight Police Officer positions and one Police Sergeant position. The initial request was for \$419,000, which included one-time capital costs of \$167,000 and officer salaries for three months of

the fiscal year. The City Auditor's Office estimated that this program has a recurring cost of \$577,000, based on the original budget proposal.

- **12 P1 (entry level) Police Officers to Meet Workload Demands** – The stated goal for this program is to manage crime/safety issues and initiatives as well as the perception of community safety. The \$1.058 million proposal requested funding for 12 P1 Police Officers and included \$209,000 for capital outlay. The estimated annual recurring cost, based on the original budget proposal, is \$777,000.
- **Eight Police Officers for Vehicle Burglary Calls** – This program was proposed to increase responsiveness and help reduce vehicle burglaries. The objective of the program was to “address the all too common crime of vehicle burglaries through dispatching officers to the scene”. The proposal requested \$500,000 in funding for eight Police Officer positions. The request included capital outlay of \$125,000. The estimated annual recurring cost of this program is \$532,000.

The annual recurring expenditures for these programs, based on the approved original budget issues, approximate \$1.9 million per year. In FY2009 and FY2010, red light camera net revenue approximated the annual recurring expenditures of these programs. In FY2011, the budgeted red light camera revenue was increased to \$2.5 million. However, due to reduced notice issuance and the delay of the Scofflaw Program, the City is now estimating that net red light camera revenue will be \$2.1 million for FY2011. It appears that net revenue for FY2011 will exceed the expenditures associated with the previously approved programs. In the future, if the expenditures exceed net red light camera revenue, those expenditures will need to be absorbed by other revenue of the General Fund.

The City Auditor's Office noted that no formal policy exists to periodically analyze the results of the red light camera program to determine if program objectives are met, nor to determine if the City's share of the net revenue is being spent in the most effective way possible. The Police Department has targeted intersection speed and red light running as the primary purpose of the program. Although no formal process exists, Police Department management has stated that the City Manager's Office reviews the cost effectiveness of the program annually through the budget process. The Police Department believes that accident history, citizen and Council complaints, and the result of citizen surveys have been the basis for this priority over pedestrian safety or intersection improvements.

Detailed Audit Finding

The City has not assessed the risks associated with their reliance on the vendor to process the red light camera program.

According to the Institute of Internal Auditors, understanding the key areas of exposure associated with outsourced processes and developing steps to mitigate those exposures are critical to the outsourcing process. During the life of an outsourcing relationship, the organization must continually manage supported processes to ensure that its requirements are being met. This includes performing periodic risk assessments to update and respond to outsourcing risks and regularly assessing the adequacy and cost effectiveness of the service.

According to the American Institute of Certified Public Accountants, one way an organization may obtain evidence about the quality and accuracy of the data provided by a service organization is to obtain a CPA's report on controls (formerly referred to as a "SAS 70 Report") at the service organization that affect data provided to the user entities and incorporated in the user entities' financial statements. The rationale for this approach is that controls are designed to prevent, or detect and correct, errors or misstatements. If controls at a service organization are operating effectively, errors in data provided to the user entities will be prevented, or detected and corrected, and misstatements in the user entities' financial statements will be avoided.

The City's current red light camera vendor is not a publically traded company. As such, the vendor has not provided the City with a CPA report on controls that exist and whether they are operating effectively. The APD has not performed a risk assessment of the vendor's red light camera operating system. Because the vendor's offices are located in Arizona, the City Auditor's Office did not perform a site visit to document and test the vendor's internal controls. However, the following potential risk areas were identified:

Risk	Impact
All events captured by the red light cameras may not be transferred to the vendor's database and, therefore, not reviewed for potential violation	Valid events that do not result in a notice which affects the user's revenue or invalid events that are not rejected which affects the vendor's performance measures
The vendor's initial review of an event could result in a false rejection which reduces the number of violations, as well as possible revenue	Events rejected by the vendor are not placed on the vendor's website for the APD to review. Rejected events are therefore not being verified.
There is no sequential listing of violations that are issued on a daily basis	Difficulty identifying missing events
Mailing violations to vehicle owners with a different return address; thereby, possibly allowing payments to be sent to a personal mailbox	Payment by the owner, but funds being received by an unauthorized person. The violation would remain on the user's outstanding list and not shown as paid

Risk	Impact
Since the vendor has control over its own operating system, changes to documents could possibly be made without the consent or knowledge of the City.	Event status from rejected to accepted, mailing address change, etc

These are just a few examples of how errors or irregularities could possibly result in reduced effectiveness of the red light camera program if the user does not monitor operations. Without detailed analysis of the controls at the service organization, it is not possible to determine whether these risks have been properly mitigated. Any of these scenarios could lead to fewer reported violations, reduced revenue and decreased effectiveness of the program.

Recommendation:

The Chief of Police should ensure that a risk assessment is performed for the red light camera operating system. Management should then determine whether to perform steps to mitigate those identified risks or make a decision to accept the risks associated with the system.

Management's Response:

Concur. The Police Department will align with the City's current risk assessment strategies and partner with Internal Audit to ensure that risks are identified and addressed as deemed feasible.

Target Date: August 31, 2012

Responsibility: Debbie Wentworth, Information Resources Manager