TO: Chair and Members  
Public Works Committee  

WARD(S) AFFECTED: CITY WIDE

COMMITTEE DATE: June 20, 2011

SUBJECT/REPORT NO: Red Light Camera Program and Other Traffic Safety Initiatives - (PW11048) (City Wide)

SUBMITTED BY: Geoff Rae, MBA, P.Eng.  
Acting General Manager  
Public Works Department

PREPARED BY: Hart Solomon, P.Eng  
(905) 546-2424, Extension 4584

SIGNATURE:

RECOMMENDATION

(a) That the red light camera program for the City of Hamilton be extended for a period of five years to the end of 2017;

(b) That the current contract with Traffipax, Inc. for the provision of red light cameras and associated maintenance service and data transfer, be extended for an additional five years, following the same terms and conditions within the current contract, with the cost for red light camera equipment rental and servicing to be charged to account 55916-461010;

(c) That approval be granted to extend the existing contract or enter into a new contract between the City of Hamilton and the City of Toronto, to undertake centralized municipal processing of red light camera offence notices, to the end of the year 2017, with the cost for this activity to be charged to account 55739-461010;

(d) That approval be granted to extend the operational agreement with the Ministry of Transportation, Ontario, with said agreement defining the responsibilities of the City and the Province under the red light camera program and thereby authorizing and permitting the City of Toronto to obtain motor vehicle registration information necessary to lay charges under the red light camera program on behalf of the City of Hamilton, with the cost for this activity to be charged to account 55738-461010;
(e) That the Mayor and City Clerk be authorized and directed to execute all agreements cited in recommendations (a) to (d), in a form satisfactory to the City Solicitor;

(f) That the General Manager of Public Works or his designate, be authorized to negotiate and execute any other ancillary documentation required, in the opinion of the City Solicitor to implement the above agreements, in a form satisfactory to the City Solicitor;

(g) That, where the contract with Traffipax, Inc. indicates references to the General Manager, those be revised to be the General Manager of Public Works or his designate and where the contract references the Manager of Traffic Engineering and Operations that those be revised to the Manager of Traffic Engineering;

(h) That, over the next five years of the Red Light Camera Program, staff be authorized to implement up to eight new locations and to remove locations which are not performing a public safety function, with such decisions to be made on a combination of the collision history and the red light running violation rates of candidate sites;

(i) That, should the City of Hamilton identify additional sites for red light camera implementation, that the City Manager of the City of Hamilton advise the City Manager of the City of Toronto of our intentions to ensure that the necessary resources are available at the City of Toronto processing centre to handle the increased demand generated;

(j) That Appendix “A” attached to Report PW11048 respecting Candidate Locations for Red Light Camera Program Expansion - 2012 to 2017 be received.

EXECUTIVE SUMMARY

Over the past five years, there have been an average of about 235 right angle crashes annually at traffic signals in Hamilton, with about two-thirds causing injuries. The red light camera program in Hamilton started in November, 2000, to attempt to reduce the injuries and property loss from these crashes. The program has grown to the point where the City of Hamilton now operates twelve red light cameras at a total of fifteen red light camera sites.

The program has demonstrated sufficient safety improvement in terms of reductions in red light running and collisions at those sites to justify retaining and potentially expanding the program. The City presently utilizes two separate contractors for red light camera servicing and data retrieval. It is proposed to allow the contract with one of the vendors to expire naturally, without penalty, at the end of 2011 and to extend the other contract for an additional five years. The contract to be extended does contain an exit clause that would allow the City, should the situation occur, to cease the red light camera program at any time before the end of the five year term.

Where older sites are still deemed to be performing a safety function, the prime vendor would replace the hardware at the existing sites and this would result in a slight
decrease in operational costs and an improvement in the monitoring capabilities. In order to continue with the red light camera program, the contracts in place with the Ministry of Transportation for the vehicle ownership information and with the City of Toronto for the red light camera processing, also need to be extended.

Financially, the red light camera program has been self-sufficient and in fact, due to several recent events, has temporarily resulted in some funding accumulating in the red light camera reserve. Council has previously earmarked this reserve for safety improvements and activities and, in the 2011 operating budget, has defined a $200,000 transfer from this reserve for staff safety activities. Engineering and overall safety programs have been undertaken in the past years have also been funded from the reserve.

The Hamilton Strategic Road Safety Program involves the City and its major partners in promoting road safety based on a strong factual basis. The City’s contract with the province of Ontario requires that safety promotion be undertaken on an on-going basis. To fulfil this obligation, a major upcoming initiative will be to launch a media and outreach program intended to reduce motor vehicle collisions and reduce injuries and deaths among the groups singled out as being most susceptible to improvement through these campaigns.

There are a limited number of additional potential camera sites in Hamilton, based on possible collision reduction and violation reduction. It is recommended that staff be authorized to install up to eight additional sites over the next five years, with the understanding that some of the sites may not have as great an impact on safety as the current sites, but that the wider-spread use of cameras may have an overall effect on driver behaviour.

**Alternatives for Consideration - See Page 8**

**FINANCIAL / STAFFING / LEGAL IMPLICATIONS**

**Financial:** The red light camera program was initiated as a safety program to reduce collisions and injuries to road users in Hamilton. It has been successful in this regard. The program has been structured to be financially self-sufficient, in that locations have been chosen so that fine revenues would balance the cost of operating the program. This approach has been successful, with the typical year showing a surplus of about $200,000, which was placed into a reserve for future red light camera expenses and other safety initiatives. The one notable exception was 2010, when a combination of factors, most notably two new sites with a very high initial number of violations and an increase in the red light running fine from $180 to $325, combined to deliver a surplus in excess of $1,400,000.

It is expected that 2010 is an anomaly. The violation rates on the two new sites are dropping rapidly, which is the point of a red light camera program. In addition, the effect of the higher fine appears to be a significant reduction in violations across the City’s full camera program.
Staffing: The red light camera program is managed by the Traffic Engineering section. The proposed changes noted in this report can be managed within the existing staff complement.

Legal: The City entered into a contract with Traffipax, Incorporated in 2007. That contract was for a five year term, with an option clause for five additional one year extensions. It is proposed to utilize this portion of the contract wording and Traffipax is agreeable to an extension under all current conditions and contractual obligations, with no change in pricing over the additional five year term. It is recommended that this proposal be accepted. The contract has an exit clause provision, with a reasonable financial penalty, so should the City decide at a later date to exit the program, it would be possible to discontinue use of the red light cameras, with minimal notice.

The City presently utilizes two separate contractors for red light camera servicing and data retrieval. It is proposed to allow the contract with Affiliated Computer Systems to expire naturally, without penalty, at the end of 2011. The newer vendor, Traffipax, Inc. is slightly less expensive and has equipment which has better technical capability. As well, this will simplify the processing arrangements for the City of Toronto.

Within the contract there are references to the General Manager and also references to the Manager of Traffic Engineering and Operations. It is proposed, to streamline operations, that the reference to the General Manager be revised to the General Manager or his designate and where there are references to the Manager of Traffic Engineering and Operations, due to the reorganization last year, that these be altered to the current title of Manager of Traffic Engineering.

Processing of all red light camera violations in Ontario is undertaken at the City of Toronto centrally. While a formal contract has not been signed, a contractual obligation exists through the provision of services and the payment for said services. It is proposed to continue that arrangement. If it is necessary to enter into a formal contract, that can be done at a later date and is proposed to authorize staff to do so if necessary.

In order for the City of Toronto to process red light camera violations it is necessary for the Ministry of Transportation, Ontario to provide information regarding the ownership of vehicles captured in the photographs. There is a formal contract between the Province and the City of Hamilton to allow for the provision of that information to the City of Toronto and it is necessary to extend that contract in order to ensure that the red light camera program can proceed.

HISTORICAL BACKGROUND

The City of Hamilton has been operating the red light camera program since November, 2000. The initial implementation was two cameras rotating through eight sites and over time that has expanded to the current situation which is now twelve cameras and a total of fifteen sites. Eight of the cameras are fixed in location and four of the cameras rotate through the remaining seven sites.
The intent of the program is to improve road safety by reducing the incidence of right-angle collisions at traffic signals, which are typically caused by drivers failing to obey the lights.

The initial implementation of red light cameras in Hamilton was through a joint tender undertaken by six municipalities in Ontario including the cities of Hamilton, Toronto, Ottawa and the Regional Municipalities of Peel, Halton and Waterloo. The initial contract was with a company which is now known as Affiliated Computer Systems ("ACS"). ACS was responsible for supplying and installing the cameras, conducting a regular rotation of the cameras to various sites and removing the film and delivering it to the City of Toronto.

Subsequently, a request for proposals was issued in 2007 for an expansion to the program. At that time, Traffipax, Inc. was low bid and all cameras installed from that point forward have been supplied by Traffipax, Inc. The financial structure with Traffipax, Inc. is different from ACS. Under the ACS contracts, the City purchased the cameras and associated hardware outright and amortized the cost over the life of the cameras. The City pays ACS only for maintenance services.

The agreement with Traffipax, Inc. is strictly turnkey and rental. There is no capital outlay required, simply a monthly charge which covers all aspects of installation, maintenance and servicing. This arrangement has turned out to be financially advantageous to the City over the previous ACS fiscal arrangement. In addition the cameras supplied by Traffipax, Inc. have greater functional capability in terms of the number of lanes and the conditions under which the cameras can be installed.

**POLICY IMPLICATIONS**

The recommendations in this report support the Public Works business plan “Innovate Now” mission to “Provide safe, strategic and environmentally conscious services that bring our communities to life”, by targeting actions to improve road safety and reduce the associated injury and costs.

**RELEVANT CONSULTATION**

Consultation has been undertaken with the principals of Traffipax, Inc and the principals of ACS. In addition, staff has had discussions with Legal Services in regard to the contract extensions. Discussions have been held with the City of Toronto about processing capabilities and with key members of the other municipalities involved in the red light camera program about current plans and intentions in order that the program extensions be conducted in a consistent fashion.

**ANALYSIS / RATIONALE FOR RECOMMENDATION**

The red light camera program is a joint effort of five southern Ontario municipalities, and starting from scratch with a request for proposals for a new vendor would require all five partners to agree to this approach, which presently is not the preference of the group.
The processing is done by the City of Toronto, so Hamilton cannot unilaterally change vendors, due potentially to a lack of correct software available to process violations, nor would any other cameras be legally recognized as they are specifically identified in the Highway Traffic Act. As well, when the last request for proposals was examined, there were four bidders and Traffipax, Inc. was the lowest by a significant amount.

The red light camera program is part of a package of safety initiatives undertaken under the umbrella of the Hamilton Strategic Road Safety Program (HSRSP). The HSRSP has membership from the City’s Public Works and Public Health departments, Hamilton Police Service, both school boards, along with representatives from the seniors, high schools, Ministry of Transportation and the Hamilton Safe Communities Coalition.

The purpose of the HSRSP is to ensure that all members are undertaking road safety activities targeting the types of collisions and road user groups which will provide the highest probability of success in collision reduction. This is done by coordinating activities and through the interchange of information and timing of events to maximize the impact.

The HSRSP has been underway for about a year and a half and has identified three major emphasis areas. These are distracted or aggressive driving, intersections and vulnerable road users (pedestrians, cyclists and motorcyclists). These areas comprise 63, 61 and 24 percent of motor vehicle collisions in Hamilton respectively, with the total being greater than 100 percent since more that one factor can influence the occurrence of a collision.

The program has set a realistic but difficult target of a 10 percent reduction in three years over the 2008 baseline collisions both for injuries/fatal collisions and property damage only collisions. The HSRSP was funded through formal Council direction and is also formally endorsed by the Police Service Board.

Collision reduction programs are often defined as falling into the three E’s of engineering, enforcement and education. The City’s red light camera program is a combination of the engineering and enforcement categories. Since it typically takes several years for the impacts of a red light camera to be realized, statistics are not available for the latest cameras installed in the City. For the cameras which were installed in 2000 it is possible to state with confidence the effect on collisions.

The initial camera sites have demonstrated a 41% reduction in right-angle collisions with a 10% increase in rear-end collisions. On an overall basis, since rear-end collisions tend to be less severe in nature, this is a distinct improvement. Considering the overall effect, sometimes called the “halo” effect, resulting in a wider spread reduction in right-angle types of collisions at all intersections in Hamilton, there was virtually no change in right angle collisions for the first six years of the program. However, in the period 2007-2010, a total of 147 fewer right angle collisions than would have been expected occurred at traffic signals City-wide across Hamilton. While some of the decrease may be due to other factors, such as police enforcement, at least some of the improvement is attributable to the red light camera program.
With the conversion of York Blvd. to two-way operation, one of the cameras from the original installation is no longer applicable or operable. In addition, there are three other sites of the original eight which are showing very few violations and for which the operational cost is not justified. This leaves twelve of the current sites which are recommended for continuing operation over the next five years. Reviewing the expansion list, there are a limited number of sites with slightly poorer than average collision histories and with a significant number of daily violations.

It is recommended that the red light camera program be expanded to include some of these lower volume locations. In the past, the red light camera program has been operated so that it would be financially self-sustaining. Given the present state of the red light camera reserve, it is now possible to consider locations which might be slightly negative financially over time but would still serve the purpose of reinforcing the safety considerations of red light cameras.

It is recommended that staff be authorized to install up to eight additional sites over the next five years. As in the past, the exact site locations are not advertised or formally noted, as the intent is to leverage the effect of the cameras as broadly as possible. The basis for the choice of red light camera sites will continue to be collisions and red light running. The sites will be chosen from locations listed in Appendix “A”. Additional cameras mean added workload for the City of Toronto in terms of processing. Since the processing centre is working near capacity, it is recommended that Hamilton’s City Manager formally contact Toronto’s City Manager prior to program expansion, to ensure that the processing centre can handle the increased volume, or can make the necessary changes to ensure Hamilton’s violations can be expeditiously managed.

Council has previously endorsed the concept that any excess funds resulting from the red light camera program should be put back into other road safety actions. Council specifically authorized and funded the HSRSP. In addition, red light camera funds have been used for minor improvements such as upgrades to signing and markings on the Queen Street Hill to reduce collisions, solar operated stop sign flashers at several intersections in the rural areas and minor reconstruction programs. This program will continue, contingent on funding and suitable opportunities being identified.

While engineering and enforcement activities can significantly impact road safety, by far the most effective approach is to alter driver and pedestrian behaviour, if this can be done successfully. To this end, HSRSP has undertaken to develop a media and outreach campaign. This program is being designed, through a very innovative process, at present. The development of the program is employing a combination of traffic engineering professionals and media specialists to pinpoint the portions of the audience which are causing the majority of crashes and whose behaviours are most likely to be positively altered through media. The resulting programs will likely take a combination of traditional print and airwave media mixed with a significant portion of the new generation of social media such as Twitter and Facebook. As a mandatory requirement of the contract between the Ministry of Transportation, Ontario and the City of Hamilton, the City is obliged to undertake safety media campaigns on a regular basis and report
back to the Ministry of Transportation. In this regard, an annual budget from the red light camera program of $100,000 is set aside as a line item.

The purpose of the consulting program underway now is to ensure that this money is spent in the most effective way possible. An upcoming Operations Update will apprise Council of the details of the media program before it is launched this summer. To ensure that the media campaigns are successful, measurements will be taken to ensure that the appropriate audiences are being impacted as planned.

**ALTERNATIVES FOR CONSIDERATION**

The red light camera program could be cancelled through not renewing the contracts. This would negate the opportunity to impact driver behaviour, which not only includes the direct red light running activity but driver speed and awareness at signalized intersections, thereby reducing collisions.

The program could be restricted to the current level of implementation. This would miss the opportunity to further decrease the incidence of collisions at traffic signals in Hamilton.

The ongoing efforts at road safety, including the road safety media and outreach program and the engineering countermeasures, could be discontinued. However, this would lose the opportunity to impact on drivers and pedestrians to reduce collisions.

**CORPORATE STRATEGIC PLAN**


**Skilled, Innovative & Respectful Organization**

- A culture of excellence
- More innovation, greater teamwork, better client focus
- An enabling work environment - respectful culture, well-being and safety, effective communication
- Opportunity for employee input in management decision making
- Council and SMT are recognized for their leadership and integrity

The red light camera program is active in only five municipalities in Ontario. The camera program has led to other road safety initiatives, making Hamilton one of the leaders in road safety programs in Ontario.

**Financial Sustainability**

- Financially Sustainable City by 2020
- Delivery of municipal services and management capital assets/liabilities in a sustainable, innovative and cost effective manner

---

Vision: To be the best place in Canada to raise a child, promote innovation, engage citizens and provide diverse economic opportunities.

Values: Honesty, Accountability, Innovation, Leadership, Respect, Excellence, Teamwork
- Full life-cycle costing for capital

The red light camera program remains self-sufficient financially.

**Intergovernmental Relationships**
- Influence federal and provincial policy development to benefit Hamilton
- Maintain effective relationships with other public agencies

The red light camera program depends on working and contractual relationships with the City of Toronto, our other red light camera partner municipalities and the Province of Ontario.

**Healthy Community**
- Plan and manage the built environment

The red light camera program reduces injuries due to motor vehicle collisions.

**APPENDICES / SCHEDULES**

Appendix “A”: Candidate Locations for Red Light Camera Program Expansion – 2012 to 2017
Candidate Locations for Red Light Camera Program
Expansion - 2012 to 2017

<table>
<thead>
<tr>
<th>Location 1</th>
<th>Location 2</th>
</tr>
</thead>
<tbody>
<tr>
<td>Main St. E. &amp; Victoria Ave. S.</td>
<td>Burlington St. &amp; Ottawa St. N.</td>
</tr>
<tr>
<td>Charlton Ave. &amp; James St. S.</td>
<td>Cannon St. E. &amp; John St. N.</td>
</tr>
<tr>
<td>Main St. E. &amp; Wellington St. S.</td>
<td>Cannon St. E. &amp; Victoria Ave. N.</td>
</tr>
<tr>
<td>Cannon St. E. &amp; Sanford Ave. N.</td>
<td>Charlton Ave. W. &amp; Hess St. S.</td>
</tr>
<tr>
<td>Hunter St. &amp; James St. S.</td>
<td>Governors Rd. &amp; Main St., Dundas</td>
</tr>
<tr>
<td>Catharine St. &amp; King St. E.</td>
<td>King St. E. &amp; Sanford Ave.</td>
</tr>
<tr>
<td>Sanford Ave. N. &amp; Wilson St.</td>
<td>Wentworth St. N. &amp; Wilson St.</td>
</tr>
<tr>
<td>Wellington St. N. &amp; Wilson St.</td>
<td>Cannon St. E. &amp; Wentworth St. N.</td>
</tr>
<tr>
<td>Barton St. E. &amp; Ottawa St. N.</td>
<td>Caroline St. S. &amp; Hunter St. W.</td>
</tr>
<tr>
<td>Centennial Pkwy. N. &amp; South Service Rd.</td>
<td>Charlton Ave. E. &amp; John St. S.</td>
</tr>
<tr>
<td>Hess St. N. &amp; York Blvd.</td>
<td>Concession St. &amp; Upper Wellington St.</td>
</tr>
<tr>
<td>John St. N. &amp; Wilson St.</td>
<td>Green Rd. &amp; Hwy. 8, Stoney Creek</td>
</tr>
<tr>
<td>King St. E. &amp; Victoria Ave.</td>
<td>James St. S. &amp; Main St.</td>
</tr>
<tr>
<td>King St. E. &amp; Wellington St.</td>
<td>Limeridge Rd. &amp; Upper Ottawa St.</td>
</tr>
<tr>
<td>Barton St. E. &amp; John St. N.</td>
<td>Bay St. N. &amp; Cannon St. W.</td>
</tr>
<tr>
<td>Barton St. E. &amp; Kenilworth Ave. N.</td>
<td>Cannon St. E. &amp; Gage Ave. N.</td>
</tr>
<tr>
<td>Charlton Ave. W. &amp; Queen St. S.</td>
<td>Cannon St. E. &amp; Sherman Ave. N.</td>
</tr>
<tr>
<td>Fennell Ave. E. &amp; Upper Wellington St.</td>
<td>Dundas St. E. &amp; Mill St., Flamborough</td>
</tr>
<tr>
<td>James St. N. &amp; York Blvd.</td>
<td>Fennell Ave. E. &amp; Upper Wentworth St.</td>
</tr>
<tr>
<td>Kenilworth Ave. S. &amp; Main St. E.</td>
<td>Fennell Ave. W. &amp; West 5th St.</td>
</tr>
<tr>
<td>Mohawk Rd. E. &amp; Upper Wentworth St.</td>
<td>Garth St. &amp; Mohawk Rd. W.</td>
</tr>
<tr>
<td>Parkdale Ave. S. &amp; Queenston Rd.</td>
<td>Golf Links Rd. &amp; Neville Dr., Ancaster</td>
</tr>
<tr>
<td>Barton St. E. &amp; Wellington St. N.</td>
<td>King St. W. &amp; Macklin St.</td>
</tr>
<tr>
<td>Bay St. S. &amp; Hunter St. W.</td>
<td>Lawrence Rd. &amp; Rosedale Ave.</td>
</tr>
<tr>
<td>Garner Rd. W. &amp; Wilson St. W., Ancaster</td>
<td>Main St. E. &amp; Walnut St. S.</td>
</tr>
<tr>
<td>John St. S. &amp; Main St. E.</td>
<td>Mohawk Rd. W. &amp; Upper Paradise Rd.</td>
</tr>
<tr>
<td>Main St. W. &amp; Queen St. S.</td>
<td>Mohawk Rd. E. &amp; Upper Wellington St.</td>
</tr>
</tbody>
</table>