

REGIONAL MUNICIPALITY OF OTTAWA-CARLETON  
MUNICIPALITÉ RÉGIONALE D'OTTAWA-CARLETON

REPORT  
RAPPORT

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Our File/N/Réf.           **25 20-96-0201**  
Your File/V/Réf.

DATE                       14 November 1996

TO/DEST.                 Co-ordinator Transportation Committee

FROM/EXP.               Director, Mobility Services and Corporate Fleet Services  
Environment and Transportation Department

SUBJECT/OBJET         **MONITORING OF RED-LIGHT VIOLATIONS AT TRAFFIC  
CONTROL SIGNALS**

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#### **DEPARTMENTAL RECOMMENDATIONS**

**That the Transportation Committee recommend Council:**

- 1. Request the Province of Ontario to enact appropriate legislative amendments providing for the following:**
  - a. video monitoring and enforcement of red-light violations at signalized intersections;**
  - b. that such legislation be sufficient to prosecute the owners of vehicles found by camera technology to be violating red traffic light signals, without proof that they were, at the material time, the drivers of the vehicles;**
  - c. enable municipalities to allocate the fine revenues from red-light enforcement, or a special grant or subsidy, to the costs of the installation, maintenance and operation of red-light monitoring systems, to the costs of adjudication, and to other safety measures;**
- 2. Subject to the appropriate legislative amendments being enacted, the Environment and Transportation Department, in conjunction with the Ottawa-Carleton Regional Police Services, be authorized to undertake a "red-light monitoring/enforcement" pilot project.**

## BACKGROUND

This report is similar to one adopted by the Metropolitan Toronto Council on 25 and 26 September 1996.

In an attempt to reduce the total number of collisions throughout Ottawa-Carleton, this Department, in co-operation with the Ottawa-Carleton Regional Police Services, is examining the feasibility of introducing a monitoring system to take pictures of licence plates of vehicles at signalized intersections when the vehicle enters the intersection during a red light indication.

A red-light camera is a traffic enforcement device that automatically photographs licence plates of vehicles that proceed through intersections against a red light. The enforcement system is installed on poles at problem intersections to help increase signal compliance, thereby reducing the number of collisions, injuries and fatalities. Red-light cameras were first introduced in the 1960s and today there are over 2,500 units in operation around the world.

A red-light camera system is comprised of a camera/computer unit, protective housing, and subsurface detection loops installed near the stop bar at a signalized intersection. The system is also connected to the traffic signal controller. When the light is red, the detection loops are "live" and any vehicle passing over them triggers the camera, which photographs the rear of the offending vehicle. The film is then processed and tickets are issued.

The use of cameras to enforce against red-light running is widespread in Europe including Germany, Netherlands, Norway, Sweden and Switzerland. Applications in Singapore, Australia and the U.K. have shown success in reducing violations and in reducing collisions. This method of enforcement is found to be cost effective, particularly if clearly authorized by legislation (including owner liability for offences) and supported by public education.

There are approximately eight jurisdictions in the U.S.A. where red-light camera systems have been in operation since the early 1990s. Of particular interest to Ottawa-Carleton is the New York City red-light camera system which was installed under the premise of "no cost to the city" with the revenue realized from payment for violations covering the total costs (both contractor and City costs) of installing, operating and maintaining the system. The City of New York is responsible for collection of the revenue from the fines. The following activities are included in the contract: daily film loading, unloading, development and delivery; camera and loop installation and maintenance; 15 cameras always in operation; rotation of camera locations as directed by the city; a complete Notice of Liability (NOL) tracking system, including both hardware and software; onset support personnel for assistance as needed; training of city employees; and a data processing system.

The Victoria Police Department, at the request of the Insurance Corporation of British Columbia, conducted a red-light camera pilot project between 16 June 1992 and 22 February 1993. The camera commenced operation on 16 June 1992 but its presence was not announced to the public. The plan was to collect data before and after the installation was announced for comparison purposes. Before the presence of the camera was announced, it was operated for 66 days. On 1 December 1992 wide media coverage was given to the camera installation and the previous data collection. Signs were installed approximately one-half block from the camera on the approach side announcing

"RED-LIGHT CAMERA IN OPERATION AHEAD". Media coverage was positive during the month of December 1992, particularly from local radio, and included the information that violation tickets would be issued. The camera was removed from operation on 22 February 1993. During the time the camera was operational, there were no collisions resulting from a red-light violation. Although on-site manual field studies were inconclusive, the number of violations recorded by the camera dropped significantly during December, January and February. It was concluded and reported that the pilot project proved the value of the red-light camera as a method of reducing accidents and as an enforcement tool. Permanent installation was deferred pending resolution of funding and legislative issues.

As a result of this experience, there has been increased interest in the possible application of red-light cameras by Municipalities and agencies in Ontario including:

- Metropolitan Toronto;
- City of Mississauga;
- Regional Municipality of Peel;
- Regional Municipality of Sudbury;
- City of Scarborough;
- Canadian Association of Chiefs of Police; and
- Ontario Traffic Conference (see Annex A).

All of the above have endorsed the introduction of red-light camera enforcement. Subsequent to endorsement by this Council in 1995, application was made to the Province to introduce the necessary legislative amendments.

In December 1995 this Council received a response from the Minister of Transportation of the Province of Ontario stating as follows:

"I agree with you that speeding and red-light violations are critical road safety issues. However, there are other driving practices which place road users at serious risk. Our government believes there is a need for a more comprehensive approach to road safety. Our goal is to not only control speeders and those who run red lights but also to further combat the driving practices which photo radar failed to prevent, such as impaired driving, aggressive driving, tailgating, improper lane changes.

This government is not supportive of the use of photo based enforcement technologies because they target the registered owner of the vehicle rather than the driver of that vehicle at the time of the offence. This government believes that it is important to apprehend the driver for violations of the Highway Traffic Act wherever possible."

This response reflects, to some extent, the decision by the current Provincial Government to cancel the photo radar speed enforcement programme. Some of the opposition to the use of photo radar for monitoring speed limit violations is based on the belief that speed itself is not dangerous or that other infractions such as tailgating and improper lane changes are more dangerous and therefore deserve more police attention and enforcement.

There is no such controversy with respect to red-light violations at intersections where the hazard to all road users, including pedestrians and cyclists, from red-light violations, is commonly recognized.

Legal and Environment and Transportation staff are liaising with staff of Metropolitan Toronto and Peel Region to provide a co-ordinated approach to this issue.

## DISCUSSION

Currently there are approximately 14,100 reportable collisions per year on roads within Ottawa-Carleton, of which approximately 4,400 per year occur at signalized intersections. Of these 4,400, approximately 1,000 are classified as "angle" collisions involving vehicles approaching the intersection from different directions. There is no defined relationship between the number of collisions and the number of conflicts or "close calls", but it is estimated that one in 10 conflicts results in a collision. Therefore, it is estimated that there are approximately 10,000 "angle" conflicts per year at signalized intersections in Ottawa-Carleton.

In many cases, charges of failing to stop or yield at a red light were laid for those collisions which occurred at signalized intersections. The relationship between "violation rate" and actual charges laid is not known, but based on a combination of field observations and collision statistics, it is likely that failure to comply with the meaning of the red light is a traffic safety issue in Ottawa-Carleton. In some cases the number of violations and collisions can be reduced by improving the visibility of the signal heads, installing advance signs or other operational measures, but in cases where the visibility is excellent, photo enforcement may be a useful measure.

A remaining impediment to proceeding with this project revolves around the legal issues. However, if Council wishes to pursue the introduction of camera technology for red-light violation monitoring and enforcement, these would have to be resolved.

It is recommended that the following course of action be followed:

1. the Province be requested to provide legislation sufficient to prosecute the owners of vehicles found by camera technology to be violating red traffic light signals, without proof that they were, at the material time, the drivers of the vehicles; and
2. that the legislation provide for the allocation of the fine revenues from red-light enforcement, or a special grant or subsidy, to the costs of installation, maintenance and operation of red-light monitoring systems (including communication with the signal system), as well as the costs of adjudication (including the cost of staff time when serving as expert witness in court cases).

The legislative amendment should ensure that revenue from fines are returned to the municipalities, since it is likely that some staff cost would be required to implement this programme. If excess revenues are collected, they should be earmarked specifically for safety improvement projects or programmes.

## CONCLUSIONS

There are many benefits that could be achieved with the introduction of a programme of red-light violations monitoring and enforcement in Ottawa-Carleton. The primary benefit would be a reduction in the number of violations of running red lights with an anticipated reduction in collisions, injuries and fatalities. This will result in cost reductions for emergency services, health care, and insurance claims.

Based on the New York City experience, and if the revenues from fines are returned to the RMOC, it is possible that a red-light camera programme could be introduced at no net cost to the taxpayers of Ottawa-Carleton. Together with the endorsements of Police Groups and Safety Agencies, the recommendations contained in this report should be vigorously pursued.

## CONSULTATION

There has been no public consultation to date on this issue. Once the appropriate Provincial legislation is in place, it is anticipated that a publicity campaign will precede any implementation of red-light cameras.

## FINANCIAL IMPLICATIONS

Implementation of red-light camera technology would be on a fully cost-recovery basis.

*Approved by  
Doug Brousseau*

GM/sc

Attach. ( 1 )

ANNEX AO.T.C.\* BOARD RESOLUTION APPROVED 7 JUNE 1996

WHEREAS Red Light Violations at signalized intersections are a serious traffic safety issue.

AND WHEREAS the enforcement of Red-Light Violations through a traditional Police presence is difficult, costly and of a safety concern.

AND WHEREAS Automated Intersection Enforcement appears to be a practical and effective method to enforce traffic signal control obedience.

BE IT RESOLVED THAT, the Ontario Traffic Conference supports the testing and use of Automated Intersection Enforcement Technology (Red-Light Cameras) within the Province of Ontario.

AND FURTHER THAT, the Ontario Traffic Conference request that the Minister of Transportation, Ontario and the Ontario Solicitor General introduce a Government Bill to amend the Highway Traffic Act to allow Red-Light Camera enforcement in Ontario.

AND FURTHER THAT any legislative changes to permit Red-Light Camera enforcement also include provisions for the distribution of violation generated recoveries to the operating jurisdiction to offset the costs and ensure a revenue neutral program.

- \* O.T.C. - Ontario Traffic Conference. An association for the improvement of traffic conditions and traffic safety in the Municipalities of Ontario. Membership includes municipalities, police, universities, hospitals, equipment manufacturers, etc.