AUTOMATED TRAFFIC ENFORCEMENT

A RECOMMENDED DELIVERY MODEL FOR THE CITY OF EDMONTON

REPORT OF THE WORKING GROUP

AUTOMATED TRAFFIC ENFORCEMENT PROJECT

2007

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I. PURPOSE AND SCOPE

The Purpose of this project was to:

1. Analyze the current delivery model for automated traffic enforcement in the City of Edmonton;

2. Review and compare alternative delivery models for automated traffic enforcement; and

3. Recommend to Council a delivery model for automated traffic enforcement that best combines the attributes of :

   (a) potential for increased traffic safety;
   (b) cost effectiveness;
   (c) accountability and transparency; and
   (d) employing appropriate and optimal technology.

It was not within the scope of this project to review the merits of having a program of automated traffic enforcement. This is an issue that has received significant attention in a number of studies and papers of an academic nature. For the purpose of this project it was assumed a program of automated traffic enforcement would continue in the City.

However, any person wishing to review the literature on this subject in order to gather further information is encouraged to contact the City of Edmonton's Office of Traffic Safety. This office serves as an excellent resource for materials on this and related topics.

II. PROJECT TEAM

The project team was comprised of a Project Sponsor, a Steering Committee, a Project Manager and a Working Group. The Project Manager chaired the meetings of the Working Group and reported directly to the Project Sponsor. The Project Sponsor chaired the meetings of the Steering Committee.

The Project Sponsor was Joyce Tustian, General Manager of the Corporate Services Department.

The Steering Committee was comprised of:

Joyce Tustian, Chair
Al Maurer, City Manager
Michael Boyd, Chief of Police
Larry Benowski, General Manager, Planning and Development Department
Rick Ducharme, General Manager, Transportation Department

The Project Manager was Steven Phipps, a lawyer with the City of Edmonton Law Branch whose areas of practice include municipal prosecutions, advising municipal enforcement sections and drafting municipal legislation.

The Working Group was comprised of:

Bruce Appelt – City of Edmonton, IT Branch
Diana Christie – City of Edmonton, Materials Management Section
Sgt. Barb Clover – Edmonton Police Service, Specialized Traffic Operations Unit
Insp. Darren Eastcott – Edmonton Police Service, Special Projects, Automated Enforcement
Gerry Goodall - City of Edmonton, Materials Management Section
Gerry Shimko - City of Edmonton, Office of Traffic Safety Executive Director
George Teply - City of Edmonton, Traffic Operations Branch

The members of the Working Group were selected based on their prior experience with automated traffic enforcement, involvement with traffic safety issues and in some cases both. Certain members were also selected based on particular areas of expertise thought to be important as part of the overall analysis.

III. WORKING GROUP ACTIVITIES

(1) Weekly Meetings

As part of its work on this project the Working Group met weekly from late January until the end of June. During these meetings each aspect of the current delivery model of automated traffic enforcement was reviewed and contrasted with available options. The group meetings were also an opportunity to identify and discuss areas of concern or interest to various departments, branches or sections within the City. In this way stakeholders could be identified and their input and suggestions sought where appropriate.

Finally, because of the diverse nature of the Working Group's membership the meetings served as an opportunity to keep all discussions in the context of the overall picture. The impact of a certain option or decision upon another area of the City was always quickly identified.

(2) Liaison With Other Jurisdictions

As part of its work on this project the Working Group sought information and advice regarding automated traffic enforcement from a number of other jurisdictions both within and outside of Alberta.

Jurisdictions were selected to obtain input from communities of various sizes and with different delivery models for automated traffic enforcement. By doing so the Working Group felt it was easier to ascertain advantages and disadvantages of each model.

Jurisdictions contacted or visited included:

Lethbridge
Medicine Hat
Fort Saskatchewan
Grande Prairie
Calgary
Saskatoon
Regina
Toronto

(3) **Site Visits**

In March one member of the Working Group visited the Calgary Police Service to review in-depth the delivery model used in that city.

In April several members of the Working Group visited the City of Toronto and met with Michael Brady, the Manager of the Red Light Camera Operations Unit and Sheilagh Stewart, Crown Counsel with the Ontario Ministry of the Attorney General.

The Toronto visit was particularly educational in that the City provides processing and ticket production services province wide to all municipalities using automated traffic enforcement.

(4) **Stakeholder Meetings**

As part of its work on this project the Working Group sought to keep as many parties apprised of its work as possible as the project progressed.

These meetings included consultations with or presentations to:

Traffic Operations Branch
IT Branch
Finance Branch
Bylaw Ticket Administration and Remittance Processing
Corporate Services Department Management Team
Business Process Management Committee
Edmonton Police Commission

In addition the Project Manager met bi-weekly, or as needed, with the Project Sponsor and with the Steering Committee at the outset and conclusion of the Working Group's activities.

IV. HISTORY OF AUTOMATED TRAFFIC ENFORCEMENT IN EDMONTON

Automated traffic enforcement began in Edmonton as a pilot project in 1993. At the outset enforcement was restricted to speeding offences. In 1999 enforcement of red light offences commenced. Since that time the enforcement program has expanded to five cameras used to enforce speed and 24 cameras used to enforce intersection violations. These numbers were arrived at after an analysis of the City's population, road system and traffic history and were thought to be the minimum numbers to support the goal of increased traffic safety. The number of red light cameras may now actually be somewhat low to achieve this goal. It may be that as many as 60 intersection cameras should be operational at any one time given the City's characteristics. There are currently 60 poles installed at locations throughout Edmonton, however, budget restraints have prevented utilizing more cameras than the current 24. The Edmonton Police Service and the City's Office of Traffic Safety are undertaking a study to determine the optimum level of enforcement in a City with Edmonton's current characteristics to achieve the desired level of traffic safety.

The original enforcement, being a pilot project, involved equipment, processing and ticket production services provided by a third party supplier. This was seen as a prudent move given the alternative of a potentially significant capital investment. There were a number of third party suppliers able to provide what amounted to a "turn-key" system which could be used by the Edmonton Police Service. The City issued a Request for Proposal and a contract was awarded to the successful applicant. Pursuant to this contract the supplier would provide the camera units, film processing, initial film review and, where authorized, ticket production. The Edmonton Police Service would be involved in all actual enforcement decisions and in determining whether or not offences were committed.

The original contract had a five year renewal option and this was exercised in 1999 to last until 2004. Once again it was determined that, at this stage of experience with automated traffic enforcement, it would be advantageous to remain with a "turn-key" system familiar to the enforcement agency.

Since 2004 the contract has been extended for brief periods of time and remains in effect today with both parties retaining an option to give notice of the contracts termination.

In 2006 the Edmonton Police Commission sought two independent consultant reports. One was to deal with the effectiveness of automated traffic enforcement in relation to achieving the goal of increased traffic safety. The other sought

advice on alternative models of delivery assuming automated traffic enforcement was to continue.

As a result of the consultants report on the latter question, the Police Commission made certain recommendations to Edmonton City Council. Council, in turn, directed administration to conduct a review of all options and to return with a report and recommendations in July, 2007.

V. AUTOMATED TRAFFIC ENFORCEMENT PROCESS

Automated Traffic Enforcement is comprised of both photo radar to detect speeding offences and intersection cameras to detect red light offences. The following is a brief summary of the basic process involved in each type of enforcement.

(1) Speeding Offences

This type of enforcement is carried out using cameras mounted in a van or other similar vehicle. The vehicle can be located wherever the agency in charge of enforcement decisions feels it will best serve the goal of increased traffic safety. The camera in the vehicle is connected to a radar unit set to measure the speed of oncoming vehicles. If a vehicle is exceeding the set speed limit the camera is triggered and a photo of the vehicle is taken. The officer operating the camera unit records certain information at the same time.

The officers operating the vehicles containing the photo radar equipment are all appointed as Provincial Peace Officers (formerly Special Constables) having the authority to enforce certain sections of the provincial Traffic Safety Act. These officers operate under the direct control and supervision of the Edmonton Police Service. They have no connection whatsoever to the third party supplier of equipment and services.

At the end of a shift the officer submits the film for processing. Over a period of several days the film is developed and the images digitized. The digital images are loaded into a database. One by one the images are reviewed to determine whether or not the standards for enforcement and prosecution are satisfied. If not, the image is discarded with an explanation as to why it does not meet the standard. If the standards are satisfied the licence plate information from the vehicle is entered into the database in connection with the image. This process is repeated for every image on the roll of film.

Once the initial review process is complete the licence plate information is provided to the provincial Registry of Motor Vehicles. The province then provides the registered ownership information on file for each of the licence plates. This information is also added to the database in connection with the image.

All of the images are then reviewed a second time by a different staff person. This person will not have been part of the first review of the image. Once again this person must enter the licence plate information from the image into the database. The system then compares the two licence plate entries to ensure they match. The person making the second entry will not be able to see the entry made by the first person reviewing the image. If they match the process continues. If they do not the image is removed from the process. This step is intended to ensure that only clear images of licence plates proceed to enforcement. The reviewers are not to guess or speculate as to the contents of a particular licence plate.

Assuming an image passes both reviews it is then eligible for a final review by the officer who was operating the photo radar camera at the time the image was taken. During this review the officer will ensure the image is consistent with their notes and with the information in the database. If the officer is satisfied an offence has been committed the image will be forwarded for production of a violation ticket. If not the process is stopped.

If the image is sent for ticket production a standard form, computer generated, provincial violation ticket is generated in the name of the registered owner of the vehicle and is mailed to the address for the owner on file at the Motor Vehicle Registry. The violation ticket will offer the option of a voluntary payment if the person does not contest the charge. There is also the alternative of setting a date for trial if the allegations are disputed. The decision to pay the ticket or dispute the charge must be made on or before the first appearance date on the violation ticket. If no decision is made the person is deemed by provincial legislation not to dispute the charge, a conviction is entered and the specified fine imposed.

If a fine is imposed, either after a finding of guilt at trial or after a conviction in absence (described above), enforcement and collection is carried out by the Province. Unpaid fines may lead to the Province withholding operator's licences and motor vehicle registration, amongst other services.

Under no circumstances is fine collection carried out by the City of Edmonton or any entity providing services to either the City or the Edmonton Police Service with respect to automated traffic enforcement.

(2) **Red Light Offences**

This type of enforcement is carried out using cameras mounted on fixed poles adjacent to intersections governed by traffic lights. The camera is connected to sensors in the pavement as well as the traffic signals. When a signal light turns red the sensors in the road are activated and will detect any vehicle then driving over them. If the vehicle proceeds over the sensors and then into the

intersection, the camera is triggered and several photos of the vehicle and intersection lights are taken.

On a regular basis the film in the camera is removed by an operator and submitted for processing.

From this point forward the process is identical to that for speeding offences with one exception. As there is no peace officer operating the camera at the time of the image being produced the final review and determination as to whether an offence appears to have been committed is made by a police officer with the Edmonton Police Service working in the Specialized Traffic Operations Unit. If the officer is satisfied an offence has been committed the image will be forwarded for production of a violation ticket. If not the process is stopped.

All of the other checks and balances described in the process for speeding offences remain in place for red light offences.

VI. COMPONENTS IN THE DELIVERY MODEL FOR AUTOMATED TRAFFIC ENFORCEMENT

Automated traffic enforcement may be easily divided into two distinct components:

1. Equipment; and

2. Processing and Ticket Production.

The equipment used in automated traffic enforcement is sometimes also referred to as the “front end” part of the enforcement. For speed enforcement this equipment consists of a van or other similar vehicle; a camera; radar control unit; flash unit; antenna and related accessories. For red light enforcement this equipment consists of poles installed at intersections; a camera, two flash units and related accessories and wire loop sensors built into the roadway and connected to both the camera and the traffic signals.

The processing and ticket production aspects of automated traffic enforcement are sometimes also referred to as the “back end” part of the enforcement. This component is essentially identical for both speeding and red light offences. It involves the processing of film to produce digital images, the “double blind” review of these images to ensure the integrity of the system, the sharing of information with the Motor Vehicle Registry, a final review by either a peace officer or a police officer with the Edmonton Police Service to confirm whether or not there are grounds to believe an offence has been committed and, if so, computer production of a provincial violation ticket.

Once the violation ticket has been issued and served the matter is within the jurisdiction of the Province and the courts. If a fine is imposed responsibility for collection of the fine amount is with the Province. Neither the City, nor any supplier of services as part of automated traffic enforcement play any role in the collection of fines.

VII. CURRENT DELIVERY MODEL

(1) Equipment

Since the implementation of automated traffic enforcement in Edmonton, the City, through the Edmonton Police Service, has contracted for the annual provision of almost all equipment used in such enforcement. This includes all cameras, flash units and related accessories, all radar control units, and all intersection poles. This equipment is owned by the provider and an annual fee is charged to the City for it's use and maintenance. The City does not acquire ownership of the equipment over the course of the contract. It is, in essence, a rental agreement.

The one significant exception are the vans used in the enforcement of speeding violations. These vans are owned by the City.

(2) Processing and Ticket Production

As with the provision of equipment, the City, through the Edmonton Police Service, has contracted for the annual provision of almost all activities required for the processing of possible violations and the production of violation tickets. The contractor processes the film and digitizes the images. The contractor provides the database for storing the information. The contractor provides staff members who do the first and second reviews of each image. Finally, the contractor provides the software that handles these processes and generates violation tickets where required. The City does not acquire any ownership of the software system over the course of the contract. As with the equipment it is, in essence, a rental agreement.

It is important to note that the contractor does not make the final determination as to whether or not a ticket will be issued. This decision is made by a peace officer or police officer with the Edmonton Police Service. All of the criteria with respect to enforcement standards must first be satisfied and there must be compliance with all requirements relating to the issue of a violation ticket contained in the Provincial Offences Procedure Act.

At no time has the City or the Edmonton Police Service contracted out the decision making authority regarding whether or not an offence has been committed to a third party.

(3) Advantages of Current Model

The “turn-key” approach to automated traffic enforcement can be advantageous for smaller municipalities without the economies of scale present to justify up front capital expenditures for either equipment, software development or both.

The approach is also advantageous for municipalities of any size interested in implementing automated traffic enforcement as a temporary, short term or pilot project. After a period of time if the municipality decides on a long term approach to automated traffic enforcement then alternative methods of delivery may be examined.

The latter is an apt description of the situation involving the City of Edmonton. Automated traffic enforcement was first implemented as a pilot project on a very limited scale. Over time enforcement has grown in an effort to achieve increased traffic safety. A review of alternatives at this stage appears prudent.

(4) Disadvantages of Current Model

At some point economies of scale make contracting out the provision of equipment and the processing and production of tickets less cost effective than other alternatives. For municipalities of a certain size with a long term approach to this type of enforcement it may be more cost effective to consider ownership options.

A second disadvantage of the current model is the storage and retention of personal information used in the enforcement process by a third party. This is not to say there are any security concerns with respect to the current, or any other, provider. There has never been any allegation of such a problem. In addition there are strict requirements imposed upon the contractor as to what use may be made of information. Again, there have never been any concerns raised with respect to this issue on the part of the current provider. However, there is a generally held perception that information gathered by a municipality as part of enforcement activities is best retained solely by the municipality. This certainly increases the level of accountability and can serve to increase public confidence in the system.

Although this latter disadvantage is likely one of perception more then reality it is seen as a concern worth mentioning.

There have been concerns raised in the past that a further disadvantage of involving a third party in the processing and production of tickets somehow allows the third party to control its own revenue by manipulating the number of tickets being issued.

There is no substance to this allegation. Even if the third party is paid on a per ticket basis they do not control the number of tickets issued. First, they may only deal with the images provided to them by the Edmonton Police Service. Second, a representative of the Edmonton Police Service has the final say on whether or not a ticket will be issued and this decision must be made in compliance with internal enforcement standards and all applicable legislation.

VIII. RECOMMENDED DELIVERY MODEL

(1) Equipment

After reviewing the current delivery model, and taking into account the advantages and disadvantages of that model, and after reviewing delivery models in other jurisdictions and after reviewing available technologies, suppliers and estimated costs, the working group recommends the City of Edmonton transition from the current model and purchase, rather than rent, all equipment used in automated traffic enforcement. This includes:

- cameras;
- flash units;
- related accessories;
- radar units;
- intersection poles; and
- other miscellaneous equipment.

The City already owns the vans used in speed enforcement and the wire loops used in red light enforcement and so status quo is recommended here.

It is recommended the City prepare two Requests for Proposals (RFP's) for the provision of this equipment. One will be for equipment used in the enforcement of speeding offences. The other will be for equipment used in the enforcement red light offences.

It is felt by the Working Group that having two separate RFP's will make the process more open and more competitive. It will allow all providers to stress the strengths of their respective products in each area.

Although the actual technical requirements to be included in the RFP's will be determined with appropriate input from both the City and the Edmonton Police Service it is recommended by the Working Group that:

1. both RFP's mandate the use of digital photography;

2. the intersection RFP include a requirement for the capability to provide both "invasive" enforcement (i.e. wire loops in the roadway) and "non-

invasive" enforcement (i.e. virtual loops using radar) at intersections; and

3. the intersection RFP include a requirement for the capability to enforce additional intersection infractions that have been added to other provincial legislation and which may be added to Alberta's in the future.

It is important to understand this list is not comprehensive but does include key provisions related to the use of the most current technology and the ability to adapt to legislative change by the province.

Other provisions recommended for inclusion in the RFP's are:

4. the ability to purchase additional units over the term of the contract;

5. the contractor providing all service and maintenance of the equipment over the term of the contract as well as a provision for replacement of any equipment if required; and

6. the ability of the equipment to produce an output that will be capable of use in the system for ticket production to be used by the City (see following section).

The City will continue to own the vehicles used in speed enforcement and the wire loops in the roadway used in red light enforcement. No changes are recommended to the manner in which either are acquired.

(2) **Processing and Ticket Production**

After reviewing the current delivery model, and taking into account the advantages and disadvantages of that model, and after reviewing delivery models in other jurisdictions, and after reviewing available technologies, suppliers and estimated costs, the Working Group recommends the City of Edmonton transition from the current model and purchase the software used in the processing of violations and production of tickets. It is also recommended that processing of violations and production of tickets be conducted by City staff rather than staff employed by a third party contractor.

It is recommended the City prepare a Request for Proposal (RFP) for the provision of this software as well as IT hosting and management services. It will be necessary to complete this RFP before the two mentioned previously dealing with equipment as the software selected will set the standard for the outputs the equipment must generate.

Although the actual technical requirements to be included in the RFP will be determined with appropriate input from both the City and the Edmonton Police Service it is recommended by the Working Group that:

1. the RFP require on-site design to ensure compatibility with specific City of Edmonton requirements;

2. the RFP provide for training of all appropriate staff members;

3. the RFP provide for ongoing maintenance of the software for the term of the contract;

4. the RFP provide for the off-site hosting and managing of the system; and

5. the RFP provide a requirement that the system may also be used to process bylaw violations and produce violation tickets for those offences as well.

(3) **Advantages of Recommended Model**

The Working Group identified a number of advantages to the recommended model for delivery of automated traffic enforcement. These include:

1. Cost Savings

The cost savings of the recommended model appear to be significant. Although up front costs in the first year would likely be somewhat higher than incurred at present (for an equivalent level of enforcement) these costs would appear to be completely recovered by either year two or three. From that point onward the program of automated traffic enforcement could be delivered at a reduced cost.

A more detailed comparison of the costs in both models is contained in Part IX of this report.

2. Flexibility

The recommended model will provide the City and the Edmonton Police Service with the ability to design a system of automated traffic enforcement that best achieves the goal of increased traffic safety, given considerations specific to the City of Edmonton.

3. Synergy With Respect to Ticket Production

The City of Edmonton already processes bylaw offences and produces violation tickets for such offences in-house. Staff, procedures and office space are already in place. Although some staff increases would be required to process the additional speeding and red light offences, it would not involve the creation of a process entirely new to the City.

4. Replacement of Current City Bylaw Ticket System

The system used by the City to produce and track bylaw violation tickets (FINES) is at the end of its useful life and has been scheduled for replacement for some time. This is an ideal opportunity to replace this system and to include the process as part of the system to be designed for the production of violation tickets related to automated traffic enforcement.

5. Use of Current Technology

The recommended model will result in the use of digital photography rather than the conversion of a wet film developed image into a digital format. Not only does this result in significantly faster processing (at least two days) it also produces a clearer, sharper image.

The recommended model will also result in the potential use of non-invasive intersection enforcement technology. The City does not currently use such enforcement, however, it has been shown to have advantages for routes with high traffic volumes, heavy truck traffic and for Cities in cold weather climates. Edmonton qualifies on all counts.

During the course of the Working Groups review of the technology in this area it became apparent there are additional opportunities for technological development, all of which could be considered for inclusion on a go forward basis.

6. In House Retention of Information

As discussed earlier in this report this may be more of a perceived benefit than an actual one but is worthy of consideration nonetheless.

7. Accountability

Having ownership of all equipment used in the delivery of automated traffic enforcement rest with the City and conducting all processing and review of images as well as ticket production within the City provided increased accountability when contrasted with having these services provided by a third party.

8. Information Tracking

By processing all enforcement of tickets through one internal process the City will be in a far better position to accumulate and analyze data; both financial and practical. This will result in improved reporting as well as the ability to use such data to improve the effectiveness of the program from a traffic safety perspective

9. IT Managed Services for Ticket Production

Consistent with current City practices and objectives, hosting and management services for the proposed ticket production software will be provided to the City.

(4) **Disadvantages of Recommended Model**

The proposed model does not have any disadvantages of a significant nature. The primary consideration under this heading would be the need to transition from a system already in place to a new system. It may be viewed by some that the design and training involved in implementing a new system would constitute a disadvantage but in the longer term the Working Group considers this to be of, at most, a minor nature.

IX. COST COMPARISONS

The following is a five year cost comparison contrasting the current delivery model with that recommended by the Working Group. The costs of the recommended delivery model are estimates but thought to be conservative in nature. The costs of the current delivery model are based on the terms of the contract now in place.

Three scenarios are presented for consideration. One reflects the current approximate volume of violation tickets on an annual basis. The second contemplates an approximate 25% increase in the volume of tickets while the third provides for an approximate 25% reduction in the volume of tickets. Neither of the latter two scenarios are seen as probable within the next five years, however, they are provided to illustrate the perceived advantages of the proposed model regardless of volume.

All scenarios include the following assumptions:

1. Current levels of automated traffic enforcement are maintained in years one to five. This includes five photo radar (speeding) units and 24 red light (intersection) units. This is to maintain the current level of traffic safety provided by such enforcement.

2. Direct costs to the Edmonton Police Service (i.e. staffing) and the costs of peace officers involved in the operation of automated traffic enforcement are not included. These costs are identical in both the current and proposed delivery models.

3. The costs do not account for inflation. Once again, any inflation is projected to impact either delivery model in an essentially identical manner.

4. The costs do not include GST. As above, GST would apply to both models and is therefore a neutral factor.

5. Figures are rounded to the nearest thousand dollars.

All estimates are based on figures provided by the industry to the Working Group in the course of the review. Where costs were estimated to be within a significant range the high end of the range was used. Equipment purchase estimates provided are thought to be at the high end of what may be available through a competitive RFP. The estimate provides for the purchase of sufficient equipment to replace all currently active automated traffic enforcement in the first year of the proposed delivery model.

Operating expenses will be incurred on an annual basis and are projected as relatively stable over the five year period. There is a possibility of slightly increased costs in these areas but the amount is not projected to be significant in terms of the overall program.

Capital costs illustrated would be incurred only in the first year and reflect an amount sufficient to replace all automated traffic enforcement equipment currently in use.

Scenario 1 : Annual Ticket Volume - 150,000

Delivery Model	Year 1	Year 2	Year 3	Year 4	Year 5
Current Model	$2,798,000	$2,798,000	$2,798,000	$2,798,000	$2,798,000
Recommended Model	$4,455,000	$555,000	$555,000	$555,000	$555,000
Cost Reduction (Increase)	($1,657,500)	$2,243,000	$2,243,000	$2,243,000	$2,243,000
Cumulative Cost Reduction (Increase)	($1,657,000)	$586,000	$2,829,000	$5,072,000	$7,315,000

The breakdown of the estimated costs of the recommended delivery model are as follows:

CAPITAL EXPENSES (YEAR ONE ONLY)

Ticket Processing Software Development	$1,000,000
Equipment Purchase	$2,900,000
TOTAL CAPITAL:	$3,900,000

OPERATING EXPENSES (ANNUAL)

Staffing	$300,000
Software Maintenance	100,000
IT Managed Services	100,000
Equipment Maintenance	50,000
Hardware Leases	5,000
TOTAL OPERATING:	$555,000

Scenario 2 : Annual Ticket Volume - 187,500

Delivery Model	Year 1	Year 2	Year 3	Year 4	Year 5
Current Model	$3,416,000	$3,416,000	$3,416,000	$3,416,000	$3,416,000
Recommended Model	$4,455,000	$555,000	$555,000	$555,000	$555,000
Cost Reduction (Increase)	($1,039,000)	$2,861,000	$2,861,000	$2,861,000	$2,861,000
Cumulative Cost Reduction (Increase)	($1,039,000)	$1,822,000	$4,683,000	$7,544,000	$10,405,000

The breakdown of the estimated costs of the recommended delivery model are as follows:

CAPITAL EXPENSES (YEAR ONE ONLY)

Ticket Processing Software Development	$1,000,000
Equipment Purchase	$2,900,000
TOTAL CAPITAL:	$3,900,000

OPERATING EXPENSES (ANNUAL)

Staffing	$300,000
Software Maintenance	100,000
IT Managed Services	100,000
Equipment Maintenance	50,000
Hardware Leases	5,000
TOTAL OPERATING:	$555,000

Scenario 3 : Annual Ticket Volume - 112,500

Delivery Model	Year 1	Year 2	Year 3	Year 4	Year 5
Current Model	$2,179,000	$2,179,000	$2,179,000	$2,179,000	$2,179,000
Recommended Model	$4,455,000	$555,000	$555,000	$555,000	$555,000
Cost Reduction (Increase)	($2,276,000)	$1,624,000	$1,624,000	$1,624,000	$1,624,000
Cumulative Cost Reduction (Increase)	($2,276,000)	($652,000)	$972,000	$2,596,000	$4,220,000

The breakdown of the estimated costs of the recommended delivery model are as follows:

CAPITAL EXPENSES (YEAR ONE ONLY)

Ticket Processing Software Development	$1,000,000
Equipment Purchase	$2,900,000
TOTAL CAPITAL:	$3,900,000

OPERATING EXPENSES (ANNUAL)

Staffing	$300,000
Software Maintenance	100,000
IT Managed Services	100,000
Equipment Maintenance	50,000
Hardware Leases	5,000
TOTAL OPERATING:	$555,000

A review of these figures shows that regardless of whether current ticket volumes remain steady, increase or decrease the potential for cost reductions in the delivery of automated traffic enforcement are considerable.

Assuming the volume of tickets resulting from automated traffic enforcement remains at approximately current levels the recommended delivery model is estimated to achieve cost reductions totaling in excess of $7,000,000 within the first five years of operation.

X. FLOW THROUGH ISSUES

The implementation of the delivery model for automated traffic enforcement recommended in this report will require attention be given to a number of issues. These include:

(1) Budget Adjustments

Under the current delivery model the annual costs incurred pursuant to the contract with the supplier of equipment, processing and ticket production involved in automated traffic enforcement are included within the annual budget for the Edmonton Police Service.

Pursuant to the recommended delivery model these costs would no longer be incurred to a third party and accordingly the Working Group recommends this amount be removed from the police budget and re-allocated to the budgets of the City departments incurring the costs.

The amount currently allocated to the police budget to cover the costs of officers operating the vans involved in speed enforcement would remain within the police budget. This expense would not change with the recommended delivery model.

The intention of these adjustments is to have a neutral impact upon the budget for the Edmonton Police Service. Only the amount allocated for costs the Service would no longer incur would be removed.

In terms of City department budgets year one would involve funds for the Corporate Services Department for the software development and operating costs involved in violation processing and ticket production. Year one would also involve funds for the Transportation Department to purchase the equipment required for automated traffic enforcement. Subsequent years would require ongoing funding to the Corporate Services Department for operating costs and possibly to the Transportation Department for further traffic safety initiatives (see below).

(2) **Transition Plan**

If approved, the recommended delivery model would require a transition from a contractor provided service to an in-house operation. The transition will involve RFP's for both software and equipment. Software will require design and training. New equipment may also require training.

In the interim the current contract provides for a continuation of services as required and assistance, if necessary, with any transition to a different delivery model. In addition, the City continues to process bylaw violations and produce tickets for such violations. Use of the current system for doing so can continue until a replacement system is ready.

The actual transition time table would be determined once the recommended delivery model was accepted. The Working Group recommends work begin immediately on the RFP's with a working goal of a complete transition by no later than mid 2009 or possibly earlier if it is practical to do so.

(3) **Roles of the Parties**

1. The Edmonton Police Service

Pursuant to the Province of Alberta's *Automated Traffic Enforcement Technology Guidelines*:

> "… responsibility for the operation of the Automated Traffic Enforcement Program shall rest with the police service of jurisdiction, which will provide direction in the following areas by:
>
> - Ensuring enforcement is conducted in accordance with local Traffic Safety Plans;
> - Directing at which sites automated traffic enforcement technology is to be used; and
> - Setting periods of operation and duration of enforcement."

The *Guidelines* also provide that:

> "Police services in Alberta not only have the primary responsibility for traffic safety enforcement but also have the expertise to determine where automated traffic enforcement technology can best be deployed to compliment existing traffic safety initiatives. Automated traffic enforcement technology programs under the direction of police will ensure compliance with existing standards and consistent enforcement practices geared towards traffic safety." (emphasis added)

Therefore, pursuant to provincial guidelines the Edmonton Police Service will have overall responsibility for the operation of the program. This is not a change from the current delivery model.

2. The City of Edmonton

(a) Office of Traffic Safety

In discussing the principles for the use of automated traffic enforcement technology the *Guidelines* state:

> "Traffic safety data must determine if and where automated traffic technology will be used. These criteria include, but are not restricted to, high-risk, high-frequency and high collision locations."

The Office of Traffic Safety is particularly well positioned to collect and analyze data related to traffic safety. It is anticipated this information will be shared on a regular basis with the Edmonton Police Service to assist in the operation of the program. The Office of Traffic Safety is also the suggested area for responsibility with respect to acquisition of the equipment used in automated traffic enforcement. Through data analysis and ongoing studies and consultation the Office of Traffic Safety can ensure the level of automated traffic enforcement is optimal for attaining the goal of increased traffic safety.

(b) Bylaw Ticket Administration and Remittance Processing

This area will oversee the processing of alleged violations and preparation of files for review by a representative of the Edmonton Police Service. As discussed elsewhere in this report it is the officer who will decide whether or not reasonable grounds exist to believe an offence has been committed. Once this decision has been made this area will have responsibility for production and service (by mail pursuant to provincial legislation) of the violation ticket.

This area will also be responsible for compiling the material required for any court appearance scheduled due to a not guilty plea being entered in response to a ticket. This material will consist of photographs of the alleged offence and standard form document affidavits.

(4) **Ongoing Funding for Traffic Safety**

As discussed in the *Guidelines*:

> "Automated traffic enforcement technology, <u>combined with other speed enforcement methods, education and awareness</u> can help reduce the number and severity of collisions on our roads." (emphasis added)

It is recognized by the Working Group that automated traffic enforcement is only one piece of the traffic safety puzzle.

Given the cost savings expected if the recommended delivery model is implemented it is further recommended by the Working Group that an appropriate amount of the savings be directed towards traffic safety initiatives through the Office of Traffic Safety. This may be through automated traffic enforcement, other methods of enforcement, or programs of education and awareness.

(5) Fine Revenues

Pursuant to provincial legislation fine revenues from Traffic Safety Act offences within the City of Edmonton accrue to the City. These fine revenues do not belong to the Edmonton Police Service.

There has been, in the past, a misconception amongst members of the public that automated traffic enforcement could be used purely to increase budget revenues. Not only is there a lack of substance to such allegations it would be contrary to the very guidelines under which such programs of enforcement are carried out.

Implementation of the recommended delivery model should provide an even stronger foundation to rebut such allegations. The Edmonton Police Service would not be receiving funds to provide to a third party supplier and no third party would be paid on a per ticket basis. Although checks and balances have always existed to prevent a third party supplier from being able to manipulate revenues this will render the debate moot.

XI. SUMMARY AND RECOMMENDATIONS

(1) Summary

Consistent with the purpose of this project the Working Group:

(a) analyzed the current delivery model for automated traffic enforcement in the City of Edmonton; and

(b) reviewed and compared alternative delivery models for automated traffic enforcement.

The findings of the Working Group were that an alternative to the current delivery model is both feasible and capable of generating significant cost savings to the City in both the long and short term.

(2) **Recommendations**

The Working Group makes the following recommendations to City Council:

1. That administration in consultation with the Edmonton Police Commission and the Edmonton Police Service take all steps necessary to implement the recommended delivery model for automated traffic enforcement described in Part VIII of this report; and

2. To ensure a consistent level of traffic safety in the transition from the current delivery model to the recommended delivery model administration bring forward a budget request at the outset of the transition in an amount sufficient to fund the purchase of an equivalent number of enforcement units to that now in place (being five photo radar units and 24 intersection red light units).

PREPARED AND SUBMITTED THIS 21ST DAY OF JUNE, 2007.

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PROJECT MANAGER
AUTOMATED TRAFFIC ENFORCEMENT PROJECT, 2007