Safe City Initiative
for
The City of Spruce Grove

December 2008
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The City of Spruce Grove is a growing community. The population in Spruce Grove in 2008, is in excess of 22,000 citizens, and is predicated to continue to grow. The increasing population results in more vehicle traffic on our traffic corridors and moving through Spruce Grove intersections. RCMP “K” Division Traffic Services reports 25% of all fatal and serious injury collisions occur at controlled intersections.¹ For the safety of its residents, Spruce Grove must ensure its intersections are safe and continue to remain safe. The Safe City Initiative for Spruce Grove considers intersection collisions an avoidable risk for all. It has designed a program that will coordinate a strategic approach to make drivers aware how important it is to exercise caution at intersections. Disobeying, intersection control devices, is dangerous. Creating an effective Intersection Safety Program will coordinate the monitoring of all 19 intersections. Combining the efforts of all stakeholders will ensure the safety of our intersections now and into the future.

The Intersection Safety Program for Spruce Grove is built upon a foundation of four equally important core principles: public awareness, educational activity, increased enforcement, and intersection design. Public awareness and educational activities are implemented in conjunction with all intersections having photo enforcement. A base line of infractions will be determined from an initial trial period. A 20% reduction, from the base line, will establish the program goal. Statistical data obtained from photo enforcement will be reviewed on a monthly cycle. A six stage approach will ensure the success of the program. An Intersection Safety Committee will review intersections that show consistent non-compliance and examined to determine root causes. Stats obtained, from photo enforcement data, will indicate when the goal of a 20% reduction in intersection collisions has occurred. Far too many collision victims are seen in emergency departments and hospitals, as a result of collisions that were preventable.

1.1 Goal

The goal of the Spruce Grove Intersection Safety Program is to reduce the severity and number of collisions at intersections.

1.2 SMART GOAL

Continuous evaluation will be a key component to ensure the perpetuity of the Intersection Safety Program. Transport Canada recognizes road safety as very significant to all Canadians and created a national traffic safety plan called Road Safety Vision 2010 to address road safety issues. The Vision 2010 report states as one of its sub-target: “20% decrease in the number of road users killed or seriously injured in speed - or intersection - related crashes.”²

The success of the Spruce Grove Intersection Safety Program, will mirror Canada’s vision, and be measured by a quantifiable 20% reduction in intersection related traffic offences. Achieving this reduction will ensure the program goal, of reducing the severity and number of collisions at intersections within our community, is met.

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¹ Intersection Safety Starts with You, Sgt. Sam Hewson, Senior Collision Reconstructionist, RCMP “K” Division Traffic Services
² Transport Canada, Canada Council of Motor Transport Administrators, Road Safety Vision 2010
Background

2.1 Federal Intersection Traffic Safety Initiatives

2.1.2 Road Safety Vision 2010

Canada has taken a lead when it comes to countries that want to ensure its residents are safe on our roads. Transport Canada, Canada Council of Motor Transport Administrators has created a guide to ensure the future safety of our traffic corridors. Road Safety Vision 2010 is Canada's national road safety plan. The goal of the report is to make Canada's roads the safest in the world. The report indicates the high-risk nature of intersections. The report states:

"...most of the collisions at intersections are preventable. The leading factor of collisions, caused by driver action, is disobeying traffic controls."\(^3\)

2.2 Provincial Intersection Traffic Safety Initiatives

2.2.1 Alberta Motor Association - Member Opinion Survey Results\(^4\)

AMA, Alberta Motor Association surveys its membership to gather public opinion of Albertans on Traffic Enforcement. In a 2004 survey the following was reported:

- 87% of members contacted strongly or somewhat supported the use of red light cameras to ticket those who ran red lights.
- 86% of AMA members were somewhat or very concerned over other motorists running red lights.
- 78% of members either strongly or somewhat supported the practice of using photo radar to ticket those who are speeding.

2.2.1 Alberta Health Services

Alberta is promoting traffic safety. As a province it has become aware of the burden that results from these collisions. For example, health providers must provide medical assistance to individuals that are injured as a result of collisions. Each year in the Capital Region there are 25,000 motor vehicle collisions.\(^5\)

- Two out of three injury collisions happen in intersections.
- More than one in four results in an injury or death.
- This represents more than 6,000 injury collisions in the Capital Region each year.

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\(^3\) Transport Canada, Canada Council of Motor Transport Administrators, Road Safety Vision 2010
\(^4\) AMA Member Opinion Survey Results – Traffic Enforcement
\(^5\) Kids Safety Connection, Stollery Hospital, Alberta Health Services
2.2.2 The Alberta Ministry of Transportation
The Alberta Ministry of Transportation was speaking to intersection safety in our province when it created the Alberta Traffic Safety Plan. The comprehensive plan states:

"Recent crash data show that approximately 25% of road users died in collisions at intersections. Intersections on urban streets, where the speed limit is 60 KPH or less, are particularly dangerous. 47% of all people killed and 57% of those seriously injured in intersections crashes were injured or killed at intersections on urban streets."\(^6\)

The Alberta Traffic Safety Plan has adopted the same intersection safety goal as Vision 2010, a 20% reduction in intersection related traffic offences.

2.2.3 RCMP Alberta, Selective Traffic Enforcement Program
RCMP Alberta enforces Alberta Traffic Safety Act; ensuring drivers obey the posted traffic signage. The RCMP has identified that even though it is against the law to disregard posted traffic signage, some drivers need to have enforcement of traffic safety laws. RCMP Alberta has identified this need by creating STEP - Selective Traffic Enforcement Program.

“The failure to stop at these intersections increases the risk of injury to drivers and passengers. The enforcement of traffic safety laws encourages drivers to stop at all intersections…combines awareness and education activities with enforcement efforts to increase road safety across Alberta.” “Analysis indicates that 60% of a population will obey traffic laws for their own safety, 25% will obey laws after being ticketed, and 15% are likely to disregard traffic laws regardless of enforcement efforts.”\(^7\)

2.3 Municipal Intersection Traffic Safety Initiatives

2.3.1 Spruce Grove Quest
To obtain information of what Spruce Grove residents are thinking on various topics a survey was conducted and the results compiled into the report, Spruce Grove Quest. The report states that community members express concerns when asked about transportation goals for Spruce Grove. Residents indicated a priority be given to: "Reduce traffic congestion and provide greater road safety."\(^8\)

Currently, Spruce Grove traffic corridors were observed to be a mixture of arterials and collectors.\(^9\) The design of these traffic corridors was based upon the traffic flow and road functions. Engineered features such as the width of the traffic corridor, traffic controls, and spacing of the 19 intersections were designed to ensure optimal traffic safety.

\(^6\) www.transportation.alberta.ca, Alberta Traffic Safety Plan, Saving Lives on Alberta's Roads
\(^7\) RCMP Alberta, Selective Traffic Enforcement Program
\(^8\) Spruce Grove Quest 2008, Your City...Your Future
\(^9\) Al-Terra Engineering Ltd., 2001 Spruce Grove Transportation Study
Spruce Grove Traffic Enforcement

3.1 RCMP – Spruce Grove / Stony Plain Detachment

RCMP Traffic Services mission statement states: “We are dedicated to improving public safety on our roadways”  

Intersections have been identified as a target area in the RCMP National Traffic Safety Mandate, which states:

- Target Stop Sign / Intersection Violations – 41% of all fatal / serious injury collisions were intersection related.  

The Spruce Grove / Stony Plain RCMP Detachment enforce provincial statute traffic violations and criminal code traffic violations and provided the following statistical information of Spruce Grove intersections.

- Statistical data provided by:
  - Cst. Garth Domm, Stony Plain Traffic Services Investigator
  - Karen Headrick, Spruce Grove / Stony Plain Detachment

<table>
<thead>
<tr>
<th>Criminal Code</th>
<th>Provinical Statute</th>
</tr>
</thead>
<tbody>
<tr>
<td>Collisions Involving Intersections</td>
<td>Intersection related incidents</td>
</tr>
<tr>
<td><strong>2004</strong></td>
<td><strong>2005</strong></td>
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<tr>
<td>10</td>
<td>4</td>
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<td>42</td>
<td>36</td>
</tr>
<tr>
<td>47</td>
<td>19</td>
</tr>
</tbody>
</table>

Provincial files are held for a 2 year period only

10 RCMP Alberta, Selective Traffic Enforcement Program

11 RCMP “K” Division Traffic Services
3.2 Photo Enforcement

Since August 2005, Spruce Grove has contracted photo enforcement. Currently, photo enforcement is contracted to Global Traffic Group Ltd. Although all enforcement is permitted within the contract enforcement has been limited to speed only.

“Each intersection comes with its own dynamics, in most cases that specific distance can vary from site to site in order to operate. The equipment we utilize is portable and can be setup on a tripod within a vehicle. Our equipment can quickly (within 2 minutes) be transferred from one vehicle to another should the need/want arise. We feel our system allows communities to cover multiple intersections with one unit instead of one unit per intersection (freestanding pole system) at a zero capital cost to the community. This allows you to put a public message out that all intersections are photo enforced instead of a select few. In operating, at an intersection, things like visibility, terrain, come into play (to name but a few). We also work closely with the local Alberta Justice Prosecutor(s) and the local RCMP to deal with any issues that may arise in an effort to insure service delivery/prosecution goes as seamless as possible.”

- Statistical data provided by:

  √ Nikki D’Aoust, Global Traffic Group Ltd.

<table>
<thead>
<tr>
<th>Intersection Key:</th>
<th>G - Grove Drive/Campsite Road</th>
<th>H - Calahoo Road /McLeod Ave</th>
</tr>
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<tbody>
<tr>
<td>A - Grove Meadow Drive/Century Road</td>
<td>I - Hwy 16A/Calahoo Road</td>
<td></td>
</tr>
<tr>
<td>B - Century Road/McLeod Ave</td>
<td>J - McLeod Ave/Campsite Road</td>
<td></td>
</tr>
<tr>
<td>C - Century Road/Grove Drive</td>
<td>K - Hwy 16A/Westgrove Drive</td>
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<tr>
<td>D - Hwy16 A/Campsite Road</td>
<td></td>
<td></td>
</tr>
<tr>
<td>E - Century Road/Hwy16A</td>
<td></td>
<td></td>
</tr>
<tr>
<td>F - Grove Drive/Calahoo Road</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Intersection</th>
<th>hrs.</th>
<th>Number of Red Lights</th>
<th>Number Red Light Violations</th>
<th>Violations Based on Crown Criteria</th>
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<tbody>
<tr>
<td>A</td>
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<td>126</td>
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<tr>
<td>K</td>
<td>2</td>
<td>75</td>
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<td>6</td>
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<tr>
<td>Total</td>
<td>46.5</td>
<td>1,573</td>
<td>542</td>
<td>217</td>
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</tbody>
</table>

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12 Nikki D’Aoust, Global Traffic Group Ltd.
The Spruce Grove / Stony Plain RCMP Detachment endorse photo enforcement. Individuals who receive a ticket have broken the law and have driven outside of safety perimeters designated by traffic engineers for that road. Additionally, the RCMP has indicated that photos taken have led to unrelated criminal cases being solved. Each infraction results in two photos. The first photo is a high quality image of the license plate, and a second photo, is an image of the vehicle interior. These photos have assisted the RCMP with criminals being identified and vehicles used in crime, being found. A video of the incident is also available for viewing on line, which illustrates the infraction occurring. Photographic evidence from photo enforcement is proven to result in court cases being easier to convict. A strategy of combining photo enforcement with uniformed presence is the most effective method of traffic enforcement.

### 3.3 Spruce Grove Fire Service

Spruce Grove Fire Services does not enforce traffic offences. However, Fire Services does respond to collisions and provides medical assistance to the patients of those collisions.

- Statistical data provided by:  
  √ Chief R. Kosterman, Spruce Grove Fire Services

<table>
<thead>
<tr>
<th>Year</th>
<th>2005</th>
<th>2006</th>
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<td>Jan - Oct 31</td>
<td>30</td>
<td>46</td>
<td>57</td>
<td>28</td>
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#### Spruce Grove Intersection Safety Program

### 4.1 How to achieve our goal?

To achieve program success the Intersection Safety Program is proposing all 19 intersections in the City of Spruce Grove become photo enforced. Guiding the program are the core principles of public awareness, educational activity, increased enforcement, and intersection engineer design. Continuous monthly evaluation will identify if target goal is achieved, if not, which intersection is problematic, and what core principle needs to be applied. An Intersection Safety Review Committee will be created with representation from RCMP Traffic Safety Specialists, Spruce Grove Traffic Engineers, and Safe City Coordinator. The committee will be tasked, as needed, to review specific identified intersections to determine if non-compliance is related to a design problem of that interchange. Recommendations of the safety committee will then be applied to the intersection. The program strategy is a six stage, statistically evaluated approach.
Stage 1
RCMP Traffic Services Investigator will review the 19 intersections regarding traffic safety. Recommendations and comments received will be reviewed. If problems are identified they will be presented to the Intersection Safety Review Committee for follow up action on that intersection. If no problems are identified than Stage 2 will proceed.

Stage 2
An initial 30-day, no fine period will be rolled out. Rather than receiving a fine, violators will be mailed a warning notice and AMA's intersection safety brochure Take Care Be Aware, Intersection Safety Tips for Drivers. To launch the start of the program, public announcements (4.3 Public Awareness) with intersection safety messages, will identify the launch of the Intersection Safety Program for Spruce Grove.

Stage 3
Intersection monitoring photo enforcement, with penalized infractions, as a result of disobeying intersection control devices, will commence at all Spruce Grove intersections.

Stage 4
After 30 days there will be a statistical review of the data from the prior period. Data will be provided from photo enforcement and will be reviewed by Safe City Coordinator. The total number of infractions is compared to total number in Stage 2. If the number of infractions is 80% or lower than obtained in Stage 2. The Intersection Safety Program's goal will have been met. If the number of infractions recorded are over 80% of the infractions committed in stage 2 than the program proceeds to Stage 5.

Stage 5
Data obtained will be examined on a per intersection basis to determine the intersection(s) that have the highest number of infractions. These are determined to be the worst intersections and a uniformed presence will be launched for a 30-day period. If the same intersection is identified as having the highest number of infractions two consecutive months that intersection will proceed to Stage 6.

Stage 6
Intersection(s) that remained the highest infraction for two consecutive months will be reviewed by the Intersection Safety Committee for possible reasons and problem solving.

The ongoing, consistent monitoring, of all Spruce Grove intersections will enable the goal of ensuring our intersections are safe and will continue to be safe.
4.2 Photo Enforcement Component

The Intersection Safety Program has designed a program that will ensure our intersections are safe and continue to be safe for Spruce Grove. There are 19 intersections in Spruce Grove. Each intersection has 4 possible directions vehicles can travel. Hence there are 76 possible directional interchanges the Intersection Safety Program is monitoring.

The Intersection Safety Program concludes that by facilitating photo enforcement, only **.157% of the time** at each Spruce Grove intersection direction, the safety of our intersections will be improved significantly.

Ongoing enforcement of all Spruce Grove intersections, ensuring compliance of intersection control devices, will achieve our goal.

4.3 Public Awareness

Ensuring the message of intersection safety is a key component to achieve the success of the Intersection Safety Program. To ensure Spruce Grove residents are aware of the program, educational messages will be placed on the City web site. The Spruce Grove Examiner will provide avenues for intersection safety facts and program information. Spruce Grove public information boards will provide areas for display of posters and materials related to intersection safety. Messaging on Spruce Grove utility bills by including intersection safety facts will also be examined.

CRISP - Capital Region Intersection Safety Partnership

The Spruce Grove Safe City Initiative has been tentatively invited to join and become part of CRISP. Joining with other local municipalities in this strategic alliance will be an example to the residents of Spruce Grove of the importance of intersection safety. The City of Spruce Grove will be able to participate in the highly publicized awareness campaigns implemented by CRISP. Since 2001 the Capital Region Intersection Safety Partnership (CRISP), a partnership of Capital Region safety experts, has been creating safety initiatives to save lives on Capital Region roads. CRISP’s goal is to reduce the number and severity of intersection collisions in the Capital Region through participation in public awareness campaigns, enforcement, research, and education. CRISP partners share resources and expertise to implement intersection safety initiatives to influence driver behavior to improve safety on our streets.

CRISP is a strategic alliance, a partnership with:
Alberta Motor Association
Alberta Health Services
City of St. Albert and St. Albert RCMP
Strathcona County and Strathcona RCMP
City of Edmonton and Edmonton Police Services

13 CRISP – Capital Region Intersection Safety Partnership
http: www.drivetolive.ca/Activities_Campaigns/index.html
4.4.2 Educational Activities

Educational intersection safety programs will be offered to schools and service groups of Spruce Grove. A program offered through the Alberta Office of Traffic Safety called Walk the Talk will be offered to K-4 division in both school systems. Implemented by the Safe City Initiative and working with Spruce Grove Enforcement Services this program will emphasize the importance of intersection safety in our community to our families.

4.4.3 Operation Traffic Watch - Community reporting program

The Intersection Safety Program wants to engage the Spruce Grove community, in the enforcement of posted intersection signage, and will implement an anonymous reporting method. Reporting forms will be available where residents can record offender's license plates and details of their offence. Completed forms can be dropped off at municipal offices. Operation Traffic Watch forms will be reviewed for possible follow up action.

Conclusion

Traffic safety affects everyone, in the Spruce Grove community, who use the roads. The Intersection Safety Program ensures everyone gets home safe.

References

- Alberta Centre for Injury Control & Research / Office of Traffic Safety
  Bruce Adams, Regional Traffic Safety Coordinator

- Office of Traffic Safety and Transportation, City of Edmonton
  Gerry Shimko, Executive Director
  Chairperson, CRISP - Capital Region Intersection Safety Partnership

- Global Traffic Group Ltd., Nikki D'Aoust

- Enforcement Services, City of Spruce Grove
  Sgt. Jason Starchuk, Community Peace Officer

- RCMP, Spruce Grove/ Stony Plain Detachment
  Sgt. Jim Martin, Operations Support NCO

- AMA, Alberta Motor Association
  Don Szarko, Manager, Advocacy and Community Services

- Kids Safety Connection, Stollery Hospital, Capital Health
  Dawn MacDonald, Program Manager

- City Engineering, City of Spruce Grove
  Darren Flynn, Technical Services Coordinator

- Spruce Grove Fire Services, City of Spruce Grove
  Robert Kosterman, Fire Chief