



PROTECTIVE SERVICES AUTOMATED TRAFFIC ENFORCEMENT 2020 ANNUAL REPORT

Your City, Your Family, Our duty



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Introduction

Automated Traffic Enforcement (ATE) refers to those traffic law enforcement operations which are performed by either a fixed or mobile system in which the violator is not immediately stopped, but instead the registered owner is issued a violation notice in the mail. Although the fixed systems do not have an operator present at the time of infraction, like the mobile systems, every infraction is reviewed and approved by a community peace officer.

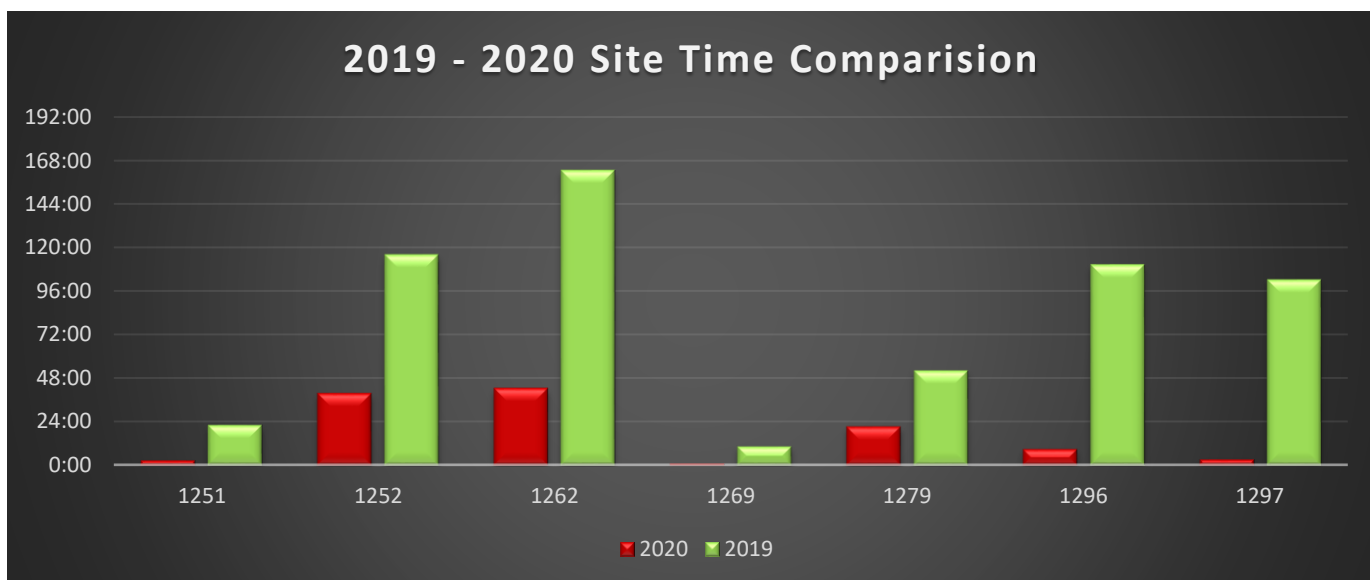
The intent of this report is to increase the amount of analyzed data that is released through annual public reporting, thus enabling public to make informed opinions on the effectiveness of the ATE program in Spruce Grove. Analyzing 2020 data has been very challenging. In 2020 we transitioned from one service provider to another service provider, the province changed rates for both victims of crime and provincial fine retention, the calculation of fines was transitioned from Protective Services to Finance, and the court system removed the identifier code that separated ATE fines from other municipal fines. This also occurred during a worldwide pandemic which not only saw demands on the chief's office affected but affected our service provider, courts, and the Solicitor General's Office as many functions were transitioned to working from home or alternate offices.

This report is the result of many staff hours in analyzing data from two separate service providers and bringing it together in one report that is as informative as possible. We trust the information contained within this report is as accurate and detailed as possible given all challenges in 2020.

Stop Signs

Frequency of Enforcement

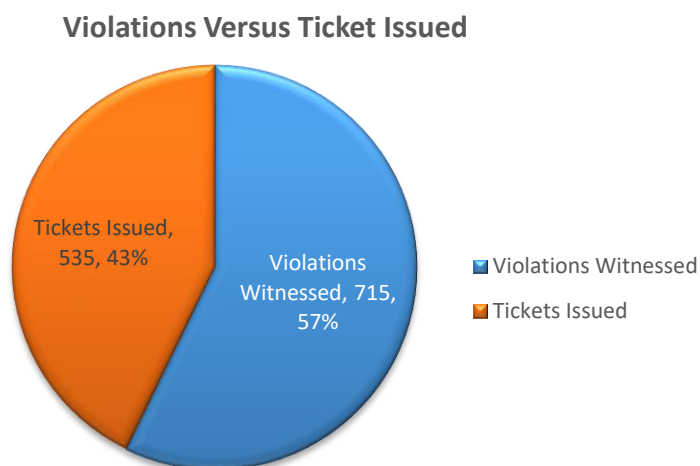
In 2020 there were eight stop sign locations (sites) approved for monitoring. Seven of these sites were monitored by ATE peace officers for a total of 118 hours and 43 minutes. Stopping at a stop sign is required 24/7 therefore the maximum potential enforcement time at these sites was 70,080 hours. This means the sampling of driver behaviour was on average 0.17% based on time.



Violations Observed vs Tickets Issued

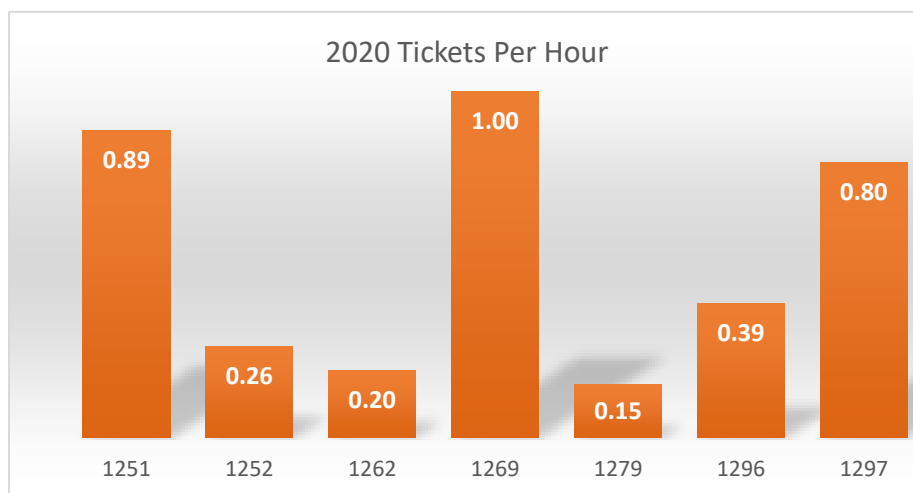
In 2020 there were 715 violations observed and 535 tickets issued. In 2019 there were 4,172 violations observed and 2,780 tickets issued.

The reasons for observed violations not being ticketed vary from obscured license plates to officer discretion. There is no fixed systems related to stop sign violations and an officer is present to observe every violation. If, in the officer's opinion, given all circumstances witnessed at the time of the offence, they form the opinion that a ticket is not warranted, then no ticket is issued.



Tickets per Hour per Site

In 2020 Site 1269 generated the most violations per hour at 1 violation per hour.



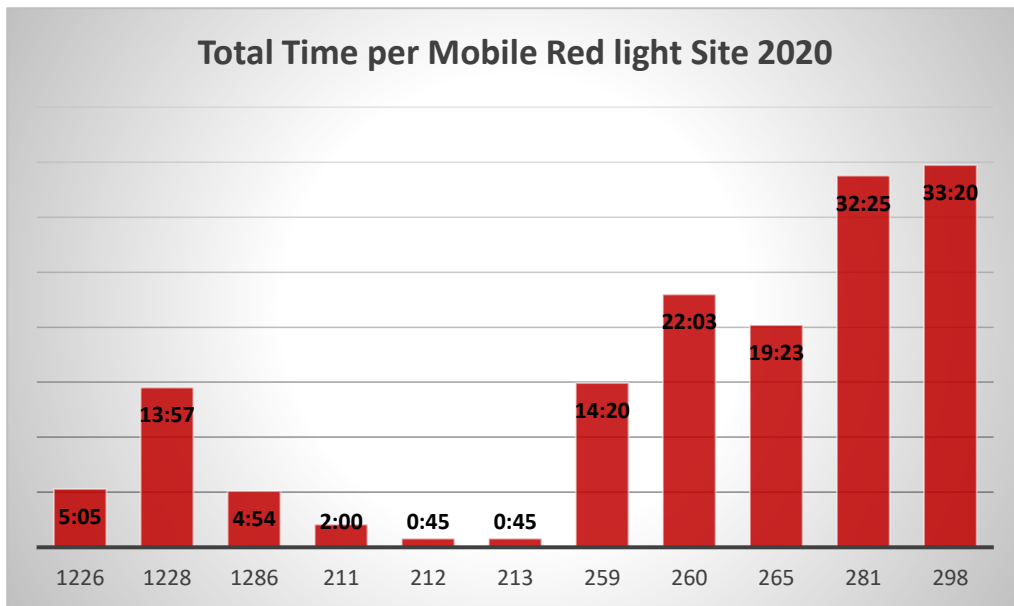
Enforcement Hours vs Tickets Issued per Hour

The highest number of tickets at a site does not equate to the largest number of hours. As an example, Site 1262 had the highest number of enforcement hours and the second lowest number of tickets per hour. While 1269 had the highest number of tickets per hour but received the lowest number of hours of enforcement (excluding site 1280 which was not enforced).

Mobile Red Light

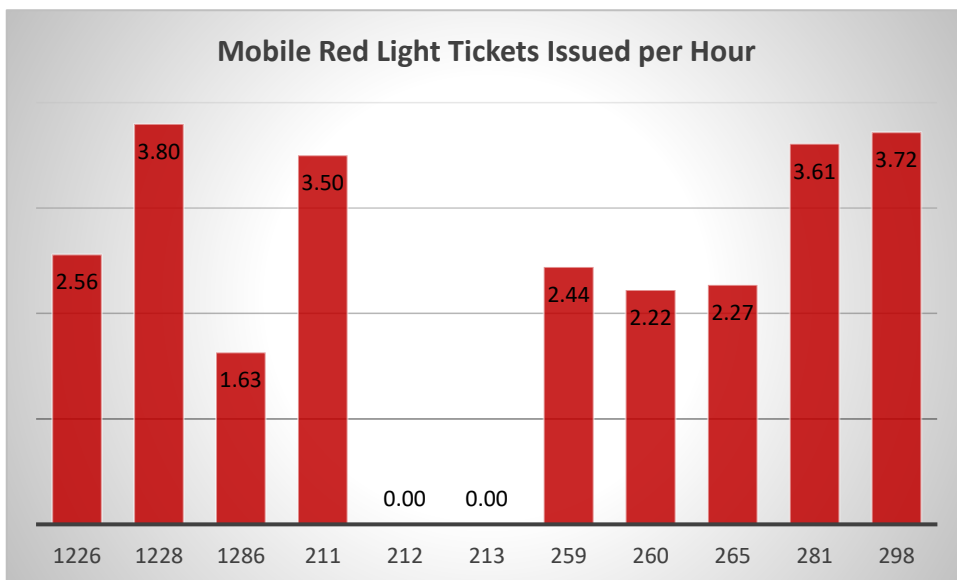
Frequency of Enforcement

In 2020 Mobile Red Light enforcement only occurred in January, February, and March. In total there were 11 sites monitored. Site 298 received the most hours at 33 hours and 20 minutes. This represents 22.38% of the total Mobile Red Light enforcement time in 2020.



Tickets Issued

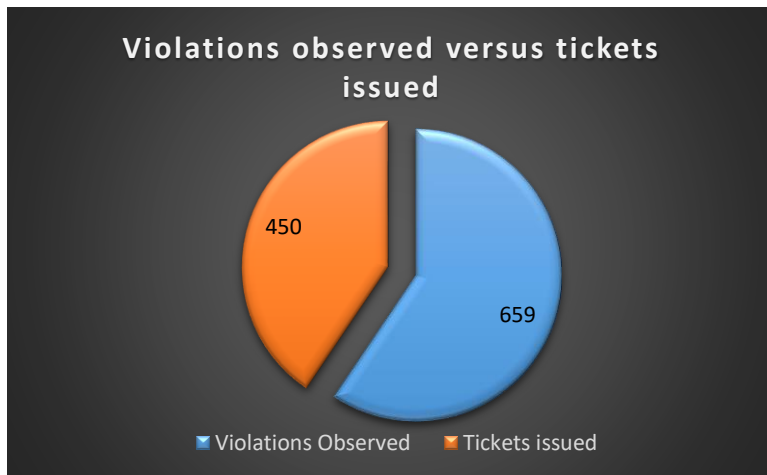
Mobile Red Light enforcement produced a total of 450 tickets in 2020 with an average of 3.02 tickets per hour. Site 1228 had the highest number of tickets per hour, at 3.8, while the sites with the lowest tickets per hour were Sites 212 and 213 with no tickets issued in 2020.



Violations Observed vs Tickets Issued

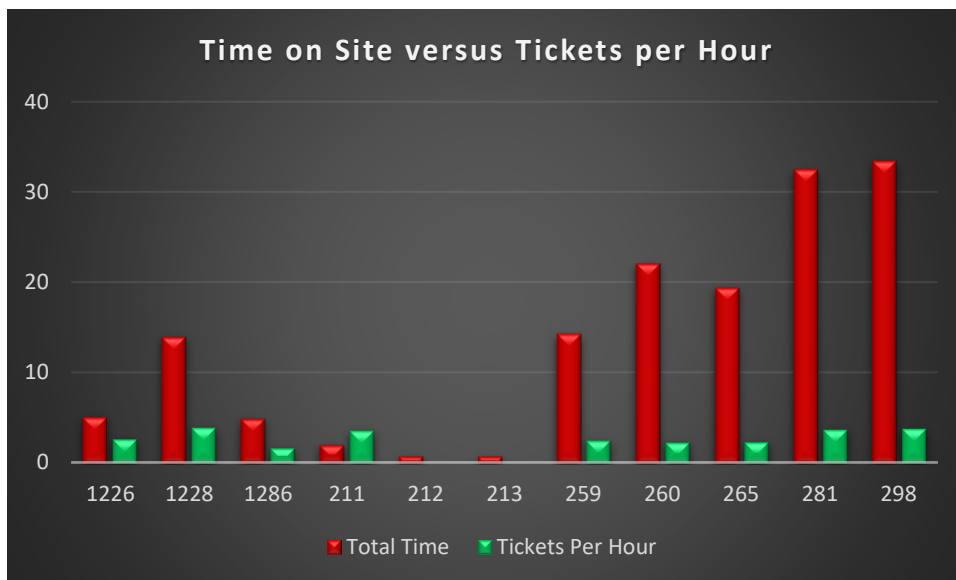
2020 Mobile Red Light, failing to stop violations for all sites combined totaled 659, with 450 tickets issued.

The reasons for not issuing a ticket range from obscured licence plates, to officer discretion. In most cases the reason is officer discretion, based on all the circumstances present when the offence was observed.



Time on Site vs Tickets per Hour

This chart shows the amount of time spent during the year on any particular site compared to the number of tickets generated per hour.



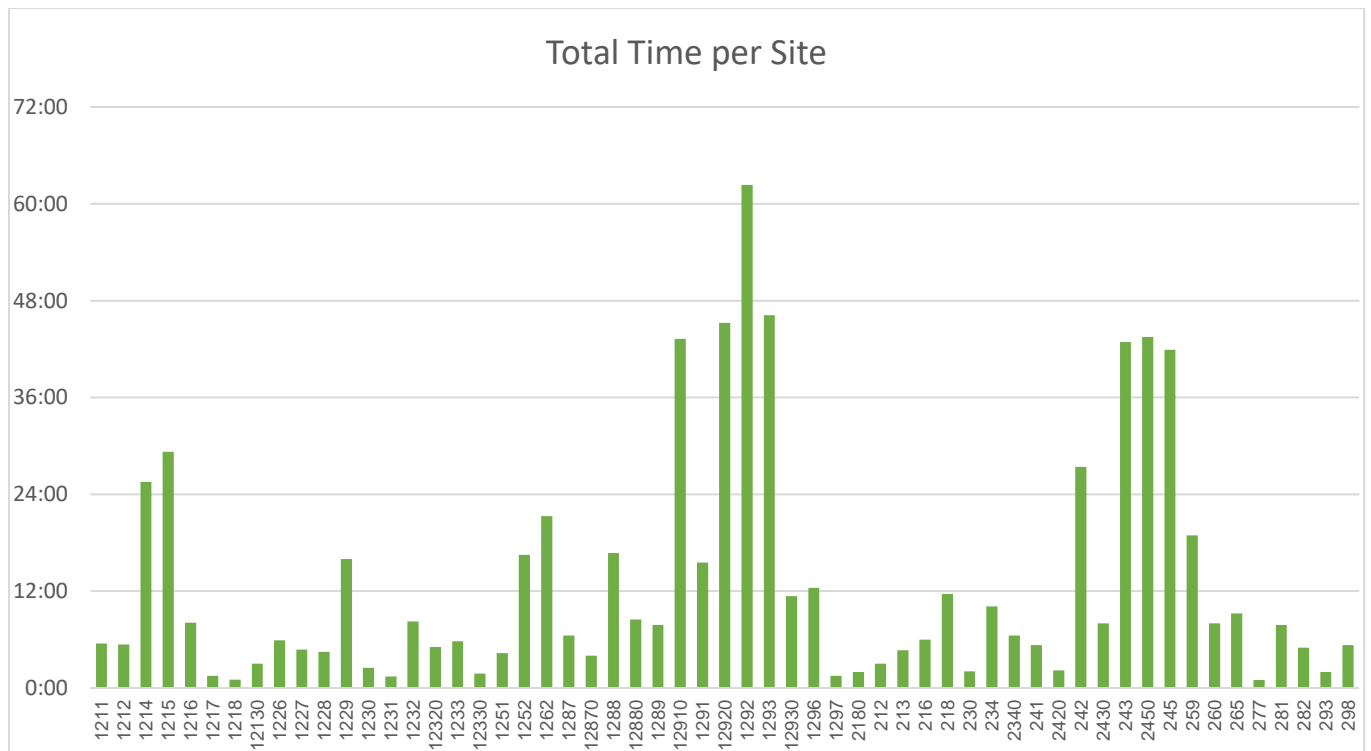
Mobile Speed

Frequency of Enforcement

In 2020 there were 57 sites monitored for speed with ATE mobile enforcement. Many of these sites are duplicated sites. This is due to reporting requirements of overt¹ vs covert². As an example site 245 and 2450 are actually the same location but 245 is overt while 2450 is covert. There were 13 sites used covertly for speed enforcement in 2020 and therefore 44 overt speed sites used. There was a total of 722.5 hours of Mobile Speed enforcement with 184.38 hours being covert and 538.12 being overt.

Site 1292 had the highest amount of enforcement time at 62 hours and 21 minutes or with 8.63% of total time.

The following chart shows the amount of time spent at each Mobile Speed location that was enforced in 2020.

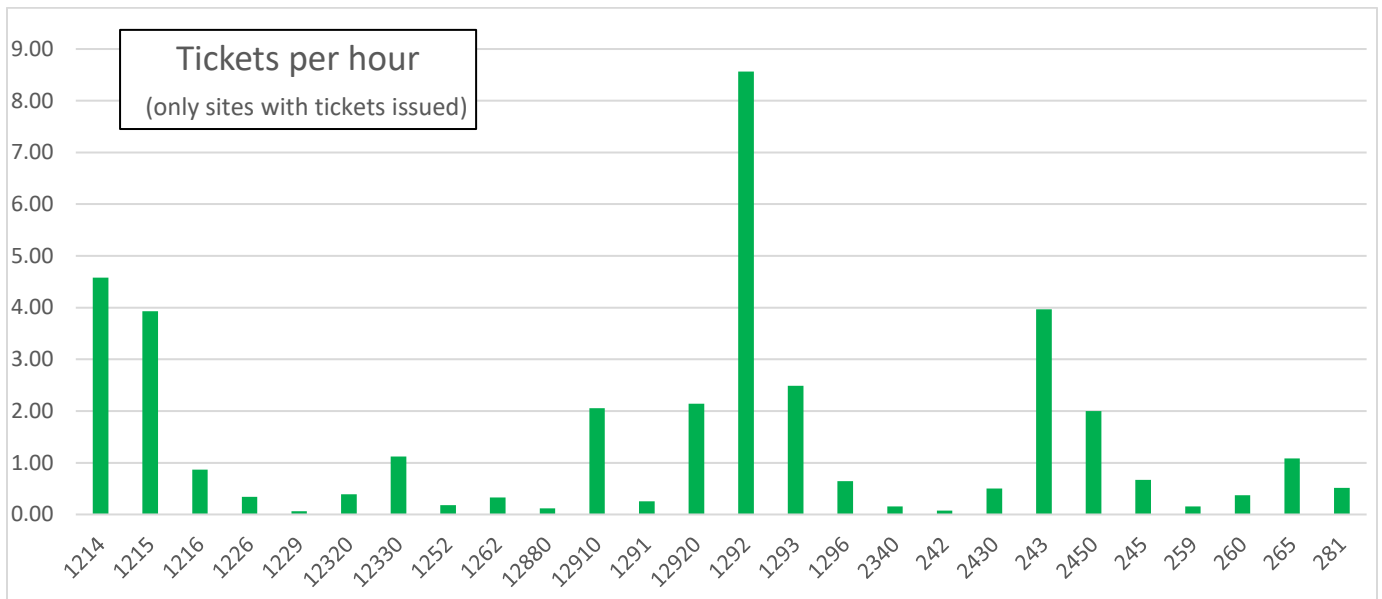


¹ Overt is defined in section titled Overt vs Covert found on page 13.
² Covert is defined in section titled Overt vs Covert found on page 13.

Tickets Issued

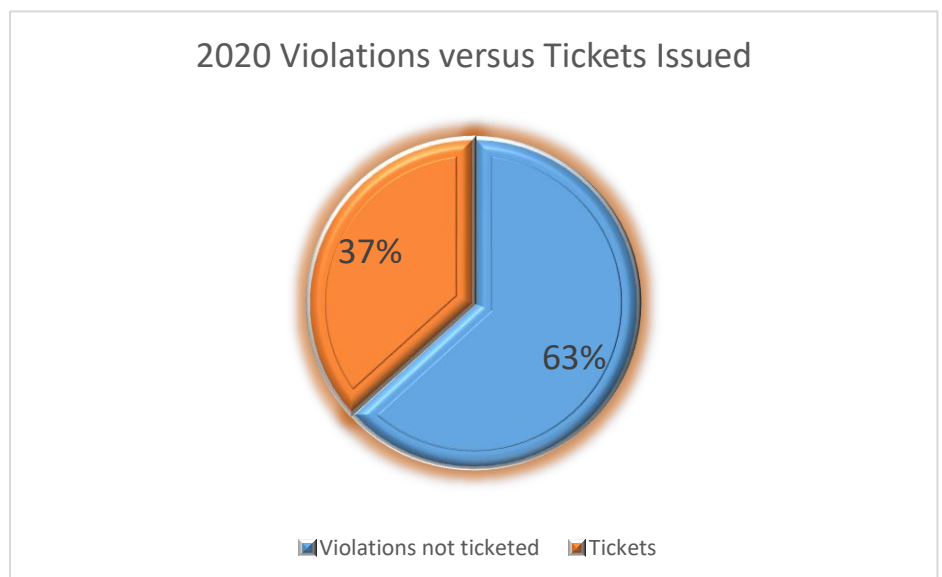
There were 1,414 tickets issued in 2020 from Mobile Speed enforcement. With regard to tickets issued per hour, Site 1292 had the highest number of tickets per hour at 8.56 tickets per hour, while 31 sites resulted in no tickets being issued.

Sites where tickets were issued are shown in the following chart.



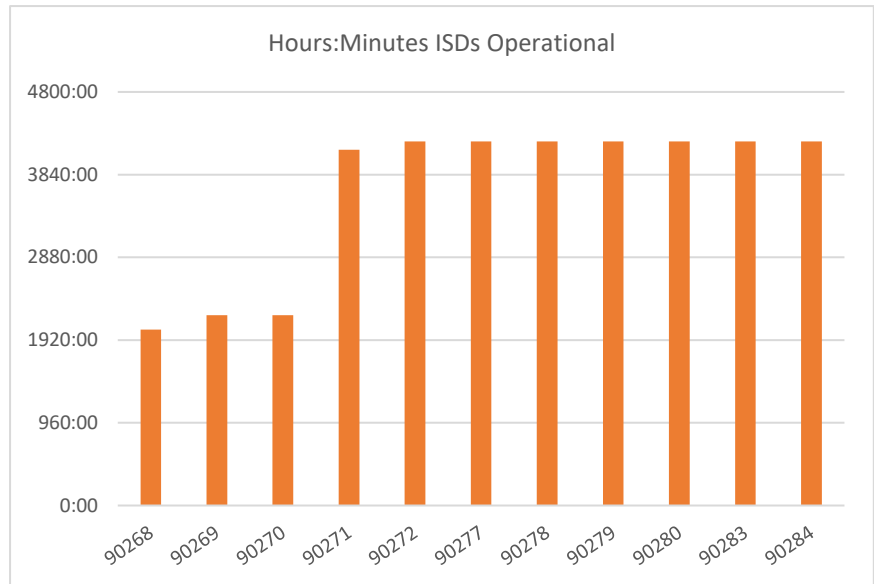
Violation Observed vs Tickets Issued

In 2020 there were 2,433 speeding offenses observed with 1,414 tickets issued.



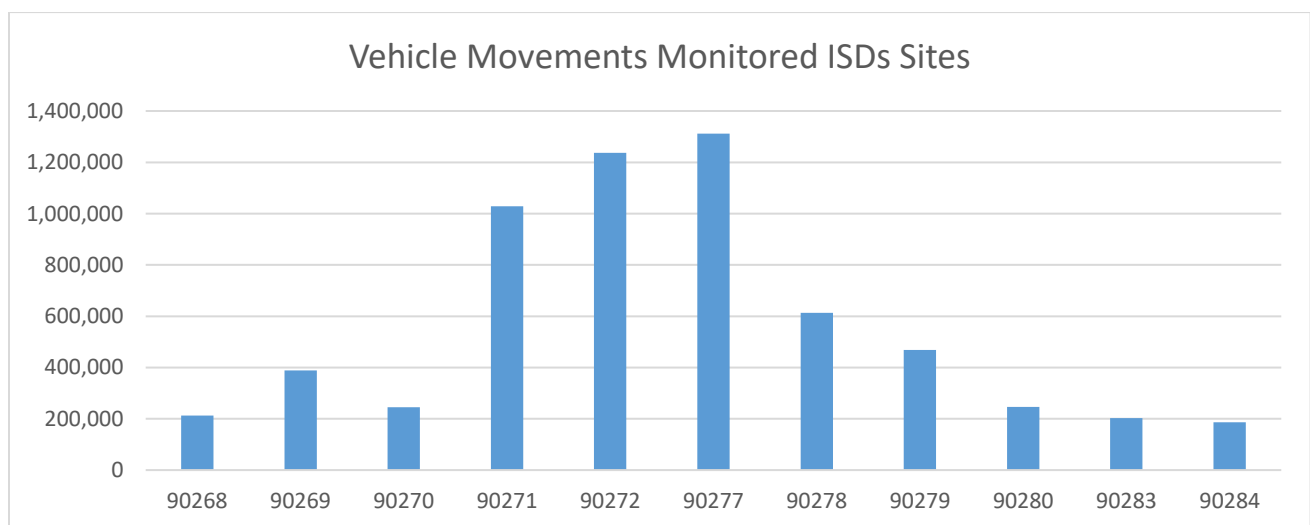
Fixed (ISD) Frequency of Enforcement

In 2020 there were 11 Intersection Safety Devices (ISD) or Fixed Systems. These devices are designed for use 24 hours a day, 365 days a year, and monitor both speed and red light infractions. None of the sites were functional for the entire year and site 90268 was decommissioned in 2020. In total the sites were operational for 40,152 hours in 2020.



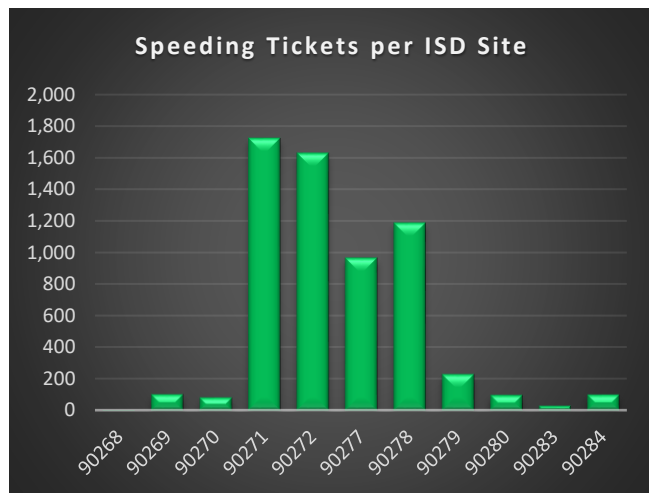
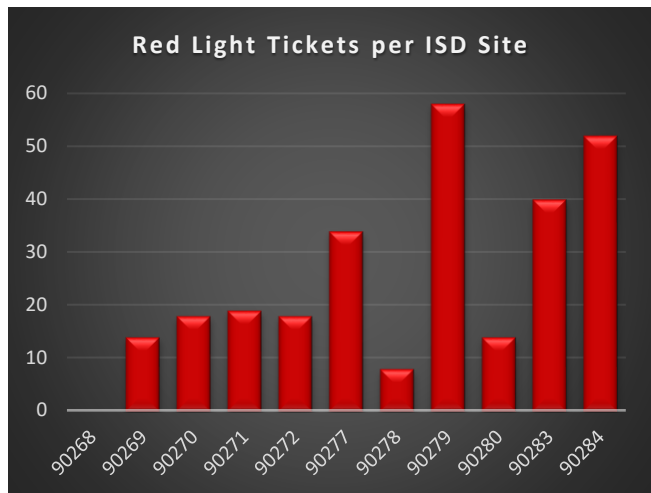
Number of Vehicles Monitored - ISD

In 2020 there were a total of 6,142,152 vehicles movements monitored at the ISD sites. Site 90277 had the most vehicles monitored at 1,311,809.



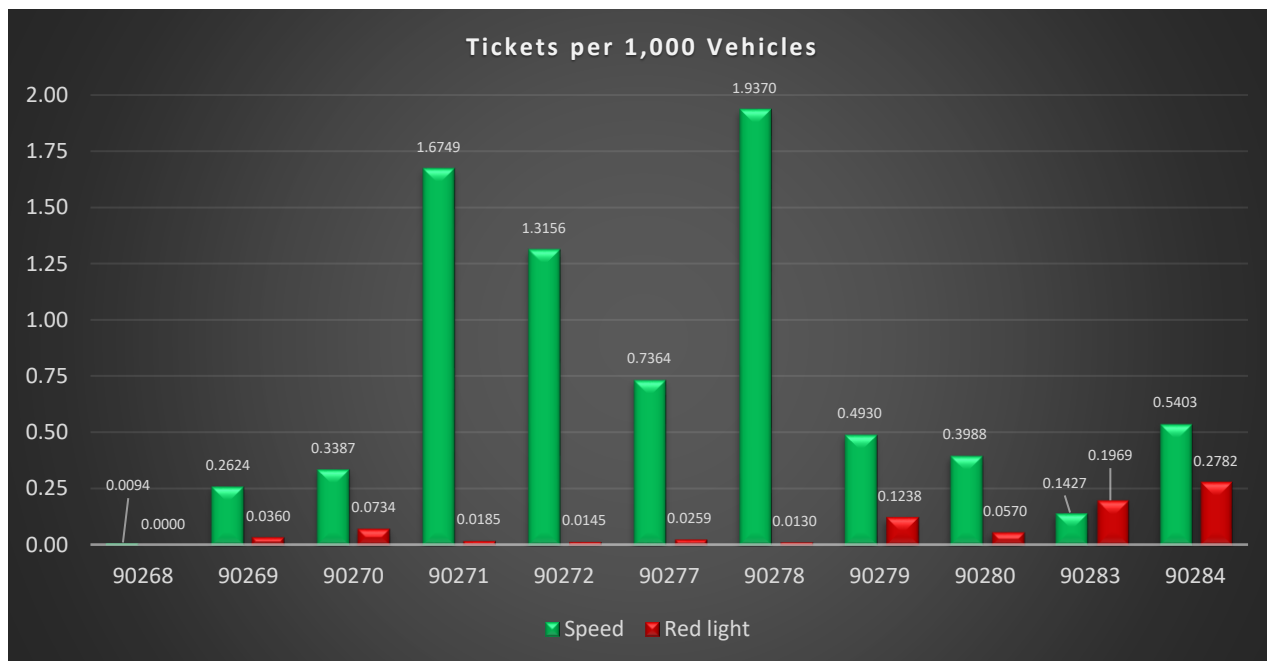
Tickets Issued

In 2020 there were 6,150 speeding tickets issued and 275 red light tickets issued at the ISD sites.



Tickets Issued Versus Total Traffic Volume

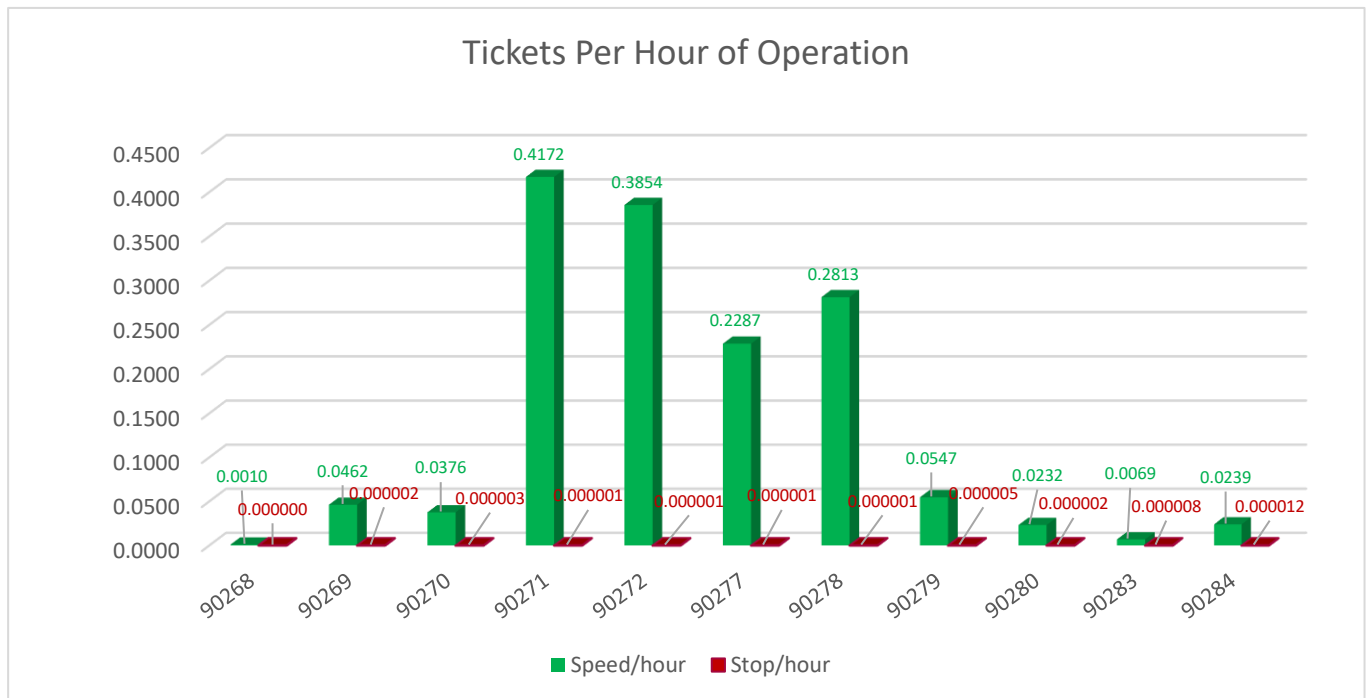
In 2020 there were 6,142,152 vehicles monitored at ISD sites and a total of 6,425 tickets issued, or 0.1046% of vehicles ticketed.



Tickets Issued - Per Hour of Operation

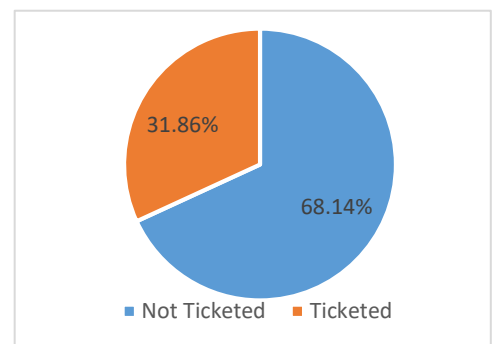
Site 90271 had the most speeding tickets issued per hour with 0.4172 tickets issued per hour.

Failing to stop at the ISD sites remains very low, Site 90284 having the most tickets issued per hour at 0.000012.



Violation Observed vs Tickets Issued

In 2020 the ISD system was replaced which resulted in a period of time where the system ran through a test phase where offences were tracked but not ticketed, there was then a period of time where warnings were issued, and finally red light infractions were recalibrated and counted differently than previous years³



In 2020 the ISD system observed 10,938 speeding violations resulting in 6,150 speeding tickets being issued. There were 2,802 red light failing to stop violations observed with 275 tickets being issued.

³ Stopping past the stop line is a red light infraction, but not ticketed at this time.

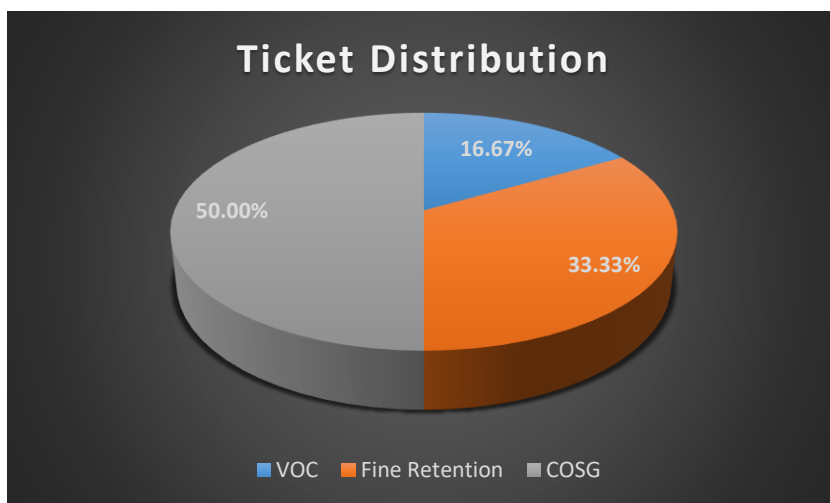
Fines

Actual fines issued in 2020 is a figure that would be too complex to determine. This is as the contractor was changed in 2020, the court coding system was changed in a way that eliminated the separate coding for ATE, the province is transitioning ATE tickets from the courts to “SafeRoads Alberta” all while working in a pandemic.

Fine revenue is divided between the provincial Victims of Crime Fund (VOC), the Province of Alberta Fine Retention, and the City of Spruce Grove (COSG). For clarity, the VOC fund is a 20% surcharge on top of a fine. So a \$100.00 fine would be written as \$120.00.

The \$120.00 ticket would then be divided as follows:

\$20.00 for VOC, \$40.00 for Provincial Fine Retention, and \$60.00 for the COSG.



Fines Paid

Fines may be paid by the court date identified or after the finding of guilt. Once there is a finding of guilt the fine then gets registered into the provincial system and may be paid, paid when one goes to register a vehicle or renew a driver’s license, move to provincial enforcement, written off by the province, or alternate measures such as community services. The city has no control over when or if a fine is paid; that authority rests with the court and the province.

In 2020 the COSG received \$1,290,392.34 in fine revenue from ATE. As the Fine Retention and VOC surcharge percentages have changed, and these changes only affect tickets written after the change date, it is nearly impossible to determine actual amounts paid to VOC and Fine Retention. However with the changes the simple “go forward” formula is that for every dollar paid to the City of Spruce Grove the province receives one dollar too. Of that dollar 1/3 goes to VOC and 2/3 goes to the province.

Use of ATE Funds

In 2020 the city received \$1,290,392.34 in ATE fines. Where are these funds used? The funds are allocated to general revenues as are all revenues received within Protective Services. General revenue is used to fund Protective Services which in 2020 had a net cost of almost eleven million dollars. The net cost of operating each area of Protective Services in 2020 were as follows:

Fire Services	.....	\$5,923,697
Police Services	.....	\$4,544,608
Enforcement Services	.....	\$1,014,734
Safe City (includes ATE)	.....	-\$693,877
Total	.....	\$10,789,144

ATE is not the only source of revenue generated by Protective Services. In 2020 each separate area of Protective Services generated the following revenues with ATE being the majority of revenue in Safe City:

Fire Services	.....	\$3,630,947
Police Services	.....	\$1,467,677
Enforcement Services	.....	\$210,569
Safe City (includes ATE)	.....	\$1,337,213
Total	.....	\$6,646,406

Overt vs Covert

ATE is most effective when motorists are reminded of its existence via visual reminders such as signage and visible enforcement. In order to remind motorists of the existence of ATE in Spruce Grove both signage and overt ATE enforcement have been deployed with a goal of 50/50 between overt and covert mobile ATE.

Overt is achieved when the ATE vehicle is clearly marked and visible to motorists prior to the possibility of a violation occurring. An example of this is the clearly marked ATE peace officer vehicle being parking on the side of the road monitoring speeds, red lights, or stop signs. The motorist can clearly see the ATE vehicle prior to passing it and

entering the area of enforcement. In theory this visual reminder should result in no violations as the motorist is instantly reminded to obey the traffic laws.

Covert however occurs when an unmarked vehicle is used, the ATE vehicle is hidden, or when using remote devices. In this case the motorist does not see the ATE vehicle and is expected to obey red lights, speed limits, or stop signs as a matter of practice. The overt (visible) system reminds motorists of the ATE existence and that it may also be covert (hidden) so to obey the rules of the road all the time.

In 2020 site identifications were modified to indicate when the ATE mobile system was overt vs covert. With regard to mobile speed the system logged 538 hours overt and 184.5 hours covert. This means that in 2020 mobile speed was overt more than 74% of the time.

When one adds the covert times from Mobile Red Light (149 hours) and Mobile Stop Sign (118.5 hours) there is a total of 452 covert hours versus 538 overt hours meaning in total overt was operational over 54% of the total mobile time, just above the 50/50 target.



Provincial Guideline Adherence

The City of Spruce Grove communicates regularly with the Solicitor General's office to ensure all ATE operations adhere to provincial guidelines. Quarterly and year end reports are submitted as well as traffic safety plans, site rationales and other documentation.

Other Traffic Safety Initiatives

Staffed Enforcement

In an effort to maximize visibility, enforcement services conducted high visibility operations in 2020:

- 33 joint forces traffic safety operations were conducted.
- 322 School Zone and School Area patrols were completed in 2020.
- 638 dedicated traffic operations were conducted.



Data Collection

Data collection occurs via the Houston Radar boxes which are moved throughout 20 primary zones in the city, speed display monitoring signs which are located through the city, and a Vermac speed display sign.

The display signs are designed to instantly remind traffic of the correct speed limit and advise motorists that they are speeding, while the Houston Radar boxes are covert and designed to identify areas of the city where speeding is an issue.

Once data is analyzed, a corrective action is implemented that best suits the situation.

Collision Statistics (2020)

A total of 597 collisions were reported into the system with four being duplicated files, 23 were not in Spruce Grove, four were not collisions at all. Therefore the correct total is 566. This is a 19.8% decrease over 2019.

- Parking lot and driveway 159
- Vulnerable⁴ road user 8
- Intersection 106
- Rear end collisions 117
- Other causes 176



There were no fatal collisions in 2020 and there were 119 collisions with injuries. This is a 7% decrease over 2019. Of the 119 injury collisions, they may be broken down as follows:

- Intersection 51
- Rear End 35
- Pedestrian 3
- Driveway/Parking Lot 7
- Other 23



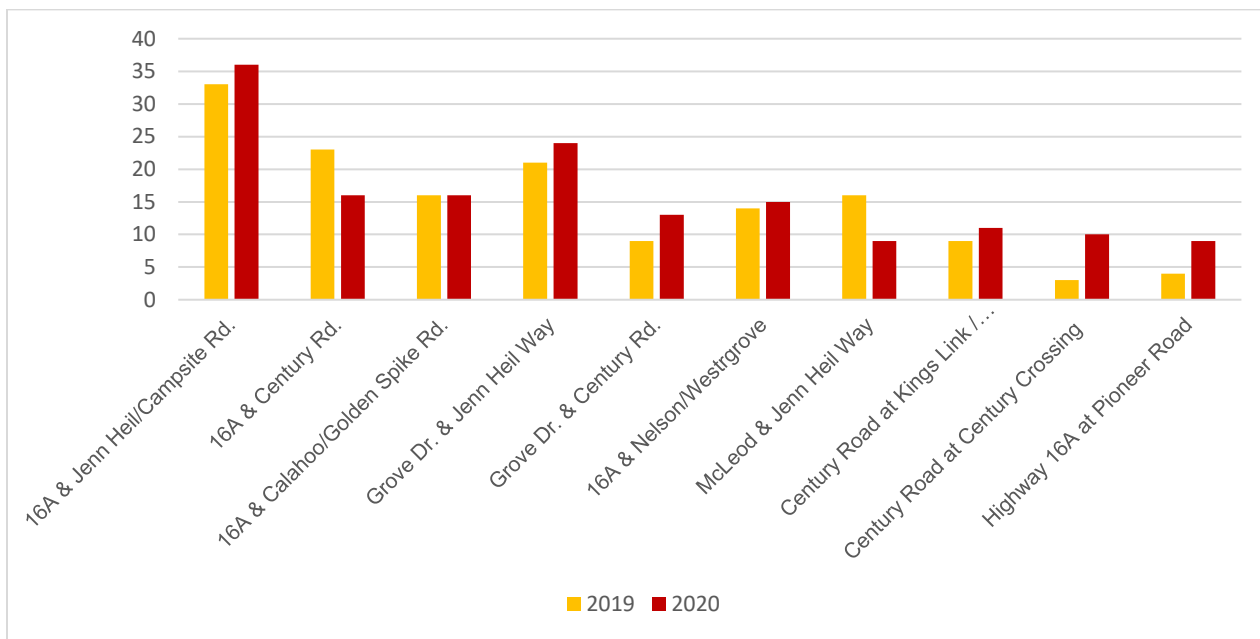
Primary collision routes were:

1. Hwy 16A 115
2. Jennifer Heil Way 86
3. Century RD. 73
4. Grove DR. Corridor 57
5. McLeod Avenue 50
6. Calahoo RD. Corridor 31

⁴ Cyclists, pedestrians, wheel chairs.

Top ten collision intersections⁵

1. Hwy 16A at Jennifer Heil Way/Campsite RD.	.....	36
2. Grove DR. at Jennifer Heil Way	.....	24
3. Hwy 16A at Century RD.	.....	16
4. Hwy 16A at Golden Spike/Calahoo Rd	.....	16
5. Hwy 16A at Westgrove DR. / Nelson DR.	.....	14
6. Grove DR. at Century RD.	.....	13
7. Century RD. at Kings Link / Vanderbilt Common	.....	11
8. Century RD. at Century Crossing	.....	10
9. HWY 16A at Pioneer RD.	.....	9
10. Jennifer Heil Way at McLeod Ave	.....	9



Site Rational

All sites with rational are listed on the city web page

<https://www.sprucegrove.org/services/emergency-protective-services/automated-traffic-enforcement/automated-enforcement-locations-and-rationale/>

⁵ Table excludes collisions in parking lots, alleys or in a driveway (If backing onto street the collision was included).

Staffed Enforcement versus ATE Balance

The intent is to balance hours of ATE with hours of staffed or traditional enforcement. Although in 2020 Enforcement Services commenced the tracking of hours dedicated to traditional traffic enforcement, we do not have access to RCMP data related to traffic enforcement. The RCMP provide Spruce Grove with municipal policing services and Spruce Grove has not funded dedicated traffic officers within the RCMP. In 2020 a review was done comparing the City of Spruce Grove to the City of Edmonton for the number of dedicated traffic officers per capita. This study resulted in a pilot project that is being conducted in 2021.

The pilot project transferred two Community Peace Officers from their regular duties to being dedicated to traffic. Two traffic officers would make Spruce Grove equal to Edmonton on a per capita basis. Early results of this pilot have shown to be successful in enforcing and educating motorists in those areas of traffic safety not enforced via the ATE system. These are not limited to but do include items such as distracted driving, equipment regulation, crosswalks, and stopping suspended and prohibited drivers.

In 2020 Spruce Grove Enforcement Services conducted 532.38 hours of targeted traffic operations. In 2021 this number will be greatly increase with the addition of the two dedicated traffic officers.

Education Initiatives

Spruce Grove is a member of the Capital Region Intersection Partnership (CRISP) which provides education to motorists, engineers, and government officials. More on CRISP may be found at <https://drivetolive.ca/what-we-do/strategic-plan-2017-2021/>

The city's communications department helps with traffic safety messaging via the city's website and social media. The website information may be found at <https://www.sprucegrove.org/services/emergency-protective-services/safe-city/traffic-safety/>

In 2020 the following was done to enhance ATE program awareness:

- New ATE signs were installed on Century RD. and on Campsite RD. advising that ATE in use.
- VERMAC electronic signs were used on HWY 16A advising that ATE was in use.
- Warning tickets were issued to offenders for an 11 day period.

- A public accessible interactive map was developed to enhance transparency and awareness of the statistical data utilized for the ATE program including:
 - Live information as to where mobile enforcement is being conducted,
 - yearly plot of total collisions per location,
 - location of speed display monitoring signs with statistical information,
 - total tickets issued for each ATE (current provider data only),
 - 85th percentile of speed, and traffic counts for fixed ATE speed monitoring locations for the last 30 days,
 - speed limits across the city, and
 - site rationale for each location.
- Enhanced the City of Spruce Grove Automated Traffic Enforcement Website.

Please see <https://www.sprucegrove.org/services/emergency-protective-services/safe-city/traffic-safety/> for more information.

Advisory Committee Comments

The Committee reviewed this report at their May 12, 2021 regular meeting. One of the biggest surprises from the Committee was that the data clearly demonstrates there are fewer infractions than they, and presumably the community believes. The Committee commented that this was a direct contrast to the “cash grab” perception of some.

The Committee commented and asked about how the data is used and interpreted. Administration answered that the report is to be data driven and fact based. The Committee agreed that providing greater clarity for the public and them in the future as to how the data is further interpreted and who provides that expert opinion would be beneficial. In other words, what is the ultimate measurement (i.e. collision reductions) and analysis of whether the City and its ATE program is “winning or losing”?

Additionally, the Committee had the following observations and recommendations to consider for future reports:

- Include more years of data for broader comparison. At this point it really only compares to the previous year and it would be beneficial to have a longer term comparison for trend analysis.
- Additional communication on trends and successes. Are there areas that continue to be a concern? What about areas that have made improvements? How could those be highlighted in a better way not only in the report but with other communication methods (i.e. signage of high collision areas).

- More clarity on the financial components listed in the report.
- Clearer definitions or in some cases include explanations. For example, it refers to “overt” and “covert” but one reading this for the first time may not have the luxury of knowing what those mean and reading all of the past reports.

Protective Services Recommendations

- Monitor and ensure equitable distribution of overt vs covert mobile ATE operations to achieve the 50/50 ratio.
- Ensure consistency of formatting of data collected to facilitate a more efficient review.
- Review and monitor the pilot project of dedicated traffic officers and include finding in 2021 ATE report.
- Based on the effectiveness of new technologies review the enforcement ratios of staffed to automated enforcement with the goal of utilizing new technologies and needs assessments to:
 - Eliminate ATE,
 - Modify ATE,
 - Maintain ATE, or
 - Reduce ATE.

Appendix A (Site Identifiers)

NOTES: Sites in **Red** are covert sites, while all sites that start with a “9” are ISD (fixed) sites.

1211	Jennifer Heil Way south bound at Grove DR.
1212	Grove DR. east bound at Jennifer Heil Way
1214	Harvest Ridge DR. east bound at Heron Crescent
1215	Harvest Ridge DR. west bound at Heron Crescent
1216	Grove DR. east bound at Spring Gate
1217	Grove DR. west bound at Hartwick Way
1218	Grove DR. east bound at Calahoo RD.
1226	Millgrove DR. east bound at Calahoo RD.
1227	Woodhaven DR. west bound at Calahoo RD.
1228	Spruce Ridge DR. at Jennifer Heil Way
1229	Hawthorne Gate west bound at Calahoo RD.
1230	Grove DR. east bound at Calahoo RD.
1231	Grove DR. westbound at Calahoo RD.
1232	Grove DR. east bound at Grove Senior Village
12320	Grove DR. east bound at Grove Senior Village
1233	Grove DR. west bound at Grove Senior Village
12330	Grove DR. west bound at Grove Senior Village
1251	Diamond Avenue east bound at Golden Spike RD.
1252	Diamond Avenue west bound at Golden Spike RD.
1262	south Avenue east bound at Century RD.
1269	Madison Crescent west bound at Campsite RD.
1279	Spruce Ridge DR. west bound at Spruce Ridge RD.
1280	Spruce Ridge DR. east bound at Spruce Ridge RD.
1286	Spruce Ridge RD. north bound at Grove DR.
1287	Jennifer Heil Way north bound at Tri Leisure Centre
12870	Jennifer Heil Way north bound at Tri Leisure Centre
1288	Grove DR. west bound at or near Hilldowns DR.
12880	Grove DR. west bound at or near Hilldowns DR.

- 1289 Grove DR. west bound at or near Fieldstone DR.
- 1291 HWY 16A at or near Nelson DR.
- 12910 HWY 16A at or near Nelson DR.
- 1292 HWY 16A east bound at or near Westgrove DR.
- 12920 HWY 16A east bound at or near Westgrove DR.
- 1293 HWY 16A east bound at or near King Street
- 12930 HWY 16A east bound at or near King Street
- 1296 Spruce Ridge RD. north bound at Spruce Ridge DR.
- 1297 Spruce Ridge RD. south bound at Spruce Ridge DR.
- 211 HWY 16A west bound at Nelson DR.
- 212 HWY 16A east bound at Nelson DR.
- 213 Nelson DR. south bound at HWY 16A
- 216 Century RD. north bound at or near Grove Meadow DR.
- 218 Century RD. south bound at or near Kings Link
- 2180 Century RD. south bound at or near Kings Link
- 230 Grove DR. east bound at or near Hilldowns DR.
- 234 Jennifer Heil Way south bound at or near Tri Leisure Centre
- 2340 Jennifer Heil Way south bound at or near Tri Leisure Centre
- 241 Grove DR. east bound at or near Jubilee Park
- 242 Grove DR. west bound at or near Jubilee Park
- 2420 Grove DR. west bound at or near Jubilee Park
- 243 HWY 16A west bound at or near King Street
- 2430 HWY 16A west bound at or near King Street
- 245 Golden Spike RD. south bound at or near Diamond Avenue
- 2450 Golden Spike RD. south bound at or near Diamond Avenue
- 259 Brookwood DR. east bound at Century RD.
- 260 Grove Meadow DR. west bound at Century RD.
- 265 McLeod Avenue east bound at Century RD.
- 277 HWY 16A east bound at Century RD.
- 281 Calahoo RD. north bound at Grove DR.
- 282 Calahoo RD. south bound at Grove DR.
- 293 Calahoo RD. south bound at HWY 16A
- 298 McLeod Avenue west bound at Jennifer Heil Way
- 90268 Grove DR. east bound at or near Century RD.
- 90269 Century RD. north bound at or near Grove DR.
- 90270 Century RD. south bound at or near Grove DR.
- 90271 HWY 16A west bound at or near Jennifer Heil Way
- 90272 HWY 16A east bound at or near Campsite RD.

- 90277 HWY 16A at or near Century RD.
- 90278 HWY 16A east bound at or near Century RD.
- 90279 Jennifer Heil Way north bound at Grove DR.
- 90280 Jennifer Heil Way south bound at Grove DR.
- 90283 Grove DR. east bound at Calahoo RD.
- 90284 Grove DR. west bound at Calahoo RD.