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INFORMATION REQUEST (IR) - School and Playground Zone Policies

Requested by: Councillor Clark

Date of Request: May 12, 2026

Date Response Due: June 12, 2026

Confidential Response: No

QUESTION

Given that school grounds are used as community spaces beyond regular school hours and that current “school days only” signage can be unclear for drivers who do not have school-aged children or are not familiar with school calendars.

I ask that Administration provide the following information:

- Are there opportunities for alignment between current school and playground zone policies and what is the feasibility of applying consistent daytime speed limits (e.g., 7:30 a.m. to sunset) across both zone types.
- Evaluate the costs, benefits, and implementation considerations associated with this change for Council's consideration.

RESPONSE

A: Response to Questions

1. In Alberta, default provincial school zones are 30 km/h in effect on school days during specific periods of day; typically, three separate periods - 8:00 am to 9:30 am, 11:30 am to 1:30 pm, and 3:00 pm to 4:30 pm; or a solid period from approximately 8:00 am to 4:30 pm. Although municipalities may apply local Bylaws (Traffic Bylaw) to override these times of day, Administration is not aware of any municipalities that have applied School Zones and then altered School Zone times of day beyond the noted hours that align to the Provincial default time periods.
 - Doing so could cause a disconnection between the perception and likely acceptance from a driver to adhere to reduced speeds if School Zones were indicated through signage, but reduced speeds were well outside of noticeable hours of operations of the school.
 - A risk associated with such a change is that compliance with speed reductions during both non-school hours and during school hours could negatively be impacted.

Although Administration is not aware of any municipality that has extended hours of School Zones (beyond the school operational hours) that align with Playground Zone times of day, there are some Alberta municipalities that have officially replaced School Zones with Playground Zones,

with reduced speeds to 30 km/h and applied Playground Zone hours to these sites; inclusive of the Alberta agencies of:

- City of Calgary: The city officially transitioned all traditional school zones into playground zones to avoid confusion and increase safety, as school hours fluctuate. These zones require a speed of 30 km/h and are in effect every day from 7:30 a.m. to 9:00 p.m., year-round.
- City of Edmonton: Following a city-wide transition, all school zones in Edmonton have been converted into playground zones. They enforce a 30 km/h speed limit every day from 7:30 a.m. to 9:00 p.m.
- City of Lethbridge: Similar to Calgary and Edmonton, these zones are active daily from 7:30 a.m. to 9:00 p.m.

The rationale used in these cities for the change was related to effort to avoid confusion and increase safety; however, Administration understands that changes were related to philosophical benefits of change and not to any application of specific engineering or industry standards. St Albert has investigated such amendments in the past, applying a process of assessing locations with Provincial best practice criteria while also incorporating public feedback.

In St Albert, a city-wide network assessment for speed limits was performed in 2019/2020 that incorporated a full detailed technical assessment of school and playground zones as well as public engagement. Details of the Provincial assessment of School and Playground Zones are shared in Section B of this report, however, the final recommendations of the network speed review were based upon technical analysis and public feedback which were to maintain School Zones and not convert Elementary School Zones to Playground Zones. Administration had originally considered the conversion of Elementary School Zones to Playground Zones; however, key influences that informed the final recommendations included:

- When applying the Provincial Guidelines to assess existing School Zones as Playground Zones, the assessment had to be modified to result in the Elementary School Zones being successfully warranted as Playground Zones.
 - a. Such amendments to the warrant and assessment process generate inconsistency to the methodology of evaluating school and playground sites.
 - b. Ultimately, applying the criteria and Provincial Guidelines did not result in clear alignment to modify School Zones to Playground Zones.
- Public / Stakeholder Feedback:
 - a. Survey background:
 - i. 2,937 residents responded to the question of whether Elementary School Zones should be replaced with Playground Zones.
 - ii. 34% Agree / 66% Disagreed.
 - b. Feedback received was that:
 - i. "The change was unnecessary".
 - ii. There was strong belief of negative impacts to roadways.
 - iii. There was a belief that School Zones are more respected and adhered to than

Playground Zones.

- c. Direct representatives of all School Boards and individual school sites were also engaged and asked for feedback on the potential changes, to which there were no requests to amend the existing sites to Playgrounds or extend hours beyond a request to start the School Zone reduced speeds 30 minutes earlier, from previously applied 8:00 am to 7:30 am.

Following the network-wide speed study and public engagement, the following conditions were implemented in the City of St Albert:

- Maintained separate School and Playground Zones with continued application of Provincial Guidelines to assess whether zones should be established.
- School Zone times of day were updated to be from 7:30 am to 4:00 pm on school days only.
- Playground Zones time of day updated to be from 8:00 am to 8:00 pm, every day of the week for the spring to fall season.
 - Establish a seasonal implementation of Playground Zones, with reduced speeds being in effect from April 1 to October 31.
 - i. This recommendation was informed by data collected through the year at playground sites and recorded reduction in volumes of users.
 - ii. This recommendation acknowledged the additional network speed recommendation to reduce Neighbourhood speed limits to 40 km/h; meaning that an overall reduction all year round was part of the overall safety improvements and resulted in only a 10 km/hr speed variance in the nonseasonal periods from November 1 to March 31.

Please find the “Transportation Network Speed Limit Review Final Report” attached to this Information Request response.

2. Should Council desire to change School Zones to Playground Zones, the following should be considered:

- Current Playground Zone seasonal periods would need to be changed / removed to have Playgrounds in effect all year long.
 - a. The City’s Playground Zones are currently in effect from April 1 to October 31 annually, whereas School Zones are in effect during School Operational days only, which are inclusive of winter months.
- Although school hours may be perceived as “confusing”, site signage offers this information to drivers for awareness, and the City of St Albert has invested in School Warning Flashers that operate with the hours of day schools are in.
 - a. The Transportation Department implements the school site specific hours, inclusive of inputting days the kids are out of school (PD Days, holidays, summer break) to have the warning flashers not operate on these days.
 - i. These warning systems are inspected twice per year in spring and fall to reduce

risk of malfunction; however, issues may occur and so they are beneficial with communicating times and days of school operation but are not suggested to be perfect mechanisms of warning.

- Typically, a “worst case” scenario of a driver being unaware of the actual school hours should result in a driver travelling at the reduced speed (30 km/hr) when it is not necessary.
 - a. Adjustments to zones without actual site changes or tangible acknowledgment for drivers to see and recognize why such changes are implemented could result in increased non-compliance with reduced speeds.
- Recognizing that the majority of these sites exist on Neighbourhood roadways which are posted as 40 km/h, there is an overall reduction gain of 10 km/hr for extended periods of day as well as throughout the entirety of the season.
 - a. These speed changes would be more impactful in some key areas where School Zones exist on Arterial Roadways, such as Sir Winston Churchill Avenue and Cunningham Road; although the thought is that safety may improve, there would be the potential of high non-compliance to these posted speeds that would exist at these sites with considerations of change.
- Transit Services would be influenced by network-wide applications of extended hours of reduced speeds. Should the change be implemented, there would be potential need to adjust some timings of transit routes slightly; however, the impact to overall operations would be expected to be minimal.
- Impacts to Municipal Enforcement and Policing: From a policing resource perspective, extending the hours during which a reduced 30 km/h speed limit applies in school zones would likely increase community expectations for speed enforcement.
 - a. If expectations rise, options to expand enforcement presence include increasing the use of photo enforcement through contracted services or assigning additional in-person enforcement by RCMP or Municipal Enforcement officers.
 - b. However, higher expectations may also lead to community dissatisfaction if enforcement is unable to meet the increased demand. The true level of required enforcement can only become clear after potential changes take effect and officers can assess the degree of voluntary compliance.
 - c. Additional enforcement hours could result in increased staffing costs if the community or council is not satisfied with the level of enforcement provided. Some of these costs may be offset by increased fine revenue, which typically rises when enforcement activity increases.

At this time, the RCMP is not aware of any collision trends, vehicle or pedestrian, occurring in school zones after the current 4 p.m. end time where speed has been identified as a contributing factor. Nonetheless, it is well established that lower vehicle speeds reduce the severity of collisions, reinforcing the potential safety benefits of extended speed limit hours.

- Within the Provincial Guidelines it is commented specifically that “*School and Playground Zones and Areas should be used sparingly, and in accordance with these Guidelines. Zones and Areas should not be provided as an attempt to increase safety of crossing the roadway; other devices have been developed and should be applied for such purpose.*”
- Costs of Potential Implementation:

For network background information and to inform on what would be expected to make field changes associated with changing School Zones to Playground Zones the following would be considerations:

- The City currently has twenty-six (26) School Zones
 - a. Within these School Zones there are approximately 222 signs that would require change.
 - b. To replace the existing School Zone Signs with Playground Zone signs and change the time of day tab signs the estimated cost of signs only would be \$15,000
- The City currently has twenty-three (23) Playground Zones
 - a. Within these Playground Zones there are approximately 121 Signs that would require change.
 - b. To replace the existing Playground Zone tab signs showing the time of day and removal of season would be an estimated cost of \$10,000 for the signs only.
- The estimated cost of labour to perform the field changes would be \$30,000
- In total, the estimated costs of changes in the field, for Playground and School Zones, would be \$55,000; with a breakdown of costs inclusive of:
 - a. Sign material = \$25,000
 - b. Labour = \$30,000

B: School and Playground Assessment Background and Details

The following is provided as additional background information on how Administration assesses the potential applications of School and Playground Zones by applying the Provincial Guidelines, what inputs and criteria are considered and how the existing aspects of the different criteria are scored to conclude with recommendations of applying speed reduced areas or “Zones”.

The following are definitions used in the Provincial (Alberta) “Guidelines for School and Playground Zones and Areas”:

- School means an educational institution that are attended primarily by children and includes elementary schools, middle schools, junior high schools and high schools. There is no distinction between private or public schools.
- Playground means recreational facilities utilized primarily by children. This includes outdoor playgrounds with play equipment, sports fields, ball diamonds, tot lots and indoor or enclosed facilities such as skating rinks and swimming pools.

- Zone (School or Playground) means a section of roadway adjacent to a school or playground that is denoted by a School Area or Playground Area signage and a 30 km/h speed limit sign.
- Area (School or Playground Area) means a section of roadway adjacent to a school or playground that is denoted by School Area or Playground Area signage only; there is no reduction of speed limit below the posted speed of the roadway.

The City of St Albert has applied the Provincial Guidelines to establish and maintain School and Playground Zones; however, historically there was not a strongly documented assessment nor report on any established speed limits in the City, inclusive of these sensitive areas. Sparked by public safety concerns on local and collector roadways and an industry application for reduction of speeds in neighbourhoods, Administration identified a project to assess the City's full transportation network for speed limits. A full review of the City's transportation network speed limits, inclusive of all school and playground sites, was conducted in 2019 / 2020 and included scope of technical application of the "Canadian Guidelines for Establishing Posting Speed Limits" and "Alberta Transportation (AT) Guidelines to Playground and School Area and Zones", followed by public engagement on recommendations that were created from the technical analysis.

Specific to School and Playground reviews, the Alberta Guidelines have established a set of criteria to assess individual road segments adjacent to a school or playground site. The assessment applies a scoring methodology to which each criteria have a total potential score and the recorded consideration of the roadway segment has a weighting factor based upon the input from the assessment.

- Higher scoring is associated with what would be deemed "higher risk" and lower scoring would acknowledge where measures or considerations are in place that mitigate risk associated with conflict of vehicles and users of areas.
- To recommend the application of a School or Playground Zone (with reduced speeds), a minimum score must be achieved for that section of roadway.

1: School Site Assessment for School Zone(s)

The following are the criteria and description of considerations in scoring for potential implementation of a School Zone:

- School Type - this is relevant to the school being an Elementary school, Jr. High School, High School or Post Secondary. The higher ranking goes to the Elementary school, which achieves full value of scoring to the Post Secondary that achieves "0" scoring.
- Road Classification - this is relevant specific to the specific roadway being assessed and refers to the classification of the roadway as an Arterial Road, collector (Neighbourhood Road in St Albert), or Local Road. The highest scoring is applied to the Local Road or Collector Road, with lower scoring applied to the Arterial.
- Fencing - this is relevant to the specific site and roadway and refers to whether a physical barrier as a fence exists. The effectiveness of fencing depends on the traversability, i.e. how easily can it be bypassed? A higher score is given to sites that are fully or easily traversable (no to

limited fencing), whereas limited scoring is applied to sites well protected.

- **Property Line Separation** - this is relevant to the distance or setback of the school from the roadway being assessed. Closer proximity equates to a higher risk and as such if a school is located with minimal separation to the road right of way it scores higher in ranking versus a site with larger offset.
- **School Entrance** - this is relevant to the access to the school from the specific roadway being assessed and considers whether the segment must account for a main entrance or secondary entrance(s) or no entrances to the school site. Higher consideration and scoring is applied to the roadway that must operate with the main entrance as a consideration versus a segment with secondary or no entrance considerations.
- **Sidewalks** - this is relevant to considering the safety of accessibility and connectivity to the school site and accounts for the existence of sidewalk offering safer passage for children than the consideration that no sidewalk may result in more random crossings and entering into the road right of way. Sites without any offering of sidewalk score higher than road segments that offer full sidewalk connections on both sides of the assessed road segment.

The outcome of applying the criteria and scoring each individual road segment results in the recommendations of either No School Zone, School Area (warning signs but no reduction of speed) or School Zone (warning signs and reduction of speed to 30 km/hr).

In St. Albert there are no existing sites of “School Area”, where there is an application of warning signs but no formal reduction of speed. In the City, if a road segment is scored as an “Area”, it is applied as a “Zone” with a reduced speed applied. Currently there are a total of twenty-six (26) School Zones in St. Albert.

During the network wide assessment, Administration did consider the conversion of all Elementary School Zones to Playground Zones based upon potential use of the playground equipment and fields during non-school hours and the perception to increase safety. To investigate this potential change, the Provincial Playground assessment was performed on all school sites; however, the resulting scores did not result in recommendations to apply a Playground Zone to the school sites. To achieve this, a modification of the warrant process and assessment was necessary, which could result in inconsistency with site assessments. In addition, further investigation into sites was performed through data collection and it was recognized that volumes of both vehicles and children to these park and playground areas significantly decreases during non-school hours. Public feedback was also sought on the potential of such a change, and the result was that 66% of residents who responded did not support such a change.

2: Playground Site Assessment for Playground Zone(s)

The following are the criteria and description of considerations in scoring for potential implementation of a Playground Zone:

- **Playground Type** - this is relevant to multiple factors, including:
 - a. Is the playground a location of play equipment, a sports field or open field (no sports) or any facilities
 - b. The size of the site or anticipated usage - this is in reference to the site offering expected use of low numbers of children or higher numbers for usage at a given time
 - c. **Frontage Size** - this is in reference to the size and the area specifically fronting or adjacent to the roadway being assessed with a specific reference of a site being 50 m or more compared to smaller frontage.

The higher scoring is applied to a large site with equipment that fronts onto the roadway at or more than 50 m.

- **Road Classification** - this is relevant specific to the specific roadway being assessed and refers to the classification of the roadway as an Arterial Road, collector (Neighbourhood Road in St Albert), or Local Road. The highest scoring is applied to the Local Road or Collector Road, with lower scoring applied to the Arterial.
- **Fencing** - this is relevant to the specific site and roadway and refers to whether a physical barrier as a fence exists. The effectiveness of fencing depends on the traversability, i.e. how easily can it be bypassed? A higher score is given to sites that are fully or easily traversable (none or limited fencing), whereas limited scoring is applied to sites well protected.
- **Property Line Separation** - this is relevant to the distance or setback of the playground from the roadway being assessed. Closer proximity equates to a higher risk and as such if a playground is located with minimal separation to the road right of way it scores higher in ranking versus a site with larger offset.
- **Playground Entrance** - this is relevant to the access to the playground from the specific roadway being assessed and considers whether the segment must account for a main entrance or secondary entrance(s) or no entrances to the site. Higher consideration and scoring is applied to the roadway that must operate with the main entrance as a consideration versus a segment with secondary or no entrance considerations.
- **Sidewalks** - this is relevant to considering the safety of accessibility and connectivity to the playground site and accounts for the existence of sidewalk offering safer passage for children then the consideration that no sidewalk may result in more random crossings and entering the road right of way. Sites without any offering of sidewalk score higher than road segments that offer full sidewalk connections on both sides of the assessed road segment.

The outcome of applying the criteria and scoring results in the recommendations of either No Playground Zone, Playground Area (warning signs but no reduction of speed) or Playground Zone (warning signs and reduction of speed to 30 km/hr).

In St Albert, there are applications of “Playground Area”, as the warning signs indicate to drivers to

use caution and awareness. There is a total of nine (9) Playground Area locations, while there is a total of twenty-three (23) Playground Zones in the City.

Playground Zone Application to School Sites Summary of Findings

The following are comments pulled as findings from the Network Speed Review as associated with the assessment of School sites as potential Playground Zones:

1. AT Playground Zone Worksheet Results: The results of direct application of the AT guide for playground zones at school zones found that one of 30 schools are recommended as a playground zone.
 - This result reflects the higher score threshold for a playground zone, which is 81 compared to a school zone which is 65.
 - Separation of playground equipment from the roadway is higher at schools than at playgrounds resulting in lower scores for the property line separation component of the AT guide.
 - Considering the two main factors impacting the standard approach for evaluating playground zones, changing the criteria and applying the same threshold for a school zone (65) and treating school buildings as playground equipment results in 22 of the schools recommended a playground zone.
 - None of the eight junior high schools warranted a playground zone using the new criteria and lowered threshold. Considering this, none of the junior high schools are recommended to be converted into playground zones.

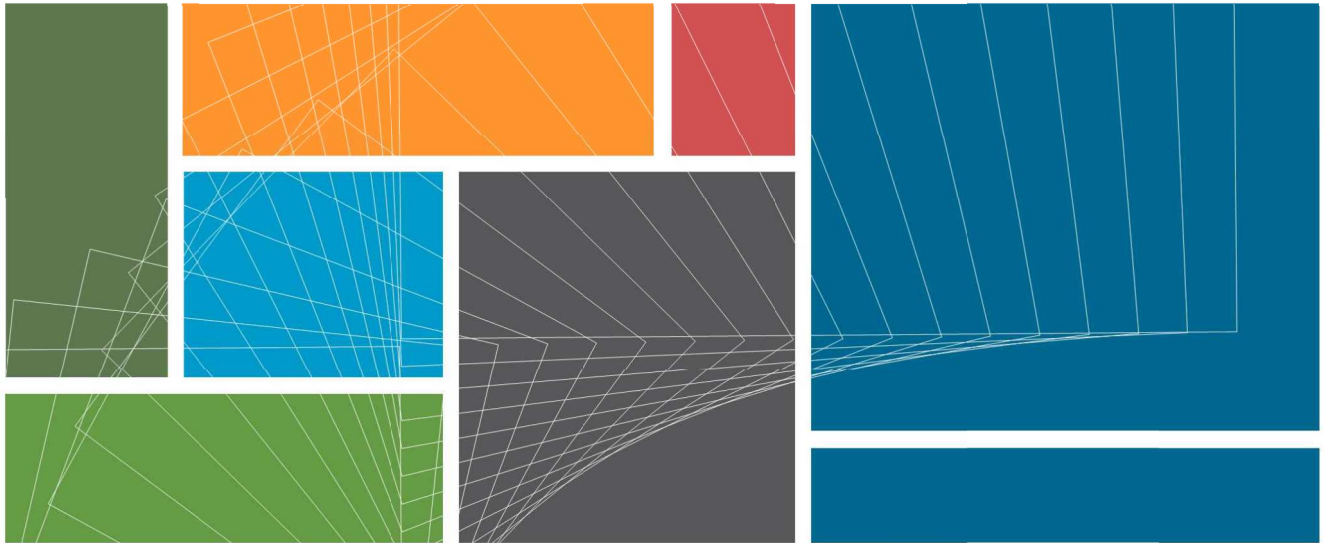
2. Time of Day Considerations:
 - The collision data indicated that a significant number of collisions occur at school zones outside of the hours of effect.
 - The playground usage data indicates that playgrounds on school grounds are much more utilized than standalone playgrounds, even outside of school hours.
 - Considering the collision data and observed usage of playground equipment, playground zone hours of effectiveness are recommended between 8:00 AM and 8:00 PM.
 - Additional data collection may be performed to confirm this assumption; however, this is consistent with other municipalities.

3. School Zone Consolidation to Playground Zone Review
 - Only the portion of Deer Ridge Drive adjacent to J.J. Nearing Elementary School is warranted as a playground zone; however, it is noted that three other roadways were only one point away from being warranted.
 - Modifying the threshold for playground zones to 65 (consistent with School Zones) and the property line separation criteria, all 22 of the elementary school zones warrant playground zones.
 - Playground zones are not recommended for junior high schools.
 - A review of the City of Edmonton's and the City of Calgary's recent transition from School Zones to playground Zones indicated potential safety and compliance benefits to consolidating zones.

Following the completion of the network assessment, public engagement occurred seeking feedback on the potential of changing School Zones to Playground Zones, with the result being a large majority (66%) of residents opposed to the change.

Administration reviewed information and in consideration of the data and requirements of amending the Provincial Guidelines to have School sites warrant the implementation of Playground Zones, did not recommend this change to Council.

Report Date: June 1, 2026
Author(s): Dean Schick, Transportation Manager
Department: Engineering
Department Director: Dawny George
Managing Director: Adryan Slaght
Chief Administrative Officer: William Fletcher



City of St. Albert

Final Report

Transportation Network Speed Limit Review

February 2020







Corporate Authorization

This document entitled "Transportation Network Speed Limit Review" has been prepared by ISL Engineering and Land Services Ltd. (ISL) for the use of City of St. Albert. The information and data provided herein represent ISL's professional judgment at the time of preparation. ISL denies any liability whatsoever to any other parties who may obtain this report and use it, or any of its contents, without prior written consent from ISL.



February 4, 2020

Daniel Zeggelaar, P.Eng., PTOE
Transportation Project Manager

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1.0 Introduction

1.1 Background

An important aspect of transportation safety is linked to roadway operations and directly associated with speed. This aligns to, not only road user behaviour and the speed at which they travel, but also the context of how the City's roadways are designed and managed. A strategy (strategy VS-S1-C) recommended within the City of St. Albert Transportation Safety Plan (2018) identified the opportunity for the City to evaluate the existing road network using the Transportation Association of Canada (TAC) Guidelines for posted speed limits and compare results of the evaluation with recorded driver speeds on roadways (representing drivers' perception of appropriate speeds). Further analysis of safety information, such as motor vehicle collisions, would be incorporated into the review to complete a holistic evaluation of the network based from existing roadway design criteria and risk factors within the corridors, recorded roadway operational inputs and consideration of safe management of roadways.

St. Albert's road network to date has been designed and posted following the Transportation of Canada (TAC) Guidelines; however, there is a lack of formal documentation and direct reporting on the varying corridor's characteristics and resulting posted speed limits. The performance of a network speed review allows for both the re-evaluation of the road system, as well as creates an opportunity for public information sharing and education on posted speeds through the results of the evaluation and final reporting.

1.2 Approaches to Setting Speed Limits

The following report considers several approaches for setting speed limits and provides recommendations based on each approach, with the goal of combining the recommendations into a single recommendation that has been informed through all approaches. The approaches for setting speed limits are as follows:

- **Canadian Guidelines for Establishing Posted Speed Limits (CGEPSL):** Applies to setting speed limits for arterial and collector roadways (not including school zones and playground zones).
- **Alberta Transportation Guidelines to Playground and School Area and Zones:** Applies to setting speed limits (zones and areas) for playground and schools.
- **Local Roadway Review:** Applies to setting speed limits on local roadways.
- **Safety Systems Review:** Applies to all roadways based on managing the network at operational consideration to reduce collision severity.

1.2.1 The Canadian Guidelines for Establishing Posted Speed Limits

The Canadian Guidelines for Establishing Posted Speed Limits (CGEPSL), published by TAC is used in this report for evaluating the speed limits on collector and arterial roadways. The guideline, published in 2009, is the first single accepted uniform methodology for evaluating speed limits available for Canadian use. The guide provides an evaluation tool to assess posted speed limits based on roadway classifications, function and physical characteristics providing an objective assessment considering engineering factors related to a roadway's risk level.



1.2.2 Alberta Transportation Guideline to Playground and School Area and Zones

The Alberta Transportation Guidelines for School and Playground Zones and Areas is used in this report for evaluating speed limits on roadways adjacent to school and playgrounds. The guideline, published in 2007, is a well-used guideline in the province of Alberta and is applied as a standard by some municipalities. Speed limits for school and playgrounds are designated based on the type of school, size of playground and other road features such as the presence of sidewalks and fencing. The guidelines provide a systematic, objective, and quantitative procedure for assessing the need for a school and playground zone or area.

1.2.3 Local Roadway Review

Local roadway review includes evaluation of a representative selection of the City's local roadways based on literature review and field observation.

1.2.4 Safe Systems Review

The St. Albert Transportation Safety Plan, which aligns with Safe Systems, focuses on the objective of "Vision Zero" and seeks to reduce injuries and fatal collisions on St. Albert roadways. Vision Zero is a long-term traffic safety goal that is focused on working towards the objective of no fatality or serious injury occurrence as a result of a motor vehicle collision. The application of a Safe Systems Approach to reviewing and establishing speed limits is different from the CGEPSL and AT's school and playground speed limit guide. A safe systems approach prioritizes the safety of vulnerable road users (pedestrians and cyclists) over the many other factors considered by the two aforementioned guides and considers the need to reduce speeds to reduce risk to all road users.

1.3 Study Objectives

The purpose of this study is to complete a road network assessment of speed limits within St. Albert. The objective of this study is to provide the City with comprehensive recommendations for posted speeds based on completing the following process steps:

- **Section 2.0 Best Practices Review:** Best practices review of comparable communities regarding current speed limit setting practices.
- **Section 3.0 Background Information Review:** Comprehensive review of existing St. Albert studies, reports and documents related to speed limits.
- **Section 4.0 CGESL Assessment:** An overview of the CGEPSL and recommended speeds based on applying the CGEPSL guide.
- **Section 5.0 Local Roadway Review:** Separate review of local roadways and recommendations made based on the review.
- **Section 6.0 Playground and School Zone Review:** A review of the current Playground Zones and School Zones and recommendations based on the Alberta Transportation Guidelines for Playground and School Zone Area and Zones.
- **Section 7.0 Safe Systems Review:** Application of safe systems and recommendations for setting speed limits based on the safe system approach.
- **Section 8.0 Speed Limit Recommendations:** Recommendations for speed limits based on interpreting combined results from the above subject areas.

2.0 Best Practices Review

2.1 Introduction

This section of the report describes results from the review of similar sized municipalities for setting speed limits based on information collected from a survey. Described below are the survey methodology, survey results and a summary of emerging trends and best practices based on the feedback.

2.2 Survey Methodology

An online survey was completed from April 25 – May 10, 2019 to collect information from similar sized municipalities related to their practices for posting and reviewing speed limits, including questions related to future review, data collection and public communications. The survey was sent out to 14 municipalities, which were selected using the following criteria:

- Must be a Canadian municipality.
- Three to four from the Edmonton region.
- Similar in population to St. Albert.
- Similar road hierarchy and topography as St. Albert.
 - Note: In interest as a comparator, the municipality was also asked to look into the existence of any formalized Traffic Safety Program or Plan (similar to the one in Appendix A of the City’s Transportation Safety Plan).

Survey Monkey, which is an online tool to administer and store responses from a survey, was used to create the survey. Fourteen municipalities plus the City of St. Albert completed the survey, and municipalities that responded to the survey are listed in the following table:

Table 2.1: Municipalities Surveyed

Number	Municipality	Traffic Safety Program/Plan	Population	Response Received
1	City of St. Albert	Yes	66,082	Yes
2	City of Airdrie, AB	Yes	68,091	Yes
3	Strathcona County, AB	Yes	98,044	Yes
4	City of Calgary, AB	Yes	1,239,000	Yes
5	City of Edmonton, AB	Yes	932,500	Yes
6	City of Red Deer, AB	Yes	100,400	Yes
7	City of Saskatoon, SK	Yes	246,400	Yes
8	City of Hamilton, ON	Yes	536,900	Yes
9	City of London, ON	Yes	383,800	Yes
10	City of Leduc AB	Unknown	30,498	Yes
11	City of Spruce Grove, AB	Unknown	33,640	Yes
12	Town of Okotoks, AB	Unknown	28,881	Yes
13	City of Lethbridge, AB	Unknown	92,730	Yes
14	City of Medicine Hat, AB	Unknown	63,260	Yes
15	City of Grande Prairie, AB	Unknown	63,170	Yes



Of the 14 municipalities surveyed, 16 survey forms were filled as two municipalities conducted the survey twice (City of Airdrie and other not indicated). Therefore, the maximum number of responses for each question is 16.

2.3 Survey Results

The following is a summary of the results for each question in the survey. The detailed responses for each question are provided in Appendix A.

2.3.1 Overall Speed Philosophy

■ Survey Question: What is your municipality's philosophy for setting speed limits?

Survey Responses

Overall, the responses varied greatly, and there was no apparent trend in the philosophy. The following is a summary of the responses received regarding the philosophy for setting posted speed limits.

- Three responses indicated using the TAC design guidelines for setting speed limits, which is the closest of a trend in the answers.
- Other notable responses:
 - 50 km/h unless otherwise posted.
 - Use of the functional classifications.
 - Use of local design and construction standards.
 - Council approved policies that accounts for land use, number of access, lane width, vehicle volumes.
 - Vision zero, safe speeds, safe streets.

St. Albert's Current Practice

- TAC Guideline application / provincial playground and school zone applications; however, transitioning to a Safe System approach with greater emphasis on road function

General Observations Based on Survey Responses

The variation in the responses illustrates one of a few conclusions:

- There is no single philosophy adapted for setting speed limits.
- The respondent is unaware of the local philosophy for setting speeds limits.
- Speed limits change so infrequently that there is no standard philosophy for reviewing these or identification that one is unnecessary.

2.3.2 Methodology for Setting Speeds

■ **Survey Question: What methodology does your municipality use to establish speed limits along the following types of roadways or zones?**

- **Arterial**
- **Collector**
- **Local**
- **School zone**
- **Playground zone**

Survey Responses

Overall, the responses varied greatly, and there was no apparent trend in the methodology. The following is a summary of the responses received regarding the methodology for setting posted speed limits on arterials, collectors and local roads.

Arterials

- Six responses indicated using the TAC design guidelines for setting speed limits.
- Two conflicting methodologies, including use of the design speed for setting posted limits or using the design speed minus 10 km/h (for example design at 70 km/h and post at 60 km/h).
- Other notable responses:
 - Single response that it is based on consultant recommendations.
 - 60, 70 or 80 km/h depending upon the built environment.

Collectors

- Five responses indicated using the TAC design guidelines for setting speed limits.
- Three responses indicated a default speed of 50 km/h.
- Other notable responses:
 - Posted speed equals design speed.
 - Posted speed equals design speed minus 10 km/h.
 - All residential collectors are posted at 50 km/h.

Locals

- Two responses indicated using the TAC design guidelines for setting speed limits.
- Seven responses indicated a default speed of 50 km/h.
- Other notable responses:
 - Default of 40 km/h.
 - Default of 30 km/h.
 - Posted speed equals design speed.
 - Posted speed equals design speed minus 10 km/h.
 - Vision zero.



School Zones

- Five responses indicated using Alberta Transportation Guidelines.
- Four responses indicated using TAC.
- Other notable response:
 - Vision Zero.
 - Bill 65.
 - All school zones designated as playground zones.
 - Traffic Safety Act.

Playground Zone

- Four responses indicated using Alberta Transportation Guidelines.
- Four responses indicated using TAC.
- Other notable responses:
 - Vision Zero.
 - Bill 65.

St. Albert's Current Practice

Table 2.2: St. Albert's Current Practice – Methodology for Setting Speed Limits

Road Type	Methodology
Arterial Roads	TAC
Collector Roads	TAC & Provincial default of 50 km/h
Local Roads	TAC & Provincial default of 50 km/h
School Zone	Provincial Guidelines for School Zones – 30 km/h
Playground Zone	Provincial Guidelines for Playground Zones – 30 km/h

General Observations Based on Survey Responses

- TAC prevails for setting speeds on arterial roadways, but less prevalent on collector and minimal use on local roadways.
- Local roadways generally set at a default speed limit of 50 km/h or less.
- Conflicting philosophy regarding use of design speed equals posted speed or posted speed is 10 km/h lower.

2.3.3 Default Posted Speed Limits

■ **Survey Question:** What are the default posted speed limits on the following street types in your municipality?

- Arterial
- Collector
- Local
- School zone
- Playground zone

Survey Responses

Table 2.3: Default Posted Speed Limit Response Count (by road type)

Roadway Classification/Area	Default Speed Limit									Total
	30	40	40-50	50	50-60	60	60-70	70	Varies	
Arterial				4	3	4	1		4	16
Collector		1	1	12					2	15
Local	2	2		12						16
School Zone	11	1		1						13
Playground Zone	12			2						14

Notable responses regarding default speed limits:

- **Arterials:** Default speed limits generally range from 50 – 60 km/h.
- **Collectors:** Default speed limit is generally 50 km/h, except where 30 – 40 km/h is used, either in residential areas on a trial basis or in some cases no reason indicated.
- **Locals:** Default speed limit is 50 km/h, except where it is 30 or 40 km/h with no reason indicated.
- **School Zones:** Default speed limit is generally 30 km/h, where higher speeds likely indicate no use of school zones. Three occurrences of playground zones used, not school zones.
- **Playground Zones:** Default speed limit is 30 km/h, where higher speed limits likely indicate no use of playground zones.

St. Albert's Current Practice

Table 2.4: St. Albert's Current Practice – Default Speed Limits

Road Type	Default Posted Speed
Arterial Roads	50 – 60 km/h
Collector Roads	50 km/h unless school or playground zone
Local Roads	50 km/h unless school or playground zone
School Zones	30 km/h
Playground Zones	30 km/h

General Observations Based on Survey Responses

Arterials have the largest variability in posted speeds compared to collector and local roadways. This is potentially because of arterial roadways generally having a larger range in attributes, including number of lanes, lane widths, connectivity, roadside features, cross section features, adjacent land use, traffic volumes and others. Collector and local roadways have a small variability in posted speed limits, potentially a result of these roadways having a small range in attributes.



Compared to arterial roadways, collector roadways typically have less than four lanes, limited connectivity (compared to arterials) and lower traffic volumes. Local roadways typically are most consistent.

Collector and local roadway speed limits are consistently posted at 50 km/h although the posted speeds appear to be trending downward, with some respondents indicating the using or trialing lower default speeds.

2.3.4 Triggers for Conducting Reviews

■ Survey Question: What are triggers at which point your municipality reviews posted speed limits along the following types of roadways or zones?

- Arterial
- Collector
- Local
- School zone
- Playground zone

Survey Responses

Table 2.5: Triggers for Conducting Speed Reviews

Responses	Response Totals (by classification/area)					Total
	Arterial	Collector	Local	SZ	PG	
Combination (significant geometric changes, public concern safety concerns, new developments)	8	4	1	1	2	16
Public or safety concerns	2	2	2	2	2	10
Pubic/council concerns		2	4	1	1	8
Public concern or speed based		1				1
Public concern or significant development	1	2		2	1	5
No review process	1	1	1		1	4
Design construction, only	1					1
Operating speed, only	1		1			2
Safety based, only	1	1	1			3
Development 1	1					1
New School/Playground		2	2	2	2	8

St. Albert's Current Practice

Table 2.6: St. Albert Current Practice – Triggers for Conducting Speed Limit Reviews

Road Type	Trigger for Posted Speed Review
Arterial Roads	Development impacts
Collector Roads	Resident requests
Local Roads	Resident request – although typically no change
School Zones	Resident/school request, Safe Journeys Review, new school
Playground Zones	Resident request, new playground

General Observations Based on Survey Responses

- The majority of responses indicated a variety of reasons for reviewing speed limits, including major roadway projects, safety concerns, new developments and/or resident concerns.
- Public concerns cited as a trigger in a majority of the responses for reviewing speed limits, as a single trigger or as a combined trigger.
- Local roadways have the highest number of reviews triggered by only public/council concern as the single reason.

2.3.5 Speed Limit Current State of Review

- **Survey Question: Is your municipality currently, or will be, in the process of reviewing and/or changing residential neighbourhood speed limits on local and collector roads?**

Survey Responses

Table 2.7: Current State of Changing Neighbourhood Speed Limits

Response	Total
Current reviewing/debating	7
Considering lower speed limits on local roads in the future	2
Considering lower speed limits in neighbourhoods in the future	1
Waiting on other municipalities to complete their review	1
Not being considered	4

St. Albert's Current Practice

- Yes – currently performing a City network wide review of all classes of roadways; inclusive of playground and school zones and have performed piloted reduction of neighbourhood speeds aligned with Neighbourhood Traffic Calming work.

General Observations Based on Survey Responses

- The majority of respondents indicated they are currently in the process of reviewing neighbourhood speed limits or awaiting the outcomes of results of such reviews from other agencies.



2.3.6 Data Collection

- **Survey Question: Does your municipality capture and publicly share traffic operations data on roadways, including safety statistics?**

Survey Responses

Table 2.8: Capture and Share Traffic Operations Data and Safety Data

Response	Total
Yes	11
No	1
In the process	1
Yes, when requested	2

St. Albert's Current Practice

- Yes – volume data and collision data; speed data is shared with communities involved in neighbourhood traffic calming projects.

General Observations Based on Survey Responses

- The vast majority of respondents indicated they capture traffic and safety data.
- The majority of respondents indicated they publicly share traffic operations data.

2.3.7 Acceptable Ranges

- **Survey Question: If your municipality collects speed data along school zones or playground zones, what are acceptable ranges of speeds for a zone that is deemed working well?**

Responses

Table 2.9: Acceptable Ranges for Speeding (Playground and School Zones)

Response	Total
No thresholds	1
90th percentile <10 % above speed limit	1
85th percentile < 35 km/h	3
85th percentile <10% above speed limit	1
10 km/h above	1
+10%	1
30 – 35 km/h	1
Assessed at a network level (prioritized)	1
<5 km/h above limit	2

St. Albert Current Practice

- Currently <10 km/h variance from the posted speed; however, the tolerance level of “acceptable” is reducing with particular attention in areas of playground/school zones which have a <5 km variance. Note – this “tolerance” is aligned to engineering tolerance and is not reflective of any enforcement tolerances.

General Observations Based on Survey Responses

- There is a high level of variability in the responses.
- The most common criteria from the respondents was the 85th percentile.
- The vast majority of respondents indicated they collect speed data from school zones.

2.3.8 Prevailing Speeds

- **Survey Question: Does your municipality examine prevailing speeds in comparison to the roadway characteristics and posted speed limits?**

Survey Responses

Table 2.10: Examination of Prevailing Speeds, Comparing Roadway Characteristics to Posted Speeds

Response	Total
Yes, with public concerns	2
Yes, with public concerns/safety incidents	1
Yes	12
No	0
Yes, data collected, but not examined	1

St. Albert’s Current Practice

- Yes – however, more so aligned to prevailing speeds compared to posted speeds. Annual traffic counts and speed data is recorded and reviewed. Specific review also occurs in response to public concerns, where data is gathered to confirm relative degree of the speeding issue(s). Additionally, recorded speed data is utilized in prioritization of programming such as Neighbourhood Traffic Calming, pedestrian improvements. The use of the information typically aligns to a response to specific concerns or delivery of a specific program.

General Observations Based on Survey Responses

- The vast majority of respondents indicated they collect speed data.
- The majority of respondents indicated they review their speed data regardless of public inquiry.



2.3.9 Signage Installation

- **Survey Question: How does your municipality determine the type of signage and how/where it is placed?**

Survey Responses

Table 2.11: Signage Install Guidelines

Response	Total
TAC	3
Case by case	1
TAC and MUTCD	4
MUTCD	5
OTM	2
OTM and HTA	1

St. Albert's Current Practice

- Signage is determined and placed according to MUTCD/TAC Guidelines, Alberta Solicitor General enforcement requirements; for posted speeds anywhere there is a transition from one speed to the next.

General Observations Based on Survey Responses

- The majority of respondents use TAC, or specifically the Manual of Uniform Traffic Control Devices for Canada (MUTCD), to determine the type and placement of signage.
- Engineering judgement often supports the decisions.

2.3.10 Public Communication

- **Survey Question: How does your municipality inform the public when a speed limit is modified?**

Survey Responses

Table 2.12: Public Communication Protocol

Response	Total
Temporary "new" signs, website, radio, newspaper	1
Public notification and temporary "new" signs	1
Public service announcement and electronic message boards	2
Signage, social media, quarterly mail out	1
City website, social media, media release and interview	1
Public community meeting	1
Temporary "new" signs	4
Change speed limit signage, no other notification	2
Newspaper, electronic media, social media, electronic signs	1
City council	1

St. Albert Current Practice

- Updates or amendments to the Traffic Bylaw require Council approval and during presentations and readings of the Bylaw a non-statutory public hearing process is followed to which written media notification of the public hearing occurs. If Bylaw amendments are approved there is typically media campaigns applied (social and print) prior to implementation and when changes are implemented in the field, “NEW” signs accompany changed speed signs for a minimum period of time. Playground/school zones are often simply implemented, and field signage accompanied with “NEW” tabs are used.

General Observations Based on Survey Responses

- While the combinations vary, the main methods of notifying the public are temporary “new” signs/electronic message, print media, and social/electronic media.
- Temporary “new” signs/electronic message boards are the most common ones.
- The majority of respondents alert the public to speed limit changes in some way.

2.3.11 Variable Speed Limits

■ Survey Question: Does your municipality have any experience with studying or applying variable speed limits?

Survey Responses

Table 2.13: Experience or Study with Variable Speed Limits

Response	Total
No	14
Yes	2
School zones only	2

St. Albert’s Current Practice

- No, the City does not have any experience with studying or applying variable speed limits.

General Observations Based on Survey Responses

- The majority of respondents do not employ variable speed limits.

2.4 Emerging Trends and Best Practices

The survey responses for overall speed philosophy were varied, with no clear trend. Three responses indicated using the TAC design guidelines for setting speed limits, which is the closest of a trend in the answers. A default speed of 50 km/h appears to be common. There seems to be no single philosophy for setting speed limits, or the respondents are not aware of any as speed limits change so infrequently. Eleven of the 15 respondents capture and share traffic operations data with the public, two when requested, one in the process, and one that indicated traffic operations data was either not captured or shared. The 14 responses indicated they review prevailing speeds in comparison to the roadway characteristics and posted speed limits.

Roadway specific best practices are discussed in the following sections.



Arterial Roadway Best Practices

Based on the survey results, the TAC design guidelines are the most frequent method of setting arterial roadway speeds with six of the responses indicating its use. Two conflicting philosophies emerged for setting the posted speed, with some using the design speed and others using the design speed minus 10 km/h. The default speed limit for arterial roadways generally ranges between 50 km/h and 60 km/h, with 11 the responses falling within this range. Triggers for conducting arterial roadway speed limit reviews are generally a combination of significant geometric changes public safety concerns, and new development.

Collector Roadway Best Practices

Based on the survey results, the TAC design guidelines are the most frequent method of setting collector roadway speeds with five the responses indicating its use. Three responses indicated a default collector speed on 50 km/h. Similar to arterial roadways, there is a discrepancy as to whether the design speed or the design speed plus 10 km/h is used. Triggers for conducting arterial roadway speed limit reviews are generally a combination of significant geometric changes public safety concerns, and new development.

Local Roadway Best Practices

Based on the survey responses, the default speed limit on local roadways is 50 km/h, except in four municipalities where 30 – 40 km/h is used either on a trial basis or with no reason indicated. Local speed limit reviews are generally triggered due to public request, safety concerns, or the construction of a new school or playground nearby. Seven municipalities indicated that a residential neighbourhood speed limit is currently being reviewed or debated, with three more indicating that is it a topic of future review.

School Zone Best Practices

Based on the survey responses, transportation guidelines are used frequently when setting school zone best practices, with Alberta Transportation Guidelines being used by five of the responses, and the TAC guidelines were used by four. Vision Zero, Bill 65, school zones as playground zones, and the traffic safety act were other notable responses. The default speed limit for school zones is 30 km/h for of the surveyed municipalities. Triggers for a school zone speed limit review generally include the construction of a new school or safety concerns. There is a high variability in the acceptable range of speeds for a school zone to be deemed working well; however, the most common response is the 85th percentile speed being below 5km/h over the zone speed (<35km/h).

Playground Zone Best Practices

Based on the survey responses, transportation guidelines are used frequently when setting playground zone best practices, with Alberta Transportation Guidelines being used by four of the responses, and four used the TAC guidelines. Bill 65 and Vision Zero were also noted. The default playground zone speed limit is 30 km/h, with higher speed responses indicating no playground zone use. Triggers for a playground zone speed limit review generally include the construction of a new playground or safety concerns. There is a high variability in the acceptable range of speeds for a playground zone to be deemed working well; however, the most common response is the 85th percentile speed being below 5 km/h over the zone speed (<35km/h).

2.4.1 St. Albert's Current Practice

St. Albert previously adhered to TAC guidelines for setting speed limits; however, aligned with this network review and with the City's transportation safety objectives, there is a desired safe systems approach towards future transportation management. A default speed of 50 km/h has been applied on neighbourhood roadways (locals and collectors) and is currently in use with the exception of piloted areas of reduced speed that have had Neighbourhood Traffic Calming applied. Generally, St. Albert's practices conform to the most typical responses from the surveyed municipalities. Documentation and evaluation for setting speed limits have been minimal, which is one of the factors that influenced the City to perform this network study.

Roadway specific practices are discussed below.

Arterial Roadways

As previously stated, St. Albert uses the TAC guidelines to set arterial (boulevards and crosstown) roadway speed limits. The speeds on arterials are generally posted at 60 km/h, with the exception of Ray Gibbon Drive, which is posted at 70 km/h and a segment of north St. Albert Trail that is posted at 80 km/h as a transition to the highway north of the City.

Collector Roadways

A default posted speed of 50 km/h is applied to collector roadways. The neighbourhoods of Erin ridge, Erin Ridge North, and Lacombe Park neighbourhood roadways (local and collectors) had their posted speed limits reduced to 40 km/h in 2019 to align with the City's Neighbourhood Traffic Calming program, as well as a recommendation within the Transportation Safety Plan to pilot reduced neighbourhood speeds.

Local Roadways

A default speed of 50 km/h is applied to local roadways. The neighbourhoods of Erin Ridge, Erin Ridge North, and Lacombe Park neighbourhood roadways (local and collectors) had their posted speed limits reduced to 40 km/h in 2019 to align with the City's Neighbourhood Traffic Calming program, as well as a recommendation within the Transportation Safety Plan to pilot reduced neighbourhood speeds.

School Zones

Currently school zones are used within St. Albert and posted to 30 km/h from 8:00 AM to 4:00 PM on schooldays only. The vast majority of school zones are adjacent to Elementary schools and located in neighbourhoods on collector/local roadways; however, there are some school zones installed adjacent to junior high schools and some zones adjacent to elementary schools that are located on arterial roadways. School zones are created based on the Provincial Guidelines for School Zones with a speed limit of 30km/h.

Playground Zones

Currently Playground Zones follow the provincial guideline of being in effect from 8:30 a.m. to one hour after sunset daily (every day of the year). Playground zones are created based on the Provincial Guidelines for School Zones with a speed limit of 30 km/h.

3.0 Background Data Review

The following section describes the results of the background data review, including an inventory of information, relevancy, gaps analysis and recommendations for inclusion into the speed review.

3.1 Background Data

The City provided data and reports related to this project, including:

- **Traffic Data:** Traffic collision statistics, traffic speed and traffic count data.
- **Reports/Plans:** Transportation Master Plan, Municipal Development Plan, Transportation Safety Plan, Engineering Standards.
- **Legislation:** Traffic Bylaw, Transportation System Bylaw.

3.1.1 Traffic Collision Statistics

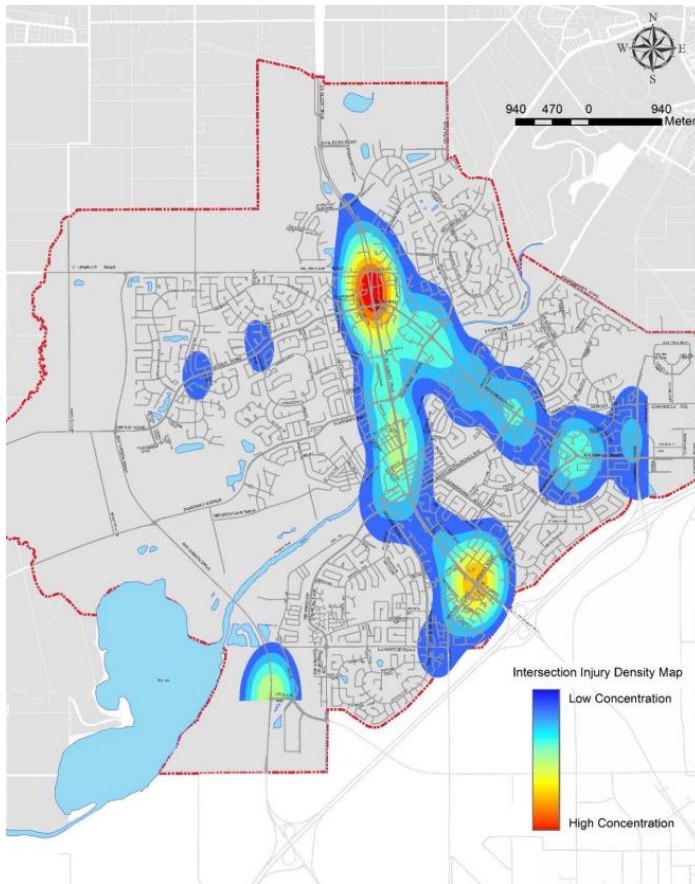


Figure 3.1: Injury Collision Density – St. Albert Collisions Statistics (2017)

The traffic collision statistics were reviewed to get a better understanding of the safety conditions within the City. In total, **6,288** collisions (unfiltered) occurred in St. Albert from 2012 to 2018 (inclusive). After the initial collision data screening, by filtering out collisions involving parked cars, the total number of collisions were **5,112**, and the annual collision frequency was **730** collisions per year.

Speeding, as one of the contributing factors to the collision occurrence, is recognized to have a higher probability of potential influence on collisions related to “Rear End” and “Off Road Right” Collisions. In addition, having speed differential between vehicles may cause drivers to pass one another, and consequently could increase the risk of “Passing” and “Side Swipe” Collisions.

Problematic corridors in the City include St. Albert Trail and Boudreau Road based on the concentration of injury resulting collisions in the City, as illustrated in **Figure 3.1**.

A more detailed review of the collision data for Boudreau Road and St. Albert Trail was conducted to aid in developing a methodology for determining the potential impact of the speed limit on safety and collision frequency. The findings from the review are discussed below.

Boudreau Road: Key findings from the detailed review of collision statistics on Boudreau Road are as follows:

- 556 collisions were found over 7 years (79 collisions per year), which account for approximately 11% of the total City-wide collisions.
- The severity of these collisions included one fatal, 148 injury, and 407 property damage only collisions, the collision casualty (fatal and injury) rate was determined as 27%.
- As shown in the table, 50% of the total collisions involved “Rear End”, followed by “Left Turn – Across Path” (17%), and “Right Angle” (10%).
- Although speeding is of the contributing factors considered in the collision data, it was identified that only one collision was directly reported to have speeding as a factor, which does not seem to be reliable.

The collision history by alone Boudreau Road from 2012 to 2018 (inclusive) is shown in Table 3.1.

Table 3.1: Boudreau Road Collisions (2012 – 2018 inclusive)

COLLISION TYPE	Collision	
Rear End	278	50.0%
Left Turn Across Path	97	17.4%
Right Angle	58	10.4%
Sideswipe	46	8.3%
Struck Object	30	5.4%
Ran Off Road	21	3.8%
Backing	7	1.3%
Pedestrian Involved	6	1.1%
Passing - Left Turn	5	0.9%
Other	3	0.5%
Hit and Run	2	0.4%
Passing Right Turn	2	0.4%
Head On	1	0.2%
Grand Total	556	100.0%

St. Albert Trail: Key findings from the detailed review of collision statistics on St. Albert Trail are as follows:

- 1,428 collisions were found over 7 years (204 collisions per year), which account for approximately 28% of the total City-wide collisions.
- The severity of these collisions included one fatal, 383 injury, and 1,428 property damage only collisions, the collision casualty (fatal and injury) was determined as 27%.
- As shown in Table 3.2, 56% of the total collisions were “Rear End”, followed by “Sideswipe” (14%), and “Left Turn - Across Path” (12%). All these collisions may be related to high vehicle speed.
- Only three collisions were reported to have speeding as a direct contributing factor, which does not seem to be reliable.



The collision history by alone St. Albert Trail from 2012 to 2018 (inclusive) is provided in Table 3.2.

Table 3.2: St. Albert Trail (2012 – 2018 inclusive)

COLLISION TYPE	Collision	
Rear End	798	55.9%
Sideswipe	204	14.3%
Left Turn Across Path	167	11.7%
Right Angle	126	8.8%
Struck Object	60	4.2%
Ran Off Road	24	1.7%
Backing	13	0.9%
Passing Right Turn	11	0.8%
Pedestrian Involved	6	0.4%
Passing - Left Turn	6	0.4%
Head On	5	0.4%
Other	5	0.4%
Hit and Run	2	0.1%
Passing - Right Turn	1	0.1%

Implications of the Traffic Collision Data

Although one of the provided information in the collision data is for the contributing factors, we found that only three collisions that had occurred on St. Albert Trail and one collision that had occurred on Boudreau Road were directly reported to have speeding as a factor, which does not seem to be reliable. Therefore, it is difficult to quantify and associate collision occurrence directly to speed issues and the posted speed limit.

3.1.2 Traffic Speed and Count Data

The City provided over 750 data points, representing 2016, 2017 and 2018 average daily volumes and 85th percentile speeds recorded in several neighbourhoods, major roadways, in playground and school zones. The 85th percentile speeds and average daily traffic (ADT) volumes are recorded for each segment with the speed warrant. For purposes of this project, the 2018 data was utilized (as the most up to date information), unless unavailable and then 2017 or 2016 information was analyzed.

3.1.3 Other Reports/Plans

Reviewing existing plans and reports completed by the City establishes a baseline for understanding the current state of transportation and directs focus areas for this study. The following sections outline applicable information gathered from existing plans and reports that apply to this report. Relevant excerpts are provided from these plans and reports as they apply; and discussion includes the implication of the relevant report on this study.

Municipal Development Plan (2007)

A Municipal Development Plan (MDP) is a strategic planning document for articulating the community's vision, goals, objectives, and policies to guide the physical, social, and economic development to a set future horizon. The City's MDP was last updated in 2007 named "CityPlan 2007" and is in the process of being updated for finalization in the spring of 2020.

- Based on a review of the 2007 document, the MDP does not specify or guide a policy for setting speed limits within the City.

Transportation Master Plan (2015)

The Transportation Master Plan (TMP) is a strategic planning document for maintaining, improving and planning a future transportation system. There are four principals outlined in the 2015 TMP that apply to the transportation network, which aspire to guide the improvements for the transportation network. These are provided as follows.

- Principal 1: St. Albert is a livable community with safe access to amenities and employment, where we prioritize accommodation for accessible and affordable transit and active transportation.
- Principal 2: St. Albert has a strategic approach to sustainable transportation to serve our diverse population.
- Principal 3: St. Albert protects environmental health by creating opportunities for alternative transportation to maintain the beauty of surrounding nature.
- Principal 4: St. Albert's transportation system supports economic prosperity.

An opportunity identified in the TMP aligns to the recommendation of integrating Intelligent Transportation Systems (ITS) within the City to maximize existing road infrastructure, and suggests the potential application of variable speed limits on the St. Albert Trail corridor. ITS uses technology to improve the efficiency, safety and security of the road network and some examples are listed in the TMP, although variable speed limits are not listed, they fall into the ITS category. Variable speed limits are one of many ITS tools and known to improve safety and efficiency of roadway networks; however, operational conditions of St. Albert Trail would have to be investigated, as optimal integration of variable speeds may more so align with corridors with limited intersections (more free flow tie-ins or exits) and limited direct accesses from the roadways (commercial accesses) which cause disruption to typical driving speeds.

Implications of the Transportation Master Plan on this report:

- Generally, the TMP focuses on many transportation areas, including roads, active transportation, transit and goods movement and general safety; however, there is no direct focus on principal, policy or process on speed limit reviews. Principal 1, to create a livable community, implicates this report where livable could be interpreted as roadways posted with consistent speed limits that reflect their constructed features and through this study, recommendations of this nature are anticipated. Other principals are more challenging to directly apply to speed limit review.
- Direct reference and strategy recommendations within the TMP suggest formalizing the roadway network into appropriate classifications to better represent the roadway's function and service requirements. Within this context speed is relevant for safety and operational considerations in servicing various road users and align to "comfort" for residents and users of adjacent land use.
- ITS tools, including the potential use of variable speed limits could be beneficial, but require additional effort that is outside the scope of this report.

Transportation Safety Plan (2018)

The Transportation Safety Plan, completed in 2018, pursues a set of strategies that will minimize the risk of fatality and injury on roadways in the City and aspires to the objective of Vision Zero, where no serious injury or fatalities occur as a result of motor vehicle collisions. The priority of the Transportation Safety Plan is on injury and fatality collisions to prioritize the prevention of harm associated with these more-serious collisions that have the greatest impacts on the community, causing the most tragedy, costs and loss of productivity.

The Transportation Safety Plan and this report are connected by the recognition that higher speed collisions are observed to have the greatest impacts, resulting in higher probability of fatality and injury. A visual representation of the correlation between risk and speed is illustrated in the Figure 3.2, showing an analogy of speed related risk of injury in a collision between a vehicle and a pedestrian at varying speeds and building heights.



Figure 3.2: Analogy - Impacts of Falling and Impacts (Collision between Vehicle and Pedestrian)

The Transportation Safety Plan provides some speed specific related messaging throughout the report. Excerpts from the Transportation Safety Plan are provided as follows, where they relate to this project:

Background Information:

- The review of municipal safety plans (from 11 Canadian municipalities found a strong emphasis on speed management.
- Speed is both a primary and secondary cause of collisions and high-speed collisions result in much higher severity.

- Drivers typically select speed based on the road design, adjacent land use and roadway features, more often than posted speed limits.
- 2015 speed surveys indicated that speeding is regularly occurring on arterial roads, with recorded “hot spots” on local roads.

Proposed Strategies and Projects – From the Traffic Safety Plan and their implications in this report:

- **Strategy #1** – Provide speed limits consistent with the road design.
 - **Implications:** This project aspires to make recommendations for posted speed limits that are consistent with the road design by objectively reviewing the entire arterial and collector roadway network using the TAC Guidelines for Posted Speed Limits. This addresses strategy #1 as shown above.
- **Strategy #2** – Provide road designs to achieve a target speed.
 - **Implications:** Outside of this project, the City has completed the development of the Complete Streets Guidelines, which will be incorporated into an update of the Municipal Engineering Standards (2020), as well as integration of Traffic Calming design into the update of Standards for direction of retrofit considerations or new development. It is noted that the Complete Streets Guidelines indicate a 30 – 50 km/h posted for neighbourhood roadways and this may need to be updated, pending outcomes of this study.
- **Strategy #3** – Encourage lower speeds in urbanized areas, where access locations are more frequent and vulnerable road users are more prominent.
 - **Implications:** This project includes a detailed evaluation of all Arterial and Collector roadways from a TAC design and posted speed perspective, as well as a review of 10 representative local roadways and explores the recommendations for speed limits in neighbourhoods. Results of this review will inform on posted speeds for various roadway functions and adjacent land use.
- **Strategy #4** – Safe speeds and speed limits strategy, including revising road classifications and design standards, piloting low speeds on local roads.
 - **Implications:** Similar to Strategy #2, a reclassification system has been identified through the Complete Streets Guidelines that better aligns roadway function with adjacent land use. Outputs of this report may provide a “typical” operational setting for various classes of roadways.
 - The City has already integrated reduced neighbourhood speeds in communities having Neighbourhood Traffic Calming applied (speeds reduced to 40 km/h in the neighbourhoods of Erin Ridge, Erin Ridge North and Lacombe Park (East)).
- **Strategy #5** – Review all posted speed limits, including comparison of 85th percentile speed to posted speed limit and perform a TAC speed limit evaluation.
 - **Implications:** This project directly delivers on Strategy #5, as it compares prevailing (85th percentile speed) with the posted speed limit and the TAC warrant speed limit.

Municipal Engineering Standards (2013)

Engineering standards direct the design and construction activities for most components of roadway infrastructure, including general requirements, design details, design materials, construction requirements, quality control and post construction inspection and maintenance. The purpose of engineering standards is to provide direction to designs and ensure consistency across infrastructure projects.



The correlation between engineering standards and this project are that roadway standards, including lane widths, design speed, parking standards, boulevard design, pedestrian accommodation and other cross section features have a significant impact on the perceived functionality of the roadway and resulting operating speeds of drivers. For example, wide lanes on roadways with parking prohibited (no on-street parking), very few landscaping or street-scape features and mild curves are more comfortable for drivers and make it easier to travel at higher rates of speeds. In contrast, narrow lanes, parked vehicles and densely build-up boulevard spaces are less comfortable for drivers that influence reduced speeds.

The municipal engineering design standards offer the maximum operating speed by roadway classification and this is provided in the following excerpt.

Table 3.3: Maximum Operating Speeds (Municipal Engineering Design Standards Table 3.1)

Road Classification	Roadway Curb-to-Curb Width (m)	Right-of-Way Width (m)	Maximum Operating Speed (km/h)
Residential Roads			
Local	9.0	20.0	50
Cul-de-sac	9.0	20.0	50
Minor Collector	11.0	22.0	50
Major Collector	12.0	23.0	50
Commercial Roads			
Minor Collector	11.0	22.0	50
Major Collector	12.0	23.0	50
Arterial Roads			
Undivided	15.0	37.0	60
Divided	8.0 x 2	45.0	60/70

The maximum operating speed in St. Albert is 70 km/h, reserved only for divided arterials. The maximum operating speed for undivided arterials is 60 km/h and the maximum operating speed for all other roadways is 50 km/h.

Implications of the Municipal Engineering Standards in this report includes the following:

- Any recommendations to posted speed limits that are made as a result of this report need to be reviewed against the municipal engineering standards for each roadway classification to ensure roadway design features are consistent.

Traffic Bylaw

The traffic bylaw is a regulatory document governing operations of motor vehicles, bicycles, parking of motor vehicles, pedestrian behaviours, trucks routes, dangerous goods routes, and rules for parades, construction activities and several other regulatory aspects of transportation in St. Albert. Items of the traffic bylaw that pertain to this study are as follows:

- Schedule 7: Speed Limits – Except as indicated in schedule (speed limit map) or otherwise in the bylaw, the speed limit on all roadways is 50 km/h.
- Section 17 – School zone speed limit is 30 km/h, from 8:00 to 16:00 on each school day and is indicated by a traffic control device.
- Section 17 – Playground zone speed limit is 30 km/h, from 8:30 to one hour after sunset and is indicated by a traffic control device.
- Section 18 – The speed limit in an alley and on private land is 20 km/h.
- Section 41 – Bicycles may be operated on a sidewalk, if yielding to pedestrians and not recklessly.

Implications of the Traffic Bylaw on this report includes the following:

- The overall posted speed limit for roadways (speed limit posting on specific roadways as well as general default speed limit) may be influenced and recommended for amendments based on the outcomes of this report.
- The integration of school zones and playground zones and operational considerations such as times of day for application of such zones may be influenced by the findings and recommendations of this report.

Transportation System Bylaw

The Transportation System Bylaw identifies roadway classifications (arterial, collector and locals) but has since been integrated with the Complete Streets roadway classifications – at the time of this report, the bylaw has been approved by local council and is undergoing final approval by the Provincial Ministry. Aligned to the Bylaw, this report follows the following nomenclature and typology (from Complete Streets to Transportation Association of Canada):

- Boulevards = Arterials
- Connectors = Arterials
- Crosstown = Arterials
- Neighbourhood = Collector
- Local = Locals

Implications of the Transportation System Bylaw in this report includes the following:

- Roadway classification is an input to the TAC speed limit warrant.

■ 4.0 Applying TAC Guidelines for Posted Speed Limits

4.1 Introduction

This section of the report describes the results for reviewing the City's collector and arterial roadways using the Canadian Guidelines for Establishing Posted Speed Limits (CGEPSL), published by the Transportation Association of Canada (TAC). The focus of this section is reviewing all non-playground and non-school zone arterial and collector roadways, a total of approximately 60 linear km of arterials and 50 linear km of collectors.

This section provides the following:

- **Section 4.2:** Overview of the Canadian Guidelines for Establishing Posted Speed Limits.
- **Section 4.3:** Detailed documentation of methodology applied for conducting the speed limit review according to the CGEPSL guide, including any assumptions or interpretations needed.
- **Section 4.4:** Results of applying the guide, including a discussion of speed limits recommended by the CGEPSL guide compared to existing posted speed limits.

The recommendations included in this section of the report are based solely on the CGEPSL guide for posted speeds and do not necessarily represent the final recommendation.

4.2 TAC Canadian Guidelines for Establishing Posted Speed Limits

The CGEPSL guide is an evaluation tool to determine a recommended speed limit for a specific segment of roadway based on its classification, function and physical characteristics. The CGEPSL guide provides recommendations for posted speed limits from 40 km/h to 110 km/h.

4.3 Methodology

The methodology for using the CGEPSL guide is as follows:

- **Segment Creation:** Arterials and collectors are broken into segments based on homogeneity, where each segment is geometrically similar. The detailed methodology for selecting segments is provided in Section 4.4.1.
- **Data Inputs:** The CGEPSL guides provides an automatic spreadsheet for conducting the review and calculating the associated risk score for each segment. Data inputs for the guide and associated section in this report are as follows:
 - **Non-Geometric Inputs:**
 - Classification, Urban or rural, major or minor, design speed, posted speed, prevailing speed, policy speed.
 - **Geometric Inputs**
 - Divided or undivided, number of lanes, segment length, horizontal alignment, vertical alignment, average lane width, pedestrian exposure, cyclist exposure, pavement surface, number of intersections, number of accesses, interchanges and on-street parking.
 - **Results (Risk Score and Recommended Speed Limit):** The automatic spreadsheet calculates a risk score based on the non-geometric and geometric inputs and correlates the risk score to a recommended speed limit. The recommended speed limit and correlating risk score is outlined in the following tables, 4.1 (arterials) and 4.2 (collectors).

Table 4.1: TAC Recommend Posted Speed Limit Criteria (Arterials)

Arterials		Recommended Posted Speed Limit (by risk level)				
		90 km/h	80 km/h	70 km/h	60 km/h	50 km/h
Urban Divided Major (1 lane or 2+ lanes)	Recommended Speed	90 km/h	80 km/h	70 km/h	60 km/h	50 km/h
	Associated Risk Score	<25	26 – 33	34 – 41	42 – 59	>60
Urban Undivided Major or Divided Minor (1 lane or 2+ lanes)	Recommended Speed	80 km/h	70 km/h	60 km/h	50 km/h	
	Associated Risk Score	<29	30 – 48	49 – 64	>65	
Urban Undivided Minor (1 lane or 2+ lanes)	Recommended Speed	70 km/h	60 km/h	50 km/h		
	Associated Risk Score	<33	34 – 56	>57		

Table 4.2: TAC Recommend Posted Speed Limit Criteria (Collectors)

Collectors		Recommended Posted Speed Limit (by risk level)			
		80 km/h	70 km/h	60 km/h	50 km/h
Urban Divided Major (1 lane or 2+ lanes)	Recommended Speed	80 km/h	70 km/h	60 km/h	50 km/h
	Associated Risk Score	<29	30 – 36	37 – 39	>40
Urban Undivided Major or Divided Minor (1 lane or 2+ lanes)	Recommended Speed	70 km/h	60 km/h	50 km/h	
	Associated Risk Score	<33	34 – 37	>38	
Urban Undivided Minor (1 lane or 2+ lanes)	Recommended Speed	60 km/h	50 km/h	40 km/h	
	Associated Risk Score	<33	34 – 50	>51	

4.4 Application of the Guide

Application of the CGEPSL guide relies on consistency in the interpretation and application of the required data inputs for using the guide. The following sections are provided to limit inconsistencies for future application of the CGEPSL guide and allow reviewers to understand how the CGEPSL guide was applied.

4.4.1 Segment Creation

The CGEPSL applies to roadway segments, which are defined as sections of a roadway corridor between intersections or otherwise designated at a certain distance between intersections. Careful selection of roadway segments that reflect homogenous sections of a corridor is required for the speed limit guide to apply. Roadway cross section is the primary screening criteria to determine a segment as this is the primary input to the TAC warrant. However, other aspects must be considered, including the number of lanes, divided/undivided, lanes widths, horizontal curvature and classifications, vertical curvature and land use.



Notable application of the guide for creating segments includes the following:

- Posted speed limit is not a criterion for selecting roadway segments. If there are two speed limits for a segment, the speed limit that is the larger portion within the segment will be used for reference only.
- The CGEPSL guide indicates that no speed zones should be less than 500 m for roadways less than 70 km/h speed, therefore no segments should be less than 500 m.

Notable interpretation of the guide:

- A significant change in land use will warrant a change in segment.
- Segments reflect 2019 construction projects (example is Boudreau Road, St. Albert Trail project).

Segment Selection Results

Dividing St. Albert’s roadway corridors into segments based on the CGEPSL guide resulted in the creation of 53 arterial and 57 collector roadway segments. Collector and arterial roadway segments are provided in Exhibit 4.1.

4.4.2 Non-Geometric Inputs

Non-geometric inputs include classification, designation as urban or rural, design speed, posted speed, prevailing Speed and policy speed. Input options and data sources are detailed in the following table.

Table 4.3: Non-geometric Data Inputs

Non-geometric Input	Input Options	Data Source	Interpretation of Source
Road Classifications	Arterial Collector Local	Complete Streets Guidelines	Boulevards, Connectors, Crosstown = Arterials Neighbourhood = Collector Local = Locals
Major or Minor Classification	Major, Minor	See detailed discussion in this section below table.	
Urban or Rural Designation	Urban or Rural		All roadways considered urban, except Meadowview Drive (west of Ray Gibbon Drive)
Current Posted Speed	Speed (km/h)	Traffic Bylaw	
Prevailing Speed	Speed (km/h)	City-provided speed data	85th Percentile Speed (see note below this table)
Policy Speed	Speed (km/h)	Not available (not required, for reference only)	
Design Speed	Speed (km/h)	Not available (not required, for reference only)	

Additional notes for each input are provided as needed.

Major/Minor Classification

The City of St. Albert does not differentiate between major or minor roadways in their roadway classifications and the CGEPSL guide suggests assuming major classification where there is no designation used.

To address this input into the evaluation, the following criteria was developed to determine major or minor roadway classification to be applied for this study only.

- Residential Collector
 - Minor = <3,000 AADT AND shorter less continuous segments.
 - Major = >3,000 AADT AND longer more continuous segments.
- Industrial Collector
 - Major for all, given levels of adjacent development
- Arterial
 - Major for all is assumed

Prevailing Speed

The City of St. Albert provided recorded speed data for the prevailing speed along segments. The 2018 data was used for most of the segments and if multiple points of data were available, the data furthest from an intersection/ driveway was selected. There were nine segments that did not have speed data in 2018, so the 2017 speed and AADT data was used.

4.4.3 Geometric Inputs

Geometric inputs are used to determine the risk score, depending on whether the roadway is classified as an arterial or collector. The following table outlines the geometric data inputs, data source and interpretation of data source.

Table 4.4: Geometric Data Inputs

Geometric Input	Input Options
Cross Section	Divided or Undivided
Intersections and Access	Total number
Number of through lanes per direction	1 or 2+
Horizontal Curvature	Curves/km
Vertical Curvature	% Grade
Lane Widths	Narrow, Moderate, Wide
Roadside Hazards	Total/km
Pedestrian Exposure	See detailed description
Cyclist Exposure	
Pavement Surface	
On-street Parking	

The geometric inputs were sourced from field review of each segment. The detailed description of the data inputs, assumptions and associated risk score is provided in the following sections.

Cross Section (Divided or Undivided)

Where there is a mix of divided and undivided sections, the main characteristic can be considered as the one observed for greater than 50 per cent of the segment being evaluated. There is no risk score associated with this input as it is used to correlate risk score to recommend a speed limit.



Intersections and Accesses (Total Number)

Some anomalies that were encountered were service streets and pedestrian actuated crossing signals. Service roads were counted as stop-controlled side streets and pedestrian actuated crossing signals were counted as signalized intersections. Any accesses that have not been completed (barricaded with jersey barriers) were not counted as side roads or private accesses because the public cannot use them. The risk score resulting from the number of intersections and accesses is not published in the CGEPSL guide.

Number of Through Lanes

Number of through lanes was clear and did not require any interpretation. There is no risk score associated with this input as it is used to correlate risk score to recommend a speed limit.

Horizontal Curves

Horizontal curves are those of any radius that require any level of driver involvement to maintain their location within the lane.

Table 4.5: Horizontal Curves

Risk Level Description	TAC Description	Risk Score	Weight
Higher - > 4	Higher – More than 4 curves per kilometre	3	2 – arterial 1 – collector
Medium - Between 2 and 4	Medium – 2 to 4 curves per kilometre	2	
Lower - < 2	Lower – Less than 2 curves per kilometre	1	

Source: Preliminary source from Google Maps and verified in the field.

Roadways with substantial continuous curves are counted as more than one curve based on number of different curve radii, and using engineering judgement.

Vertical Curves

Vertical curves are counted where the grade is over 4%, occurring on 50% or more of the segment and described in the following table.

Table 4.6: Vertical Curves

Risk Level Description	TAC Description	Risk Score	Weight
Higher – 6% or more on 50% of the section or more	Higher – Frequent steep grades (6% or more on 50% of the section or more)	3	2 – arterial 1 – collector
Medium – 4% or more on 50% of the section or more	Medium – Some steep grades (4% or more on 50% of the section or more)	2	
Lower – Moderate grades or flat	Lower – Generally moderate grades or flat	1	

Source: Preliminary source from Google Maps using the bike directions tool and verified in the field using an inclinometer.

Lane Width

Available lane width depends on the presence of a shoulder and potential of parked vehicles. The lane width inputs are provided in the following table.

Table 4.7: Lane Width

Risk Level Description	TAC Description	Risk Score	Weight
Higher – Narrow	Available width is narrow compared to typical roadways with the same road classification AND (if applicable) adjacent parking lane is available but always busy OR shoulder is narrow.	3	2 – arterial 2 – collector
Medium – Similar	Option 1: Available width is narrow to typical roadways AND on-street parking is available and rarely used OR shoulder is wide Option 2: Available width is similar to typical roadways with the same road classification AND parking is available and busy OR shoulder is narrow.	2	
Lower – Wide	Option 1: Available width is similar to typical roadways with the same road classification AND parking is available and never used OR shoulder is wide. Option 2: Available width is wide compared to typical roadways with the same road classification, regardless of parking and shoulder conditions.	1	

Source: Refer to Appendix B for image descriptions of each risk level. The City of St. Albert Complete Street Guidelines use a lane width of 3.5 m for all Boulevard, Crosstown, Connector, and neighbourhood type roads. Google Street View and aerial photos will be used to judge the lane width.

Roadways where parking is allowed may have wider carriageways necessary to accommodate parking. The addition of parking lanes slightly changes the judgement used for assigning a risk level. Below is the logic followed along collector roads:

- Risk level = Higher, where parking is allowed along one or both sides of the road and the travel lane is narrow compared to regular lanes.
- Risk level = Medium, where parking is allowed along one or both sides of the road and the travel lane is similar size to a regular lane.
- Risk level = Lower, where parking is allowed along one or both sides of the road and the travel lane is wide compared to regular lanes.



Road Side Hazards

Road side hazards within the clear zone area are counted (totaled) for the segment into two categories, “non-breakable” and “breakable”; described as follows:

- Clear zone is 1.5 m based on the complete streets cross-sections.
- **Non-breakable:** Non-breakable includes infrastructure traditionally considered “break-away” and other larger items. For example, breakaway bases for utility, although considered break-away, have a substantial impact if involved in a collision from a vehicle running off the road. Examples of Non-breakable hazards:
 - Utility poles
 - Larger trees (based on judgement)
 - Larger trees located on the median
 - Larger utility pedestals
 - Mail boxes
 - Neighbourhood gateway sign
 - Jersey barriers
 - Concrete bus benches
 - Wooden barrier combined with fence and large trees (along Grandin 2)
 - Train crossing poles
- **Breakable:** Breakable and non-recoverable hazards include the following:
 - Fences
 - Traffic control signage posts
 - Smaller trees (based on judgement)
 - Smaller poles (example knock down barricades at shared use paths)

Refer to Appendix B for image descriptions of different roadside hazards. Items like super mailboxes, which have many mailboxes with minimal spacing between them were considered one roadside hazard. Some segments have a minimum risk score for roadside hazards of medium because of the continuous hazards along the segment; however, if over 10 hazards are present along the segment the risk was deemed high. Additionally, when on-street parking is permitted, the roadside hazards were evaluated as if no cars are parked along the segment. The roadside hazards risk score and weight is provided in the table below.

Table 4.8: Roadside Hazards

Risk Level Description	TAC Description	Risk Score	Weight
Higher – 10 hazards or more/km	10 or more hazards per kilometre, or continuous hazards on more than 50% of the segment length, on one or both sides.	3	1 – arterial 1 – collector
Medium – 5 to 9 hazards/km	5 to 9 hazards per kilometre, or continuous hazards on 25 to 50% of the segment length, on one or both sides.	2	
Lower – <5 hazards/km	Less than 5 hazards per kilometre, any continuous hazards extend for less than 25% of the segment length, or curb and gutter.	1	

Pedestrian Exposure

The risk associated with pedestrians is measured based on the likelihood of pedestrians using a roadway and the facilities provided for pedestrian use. A roadway with known pedestrian activity but limited pedestrian activity may justify a lower speed limit as the lack of facilities may increase the risk of pedestrian collisions. The pedestrian exposure risk score and weighting are provided in the table below.

Table 4.9: Pedestrian Exposure

Risk Level Description	TAC Description	Risk Score	Weight
Higher – No pedestrian facility	Roadway is used by pedestrians and no pedestrian facilities are provided.	3	3 – arterial 3 – collector
Medium – Shoulder Trail	Roadway is used by pedestrians and a shoulder or trail adjacent to the roadway and at the same elevation as the roadway is provided.	2	
Lower – Physically separated	Roadway is used by pedestrians and physically separated pedestrian facilities (sidewalks; trails away from the road) are available; or roadway has negligible pedestrian demand.	1	

Source: Aerial maps and Google Street View will be used to determine the pedestrian exposure risk. The determined risk level will be field verified.

If both monolithic and physically separated sidewalks are present along a segment, the type that covers the majority of the segment will be chosen.

Cyclist Exposure

Similar to pedestrian exposure, cyclists are at a higher risk when there is known cyclist activity on a roadway with no cycling facilities. The pedestrian cyclist risk score and weighting is provided in the table below.

Table 4.10: Cyclist Exposure

Risk Level Description	TAC Description	Risk Score	Weight
Higher – No road space	Roadway is used by cyclists and no road space is allocated to bikes.	3	3 – arterial 3 – collector
Medium – Wide curb or shoulder	Roadway is used by cyclists and wide curb lane or shoulder is provided.	2	
Lower – Designated bike lane	Roadway is used by cyclists and a designated bike lane is provided; or roadway is used by cyclist and no road space is allocated to bikes, but roadway has very low traffic volumes; or roadway has negligible cyclist demand.	1	

Source: Aerial maps and Google Street View will be used to determine the cyclist exposure risk. The determined risk level will be field verified.

For the purposes of this project, all roadways are assumed to have some level of cyclist demand. St. Albert has many multiuse trails, and these are considered designated bike lanes with a lower risk associated for the purposes of this project.

Where there are no multiuse trails available, and the lane widths are identified in table 3.6 as narrow or similar, cyclist exposure is assumed as higher and where lane widths are identified in table 3.6 as wide, cyclist exposure is assumed as medium.

Pavement Surface

A vehicle’s maneuverability can be significantly reduced by rough surface conditions or unpaved road. Roadways with poor or unpaved/gravel pavement surfaces may necessitate lower speed limits. The pavement surface risk score and weighting are provided in the table below.

Table 4.11: Pavement Surface

Risk Level Description	TAC Description	Risk Score	Weight
Higher – Poor or Unpaved	Poor or unpaved/gravel.	3	1 – arterial 1 – collector
Medium – Fair or Rough	Fair or rough (significant sections with pot holes, rutting, large cracks, etc.).	2	
Lower – Good or Smooth	Good or smooth.	1	

Source: Aerial maps and Google Street View will be used to determine the pavement surface. The determined risk level will be field verified.

During the desktop review, if there were visible signs of multiple crack or pothole repairs the pavement condition was considered fair/rough. Otherwise, pavement was considered good/smooth.

On Street Parking

Conflicts may occur along streets where parking is permitted. The risk for on-street parking is focused on the duration that on street parking is permitted and assumes parking is utilized if it is provided. Lower posted speed limits are justified along roadway segments with parking permitted all day. The on-street parking risk score and weighting is provided in the table below.

Table 4.12: On Street Parking

Risk Level Description	TAC Description	Risk Score	Weight
Higher – Parking all day	Parking permitted all day on one or both sides of the roadway.	3	3 – arterial 3 – collector
Medium – Parking during part of the day	Parking permitted during part of the day on one or both sides of the roadway.	2	
Lower – Hardly used/not allowed	No parking allowed; or parking is permitted but rarely if ever actually utilized.	1	

Source: Aerial maps and Google Street View will be used to determine on-street parking risk level and will be confirmed with a field verification. Additionally, the City’s Traffic Bylaw will be reviewed for roadways where parking/stopping is prohibited. Judgement is used when “Parking Prohibited” signage cannot be found. It is assumed drivers would not block a through lane of traffic to park on the street.

The TAC guide does not provide direction for identifying the risk level based on parking occupancy and there is no indication in the Guide as to what qualifies as “rarely used” parking. In St. Albert’s residential areas, parking is generally provided on both sides of the roadway; however, the actual demand and use of on-street parking varies greatly throughout the day, typically higher during

evenings/nights and lower during the day. To improve accuracy for identify parking risk levels, the following additions apply to the risk levels in Table 4.12.

- Risk level = Higher; where parking is permitted all day on one or both sides of the roadway AND covers at least a 25% proportion of the segment and is at least 25% occupied during the day.
- Risk level = Medium; where parking is permitted during part of the day AND covers at least 25% proportion of the segment and is at least 25% occupied during the day.
- Risk level = Lower; where no parking is permitted, or parking is permitted over less than 25% proportion of the segment, or parking is permitted and covers greater than 25% proportion of the segment but is less than 25% occupied during the day.

The 25% thresholds for segment coverage and occupancy is based on engineering judgment towards the impact of parked vehicles on vehicle flow during the field verification tasks of this project. The experience from the field was that a minimal volume of parked vehicles will influence driver comfort on the roadway by increasing driver workload to maneuver through the roadway. Further investigation could be performed with additional data collection comparing varying levels of parking supply, occupancy, and their impacts on driver speed to confirm the risk level thresholds suggested.

4.5 TAC CGEPSL Recommendations

The results indicate the recommended speed limit based on CGEPSL and serve as an important tool for reviewing speed limits. It is important to note that the results do not constitute statutory requirements, as the CGEPSL is a guideline and not a statutory document. Application of the results require interpretation and judgement before implementation and the following provides a discussion of the results for the purpose of making recommendations, including:

- Comparison of recommended speed limits from the CGEPSL to the existing posted speed limits.
- Comparison of recommended speed limits from the CGEPSL to prevailing speeds on St. Albert's roads.
- Discussion of the use of minor and major classifications for neighbourhood roadways in relations to the recommended speed limits from the CGEPSL.

The results of the assessment are provided in Exhibit 4.2. Detailed results for each segment are provided in Appendix C.

Comparison of Results to Existing Posted Speed Limits

The posted speed limits are centralized around 50 km/h, with most segment speed limits set at 50 km/h, as shown in the following figure.

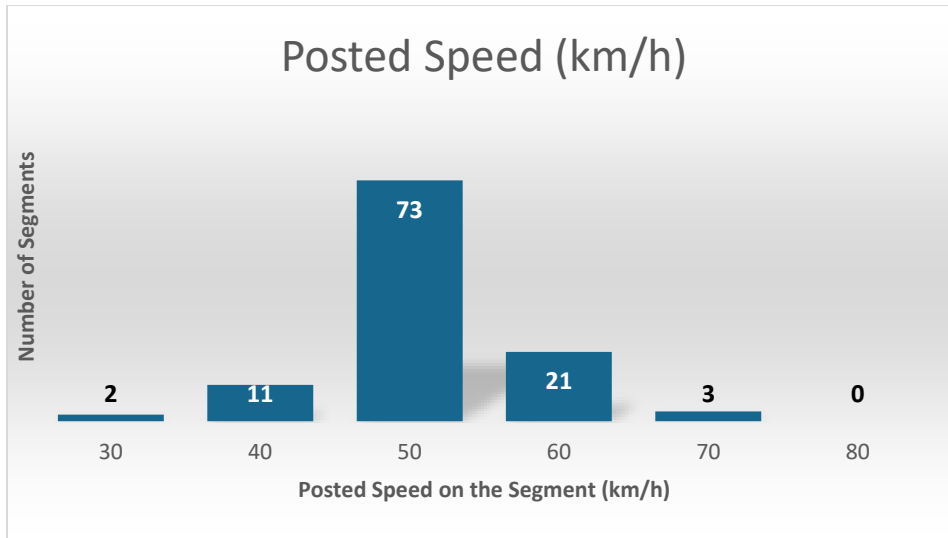


Figure 4.1: Current Posted Speed Limit

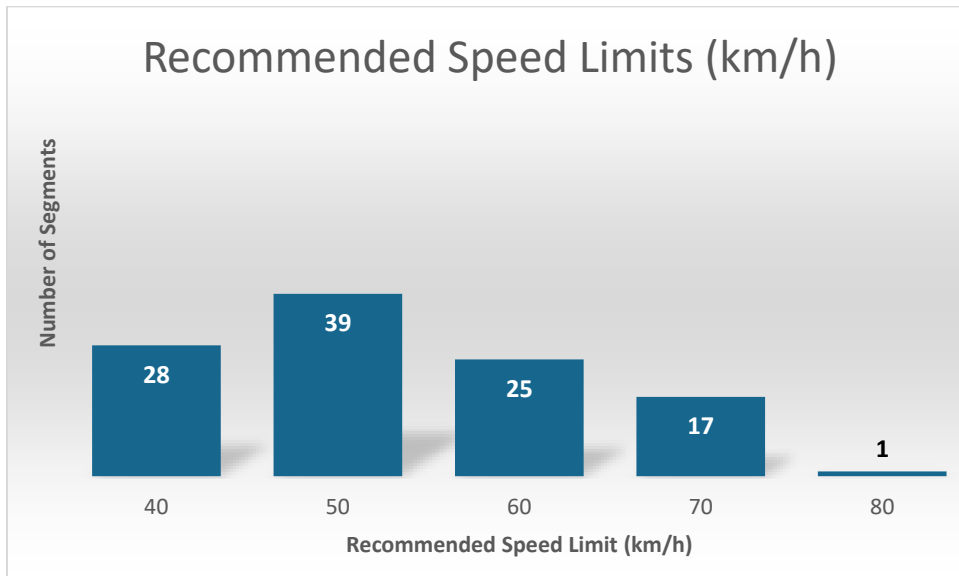
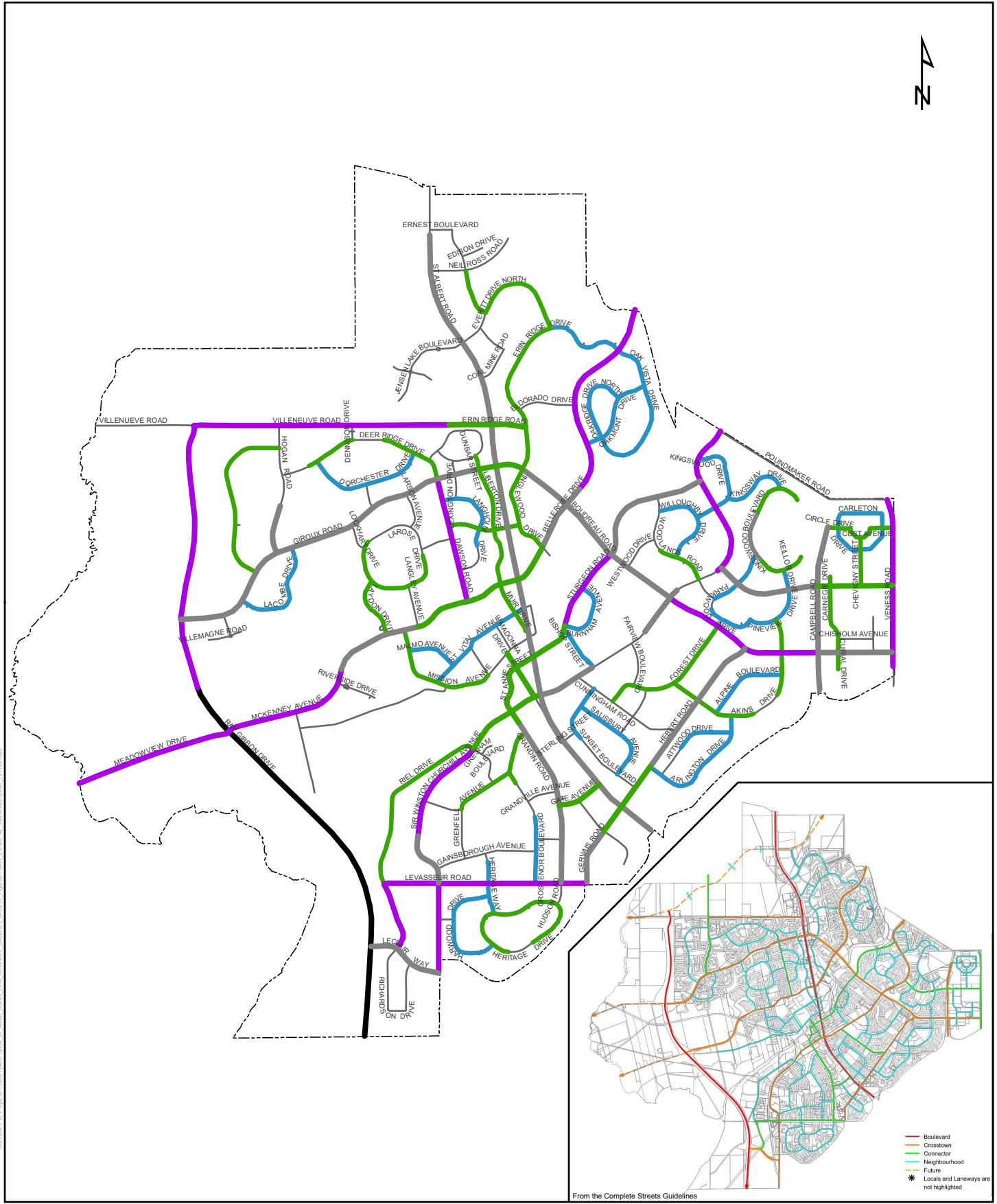
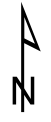


Figure 4.2: Recommended Speed Limits

The recommended speed limits are still centralized around 50 km/h; however, as can be seen in Figure 4.2, the results recommend increased application of 70 km/h and 40 km/h zones.

The posted speeds are compared to the recommended speeds by subtracting the recommended speed limit from the posted speed limit for each segment. The results are provided in the following figure.



0 0.5 1 2 km
 CANA83-3TM114 1:55,000

City of St. Albert
 Road Unclassified

Warranted Speed (km/h)

- 40
- 50
- 60
- 70
- 80

Boulevard
 Crossroad
 Connector
 Neighbourhood
 Future
 Locals and Laneways are not highlighted



EXHIBIT 4.2:
TAC CGEPSL
RECOMMENDED
SPEED LIMIT

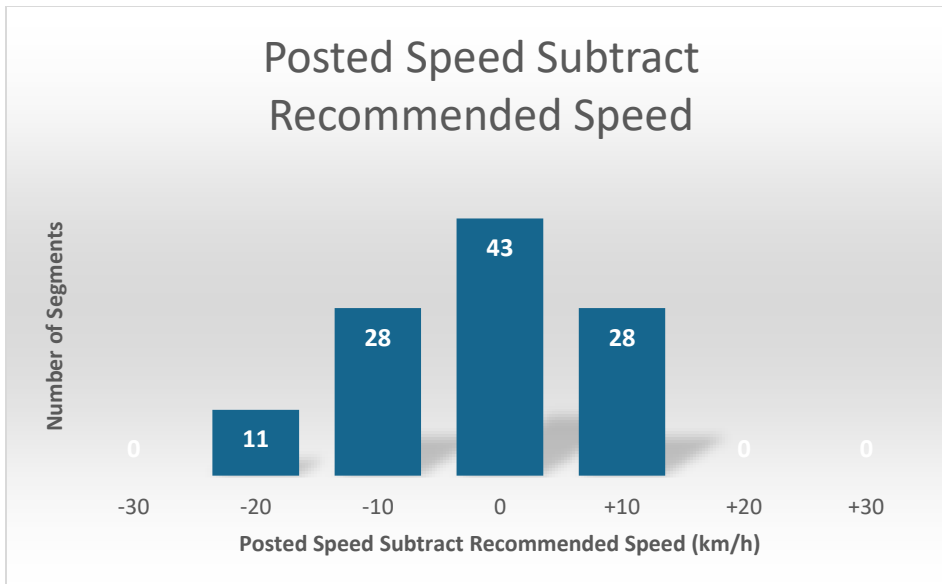


Figure 4.3: Posted Speed Subtract Recommended Speed

The following observations are made from the figure:

- Overall, the difference between the posted and recommended speed limit was relatively small, with 99 of 110 segments reflecting a posted speed limit within 10 km/h of the recommended speed limit.
 - 43 of 100 segments have a matching posted and recommended speed limit.
 - 56 segments have a posted speed limit within 10 km/h of the recommended speed limit.
- 39 segments have an increased recommended speed limit and 28 segments have a decreased recommended speed limit.
- Eleven segments have a recommended speed limit that is 20 km/h greater than the posted speed limit.

These above three observations indicate that overall the speed limits within St. Albert generally align with the CGEPSL, which aligns with reported past practices. Key exceptions exist where the recommended speed limit is for an increase of 20 km/h or more. The posted speed is compared to the recommended speed in Exhibit 4.3.

Comparison of Results to Prevailing Speeds

Prevailing driver speeds is an important consideration when reviewing the speed limits within a City. Although not a specific input to the CGEPSL guide, understanding speeds that drivers choose to drive provides context for understanding local conditions and reviewing the results. For this, the City provided traffic speed data based on the 85th percentile for 2018 and 2017 where available. The 85th percentile speed represents the speed that 85 per cent of vehicles were observed to travel at or below, or rather the speed that only 15 per cent of drivers were observed to exceed.

The recommended speed minus the prevailing speed is tabulated in the following figure, Note – the total segments with speed data recorded equals 82.

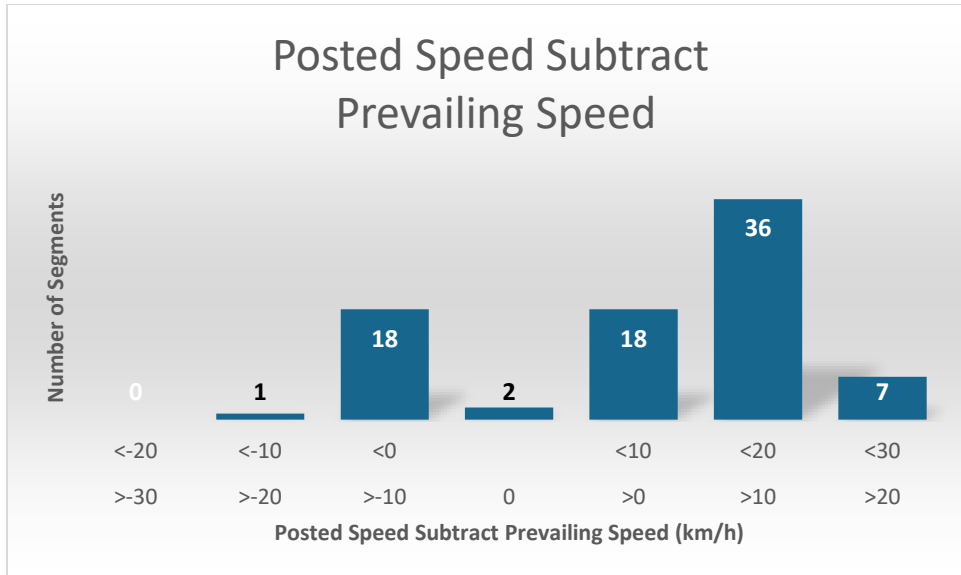


Figure 4.4: Posted Speed Subtract Prevailing Speed

The following observations can be made from the above figure and Exhibit 4.3:

- Approximately 77% of segments (63 of 82 segment) show drivers travelling at speeds at or below the posted speed limit.

Based on this speed data, the majority of drivers travel well within the posted speed limit. This is important as the results indicate that there are more cases where an increase in the posted speed limit is recommended rather than a decrease. When considering the prevailing driving speed is generally at, or lower, than what is currently posted, an increase in the posted speed limit may not be appropriate. While it may be recommended through the CGEPSL process, increasing the posted speed limit on roadways in which the prevailing speed is aligned to or lower than the current posted speed limit could result in a greater differential in travel speeds along the corridor which is both an operational and safety concern.

Major/Minor Classification

As previously discussed, the City of St. Albert does not differentiate between major and minor roadway classifications, which is a key factor in determining the recommended posted speed. With this criterion not clearly identified, as part of this project, the team utilized operational considerations and recorded information to assign a classification to the roadways. Information used to classify the roadways as minor or major was based on traffic volumes and roadway segment continuity. The results of applying these factors resulted in a recommendation to utilize the “minor” classification for the roadways and under this criterion, approximately 70% of the neighbourhood roadways are recommended as 40 km/h.

- For the purposes of testing the sensitivity of the CGEPSL guide, maintaining the classification of neighbourhood roads as “minor” roads, and adjusting the risk score threshold from 51 to 47 (<10%) resulted in a substantial increase to approximately 90% of roadways recommended to be posted at 40 km/h.

- As a further comparison, the roadways were also evaluated under a “major” and “minor” classification system, focused on a difference of the roadways based on traffic volumes. The application of the two classifications resulted in an approximate split (50%) of collector roadways to be recommended at 40 km/h. This evaluation of the collector/neighbourhood roads is illustrated in the following table.

Table 4.13: Supplemental Results, Collector Speed Limit Recommendations (total for 57 segments)

Total	(Threshold 51)	Neighbourhood Classification System All Minor (Threshold 51)	Results If all Minor + 47 Risk Threshold (instead of 51)
40 km/h	28	40	51
50 km/h	28	16	5
60 km/h	1	1	1

As shown in the table:

1. Classifying all neighbourhood roads as minor and using the threshold score of 51 results in a recommended speed limit of 40 km/h for 40 of the 57 segments (70% of the collector roadways).
2. If the threshold is reduced by 4 points, from 51 to 47 (10%) then 51 of 57 segments are recommended at 40 km/h (89% of the collector roadways).
 - a. There are five exceptions where the speed limit is still recommended at 50 km/h; however, the risk score is relatively close to the threshold.
 - b. The only other exception is Kingswood Boulevard where the roadway is adjacent to a large open and undeveloped space, but it is anticipated this area will become developed and thus the criteria and score would change.
 - i. The risk score is very low for this segment (27) as a result, which is why 60 km/h is recommended.



5.0 Local Roadway Review

5.1 Introduction

Local roadways make up the largest portion of the City's network (their total linear length of 170 km is more than the combined length of arterials and collectors). The major function of local roadways is to provide vehicle access to private and public developments and thus vehicle mobility and speed expectations are very different from collector and arterial roadways (although in the context of St. Albert with front facing residential access along collectors, there is stronger similarity of function from local to collector in comparison to arterial). Local roadways also often share mobility with vulnerable road uses and sometimes serve as recreational spaces for local activities such as street hockey games.

Based on the results of the best practices survey, the majority of municipalities have a current default speed of 50 km/h on local roadways and local roadway speed reviews are generally conducted due to public request, safety concern, or the construction of a new playground or school. In addition, of the municipalities surveyed, the majority of responses indicated that they are currently conducting or discussing a local roadway speed limit review or intend to do so in the future.

The results of the best practices survey indicate a trend towards reviewing the default 50 km/h speed limit on local roadways. This is likely due to a combination of safety concerns and public opinion.

5.2 Review Purpose

The purpose of this section is to share information following the evaluation of a representative selection of the City's local roadways based on literature review and field observation.

5.2.1 Literature Review

Safety is central around the local roadway speed limit debate, due to the high number of pedestrians typically associated with these roadways. There is no debate surrounding the strong correlation between pedestrian fatality risk and the impact speed of the vehicle.¹ In fact, it was determined that the pedestrian fatality risk at 50 km/h is twice as high as the risk at 40 km/h and more than five times higher than the risk at 30 km/h.² Note – this fatality risk only applies to pedestrians aged 15 years or older.

- It was found that the risk of child pedestrian injury is seven times more likely with an increase in impact speed from approximately 30 km/h to 50 km/h (actual values are 32 km/h to 48 km/h).³

In addition to safety, speed limits influence the level of comfort on the environment for cyclists. The National Association of City Transportation Officials (NACTO) Design for All Ages, All Abilities facility selection guidance is a tool to design safe and inviting bicycle infrastructure that any cyclist would feel comfortable using, regardless of their age or abilities. In the guidebook, the suggested speed limit for

¹ Rosén, E., and Sander, U. "Pedestrian Fatality Risk as a Function of Car Impact Speed." *Accident Analysis and Prevention*, 41 (2009): 536-542

² Rosén, E., and Sander, U. "Pedestrian Fatality Risk as a Function of Car Impact Speed." *Accident Analysis and Prevention*, 41 (2009): 536-542

³ Jacobson, P. et al. "Child Pedestrian Injuries on Residential Streets: Implications for Traffic Engineering." *Institute for transportation Engineers*, February 2000

a shared facility, or bike boulevard, is 30 km/h or 40 km/depending on the motor vehicle traffic volume. This cycling facility type was chosen as it is the most common cycling facility type within local roadways.

Compliance is an important factor in determining the effectiveness of reduced local roadway speed limits. In 2010, the City of Edmonton reduced the posted speed limit in six residential communities from 50 km/h to 40 km/h. A study was conducted to investigate the impact to vehicle speeds in these communities due to the reduced speed limit. Data was collected for at 65 locations for a 7-month period, one month before the speed limit reduction and six months after.⁴ It was found that overall, the residential speed limit reduction was effective for all performance indicators evaluated, with compliance increasing over time. Six months after treatment, the mean free-flow speed was reduced by 4.88 km/h. Furthermore, speeding levels exceeding 50 km/h and 65 km/h was substantially reduced with an 85th percentile speed reduction observed in the treated communities.

5.3 Local Road Assessments

5.3.1 Local Roadway Selection

Local roadways selected for assessment include 10 representative roads, which include varying levels of the following:

- Different adjacent land uses.
- Different traffic volumes and lengths.
- Different roadway widths.
- Roads with a history of citizen traffic safety concerns.

The roadways selected and their perceived attributes from desktop review are shown below.

Table 5.1: Local Roadways Selected

Segment	From	To	Traffic Volumes			Roadway Width		Land Use
			Lower	Moderate	Higher	Narrower	Wider	
Dufferin Street	Giroux Road	Dorchester Drive			Y		Y	Residential
Rayburn Crescent	Riel Drive	Riel Drive		Y			Y	Industrial
Galarneau Place	Gervais Road	Loop			Y	Y		Mixed Use
Greenbrier Crescent	Gatewood Avenue	Loop	Y				Y	Residential
Fawcett Crescent	Farmstead	Farmstead Avenue	Y				Y	Residential
Arbor Crescent	Akins Drive	Akins Drive	Y				Y	Residential
Eastgate Way	Erin Ridge Drive	Edge Water Terrace			Y		Y	Residential
Otter Crescent	Oakridge Drive	Oakridge Drive		Y				Residential
Newmarket Way	Hogan Road	Nelson Court		Y			Y	Residential
Stanley Dr	Cunningham Road	Salisbury Ave		Y			Y	Residential

⁴ Islam, M.T., El-Basyouny, K., and Ibrahim, S. "The Impact of Lowered Residential Speed Limits on Vehicle Speed Behavior." *Safety Science*, 62 (2014) 483-494

5.4 Local Roadway Field Review

Each of the segments listed in Table 5.1 were investigated in the field. Results of the review are as follows:

On-street Parking and Roadway Width

Overall, local roads have a relatively narrow cross-section, which is not typically wide enough to support parked vehicles on both sides of the street and allow two vehicles to pass by each other in opposing directions. The narrow width along with even a small number of parked vehicles creates a substantial traffic calming effect based on experience travelling through the local roads.



Waiting to Pass

Lot Width, Driveway and Garages

In older areas of St. Albert, there appeared to be generally wider residential lots, and in some areas more single car driveways and single car garages. This appears to be a trend amongst areas constructed in the 1950 to 1980s. Newer areas, especially those build in the past 10 years, have generally narrower lots and in most cases two car driveways and two car garages. This is important as the roadways in older areas appeared narrower with more parked vehicles present, possibly due to less vehicles parked in driveways and garages. In newer areas roadways appear to be wider, potentially to accommodate street parking, but with less vehicles parked on the street, possibly due to more vehicles parked on driveways and garages. Newer areas also have less space between driveways where vehicles could park.



Older Area, Single Car Driveways and Street Parking



Newer Area, Double Car Driveways and Street Parking

Horizontal Curves

The St. Albert road network is curvilinear, from arterials to neighbourhood roads, and many of the local roads reviewed have sharp corners that would not be constructed on roadways of a higher classification. The sharp corners include 90-degree corners that require a substantial reduction in speed to navigate and more consideration and attention if there are parked vehicles. Generally, there is an engineering judgment that local roadways are not designed to accommodate moderate to high traffic flow speed with the types of curves constructed and instead the design suggests lower speed requirements.



Example of Curves on Local Roads

Comfortable Speed

On many of the local road segments investigated, the comfortable driving speed was much less than 50 km/h, typically ranging between 30 – 40 km/h, depending on the number of parked vehicles, roadway widths, curves and presence of pedestrians. On two segments, the comfortable speed was perceived as slightly higher due to the segment having longer straight sections of road, with few parked cars.

Adjacent Land Use

The majority of local roads reviewed are in residential areas and travelling through these areas at a speed of 50 km/h may be deemed inappropriate, in the context of surroundings and expectations of other road users. In these areas, there are a number of vulnerable users that share the road space, including those using local road streetscape for activities such as ball hockey, skateboarding, basketball (these conditions were both observed and are known).



Basketball Net on Local Road

Two local roadways outside of residential areas were also reviewed, including an industrial area and a mixed use, commercial/residential area. In these areas there were a high number of parked vehicles due to the higher activities in the area. These roadways are operationally and functionally different in comparison to the roadways investigated adjacent to residential land use; they involve less on-street or vicinity activities and could be considered for being maintained at 50 km/h or potentially be reduced to 40 km/h to be consistent with other roadways.



6.0 School Zones and Playground Zones

6.1 Introduction

The Alberta Transportation (AT) Guidelines for School and Playground Zones and Areas was created to promote uniformity in establishment, signage, and marking of school and playground zones and areas in Alberta. A maximum speed limit of 30 km/h is prescribed within school and playground zones in Section 107 of the Alberta Traffic Safety Act. By bylaw, a municipality may prescribe a lower maximum speed limit that shall be no lower than 20 km/h. The guidelines provide a systematic, objective, and quantitative procedure for assessing the need for a school and playground zone or area.

St. Albert's past practice has been application of the AT Guidelines; however, the City has applied only school zones and has not integrated school areas – meaning that in some cases, the identification of a score for a school area resulted in the field application of a school zone. Whereas, there has been the application of both playground zones and playground areas throughout the city.

6.2 Review Purpose

The purpose of this section of the study is to summarize the review process and findings on the City's existing playground and school zones using the AT Guide and interpreting the results to provide recommendations to playground and school zones for the City's consideration. The following were the main focal points to be investigated in the review:

1. How do the City's current zones or areas rank in regard to the AT Guidelines?
2. Do current school zones meet the Guidelines for application of playground zones?
3. From operational information (vehicle and pedestrian volumes), what time of day applications may be considered for playground zones or school zones?

The recommendations included in this section of the report are based solely on the AT Guidelines for School and Playground Zones for posted speeds and do not necessarily represent the final recommendation.

6.3 Applying AT School Zone Input Worksheet

The AT School Zone Input Worksheet provides a quantitative assessment for the need of a school zone or area. A total score of 100 points is possible based on six weighted categories for school type, school fencing, adjacent roadway classification, property line separation, school entrance features and presence of sidewalks. The school zone results matrix is provided in the table below.

Table 6.1: School Zone Results Matrix (AT Guidelines for School and Playground Zones & Areas)

Total Score	Area or Zone?
0 – 40	Nothing
41 – 64	School Area
65 – 80	School Area or School Zone*
81 – 100	School Zone

*Local conditions must be considered in detail to determine the appropriate treatment. Wherever possible, mitigation measures should be explored that would reduce the score so that marginal school zones can be avoided. The reasons for the final decision should always be documented.

The six installation criteria for a school zone or school area are discussed in the following sections.

School Type

The type of school has the greatest contribution to the total score with a maximum point value of 40 points. Children of elementary school age without a parent present are considered the most vulnerable due to their tendency to accidentally enter the roadway and their limited ability to anticipate and understand vehicular traffic movements. As such, elementary schools receive the highest weighting factor while high schools receive the lowest. The point breakdown for school type is provided in the following table.

Table 6.2: School Type Point Breakdown

Maximum Point Value	Description	Weighting Factor
40	Elementary	1.0
	Middle/Junior High	0.4
	High School	0.2
	Post Secondary/College/University	0.0

Fencing

Fencing can act as physical barrier to prevent movements onto the roadway, thus reducing the need for a school zone. The effectiveness of the fencing depends on how easily the fence can be traversed. A school is classified as fully traversable if there is no fence along the side adjacent to the roadway, or the fence is easily traversed. Partially traversable can describe low-height fencing or fencing with several openings. Non-traversable describes high-mounted fencing with limited openings at defined points such as a main entrance. The fencing point breakdown is provided in the table below.

Table 6.3: Fencing Point Breakdown

Maximum Point Value	Description	Weighting Factor
20	Fully Traversable	1.0
	Partially Traversable	0.5
	Non-Traversable	0.1

Road Classification

The roadway classification is important when considering school zones as it may influence compliance and create a false sense of security on potentially hazardous roadways. School zones should be avoided on expressways/freeways and arterial roads for this reason. The more significant speed reduction required going from higher class roadways to a school zone can appear to contradict the roadway's function and be unexpected or disrespected. As such, it is advisable that school zones remain on local or collector roadways only. The point breakdown for road classifications is provided in the table below.

Table 6.4: Road Classification Point Breakdown

Maximum Point Value	Description	Weighting Factor
20	Local	1.0
	Minor Collector	0.75
	Collector	0.5
	Major Collector/Minor Arterial	0.25
	Major Arterial/Expressway	0.0

*All provincial highways shall be treated as “Freeway” for the purpose of assignment of the weighting factor for the “Road Classification” under “Rural Land Use”.

Property Line Separation

A school’s property line typically abuts at least one roadway and may be near an intersecting roadway if the school is located near an intersection. When assessing the need for a school zone on the intersecting roadway, the proximity between the school’s property line and the roadway should be considered. A property line that is separated from the roadway by only a sidewalk or fence is considered to abut the roadway. If the school property line is located within 50 metres of the intersecting roadway, there is a greater likelihood that a child may enter the roadway than in the property line separation exceeds 50 metres. The property line separation point breakdown is provided in the table below.

Table 6.5: Property Line Separation Point Breakdown

Maximum Point Value	Description	Weighting Factor
10	Abuts Roadway	1.0
	Within 50 metres	0.5
	Further than 50 metres	0.0

School Entrance

School entrances is the focal point of congestion, both for pedestrians and vehicles, with the activity typically concentrated at the main entrance. A secondary entrance, if it exists, typically has far less activity than the main entrance and is thus less likely for pedestrian-vehicle conflicts to occur. A school entrance can be a driveway to the school, the closest point along the road to the main door, or a designated pick up and drop off area. The point breakdown for school entrances is provided in the table below.

Table 6.6: School Entrance Point Breakdown

Maximum Point Value	Description	Weighting Factor
5	Main Entrance/Multiple Secondary Entrances	1.0
	Secondary Entrance	0.6
	No Entrance	0.0

Sidewalks

Sidewalks provide a safe route for children onto the school grounds or a defined crossing point on the roadway. Children are less likely to walk on the roadway if sidewalks are present. The point breakdown for sidewalks is provided in the table below.

Table 6.7: Sidewalks Point Breakdown for School Zones

Maximum Point Value	Description	Weighting Factor
5	None or non-school side	1.0
	School Side	0.6
	Both Sides	0.0

6.3.1 Results

School Zone Data Review

The City of St. Albert applied the Alberta Transportation School Zone Input Worksheet to roadways adjacent to schools. Exhibit 6.1 shows the results of the School Zone and Area analysis conducted with a few updates confirming the type of school, property line separation and application of the segment. In order to reduce clutter, the schools are numbered rather than named. A legend with the school names is provided on the reverse of the exhibit.

Where the results of the final score fall into the category of applying an area or zone (refer to Table 6.1), the considerations of school type and property line separation were focused on and if the school was an elementary school and the roadway was adjacent to, or reasonably close to, the school it was classified as a zone. The resulting scores of the school evaluation, as well as identification of the existing school zones are shown on a map in Appendix D.

Based on pure application of the AT guidelines, the number of roadways that are currently signed as school zones within St. Albert is higher than what is recommended through the guidelines; with 60 currently designated and 46 warranted. The main differentiator is the type of school, as the point difference between an elementary school and a junior high school or high school is 26 and 32 respectively.

Based on the results, several roadways that are currently signed as school zones are suggested to be signed as school areas based on the direct application of the Guidelines, with 23 school areas suggested. This result aligns to the past applications exceeding the guidelines recommendations when investigating school zones, where zones were applied over areas.

It is also noted that four roadways previously not signed as school zones or areas are now suggested.

6.4 Applying the AT Playground Zone Worksheet

The AT Playground Zone Input Worksheet provides a quantitative assessment for the need of a playground zone or area. Similar to the school zone, a total score of 100 points is possible based on six weighted categories including playground type, fencing, road classifications, property line separation, playground entrance and presence of sidewalks. The playground zone results matrix is provided in the table below.

Table 6.8: Playground Results Matrix (AT Guidelines for School and Playground Zones & Areas)

Total Score	Area or Zone?
0 – 40	Nothing
41 – 80	Playground Area
81 – 100	Playground Zone

The criteria for a playground zone will be discussed in the following sections.

Playground Type

The type of playground type reflects the likely level of utilization of the facility and its exposure to the roadway. Playgrounds with more equipment (capacity) are more likely to warrant a reduced speed zone. The playground type point breakdown is provided in the table below.

Table 6.9: Playground Type Point Breakdown

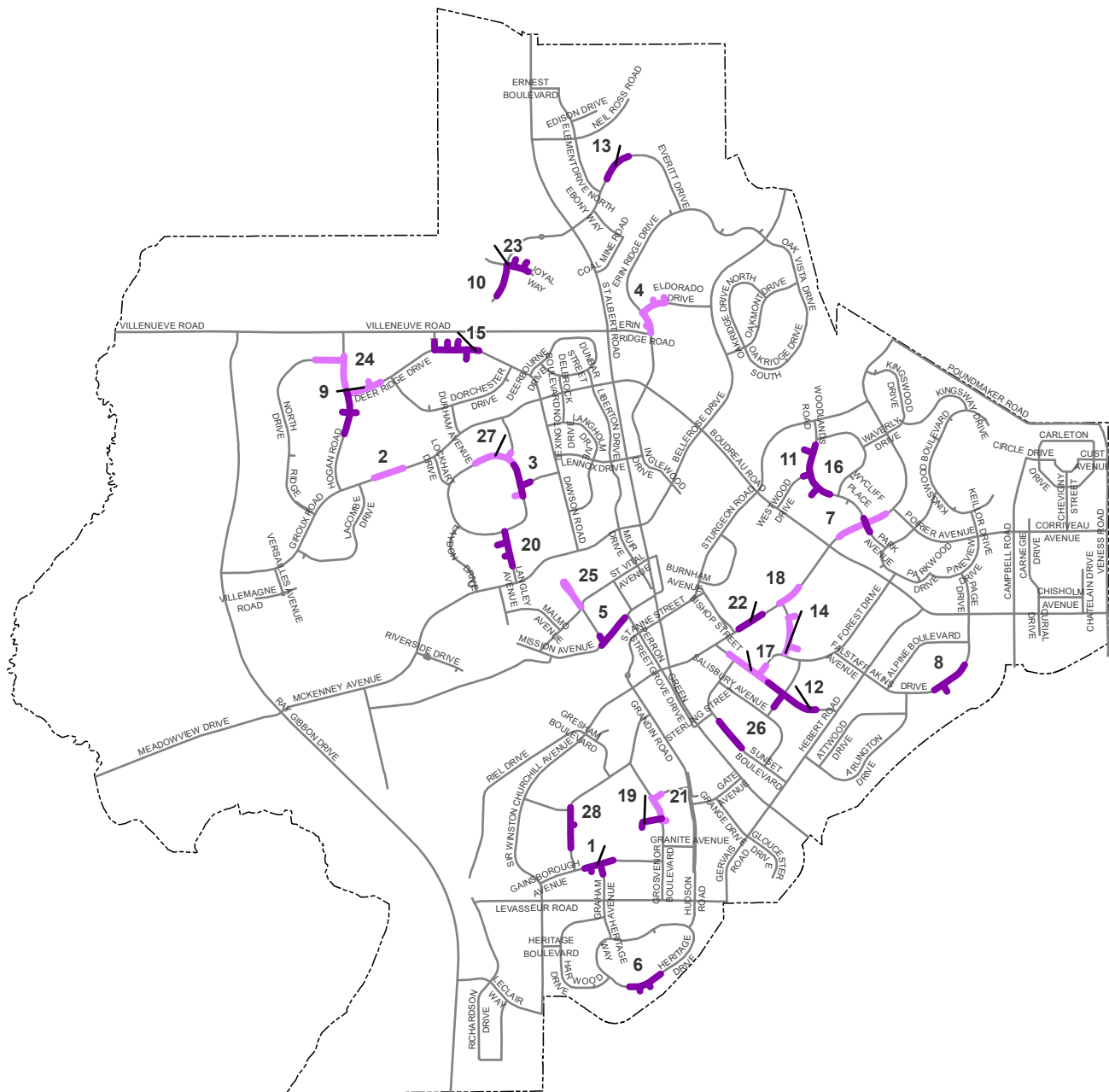
Maximum Point Value	Description		Weighting Factor
40	Frontage	Playground Capacity (number of children)	N/A
	≥ 50 m	16 or more	1.0
		5 to 15	0.75
		1 to 4	0.4
		No play equipment: sports field or open field only	0.2
	< 50 m	Any facilities	0.2

Fencing

The fencing point breakdown for playground zones is the same as for school zones, provided in the previous section, see Table 6.3. The evaluation methodology is similar, however if a play area is the focal point of activity within a much larger field, the fencing around the play area itself should be considered, particularly if fencing is not provided roadside.

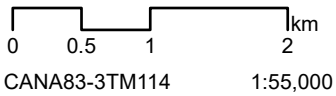
Road Classification

Similar to school assessments, the roadway classification is important when considering playground zones as it may influence compliance and create a false sense of security on potentially hazardous roadways. The point breakdown for road classifications for playground zones is the same as for school zones, see Table 6.4.



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Credits



- City of St. Albert
- Road Unclassified
- Recommended Area
- Recommended Zone

EXHIBIT 6.1:
AT GUIDE
SCHOOL ZONE
AND AREA
RECOMMENDATIONS



- 1 Albert Lacombe Elementary School
- 2 Bellerose High School
- 3 Bertha Kennedy Elementary School
- 4 Ecole Alexandre Tache Junior High School
- 5 Ecole Father Jan Elementary School
- 6 Ecole La Mission Elementary School
- 7 Ecole Marie Poburan Elementary School
- 8 Elmer Gish Elementary School
- 9 J.J. Nearing Elementary School
- 10 Joseph M Demko Elementary School
- 11 Keenooshayo Elementary School
- 12 Leo Nickerson Elementary School
- 13 Lois E Hole Elementary School
- 14 Lorne Akins Junior High School
- 15 Muriel Martin Elementary School
- 16 Neil Ross Elementary School
- 17 Paul Kane High School
- 18 Richard S Fowler Junior High School
- 19 Robert Rundle Elementary School
- 20 Ronald Harvey Elementary School
- 21 Sir George Simpson Junior High School
- 22 Sir MacKenzie Elementary School
- 23 Sister Alphonse Academy Elementary School
- 24 Sturgeon Heights Elementary School
- 25 V.J Maloney Junior High School
- 26 Vital Grandin Elementary School
- 27 W.D. Cuts Junior High School
- 28 Wild Rose Elementary School

Property Line Separation

A playground's property line typically abuts at least one roadway, and may be near an intersecting roadway if the playground is located near an intersection. The property line separation point breakdown for a playground zone is the same as a school zone; however, unlike for schools, the location of the play equipment should be considered when assessing the property line. See Table 6.5.

Playground Entrance

As with schools, playground entrances are the focal point of congestion, both of pedestrians and vehicles, with the activity typically concentrated at the main entrance. The point breakdown for playground entrances is the same as for school zones and is provided in a previous section, see Table 6.6.

Sidewalks

Sidewalks provide a safe route for children onto the playground grounds or a defined crossing point on the roadway. Children are less likely to walk on the roadway if sidewalks are present. The point breakdown for sidewalks is slightly different for playgrounds, and is provided in the table below.

Table 6.10: Sidewalks Point Breakdown for Playground Zones

Maximum Point Value	Description	Weighting Factor
5	None (or non-playground side)	1.0
	Playground Side	0.4
	Both Sides	0.0

6.4.1 Results

The results of the playground evaluations are provided in Exhibit 6.2. The evaluation scores are provided in Appendix D.

Based on this analysis, the number of playground zones recommended are 13, compared with 18 total existing playground zones. This decrease is generally triggered by the type of playground, where the existing zones that are no longer warranted are typically fields rather than locations with play areas / equipment. The most significant outcome from the evaluation is the number of warranted playground areas:

- St. Albert currently has 12 signed playground areas, whereas the evaluation results suggests there should be 53.
- It is noted that some of the suggested playground areas have very small frontages, such as the various Tot-Lots. Some judgement is required to determine if signing the adjacent roadway segment as a playground area is appropriate.

6.5 Zone or Area Signing and Marking

Section D3.3 in the Alberta Transportation Guidelines for School and Playground Zones and Areas is dedicated to signing and marking. The following section will discuss the practices outlined in the Guidelines and the current signing and marking practices within St. Albert.

6.5.1 Alberta Transportation Guidelines

The guidelines state that a school or playground zone or area should be signed in a way that is consistent with the desired objectives and the roadway context. The beginnings of all zones and areas should be clearly identified. Sign type and placement should comply with the Manual of Traffic Control Devices for Canada (MUTCDC). The signage guidelines are discussed below. Drawing showing signage placement and type based on several scenarios from the Guide are provided in the Appendix D.

Sign Type

All School areas are to be marked with the School Area sign (WC-1 of MUTCDC) and Playground Areas with the Playground Area sign (WC-3 of MUTCDC). The signs should be posted at a distance that allows adequate perception and reaction time for drivers. No specific signage is required at the end of an area (as there is no regulatory change in speed).

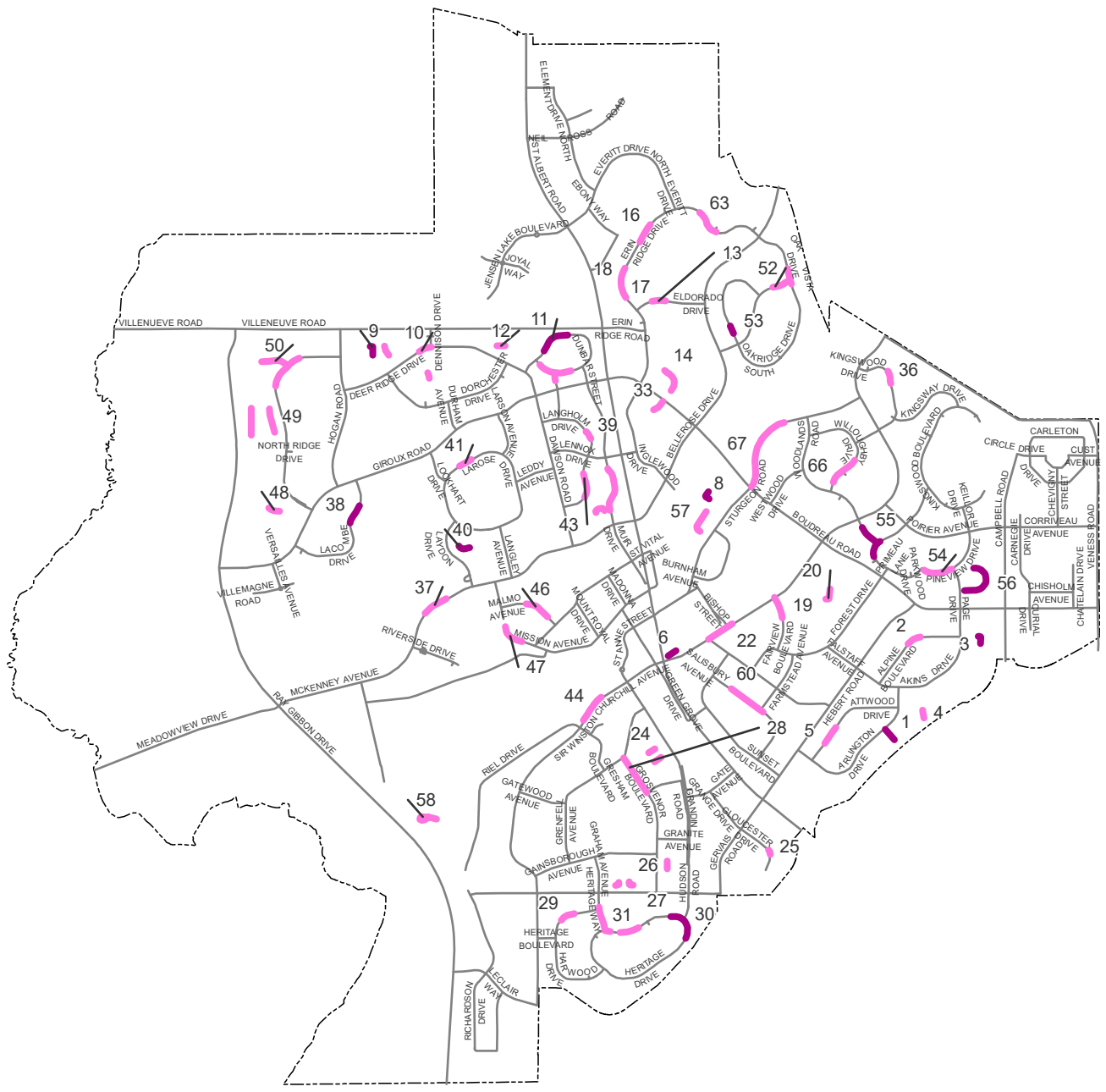
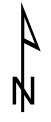
School and playground zones should be marked with a reduced RB-1 speed limit sign directly below the Area warning sign. A sign is required to denote the end of the zone. This can be achieved with an RB-1 sign to reinstate the original speed limit, or an END SCHOOL/PLAYGROUND ZONE sign on local roads only. The times the reduced speed is in effect must be shown if it is different from the Act, otherwise the time may be shown but it is not compulsory.

Signage Placement

The distance away from the property line a zone sign should be placed is determined by the speed limit on the roadway, as shown in the drawings in Appendix D.

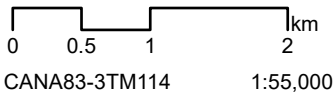
Schools and playgrounds are sometimes located at or near an intersection. Where it is determined that a zone is required on one roadway but not the cross street, motorists on the cross street and other approaches may still need to be informed of the upcoming zone. The intent in all cases is to avoid surprising drivers when turning into a zone as they may miss the start-of-zone signs. The Guide outlines the treatment of opposing and intersecting streets based on intersection controls, as follows:

- Zone or Area on uncontrolled approach:
 - On stop controlled approaches, the signage should be placed several metres in advance of the intersection to provide adequate stopping sight distance.
 - On uncontrolled approaches, the signage should be placed at least 50 m in advance of the intersection to avoid breaking close to or in the intersection.
 - All departure legs of the intersection and the end of the school or playground should provide a RB-1 sign to reinstate the original speed limit, or END ZONE sign on local roads.
- Zone or Area on stop controlled approach:
 - Similar rules apply in general, however, the zone may have to start or end more than 50 m from the intersection if the school property extends further.
- Zone or Area on signalized approach:
 - The guide strongly discourages the continuation of a school or playground zone through a signalized intersection, however if it must be provided, similar rules for the stop controlled intersections apply.



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Credits



- City of St. Albert
- Road Unclassified
- Recommended Area
- Recommended Zone

EXHIBIT 6.2:
AT GUIDE
PLAYGROUND ZONE
AND AREA
RECOMMENDATIONS



1 Alderwood_Park	35 Keenoshayo School
2 Alpine Park	36 Kensington Park
3 Amherst Park	37 Lacombe Lake Park
4 Arbor Park	38 Lafleur Park
5 Attwood Park	39 Langholm Park
6 Balmoral Park	40 Larkspur Park
7 Bellerose Park	41 Larose Park
8 Butterfield Park	42 Leo Nickerson School
9 Daulton Park	43 Liberton Park
0 Deer Ridge Park	44 Lions Park
11 Deerbourne Park	45 Lois E Hole School
12 Delage Park	46 Malamo Ave
13 Eldorado Park	47 Morgan Park
14 Ellesmere Park	48 Naples Park
15 Elmer S Gish School	49 Napoleon Park
16 Erin Ridge Diamond	50 Natalia Park
17 Erin Ridge Park	51 Neil Ross School
18 Erin Ridge Soccer	52 Oakmont Park
19 Fairview Field	53 Oakridge Park
20 Flagstone Park	54 Pineview Park
21 Forest Park	55 Poplar Park
22 Fountain Park	56 Princeton Park
23 Fowler Athletic Park	57 Red Willow Park
24 Glenmore Park	58 Reil Rec Park
25 Gloucester Park	59 Ronald Harvey
26 Gordon Tot Lot	60 Salisbury Park
27 Greer/Gillian Tot Lot	61 Sir Alexander MacKenzie School
28 Grosvenor Park	62 Sturgeon Heights School
29 Harwood Park	63 Ted Hole Park
30 Henderson Park	64 Vital Grandin School
31 Heritage Lakes	65 Wild Rose School
32 Hodgson Park	66 Willoughby Park
33 Ironwood Park	67 Woodlands Park
34 J.J. Nearing School	

Schools and playgrounds are often located adjacent to one another. In these cases, one single zone or area should be created in order to simplify the message for motorists. In general, if a school and playground both require a zone, it is suggested that the whole segment become a playground zone to provide coverage over a more extended period of time. The guide states that a school zone can be considered to cover both the school and the playground if the playground utilization and access is closely tied to the school operation. This can also be applied for schools that are near but not adjacent to a playground. The same principal applies to near or adjacent schools as well as for areas. If one facility requires a zone and the nearby facility requires an area, one zone should be provided for both.

6.5.2 St. Albert Practices for Signing School and Playground Zones / Areas

The following observations were made on St. Albert's current signage practices relating to school or playground zones or areas:

- St. Albert currently uses the appropriate zone and area signage based on the MUTCDC.
- Additional signage and roadway treatments to demarcate a school zone appears to be based on the adjacent roadway classification.
 - For example, the school zone on Sir Winston Churchill Avenue has a flashing light that is active during the times the speed reduction is in effect and a thick yellow SCHOOL pavement marking whereas school zones on local roadways are typically demarcated by the required School Zone sign.
- If there are two school zones nearby, the zone length is combined.
- The sign placement generally meets the minimum distance outlined in the Guide however; some school zones come into effect well before the recommended distance from the property line or much less, typically recognized to address school routes and pedestrian crossings. Examples of type of sign placement include:
 - Leo Nickerson Elementary School, 140 m east and over 200 m west of the school property line.
 - Wild Rose Elementary School, 130 m south of the property line.
 - Vital Grandin School, the school zone sign west of the school is less than 10 m from the start of the property line.
- Some school zone signs within the City are placed at an intersection with no setbacks when a setback is recommended in the guide. Examples of this include:
 - Wild Rose Elementary School, the school zone signage on both sides is set back less than 10 meters from the intersection. As the zone is on an uncontrolled roadway, it is recommended that the signage be placed 50 m away from the intersection to prevent breaking at the intersection.
 - Bertha Kennedy Catholic Community School, similar to Wild Rose, the school zone sign is placed with minimal setback from the uncontrolled leg of a T-intersection south out the school on Larose Drive.
 - JJ Nearing Catholic Elementary School, the school zone signage on Deer Ridge Drive is placed less than 10 m from the far side of the intersection with Dubonnet Way.
 - Elmer S. Gish School, the signage on Akins Drive north of the school is less than 10 m near side from the intersection with Arbor Crescent.
 - Vital Grandin Catholic School, signage on sunset boulevard, less than 10 m far side from the intersection with Sheridan Drive.



Note, the above lists of signage that does not comply with the AT Guide is not meant to contain everything within St. Albert but is rather meant to illustrate that the signage practices do not always align with the guide.

6.6 School and Playground Zone Proximity Review

As noted in Section 6.5.1, a school or playground's proximity to another school or playground may change the way the adjacent roadway is designated. The principals in this subject area recommended by the AT guide were applied to the school and playground evaluation results as follows:

- A roadway with a school zone adjacent to or near a playground zone is classified as a playground zone.
- A roadway with a school area adjacent to or near a playground area is classified as a playground zone.
- A school area adjacent to or near a school zone is classified as a school zone.
- A playground area adjacent to or near a school zone is classified as a school zone.

Applying the above criteria to the previous school and playground recommendations resulted in the following:

- 7 roadway segments previously classified as school areas based on the AT Guide score become school zones, including Paul Kane High School.
- 5 roadway segments become playground zones.
- 9 roadway segments previously classified as a school area based (on the AT Guide score) become playground areas.

6.7 Regional Best Practices

City of Edmonton

The City of Edmonton has undertaken several reviews of their playground and school zone practices. School zones were introduced near elementary schools in City of Edmonton in September 2014. The zones were in effect from 8:00 a.m. to 4:30 p.m. on school days and required a speed reduction to 30 km/h within the zones. City council approved the expansion of the school zones to include junior high grades in May 2017 and this came into effect in September 2017.

Up until 2017, the City of Edmonton did not have playground zones; however, studies were underway to determine the need and potential implementation of playground zones. One key factor in the study was the times in which a 30 km/h speed would be required. This is the result of the city's commitment to Vision Zero, which outlines the long-term goal of zero fatalities and serious injuries from motor vehicle collisions. An important component of Vision Zero is the adoption of the Safe Systems Approach, a holistic approach to improve traffic safety which pays particular attention to children's safety, as children are more vulnerable due to their inability to judge vehicular approach speeds as well as adults.

A report was presented at the June 8, 2017 City of Edmonton Community and Public Services Committee to report on playground speed limits within the City of Edmonton and prepare recommendations. Included within the report is a summary of a survey asking members of the public about speed limits around playgrounds. Eighty-five (85) percent of the responses indicated that they would be in favour of extending the hours playground speed limits should be in place at playgrounds adjacent to schools. Additionally, eighty-four (84) percent of respondents indicated they would be in favour of a single speed-limit zone including both schools and playgrounds with the extended hours of a playground zone. In summary, Edmonton residents showed significant support for the implementation of playground zone speed limits for those attached to schools.

In September 2017, the City of Edmonton approved the conversion of all school zones into playground zones effective from 7:30 a.m. to 9:00 p.m.

Since then, 150 standalone playground zones were installed, and 242 school zones were converted into playground zones.

Edmonton reports presented to council relating to school and playground zones are provided in Appendix D.

City of Calgary

The City of Calgary opted to convert their school zones to playground zones in August 2015. The playground zones are in effect from 7:30 a.m. to 9:00 p.m. year round. The shift was motivated by a desire to increase safety and make reduced speed limit areas easier to understand.

In 2017, the University of Calgary conducted a study to determine the effects of consolidating all school zones into playground zones. The study found that the mean speed through playground zones decreased from 36 km/h to 30 km/h. An increase in speed compliance was also noted, except in school zones from 6:00 p.m. to 9:00 p.m. where it was determined that while the compliance decreased by 5%, the average speeds decreased from 45 km/h to 32 km/h. This indicates that most drivers were aware of the time changes and adhering to the new zone timing. The number of collisions involving pedestrians within school and playground zones decreased by 70% between 5:30 p.m. and 9:00 p.m. with an overall decrease of 33%. The collision rate also decreased from 0.049 collisions per million vehicle kilometers to 0.011 per year.

The study also completed a survey of citizens and found that the majority of residents were aware and knew the exact start and end times for playground zones. More than 80% of respondents indicated they find it easier to remember the zone times with a single type of zone that remains consistent year-round.

6.8 Schools as Playground Zones Evaluation

Roadways adjacent to elementary and junior high schools were evaluated using the AT Playground Zone worksheet as well as the AT School Zone worksheet. This was performed to determine if any roadways adjacent to schools qualify for a playground zone based on AT's evaluation framework. The results of the school playground evaluations are summarized in the table below.



Table 6.11: School Playground Zone Evaluation Results (Applying AT Playground Zone)

AT Playground Zone Worksheet Score	Elementary School Total Number (Within score range)	Junior High School Total Number (Within score range)	Playground Zone Warranted (min. 81 score)
>80	1	0	Yes
80	3	0	No
70-79	13	0	No
60-69	4	0	No
<59	1	8	No
Total	22	8	1 of 30

Based on the results above, only one roadway segment, Deer Ridge Drive in front of J.J. Nearing Elementary School, qualifies as a playground zone using AT’s Playground Zone Guidelines. Conversely, all of the roadways evaluated qualified as school zones using AT’s school zone guidelines. This discrepancy is primarily due to the differences between the playground and school zone results matrix.

A roadway is recommended as a school zone with a worksheet score between 81 and 100 inclusive and may be designated as a school zone or area with a score between 65 and 80 inclusive based on the evaluator’s discretion.

Playground zones are only recommended in the AT Guide with a score of 81 to 100 inclusive and are therefore much less likely to be recommended than a school zone. It is noted that three of the roadways evaluated received a score of 80, one point away from meriting a playground zone classification according to the AT guide. These three roadways are the following:

- Gainsborough Avenue adjacent to Albert Lacombe Elementary School
- Mission Avenue adjacent to École Father Jan Elementary School
- Grenfell Avenue adjacent to Wild Rose Elementary School

Generally, the worksheet scores for individual inputs are the same when evaluating the potential for school zones and playground zones; however, the point value assigned to the property line separation and entrance often differ between the two. While the property line separation input for School Zones is based on the distance from the school’s property line to the roadway being evaluated, for playground evaluations it is based on the distance between the playground equipment and the roadway. School playgrounds are typically over 50 metres from the roadway as they are often located behind the school, resulting in a score of zero out of a possible ten for the property line separation. The location of the playground has a similar effect on the potential five points for the playground entrance, as it is stated in the guide that playgrounds situated behind a school that can only be accessed from the school can be said to have no entrance from any of the surrounding roadways.

6.8.1 Discussion of Playground Zone Guidelines for Schools

The potential for pedestrian-vehicle collisions is much higher at a school than a separate playground as the play equipment typically has a significantly higher capacity. The AT Playground Zone worksheet requires a score of 81 or higher for recommending a playground zone, but application of a Playground Zone at a school should use the same threshold of 65 used for a school zone. In addition, focusing only on playground equipment at schools ignores that the school building and grounds are typically the primary access point for children destined to the play equipment.

The distance from the roadway and the school property line has been used to reflect the probability of high numbers of vulnerable users accessing the playground from the school entrance.

Roadways adjacent to Elementary and Junior High Schools have been reevaluated using the AT Playground Zone worksheet with the lower threshold of 65 and treating school buildings as the playgrounds. The results are illustrated in the following table.

Table 6.12: School Playground Zone Evaluation Results (Applying AT Playground Zone)

AT Playground Zone Worksheet Score	Elementary School Total Number (Within score range)	Junior High School Total Number (Within score range)	Playground Zone Warranted (min. 65 score)
>80	10	0	Yes
71-80	10	0	Yes
65-70	2	0	Yes
<65	0	8	No
Total	22	8	22 of 30

Modifying the playground zone evaluation criteria for school sites results in all elementary schools warranting playground zones. None of the junior high schools met the lowered threshold for a playground zone. These results indicate that while it may reasonable to classify all roadways adjacent to elementary schools as playground zones, it is not advisable to extend this to junior high schools. The lower total scores for junior high schools are primarily due to the lack of playground equipment, resulting in a playground capacity score of eight out of a possible 40.

Based on the discussion above, it is reasonable to classify all elementary schools as playground zones to protect vulnerable users for an extended period of time. Junior High schools are recommended to remain school zones rather than playground zones.

6.8.2 Time of Day Consideration

Recent changes to the Alberta Traffic Safety Act allow municipalities to now set their own times playground zone are in effect. Previously, the Act dictated that drivers in playground zones must slow down to 30 kilometers per hour between 8:30 am and one hour after sunset. A common area of debate surrounding the utilization of school and playground zones is the time in which the reduced speed applies and the likelihood for children to be at risk outside of the zone times. Playground zones apply every day of the week and all days of the year and their hours of effectiveness and the potential of changing school zones to playground zones requires thoughtful consideration.

The City of St. Albert has provided a table correlating collisions that occur in playground and school zones with the time they occur, as seen below.

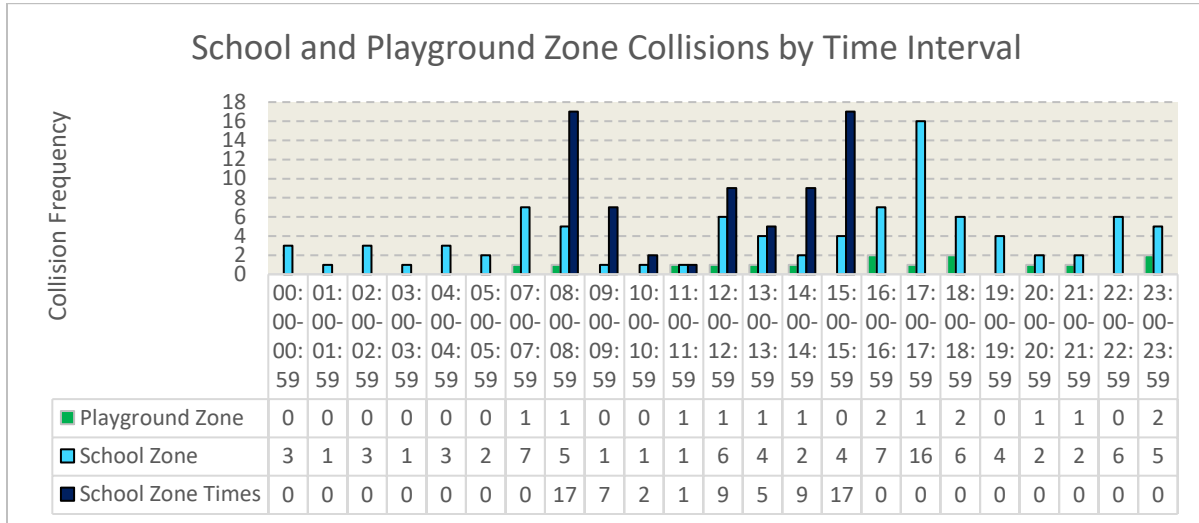


Figure 6.1: School and Playground Collisions by Time Interval

The following observations may be made based on the chart above:

1. Collisions occur most frequently in school zones within the typical periods of higher congestion – times aligned to student pick up and drop off.
2. The third most frequent collision occurrence shown in the chart is within a school zone from 5:00 PM to 6:00 PM, outside of existing School Zone hours.
 - a. While this may be correlated to a general increase of collisions during this time due to home-bound traffic, the data indicates that this time interval has a high probability of collisions. This could indicate that students or children utilizing the schools or grounds for after school activities or sporting events may face a similar risk to that of the pick-up and drop-off times.
 - This supports extended school zone times or a transition from school zones to playground zones, which have longer hours of effect.
3. A number of collisions occur within School Zones on the weekend, which is why a school zone and school zone time bar occurs within the same time intervals. The collision frequency during non-school days between 12:00 PM and 3:00 PM
 - This also supports the transition from school zones to playground zones.
4. Collisions are far more frequent within School Zones than Playground Zones. This may be due to the tendency to situate schools on roadways with higher roadway classifications while playgrounds are often situated on local roadways.

Video surveillance data at playgrounds on school grounds and parks was collected from nine schools and three parks. Each location was surveilled for three consecutive days in October 2019, on Thursday, Friday, and Saturday. The number of children using the playground equipment was recorded to inform on the times of day the facilities are utilized. As the number of schools and parks observed is unequal, the average number of children using playground equipment per hour was used and is summarized in the following graphs.

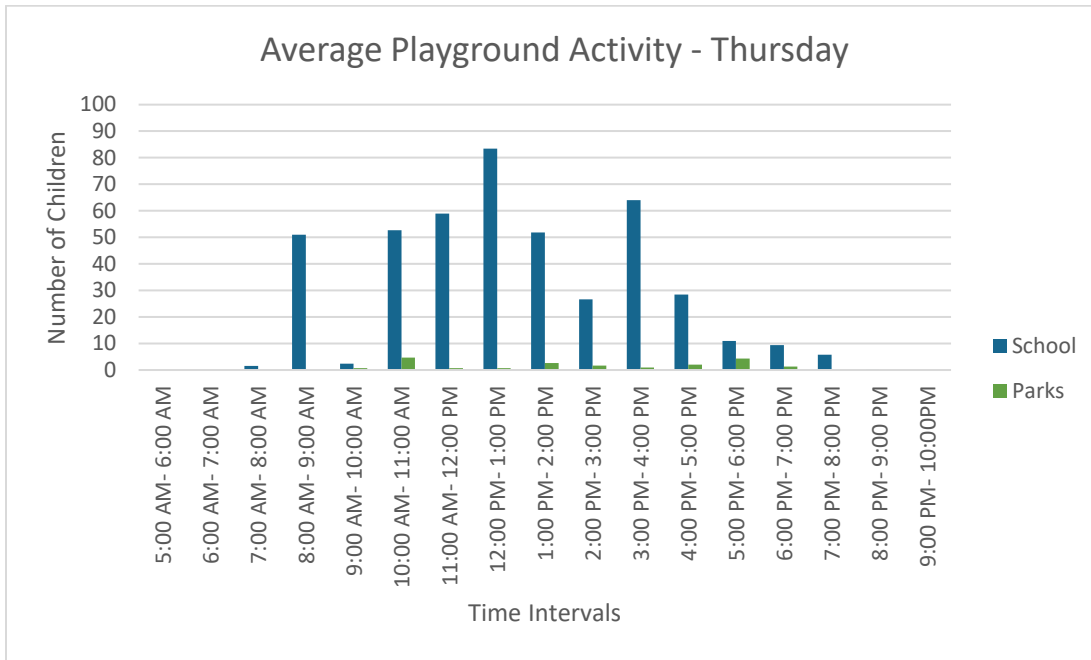


Figure 6.2: Playground Activity - Thursday

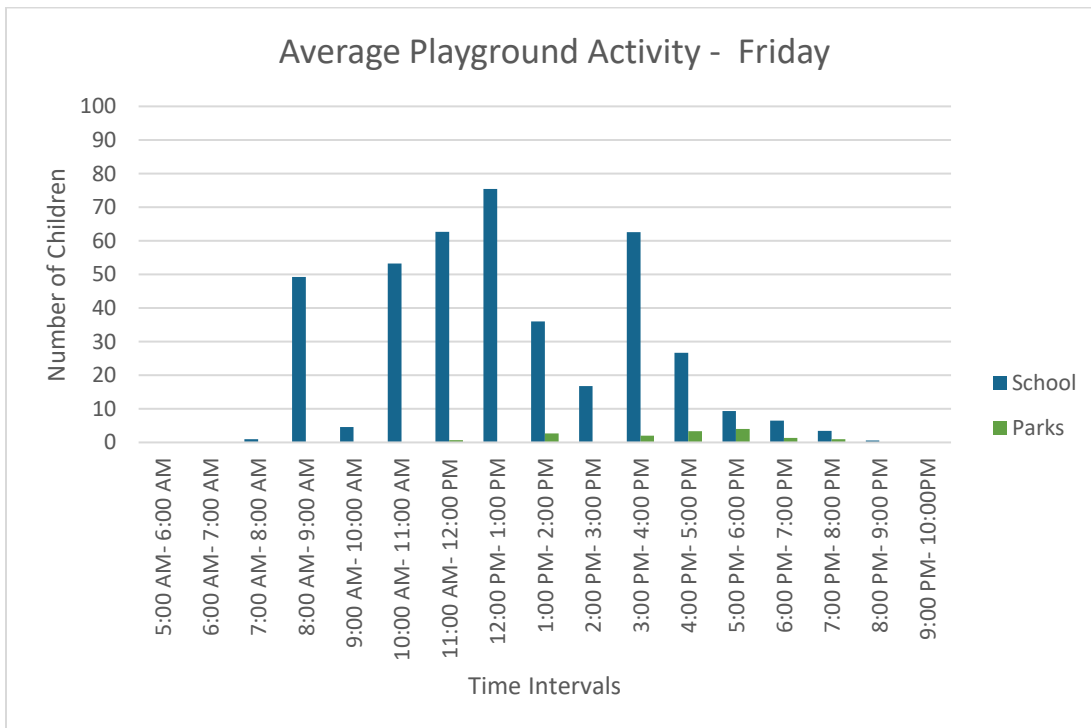


Figure 6.3: Playground Activity - Friday

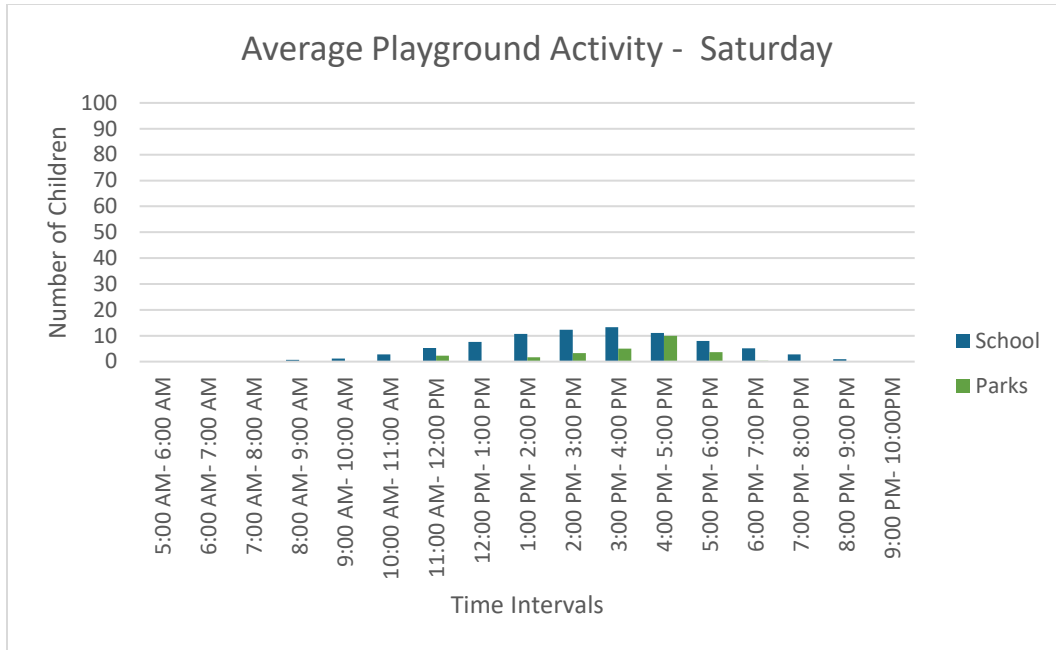


Figure 6.4: Playground Activity - Saturday

Based on the three graphs above, it appears that children are most active on playground equipment on school grounds, even on Saturdays. During school days, children were observed using play equipment from 7:00 AM to 8:00 PM. The playground equipment was most used between 8:00 AM and 4:00 PM, the current school zone hours in effect in St. Albert; however, there is also notable activity between 4:00 PM and 5:00 PM. On Saturdays, children were observed on play equipment between 9:00 AM to 9:00 PM. Playground usage can be seen increasing from 9:00 AM to peak between 3:00 PM and 5:00 PM on Saturdays. The playground activity data was collected in October, a traditionally cooler month. Increased and later playground activity is expected in the spring or summer. Activity was primarily observed on school grounds rather than parks on Saturday as well.

The higher playground usage on school grounds as opposed to parks may be due to the higher capacity of the facilities. Generally, playgrounds intended for school use are larger as they must accommodate large amounts of students during breaks (recess). This combined with the tendency to have more modern and varied equipment on school grounds may make school playgrounds more attractive to users. School playgrounds may also be a convenient meeting location for play sessions outside of school hours as many children’s friends are made at school and are likely to all live nearby.

The data used for this discussion was collected in October 2019 when the weather is cooler, and children may be less likely to play outside. While data collected in warmer months would likely capture increased playground equipment, the fact that children were observed playing outside on the equipment in October is sufficient to indicate that playground equipment on school grounds are used outside of St. Albert’s 8:00 a.m. to 4:00 p.m. school zone times. In fact, this data may be considered as a conservative estimate of playground usage in St. Albert. Additional playground surveillance during warmer months may be conducted to confirm this assumption.

6.8.3 Playground Zone Application to Schools Summary

The following summarizes the findings for assessing school zones as playground zones.

- **AT Playground Zone Worksheet Results:** The results of direct application of the AT guide for playground zones at school zones found that one of 30 schools are recommended as a playground zone.
 - This result reflects the higher score threshold for a playground zone, which is 81 compared to a school zone which is 65.
 - Separation of playground equipment from the roadway is higher at schools than at playgrounds resulting in lower scores for the property line separation component of the AT guide.
 - Considering the two main factors impacting the standard approach for evaluating playground zones, changing the criteria and applying the same threshold for a school zone (65) and treating school buildings as playground equipment results in 22 of the schools recommended a playground zone.
 - None of the eight junior high schools warranted a playground zone using the new criteria and lowered threshold. Considering this, none of the junior high schools are recommended to be converted into playground zones.
- **Time of Day Considerations:**
 - The collision data indicated that a significant number of collisions occur at school zones outside of the hours of effect.
 - The playground usage data indicates that playgrounds on school grounds are much more utilized than standalone playgrounds, even outside of school hours.
 - Considering the collision data and observed usage of playground equipment, playground zone hours of effectiveness are recommended between 8:00 AM and 8:00 PM.
 - Additional data collection may be performed to confirm this assumption; however, this is consistent with other municipalities.



6.9 School Zone and Playground Zone Summary

This chapter compared the City's current zones and areas with the recommendations based on the evaluation process outlines in the AT Guidelines, explored whether the current school zones meet the Guidelines for application of playground zones, and discussed the time of day application for playground and school zones. This section's conclusions are provided below

1. AT Guidelines for school zones and playground zones review
 - It was determined that the City's current practices for designating school zones is consistent with what is recommended using the AT guidelines, while there was significant variation between number of playground zones and areas recommended using the AT guidelines and those currently signed.
 - A review of the zone and area signing practices indicated that sign placement does not always align with the AT guidelines.
2. School Zone consolidation to playground zone review
 - Only the portion of Deer Ridge Drive adjacent to J.J. Nearing Elementary School is warranted as a playground zone; however, it is noted that three other roadways were only one point away from being warranted.
 - Modifying the threshold for playground zones to 65 (consistent with School Zones) and the property line separation criteria, all 22 of the elementary school zones warrant playground zones.
 - Playground zones are not recommended for junior high schools.
 - A review of the City of Edmonton's and the City of Calgary's recent transition from School Zones to playground Zones indicated potential safety and compliance benefits to consolidating zones.
3. School zone and playground zone time of day review
 - A review of the collision data at school or playground zones indicated that collisions occur relatively frequently outside of school zone hours, generally occurring most frequently between 7:00 AM and 6:00 PM
 - A review of the playground usage data revealed that play equipment is used between 7:00 AM and 9:00 PM even during the cooler months.
 - Playground zone times between 8:00 AM and 8:00 PM are recommended based on the collision and playground usage data.
 - School zone times between 7:00 AM and 5:00 PM are recommended based on the collision data.

7.0 Safe Systems Review

7.1 Background Information

According to the *Methods and Practices for Setting Speed Limits: An Information Report*, prepared by FHWA (Federal Highway Administration, US Department of Transportation) and ITE (Institute of Transportation Engineers) in 2012, there are four general approaches to setting speed limits:

- Engineering approach;
- Expert system approach;
- Optimization; and
- Safe system approach or injury minimization.

For the definition from the FHWA report, the Safe System Approach emphasizes that some degree of roadway user error will occur, and that such errors should not result in a fatality or serious injury. Speed limits are set according to the crash types that are likely to occur, the impact forces that result, and the human body's tolerance to withstand these forces. Therefore, the primary concept is the safety of all road users, including pedestrians and cyclists that are more vulnerable to injury and death when hit by a vehicle with relatively high speed. Consequently, the Safe System Approach usually results in lower speed limits than those that would be determined by other approaches, such as Engineering and Expert System Approaches.

Currently, some countries, such as Sweden, Netherlands, and New Zealand, have applied the Safe System Approach or Vision Zero Approach to setting the speed limits. The Swedish Safe Systems Approach states that "human life and health are paramount and take priority over mobility and other objectives of the road traffic system." *Dutch Sustainable Safety Vision* considered "necessary to achieve sustainably safe road traffic, and the principles are based on scientific theories and research methods arising from disciplines including psychology, biomechanics and traffic engineering". According to the *New Zealand Safer Journeys*, "the safe system approach aims for a more forgiving road system that takes human fallibility and vulnerability into account. Under a Safe System, we design the whole transport system to protect people from death and serious injury."

Safe System Approach may include development of traffic calming measures (e.g. curb extensions), physical separation of roadway users (e.g. multi-use pathway), and treatments that enhance visibility of vulnerable users to give drivers greater reaction time (e.g. pavement markings and road signs). It is expected that as Safe System Approach requires a holistic planning of the roads, and interconnected factors provide optimal safety to strengthen protection of vulnerable users, the safe system is an ideal approach for many urban roads.

Compared to other approaches, the data collection requirements for the Safe Systems Approach requires very little data collection since it is based on very basic road design parameters (e.g. number and frequency of accesses, presence of a raised median, etc.) and general traffic characteristics (e.g. type and frequency of road users). The data collection effort is relatively minor. Under the Safe Systems Approach to setting the speed limit, the critical factor is the type of collisions that can be expected to occur given the physical features of the road, and the types of road users that are expected to be encountered. The collision types and patterns for different road types and survivability rates for different operating speeds are the major data requirements to develop the speed limits.



7.2 Applying Safe Systems

The application of a Safe Systems Approach to reviewing and establishing speed limits in an urban area, as previously noted, can be very different from traditional engineering methodologies. Many traditional applications of heuristic methodologies look at the safety afforded to the driver and passengers of a motorized vehicle and evaluated the safe speed for the vehicle based on the risks to the occupants. Conversely, a Safe Systems Approach prioritizes the safety of vulnerable road users (pedestrians and cyclists) much higher than the operational factors of a road network, or the travel time for motorists. As such, the application of a Safe Systems Approach to setting speed limits can be accommodated more from a policy perspective than an engineering perspective.

In considering the City of St. Albert, the existing road network, the existing speed limits and any potential changes that may be appropriate from a Safe Systems perspective, it is possible to consider and assess the implications of the following policy approaches:

- Assessing vulnerable user presence related to land use.
- Assessing vulnerable user presence and location related to road type.
- Setting speed limits related to land use and road type.

Within the City of St. Albert Complete Streets Guidelines, all the City's land uses are classified as either commercial, residential or employment and are allocated to the roadway typologies of Boulevard, Crosstown, Connector, Neighbourhood, Local and Lanes. As the linkages between land use, transportation, and safety are inextricably interconnected, it is difficult, if not impossible, to address the setting of speed limits based on one of these factors independently. However, it is possible to apply a Safe Systems Approach to the Complete Streets hierarchy and address appropriate speed limits that could be applied given the associated land uses, roadway contexts and probable presence of vulnerable road users.

The recommendations included in this section of the report are based solely on the Safe Systems Approach and do not necessarily represent the final recommendation.

7.2.1 Setting Target Speeds Related to Land Use and Roadway Typology

This section of the report outlines how each of the Safe Systems Approaches could be applied to each of the 13 different land use/roadway typologies as defined by the City of St. Albert Complete Streets Guidelines (2018). These roadway typologies have been used in this section to assist in the identification and classification of St. Albert's roadways in an ordered manner to ensure that all City roadways and road types have been reviewed and assessed within a Safe Systems Approach. For reference, Figure 7.1 below shows the St. Albert Typology Street Network as presented within the Complete Streets Guidelines. This map is included herein as a reference to assist with evaluation and correlation of street type with recommended speeds.



Figure 7.1: St. Albert Typology Street Map (St. Albert Complete Streets Guidelines, August 2018)

Boulevards

Within the Complete Streets Guidelines, Boulevards are defined as regional roadways that support the Edmonton Metropolitan Region, serving local and regional travel, often accommodating transit, providing commercial and large load movement. These roadways are unique in both character and function and have traditionally been defined as either highways, freeways or expressways.

The only two Boulevards in St. Albert are St. Albert Trail and Ray Gibbon Drive, both of which vary in cross section, land use and access conditions as they traverse through the City in a north-south manner. The Complete Streets Guidelines note that traffic volumes and access frequencies should determine the speed limit. From a Safe Systems perspective, addressing the speed limits on these roads must consider the land use, cross section, traffic volumes, and number of lanes and presence of vulnerable users.

For St. Albert Trail, a Safe Systems Approach could consider revisiting the current speed limit of north St. Albert Trail from 80 km/h to 70 km/h as a means for reducing the speed differential from vehicles transitioning from highway speeds as they enter the urban area of St. Albert from the rural area to the north. The current speed limit for the majority of the remainder of St. Albert Trail from the South City limit to 500 m south of the North City Limit may already fit within the safe systems perspective. It is already posted at 60 km/h, is divided, has limited direct accesses and has separated pedestrian walkways.



The exception is the segment of St. Albert Trail in the central commercial section of the City from south of Sturgeon Road to McKenney Avenue/Bellerose Drive where the sidewalk is immediate adjacent to the travel lanes on St. Albert Trail without boulevard separation. Consideration could be given to a speed reduction to 50 km/h in this section of St. Albert Trail as there is a higher probability of a collision with a pedestrian or cyclist due to the reduced offset to the designated facilities.

The current speed limit for Ray Gibbon Drive is 70 km/h from the south City limit to Villeneuve Road. With most of the roadway being 2-lane undivided and rural in nature, a contextual review of this road suggests that the current speed limit fits within the Safe Systems perspective.

Crosstowns

Within the Complete Streets Guidelines, crosstowns are defined as major streets that allow users to travel across the city without changing corridors. These streets enable higher speed movements and accommodate transit and larger heavy vehicles (designated as truck routes). The Complete Streets Guidelines note that possible speed limits for these roadways could be within the 50km/h - 60km/h range.

The design guidelines note that crosstowns would all be divided roadways and have separated cycle facilities (bike lines) and separated pedestrian sidewalks. It is also noted that the Commercial Crosstown can also be designed to accommodate on-street parking. However, in correlating the guidelines to the existing developed 10 Crosstown roadways within St. Albert, it is noted that not all of the roadways comply with the guidelines. In addition, all of the Crosstowns are also located within or adjacent to residential areas, with limited exceptions of Campbell Road and Sir Winston Churchill Avenue having residential on one side and employment on the other. In addition, all of the crosstowns that connect to St. Albert Trail have a portion of their route through commercially developed areas.

- Gervais Road, predominantly residential, commercial near St. Albert Trail, some stop controlled accesses and pedestrian crossings, posted at 50 km/h.
- Hebert Road, predominantly residential, commercial near St. Albert Trail, employment east of Campbell road, some stop controlled accesses and pedestrian crossings, posted at 60km/h.
- Sir Winston Churchill Avenue, predominantly residential, commercial near St. Albert Trail, some stop controlled accesses and pedestrian crossings, posted at 50 km/h.
- Campbell Road, residential to the west, employment to the east, some stop controlled accesses and pedestrian crossings, posted at 60 km/h.
- Boudreau Road, predominantly residential, commercial near St. Albert Trail, predominantly signal controlled accesses and pedestrian crossings, hospital, posted at 60 km/h.
- Bellerose Drive, predominantly residential, commercial near St. Albert Trail, some stop controlled accesses and pedestrian crossings, posted at 50 km/h.
- McKenney Avenue, predominantly residential, commercial near St. Albert Trail, some stop controlled accesses and pedestrian crossings, posted at 50 km/h from 200 m west of CN to St. Albert Trail and 60 km/h from 200 m west of CN to the west City Limits.
- Giroux Road, predominantly residential, commercial near St. Albert Trail, some stop controlled accesses and pedestrian crossings, posted at 60 km/h.
- Neil Ross Road, still developing, 6 lanes, near commercial land uses, posted at 60 km/h.
- Fowler Way, future crosstown, predominantly residential, speed limit to be determined.

In considering the existing nature of the network, the existing speed limits on all of the crosstown corridors, layering a Safe Systems Approach to the crosstowns would be consistent with the Complete Streets Guidelines by providing consistency across the City; a recommendation could be considered to standardize the speed limits. As all of the crosstowns travel through or adjacent to residential areas, have pedestrian and cycling facilities as part of the active transportation network, Safe Systems would recommend a common speed of 50 km/h. Given that there are existing residential land uses, stop controlled accesses and pedestrian crossing on the Crosstowns, a Safe Systems Approach would provide for vulnerable users first and vehicle mobility second. Examples of impact would be speed limit reductions on Hebert Road, Campbell Road, and Giroux Road, as these corridors traverse through predominantly residential areas with a higher proportion of vulnerable users.

Connectors

Within the Complete Streets Guidelines Connectors are defined as major streets that connect crosstowns together. Many of the Connector streets are undivided, and most are adjacent to Residential and Commercial areas with the exception of Corriveau Avenue and Venesse Road in the Campbell Industrial area. Connectors enable the provision of transit and can accommodate have vehicles. The Complete Streets Guidelines notes that speed limits for connectors could be 50km/h, which would align with a safe system approach.

It is worth noting that there are a limited number of Connectors within St. Albert and that the posted speed limits currently vary among them.

- Hogan Road, Dawson Road, Riel Drive, Gate Avenue, Sturgeon Road, Cunningham Road, and Poirier Avenue are all posted at 50 km/h.
- Grandin Road, 40 km/h in Downtown and 50 km/h south of Glenview Crescent.
- St. Anne Street and Perron Street in downtown, are both posted at 40 km/h.
- Levasseur Road and Villeneuve Road are posted at 60 km/h.
- Corriveau Avenue and Venesse Road in Campbell Industrial are posted at 50 km/h and 60 km/h respectively.

In applying a Safe Systems Approach to the review of Connectors, the presence of vulnerable users along these corridors should be considered as well as the context of the corridors themselves. This approach would recommend lower speed limits in areas when higher proportions of pedestrian would be present. As all of the Connector roadways with the downtown already have a lower 40km/h speed limit, a contextual review of this road suggests that the posted speed limit may not need to be altered and that the current speed limit fits within the Safe Systems perspective.

For the remaining roadway, a Safe Systems Approach that places higher priority on vulnerable users would suggest that the lower speed limit would be appropriate. Given that the connectors have limited direct access to parcels as most land use is read facing or flanking the connectors, the level of pedestrian interaction along these roadways would be expected to be lower than in the downtown areas. As such, for the majority of the corridors with a posted 50km/h speed limit a contextual review of this road suggests that the posted speed limit may not need to be altered and that the current speed limit fits within the Safe Systems perspective.



However, as noted, there are three exceptions within the Connector typology that deserve addressing outside of the general corridors. As the context of these corridors Levasseur Road, Villeneuve Road and Venesse Road with wide rights of way along straight alignments varies significantly from all other Connectors, a uniform approach may not be feasible. Given the historic grid line nature of, these three corridors, although a lower speed limit of 50 km/h may be considered desirable from in a Safe Systems Approach, the application of this lower limit on these roadways may not be practical. Given the existing nature of the corridors, a re-designation of the speed limit may not be effective without enforcement and physical changes to the roadways that que drivers to the need to a lower operating speed. As such, consideration could be given to leaving the speed limit on these three connector corridors at 60 km/h.

Neighbourhoods

Within the Complete Streets Guidelines Neighbourhoods are defined as minor streets that provide direct access to street-fronting commercial and mixed-use developments as well as residential developments. Neighbourhood streets are capable of accommodating transit and were traditionally known as collector streets. The guidelines note that the Neighbourhoods would also accommodate on street parking as well as one street cycling. The Complete Streets Guidelines notes that possible speed limits for these roadways could be within the 30km/h-50km/h range.

With respect to the neighbourhood residential roadways, based on review of the Complete Streets road network, this classification of roadway would have the largest proportion of all of the Neighbourhood roadways. As the name in and of itself suggests, these roadways are both found and located within residential neighbourhoods. Many of the existing Neighbourhood roadways would conversely fall under the general 50km/h unless otherwise posted designation for speed limit, with the exceptions of Neighbourhoods in the communities of Erin Ridge, Erin Ridge North and Lacombe Park where the Neighbourhoods are posted at 40km/h.

With respect to the Neighbourhood Commercial and Neighbourhood Employment Roadways, these roadways are often found and located at the entrances/exits to communities and form a portion of the length of the overall Neighbourhood roadway. As transitional segments of roadway, the integration of these segments to the residential segments is managed through the consistent application of cross section.

As all of the Neighbourhood Roadways are located within communities, provide direct access to parcels, accommodate transit, accommodate on-street cycling as well as pedestrians, the probability of vulnerable user interaction with vehicles along these roadways would be higher than on Crosstowns or Connectors. As places and spaces where pedestrians are anticipated to be on a frequent basis a Safe Systems Approach would favour the safety provisions to pedestrians and cyclists over traditional operating speeds of these roadways. While the level of pedestrian and cyclist activity on these roadways in anticipated to be higher, it is not anticipated to be as high as on Local Streets when considering vulnerable user/vehicle proportionality. As such, a speed limit of 40 km/h for neighbourhood roadways would be considered appropriate from a safe systems perspective given the context of these roadways.

Locals

Within the Complete Streets Guidelines Locals are defined as minor streets that provide direct access from the front of a residential or employment developments with probable speed limits of 20km/h-30km/h. These streets do not accommodate separate cycling facilities, nor do they accommodate transit. Based on the land uses, these streets have a higher proportion of vulnerable users of all ages. This street type also makes up the largest proportion of roads within St. Albert (by both number roads and overall linear length of roadways). Currently most of the local roads within St. Albert classified as Locals would fall under the blanket speed limit designation of 50 km/h (unless otherwise posted).

Much of the global movement related to safe systems and Vision Zero has often been focused on local streets, as the streets where people live and play and where the highest probability of a vulnerable user collision can occur, due in part to a higher proportion of pedestrians and cyclists. From a safe Systems perspective, a speed limit of 50 km/h on any roadway with a high proportion of vulnerable users would be considered unacceptable due to the greater impacts to vulnerable users involved in collisions with a vehicle travelling at 50 km/h. As noted in Section 3 of this report, the impacts to a vulnerable user involved in a collision with a vehicle traveling at 50 km/h would be analogous to the impacts from a fall from a 3rd story balcony whereas the impacts to a vulnerable user involved in a collision with a vehicle traveling at 30 km/h would be analogous to the impacts from a fall from a 1st story balcony.

To address these aspects and the material presented within the Complete Streets, it is understood that a Safe Systems Approach to speed limits on Locals would be to recommend a 30 km/h speed limit. It is noted that some jurisdictions have implemented or are considering implementing this level speed limit change.

- Montreal, implemented city wide.
- Toronto, implemented by ward.
- Vancouver, pilot project underway.
- Winnipeg, being considered.
- Edmonton, being considered.
- Calgary, and being considered.
- Saskatoon being considered.

Lanes

Within the Complete Streets Guidelines Lanes are defined as streets that provided rear access to commercial, employment and residential developments with probable speed limits of <20 km/h. While serving differing land uses, the general function of Lanes can be considered uniformly with a high probability of the presence of vulnerable users.

Given the narrow nature of lanes (6-7 m or right of way with 4-6 m of driving surface), the shared nature of the environment and the lack of separate facilities for pedestrians a very low speed would be appropriate for Lanes. In addition, direct pedestrian access from buildings and fenced yards can create conflicts that would be mitigatable with lower speed operating environments. In recognition of short block lengths and complex nature of Lanes, a Safe Systems Approach would suggest that a reduction of current speed limit from 20 km/h to a speed limit <20 km/h would be appropriate. This change would be consistent with the recommendations with the City's Complete Streets Guideline and would be consistent with other municipal jurisdictions.



As such, a 15 km/h speed limit for lanes is recommended for Lanes. This change has a limited impact on travel time (6s increase over a moderate 100 m long Lane), but a large increase due to the safety 33% speed reduction.

8.0 Preliminary Speed Limit Recommendations

The following recommendations are made for each of the road typologies from the Complete Streets Guidelines, by combining recommendations from the four areas studied, including the application of the CGEPSL, Local Roadway Reviews, application of the AT Guide for Playground and School Zones and Areas and application of Safe Systems.

Note: The preliminary speed limits are provided for discussion only. Final speed limit recommendations are illustrated in Section 10.0, based on discussions and feedback from stakeholders.

8.1 Boulevard Roadways

Boulevards are defined as regional roadways that support the Edmonton Metropolitan Region, serving local and regional travel, often accommodating transit, providing commercial and large load movement. The only two Boulevards in St. Albert are St. Albert Trail and Ray Gibbon Drive, both of which vary in cross section, land use and access conditions as they traverse through the City in a north/south manner.

- **Ray Gibbon Drive:** Application of the CGEPSL resulted a higher speed limit for a large portion of Ray Gibbon Drive, however this is not recommended given current levels of congestion, interaction with wildlife, and future consideration of accommodation of active modes. Increasing the speed limit may be investigated in the future when twinning improvements are completed; however, considerations of development, and the aforementioned conditions will remain and would have to be accounted for.
 - Recommended to maintain the current 70 km/h posted speed limit.
- **North St. Albert Trail (existing 80 km/h):** For St. Albert Trail, a Safe Systems Approach recommends reduction of the speed limit from 80 km/h to 70 km/h as a means for reducing the speed differential from vehicles transitioning from highway speeds as they enter the urban area of St. Albert from the rural area to the north. Reducing the speed limit from 80 km/h to 70 km/h is discussed with the Safe Systems Approach but this results in a 30 km/h transition from Highway 2, posted at 100 km/h. The CGESPL recommends maximum transitions of 20 km/h.
 - Recommended to maintain the existing 80 km/h zone; however, as development and road design or operations change to the north, consideration of extension of the 60 km/h zone should be made.
- **St. Albert Trail (South of Sturgeon Road to McKenney Avenue/Bellerose Drive):** A Safe Systems Approach recommends a reduction from 60 km/h to 50 km/h as the sidewalk is directly adjacent to the travel lanes on St. Albert Trail without boulevard separation. This creates a higher risk of collision with a pedestrian or cyclist due to the reduced offset, however in recognition of the change of speed for this short section of the St. Albert Trail corridor and potential confusion or issue with adherence, consideration that improvements to the active mode infrastructure (some form of barrier or separation) is recommended to then support the 60 km/h posted speed. The recommendation for this section of the St. Albert Trail corridor is as follows:
 - Recommended to maintain the 60 km/h speed limit and investigate a form of pedestrian improvement in terms of a barrier or separation of the sidewalk.



- **St. Albert Trail (remaining sections):** For remaining sections of St. Albert Trail, the results of the analysis, including application of the CGESPL and Safe Systems review, indicated the existing 60 km/h speed limit is appropriate.

8.2 Crosstown Roadways

Within the Complete Streets Guidelines Crosstowns are defined as major streets that allow users to travel across the city without changing corridors. These streets enable high speed movements, accommodate transit and larger heavy vehicles (designated truck routes). Many crosstown roads have a significant amount of existing residential land uses, stop controlled accesses and pedestrian crossings. The Complete Streets Guidelines notes that possible speed limits for these roadways could be within the 50 km/h-60km/h range.

Results of the CGEPSL and from applying a Safe Systems Approach vary to certain degrees as follows. Considering the different speed setting methodologies, the following is recommended for crosstowns:

- A Safe Systems Approach prioritizes risk to vulnerable users by reducing speeds through sections that have a significant amount of existing residential land uses, stop controlled accesses and pedestrian crossings. In addition, the CGEPSL recommends reducing speed limits on crosstown roads where they pass through dense commercial areas near St. Albert Trail due to the higher levels of risk associated with the higher number of accesses and intersections in these areas.
- The CGEPSL recommends increasing the speed limits on certain crosstown roads by 10 km/h and 20 km/h, but applying these recommendations to increase speed limits is not consistent with the Safety Systems Approach.

To respect both approaches and recognizing that higher speed limits are likely desirable by drivers where the CGEPSL suggests an increase of 20 km/h, it is recommended to increase speed limits by 10 km/h where a 20 km/h increase is recommended and apply zero increase where the recommendation is only 10 km/h.

Based on the above inputs, the following speed limit changes are recommended:

- **Giroux Road (Nevade Place to Liberton Drive):** Reduce from 60 – 50 km/h.
- **Hebert Road (St. Albert Trail to Boudreau Road):** Reduce from 60 – 50 km/h.
- **Campbell Road (South City Limit to Centre Street):** Reduce from 60 – 50 km/h.
- **Boudreau Road (Liberton Drive to Inglewood Drive):** Reduce from 60 – 50 km/h.
- **Villeneuve Road (Commercial Area to St. Albert Trail):** Reduce from 60 – 50 km/h.
- **Sir Winston Churchill Avenue (Reil Drive to Levasseur Road):** Increase from 50 – 60 km/h.
- **Bellerose Drive (Evergreen Drive to City Limits):** Increase from 50 – 60 km/h.

8.3 Connector Roadways

Within the Complete Streets Guidelines Connectors are defined as major streets that connect crosstowns together. Many of the Connector streets are undivided and most are adjacent to residential and commercial areas. The current posted speed limits vary on connector roadways from 40 km/h – 60 km/h, with lower speed limits in the downtown.

40 km/h Posted Connectors: In applying a Safe Systems Approach to the review of Connectors, the presence of vulnerable users along these corridors should be considered as well as the context of the corridors themselves. As all of the Connector roadways within the downtown already have a lower 40 km/h speed limit, a contextual review of this road suggests no changes are recommended and that the current speed limit fits within the Safe Systems perspective. The CGEPSL recommended an increase to 50 km/h speed limit in this area but this is not recommended given the precedent speed limit and land use.

50 km/h Posted Connectors: For 50 km/h, a Safe Systems Approach that places higher priority on vulnerable users would suggest that the lower speed limit would be appropriate. Given that the Connectors outside of the Downtown have limited direct access to parcels as most land use is rear facing or flanking the Connectors, the level of pedestrian interaction along these roadways would be expected to be lower than in the downtown areas. As such, no alterations are recommended for the majority of the corridors with a posted 50km/h speed limit. The only exceptions recommended are where the CGEPSL recommends a 20 km/h increase to existing 50 km/h connectors. As a means of balancing the two approaches and recognizing that higher speed limits are likely desirable by drivers where the CGEPSL suggests an increase of 20 km/h a 10 km/h increase is recommended. This applies to two roadways as follows:

- **Sturgeon Road (Beacon Crescent (South) to Boudreau Road):** Increase from 50 – 60 km/h.
- **Dawson Road (Giroux Road to McKenney Avenue):** Increase from 50 – 60 km/h.

60 km/h Posted Connectors: Levasseur Road, Villeneuve Road and Venesse Road have wide rights of way along straight alignments with a posted speed limit of 60 km/h. Given the historic grid line nature of these three corridors, although a lower speed limit of 50 km/h may be considered desirable from in a Safe Systems Approach, the application of this lower limit on these roadways may not be practical as a lowering the speed limit may not be effective without enforcement and physical changes to the roadways. Results of the CGEPSL indicate that an increase to 70 km/h but this is not recommended considering the Safe Systems Approach. As such, it is recommended to leave the speed limit on these three Connector corridors at 60 km/h.

Prior to any adjustments of increasing the posted speed limits, it is suggested that the City investigate and improve pedestrian crossings along these corridors; particularly at locations transitioning from 50 km/h to 60 km/h. Improvements may align to installation of warning flashers or signalized pedestrian crossings to enhance visibility of the pedestrian crossings and provide improved notification to drivers when a pedestrian is on site and seeking to cross or in the process of crossing the roadway.

8.4 Neighbourhood Roadways

For Neighbourhood roadways that provide direct access to parcels, accommodate transit, accommodate on-street cycling as well as pedestrians. The probability of vulnerable user interaction with vehicles along these roadways is much higher than other higher classifications. A Safe Systems Approach favours the safety provisions to pedestrians and cyclists over traditional operating speeds of these roadways and as such, a speed limit of 40km/h for Neighbourhood Roadways would be considered appropriate from a safe systems perspective given the context of these roadways. Application of the CGEPSL with a split of “minor” and “major” classification system resulted in approximately 50% of the roadways recommended to be posted at 40 km/h; however, applying operational values of vehicle volumes and taking into account the intended function of these roads



suggests a “minor” classification is more appropriate which then results in 70% of the roadways being recommended for posting of 40km/h. The remaining Neighbourhood roads are very close to being suggested to be posted at 40 km/h, so much so that a reduction of less than 10% of the risk level scoring criteria (from 51 points to 47) results in approximately 89% of roadways being recommended for posting to 40 km/h. Therefore, considering the recommendations from the Safety Systems approach and the CGEPSL generally align, it is recommended that all neighbourhood roadways be posted at 40 km/h.

8.5 Local Roadways

The built standard for Local roads reviewed, along with the adjacent land uses, narrowing due to parked vehicles and sharpness of curves suggest that a 50 km/h speed limit is inappropriate, and a lower speed limit is recommended. From the best practices review, there are some municipalities exploring 30 km/h on residential local roadways, but expecting drivers to navigate and differentiate between a Local roadway and a Neighbourhood (Collector) roadway is inappropriate. In addition, should the speeds vary between a Neighbourhood roadway to the adjoining local roads, the required infrastructure to sign and mark the speed change both off the Neighbourhood on to the Local and vice versa is impractical.

With Neighbourhood roadways recommended for 40 km/h, lowering local residential roadways to 40 km/h is a logical conclusion.

8.6 Playground and School Zone/Area Recommendations

Review of school and playground zones and areas included evaluating these areas based on the following:

- Application of Alberta Transportation Guidelines to School and Playground Zones and Areas.
- Review of regional best practices for setting school and playground speed limits.
- Assessing activities around these areas based on the time of day and comparing the application of school zones and playground zones.

The objective of the review was to:

1. Confirm the current application of the AT Guidelines guidelines for existing school and playground zones.
2. Investigate whether the City should consider applying playground zones at school sites and if site conditions warrant a change by use of the AT Guidelines.
3. Investigate appropriate times of day for school and playground zones.

Summary of Results

The AT guidelines for school and playground zones and areas was created to promote uniformity in establishment, signage, and making of school and playground zones and Areas in Alberta. To develop the recommendations the guide was applied.

- For school zones to be recommended a minimum score of 65 points out of a 100 is needed based on based on six weighted categories for school type, school fencing, adjacent roadway classification, property line separation, school entrance features and presence of sidewalks.

- For playground zones to be recommended a minimum score of 80 points out of 100 is needed based on six weighted categories for playground type, fencing, road classifications, property line separation, playground entrance and presence of sidewalks.

Application of the guide confirmed the recommendation of school zones for all elementary schools in the City, with a posted speed limit of 30 km/h. These schools scored at least 65 points out of 100. The guide recommended school areas or nothing for junior high school and high schools. Application of the guide confirmed the recommendation of 13 playground zones and recommended removal of 5 current playground zones. The recommendation of removal of current playground zones mostly apply to open field with no playground equipment. Application of the guide also recommended the designation of 53 playground areas compared with 12 existing playground areas.

School zones are only applicable during school hours and playground zones can be applicable for a longer period of the day. The City of Edmonton and the City of Calgary have converted their school zones to playground zones to extend the reduce speed limits beyond the school hours. The City of St. Albert provided collision data around school sites that also confirms the need to extend the reduced speed zone around school zones beyond school zone times. This is also consistent with the Safe Systems Approach to setting speed limits since there is a higher likelihood of children in these areas throughout the day and not only during school times.

The criteria in the AT guidelines for playground zones was modified to reflect high volume of vulnerable users at school playgrounds. Elementary and Junior High School roadways were then reevaluated using the updated criteria. The modified playground zone evaluation at schools resulted in all elementary schools being warranted as playground zones, whereas only one Junior High School met the modified playground zone threshold.

8.6.1 School Zone and Playground Zone Recommendations

- Apply playground zones instead of school zones for all elementary schools to create a reduced speed limit that applies throughout a longer period of the day and for all days of the year.
- Apply school zones to all warranted road segments (following the AT Guidelines) adjacent to junior high schools, as this is consistent with regional best practices.
 - This is also consistent with St. Albert's current practice for designating school zones, which has been applied to all elementary and junior high schools and formalizing this practice is reasonable.
 - This results in no changes recommended for removing any of the existing reduced speed zones to any junior high school.
 - Junior high schools adjacent to elementary schools are recommended to be playground zones as this will simplify signage and reduce confusion.
 - High schools adjacent or in vicinity of elementary schools are also recommended to have a reduced speed zone.
 - The only exception is Bellerose High School which is not currently a school zone and is not recommended to be a playground zone.
- Based upon collision information and records of counts taken from playgrounds, it is recommended that Playground Zones be in effect from 8:00 a.m. to 8:00 p.m.

- The recommendation for designating 53 playground areas is a significant increase to the 12 existing playground areas.
 - Considering that neighbourhood roadways speed limit reduction 40 km/h is recommended, application of playground areas on neighbourhood roadways may also align to a Safe System approach to provide warning of conflict areas and gently remind drivers of the reduced neighbourhood speed (40 km/h).
 - Additional consideration of driver warning could be applied to Playground Areas (as recommended by the AT Guide) adjacent to higher classified roadways, including boulevard, crosstown and connector roadways. This may apply to two playground areas:
 - **Lions Park (Sir Winston Churchill Avenue):** Install playground area signage.
 - **Lacombe Park/Morgan Crescent location (McKenney Avenue):** Install playground area signage.
- Maintain the 13 playground zones recommended by the AT guide, but remove playground zones located on open fields where there is no playground equipment.
 - The removal is recommended based on the type of playground, where they are open fields rather than playgrounds.
 - Removal is only recommended where they are located on neighbourhood roadways, since a reduction to 40 km/h is also recommended.
 - The recommended changes apply to the following playgrounds:
 - Attwood Park (Attwood Drive playground zone): Remove.
 - Forest Park (Forest Drive playground zone): Remove.
 - Deerbourne Park (Deerbound Drive South playground zone): Remove.

8.7 Short 30 km/h Sections

Posted speed limits that are shorter than 500 m are not recommended, and this applies to a few existing 30 km/h zones that are not associated with a playground or school zone. These should be removed and incorporated with the adjacent speed limit.

Locations include:

- Sturgeon Road: Burns Street to Burnham Avenue.
- Mission Avenue: Between St Vital Avenue and Malmo Avenue.
- Grosvenor Boulevard: Gaylord Place to south of Grenfell Avenue.
- Grenfell Avenue: Gatewood Avenue to Greenwich Crescent.
- Meadowview Drive: Mission Avenue to 150 m west of Mission Avenue.
- Cunningham Road: South of Sycamore Avenue to Stanley Drive.

9.0 Stakeholder Consultation

9.1 Introduction

Key stakeholders were identified to discuss the preliminary recommended speed limit changes. These groups were selected as their department's operations and services to the City may be impacted by the proposed changes. Stakeholders include:

- Public Works
- Transit
- Parks and Recreation
- Municipal Enforcement
- RCMP
- Engineering
- Strategic Services – Communication

9.2 Stakeholder Workshop

A workshop was held on December 3, 2019 to present the preliminary recommendations to the key stakeholders. The stakeholder presentation is provided in the Appendix E.

Stakeholders were sent a follow up email summary of the preliminary recommendations, which included the following information:

1. Collectors and Locals – these are roadways within communities or neighbourhoods (transit services operate on locals, waste management exists on all classes).
 - a. Recommendation: Reduction in speeds to 40 km/h.
 - b. Currently the posted speed limit is 50 km/h.
2. Arterials – these are the main roadway corridors.
 - a. Reduction in speed limits where the following arterials cross/connect to St. Albert Trail: NOTE – the segments are identified below and the restrictions do not reflect a recommended change to the entire corridor (just the specific zones).
 - i. Boudreau Road – Liberton Drive to Inglewood: Reduce from 60 to 50 km/h
 - ii. Villeneuve Road – Commercial Area in vicinity to the Walmart to St. Albert Trail: Reduce from 60 to 50 km/h.
 - iii. Hebert Road – St. Albert Trail to Arlington Drive: Reduce from 60 to 50 km/h.
 - b. Increase in speed limits for the following arterial roads, with “start” and “end” points shown:
 - i. Sir Winston Churchill Avenue - Riel Drive to Levassuer Road: Increase from 50 to 60 km/h.
 - ii. Bellerose Drive – Evergreen Drive to City limits: Increase from 50 to 60 km/h.
 - iii. Sir Winston Churchill Avenue – Poirier Avenue to City Limits: Increase from 50 to 60 km/h.
 - iv. Sturgeon Road – St. Albert Trail to Boudreau Road: Increase from 50 to 60 km/h.
 - v. Dawson Road – Giroux Road to McKenney Avenue): Increase from 50 to 60 km/h.
 - vi. Meadowview Drive – West of Ray Gibbon Drive: Increase from 60 to 70 km/h.



3. School zones and playground zones.
 - a. Change from school zone to playground zones at elementary schools.
 - b. Apply a time of day for playground zones, 8 a.m.– 8 p.m., this would apply every day of the year.
 - c. Removal of three playground zones, with no playground equipment (only park space).
 - d. Apply Playground Areas – warning signs with tab signs encouraging the proposed reduced neighbourhood speed of 40 km/h (not a change in the actual speed limit – just reposted with the warning sign).
4. Short 30 km/h segments.
 - a. Removing short 30 km/h zones.
 - i. Sturgeon Road: Burns Street to Burnham Avenue.
 - ii. Mission Avenue: Between St Vital Avenue and Malmo Avenue.
 - iii. Grosvenor Boulevard: Gaylord Place to south of Grenfell Avenue.
 - iv. Grenfell Avenue: Gatewood Avenue to Greenwich Crescent.
 - v. Meadowview Drive: Mission Avenue to 150 m west of Mission Avenue.

Stakeholder feedback was received for approximately 10 business days following the follow up email.

9.3 Stakeholder Feedback

Stakeholder groups were sent an email asking their consideration and feedback on the recommendations presented at the workshop as a follow-up. A summary of each stakeholder group's responses is in the following sections.

9.3.1 Parks and Recreation

Parks and Recreation feedback primarily focused on the school and playground zone recommendations as it was most directly identified to align to their service delivery. Extensive internal discussions occurred surrounding school zones and the impact to the public and traffic flow with the possibility of extending the school zones to playground zones until 8:00 p.m. It was questioned whether this time extension is necessary when school playgrounds are perceived to be primarily utilized during school hours, particularly along major roads.

The department indicated that they do not support the removal of the playground zones at the three fields without utilization data from warmer months; however, recognize that consideration could be made with acknowledgment of reducing neighbourhood speeds to 40 km/h. Additionally, the department identified that high schools should be classified as school zones due to the high number of busses and people merging at the same time.

It was also suggested that the new speed changes be implemented in stages to see what the impacts may be.

9.3.2 Transit

The department acknowledges and appreciates all efforts of improving transportation safety, and for the most part supports the recommended changes; however, Transit's primary concern is how the recommended speed reductions would impact their ability to maintain existing transit service levels – specifically, meeting service levels with increased travel time from reduced neighbourhood speeds. The recommendations were reviewed internally, and it was determined that two key routes (with bi-directional servicing) of St. Albert's current bus routes would be unable to adhere to the schedules with the recommended speed limit reduction to 40 km/h. The routes with anticipated schedule conflicts are A4, A5, A7, and A8, of which A4 and A5 operate in opposite directions of the same path, as with A7 and A8.

Transit noted that if the current schedules cannot be adhered to and current service levels were required to be maintained; an additional transit bus for each pairing would be anticipated to be required. These two additional busses would be required throughout all operating hours, including weekdays and Sundays according to the transit department. An estimated operational impact (not including funding to acquire additional fleet) was provided at approximately \$960,000 annually to operate the additional buses required to support the changes without acknowledgement or approval of any change to service levels.

9.3.3 Public Works

Public Works indicated that they support all the recommendations and do not anticipate any service level, operational, or funding impacts as a result. They noted that there could be a safety benefit to the recommendations, as the reduced speed limits in areas where their staff are working provides a safer work environment. It was also noted that the slight increases in speeds on some of their regular routes are anticipated to offset the slowdowns in local roads.

9.3.4 Municipal Enforcement/RCMP

Municipal enforcement indicated that the recommended speed reductions and increases have no expected direct impacts to service levels or funding. The potential for indirect impacts, however, were noted as:

- Municipal enforcement operations may be indirectly influenced by an expectation from the community to focus more time and effort in areas where new reduced speeds have been established.

Additionally, concern was expressed as to the perception of speed enforcement as it relates to budgetary motivation, as there is a perception that enforcement is a “cash cow” orchestrated as a result of reduced fine revenues coming in over the years.

Reactions were mixed for the arterial recommendations, as follows:

- While the speed reductions on the three arterial corridors was supported by enforcement, concern was raised due to the short length of the segment as the length may make enforcement challenging and cause driver confusion to which adherence may be reduced.
- The arterial speed increase recommendations were all supported by enforcement except on Sir Winston Churchill Avenue and Sturgeon Road.



- Municipal enforcement expressed concerns for Sir Winston Churchill Avenue between Poirier Avenue to the City Limits due to the hill and crosswalk at the bottom of the hill and the proximity to the Kingswood Park intersection.
- The number of crosswalks on Sturgeon Road between St. Albert Trail and Boudreau Road was also a cause for concern.

The Playground and School Zone recommendations were well received by Enforcement, however the change from the end of the playground zone time of effect from one hour after sunset to 8:00 PM was questioned.

Municipal enforcement supported the removal of all the short 30 km/h zones. It was noted that consideration should be given to additional traffic calming measures to ensure speeds are adhered to, for example 40 km/h on collector roadways.

RCMP do not anticipate impacts to service delivery or service levels; and overall support for the recommendations was provided.

9.3.5 Engineering

Engineering's reception of the speed limit recommendations was generally supportive. The reduction of the Neighbourhood and Local roadway default speed limit within the City from 50 km/h to 40 km/h and the school zone and playground zone recommendations were fully supported, while the arterial recommendations received support with stipulations.

Engineering felt additional background collision data was required to support the recommended reduced speed limits on sections of Boudreau road, Villeneuve Road, and Hebert Road.

- It was identified that there are programs in progress to which network improvements for efficiency and safety are occurring; for example, the St. Albert Trail at Boudreau Road / Giroux Road intersection.
- It was recommended that these segments, of recommended reduced speed limits, be monitored during collision network screening and effort be made to report on the areas and evaluate to better quantify the actual demand; or identify the impacts of the improvements to the areas once completed.

Similarly, the recommended speed limit increases were supported, but it was noted that each recommendation should be given with a stipulation.

- Prior to increasing the speed, the City should perform improvements of existing pedestrian crossings, for example, design and install flashing warning systems to improve driver awareness when a pedestrian is seeking to cross the roadway.

The removal of the short 30 km/h segments was supported by the Transportation Department. There is agreement with enforcement's comment that there may be an opportunity to specifically recommend targeting improvements and/or traffic calming measures or warnings to drivers to ensure the speeds are adhered to. It was also noted that some locations of the suggested removal of the 30 km/h zone fall within the proposed Neighbourhood speed reduction to 40 km/h.

It was also identified that the removal of some of the 30 km/h segments assists with delivery of current traffic calming efforts, such as the Grandin area (in vicinity of the Grosvenor Boulevard and Grenfell Avenue intersection).

9.3.6 Strategic Services – Communication

Strategic Services would anticipate a service level demand to support communications of proposed speed limit changes. Impacts would be relevant to any proactive communication to promote the proposed traffic bylaw changes and notify of a Public Hearing (inclusive of following standard notifications of the forthcoming Public Hearing for proposed changes to the Traffic Bylaw), as well as necessary public notification of any approved Bylaw amendments prior to the actual implementation of changes in the field.

Actions would be inclusive of various public engagement and notification forums such as development of focus groups, written notifications in the local paper, social media updates, field signage and messaging and support to departments in any media requests and public inquiry or concerns communication.

9.3.7 Stakeholder Feedback Summary

Overall response to the preliminary recommendations were positive. The areas that are of the greatest concern to stakeholders are:

1. Reduced neighbourhood speed (40 km/h) impact to Transit services and their ability to maintain current service levels.
2. A general concern of playground zone time extension, as some question the need for this increased time at schools or more so application at specific sites. An example of a concerned site are the current school zones on Sir Winston Churchill Avenue.

Table 9.1: Stakeholder Feedback Summary

Recommendation	Descriptive Summary
Collectors and Locals - Default Speed Reduction (50 km/h to 40km/h)	The majority of feedback was supportive, with Parks and Recreation noting that the reduced speeds will likely create safer conditions for their workers. Transit did not support this recommendation due to the impacts of increased travel times on the existing transit schedule.
Boudreau Road – Liberton Drive to Inglewood: Reduce from 60 to 50 km/h	The majority of feedback was supportive, with Parks and Recreation noting that the reduced speeds will likely create safer conditions for their workers. Transit did not support this recommendation due to the impacts increased travel times on the existing transit schedule. Engineering felt additional background collision data was required to support the recommended reduced speed limits.
Villeneuve Road – Commercial Area in vicinity to the Walmart to St. Albert Trail: Reduce from 60 to 50 km/h	Same as previous.
Hebert Road – St. Albert Trail to Arlington Drive: Reduce from 60 to 50 km/h	Same as previous.
Sir Winston Churchill Avenue – Riel Drive to Levasseur Road: Increase from 50 to 60 km/h	Fully supported by all stakeholders. It is noted that the City should target the completion of improvements to existing pedestrian crossings before implementing the speed reduction.
Bellerose Drive – Evergreen Drive to City limits: Increase from 50 to 60 km/h	Same as previous.

Recommendation	Descriptive Summary
Sir Winston Churchill Avenue – Poirier Avenue to City Limits: Increase from 50 to 60 km/h	Supported by all but Municipal Enforcement due to the crosswalk at the bottom of the hill and proximity to the Kingswood intersection. It was noted by Engineering that the City should target the completion of improvements to existing pedestrian crossings before implementing the speed reduction.
Sturgeon Road – St. Albert Trail to Boudreau Road: Increase from 50 to 60 km/h	Supported by all but Municipal Enforcement due to the number of crosswalks in along the roadway segment. It was noted by Engineering that the City should target the completion of improvements to existing pedestrian crossings before implementing the speed reduction.
Dawson Road – Giroux Road to McKenney Avenue): Increase from 50 to 60 km/h	Fully supported by all stakeholders. It is noted that the City should target the completion of improvements to existing pedestrian crossings before implementing the speed reduction.
Meadowview Drive – West of Ray Gibbon Drive: Increase from 60 to 70 km/h	Fully supported by all stakeholders. It is noted that the City should target the completion of improvements to existing pedestrian crossings before implementing the speed reduction.
Change from school zone to playground zones at elementary schools	Many of the stakeholders support this, however questions were raised about the playground utilization and the need to maintain zones outside of school hours.
Apply a time of day for playground zones, 8 AM – 8 PM, this would apply every day of the year.	Same as previous.
Removal of three playground zones, with no playground equipment (only park space)	The majority of stakeholders support this recommendation, however Parks and Recreation was reluctant to provide support without utilization data for the fields, but willing to consider should reduce neighbourhood speeds be applied.
Apply Playground Areas – warning signs with tab signs encouraging the proposed reduced neighbourhood speed of 40 km/h	Fully supported.
Removing short 30 km/h zones at Sturgeon Road, Mission Avenue, Grosvenor Boulevard Grenfell Avenue, Meadowview Drive	Fully supported, with suggestions to explore traffic calming measures, warnings and notifications, in these areas to ensure speeds are followed.

9.3.8 Stakeholder Feedback Discussion

The prevailing concern from stakeholders involved the travel time impacts anticipated from speed reductions and increased playground zone times and coverage. To address these concerns, the following may be considered for further study:

- Playground and field usage during the warmer months, both while school is in session and during summer vacation.
- The results of the data collection could strengthen the case for the playground zone classification for elementary schools and extended zone times, or indicate that the usage is not as assumed based on the available data at the writing of this report, and suggest the playground and school zone recommendations should be revisited.
- A detailed review of the transit scheduling impacts, potential solutions, and potential associated costs of maintaining the current transit service levels while implementing the recommendations.

10.0 Final Speed Limit Recommendations

The final speed recommendations are provided in the following section based on a combination of speed limit setting methodologies and the stakeholder feedback. Potential impacts of these recommendations are also explored.

10.1 Recommendations

The final speed limit recommendations are as follows and illustrated in Exhibit 10.1, where applicable.

Collectors and Locals

- **Recommendation #1:** Reduction in the default and posted speed of 50 km/h to 40 km/h.

Arterials

- **Recommended Option #2a:** Reduce speed limits as per study recommendations:
 - Boudreau Road – Liberton Drive to Inglewood: Reduce from 60 to 50 km/h.
 - Villeneuve Road – Commercial Area in vicinity to the Walmart to St. Albert Trail: Reduce from 60 to 50 km/h.
 - Hebert Road – St. Albert Trail to Arlington Drive: Reduce from 60 to 50 km/h.

Or,

- **Recommended Option #2b:** Maintain existing speed limit of 60 km/h for recommended option 2a, by implementing recommendations for reducing the risk score to maintain a 60 km/h posted speed recommendation by the CGEPSL.

Or,

- **Recommended Option #2c:** Maintain existing speed limit of 60 km/h for recommended option 2a, with future review of background collision data to confirm a speed related collision issue exists, if no issue, maintain speed with monitoring.

This recommendation reflects opportunity to account for intersection improvements underway or planned (St. Albert Trail and Boudreau Road and intersection improvements planned in the short term for St. Albert Trail and Villeneuve Road) Monitoring only to confirm a speed related collision issue is recommended for the Hebert Road segment as there are no improvement planned in the near future.

Upon finalizing this report, it was identified that Option #2c for Arterials is the preferred recommendation.

- **Recommended Option #3:** Increase from 50 km/h to 60 km/h at the following segments:
 - Sir Winston Churchill Avenue – Reil Drive to Levassuer Road.
 - Bellerose Drive – Evergreen Drive North to City limits.
 - Sir Winston Churchill Avenue – North to City Limits.
 - Sturgeon Road – Beacon Crescent (South) to Boudreau Road.

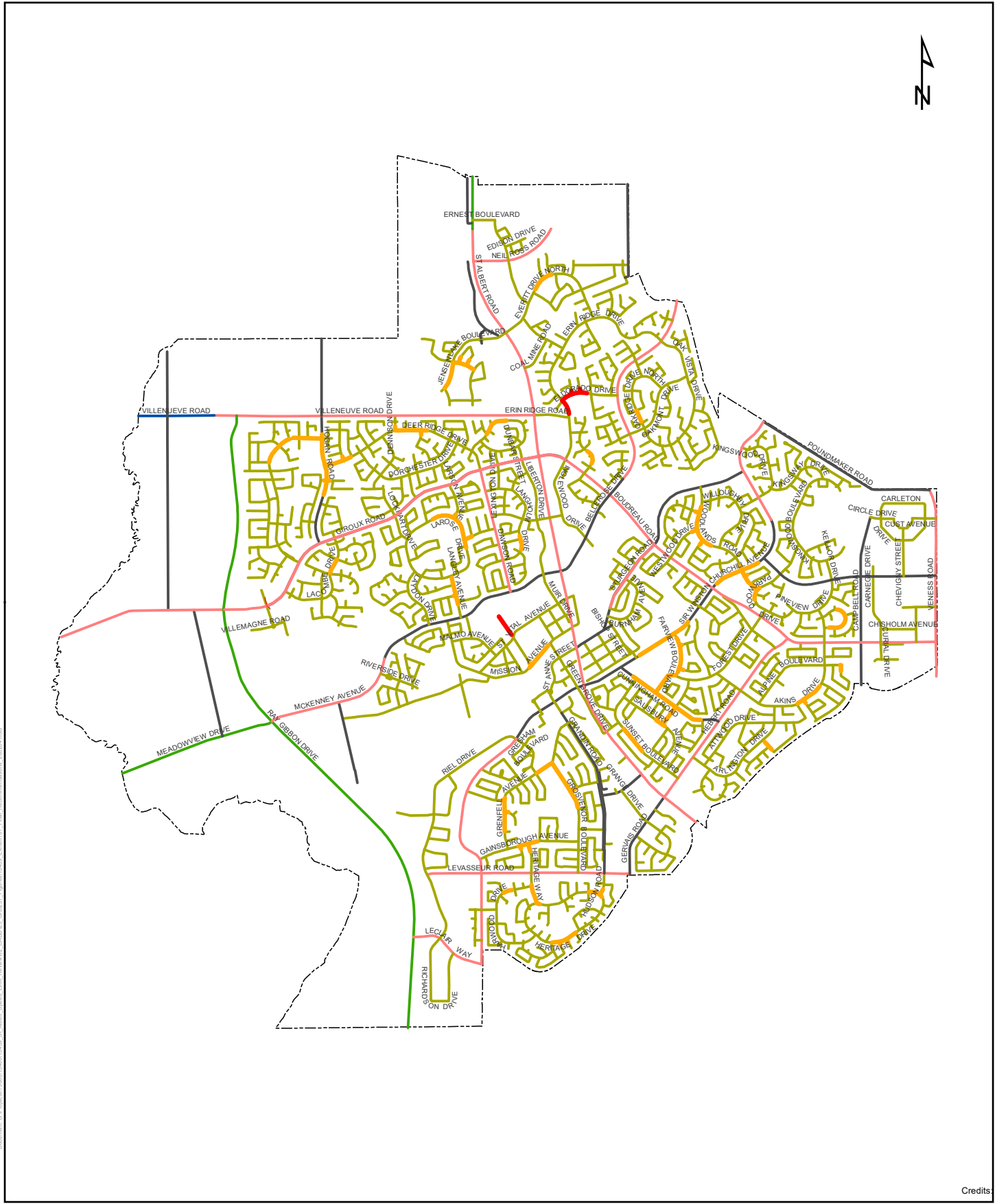
- Maintaining the reduced speed warning sign along the curve of the road in the vicinity of Bishop Street.
- Dawson Road – Giroux Road to McKenney Avenue: Increase from 50 to 60 km/h.
- Meadowview Drive – West of Ray Gibbon Drive: Increase from 60 to 70 km/h.
- **Recommendation #4:** Prior to any increase in speed limits in recommendation #3, it is recommended that the City targets completion of improvements to existing pedestrian crossings within these segments; designing and installing warning flasher systems that will improve driver awareness and warning when pedestrians are on site and seeking to cross the roadway.
- **Recommendation #5:** The City, by use of the performed speed review outputs and identification of factors influencing current lower speed limits on some arterial roadways, identify and complete further speed limit reviews with completion of network improvements or roadway projects.
 - An example of this would be the Connector road segment of Poirier Avenue and Corriveau Road, which should sidewalk be constructed on Corriveau Road, could result in a suggested increase in speed from the 50 km/h to 60 km/h.

Playground and School Zones

- **Recommendation #6:** Change from school zone to playground zones at Elementary Schools
- **Recommendation #7:** Apply a time of day for playground zones, 8 a.m.– 8 p.m., which would apply every day of the year.
- **Recommendation #8:** Removal of three playground zones, with no playground equipment (only park space); this is to be applied in conjunction with approval of reduced neighbourhood speeds as these are located within neighbourhoods. Parks include: Attwood Park (Atwood Drive Playground Zone), Forest Park (Forest Drive Playground Zone), Deerbourne Park (Deerbound Drive, South Playground Zone).
- **Recommendation #9:** Apply playground areas – warning signs with tab signs encouraging the proposed reduced neighbourhood speed of 40 km/h (not a change in the actual speed limit – just reposted with the warning sign).
- **Recommendation #10:** It is recommended that the City reviews additional school and playground sites further to capture spring and summer use throughout 2020 to gain a better understanding of school and playground utilization, as needed.

Other

- **Recommendation #11:** Short 30 km/h segments.
 - Removing short 30 km/h zones and installing warning only signs at the following:
 - Sturgeon Road: Burns Street to Burnham Avenue.
 - Mission Avenue: Between St Vital Avenue and Malmo Avenue.
 - Grosvenor Boulevard: Gaylord Place to south of Grenfell Avenue.
 - Grenfell Avenue: Gatewood Avenue to Greenwich Crescent.
 - Meadowview Drive: Mission Avenue to 150 m west of Mission Avenue.
 - A review of potential targeted improvements or traffic calming at the locations above is recommended for consideration.



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Credits



- | | |
|--------------------|---------------------------|
| City of St. Albert | Speed Limit (km/h) |
| Playground Zone | 30 |
| School Zone | 40 |
| | 50 |
| | 60 |
| | 70 |
| | 80 |

EXHIBIT 10.1:
FINAL
RECOMMENDATIONS



- **Recommendation #12:** Clearance intervals (amber and all-red) at signalized intersections along corridors need to be updated where there is a change in posted speed limit.

10.2 Potential Impacts of the Recommendations

As with any project, these recommendations have potential advantages and disadvantages. An in-depth understanding of the potential impacts the recommendations may have on the City’s operations, safety, and budget is needed to make an informed decision. The following section discusses the potential direct and indirect impacts of the speed limit recommendations, as well as the observed impacts from similar projects such as the shift from school zones to playground zones in the City of Edmonton and the isolated areas of 40 km/h posted speed within St. Albert.

10.2.1 Direct Impacts

Direct impacts include costs associated with applying the recommended speed changes and travel time increases, as discussed in the following subsections. All costs estimates in this section were supplied by the City of St. Albert.

Field Signage Costs

Signage will need to be upgraded or installed to reflect the recommended speed limit and school/playground zone/area changes. The following table summarized the estimated cost of field signage.

Table 10.1: Field Signage Cost

Signage	Description	Estimated Amount	Estimated Cost
Speed Sign	Changed from 50 km/h to 40 km/h	260	\$36,000 (Supply and install)
Warning Signs of Reduced Speeds	Entering communities	75	\$13,000 (Supply and install)
Playground Zone	Changed from school zone to playground zone with new time of day tabs	140	\$20,000
Total		475	\$69,000

Pedestrian Crossing Improvements

Prior to implementing recommended arterial roadway segment speed increases, it is advisable to ensure that pedestrian crossings are addressed and improved to promote safety and ensure they are highly visible. Improvements suggested to the existing or potential crossings along these segments would be inclusive of road markings and warning flashers.

Pedestrian crossings anticipated to be impacted and recommended for improvements include:

1. **Sir Winston Churchill Avenue:**
 - a. Crossing north of Gainsborough Avenue.
 - b. Crossings south of Gatewood Avenue x 2.
 - c. Crossing at Sturgeon Road.



2. Bellerose Drive:

- a. Crossing at Eldorado Drive.
- b. Crossing at Empress Way.

3. Dawson Road:

- a. Crossing at Lennox Drive.
- b. Crossing at Langholm Crescent (South).

Improvements are estimated at \$270,000 for completion of necessary design and supply and installation of warning systems and road markings.

Travel Times

Travel times within neighbourhoods will increase; however, anticipated impacts of actual travel time are negligible. No anticipated further delay or impact at existing traffic controls (stop signs or yield signs); the change in travel time occurs only during actual travel. An example of potential travel time implications is provided in the table below, assuming a total travel distance of 2 km within a community.

Table 10.2: Time Comparison

Scenario	Travel Time
Traveling 2 km at 50 km/h	2 minutes 24 seconds
Traveling 2 km at 40 km/h	3 minutes
Travel time variance (40 km/h subtract 50 km/h)	36 seconds

As a comparator of actual travel distances within communities, the following provides examples of what may be deemed substantial travel routes and distances within communities from a local roadway to an adjacent arterial roadway (acknowledging that alternative and shorter routes would exist):

- Erin Ridge community; Eastcott Drive to Bellerose Drive at Erin Ridge Drive via the route of Erin Ridge Drive = 2.63 km.
- Oakmont community; Otter Crescent to Bellerose Drive at Oak Vista Drive, via the route of Oakridge Drive South = 1.6 km.
- Kingswood community; Kingsford Crescent to Poirier Avenue at Keillor Drive, via the route of Kingswood Boulevard to Keillor Drive = 1.8 km.
- Lacombe Park community; Lamartine Crescent to Giroux Road at Larson Avenue, via a route of Larose Drive (eastbound) to Larson Avenue to Giroux = 1.9 km.

Transit Services

Despite the travel time impact anticipated to be low, any influence on Transit services that impact time can have implications on service delivery.

It was communicated that two key routes (with bi-directional servicing) of St. Albert's current bus routes would be unable to adhere to the schedules with the recommended speed limit reduction to 40 km/h. The routes with anticipated schedule conflicts are A4, A5, A7, and A8, of which A4 and A5 operate in opposite directions of the same path, as with A7 and A8.

Transit noted that if the current schedules cannot be adhered to and current service levels were required to be maintained; an additional transit bus for each pairing would be anticipated to be required. These two additional busses would be required throughout all operating hours, including weekdays and Sundays according to the transit department.

An estimated operational impact (not including funding to acquire additional fleet) was provided at approximately \$960,000 annually to operate the additional buses required to support the changes without acknowledgement or approval of any change to service levels. The value of \$960,000 is derived from the following cost calculation provided by Transit Services:

- 2 buses X 14 hours per day X 6 days per week X 52 weeks per year X \$110.00 per hour = \$960,960.00 per year.

On January 20, 2020, Council approved motion CB-20-011; “That Administration implement the transit service level revisions, effective September 2020, as presented at the January 13, 2020 Community Growth & Infrastructure Standing Committee meeting.”

The results of this motion and approved service level change are anticipated to enable Transit to accommodate the recommended Traffic Bylaw amendments, with no operational costs associated.

10.2.2 Public Perception of Speed and Enforcement

It is anticipated that there may be some public opinion on the rationale of enforcement revenue being the key influence towards reducing neighbourhood speeds. This opinion may be amplified based on recent review of photo enforcement programs within Alberta.

The process followed, and the reporting performed (inclusive of this final report being a public facing document), is anticipated to assist in public communications and education on how the speed limit recommendations have been developed.

It is noted and important to clarify that the Transportation Network Speed Review and resulting recommendations have been developed and are based upon engineering application of guidelines, site inspections and current practice models. Recommendations of speed changes (reduction or increase) were not generated based on enforcement activity or prior communication; however, once the recommendations were developed they were shared with the enforcement branches (Municipal and RCMP) as they are key service delivery stakeholders.

10.2.3 Reported Implications from St. Albert Reduced Speeds in St. Albert

In spring (March/April) 2019, the posted speed in the neighbourhoods of Erin Ridge, Erin Ridge North, and Lacombe Park East were reduced from 50 km/h to 40 km/h. Since implementation, no substantial operational issues or service related concerns have been reported to the Transportation department from the neighbourhoods.

Speed Measurements

Eighty-fifth (85) percentile speeds, meaning that 85% of recorded vehicles are traveling at the recorded speed or lower; or also considered as 15% of vehicles are recorded as traveling faster than the recorded speed, indicate a strong compliance within the communities to the reduced neighbourhood speeds.



Data captured during 2019 traffic counts later in the year, included twenty-two (22) midblock locations as comparators and examples of speeds being traveled. The twenty-two sites include the following: five (5) in the Erin Ridge North community, 11 in the Erin Ridge community, four (4) in the Lacombe Park East community and two in the downtown.

The results are as follows:

- One (1) site recorded an 85% speed limit above the posted 40 km/h; which was 44 km/h.
 - This site was on Erin Ridge Drive at a location north of Boudreau Road.
- Twenty-one (21) sites recorded an 85% speed limit below the posted 40 km/h.
- The average variance of the 21 sites from the posted 40 km/h speed limit was 8 km/h below the speed limit.
- The average 85% speed limit recorded of the 21 sites was 33 km/h.

Summary: The results reflect a high level of driver compliance of the 40 km/h speed limit.

Automated Enforcement

*Note: this summary of enforcement information has been compiled from Automated Enforcement data only. Conventional enforcement (tickets issued by officer on roadside) data is not available to this level of detail and therefore has not been included.

In the areas of reduced neighbourhood speed, there are ten approved photo enforcement sites that have enforced speed in the communities (enforcement sites were approved prior to speed reductions in the communities). Following the implementation of the reduced speeds in March and April of 2019, there was a period of 6 weeks that warnings were provided to drivers in violation of the posted speed limit (40 km/h) versus violation tickets.

From the end of the warning period to end of December 2019 there were:

- Speed Limit: Posted speed limit of 40 km/h
 - 2.5 violations recorded per hour of enforcement
 - The average speed violation recorded was 56.8 km/h (16.8 km/h above the posted speed limit)
 - Note: This average is not reflective of the average recorded speed; it is reflective of the average speed violation.

For comparison of the broader City-wide enforcement activity during the same time period as the enforcement period at sites of reduced speeds, the following information may be considered:

- **School Zones and Playground Zones:** Total of 53 enforcement sites.
 - Speed Limit: Posted speed limit of 30 km/h during times of day for school and playground zone periods
 - 4.8 violations recorded per hour of enforcement
 - The average speed violation was 40.3 km/h (10.3 km/h over the posted speed limit)
 - Note: This average is not reflective of the average recorded speed; it is reflective of the average speed violation.

- **Other Speed Zone Sites** (approved enforcement sites beyond school and playground zones, with the sites of locations of reduced neighbourhood speeds removed) – Total of 57 approved enforcement sites.
 - Speed Limit: Posted speed limit of 50 km/h, 60 km/h or 70 km/h pending the roadway and site
 - 4.0 violations recorded per hour of enforcement
 - The average speed violation was:
 - For 50 km/h road segments – 67.2 km/h (17.2 km/h over the posted speed)
 - For 60 km/h road segments – 77.6 km/h (17.6 km/h over the posted speed)
 - For 70 km/h road segments – 87.3 km/h (17.3 km/h over the posted speed limit)

Results of comparing the enforcement activities and violation information from reduced neighbourhood speed sites to typical city-wide areas:

- The violations recorded per hour at locations with a 40 km/h reduced speed limit are lower than other approved enforcement sites, including at school zones, playground zones and locations with 50 km/h, 60 km/h and 70 km/h speed limits.
- The average speed violation in the reduced speed community is 56.6 km/h, 16.6 km/h above speed limit. This is similar to the average violation above the posted speed limit in other approved site locations.
- School and playground sites had the lowest average violation recorded (10.3 km/h over the posted speed).

Collisions

The following figure provides an overview of motor vehicle collision frequency within the communities to which reduced speeds have been applied.

It should be noted that as the reduced speed limits were implemented mid-year in 2019, the figures below compare collision frequencies in the months from April to November only.

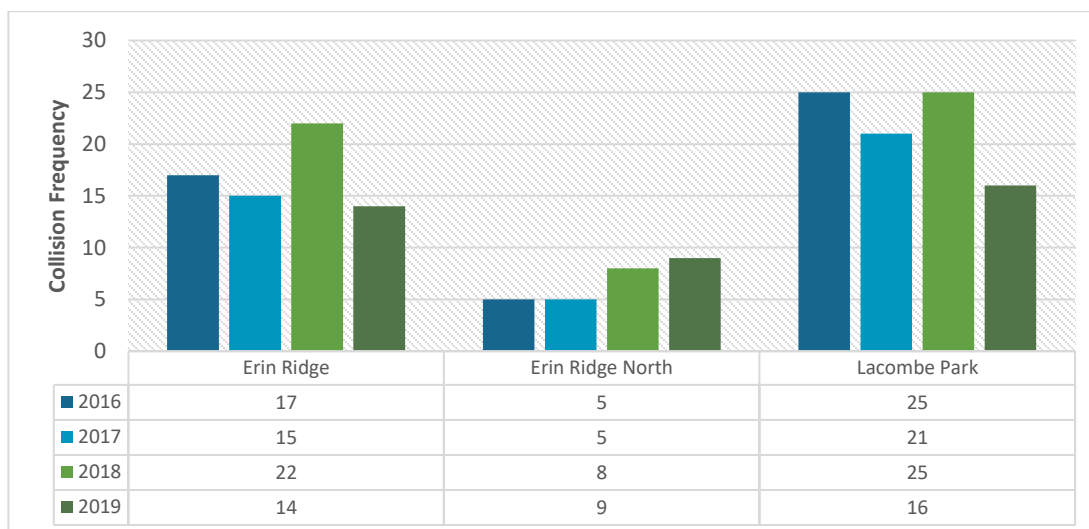


Figure 10.1: Motor Vehicle Collisions in Speed Reduced Communities (April – November)

From the graph above, the change in average total collisions per year at all location is as follows:

- Before: 15.9 collisions per year (all locations)
- After: 13 collisions per year (all locations)

As a priority for the City is to influence and reduce severe motor vehicle collisions, a review of the impact of reduced speeds on the resulting severity outcomes of any motor vehicle collision that occurred is an important aspect of consideration of reduced neighbourhood speed limits. The following figure highlights the frequency of injury related or worse motor vehicle collisions in communities that had 40 km/h speed limits introduced in 2019.

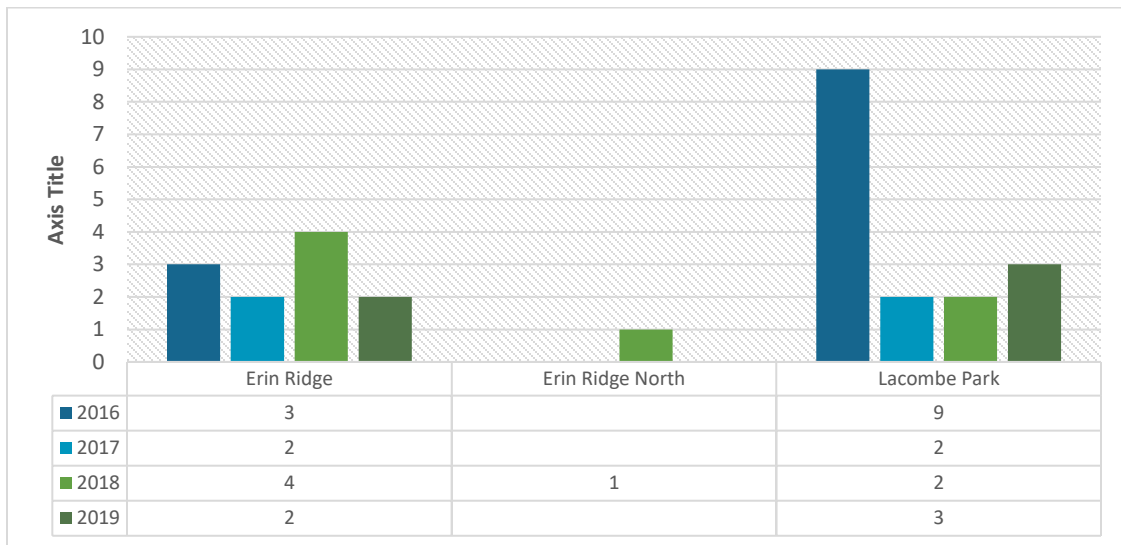


Figure 10.2: Injury Motor Vehicle Collisions in Speed Reduced Communities (April – November)

From the above, it can be identified that injury collisions were reduced in two of the three communities, with no injury related incidents reported following the speed reduction in the community of Erin Ridge North. The average total injury collisions have changed as follows:

- Before: 3.3 injury collisions per year (all locations)
- After: 1.7 injury collisions per year (all locations)

Overall, the results suggest a correlation between the decrease in total collisions and the reduction in speed limits. Future monitoring, additional months/years of data and additional analysis is suggested to confirm the correlation is caused by the reduction in speed limit as most, but not all locations had a reduction.

11.0 Next Steps

The Transportation Network Speed Limit Review and resulting report, provides recommendations that ultimately seek to advance the City's Transportation Safety Plan. In recognition of the competing interests and demands of the transportation network from varying needs of road users, it is important the City acknowledges and continues to promote the primary objective of Vision Zero, and the goal of reducing severe collision occurrences, while at the same time applying sustainable and efficient traffic management practices.

The final recommendations provide opportunity to present amendments to the City's Traffic Bylaw, with rationale and background clearly documented. At the same time, the results of this study provide opportunity to maintain and update the road segment evaluations for posted speed as roadway improvements are considered or applied to the network and support the development of general principles and policy surrounding posted speed limits.

Continued monitoring and network screening of safety, such as collision reporting or public reports of concern and operations (recorded vehicle volumes and speed) should also be performed, with particular review of noted segments that were identified in this report to be areas of potential recommended changes – to either quantify and prioritize changes or to capture opportunity of roadway improvements to further reduce conflict or support safety with minimal operational change.



■ 12.0 Acronyms

CGEPSL	Canadian Guidelines for Establishing Posted Speed Limits
AADT	Average Annual Daily Traffic
NACTO	National Association of City Transportation
AT	Alberta Transportation
MUTCDC	Manual of Traffic Control Devices for Canada
FHWA	Federal Highway Administration, US Department of Transportation
ITE	Institute of Transportation Engineers
TAC	Transportation Association of Canada
OTM	Ontario Traffic Manual
HTA	Highway Traffic Act

13.0 Glossary of Terms

Term	Definition
Alberta Traffic Safety Act	A provincial Act defining regulations regarding traffic safety, vehicles, and vehicle operators.
Alberta Transportation (AT)	A provincial roadway authority that creates legislation and guidelines for Alberta's roadways as well as owns, operates, and maintains the provincial highway network.
Area (School Area or Playground Area)	A section of roadway adjacent to a school or playground that is denoted by School Area or Playground Area signage only.
Average Annual Daily Traffic (AADT)	A traffic volume measurement often used in transportation engineering.
Best Practices	The prevailing or most common practices used by other roadway authorities or municipalities.
Canadian Guidelines for Establishing Posted Speed Limits (CGEPSL)	A set of guidelines published by the Transportation Association of Canada that outlines how to set speed limits for arterial and collector roadways.
Cross Section	A vertical section of the roadway and surrounding ground including all elements of a roadway from the right-of-way line.
Exposure (Pedestrian or Cyclist)	Relates to the proximity of pedestrians or cyclists to roadway activities.
Federal Highway Administration, US Department of Transportation (FHWA)	A division in the United States Department that specialized in highway transportation.
Felid Review	An on-site review of the roadway characteristics to confirm
Institute of Transportation Engineers (ITE)	An international educational and scientific association of transportation professionals.
Manual of Traffic Control Devices for Canada (MUTCDC)	A document published by the Transportation Association of Canada that offers guidance on traffic control device types, use, and placement for a variety of road authorities and jurisdictions.
National Association of City Transportation (NACTO)	A coalition of the Departments of Transportation in North American cities formed to cooperatively approach transportation issues.
Playground	Playgrounds are recreational facilities utilized primarily by children. This includes outdoor playgrounds with play equipment, sports fields, ball diamonds, tot lots and indoor or enclosed facilities such as skating rinks and swimming pools.
Posted Speed	The maximum speed limit posted on a section of roadway using a regulatory sign.
Prevailing Speed	The speed at which 85 percent of motorists travel on a roadway.
Road Network	A system of interconnecting roadways that support movement throughout the City.



Term	Definition
Roadway Segment	A portion of a roadway, typically defined by its homogeneity or proximity to a playground or school.
Safe Systems	A system that prioritizes the safety of vulnerable road users (pedestrians and cyclists) over the many other factors considered by the two aforementioned guides and considers the need to reduce speeds to reduce risk to all road users.
School	Schools are educational institutions that are attended primarily by children. This includes elementary schools, middle schools, junior high schools and high schools. No distinction is made between public and private schools.
Transportation Association of Canada (TAC)	A national technical association that focuses on road and highway infrastructure and urban transportation.
Vision Zero	A long-term traffic safety goal that is focused on working towards a world with zero traffic fatalities
Zone (School Zone or Playground Zone)	A section of roadway adjacent to a school or playground that is denoted by School Area or Playground Area signage and a 30 km/h speed limit sign.

14.0 References

Reference	Organization or Author
Alberta Traffic Safety Act	Alberta Transportation
Canadian Guidelines for Establishing Posted Speed Limits (CGEPSL)	Transportation Association of Canada
Child Pedestrian Injuries on Residential Streets: Implications for Traffic Engineering. Institute for transportation Engineers, February 2000	Jacobson, P. et al.
Guidelines to Playground and School Area and Zones	Alberta Transportation
Municipal Development Plan (2007)	City of St. Albert
Municipal Engineering Standards (2013)	City of St. Albert
Pedestrian Fatality Risk as a Function of Car Impact Speed. Accident Analysis and Prevention, 41 (2009): 536-542	Rosén, E., and Sander, U.
Review of school and Playground Zone harmonization in Calgary	City of Calgary, University of Calgary, Mishra, S., Kattan, L.
The Impact of Lowered Residential Speed Limits on Vehicle Speed Behavior. Safety Science, 62 (2014) 483-494	Islam, M.T., El-Basyouny, K., and Ibrahim, S.
Traffic Bylaw	City of St. Albert
Transportation Master Plan (2015)	City of St. Albert
Transportation Safety Plan (2018)	City of St. Albert
Transportation Safety Plan (2018)	City of St. Albert
Transportation System Bylaw	City of St. Albert
Variable Seasonal Times for Playground Zones	City of Edmonton
Methods and Practices for Setting Speed Limits: An Information Report (2012)	FHWA (Federal Highway Administration, US Department of Transportation) and ITE (Institute of Transportation Engineers)



APPENDIX
Survey Question Results

A

Q1 What is your municipality's philosophy for setting speed limits?

Answered: 16 Skipped: 0

#	RESPONSES	DATE
1	.	5/10/2019 1:14 PM
2	50 unless posted. Reduce speeds only within playground and school areas/zones. One exception area in our more walk able main street where it is 30 km/hr	5/10/2019 10:42 AM
3	The speed limit shall be appropriate to the functional classification of the roadway. The primary criteria would be to provide safety for all road users whilst fulfilling the functions of mobility and accessibility as appropriate to the functional class of the roadway.	5/8/2019 4:45 PM
4	TAC and Alberta Transportation guidelines	5/8/2019 4:07 PM
5	The City's philosophy for setting posted speed limit is based on the TAC's Canadian Guidelines for Establishing Posted Speed Limits. The posted speed limit is determined to alleviate safety concerns while meeting the driver's expectation.	5/6/2019 4:20 PM
6	Follow TAC guidelines and internal speed limit guidelines also based upon TAC as well as roadway classification and design. Design speed related to posted speed is found in Complete Streets Design and Construction Standards. See Section 3.2 https://www.edmonton.ca/city_government/urban_planning_and_design/city-design-construction-standards.aspx?utm_source=virtualaddress&utm_campaign=designconstructionstandards	5/3/2019 4:31 PM
7	Most roads in Calgary default to 50 kph as per the Alberta Traffic Safety Act . Recently with the Calgary City Charter, we have been granted the ability to set a different default speed limit. We are currently preparing a report to Council on the possible alternatives for either reducing the default limit to either 30 or 40 kph where the remainder of the roadways (collectors, arterials and expressways) being signed at higher speeds. Current policy is that arterials are designed and posted between 50 - 60 kph, and expressways between 60 - 80 kph.	5/2/2019 2:18 PM
8	Provide a safe, effective and efficient conditions for road users	4/30/2019 8:15 AM
9	Red Deer follows TAC guidelines for setting speed limits on arterial roads. The posted speed considers conflicts and road conditions, is normally less than the design speed and less than or equal to the 85th percentile speed.	4/29/2019 8:57 AM
10	We use the TAC Guideline for Establishing Posted Speed Limits and will be converting all local neighbourhood roadways to 40km/h as per Bill 65.	4/29/2019 8:06 AM
11	Vision Zero, Safe speeds & Safe streets	4/29/2019 7:05 AM
12	The speeds are set using the Council approved policy which takes into account land use, number of accesses, lane width, vehicle volume	4/29/2019 6:42 AM
13	Speed limit should be reasonable and acceptable by majority of road users. Changing speed limits without changing road environment do not work.	4/26/2019 4:24 PM
14	Establish a reasonable and safe speed limit that is appropriate for a particular roadway based on its design and classification	4/26/2019 3:56 PM
15	Posted speeds should be intuitive, with drivers receiving visual cues from their environment.	4/26/2019 2:09 PM
16	We use several factors such as design speed, adjacent land use, local Bylaws and existing development.	4/26/2019 12:37 PM

Q2 What is the methodology your municipality uses to establish speed limits?

Answered: 16 Skipped: 0

ANSWER CHOICES	RESPONSES	
Arterial Roads	100.00%	16
Collector Roads	100.00%	16
Local Roads	100.00%	16
School Zone	100.00%	16
Playground Zone	100.00%	16

#	ARTERIAL ROADS	DATE
1	Based on consultant recommendations	5/10/2019 1:14 PM
2	Assumed 50	5/10/2019 10:42 AM
3	Based on our roadway standards for new roads. In the existing areas or retrofit situations, we use ITE recommended practices consisting one or more of engineering approach and safe system approach.	5/8/2019 4:45 PM
4	TAC	5/8/2019 4:07 PM
5	Canadian Guidelines for Establishing Posted Speed Limits, road geometry/characteristics, operational safety, prevailing 85th percentile speed	5/6/2019 4:20 PM
6	Design speed is 10 km/hr greater than posted, Complete Streets Section 3.21	5/3/2019 4:31 PM
7	Posted speed limit is less than or equal to design speed of the roadway. Engineering judgement is used to determine whether the roadway is either 50 or 60 kph. A multitude of factors are used to determine the posted speed (crashes, driveway density, access frequency, access volumes, adjacent land use, pedestrian volumes, presence of active mode facilities, etc.)	5/2/2019 2:18 PM
8	Geometric Standard and design speed	4/30/2019 8:15 AM
9	TAC Guidelines, design speed and 85th percentile speed with some additional analysis as needed.	4/29/2019 8:57 AM
10	TAC Guideline	4/29/2019 8:06 AM
11	TAC Guidelines	4/29/2019 7:05 AM
12	Our Policy	4/29/2019 6:42 AM
13	Engineering approach - Road risk method (TAC guidelines)	4/26/2019 4:24 PM
14	TAC	4/26/2019 3:56 PM
15	60, 70 or 80kph, depending upon level of built environment	4/26/2019 2:09 PM
16	Design speed, adjacent land use and development	4/26/2019 12:37 PM

#	COLLECTOR ROADS	DATE
1	Collector and Local - 40	5/10/2019 1:14 PM
2	Assumed 50	5/10/2019 10:42 AM
3	We use our default speed of 50 km/h, except for traffic calmed streets	5/8/2019 4:45 PM
4	TAC	5/8/2019 4:07 PM
5	Canadian Guidelines for Establishing Posted Speed Limits, road geometry/characteristics, operational safety, prevailing 85th percentile speed	5/6/2019 4:20 PM

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6	Design speed equals posted speed with exceptions, Complete Streets Section 3.21	5/3/2019 4:31 PM
7	Posted speed limit on most collectors is set at the default speed limit, which was also used as the design speed of these roadways	5/2/2019 2:18 PM
8	Bylaw and Geometric Standard and design speed	4/30/2019 8:15 AM
9	50 km/h posted speed with 60 km/h design speed.	4/29/2019 8:57 AM
10	TAC Guideline + Bill 65	4/29/2019 8:06 AM
11	Major Collector - TAC, Minor Collector - Vision Zero	4/29/2019 7:05 AM
12	All residential areas are posted at 50 km/hr	4/29/2019 6:42 AM
13	Using default speed of 50 km/h	4/26/2019 4:24 PM
14	TAC	4/26/2019 3:56 PM
15	50 kph	4/26/2019 2:09 PM
16	As per Arterial Roads unless adjacent land use is residential development. Then City Bylaw requires 30km/hr in residential.	4/26/2019 12:37 PM
#	LOCAL ROADS	DATE
1	Collector and Local - 40	5/10/2019 1:14 PM
2	Assumed 50	5/10/2019 10:42 AM
3	We sue our default speed of 50 km/h, except for traffic calmed streets	5/8/2019 4:45 PM
4	TAC	5/8/2019 4:07 PM
5	Currently speed limit on local roads is posted at 50 km/h and is generally not reviewed.	5/6/2019 4:20 PM
6	Statutory speed is 50 km/hr except in a few locations/neighbourhoods	5/3/2019 4:31 PM
7	Posted speed limit on most local roadways is set at the default speed limit, which was also used as the design speed of these roadways	5/2/2019 2:18 PM
8	Bylaw and Geometric Standard	4/30/2019 8:15 AM
9	50 km/h posted speed with 60 km/h design speed.	4/29/2019 8:57 AM
10	Bill 65	4/29/2019 8:06 AM
11	Vision Zero	4/29/2019 7:05 AM
12	All locals are 50 km/hr	4/29/2019 6:42 AM
13	Using default speed of 50 km/h	4/26/2019 4:24 PM
14	TAC	4/26/2019 3:56 PM
15	50kph	4/26/2019 2:09 PM
16	As per City Bylaw - 30km/hr	4/26/2019 12:37 PM
#	SCHOOL ZONE	DATE
1	Alberta Transportation Guidelines	5/10/2019 1:14 PM
2	School zone evaluated then posted 30 during key hours (provincial standard hours)	5/10/2019 10:42 AM
3	30 km/h based on Alberta Guidelines	5/8/2019 4:45 PM
4	AT warrant analysis	5/8/2019 4:07 PM
5	All school zones are designated at playground zones	5/6/2019 4:20 PM
6	See playground zone	5/3/2019 4:31 PM
7	Roadway speed limits in school zones are the same as the remainder of the street which the school zone has been established and is in effect outside of school zone hours/days. A few years ago, Calgary d has removed all school zones and replaced all school zones with playground zones that have modified hours different that default Provincial hours (7:30 am to 9:00 pm) 24/7/365	5/2/2019 2:18 PM
8	MUTCD	4/30/2019 8:15 AM

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9	TAC Guidelines with 08:00 to 16:30 custom time.	4/29/2019 8:57 AM
10	Bill 65	4/29/2019 8:06 AM
11	Vision Zero	4/29/2019 7:05 AM
12	All streets with connections to school property are zoned 40 km/hr	4/29/2019 6:42 AM
13	TAC guide for establishing speed limits through school zones	4/26/2019 4:24 PM
14	TAC	4/26/2019 3:56 PM
15	30kph (want to make times consistent with playground zones ie 7:30 to 1hr after sunset)	4/26/2019 2:09 PM
16	As per Alberta Traffic Safety Act - 30km/hr	4/26/2019 12:37 PM
#	PLAYGROUND ZONE	DATE
1	Alberta Transportation Guidelines	5/10/2019 1:14 PM
2	Playground zone evaluated then posted 30	5/10/2019 10:42 AM
3	30 km/h based on Alberta Guidelines	5/8/2019 4:45 PM
4	AT warrant analysis	5/8/2019 4:07 PM
5	As per Alberta TSA	5/6/2019 4:20 PM
6	30 km/hr time restricted	5/3/2019 4:31 PM
7	Roadway speed limits in playground zones are the same as the remainder of the street which the school zone has been established and is in effect outside of school zone hours/days. A few years ago, Calgary d has removed all school zones and replaced all school zones with playground zones that have modified hours different that default Provincial hours (7:30 am to 9:00 pm) 24/7/365	5/2/2019 2:18 PM
8	MUTCD	4/30/2019 8:15 AM
9	TAC Guidelines with 08:00 to 21:00 custom time.	4/29/2019 8:57 AM
10	No methodology specifically for Playground Zone	4/29/2019 8:06 AM
11	Vision Zero	4/29/2019 7:05 AM
12	50 km/hr	4/29/2019 6:42 AM
13	TAC guide for establishing speed limits through playground zones	4/26/2019 4:24 PM
14	NA	4/26/2019 3:56 PM
15	30kph 7:30 to 1hr after sunset	4/26/2019 2:09 PM
16	As per Traffic Safety Act - 30km/hr	4/26/2019 12:37 PM

Q3 What is the default posted speed limits on the following street types in your municipality?

Answered: 16 Skipped: 0

ANSWER CHOICES	RESPONSES	
Arterial Roads	100.00%	16
Collector Roads	100.00%	16
Local Roads	100.00%	16
School Zone	100.00%	16
Playground Zone	100.00%	16

#	ARTERIAL ROADS	DATE
1	50 or 60	5/10/2019 1:14 PM
2	50	5/10/2019 10:42 AM
3	60 km/h	5/8/2019 4:45 PM
4	60	5/8/2019 4:07 PM
5	50 km/h	5/6/2019 4:20 PM
6	50 km/hr	5/3/2019 4:31 PM
7	Currently the Provincial default speed limit within urban municipalities is 50 kph. Speed limits other than 50 kph must be posted. current policy is that arterials speed limits are between 50 and 60 kph.	5/2/2019 2:18 PM
8	60	4/30/2019 8:15 AM
9	50 km/h	4/29/2019 8:57 AM
10	50	4/29/2019 8:06 AM
11	varies	4/29/2019 7:05 AM
12	Can vary from 50 km/hr to 80 km/hr	4/29/2019 6:42 AM
13	70 km/h - two corridors, 60 km/h - other corridors, 50 km/h on one road	4/26/2019 4:24 PM
14	60-70	4/26/2019 3:56 PM
15	60, 70 or 80kph, depending upon level of built environment	4/26/2019 2:09 PM
16	60 km/hr	4/26/2019 12:37 PM
#	COLLECTOR ROADS	DATE
1	40	5/10/2019 1:14 PM
2	50	5/10/2019 10:42 AM
3	50 km/h	5/8/2019 4:45 PM
4	50	5/8/2019 4:07 PM
5	50 km/h	5/6/2019 4:20 PM
6	50 km/hr	5/3/2019 4:31 PM
7	Currently the Provincial default speed limit within urban municipalities is 50 kph. Speed limits other than 50 kph must be posted. current policy is that collector speed limits are 50 kph.	5/2/2019 2:18 PM
8	50 or 30	4/30/2019 8:15 AM

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9	50 km/h	4/29/2019 8:57 AM
10	50	4/29/2019 8:06 AM
11	40-50k	4/29/2019 7:05 AM
12	Depends on land use, most are 50 km/hr	4/29/2019 6:42 AM
13	50 km/h, 40 km/h on two collectors on trial basis	4/26/2019 4:24 PM
14	50	4/26/2019 3:56 PM
15	50kph	4/26/2019 2:09 PM
16	30 km/hr - Residential, 50km/hr - Commercial	4/26/2019 12:37 PM
#	LOCAL ROADS	DATE
1	40	5/10/2019 1:14 PM
2	50	5/10/2019 10:42 AM
3	50 km/h	5/8/2019 4:45 PM
4	50	5/8/2019 4:07 PM
5	50 km/h	5/6/2019 4:20 PM
6	50 km/hr	5/3/2019 4:31 PM
7	Currently the Provincial default speed limit within urban municipalities is 50 kph. Speed limits other than 50 kph must be posted. Current policy is that local roads are 50 kph.	5/2/2019 2:18 PM
8	30	4/30/2019 8:15 AM
9	50 km/h	4/29/2019 8:57 AM
10	50	4/29/2019 8:06 AM
11	40k	4/29/2019 7:05 AM
12	50 km/hr	4/29/2019 6:42 AM
13	50 km/h	4/26/2019 4:24 PM
14	50	4/26/2019 3:56 PM
15	50kph	4/26/2019 2:09 PM
16	30 km/hr	4/26/2019 12:37 PM
#	SCHOOL ZONE	DATE
1	30	5/10/2019 1:14 PM
2	30 during specific hours (flashing lights to indicate)	5/10/2019 10:42 AM
3	30 km/h	5/8/2019 4:45 PM
4	30	5/8/2019 4:07 PM
5	All school zones are designated at playground zones	5/6/2019 4:20 PM
6	See Playground Zone	5/3/2019 4:31 PM
7	Calgary has no school zones. All schools have playground zones which are in effect 365 days per year between 7:30 am and 9:00 pm. The posted speed limit of these zones outside of school zone hours is whatever the posted speed limit is of the roadway the playground zone is located, usually 50 or 60 kph. The playground zone speed is the default 30 kph required by the TSA 107(1) .	5/2/2019 2:18 PM
8	30	4/30/2019 8:15 AM
9	30 km/h	4/29/2019 8:57 AM
10	50	4/29/2019 8:06 AM
11	30k	4/29/2019 7:05 AM
12	40 km/hr	4/29/2019 6:42 AM

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13	30 km/h	4/26/2019 4:24 PM
14	30	4/26/2019 3:56 PM
15	30kph (want to make times consistent with playground zones ie 7:30 to 1hr after sunset)	4/26/2019 2:09 PM
16	30 km/hr	4/26/2019 12:37 PM
#	PLAYGROUND ZONE	DATE
1	30	5/10/2019 1:14 PM
2	30	5/10/2019 10:42 AM
3	30 km/h	5/8/2019 4:45 PM
4	30	5/8/2019 4:07 PM
5	30 km/h	5/6/2019 4:20 PM
6	30 km/hr	5/3/2019 4:31 PM
7	All playground zones are in effect 365 days per year between 7:30 am and 9:00 pm. The posted speed limit of these zones outside of school zone hours is whatever the posted speed limit is of the roadway the playground zone is located, usually 50 or 60 kph. The playground zone speed is the default 30 kph required by the TSA 107(1) .	5/2/2019 2:18 PM
8	30	4/30/2019 8:15 AM
9	30 km/h	4/29/2019 8:57 AM
10	50	4/29/2019 8:06 AM
11	30k	4/29/2019 7:05 AM
12	50 km/hr	4/29/2019 6:42 AM
13	30 km/h	4/26/2019 4:24 PM
14	NA	4/26/2019 3:56 PM
15	30kph 7:30 to 1hr after sunset	4/26/2019 2:09 PM
16	30 km/hr	4/26/2019 12:37 PM

Q4 What time of day applies for the following zones?

Answered: 16 Skipped: 0

ANSWER CHOICES	RESPONSES	
School Zone	100.00%	16
Playground Zone	87.50%	14

#	SCHOOL ZONE	DATE
1	0730-1700h	5/10/2019 1:14 PM
2	8-9:30, 11:30-1, 2:30-4 on school days	5/10/2019 10:42 AM
3	7:30 AM to 4:30 PM school days	5/8/2019 4:45 PM
4	8-9:30, 11:30-1, 3-4:30	5/8/2019 4:07 PM
5	All school zones are designated at playground zones	5/6/2019 4:20 PM
6	See playground zone. All zones classified as playground zones.	5/3/2019 4:31 PM
7	N/A	5/2/2019 2:18 PM
8	Traffic Safety Act	4/30/2019 8:15 AM
9	08:00 to 16:30	4/29/2019 8:57 AM
10	school arrival, lunch and dismissal times	4/29/2019 8:06 AM
11	24 hrs / 40 k on major collector and arterials, school times only with Flashers	4/29/2019 7:05 AM
12	24 hours	4/29/2019 6:42 AM
13	7:30 am - 4:30 pm	4/26/2019 4:24 PM
14	8am-5pm, M-F, Sept. 1st-June 30th	4/26/2019 3:56 PM
15	currently 07:30 to 16:30, in the process of changing this to be consistent with playground zones ie. 7:30 to 1hr after sunset.	4/26/2019 2:09 PM
16	7:30 to 17:00	4/26/2019 12:37 PM

#	PLAYGROUND ZONE	DATE
1	0730-One hour after sunset	5/10/2019 1:14 PM
2	7:30 - 9 every day	5/10/2019 10:42 AM
3	8:30 AM to 1 hour after sunset (all year round)	5/8/2019 4:45 PM
4	7:30 AM to 9:00 PM	5/6/2019 4:20 PM
5	7:30 - 21:00	5/3/2019 4:31 PM
6	7:30 am to 9:00 pm	5/2/2019 2:18 PM
7	Traffic Safety Act	4/30/2019 8:15 AM
8	08:00 to 21:00	4/29/2019 8:57 AM
9	N/A	4/29/2019 8:06 AM
10	24 hrs	4/29/2019 7:05 AM
11	8:30 am - one hour after sunset	4/26/2019 4:24 PM
12	NA	4/26/2019 3:56 PM
13	30kph 7:30 to 1hr after sunset	4/26/2019 2:09 PM
14	8:30 to one hour after sunset	4/26/2019 12:37 PM

Q5 What are triggers at which point your municipality reviews posted speed limits along the following types of roadways?

Answered: 16 Skipped: 0

ANSWER CHOICES	RESPONSES	
Arterial Roads	100.00%	16
Collector Roads	93.75%	15
Local Roads	87.50%	14
School Zone	81.25%	13
Playground Zone	87.50%	14

#	ARTERIAL ROADS	DATE
1	Significant change to accesses/intersections/etc. or resident inquiry	5/10/2019 1:14 PM
2	No current review process - assumed 50	5/10/2019 10:42 AM
3	Safety concerns, public complaints, reconstruction, inservice safety reviews	5/8/2019 4:45 PM
4	count data 85th percentile	5/8/2019 4:07 PM
5	Road upgrade, significant development, safety/operational concern and public complaints	5/6/2019 4:20 PM
6	Road Widening, Citizen/Councillor Inquiry	5/3/2019 4:31 PM
7	Reconstruction, operational safety review (high crash rate/frequency), request from the public or request from Council.	5/2/2019 2:18 PM
8	Design and Construction	4/30/2019 8:15 AM
9	Large geometric changes, new developments and engineering studies.	4/29/2019 8:57 AM
10	Public requests/safety reviews	4/29/2019 8:06 AM
11	complaints or collision analysis	4/29/2019 7:05 AM
12	Complaints or significant development	4/29/2019 6:42 AM
13	Over representation of severe injury collisions	4/26/2019 4:24 PM
14	Safety concerns, changes in adjacent land use, public concerns	4/26/2019 3:56 PM
15	increase of built environment, review of collision reports and inservice safety reviews	4/26/2019 2:09 PM
16	Adjacent Development	4/26/2019 12:37 PM

#	COLLECTOR ROADS	DATE
1	Resident inquiry	5/10/2019 1:14 PM
2	No current review process - assumed 50	5/10/2019 10:42 AM
3	Safety concerns, public complaints, inservice safety reviews	5/8/2019 4:45 PM
4	Road upgrade, significant development, safety/operational concern and public complaints	5/6/2019 4:20 PM
5	Citizen/Councillor Inquiry	5/3/2019 4:31 PM
6	Default 50 kph. Direction from Council	5/2/2019 2:18 PM
7	Bylaw	4/30/2019 8:15 AM
8	New school or playground opened.	4/29/2019 8:57 AM
9	Public requests/safety reviews	4/29/2019 8:06 AM

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10	complaints or collision analysis	4/29/2019 7:05 AM
11	Complaints or significant development	4/29/2019 6:42 AM
12	Speeding complaints or operating speeds higher than 5 km/h posted speed limit	4/26/2019 4:24 PM
13	Safety concerns, changes in adjacent land use, public concerns	4/26/2019 3:56 PM
14	review of collision reports and inservice safety reviews	4/26/2019 2:09 PM
15	Adjacent Development	4/26/2019 12:37 PM
#	LOCAL ROADS	DATE
1	Resident inquiry	5/10/2019 1:14 PM
2	No current review process - assumed 50	5/10/2019 10:42 AM
3	Safety concerns, public complaints, inservice safety reviews	5/8/2019 4:45 PM
4	Currently speed limit on local roads is posted at 50 km/h and is generally not reviewed. However, the speed limits on local roads may be reviewed in the future	5/6/2019 4:20 PM
5	Citizen/Councillor Inquiry, not a lot of flexibility for change outside of current Council discussion	5/3/2019 4:31 PM
6	Default 50 kph. Direction from Council	5/2/2019 2:18 PM
7	Bylaw	4/30/2019 8:15 AM
8	New school or playground opened.	4/29/2019 8:57 AM
9	Public requests/safety reviews	4/29/2019 8:06 AM
10	City converting all local roadways to 40k, Bill 65	4/29/2019 7:05 AM
11	Speeding complaints validated through speed survey	4/26/2019 4:24 PM
12	Safety concerns, changes in adjacent land use, public concerns	4/26/2019 3:56 PM
13	review of collision reports and inservice safety reviews	4/26/2019 2:09 PM
14	Adjacent Development	4/26/2019 12:37 PM
#	SCHOOL ZONE	DATE
1	Construction of new school	5/10/2019 1:14 PM
2	When originally installed and then when any large changes occur (road widening, play ground equipment installation/removal exc.)	5/10/2019 10:42 AM
3	school construction/type, resident concerns	5/8/2019 4:07 PM
4	See playground zone	5/3/2019 4:31 PM
5	New school, operational safety review (high crash rate/frequency), request from School board, request from community association, request from the public, request from Council	5/2/2019 2:18 PM
6	Traffic Safety Act	4/30/2019 8:15 AM
7	New school opened.	4/29/2019 8:57 AM
8	Public requests/safety reviews	4/29/2019 8:06 AM
9	City converting all schools on local roadways to 30k	4/29/2019 7:05 AM
10	School zones are always posted at 30 km/h	4/26/2019 4:24 PM
11	Safety concerns, changes in adjacent land use, public concerns	4/26/2019 3:56 PM
12	currently in process of reviewing school & playground zones to ensure consistency within City and with other municipalities.	4/26/2019 2:09 PM
13	Alberta Transportation Guidelines	4/26/2019 12:37 PM
#	PLAYGROUND ZONE	DATE
1	Construction of, or changes to, a playground	5/10/2019 1:14 PM
2	When originally installed and then when any large changes occur (road widening, play ground equipment installation/removal exc.)	5/10/2019 10:42 AM

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3	playground installation, resident concerns	5/8/2019 4:07 PM
4	Not reviewed	5/6/2019 4:20 PM
5	Citizen/Councillor Inquiry but not a lot of flexibility for change	5/3/2019 4:31 PM
6	New/expanded playground equipment, operational safety review (high crash rate/frequency), request from School board, request from community association, request from the public, request from Council	5/2/2019 2:18 PM
7	Traffic Safety Act	4/30/2019 8:15 AM
8	New playground opened.	4/29/2019 8:57 AM
9	Public requests/safety reviews	4/29/2019 8:06 AM
10	City converting all parks on local roadways to 30k	4/29/2019 7:05 AM
11	Playground zones are always posted at 30 km/h	4/26/2019 4:24 PM
12	Safety concerns, changes in adjacent land use, public concerns	4/26/2019 3:56 PM
13	currently in process of reviewing school & playground zones to ensure consistency within City and with other municipalities.	4/26/2019 2:09 PM
14	Alberta Transportation Guidelines	4/26/2019 12:37 PM

Q6 Is your municipality currently, or will be, in the process of reviewing and/or changing neighbourhood speed limits?

Answered: 16 Skipped: 0

#	RESPONSES	DATE
1	We may consider reducing to 30 km/h for local roads in the future.	5/10/2019 1:14 PM
2	Yes our municipality is currently looking to include a survey in census to evaluate support for decreasing neighborhood speed and/or increasing arterial road speeds	5/10/2019 10:42 AM
3	We are waiting for the ongoing review work at the City of Calgary. We may initiate our own review following the results/recommendations from the City of Calgary.	5/8/2019 4:45 PM
4	no	5/8/2019 4:07 PM
5	Currently speed limit on local roads is posted at 50 km/h and is generally not reviewed. However, the speed limits on local roads may be reviewed in the future.	5/6/2019 4:20 PM
6	Yes, See Community and Public Services Committee from April 24, 2019 and City Council meeting minutes from May 14, 2019 on edmonton.ca	5/3/2019 4:31 PM
7	Currently in progress as a result of recent changes to the Calgary City charter that allows Calgary to set its own default speed limit within the municipality	5/2/2019 2:18 PM
8	No	4/30/2019 8:15 AM
9	40 km/h was considered in the past but 50 km/h was kept instead. No current plans to review neighbourhood limits again.	4/29/2019 8:57 AM
10	Yes	4/29/2019 8:06 AM
11	In process, Council report forthcoming	4/29/2019 7:05 AM
12	This is currently under review	4/29/2019 6:42 AM
13	The County is currently in the process of dropping speed limit from 50 km/h to 40 km/h for one neighbourhood after going through an extensive traffic calming	4/26/2019 4:24 PM
14	The City of Saskatoon is in the process of reviewing neighbourhood speed limits.	4/26/2019 3:56 PM
15	Currently in process of reviewing all speed limits to ensure consistency within City and with other municipalities.	4/26/2019 2:09 PM
16	No	4/26/2019 12:37 PM

Q7 Does your municipality capture and publicly share traffic operations on roadways, including safety statistics?

Answered: 16 Skipped: 0

#	RESPONSES	DATE
1	.	5/10/2019 1:14 PM
2	Yes	5/10/2019 10:42 AM
3	Yes	5/8/2019 4:45 PM
4	not currently but in process	5/8/2019 4:07 PM
5	Yes. Traffic data is shared with public when requested which does not include safety statistics.	5/6/2019 4:20 PM
6	Yes.	5/3/2019 4:31 PM
7	yes	5/2/2019 2:18 PM
8	No	4/30/2019 8:15 AM
9	We track all collisions and publish an annual collision report.	4/29/2019 8:57 AM
10	Yes	4/29/2019 8:06 AM
11	Yes	4/29/2019 7:05 AM
12	Yes historical speed and volume data is available and the City is in the process of adding more information to our Vision Zero web-site	4/29/2019 6:42 AM
13	Yes	4/26/2019 4:24 PM
14	Yes	4/26/2019 3:56 PM
15	yes	4/26/2019 2:09 PM
16	Only on a case-by-case basis (eg: Intersection Safety Audit).	4/26/2019 12:37 PM

Q8 If your municipality collects speed data along school zones or playground zones, what are acceptable ranges of speed for a zone that is deemed working well?

Answered: 16 Skipped: 0

#	RESPONSES	DATE
1	We do not have defined thresholds.	5/10/2019 1:14 PM
2	90% of traffic traveling less then 10% above posted speeds, higher volumes of speeding then this merits further evaluation for traffic calming	5/10/2019 10:42 AM
3	yes, we do not have a set number but anything 10 km above speed limit will be considered for additional enforcement or other traffic calming measures.	5/8/2019 4:45 PM
4	+10%	5/8/2019 4:07 PM
5	Yes speed data is collected along playground zone and an average speed of 32km/h is measured.	5/6/2019 4:20 PM
6	Contact Dennis.tetreault@edmonton.ca for feedback on this.	5/3/2019 4:31 PM
7	From an engineering perspective, 'well' would be 85th percentile speeds being below 35 kph and average speeds equal to or below 30 kph.	5/2/2019 2:18 PM
8	-+10kmph	4/30/2019 8:15 AM
9	30 to 35 km/h	4/29/2019 8:57 AM
10	85th Percentile speed up to 15% higher than posted speed limit	4/29/2019 8:06 AM
11	85th percentile, 5km over posted speed limit	4/29/2019 7:05 AM
12	The City has a traffic calming policy. All speed and volume studies are accessed as per the scoring criteria in the policy. Last year out of 160 studies 4 qualified for traffic calming	4/29/2019 6:42 AM
13	Yes, speed data is collected along school and playground zones, and the operating speed within 5 km/h of the posted speed is acceptable.	4/26/2019 4:24 PM
14	Currently, less than 5 kph over the posted speed limit	4/26/2019 3:56 PM
15	85th%ile speed should be within 10% of posted speed	4/26/2019 2:09 PM
16	We do not collect speed data in school or playground zones	4/26/2019 12:37 PM

Q9 Does your municipality examine prevailing speeds in comparison to the roadway characteristics and posted speed limits?

Answered: 16 Skipped: 0

#	RESPONSES	DATE
1	Following resident inquiry.	5/10/2019 1:14 PM
2	In high incident areas and high complaint areas yes	5/10/2019 10:42 AM
3	Yes	5/8/2019 4:45 PM
4	yes	5/8/2019 4:07 PM
5	Yes the 85th percentile speed is measured and used while a posted speed limit is assessed for a road section. The built environment and the road characteristics are generally self-regulate the driver's behaviour/operating speed.	5/6/2019 4:20 PM
6	Yes	5/3/2019 4:31 PM
7	yes, upon request.complaint	5/2/2019 2:18 PM
8	No	4/30/2019 8:15 AM
9	Yes.	4/29/2019 8:57 AM
10	Yes	4/29/2019 8:06 AM
11	yes	4/29/2019 7:05 AM
12	yes under our speed policy we try to promote uniformity across the City	4/29/2019 6:42 AM
13	Yes.	4/26/2019 4:24 PM
14	Yes	4/26/2019 3:56 PM
15	yes	4/26/2019 2:09 PM
16	We collect data on Arterial Roads for growth management. This data collection includes speed data but we do not examine this data.	4/26/2019 12:37 PM

Q10 How does your municipality determine the type of signage and how/where it is placed?

Answered: 16 Skipped: 0

#	RESPONSES	DATE
1	We generally use TAC guidelines.	5/10/2019 1:14 PM
2	Evaluated on a case by case basis when something is required out of standard	5/10/2019 10:42 AM
3	We follow MUTCD and TAC standards and guidelines. For School and Playground zones, we follow the Alberta Guidelines.	5/8/2019 4:45 PM
4	TAC standards	5/8/2019 4:07 PM
5	Speed limit signs are usually not placed on local roads, 50 km/h is a statutory speed limit on these roads. 50 km/h sign are placed on arterial and collector roads at strategic location to inform drivers of the speed limit. Speed limit signs are always placed when the speed limit changes. The speed sign locations are determined based on MUTCD and adjusted as per site conditions.	5/6/2019 4:20 PM
6	We only sign non-statutory speed limits or in areas of speed transition zones. Not sure what you mean by type? We follow TAC guidance for signage and placement as part of MUTCDC.	5/3/2019 4:31 PM
7	Follow TAC/MUTCDC guidelines in order to satisfy Traffic Safety Act requirements. Calgary has its own custom version of time(as the times are different than the provincial default)/speed tabs which is integral to the playground zone sign, though the base warning sign is as per the MUTCDC	5/2/2019 2:18 PM
8	MUTCD	4/30/2019 8:15 AM
9	TAC guidelines with engineering judgement.	4/29/2019 8:57 AM
10	OTM Guidelines	4/29/2019 8:06 AM
11	OTM standards and HTA requirements	4/29/2019 7:05 AM
12	All signing is placed as per OTM Book #5	4/29/2019 6:42 AM
13	The County follows Manual of Uniform Traffic Control Devices for Canada guide for placing signage along the road	4/26/2019 4:24 PM
14	Guidance from MUTCDC	4/26/2019 3:56 PM
15	All signs comply with MUTCD (C). Locations are consistent with TAC recommended practice except school & playground signs which follow provincial (Alberta) guidelines.	4/26/2019 2:09 PM
16	We follow MUTCD Guidelines for all signage placement in a public roadway	4/26/2019 12:37 PM

Q11 How does your municipality inform the public when a speed limit is modified?

Answered: 16 Skipped: 0

#	RESPONSES	DATE
1	Depends on the scope. For a small area we may only install the signage and include 'New' tabs and/or 'starburst' signage. When we changed the bulk of Town, we communicated via website / radio / newspaper.	5/10/2019 1:14 PM
2	Changes to the speed bylaw is required which include public notification as well as new speed control signage installed for a set period of time.	5/10/2019 10:42 AM
3	Public Service Announcements and electronic message boards	5/8/2019 4:45 PM
4	signage, social media, quarterly mailout	5/8/2019 4:07 PM
5	City's website, social media posts, media release and interview	5/6/2019 4:20 PM
6	Public Committee of Council meeting with opportunity to speak for the public as part of change to the bylaw.	5/3/2019 4:31 PM
7	New speed limit signs are erected. Temporary warning signs (starburst NEW signs with a tab saying SPEED LIMIT) are placed where deemed appropriate at the start of the new speed zone.	5/2/2019 2:18 PM
8	"New" Starburst sign	4/30/2019 8:15 AM
9	Sometimes a "New" starburst sign is used on the same pole as the speed limit sign or a press release is issued.	4/29/2019 8:57 AM
10	We do not inform the public. We change the signage on-street	4/29/2019 8:06 AM
11	No public notification, speed limit sign changes	4/29/2019 7:05 AM
12	New sunburst signs are installed for 2 to 3 months	4/29/2019 6:42 AM
13	The County inform residents through newspaper, electronic media and social media platforms. Electronic signs are also used to inform motorists about the change.	4/26/2019 4:24 PM
14	The City of Saskatoon annually reviews the existing speed limits on roadways and recommends necessary modifications to The Traffic Bylaw.	4/26/2019 3:56 PM
15	All speed limits, and changes, are show in Traffic Bylaw and are approved by Council.	4/26/2019 2:09 PM
16	As per MUTCD guidelines, we place WB-12T "New" tab on the speed sign for a minimum of 30 days.	4/26/2019 12:37 PM

Q12 Does your municipality have any experience with studying or applying variable speed limits?

Answered: 16 Skipped: 0

#	RESPONSES	DATE
1	No.	5/10/2019 1:14 PM
2	No	5/10/2019 10:42 AM
3	Yes, we are the first municipality in Canada to have implemented variable speed limit.	5/8/2019 4:45 PM
4	only in school zones by time of day	5/8/2019 4:07 PM
5	No	5/6/2019 4:20 PM
6	Yes, some on Whitemud Drive.	5/3/2019 4:31 PM
7	TSA only allows for variable speed limits under certain conditions which have not been relevant in Calgary. Recent City Charter changes have given Calgary the authority to create a bylaw to enact variable speed limits at our discretion. No work has been undertaken to take advantage of the new regulation, nor has the necessary bylaw been enacted to allow administration to implement such a practice.	5/2/2019 2:18 PM
8	No	4/30/2019 8:15 AM
9	No.	4/29/2019 8:57 AM
10	No, aside from school zones	4/29/2019 8:06 AM
11	no	4/29/2019 7:05 AM
12	no	4/29/2019 6:42 AM
13	NO, the County has not tried variable speed limits.	4/26/2019 4:24 PM
14	No	4/26/2019 3:56 PM
15	No	4/26/2019 2:09 PM
16	No	4/26/2019 12:37 PM



APPENDIX
CGEPSL Inputs

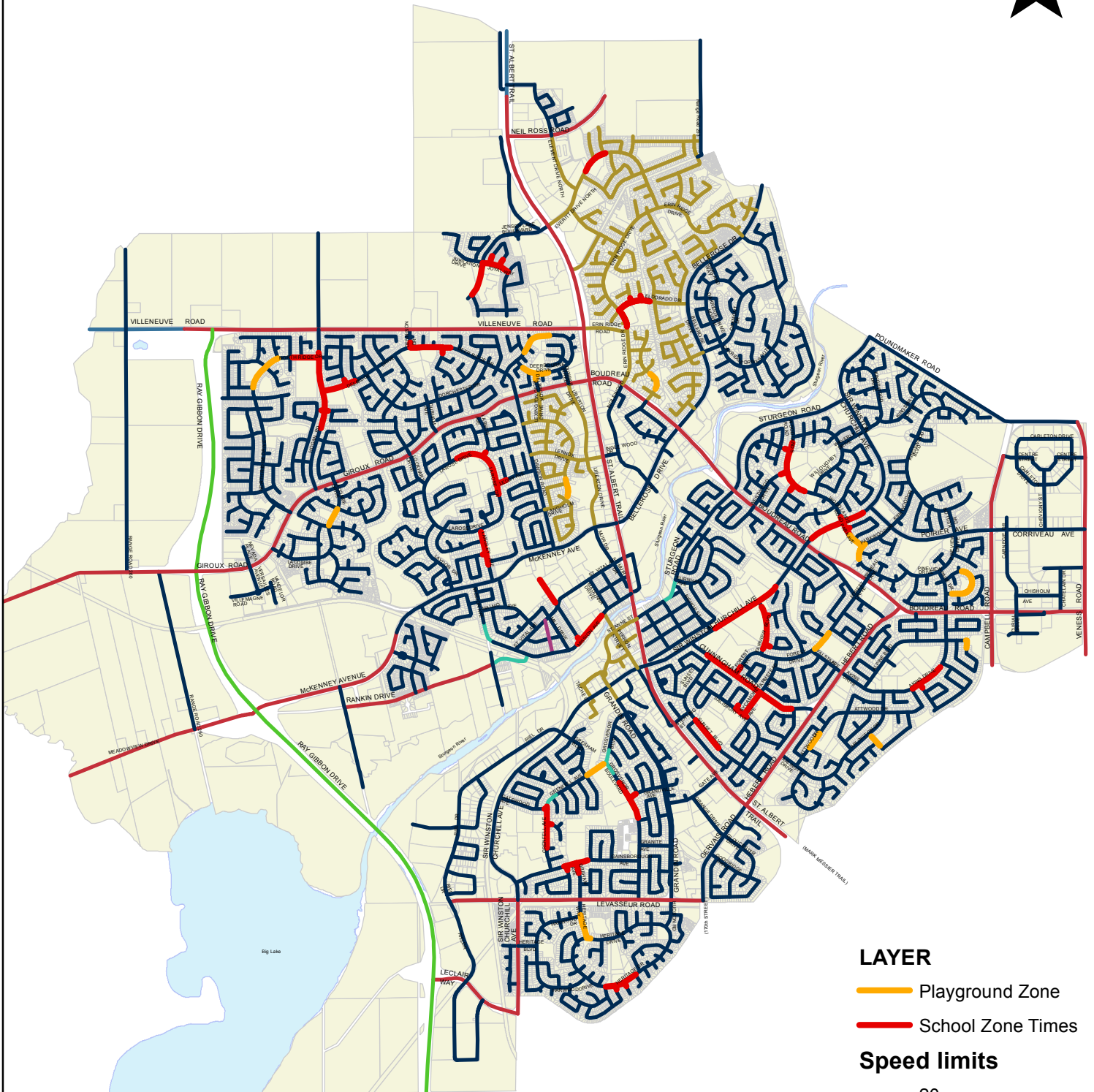
B



- Boulevard
- Crosstown
- Connector
- Neighbourhood
- - - Future
- * Locals and Laneways are not highlighted




Speed Limits


N









TAC Application Approach



Visual Definition of Risk Levels

Risk Criteria Level	Description	Images
Lane Width		
High – Narrow compared to similar roads	Appears narrow with minimal space for vehicle to move in lane.	
Medium – Similar compared to similar roads	Appears to be an average size lane similar to other roadways of the same type.	
Low – Wide compared to similar roads	Appears wide with a lot of space on either side of a vehicle in the lane.	

Risk Criteria Level	Description	Images
Roadside Hazards		
Non – breakable	Utility poles	
	Large trees – based on judgement	
	Larger utility pedestals	

Risk Criteria Level	Description	Images
	Mail boxes	
	Neighbourhood gateway signs	
	Jersey barriers	
	Wooden barrier	

Risk Criteria Level	Description	Images
	Train crossing poles	
Breakable	Fences	
	Traffic control signage poles	

Risk Criteria Level	Description	Images
	Smaller trees – based on judgement	
	Smaller poles	



APPENDIX
CGEPSL Results

C



Automated Speed Limit Guidelines

FORM A - Automated Speed Limit Guidelines Spreadsheet

Version:
10-Apr-09

Name of Corridor:	St. Anne Street 1		
Segment Evaluated:	St. Albert Trail	to	Glenview Crescent
Geographic Region:	City of St. Albert		
Road Agency:	St. Ablert		
Road Classification:	Arterial	Length of Corridor:	900 m
Urban / Rural:	Urban	Design Speed: (Required for Freeway, Expressway, Highway)	0 km/h
Divided / Undivided:	Undivided	Current Posted Speed: (For information only)	50 km/h
Major / Minor:	Major	Prevailing Speed:	29 km/h
# Through Lanes Per Direction:	2+ lanes	(85th Percentile - for information only) Policy: (Maximum Posted Speed)	0 km/h

		RISK	Score
A1	GEOMETRY (Horizontal)	Lower	2
A2	GEOMETRY (Vertical)	Lower	2
A3	AVERAGE LANE WIDTH	Medium	4
B	ROADSIDE HAZARDS	Higher	3
C1	PEDESTRIAN EXPOSURE	Medium	6
C2	CYCLIST EXPOSURE	Higher	9
D	PAVEMENT SURFACE	Lower	1
E1	NUMBER OF INTERSECTIONS WITH PUBLIC ROADS	<i>Number of Occurrences</i>	36
	STOP controlled intersection	0	
	Signalized intersection	3	
	Roundabout or traffic circle	1	
	Crosswalk	3	
	Active, at-grade railroad crossing	0	
	Sidestreet STOP-controlled or lane	1	
E2	NUMBER OF INTERSECTIONS WITH PRIVATE ACCESS DRIVEWAYS	<i>Number of Occurrences</i>	15
	Left turn movements permitted	11	
	Right-in / Right-out only	4	
E3	NUMBER OF INTERCHANGES	<i>Number of Occurrences</i>	0
	Number of interchanges along corridor	0	
F	ON-STREET PARKING	Higher	9

Total Risk Score:

87

Recommended Posted Speed Limit (km/h):

As determined by road characteristics

50

As determined by policy

0

The recommended posted speed limit may be checked against the prevailing speeds of the roadway and the road's safety performance.

Comments:



Automated Speed Limit Guidelines

FORM A - Automated Speed Limit Guidelines Spreadsheet

Version:
10-Apr-09

Name of Corridor:	Sturgeon Road 1		
Segment Evaluated:	St. Albert Trail	to	Burnham Ave
Geographic Region:	City of St. Albert		
Road Agency:	St. Ablert		
Road Classification:	Arterial	Length of Corridor:	500 m
Urban / Rural:	Urban	Design Speed: (Required for Freeway, Expressway, Highway)	0 km/h
Divided / Undivided:	Undivided	Current Posted Speed:	30 km/h
Major / Minor:	Major	Prevailing Speed:	0 km/h
# Through Lanes Per Direction:	2+ lanes	(85th Percentile - for information only)	0 km/h
		Policy:	0 km/h
		(Maximum Posted Speed)	

		RISK	Score
A1	GEOMETRY (Horizontal)	Lower	2
A2	GEOMETRY (Vertical)	Lower	2
A3	AVERAGE LANE WIDTH	Medium	4
B	ROADSIDE HAZARDS	Higher	3
C1	PEDESTRIAN EXPOSURE	Lower	3
C2	CYCLIST EXPOSURE	Higher	9
D	PAVEMENT SURFACE	Lower	1
E1	NUMBER OF INTERSECTIONS WITH PUBLIC ROADS	<i>Number of Occurrences</i>	76
	STOP controlled intersection	0	
	Signalized intersection	1	
	Roundabout or traffic circle	0	
	Crosswalk	6	
	Active, at-grade railroad crossing	0	
	Sidestreet STOP-controlled or lane	6	
E2	NUMBER OF INTERSECTIONS WITH PRIVATE ACCESS DRIVEWAYS	<i>Number of Occurrences</i>	15
	Left turn movements permitted	7	
	Right-in / Right-out only	0	
E3	NUMBER OF INTERCHANGES	<i>Number of Occurrences</i>	0
	Number of interchanges along corridor	0	
F	ON-STREET PARKING	Lower	3

Total Risk Score:

118

Recommended Posted Speed Limit (km/h):

As determined by road characteristics

50

As determined by policy

0

The recommended posted speed limit may be checked against the prevailing speeds of the roadway and the road's safety performance.

Comments:



Automated Speed Limit Guidelines

FORM A - Automated Speed Limit Guidelines Spreadsheet

Version:
10-Apr-09

Name of Corridor:	Sturgeon Road 2		
Segment Evaluated:	Burnham Ave	to	Boudreau Rd
Geographic Region:	City of St. Albert		
Road Agency:	St. Ablert		
Road Classification:	Arterial	Length of Corridor:	900 m
Urban / Rural:	Urban	Design Speed: (Required for Freeway, Expressway, Highway)	0 km/h
Divided / Undivided:	Undivided	Current Posted Speed: (For information only)	50 km/h
Major / Minor:	Major	Prevailing Speed:	55 km/h
# Through Lanes Per Direction:	2+ lanes	(85th Percentile - for information only) Policy: (Maximum Posted Speed)	0 km/h

		RISK	Score
A1	GEOMETRY (Horizontal)	Lower	2
A2	GEOMETRY (Vertical)	Lower	2
A3	AVERAGE LANE WIDTH	Medium	4
B	ROADSIDE HAZARDS	Higher	3
C1	PEDESTRIAN EXPOSURE	Lower	3
C2	CYCLIST EXPOSURE	Higher	9
D	PAVEMENT SURFACE	Medium	2
E1	NUMBER OF INTERSECTIONS WITH PUBLIC ROADS	<i>Number of Occurrences</i>	19
	STOP controlled intersection	0	
	Signalized intersection	0	
	Roundabout or traffic circle	0	
	Crosswalk	3	
	Active, at-grade railroad crossing	0	
E2	NUMBER OF INTERSECTIONS WITH PRIVATE ACCESS DRIVEWAYS	<i>Number of Occurrences</i>	0
	Left turn movements permitted	0	
	Right-in / Right-out only	0	
E3	NUMBER OF INTERCHANGES	<i>Number of Occurrences</i>	0
	Number of interchanges along corridor	0	
F	ON-STREET PARKING	Lower	3

Total Risk Score:

47

Recommended Posted Speed Limit (km/h):

As determined by road characteristics

70

As determined by policy

0

The recommended posted speed limit may be checked against the prevailing speeds of the roadway and the road's safety performance.

Comments:



Automated Speed Limit Guidelines

FORM A - Automated Speed Limit Guidelines Spreadsheet

Version:
10-Apr-09

Name of Corridor:	Sturgeon Road 3		
Segment Evaluated:	Boudreau Rd	to	Sir Winston Churchill Ave
Geographic Region:	City of St. Albert		
Road Agency:	St. Ablert		
Road Classification:	Arterial	Length of Corridor:	1,380 m
Urban / Rural:	Urban	Design Speed: (Required for Freeway, Expressway, Highway)	0 km/h
Divided / Undivided:	Undivided	Current Posted Speed: (For information only)	50 km/h
Major / Minor:	Major	Prevailing Speed:	55 km/h
# Through Lanes Per Direction:	1 lane	(85th Percentile - for information only) Policy: (Maximum Posted Speed)	0 km/h

		RISK	Score
A1	GEOMETRY (Horizontal)	Lower	2
A2	GEOMETRY (Vertical)	Lower	2
A3	AVERAGE LANE WIDTH	Medium	4
B	ROADSIDE HAZARDS	Higher	3
C1	PEDESTRIAN EXPOSURE	Higher	9
C2	CYCLIST EXPOSURE	Higher	9
D	PAVEMENT SURFACE	Lower	1
E1	NUMBER OF INTERSECTIONS WITH PUBLIC ROADS	<i>Number of Occurrences</i>	11
	STOP controlled intersection	0	
	Signalized intersection	0	
	Roundabout or traffic circle	0	
	Crosswalk	3	
	Active, at-grade railroad crossing	0	
E2	NUMBER OF INTERSECTIONS WITH PRIVATE ACCESS DRIVEWAYS	<i>Number of Occurrences</i>	13
	Left turn movements permitted	9	
	Right-in / Right-out only	0	
E3	NUMBER OF INTERCHANGES	<i>Number of Occurrences</i>	0
	Number of interchanges along corridor	0	
F	ON-STREET PARKING	Lower	3

Total Risk Score:

57

Recommended Posted Speed Limit (km/h):

As determined by road characteristics

60

As determined by policy

0

The recommended posted speed limit may be checked against the prevailing speeds of the roadway and the road's safety performance.

Comments:



Automated Speed Limit Guidelines

FORM A - Automated Speed Limit Guidelines Spreadsheet

Version:
10-Apr-09

Name of Corridor:	Boudreau Road 1		
Segment Evaluated:	142 Street	to	Campbell Rd
Geographic Region:	City of St. Albert		
Road Agency:	St. Ablert		
Road Classification:	Arterial	Length of Corridor:	780 m
Urban / Rural:	Urban	Design Speed: (Required for Freeway, Expressway, Highway)	0 km/h
Divided / Undivided:	Divided	Current Posted Speed: (For information only)	60 km/h
Major / Minor:	Major	Prevailing Speed:	63 km/h
# Through Lanes Per Direction:	2+ lanes	(85th Percentile - for information only) Policy: (Maximum Posted Speed)	0 km/h

		RISK	Score
A1	GEOMETRY (Horizontal)	Lower	2
A2	GEOMETRY (Vertical)	Lower	2
A3	AVERAGE LANE WIDTH	Medium	4
B	ROADSIDE HAZARDS	Higher	3
C1	PEDESTRIAN EXPOSURE	Lower	3
C2	CYCLIST EXPOSURE	Higher	9
D	PAVEMENT SURFACE	Lower	1
E1	NUMBER OF INTERSECTIONS WITH PUBLIC ROADS	<i>Number of Occurrences</i>	7
	STOP controlled intersection	0	
	Signalized intersection	1	
	Roundabout or traffic circle	0	
	Crosswalk	0	
	Active, at-grade railroad crossing	0	
	Sidestreet STOP-controlled or lane	1	
E2	NUMBER OF INTERSECTIONS WITH PRIVATE ACCESS DRIVEWAYS	<i>Number of Occurrences</i>	10
	Left turn movements permitted	3	
	Right-in / Right-out only	2	
E3	NUMBER OF INTERCHANGES	<i>Number of Occurrences</i>	0
	Number of interchanges along corridor	0	
F	ON-STREET PARKING	Lower	3

Total Risk Score:

44

Recommended Posted Speed Limit (km/h):

As determined by road characteristics

60

As determined by policy

0

The recommended posted speed limit may be checked against the prevailing speeds of the roadway and the road's safety performance.

Comments:



Automated Speed Limit Guidelines

FORM A - Automated Speed Limit Guidelines Spreadsheet

Version:
10-Apr-09

Name of Corridor:	Boudreau Road 2		
Segment Evaluated:	Campbell Rd	to	Sir Winston Churchill Ave
Geographic Region:	City of St. Albert		
Road Agency:	St. Ablert		
Road Classification:	Arterial	Length of Corridor:	1,750 m
Urban / Rural:	Urban	Design Speed: (Required for Freeway, Expressway, Highway)	0 km/h
Divided / Undivided:	Divided	Current Posted Speed: (For information only)	60 km/h
Major / Minor:	Major	Prevailing Speed:	40 km/h
# Through Lanes Per Direction:	2+ lanes	(85th Percentile - for information only) Policy: (Maximum Posted Speed)	0 km/h

		RISK	Score
A1	GEOMETRY (Horizontal)	Lower	2
A2	GEOMETRY (Vertical)	Lower	2
A3	AVERAGE LANE WIDTH	Medium	4
B	ROADSIDE HAZARDS	Medium	2
C1	PEDESTRIAN EXPOSURE	Lower	3
C2	CYCLIST EXPOSURE	Higher	9
D	PAVEMENT SURFACE	Lower	1
E1	NUMBER OF INTERSECTIONS WITH PUBLIC ROADS	<i>Number of Occurrences</i>	11
	STOP controlled intersection	0	
	Signalized intersection	4	
	Roundabout or traffic circle	0	
	Crosswalk	0	
	Active, at-grade railroad crossing	0	
E2	NUMBER OF INTERSECTIONS WITH PRIVATE ACCESS DRIVEWAYS	<i>Number of Occurrences</i>	2
	Left turn movements permitted	0	
	Right-in / Right-out only	3	
E3	NUMBER OF INTERCHANGES	<i>Number of Occurrences</i>	0
	Number of interchanges along corridor	0	
F	ON-STREET PARKING	Lower	3

Total Risk Score:

39

Recommended Posted Speed Limit (km/h):

As determined by road characteristics

70

As determined by policy

0

The recommended posted speed limit may be checked against the prevailing speeds of the roadway and the road's safety performance.

Comments:



Automated Speed Limit Guidelines

FORM A - Automated Speed Limit Guidelines Spreadsheet

Version:
10-Apr-09

Name of Corridor:	Boudreau Road 3		
Segment Evaluated:	Sir Winston Churchill Ave	to	Surgeon Rd
Geographic Region:	City of St. Albert		
Road Agency:	St. Ablert		
Road Classification:	Arterial	Length of Corridor:	770 m
Urban / Rural:	Urban	Design Speed: (Required for Freeway, Expressway, Highway)	0 km/h
Divided / Undivided:	Divided	Current Posted Speed: (For information only)	60 km/h
Major / Minor:	Major	Prevailing Speed:	40 km/h
# Through Lanes Per Direction:	2+ lanes	(85th Percentile - for information only) Policy: (Maximum Posted Speed)	0 km/h

		RISK	Score
A1	GEOMETRY (Horizontal)	Lower	2
A2	GEOMETRY (Vertical)	Medium	4
A3	AVERAGE LANE WIDTH	Medium	4
B	ROADSIDE HAZARDS	Medium	2
C1	PEDESTRIAN EXPOSURE	Lower	3
C2	CYCLIST EXPOSURE	Higher	9
D	PAVEMENT SURFACE	Lower	1
E1	NUMBER OF INTERSECTIONS WITH PUBLIC ROADS	<i>Number of Occurrences</i>	14
	STOP controlled intersection	0	
	Signalized intersection	2	
	Roundabout or traffic circle	0	
	Crosswalk	0	
	Active, at-grade railroad crossing	0	
E2	NUMBER OF INTERSECTIONS WITH PRIVATE ACCESS DRIVEWAYS	<i>Number of Occurrences</i>	0
	Left turn movements permitted	0	
	Right-in / Right-out only	0	
E3	NUMBER OF INTERCHANGES	<i>Number of Occurrences</i>	0
	Number of interchanges along corridor	0	
F	ON-STREET PARKING	Lower	3

Total Risk Score:

42

Recommended Posted Speed Limit (km/h):

As determined by road characteristics

60

As determined by policy

0

The recommended posted speed limit may be checked against the prevailing speeds of the roadway and the road's safety performance.

Comments:



Automated Speed Limit Guidelines

FORM A - Automated Speed Limit Guidelines Spreadsheet

Version:
10-Apr-09

Name of Corridor:	Boudreau Road 4		
Segment Evaluated:	Surgeon Rd	to	Bellerose Dr
Geographic Region:	City of St. Albert		
Road Agency:	St. Ablert		
Road Classification:	Arterial	Length of Corridor:	690 m
Urban / Rural:	Urban	Design Speed: (Required for Freeway, Expressway, Highway)	0 km/h
Divided / Undivided:	Divided	Current Posted Speed:	60 km/h
Major / Minor:	Major	(For information only)	
# Through Lanes	2+ lanes	Prevailing Speed:	65 km/h
Per Direction:		(85th Percentile - for information only)	
		Policy:	0 km/h
		(Maximum Posted Speed)	

		RISK	Score
A1	GEOMETRY (Horizontal)	Lower	2
A2	GEOMETRY (Vertical)	Medium	4
A3	AVERAGE LANE WIDTH	Medium	4
B	ROADSIDE HAZARDS	Higher	3
C1	PEDESTRIAN EXPOSURE	Lower	3
C2	CYCLIST EXPOSURE	Lower	3
D	PAVEMENT SURFACE	Lower	1
E1	NUMBER OF INTERSECTIONS WITH PUBLIC ROADS	<i>Number of Occurrences</i>	14
	STOP controlled intersection	0	
	Signalized intersection	2	
	Roundabout or traffic circle	0	
	Crosswalk	0	
	Active, at-grade railroad crossing	0	
E2	NUMBER OF INTERSECTIONS WITH PRIVATE ACCESS DRIVEWAYS	<i>Number of Occurrences</i>	7
	Left turn movements permitted	2	
	Right-in / Right-out only	1	
E3	NUMBER OF INTERCHANGES	<i>Number of Occurrences</i>	0
	Number of interchanges along corridor	0	
F	ON-STREET PARKING	Lower	3

Total Risk Score:

44

Recommended Posted Speed Limit (km/h):

As determined by road characteristics

60

As determined by policy

0

The recommended posted speed limit may be checked against the prevailing speeds of the roadway and the road's safety performance.

Comments:



Automated Speed Limit Guidelines

FORM A - Automated Speed Limit Guidelines Spreadsheet

Version:
10-Apr-09

Name of Corridor:	Boudreau Road 5		
Segment Evaluated:	Bellerose Dr	to	Inglewood Dr
Geographic Region:	City of St. Albert		
Road Agency:	St. Ablert		
Road Classification:	Arterial	Length of Corridor:	600 m
Urban / Rural:	Urban	Design Speed: (Required for Freeway, Expressway, Highway)	0 km/h
Divided / Undivided:	Divided	Current Posted Speed:	60 km/h
Major / Minor:	Major	(For information only)	
# Through Lanes Per Direction:	2+ lanes	Prevailing Speed:	60 km/h
		(85th Percentile - for information only)	
		Policy:	0 km/h
		(Maximum Posted Speed)	

		RISK	Score
A1	GEOMETRY (Horizontal)	Lower	2
A2	GEOMETRY (Vertical)	Medium	4
A3	AVERAGE LANE WIDTH	Medium	4
B	ROADSIDE HAZARDS	Medium	2
C1	PEDESTRIAN EXPOSURE	Lower	3
C2	CYCLIST EXPOSURE	Higher	9
D	PAVEMENT SURFACE	Lower	1
E1	NUMBER OF INTERSECTIONS WITH PUBLIC ROADS	<i>Number of Occurrences</i>	18
	STOP controlled intersection	0	
	Signalized intersection	2	
	Roundabout or traffic circle	0	
	Crosswalk	0	
	Active, at-grade railroad crossing	0	
	Sidestreet STOP-controlled or lane	1	
E2	NUMBER OF INTERSECTIONS WITH PRIVATE ACCESS DRIVEWAYS	<i>Number of Occurrences</i>	0
	Left turn movements permitted	0	
	Right-in / Right-out only	0	
E3	NUMBER OF INTERCHANGES	<i>Number of Occurrences</i>	0
	Number of interchanges along corridor	0	
F	ON-STREET PARKING	Lower	3

Total Risk Score:

46

Recommended Posted Speed Limit (km/h):

As determined by road characteristics

60

As determined by policy

0

The recommended posted speed limit may be checked against the prevailing speeds of the roadway and the road's safety performance.

Comments:



Automated Speed Limit Guidelines

FORM A - Automated Speed Limit Guidelines Spreadsheet

Version:
10-Apr-09

Name of Corridor:	Boudreau Road 6		
Segment Evaluated:	Inglewood Dr	to	Dunbar St
Geographic Region:	City of St. Albert		
Road Agency:	St. Ablert		
Road Classification:	Arterial	Length of Corridor:	500 m
Urban / Rural:	Urban	Design Speed: (Required for Freeway, Expressway, Highway)	0 km/h
Divided / Undivided:	Divided	Current Posted Speed: (For information only)	60 km/h
Major / Minor:	Major	Prevailing Speed:	0 km/h
# Through Lanes Per Direction:	2+ lanes	(85th Percentile - for information only) Policy: (Maximum Posted Speed)	0 km/h

		RISK	Score
A1	GEOMETRY (Horizontal)	Lower	2
A2	GEOMETRY (Vertical)	Lower	2
A3	AVERAGE LANE WIDTH	Medium	4
B	ROADSIDE HAZARDS	Medium	2
C1	PEDESTRIAN EXPOSURE	Lower	3
C2	CYCLIST EXPOSURE	Higher	9
D	PAVEMENT SURFACE	Lower	1
E1	NUMBER OF INTERSECTIONS WITH PUBLIC ROADS	<i>Number of Occurrences</i>	30
	STOP controlled intersection	0	
	Signalized intersection	3	
	Roundabout or traffic circle	0	
	Crosswalk	0	
	Active, at-grade railroad crossing	0	
E2	NUMBER OF INTERSECTIONS WITH PRIVATE ACCESS DRIVEWAYS	<i>Number of Occurrences</i>	14
	Left turn movements permitted	1	
	Right-in / Right-out only	5	
E3	NUMBER OF INTERCHANGES	<i>Number of Occurrences</i>	0
	Number of interchanges along corridor	0	
F	ON-STREET PARKING	Lower	3

Total Risk Score:

70

Recommended Posted Speed Limit (km/h):

As determined by road characteristics

50

As determined by policy

0

The recommended posted speed limit may be checked against the prevailing speeds of the roadway and the road's safety performance.

Comments:



Automated Speed Limit Guidelines

FORM A - Automated Speed Limit Guidelines Spreadsheet

Version:
10-Apr-09

Name of Corridor:	Giroux Road 1		
Segment Evaluated:	Ray Gibbon Dr	to	Hogan Rd
Geographic Region:	City of St. Albert		
Road Agency:	St. Ablert		
Road Classification:	Arterial	Length of Corridor:	1,350 m
Urban / Rural:	Urban	Design Speed: (Required for Freeway, Expressway, Highway)	0 km/h
Divided / Undivided:	Divided	Current Posted Speed: (For information only)	60 km/h
Major / Minor:	Major	Prevailing Speed:	62 km/h
# Through Lanes Per Direction:	2+ lanes	(85th Percentile - for information only) Policy: (Maximum Posted Speed)	0 km/h

		RISK	Score
A1	GEOMETRY (Horizontal)	Lower	2
A2	GEOMETRY (Vertical)	Lower	2
A3	AVERAGE LANE WIDTH	Medium	4
B	ROADSIDE HAZARDS	Medium	2
C1	PEDESTRIAN EXPOSURE	Lower	3
C2	CYCLIST EXPOSURE	Higher	9
D	PAVEMENT SURFACE	Lower	1
E1	NUMBER OF INTERSECTIONS WITH PUBLIC ROADS	<i>Number of Occurrences</i>	19
	STOP controlled intersection	0	
	Signalized intersection	4	
	Roundabout or traffic circle	0	
	Crosswalk	1	
	Active, at-grade railroad crossing	0	
E2	NUMBER OF INTERSECTIONS WITH PRIVATE ACCESS DRIVEWAYS	<i>Number of Occurrences</i>	4
	Left turn movements permitted	2	
	Right-in / Right-out only	1	
E3	NUMBER OF INTERCHANGES	<i>Number of Occurrences</i>	0
	Number of interchanges along corridor	0	
F	ON-STREET PARKING	Lower	3

Total Risk Score:

49

Recommended Posted Speed Limit (km/h):

As determined by road characteristics

60

As determined by policy

0

The recommended posted speed limit may be checked against the prevailing speeds of the roadway and the road's safety performance.

Comments:



Automated Speed Limit Guidelines

FORM A - Automated Speed Limit Guidelines Spreadsheet

Version:
10-Apr-09

Name of Corridor:	Giroux Road 2		
Segment Evaluated:	Hogan Rd	to	Dunbar St
Geographic Region:	City of St. Albert		
Road Agency:	St. Ablert		
Road Classification:	Arterial	Length of Corridor:	2,330 m
Urban / Rural:	Urban	Design Speed: (Required for Freeway, Expressway, Highway)	0 km/h
Divided / Undivided:	Divided	Current Posted Speed: (For information only)	60 km/h
Major / Minor:	Major	Prevailing Speed:	62 km/h
# Through Lanes Per Direction:	2+ lanes	(85th Percentile - for information only) Policy: (Maximum Posted Speed)	0 km/h

		RISK	Score
A1	GEOMETRY (Horizontal)	Higher	6
A2	GEOMETRY (Vertical)	Lower	2
A3	AVERAGE LANE WIDTH	Medium	4
B	ROADSIDE HAZARDS	Medium	2
C1	PEDESTRIAN EXPOSURE	Lower	3
C2	CYCLIST EXPOSURE	Higher	9
D	PAVEMENT SURFACE	Lower	1
E1	NUMBER OF INTERSECTIONS WITH PUBLIC ROADS	<i>Number of Occurrences</i>	20
	STOP controlled intersection	0	
	Signalized intersection	6	
	Roundabout or traffic circle	0	
	Crosswalk	3	
	Active, at-grade railroad crossing	0	
	Sidestreet STOP-controlled or lane	3	
E2	NUMBER OF INTERSECTIONS WITH PRIVATE ACCESS DRIVEWAYS	<i>Number of Occurrences</i>	3
	Left turn movements permitted	2	
	Right-in / Right-out only	2	
E3	NUMBER OF INTERCHANGES	<i>Number of Occurrences</i>	0
	Number of interchanges along corridor	0	
F	ON-STREET PARKING	Lower	3

Total Risk Score:

53

Recommended Posted Speed Limit (km/h):

As determined by road characteristics

60

As determined by policy

0

The recommended posted speed limit may be checked against the prevailing speeds of the roadway and the road's safety performance.

Comments:



Automated Speed Limit Guidelines

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Version:
10-Apr-09

Name of Corridor:	McKenney Avenue / Bellerose Drive 1		
Segment Evaluated:	Liberton Dr	to	Inglewood Dr
Geographic Region:	City of St. Albert		
Road Agency:	St. Ablert		
Road Classification:	Arterial	Length of Corridor:	640 m
Urban / Rural:	Urban	Design Speed: (Required for Freeway, Expressway, Highway)	0 km/h
Divided / Undivided:	Divided	Current Posted Speed: (For information only)	50 km/h
Major / Minor:	Major	Prevailing Speed:	0 km/h
# Through Lanes Per Direction:	2+ lanes	(85th Percentile - for information only) Policy: (Maximum Posted Speed)	0 km/h

		RISK	Score
A1	GEOMETRY (Horizontal)	Lower	2
A2	GEOMETRY (Vertical)	Lower	2
A3	AVERAGE LANE WIDTH	Medium	4
B	ROADSIDE HAZARDS	Higher	3
C1	PEDESTRIAN EXPOSURE	Lower	3
C2	CYCLIST EXPOSURE	Higher	9
D	PAVEMENT SURFACE	Lower	1
E1	NUMBER OF INTERSECTIONS WITH PUBLIC ROADS	<i>Number of Occurrences</i>	23
	STOP controlled intersection	0	
	Signalized intersection	3	
	Roundabout or traffic circle	0	
	Crosswalk	0	
	Active, at-grade railroad crossing	0	
E2	NUMBER OF INTERSECTIONS WITH PRIVATE ACCESS DRIVEWAYS	<i>Number of Occurrences</i>	14
	Left turn movements permitted	0	
	Right-in / Right-out only	9	
E3	NUMBER OF INTERCHANGES	<i>Number of Occurrences</i>	0
	Number of interchanges along corridor	0	
F	ON-STREET PARKING	Lower	3

Total Risk Score:

64

Recommended Posted Speed Limit (km/h):

As determined by road characteristics

50

As determined by policy

0

The recommended posted speed limit may be checked against the prevailing speeds of the roadway and the road's safety performance.

Comments:



Automated Speed Limit Guidelines

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Version:
10-Apr-09

Name of Corridor:	Bellerose Drive 2		
Segment Evaluated:	Inglewood Dr	to	Evergreen Dr
Geographic Region:	City of St. Albert		
Road Agency:	St. Ablert		
Road Classification:	Arterial	Length of Corridor:	730 m
Urban / Rural:	Urban	Design Speed: (Required for Freeway, Expressway, Highway)	0 km/h
Divided / Undivided:	Divided	Current Posted Speed: (For information only)	50 km/h
Major / Minor:	Major	Prevailing Speed:	0 km/h
# Through Lanes Per Direction:	2+ lanes	(85th Percentile - for information only) Policy: (Maximum Posted Speed)	0 km/h

		RISK	Score
A1	GEOMETRY (Horizontal)	Lower	2
A2	GEOMETRY (Vertical)	Lower	2
A3	AVERAGE LANE WIDTH	Lower	2
B	ROADSIDE HAZARDS	Higher	3
C1	PEDESTRIAN EXPOSURE	Lower	3
C2	CYCLIST EXPOSURE	Lower	3
D	PAVEMENT SURFACE	Lower	1
E1	NUMBER OF INTERSECTIONS WITH PUBLIC ROADS	<i>Number of Occurrences</i>	22
	STOP controlled intersection	0	
	Signalized intersection	2	
	Roundabout or traffic circle	0	
	Crosswalk	1	
	Active, at-grade railroad crossing	0	
	Sidestreet STOP-controlled or lane	2	
E2	NUMBER OF INTERSECTIONS WITH PRIVATE ACCESS DRIVEWAYS	<i>Number of Occurrences</i>	15
	Left turn movements permitted	6	
	Right-in / Right-out only	0	
E3	NUMBER OF INTERCHANGES	<i>Number of Occurrences</i>	0
	Number of interchanges along corridor	0	
F	ON-STREET PARKING	Lower	3

Total Risk Score:

56

Recommended Posted Speed Limit (km/h):

As determined by road characteristics

60

As determined by policy

0

The recommended posted speed limit may be checked against the prevailing speeds of the roadway and the road's safety performance.

Comments:



Automated Speed Limit Guidelines

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Version:
10-Apr-09

Name of Corridor:	Bellerose Drive 3		
Segment Evaluated:	Evergreen Dr	to	145m North of Edward Way
Geographic Region:	City of St. Albert		
Road Agency:	St. Ablert		
Road Classification:	Arterial	Length of Corridor:	660 m
Urban / Rural:	Urban	Design Speed: (Required for Freeway, Expressway, Highway)	0 km/h
Divided / Undivided:	Divided	Current Posted Speed: (For information only)	50 km/h
Major / Minor:	Major	Prevailing Speed:	60 km/h
# Through Lanes Per Direction:	2+ lanes	(85th Percentile - for information only) Policy: (Maximum Posted Speed)	0 km/h

		RISK	Score
A1	GEOMETRY (Horizontal)	Lower	2
A2	GEOMETRY (Vertical)	Lower	2
A3	AVERAGE LANE WIDTH	Medium	4
B	ROADSIDE HAZARDS	Lower	1
C1	PEDESTRIAN EXPOSURE	Lower	3
C2	CYCLIST EXPOSURE	Lower	3
D	PAVEMENT SURFACE	Lower	1
E1	NUMBER OF INTERSECTIONS WITH PUBLIC ROADS	<i>Number of Occurrences</i>	15
	STOP controlled intersection	0	
	Signalized intersection	2	
	Roundabout or traffic circle	0	
	Crosswalk	0	
	Active, at-grade railroad crossing	0	
	Sidestreet STOP-controlled or lane	0	
E2	NUMBER OF INTERSECTIONS WITH PRIVATE ACCESS DRIVEWAYS	<i>Number of Occurrences</i>	0
	Left turn movements permitted	0	
	Right-in / Right-out only	0	
E3	NUMBER OF INTERCHANGES	<i>Number of Occurrences</i>	0
	Number of interchanges along corridor	0	
F	ON-STREET PARKING	Lower	3

Total Risk Score:

34

Recommended Posted Speed Limit (km/h):

As determined by road characteristics

70

As determined by policy

0

The recommended posted speed limit may be checked against the prevailing speeds of the roadway and the road's safety performance.

Comments:



Automated Speed Limit Guidelines

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Version:
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Name of Corridor:	Bellerose Drive 5		
Segment Evaluated:	Empress Way	to	Coal Mine Rd
Geographic Region:	City of St. Albert		
Road Agency:	St. Ablert		
Road Classification:	Arterial	Length of Corridor:	820 m
Urban / Rural:	Urban	Design Speed: (Required for Freeway, Expressway, Highway)	0 km/h
Divided / Undivided:	Undivided	Current Posted Speed:	50 km/h
Major / Minor:	Major	(For information only)	
# Through Lanes	1 lane	Prevailing Speed:	55 km/h
Per Direction:		(85th Percentile - for information only)	
		Policy:	0 km/h
		(Maximum Posted Speed)	

		RISK	Score
A1	GEOMETRY (Horizontal)	Lower	2
A2	GEOMETRY (Vertical)	Lower	2
A3	AVERAGE LANE WIDTH	Medium	4
B	ROADSIDE HAZARDS	Lower	1
C1	PEDESTRIAN EXPOSURE	Lower	3
C2	CYCLIST EXPOSURE	Lower	3
D	PAVEMENT SURFACE	Lower	1
E1	NUMBER OF INTERSECTIONS WITH PUBLIC ROADS	<i>Number of Occurrences</i>	13
	STOP controlled intersection	0	
	Signalized intersection	0	
	Roundabout or traffic circle	0	
	Crosswalk	2	
	Active, at-grade railroad crossing	0	
	Sidestreet STOP-controlled or lane	2	
E2	NUMBER OF INTERSECTIONS WITH PRIVATE ACCESS DRIVEWAYS	<i>Number of Occurrences</i>	0
	Left turn movements permitted	0	
	Right-in / Right-out only	0	
E3	NUMBER OF INTERCHANGES	<i>Number of Occurrences</i>	0
	Number of interchanges along corridor	0	
F	ON-STREET PARKING	Lower	3

Total Risk Score:

32

Recommended Posted Speed Limit (km/h):

As determined by road characteristics

70

As determined by policy

0

The recommended posted speed limit may be checked against the prevailing speeds of the roadway and the road's safety performance.

Comments:



Automated Speed Limit Guidelines

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Version:
10-Apr-09

Name of Corridor:	Campbell Road		
Segment Evaluated:	Centre St	to	400m South of Boudreay rd
Geographic Region:	City of St. Albert		
Road Agency:	St. Ablert		
Road Classification:	Arterial	Length of Corridor:	1,730 m
Urban / Rural:	Urban	Design Speed: (Required for Freeway, Expressway, Highway)	0 km/h
Divided / Undivided:	Divided	Current Posted Speed: (For information only)	60 km/h
Major / Minor:	Major	Prevailing Speed:	65 km/h
# Through Lanes Per Direction:	2+ lanes	(85th Percentile - for information only) Policy: (Maximum Posted Speed)	0 km/h

		RISK	Score
A1	GEOMETRY (Horizontal)	Lower	2
A2	GEOMETRY (Vertical)	Lower	2
A3	AVERAGE LANE WIDTH	Medium	4
B	ROADSIDE HAZARDS	Higher	3
C1	PEDESTRIAN EXPOSURE	Lower	3
C2	CYCLIST EXPOSURE	Higher	9
D	PAVEMENT SURFACE	Lower	1
E1	NUMBER OF INTERSECTIONS WITH PUBLIC ROADS	<i>Number of Occurrences</i>	9
	STOP controlled intersection	0	
	Signalized intersection	3	
	Roundabout or traffic circle	0	
	Crosswalk	0	
	Active, at-grade railroad crossing	0	
E2	NUMBER OF INTERSECTIONS WITH PRIVATE ACCESS DRIVEWAYS	<i>Number of Occurrences</i>	5
	Left turn movements permitted	3	
	Right-in / Right-out only	3	
E3	NUMBER OF INTERCHANGES	<i>Number of Occurrences</i>	0
	Number of interchanges along corridor	0	
F	ON-STREET PARKING	Lower	3

Total Risk Score:

41

Recommended Posted Speed Limit (km/h):

As determined by road characteristics

70

As determined by policy

0

The recommended posted speed limit may be checked against the prevailing speeds of the roadway and the road's safety performance.

Comments:



Automated Speed Limit Guidelines

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Version:
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Name of Corridor:	Corriveau Avenue		
Segment Evaluated:	Campbell Rd	to	142 St
Geographic Region:	City of St. Albert		
Road Agency:	St. Ablert		
Road Classification:	Arterial	Length of Corridor:	790 m
Urban / Rural:	Urban	Design Speed: (Required for Freeway, Expressway, Highway)	0 km/h
Divided / Undivided:	Undivided	Current Posted Speed: (For information only)	50 km/h
Major / Minor:	Major	Prevailing Speed:	43 km/h
# Through Lanes Per Direction:	2+ lanes	(85th Percentile - for information only) Policy: (Maximum Posted Speed)	0 km/h

		RISK	Score
A1	GEOMETRY (Horizontal)	Lower	2
A2	GEOMETRY (Vertical)	Lower	2
A3	AVERAGE LANE WIDTH	Medium	4
B	ROADSIDE HAZARDS	Lower	1
C1	PEDESTRIAN EXPOSURE	Higher	9
C2	CYCLIST EXPOSURE	Higher	9
D	PAVEMENT SURFACE	Lower	1
E1	NUMBER OF INTERSECTIONS WITH PUBLIC ROADS	<i>Number of Occurrences</i>	26
	STOP controlled intersection	1	
	Signalized intersection	1	
	Roundabout or traffic circle	0	
	Crosswalk	2	
	Active, at-grade railroad crossing	1	
	Sidestreet STOP-controlled or lane	2	
E2	NUMBER OF INTERSECTIONS WITH PRIVATE ACCESS DRIVEWAYS	<i>Number of Occurrences</i>	15
	Left turn movements permitted	17	
	Right-in / Right-out only	1	
E3	NUMBER OF INTERCHANGES	<i>Number of Occurrences</i>	0
	Number of interchanges along corridor	0	
F	ON-STREET PARKING	N/A	0

Total Risk Score:

69

Recommended Posted Speed Limit (km/h):

As determined by road characteristics

50

As determined by policy

0

The recommended posted speed limit may be checked against the prevailing speeds of the roadway and the road's safety performance.

Comments:



Automated Speed Limit Guidelines

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Version:
10-Apr-09

Name of Corridor:	Dawson Road		
Segment Evaluated:	Giroux Rd	to	McKenney Ave
Geographic Region:	City of St. Albert		
Road Agency:	St. Ablert		
Road Classification:	Arterial	Length of Corridor:	1,330 m
Urban / Rural:	Urban	Design Speed: (Required for Freeway, Expressway, Highway)	0 km/h
Divided / Undivided:	Undivided	Current Posted Speed: (For information only)	50 km/h
Major / Minor:	Major	Prevailing Speed:	39 km/h
# Through Lanes Per Direction:	2+ lanes	(85th Percentile - for information only) Policy: (Maximum Posted Speed)	0 km/h

		RISK	Score
A1	GEOMETRY (Horizontal)	Lower	2
A2	GEOMETRY (Vertical)	Lower	2
A3	AVERAGE LANE WIDTH	Medium	4
B	ROADSIDE HAZARDS	Higher	3
C1	PEDESTRIAN EXPOSURE	Lower	3
C2	CYCLIST EXPOSURE	Higher	9
D	PAVEMENT SURFACE	Medium	2
E1	NUMBER OF INTERSECTIONS WITH PUBLIC ROADS	<i>Number of Occurrences</i>	17
	STOP controlled intersection	0	
	Signalized intersection	2	
	Roundabout or traffic circle	0	
	Crosswalk	2	
	Active, at-grade railroad crossing	0	
	Sidestreet STOP-controlled or lane	6	
E2	NUMBER OF INTERSECTIONS WITH PRIVATE ACCESS DRIVEWAYS	<i>Number of Occurrences</i>	2
	Left turn movements permitted	1	
	Right-in / Right-out only	0	
E3	NUMBER OF INTERCHANGES	<i>Number of Occurrences</i>	0
	Number of interchanges along corridor	0	
F	ON-STREET PARKING	Lower	3

Total Risk Score:

47

Recommended Posted Speed Limit (km/h):

As determined by road characteristics

70

As determined by policy

0

The recommended posted speed limit may be checked against the prevailing speeds of the roadway and the road's safety performance.

Comments:



Automated Speed Limit Guidelines

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Version:
10-Apr-09

Name of Corridor:	Gate Avenue		
Segment Evaluated:	Grandon Rd	to	St Albert Trail
Geographic Region:	City of St. Albert		
Road Agency:	St. Ablert		
Road Classification:	Arterial	Length of Corridor:	490 m
Urban / Rural:	Urban	Design Speed: (Required for Freeway, Expressway, Highway)	0 km/h
Divided / Undivided:	Undivided	Current Posted Speed: (For information only)	50 km/h
Major / Minor:	Major	Prevailing Speed:	36 km/h
# Through Lanes Per Direction:	2+ lanes	(85th Percentile - for information only) Policy: (Maximum Posted Speed)	0 km/h

		RISK	Score
A1	GEOMETRY (Horizontal)	Lower	2
A2	GEOMETRY (Vertical)	Lower	2
A3	AVERAGE LANE WIDTH	Medium	4
B	ROADSIDE HAZARDS	Higher	3
C1	PEDESTRIAN EXPOSURE	Lower	3
C2	CYCLIST EXPOSURE	Higher	9
D	PAVEMENT SURFACE	Lower	1
E1	NUMBER OF INTERSECTIONS WITH PUBLIC ROADS	<i>Number of Occurrences</i>	40
	STOP controlled intersection	1	
	Signalized intersection	1	
	Roundabout or traffic circle	0	
	Crosswalk	2	
	Active, at-grade railroad crossing	0	
	Sidestreet STOP-controlled or lane	1	
E2	NUMBER OF INTERSECTIONS WITH PRIVATE ACCESS DRIVEWAYS	<i>Number of Occurrences</i>	15
	Left turn movements permitted	8	
	Right-in / Right-out only	0	
E3	NUMBER OF INTERCHANGES	<i>Number of Occurrences</i>	0
	Number of interchanges along corridor	0	
F	ON-STREET PARKING	Lower	3

Total Risk Score:

82

Recommended Posted Speed Limit (km/h):

As determined by road characteristics

50

As determined by policy

0

The recommended posted speed limit may be checked against the prevailing speeds of the roadway and the road's safety performance.

Comments:



Automated Speed Limit Guidelines

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Version:
10-Apr-09

Name of Corridor:	Gervais Road 1		
Segment Evaluated:	Levasseur rd	to	Gloucester dr
Geographic Region:	City of St. Albert		
Road Agency:	St. Ablert		
Road Classification:	Arterial	Length of Corridor:	590 m
Urban / Rural:	Urban	Design Speed: (Required for Freeway, Expressway, Highway)	0 km/h
Divided / Undivided:	Divided	Current Posted Speed: (For information only)	50 km/h
Major / Minor:	Major	Prevailing Speed:	57 km/h
# Through Lanes Per Direction:	2+ lanes	(85th Percentile - for information only) Policy: (Maximum Posted Speed)	0 km/h

		RISK	Score
A1	GEOMETRY (Horizontal)	Lower	2
A2	GEOMETRY (Vertical)	Lower	2
A3	AVERAGE LANE WIDTH	Medium	4
B	ROADSIDE HAZARDS	Medium	2
C1	PEDESTRIAN EXPOSURE	Lower	3
C2	CYCLIST EXPOSURE	Higher	9
D	PAVEMENT SURFACE	Medium	2
E1	NUMBER OF INTERSECTIONS WITH PUBLIC ROADS	<i>Number of Occurrences</i>	18
	STOP controlled intersection	0	
	Signalized intersection	1	
	Roundabout or traffic circle	0	
	Crosswalk	1	
	Active, at-grade railroad crossing	0	
	Sidestreet STOP-controlled or lane	1	
E2	NUMBER OF INTERSECTIONS WITH PRIVATE ACCESS DRIVEWAYS	<i>Number of Occurrences</i>	5
	Left turn movements permitted	1	
	Right-in / Right-out only	1	
E3	NUMBER OF INTERCHANGES	<i>Number of Occurrences</i>	0
	Number of interchanges along corridor	0	
F	ON-STREET PARKING	Lower	3

Total Risk Score:

50

Recommended Posted Speed Limit (km/h):

As determined by road characteristics

60

As determined by policy

0

The recommended posted speed limit may be checked against the prevailing speeds of the roadway and the road's safety performance.

Comments:



Automated Speed Limit Guidelines

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Version:
10-Apr-09

Name of Corridor:	Grandin Road 1		
Segment Evaluated:	Levasseur rd	to	Gilchrist Pl
Geographic Region:	City of St. Albert		
Road Agency:	St. Ablert		
Road Classification:	Arterial	Length of Corridor:	1,100 m
Urban / Rural:	Urban	Design Speed: (Required for Freeway, Expressway, Highway)	0 km/h
Divided / Undivided:	Undivided	Current Posted Speed: (For information only)	50 km/h
Major / Minor:	Major	Prevailing Speed:	55 km/h
# Through Lanes Per Direction:	2+ lanes	(85th Percentile - for information only) Policy: (Maximum Posted Speed)	0 km/h

		RISK	Score
A1	GEOMETRY (Horizontal)	Lower	2
A2	GEOMETRY (Vertical)	Lower	2
A3	AVERAGE LANE WIDTH	Medium	4
B	ROADSIDE HAZARDS	Medium	2
C1	PEDESTRIAN EXPOSURE	Lower	3
C2	CYCLIST EXPOSURE	Higher	9
D	PAVEMENT SURFACE	Lower	1
E1	NUMBER OF INTERSECTIONS WITH PUBLIC ROADS	<i>Number of Occurrences</i>	27
	STOP controlled intersection	0	
	Signalized intersection	2	
	Roundabout or traffic circle	0	
	Crosswalk	3	
	Active, at-grade railroad crossing	0	
	Sidestreet STOP-controlled or lane	10	
E2	NUMBER OF INTERSECTIONS WITH PRIVATE ACCESS DRIVEWAYS	<i>Number of Occurrences</i>	7
	Left turn movements permitted	4	
	Right-in / Right-out only	0	
E3	NUMBER OF INTERCHANGES	<i>Number of Occurrences</i>	0
	Number of interchanges along corridor	0	
F	ON-STREET PARKING	Lower	3

Total Risk Score:

60

Recommended Posted Speed Limit (km/h):

As determined by road characteristics

60

As determined by policy

0

The recommended posted speed limit may be checked against the prevailing speeds of the roadway and the road's safety performance.

Comments:



Automated Speed Limit Guidelines

FORM A - Automated Speed Limit Guidelines Spreadsheet

Version:
10-Apr-09

Name of Corridor:	Grandin Road 2		
Segment Evaluated:	Glichrist Pl	to	Glenview Crescent
Geographic Region:	City of St. Albert		
Road Agency:	St. Ablert		
Road Classification:	Arterial	Length of Corridor:	710 m
Urban / Rural:	Urban	Design Speed: (Required for Freeway, Expressway, Highway)	0 km/h
Divided / Undivided:	Undivided	Current Posted Speed:	50 km/h
Major / Minor:	Major	(For information only) Prevailing Speed:	41 km/h
# Through Lanes Per Direction:	2+ lanes	(85th Percentile - for information only) Policy:	0 km/h
		(Maximum Posted Speed)	

		RISK	Score
A1	GEOMETRY (Horizontal)	Lower	2
A2	GEOMETRY (Vertical)	Medium	4
A3	AVERAGE LANE WIDTH	Medium	4
B	ROADSIDE HAZARDS	Higher	3
C1	PEDESTRIAN EXPOSURE	Lower	3
C2	CYCLIST EXPOSURE	Higher	9
D	PAVEMENT SURFACE	Lower	1
E1	NUMBER OF INTERSECTIONS WITH PUBLIC ROADS	<i>Number of Occurrences</i>	31
	STOP controlled intersection	0	
	Signalized intersection	0	
	Roundabout or traffic circle	0	
	Crosswalk	4	
	Active, at-grade railroad crossing	0	
E2	NUMBER OF INTERSECTIONS WITH PRIVATE ACCESS DRIVEWAYS	<i>Number of Occurrences</i>	4
	Left turn movements permitted	1	
	Right-in / Right-out only	1	
E3	NUMBER OF INTERCHANGES	<i>Number of Occurrences</i>	0
	Number of interchanges along corridor	0	
F	ON-STREET PARKING	Lower	3

Total Risk Score:

64

Recommended Posted Speed Limit (km/h):

As determined by road characteristics

60

As determined by policy

0

The recommended posted speed limit may be checked against the prevailing speeds of the roadway and the road's safety performance.

Comments:



Automated Speed Limit Guidelines

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Version:
10-Apr-09

Name of Corridor:	Gervais Road / Herbert Road 1		
Segment Evaluated:	Gloucester Dr	to	Arlington Dr
Geographic Region:	City of St. Albert		
Road Agency:	St. Ablert		
Road Classification:	Arterial	Length of Corridor:	840 m
Urban / Rural:	Urban	Design Speed: (Required for Freeway, Expressway, Highway)	0 km/h
Divided / Undivided:	Divided	Current Posted Speed: (For information only)	60 km/h
Major / Minor:	Major	Prevailing Speed:	0 km/h
# Through Lanes Per Direction:	2+ lanes	(85th Percentile - for information only) Policy: (Maximum Posted Speed)	0 km/h

		RISK	Score
A1	GEOMETRY (Horizontal)	Lower	2
A2	GEOMETRY (Vertical)	Lower	2
A3	AVERAGE LANE WIDTH	Medium	4
B	ROADSIDE HAZARDS	Higher	3
C1	PEDESTRIAN EXPOSURE	Lower	3
C2	CYCLIST EXPOSURE	Higher	9
D	PAVEMENT SURFACE	Medium	2
E1	NUMBER OF INTERSECTIONS WITH PUBLIC ROADS	<i>Number of Occurrences</i>	30
	STOP controlled intersection	0	
	Signalized intersection	5	
	Roundabout or traffic circle	0	
	Crosswalk	0	
	Active, at-grade railroad crossing	0	
	Sidestreet STOP-controlled or lane	0	
E2	NUMBER OF INTERSECTIONS WITH PRIVATE ACCESS DRIVEWAYS	<i>Number of Occurrences</i>	13
	Left turn movements permitted	3	
	Right-in / Right-out only	5	
E3	NUMBER OF INTERCHANGES	<i>Number of Occurrences</i>	0
	Number of interchanges along corridor	0	
F	ON-STREET PARKING	Lower	3

Total Risk Score:

71

Recommended Posted Speed Limit (km/h):

As determined by road characteristics

50

As determined by policy

0

The recommended posted speed limit may be checked against the prevailing speeds of the roadway and the road's safety performance.

Comments:



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Version:
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Name of Corridor:	Hebert Road 2		
Segment Evaluated:	Arlington Dr	to	Boudreay Rd
Geographic Region:	City of St. Albert		
Road Agency:	St. Ablert		
Road Classification:	Arterial	Length of Corridor:	1,630 m
Urban / Rural:	Urban	Design Speed: (Required for Freeway, Expressway, Highway)	0 km/h
Divided / Undivided:	Divided	Current Posted Speed: (For information only)	60 km/h
Major / Minor:	Major	Prevailing Speed:	62 km/h
# Through Lanes Per Direction:	2+ lanes	(85th Percentile - for information only) Policy: (Maximum Posted Speed)	0 km/h

		RISK	Score
A1	GEOMETRY (Horizontal)	Lower	2
A2	GEOMETRY (Vertical)	Lower	2
A3	AVERAGE LANE WIDTH	Medium	4
B	ROADSIDE HAZARDS	Higher	3
C1	PEDESTRIAN EXPOSURE	Lower	3
C2	CYCLIST EXPOSURE	Higher	9
D	PAVEMENT SURFACE	Lower	1
E1	NUMBER OF INTERSECTIONS WITH PUBLIC ROADS	<i>Number of Occurrences</i>	16
	STOP controlled intersection	0	
	Signalized intersection	3	
	Roundabout or traffic circle	0	
	Crosswalk	2	
	Active, at-grade railroad crossing	0	
	Sidestreet STOP-controlled or lane	2	
E2	NUMBER OF INTERSECTIONS WITH PRIVATE ACCESS DRIVEWAYS	<i>Number of Occurrences</i>	2
	Left turn movements permitted	1	
	Right-in / Right-out only	2	
E3	NUMBER OF INTERCHANGES	<i>Number of Occurrences</i>	0
	Number of interchanges along corridor	0	
F	ON-STREET PARKING	Lower	3

Total Risk Score:

45

Recommended Posted Speed Limit (km/h):

As determined by road characteristics

60

As determined by policy

0

The recommended posted speed limit may be checked against the prevailing speeds of the roadway and the road's safety performance.

Comments:



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Version:
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Name of Corridor:	Hogan Road		
Segment Evaluated:	Giroux Rd	to	85m North of Dunfield Cres
Geographic Region:	City of St. Albert		
Road Agency:	St. Ablert		
Road Classification:	Arterial	Length of Corridor:	520 m
Urban / Rural:	Urban	Design Speed: (Required for Freeway, Expressway, Highway)	0 km/h
Divided / Undivided:	Undivided	Current Posted Speed: (For information only)	50 km/h
Major / Minor:	Major	Prevailing Speed:	55 km/h
# Through Lanes Per Direction:	2+ lanes	(85th Percentile - for information only) Policy: (Maximum Posted Speed)	0 km/h

		RISK	Score
A1	GEOMETRY (Horizontal)	Lower	2
A2	GEOMETRY (Vertical)	Lower	2
A3	AVERAGE LANE WIDTH	Medium	4
B	ROADSIDE HAZARDS	Lower	1
C1	PEDESTRIAN EXPOSURE	Lower	3
C2	CYCLIST EXPOSURE	Lower	3
D	PAVEMENT SURFACE	Lower	1
E1	NUMBER OF INTERSECTIONS WITH PUBLIC ROADS	<i>Number of Occurrences</i>	31
	STOP controlled intersection	0	
	Signalized intersection	1	
	Roundabout or traffic circle	0	
	Crosswalk	2	
	Active, at-grade railroad crossing	0	
	Sidestreet STOP-controlled or lane	2	
E2	NUMBER OF INTERSECTIONS WITH PRIVATE ACCESS DRIVEWAYS	<i>Number of Occurrences</i>	0
	Left turn movements permitted	0	
	Right-in / Right-out only	0	
E3	NUMBER OF INTERCHANGES	<i>Number of Occurrences</i>	0
	Number of interchanges along corridor	0	
F	ON-STREET PARKING	Lower	3

Total Risk Score:

50

Recommended Posted Speed Limit (km/h):

As determined by road characteristics

60

As determined by policy

0

The recommended posted speed limit may be checked against the prevailing speeds of the roadway and the road's safety performance.

Comments:



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Name of Corridor:	Lavasseur Road 1		
Segment Evaluated:	Gervais Rd / 170 st	to	Sir Winston Churchill Ave
Geographic Region:	City of St. Albert		
Road Agency:	St. Ablert		
Road Classification:	Arterial	Length of Corridor:	1,560 m
Urban / Rural:	Urban	Design Speed: (Required for Freeway, Expressway, Highway)	0 km/h
Divided / Undivided:	Undivided	Current Posted Speed: (For information only)	60 km/h
Major / Minor:	Major	Prevailing Speed:	65 km/h
# Through Lanes Per Direction:	2+ lanes	(85th Percentile - for information only) Policy: (Maximum Posted Speed)	0 km/h

		RISK	Score
A1	GEOMETRY (Horizontal)	Lower	2
A2	GEOMETRY (Vertical)	Lower	2
A3	AVERAGE LANE WIDTH	Medium	4
B	ROADSIDE HAZARDS	Higher	3
C1	PEDESTRIAN EXPOSURE	Lower	3
C2	CYCLIST EXPOSURE	Lower	3
D	PAVEMENT SURFACE	Medium	2
E1	NUMBER OF INTERSECTIONS WITH PUBLIC ROADS	<i>Number of Occurrences</i>	17
	STOP controlled intersection	0	
	Signalized intersection	4	
	Roundabout or traffic circle	0	
	Crosswalk	1	
	Active, at-grade railroad crossing	0	
	Sidestreet STOP-controlled or lane	2	
E2	NUMBER OF INTERSECTIONS WITH PRIVATE ACCESS DRIVEWAYS	<i>Number of Occurrences</i>	1
	Left turn movements permitted	1	
	Right-in / Right-out only	0	
E3	NUMBER OF INTERCHANGES	<i>Number of Occurrences</i>	0
	Number of interchanges along corridor	0	
F	ON-STREET PARKING	Lower	3

Total Risk Score:

40

Recommended Posted Speed Limit (km/h):

As determined by road characteristics

70

As determined by policy

0

The recommended posted speed limit may be checked against the prevailing speeds of the roadway and the road's safety performance.

Comments:



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Version:
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Name of Corridor:	Lavasseur Road 2		
Segment Evaluated:	Sir Winston Churchill Ave	to	Riel Dr
Geographic Region:	City of St. Albert		
Road Agency:	St. Ablert		
Road Classification:	Arterial	Length of Corridor:	570 m
Urban / Rural:	Urban	Design Speed: (Required for Freeway, Expressway, Highway)	0 km/h
Divided / Undivided:	Undivided	Current Posted Speed: (For information only)	50 km/h
Major / Minor:	Major	Prevailing Speed:	0 km/h
# Through Lanes Per Direction:	1 lane	(85th Percentile - for information only) Policy: (Maximum Posted Speed)	0 km/h

		RISK	Score
A1	GEOMETRY (Horizontal)	Lower	2
A2	GEOMETRY (Vertical)	Medium	4
A3	AVERAGE LANE WIDTH	Lower	2
B	ROADSIDE HAZARDS	Medium	2
C1	PEDESTRIAN EXPOSURE	Lower	3
C2	CYCLIST EXPOSURE	Lower	3
D	PAVEMENT SURFACE	Medium	2
E1	NUMBER OF INTERSECTIONS WITH PUBLIC ROADS	<i>Number of Occurrences</i>	19
	STOP controlled intersection	0	
	Signalized intersection	2	
	Roundabout or traffic circle	0	
	Crosswalk	0	
	Active, at-grade railroad crossing	1	
E2	NUMBER OF INTERSECTIONS WITH PRIVATE ACCESS DRIVEWAYS	<i>Number of Occurrences</i>	4
	Left turn movements permitted	1	
	Right-in / Right-out only	0	
E3	NUMBER OF INTERCHANGES	<i>Number of Occurrences</i>	0
	Number of interchanges along corridor	0	
F	ON-STREET PARKING	Lower	3

Total Risk Score:

44

Recommended Posted Speed Limit (km/h):

As determined by road characteristics

70

As determined by policy

0

The recommended posted speed limit may be checked against the prevailing speeds of the roadway and the road's safety performance.

Comments:



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Name of Corridor:	Leclair Way 1		
Segment Evaluated:	Ray Gibbon Dr	to	Sir Winston Churchill Ave
Geographic Region:	City of St. Albert		
Road Agency:	St. Ablert		
Road Classification:	Arterial	Length of Corridor:	810 m
Urban / Rural:	Urban	Design Speed: (Required for Freeway, Expressway, Highway)	0 km/h
Divided / Undivided:	Divided	Current Posted Speed:	60 km/h
Major / Minor:	Major	(For information only) Prevailing Speed:	48 km/h
# Through Lanes Per Direction:	2+ lanes	(85th Percentile - for information only) Policy:	0 km/h
		(Maximum Posted Speed)	

		RISK	Score
A1	GEOMETRY (Horizontal)	Medium	4
A2	GEOMETRY (Vertical)	Lower	2
A3	AVERAGE LANE WIDTH	Medium	4
B	ROADSIDE HAZARDS	Medium	2
C1	PEDESTRIAN EXPOSURE	Lower	3
C2	CYCLIST EXPOSURE	Lower	3
D	PAVEMENT SURFACE	Lower	1
E1	NUMBER OF INTERSECTIONS WITH PUBLIC ROADS	<i>Number of Occurrences</i>	27
	STOP controlled intersection	0	
	Signalized intersection	2	
	Roundabout or traffic circle	0	
	Crosswalk	2	
	Active, at-grade railroad crossing	1	
	Sidestreet STOP-controlled or lane	2	
E2	NUMBER OF INTERSECTIONS WITH PRIVATE ACCESS DRIVEWAYS	<i>Number of Occurrences</i>	0
	Left turn movements permitted	0	
	Right-in / Right-out only	0	
E3	NUMBER OF INTERCHANGES	<i>Number of Occurrences</i>	0
	Number of interchanges along corridor	0	
F	ON-STREET PARKING	Lower	3

Total Risk Score:

49

Recommended Posted Speed Limit (km/h):

As determined by road characteristics

60

As determined by policy

0

The recommended posted speed limit may be checked against the prevailing speeds of the roadway and the road's safety performance.

Comments:



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Name of Corridor:	McKenney Avenue 1		
Segment Evaluated:	Muir Dr	to	Langley Ave
Geographic Region:	City of St. Albert		
Road Agency:	St. Ablert		
Road Classification:	Arterial	Length of Corridor:	1,000 m
Urban / Rural:	Urban	Design Speed: (Required for Freeway, Expressway, Highway)	0 km/h
Divided / Undivided:	Divided	Current Posted Speed: (For information only)	50 km/h
Major / Minor:	Major	Prevailing Speed:	54 km/h
# Through Lanes Per Direction:	2+ lanes	(85th Percentile - for information only) Policy: (Maximum Posted Speed)	0 km/h

		RISK	Score
A1	GEOMETRY (Horizontal)	Medium	4
A2	GEOMETRY (Vertical)	Lower	2
A3	AVERAGE LANE WIDTH	Medium	4
B	ROADSIDE HAZARDS	Higher	3
C1	PEDESTRIAN EXPOSURE	Lower	3
C2	CYCLIST EXPOSURE	Higher	9
D	PAVEMENT SURFACE	Medium	2
E1	NUMBER OF INTERSECTIONS WITH PUBLIC ROADS	<i>Number of Occurrences</i>	15
	STOP controlled intersection	0	
	Signalized intersection	2	
	Roundabout or traffic circle	0	
	Crosswalk	1	
	Active, at-grade railroad crossing	0	
E2	NUMBER OF INTERSECTIONS WITH PRIVATE ACCESS DRIVEWAYS	<i>Number of Occurrences</i>	15
	Left turn movements permitted	7	
	Right-in / Right-out only	3	
E3	NUMBER OF INTERCHANGES	<i>Number of Occurrences</i>	0
	Number of interchanges along corridor	0	
F	ON-STREET PARKING	Lower	3

Total Risk Score:

60

Recommended Posted Speed Limit (km/h):

As determined by road characteristics

50

As determined by policy

0

The recommended posted speed limit may be checked against the prevailing speeds of the roadway and the road's safety performance.

Comments:



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Name of Corridor:	McKenney Avenue 2		
Segment Evaluated:	Langely Ave	to	170m South of Rail Crossing
Geographic Region:	City of St. Albert		
Road Agency:	St. Ablert		
Road Classification:	Arterial	Length of Corridor:	970 m
Urban / Rural:	Urban	Design Speed: (Required for Freeway, Expressway, Highway)	0 km/h
Divided / Undivided:	Divided	Current Posted Speed: (For information only)	50 km/h
Major / Minor:	Major	Prevailing Speed:	42 km/h
# Through Lanes Per Direction:	2+ lanes	(85th Percentile - for information only) Policy: (Maximum Posted Speed)	0 km/h

		RISK	Score
A1	GEOMETRY (Horizontal)	Lower	2
A2	GEOMETRY (Vertical)	Lower	2
A3	AVERAGE LANE WIDTH	Medium	4
B	ROADSIDE HAZARDS	Higher	3
C1	PEDESTRIAN EXPOSURE	Lower	3
C2	CYCLIST EXPOSURE	Higher	9
D	PAVEMENT SURFACE	Medium	2
E1	NUMBER OF INTERSECTIONS WITH PUBLIC ROADS	<i>Number of Occurrences</i>	18
	STOP controlled intersection	0	
	Signalized intersection	0	
	Roundabout or traffic circle	0	
	Crosswalk	3	
	Active, at-grade railroad crossing	1	
E2	NUMBER OF INTERSECTIONS WITH PRIVATE ACCESS DRIVEWAYS	<i>Number of Occurrences</i>	2
	Left turn movements permitted	1	
	Right-in / Right-out only	0	
E3	NUMBER OF INTERCHANGES	<i>Number of Occurrences</i>	0
	Number of interchanges along corridor	0	
F	ON-STREET PARKING	Lower	3

Total Risk Score:

48

Recommended Posted Speed Limit (km/h):

As determined by road characteristics

60

As determined by policy

0

The recommended posted speed limit may be checked against the prevailing speeds of the roadway and the road's safety performance.

Comments:



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Version:
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Name of Corridor:	McKenney Avenue 3		
Segment Evaluated:	170m South of Rail Crossing	to	Ray Gibbon Dr
Geographic Region:	City of St. Albert		
Road Agency:	St. Ablert		
Road Classification:	Arterial	Length of Corridor:	1,450 m
Urban / Rural:	Urban	Design Speed: (Required for Freeway, Expressway, Highway)	0 km/h
Divided / Undivided:	Undivided	Current Posted Speed: (For information only)	60 km/h
Major / Minor:	Major	Prevailing Speed:	59 km/h
# Through Lanes Per Direction:	1 lane	(85th Percentile - for information only) Policy: (Maximum Posted Speed)	0 km/h

		RISK	Score
A1	GEOMETRY (Horizontal)	Lower	2
A2	GEOMETRY (Vertical)	Lower	2
A3	AVERAGE LANE WIDTH	Medium	4
B	ROADSIDE HAZARDS	Lower	1
C1	PEDESTRIAN EXPOSURE	Higher	9
C2	CYCLIST EXPOSURE	Lower	3
D	PAVEMENT SURFACE	Lower	1
E1	NUMBER OF INTERSECTIONS WITH PUBLIC ROADS	<i>Number of Occurrences</i>	4
	STOP controlled intersection	0	
	Signalized intersection	1	
	Roundabout or traffic circle	0	
	Crosswalk	0	
	Active, at-grade railroad crossing	0	
	Sidestreet STOP-controlled or lane	1	
E2	NUMBER OF INTERSECTIONS WITH PRIVATE ACCESS DRIVEWAYS	<i>Number of Occurrences</i>	1
	Left turn movements permitted	1	
	Right-in / Right-out only	0	
E3	NUMBER OF INTERCHANGES	<i>Number of Occurrences</i>	0
	Number of interchanges along corridor	0	
F	ON-STREET PARKING	Lower	3

Total Risk Score:

30

Recommended Posted Speed Limit (km/h):

As determined by road characteristics

70

As determined by policy

0

The recommended posted speed limit may be checked against the prevailing speeds of the roadway and the road's safety performance.

Comments:



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Version:
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Name of Corridor:	Perron Street		
Segment Evaluated:	Sir Winston Churchill Ave	to	Mission Ave
Geographic Region:	City of St. Albert		
Road Agency:	St. Ablert		
Road Classification:	Arterial	Length of Corridor:	540 m
Urban / Rural:	Urban	Design Speed: (Required for Freeway, Expressway, Highway)	0 km/h
Divided / Undivided:	Undivided	Current Posted Speed: (For information only)	40 km/h
Major / Minor:	Major	Prevailing Speed:	29 km/h
# Through Lanes Per Direction:	2+ lanes	(85th Percentile - for information only) Policy: (Maximum Posted Speed)	0 km/h

		RISK	Score
A1	GEOMETRY (Horizontal)	Lower	2
A2	GEOMETRY (Vertical)	Lower	2
A3	AVERAGE LANE WIDTH	Medium	4
B	ROADSIDE HAZARDS	Higher	3
C1	PEDESTRIAN EXPOSURE	Medium	6
C2	CYCLIST EXPOSURE	Higher	9
D	PAVEMENT SURFACE	Medium	2
E1	NUMBER OF INTERSECTIONS WITH PUBLIC ROADS	<i>Number of Occurrences</i>	65
	STOP controlled intersection	1	
	Signalized intersection	2	
	Roundabout or traffic circle	0	
	Crosswalk	4	
	Active, at-grade railroad crossing	0	
	Sidestreet STOP-controlled or lane	2	
E2	NUMBER OF INTERSECTIONS WITH PRIVATE ACCESS DRIVEWAYS	<i>Number of Occurrences</i>	11
	Left turn movements permitted	3	
	Right-in / Right-out only	0	
E3	NUMBER OF INTERCHANGES	<i>Number of Occurrences</i>	0
	Number of interchanges along corridor	0	
F	ON-STREET PARKING	Higher	9

Total Risk Score:

113

Recommended Posted Speed Limit (km/h):

As determined by road characteristics

50

As determined by policy

0

The recommended posted speed limit may be checked against the prevailing speeds of the roadway and the road's safety performance.

Comments:



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Version:
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Name of Corridor:	Poirier Avenue		
Segment Evaluated:	Sir Winston Churchill Ave	to	Campbell Rd
Geographic Region:	City of St. Albert		
Road Agency:	St. Ablert		
Road Classification:	Arterial	Length of Corridor:	1,130 m
Urban / Rural:	Urban	Design Speed: (Required for Freeway, Expressway, Highway)	0 km/h
Divided / Undivided:	Undivided	Current Posted Speed: (For information only)	50 km/h
Major / Minor:	Major	Prevailing Speed:	42 km/h
# Through Lanes Per Direction:	2+ lanes	(85th Percentile - for information only) Policy: (Maximum Posted Speed)	0 km/h

		RISK	Score
A1	GEOMETRY (Horizontal)	Lower	2
A2	GEOMETRY (Vertical)	Lower	2
A3	AVERAGE LANE WIDTH	Medium	4
B	ROADSIDE HAZARDS	Higher	3
C1	PEDESTRIAN EXPOSURE	Lower	3
C2	CYCLIST EXPOSURE	Higher	9
D	PAVEMENT SURFACE	Lower	1
E1	NUMBER OF INTERSECTIONS WITH PUBLIC ROADS	<i>Number of Occurrences</i>	23
	STOP controlled intersection	0	
	Signalized intersection	2	
	Roundabout or traffic circle	0	
	Crosswalk	3	
	Active, at-grade railroad crossing	0	
	Sidestreet STOP-controlled or lane	2	
E2	NUMBER OF INTERSECTIONS WITH PRIVATE ACCESS DRIVEWAYS	<i>Number of Occurrences</i>	9
	Left turn movements permitted	5	
	Right-in / Right-out only	0	
E3	NUMBER OF INTERCHANGES	<i>Number of Occurrences</i>	0
	Number of interchanges along corridor	0	
F	ON-STREET PARKING	Lower	3

Total Risk Score:

59

Recommended Posted Speed Limit (km/h):

As determined by road characteristics

60

As determined by policy

0

The recommended posted speed limit may be checked against the prevailing speeds of the roadway and the road's safety performance.

Comments:



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Name of Corridor:	Ray Gibbon Drive 1		
Segment Evaluated:	137 Ave NW	to	615m North of McKenney Ave
Geographic Region:	City of St. Albert		
Road Agency:	St. Ablert		
Road Classification:	Arterial	Length of Corridor:	4,380 m
Urban / Rural:	Urban	Design Speed: (Required for Freeway, Expressway, Highway)	0 km/h
Divided / Undivided:	Undivided	Current Posted Speed: (For information only)	70 km/h
Major / Minor:	Major	Prevailing Speed:	75 km/h
# Through Lanes Per Direction:	1 lane	(85th Percentile - for information only) Policy: (Maximum Posted Speed)	0 km/h

		RISK	Score
A1	GEOMETRY (Horizontal)	Lower	2
A2	GEOMETRY (Vertical)	Lower	2
A3	AVERAGE LANE WIDTH	Lower	2
B	ROADSIDE HAZARDS	Lower	1
C1	PEDESTRIAN EXPOSURE	Higher	9
C2	CYCLIST EXPOSURE	Medium	6
D	PAVEMENT SURFACE	Lower	1
E1	NUMBER OF INTERSECTIONS WITH PUBLIC ROADS	<i>Number of Occurrences</i>	1
	STOP controlled intersection	0	
	Signalized intersection	1	
	Roundabout or traffic circle	0	
	Crosswalk	0	
	Active, at-grade railroad crossing	0	
	Sidestreet STOP-controlled or lane	0	
E2	NUMBER OF INTERSECTIONS WITH PRIVATE ACCESS DRIVEWAYS	<i>Number of Occurrences</i>	0
	Left turn movements permitted	0	
	Right-in / Right-out only	0	
E3	NUMBER OF INTERCHANGES	<i>Number of Occurrences</i>	0
	Number of interchanges along corridor	0	
F	ON-STREET PARKING	Lower	3

Total Risk Score:

27

Recommended Posted Speed Limit (km/h):

As determined by road characteristics

80

As determined by policy

0

The recommended posted speed limit may be checked against the prevailing speeds of the roadway and the road's safety performance.

Comments:



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Version:
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Name of Corridor:	Ray Gibbon Drive 2		
Segment Evaluated:	Giroux Rd	to	Vileneuve rd
Geographic Region:	City of St. Albert		
Road Agency:	St. Ablert		
Road Classification:	Arterial	Length of Corridor:	2,100 m
Urban / Rural:	Urban	Design Speed: (Required for Freeway, Expressway, Highway)	0 km/h
Divided / Undivided:	Undivided	Current Posted Speed: (For information only)	70 km/h
Major / Minor:	Major	Prevailing Speed:	83 km/h
# Through Lanes Per Direction:	1 lane	(85th Percentile - for information only) Policy: (Maximum Posted Speed)	0 km/h

		RISK	Score
A1	GEOMETRY (Horizontal)	Lower	2
A2	GEOMETRY (Vertical)	Lower	2
A3	AVERAGE LANE WIDTH	Lower	2
B	ROADSIDE HAZARDS	Lower	1
C1	PEDESTRIAN EXPOSURE	Higher	9
C2	CYCLIST EXPOSURE	Medium	6
D	PAVEMENT SURFACE	Lower	1
E1	NUMBER OF INTERSECTIONS WITH PUBLIC ROADS	<i>Number of Occurrences</i>	5
	STOP controlled intersection	0	
	Signalized intersection	2	
	Roundabout or traffic circle	0	
	Crosswalk	0	
	Active, at-grade railroad crossing	0	
	Sidestreet STOP-controlled or lane	0	
E2	NUMBER OF INTERSECTIONS WITH PRIVATE ACCESS DRIVEWAYS	<i>Number of Occurrences</i>	0
	Left turn movements permitted	0	
	Right-in / Right-out only	0	
E3	NUMBER OF INTERCHANGES	<i>Number of Occurrences</i>	0
	Number of interchanges along corridor	0	
F	ON-STREET PARKING	Lower	3

Total Risk Score:

31

Recommended Posted Speed Limit (km/h):

As determined by road characteristics

70

As determined by policy

0

The recommended posted speed limit may be checked against the prevailing speeds of the roadway and the road's safety performance.

Comments:



Automated Speed Limit Guidelines

FORM A - Automated Speed Limit Guidelines Spreadsheet

Version:
10-Apr-09

Name of Corridor:	Ray Gibbon Drive 3		
Segment Evaluated:	615m North of McKenney Ave	to	Giroux Rd
Geographic Region:	City of St. Albert		
Road Agency:	St. Ablert		
Road Classification:	Arterial	Length of Corridor:	750 m
Urban / Rural:	Urban	Design Speed: (Required for Freeway, Expressway, Highway)	0 km/h
Divided / Undivided:	Undivided	Current Posted Speed: (For information only)	70 km/h
Major / Minor:	Major	Prevailing Speed:	71 km/h
# Through Lanes Per Direction:	1 lane	(85th Percentile - for information only) Policy: (Maximum Posted Speed)	0 km/h

		RISK	Score
A1	GEOMETRY (Horizontal)	Lower	2
A2	GEOMETRY (Vertical)	Lower	2
A3	AVERAGE LANE WIDTH	Lower	2
B	ROADSIDE HAZARDS	Lower	1
C1	PEDESTRIAN EXPOSURE	Higher	9
C2	CYCLIST EXPOSURE	Medium	6
D	PAVEMENT SURFACE	Medium	2
E1	NUMBER OF INTERSECTIONS WITH PUBLIC ROADS	<i>Number of Occurrences</i>	8
	STOP controlled intersection	0	
	Signalized intersection	1	
	Roundabout or traffic circle	0	
	Crosswalk	0	
	Active, at-grade railroad crossing	1	
	Sidestreet STOP-controlled or lane	0	
E2	NUMBER OF INTERSECTIONS WITH PRIVATE ACCESS DRIVEWAYS	<i>Number of Occurrences</i>	0
	Left turn movements permitted	0	
	Right-in / Right-out only	0	
E3	NUMBER OF INTERCHANGES	<i>Number of Occurrences</i>	0
	Number of interchanges along corridor	0	
F	ON-STREET PARKING	Lower	3

Total Risk Score:

35

Recommended Posted Speed Limit (km/h):

As determined by road characteristics

70

As determined by policy

0

The recommended posted speed limit may be checked against the prevailing speeds of the roadway and the road's safety performance.

Comments:



Automated Speed Limit Guidelines

FORM A - Automated Speed Limit Guidelines Spreadsheet

Version:
10-Apr-09

Name of Corridor:	Reil Drive 1		
Segment Evaluated:	Leclair Way	to	Levasseur Rd
Geographic Region:	City of St. Albert		
Road Agency:	St. Ablert		
Road Classification:	Arterial	Length of Corridor:	730 m
Urban / Rural:	Urban	Design Speed: (Required for Freeway, Expressway, Highway)	0 km/h
Divided / Undivided:	Undivided	Current Posted Speed: (For information only)	50 km/h
Major / Minor:	Major	Prevailing Speed:	41 km/h
# Through Lanes Per Direction:	1 lane	(85th Percentile - for information only) Policy: (Maximum Posted Speed)	0 km/h

		RISK	Score
A1	GEOMETRY (Horizontal)	Lower	2
A2	GEOMETRY (Vertical)	Lower	2
A3	AVERAGE LANE WIDTH	Lower	2
B	ROADSIDE HAZARDS	Medium	2
C1	PEDESTRIAN EXPOSURE	Lower	3
C2	CYCLIST EXPOSURE	Medium	6
D	PAVEMENT SURFACE	Lower	1
E1	NUMBER OF INTERSECTIONS WITH PUBLIC ROADS	<i>Number of Occurrences</i>	13
	STOP controlled intersection	1	
	Signalized intersection	1	
	Roundabout or traffic circle	0	
	Crosswalk	0	
	Active, at-grade railroad crossing	0	
E2	NUMBER OF INTERSECTIONS WITH PRIVATE ACCESS DRIVEWAYS	<i>Number of Occurrences</i>	8
	Left turn movements permitted	3	
	Right-in / Right-out only	0	
E3	NUMBER OF INTERCHANGES	<i>Number of Occurrences</i>	0
	Number of interchanges along corridor	0	
F	ON-STREET PARKING	Lower	3

Total Risk Score:

42

Recommended Posted Speed Limit (km/h):

As determined by road characteristics

70

As determined by policy

0

The recommended posted speed limit may be checked against the prevailing speeds of the roadway and the road's safety performance.

Comments:



Automated Speed Limit Guidelines

FORM A - Automated Speed Limit Guidelines Spreadsheet

Version:
10-Apr-09

Name of Corridor:	Sir Winston Churchill Avenue 1		
Segment Evaluated:	137 Ave NW	to	Levasseur Rd
Geographic Region:	City of St. Albert		
Road Agency:	St. Ablert		
Road Classification:	Arterial	Length of Corridor:	930 m
Urban / Rural:	Urban	Design Speed: (Required for Freeway, Expressway, Highway)	0 km/h
Divided / Undivided:	Undivided	Current Posted Speed: (For information only)	60 km/h
Major / Minor:	Major	Prevailing Speed:	45 km/h
# Through Lanes Per Direction:	2+ lanes	(85th Percentile - for information only) Policy: (Maximum Posted Speed)	0 km/h

		RISK	Score
A1	GEOMETRY (Horizontal)	Lower	2
A2	GEOMETRY (Vertical)	Lower	2
A3	AVERAGE LANE WIDTH	Medium	4
B	ROADSIDE HAZARDS	Medium	2
C1	PEDESTRIAN EXPOSURE	Lower	3
C2	CYCLIST EXPOSURE	Higher	9
D	PAVEMENT SURFACE	Lower	1
E1	NUMBER OF INTERSECTIONS WITH PUBLIC ROADS	<i>Number of Occurrences</i>	17
	STOP controlled intersection	0	
	Signalized intersection	3	
	Roundabout or traffic circle	0	
	Crosswalk	0	
	Active, at-grade railroad crossing	0	
E2	NUMBER OF INTERSECTIONS WITH PRIVATE ACCESS DRIVEWAYS	<i>Number of Occurrences</i>	0
	Left turn movements permitted	0	
	Right-in / Right-out only	0	
E3	NUMBER OF INTERCHANGES	<i>Number of Occurrences</i>	0
	Number of interchanges along corridor	0	
F	ON-STREET PARKING	Lower	3

Total Risk Score:

43

Recommended Posted Speed Limit (km/h):

As determined by road characteristics

70

As determined by policy

0

The recommended posted speed limit may be checked against the prevailing speeds of the roadway and the road's safety performance.

Comments:



Automated Speed Limit Guidelines

FORM A - Automated Speed Limit Guidelines Spreadsheet

Version:
10-Apr-09

Name of Corridor:	Sir Winston Churchill Avenue 2		
Segment Evaluated:	Levasseur Rd	to	310m North of Grandin Woods Estates
Geographic Region:	City of St. Albert		
Road Agency:	St. Ablert		
Road Classification:	Arterial	Length of Corridor:	600 m
Urban / Rural:	Urban	Design Speed: (Required for Freeway, Expressway, Highway)	0 km/h
Divided / Undivided:	Divided	Current Posted Speed: (For information only)	50 km/h
Major / Minor:	Major	Prevailing Speed:	0 km/h
# Through Lanes Per Direction:	2+ lanes	(85th Percentile - for information only) Policy: (Maximum Posted Speed)	0 km/h

		RISK	Score
A1	GEOMETRY (Horizontal)	Medium	4
A2	GEOMETRY (Vertical)	Lower	2
A3	AVERAGE LANE WIDTH	Medium	4
B	ROADSIDE HAZARDS	Higher	3
C1	PEDESTRIAN EXPOSURE	Lower	3
C2	CYCLIST EXPOSURE	Higher	9
D	PAVEMENT SURFACE	Medium	2
E1	NUMBER OF INTERSECTIONS WITH PUBLIC ROADS	<i>Number of Occurrences</i>	27
	STOP controlled intersection	0	
	Signalized intersection	2	
	Roundabout or traffic circle	0	
	Crosswalk	1	
	Active, at-grade railroad crossing	0	
	Sidestreet STOP-controlled or lane	2	
E2	NUMBER OF INTERSECTIONS WITH PRIVATE ACCESS DRIVEWAYS	<i>Number of Occurrences</i>	2
	Left turn movements permitted	0	
	Right-in / Right-out only	1	
E3	NUMBER OF INTERCHANGES	<i>Number of Occurrences</i>	0
	Number of interchanges along corridor	0	
F	ON-STREET PARKING	Lower	3

Total Risk Score:

59

Recommended Posted Speed Limit (km/h):

As determined by road characteristics

60

As determined by policy

0

The recommended posted speed limit may be checked against the prevailing speeds of the roadway and the road's safety performance.

Comments:



Automated Speed Limit Guidelines

FORM A - Automated Speed Limit Guidelines Spreadsheet

Version:
10-Apr-09

Name of Corridor:	Sir Winston Churchill Avenue 3		
Segment Evaluated:	310m North of Grandin Woods Estates	to	Gresham Blvd
Geographic Region:	City of St. Albert		
Road Agency:	St. Ablert		
Road Classification:	Arterial	Length of Corridor:	1,150 m
Urban / Rural:	Urban	Design Speed: (Required for Freeway, Expressway, Highway)	0 km/h
Divided / Undivided:	Divided	Current Posted Speed: (For information only)	50 km/h
Major / Minor:	Major	Prevailing Speed:	60 km/h
# Through Lanes Per Direction:	2+ lanes	(85th Percentile - for information only) Policy: (Maximum Posted Speed)	0 km/h

		RISK	Score
A1	GEOMETRY (Horizontal)	Lower	2
A2	GEOMETRY (Vertical)	Lower	2
A3	AVERAGE LANE WIDTH	Medium	4
B	ROADSIDE HAZARDS	Higher	3
C1	PEDESTRIAN EXPOSURE	Lower	3
C2	CYCLIST EXPOSURE	Higher	9
D	PAVEMENT SURFACE	Medium	2
E1	NUMBER OF INTERSECTIONS WITH PUBLIC ROADS	<i>Number of Occurrences</i>	6
	STOP controlled intersection	0	
	Signalized intersection	1	
	Roundabout or traffic circle	0	
	Crosswalk	0	
	Active, at-grade railroad crossing	0	
	Sidestreet STOP-controlled or lane	3	
E2	NUMBER OF INTERSECTIONS WITH PRIVATE ACCESS DRIVEWAYS	<i>Number of Occurrences</i>	3
	Left turn movements permitted	2	
	Right-in / Right-out only	0	
E3	NUMBER OF INTERCHANGES	<i>Number of Occurrences</i>	0
	Number of interchanges along corridor	0	
F	ON-STREET PARKING	Lower	3

Total Risk Score:

37

Recommended Posted Speed Limit (km/h):

As determined by road characteristics

70

As determined by policy

0

The recommended posted speed limit may be checked against the prevailing speeds of the roadway and the road's safety performance.

Comments:



Automated Speed Limit Guidelines

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Version:
10-Apr-09

Name of Corridor:	Sir Winston Churchill Avenue 4		
Segment Evaluated:	Gresham Blvd	to	Green Grove Dr
Geographic Region:	City of St. Albert		
Road Agency:	St. Ablert		
Road Classification:	Arterial	Length of Corridor:	890 m
Urban / Rural:	Urban	Design Speed: (Required for Freeway, Expressway, Highway)	0 km/h
Divided / Undivided:	Divided	Current Posted Speed: (For information only)	50 km/h
Major / Minor:	Major	Prevailing Speed:	40 km/h
# Through Lanes Per Direction:	2+ lanes	(85th Percentile - for information only) Policy: (Maximum Posted Speed)	0 km/h

		RISK	Score
A1	GEOMETRY (Horizontal)	Medium	4
A2	GEOMETRY (Vertical)	Lower	2
A3	AVERAGE LANE WIDTH	Medium	4
B	ROADSIDE HAZARDS	Higher	3
C1	PEDESTRIAN EXPOSURE	Lower	3
C2	CYCLIST EXPOSURE	Higher	9
D	PAVEMENT SURFACE	Lower	1
E1	NUMBER OF INTERSECTIONS WITH PUBLIC ROADS	<i>Number of Occurrences</i>	22
	STOP controlled intersection	0	
	Signalized intersection	4	
	Roundabout or traffic circle	0	
	Crosswalk	0	
	Active, at-grade railroad crossing	0	
E2	NUMBER OF INTERSECTIONS WITH PRIVATE ACCESS DRIVEWAYS	<i>Number of Occurrences</i>	15
	Left turn movements permitted	1	
	Right-in / Right-out only	11	
E3	NUMBER OF INTERCHANGES	<i>Number of Occurrences</i>	0
	Number of interchanges along corridor	0	
F	ON-STREET PARKING	Lower	3

Total Risk Score:

66

Recommended Posted Speed Limit (km/h):

As determined by road characteristics

50

As determined by policy

0

The recommended posted speed limit may be checked against the prevailing speeds of the roadway and the road's safety performance.

Comments:



Automated Speed Limit Guidelines

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Version:
10-Apr-09

Name of Corridor:	Sir Winston Churchill Avenue 5		
Segment Evaluated:	Green Grove Dr	to	Bishop St
Geographic Region:	City of St. Albert		
Road Agency:	St. Ablert		
Road Classification:	Arterial	Length of Corridor:	660 m
Urban / Rural:	Urban	Design Speed: (Required for Freeway, Expressway, Highway)	0 km/h
Divided / Undivided:	Divided	Current Posted Speed: (For information only)	50 km/h
Major / Minor:	Major	Prevailing Speed:	0 km/h
# Through Lanes Per Direction:	2+ lanes	(85th Percentile - for information only) Policy: (Maximum Posted Speed)	0 km/h

		RISK	Score
A1	GEOMETRY (Horizontal)	Lower	2
A2	GEOMETRY (Vertical)	Lower	2
A3	AVERAGE LANE WIDTH	Medium	4
B	ROADSIDE HAZARDS	Medium	2
C1	PEDESTRIAN EXPOSURE	Lower	3
C2	CYCLIST EXPOSURE	Higher	9
D	PAVEMENT SURFACE	Lower	1
E1	NUMBER OF INTERSECTIONS WITH PUBLIC ROADS	<i>Number of Occurrences</i>	31
	STOP controlled intersection	0	
	Signalized intersection	2	
	Roundabout or traffic circle	0	
	Crosswalk	2	
	Active, at-grade railroad crossing	0	
	Sidestreet STOP-controlled or lane	1	
E2	NUMBER OF INTERSECTIONS WITH PRIVATE ACCESS DRIVEWAYS	<i>Number of Occurrences</i>	2
	Left turn movements permitted	0	
	Right-in / Right-out only	1	
E3	NUMBER OF INTERCHANGES	<i>Number of Occurrences</i>	0
	Number of interchanges along corridor	0	
F	ON-STREET PARKING	Lower	3

Total Risk Score:

59

Recommended Posted Speed Limit (km/h):

As determined by road characteristics

60

As determined by policy

0

The recommended posted speed limit may be checked against the prevailing speeds of the roadway and the road's safety performance.

Comments:



Automated Speed Limit Guidelines

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Version:
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Name of Corridor:	Sir Winston Churchill Avenue 6		
Segment Evaluated:	South Ridgewood Terrace	to	200m North of Boudreau Rd
Geographic Region:	City of St. Albert		
Road Agency:	St. Ablert		
Road Classification:	Arterial	Length of Corridor:	560 m
Urban / Rural:	Urban	Design Speed: (Required for Freeway, Expressway, Highway)	0 km/h
Divided / Undivided:	Divided	Current Posted Speed: (For information only)	50 km/h
Major / Minor:	Major	Prevailing Speed:	0 km/h
# Through Lanes Per Direction:	2+ lanes	(85th Percentile - for information only) Policy: (Maximum Posted Speed)	0 km/h

		RISK	Score
A1	GEOMETRY (Horizontal)	Lower	2
A2	GEOMETRY (Vertical)	Lower	2
A3	AVERAGE LANE WIDTH	Medium	4
B	ROADSIDE HAZARDS	Higher	3
C1	PEDESTRIAN EXPOSURE	Lower	3
C2	CYCLIST EXPOSURE	Higher	9
D	PAVEMENT SURFACE	Lower	1
E1	NUMBER OF INTERSECTIONS WITH PUBLIC ROADS	<i>Number of Occurrences</i>	19
	STOP controlled intersection	0	
	Signalized intersection	1	
	Roundabout or traffic circle	0	
	Crosswalk	1	
	Active, at-grade railroad crossing	0	
	Sidestreet STOP-controlled or lane	1	
E2	NUMBER OF INTERSECTIONS WITH PRIVATE ACCESS DRIVEWAYS	<i>Number of Occurrences</i>	4
	Left turn movements permitted	1	
	Right-in / Right-out only	0	
E3	NUMBER OF INTERCHANGES	<i>Number of Occurrences</i>	0
	Number of interchanges along corridor	0	
F	ON-STREET PARKING	Lower	3

Total Risk Score:

50

Recommended Posted Speed Limit (km/h):

As determined by road characteristics

60

As determined by policy

0

The recommended posted speed limit may be checked against the prevailing speeds of the roadway and the road's safety performance.

Comments:



Automated Speed Limit Guidelines

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Version:
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Name of Corridor:	Sir Winston Churchill Avenue 7		
Segment Evaluated:	50m South of Poirier Ave	to	Poundmarker rd
Geographic Region:	City of St. Albert		
Road Agency:	St. Ablert		
Road Classification:	Arterial	Length of Corridor:	1,700 m
Urban / Rural:	Urban	Design Speed: (Required for Freeway, Expressway, Highway)	0 km/h
Divided / Undivided:	Undivided	Current Posted Speed: (For information only)	50 km/h
Major / Minor:	Major	Prevailing Speed:	43 km/h
# Through Lanes Per Direction:	1 lane	(85th Percentile - for information only) Policy: (Maximum Posted Speed)	0 km/h

		RISK	Score
A1	GEOMETRY (Horizontal)	Lower	2
A2	GEOMETRY (Vertical)	Medium	4
A3	AVERAGE LANE WIDTH	Lower	2
B	ROADSIDE HAZARDS	Medium	2
C1	PEDESTRIAN EXPOSURE	Lower	3
C2	CYCLIST EXPOSURE	Medium	6
D	PAVEMENT SURFACE	Medium	2
E1	NUMBER OF INTERSECTIONS WITH PUBLIC ROADS	<i>Number of Occurrences</i>	16
	STOP controlled intersection	0	
	Signalized intersection	2	
	Roundabout or traffic circle	0	
	Crosswalk	3	
	Active, at-grade railroad crossing	0	
E2	NUMBER OF INTERSECTIONS WITH PRIVATE ACCESS DRIVEWAYS	<i>Number of Occurrences</i>	1
	Left turn movements permitted	1	
	Right-in / Right-out only	0	
E3	NUMBER OF INTERCHANGES	<i>Number of Occurrences</i>	0
	Number of interchanges along corridor	0	
F	ON-STREET PARKING	Lower	3

Total Risk Score:

41

Recommended Posted Speed Limit (km/h):

As determined by road characteristics

70

As determined by policy

0

The recommended posted speed limit may be checked against the prevailing speeds of the roadway and the road's safety performance.

Comments:



Automated Speed Limit Guidelines

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Version:
10-Apr-09

Name of Corridor:	St. Albert Trail 1		
Segment Evaluated:	400m South of Herbert rd	to	Sir Winston Churchill Ave
Geographic Region:	City of St. Albert		
Road Agency:	St. Ablert		
Road Classification:	Arterial	Length of Corridor:	1,870 m
Urban / Rural:	Urban	Design Speed: (Required for Freeway, Expressway, Highway)	0 km/h
Divided / Undivided:	Divided	Current Posted Speed: (For information only)	60 km/h
Major / Minor:	Major	Prevailing Speed:	0 km/h
# Through Lanes Per Direction:	2+ lanes	(85th Percentile - for information only) Policy: (Maximum Posted Speed)	0 km/h

		RISK	Score
A1	GEOMETRY (Horizontal)	Lower	2
A2	GEOMETRY (Vertical)	Lower	2
A3	AVERAGE LANE WIDTH	Medium	4
B	ROADSIDE HAZARDS	Medium	2
C1	PEDESTRIAN EXPOSURE	Medium	6
C2	CYCLIST EXPOSURE	Higher	9
D	PAVEMENT SURFACE	Lower	1
E1	NUMBER OF INTERSECTIONS WITH PUBLIC ROADS	<i>Number of Occurrences</i>	11
	STOP controlled intersection	0	
	Signalized intersection	4	
	Roundabout or traffic circle	0	
	Crosswalk	0	
	Active, at-grade railroad crossing	0	
E2	NUMBER OF INTERSECTIONS WITH PRIVATE ACCESS DRIVEWAYS	<i>Number of Occurrences</i>	10
	Left turn movements permitted	1	
	Right-in / Right-out only	17	
E3	NUMBER OF INTERCHANGES	<i>Number of Occurrences</i>	0
	Number of interchanges along corridor	0	
F	ON-STREET PARKING	Lower	3

Total Risk Score:

50

Recommended Posted Speed Limit (km/h):

As determined by road characteristics

60

As determined by policy

0

The recommended posted speed limit may be checked against the prevailing speeds of the roadway and the road's safety performance.

Comments:



Automated Speed Limit Guidelines

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Version:
10-Apr-09

Name of Corridor:	St. Albert Trail 2		
Segment Evaluated:	Sir Winston Churchill Ave	to	Mission Ave
Geographic Region:	City of St. Albert		
Road Agency:	St. Ablert		
Road Classification:	Arterial	Length of Corridor:	630 m
Urban / Rural:	Urban	Design Speed: (Required for Freeway, Expressway, Highway)	0 km/h
Divided / Undivided:	Divided	Current Posted Speed: (For information only)	60 km/h
Major / Minor:	Major	Prevailing Speed:	0 km/h
# Through Lanes Per Direction:	2+ lanes	(85th Percentile - for information only) Policy: (Maximum Posted Speed)	0 km/h

		RISK	Score
A1	GEOMETRY (Horizontal)	Lower	2
A2	GEOMETRY (Vertical)	Medium	4
A3	AVERAGE LANE WIDTH	Medium	4
B	ROADSIDE HAZARDS	Medium	2
C1	PEDESTRIAN EXPOSURE	Lower	3
C2	CYCLIST EXPOSURE	Higher	9
D	PAVEMENT SURFACE	Lower	1
E1	NUMBER OF INTERSECTIONS WITH PUBLIC ROADS	<i>Number of Occurrences</i>	8
	STOP controlled intersection	0	
	Signalized intersection	1	
	Roundabout or traffic circle	0	
	Crosswalk	0	
	Active, at-grade railroad crossing	0	
	Sidestreet STOP-controlled or lane	0	
E2	NUMBER OF INTERSECTIONS WITH PRIVATE ACCESS DRIVEWAYS	<i>Number of Occurrences</i>	8
	Left turn movements permitted	0	
	Right-in / Right-out only	5	
E3	NUMBER OF INTERCHANGES	<i>Number of Occurrences</i>	0
	Number of interchanges along corridor	0	
F	ON-STREET PARKING	Lower	3

Total Risk Score:

44

Recommended Posted Speed Limit (km/h):

As determined by road characteristics

60

As determined by policy

0

The recommended posted speed limit may be checked against the prevailing speeds of the roadway and the road's safety performance.

Comments:



Automated Speed Limit Guidelines

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Version:
10-Apr-09

Name of Corridor:	St. Albert Trail 3		
Segment Evaluated:	Mission Ave	to	250m North of Boudreau rd/ Giroux rd
Geographic Region:	City of St. Albert		
Road Agency:	St. Ablert		
Road Classification:	Arterial	Length of Corridor:	2,100 m
Urban / Rural:	Urban	Design Speed: (Required for Freeway, Expressway, Highway)	0 km/h
Divided / Undivided:	Divided	Current Posted Speed: (For information only)	60 km/h
Major / Minor:	Major	Prevailing Speed:	0 km/h
# Through Lanes Per Direction:	2+ lanes	(85th Percentile - for information only) Policy: (Maximum Posted Speed)	0 km/h

		RISK	Score
A1	GEOMETRY (Horizontal)	Lower	2
A2	GEOMETRY (Vertical)	Lower	2
A3	AVERAGE LANE WIDTH	Medium	4
B	ROADSIDE HAZARDS	Lower	1
C1	PEDESTRIAN EXPOSURE	Lower	3
C2	CYCLIST EXPOSURE	Higher	9
D	PAVEMENT SURFACE	Lower	1
E1	NUMBER OF INTERSECTIONS WITH PUBLIC ROADS	<i>Number of Occurrences</i>	10
	STOP controlled intersection	0	
	Signalized intersection	4	
	Roundabout or traffic circle	0	
	Crosswalk	0	
	Active, at-grade railroad crossing	0	
	Sidestreet STOP-controlled or lane	1	
E2	NUMBER OF INTERSECTIONS WITH PRIVATE ACCESS DRIVEWAYS	<i>Number of Occurrences</i>	14
	Left turn movements permitted	0	
	Right-in / Right-out only	29	
E3	NUMBER OF INTERCHANGES	<i>Number of Occurrences</i>	0
	Number of interchanges along corridor	0	
F	ON-STREET PARKING	Lower	3

Total Risk Score:

49

Recommended Posted Speed Limit (km/h):

As determined by road characteristics

60

As determined by policy

0

The recommended posted speed limit may be checked against the prevailing speeds of the roadway and the road's safety performance.

Comments:



Automated Speed Limit Guidelines

FORM A - Automated Speed Limit Guidelines Spreadsheet

Version:
10-Apr-09

Name of Corridor:	St. Albert Trail 4		
Segment Evaluated:	250m North of Boudreau rd/ Giroux rd	to	Northern City Limits
Geographic Region:	City of St. Albert		
Road Agency:	St. Ablert		
Road Classification:	Arterial	Length of Corridor:	2,360 m
Urban / Rural:	Urban	Design Speed: (Required for Freeway, Expressway, Highway)	0 km/h
Divided / Undivided:	Divided	Current Posted Speed: (For information only)	60 km/h
Major / Minor:	Major	Prevailing Speed:	0 km/h
# Through Lanes Per Direction:	2+ lanes	(85th Percentile - for information only) Policy: (Maximum Posted Speed)	0 km/h

		RISK	Score
A1	GEOMETRY (Horizontal)	Lower	2
A2	GEOMETRY (Vertical)	Lower	2
A3	AVERAGE LANE WIDTH	Medium	4
B	ROADSIDE HAZARDS	Lower	1
C1	PEDESTRIAN EXPOSURE	Higher	9
C2	CYCLIST EXPOSURE	Medium	6
D	PAVEMENT SURFACE	Lower	1
E1	NUMBER OF INTERSECTIONS WITH PUBLIC ROADS	<i>Number of Occurrences</i>	11
	STOP controlled intersection	0	
	Signalized intersection	5	
	Roundabout or traffic circle	0	
	Crosswalk	0	
	Active, at-grade railroad crossing	0	
	Sidestreet STOP-controlled or lane	0	
E2	NUMBER OF INTERSECTIONS WITH PRIVATE ACCESS DRIVEWAYS	<i>Number of Occurrences</i>	3
	Left turn movements permitted	0	
	Right-in / Right-out only	6	
E3	NUMBER OF INTERCHANGES	<i>Number of Occurrences</i>	0
	Number of interchanges along corridor	0	
F	ON-STREET PARKING	Lower	3

Total Risk Score:

42

Recommended Posted Speed Limit (km/h):

As determined by road characteristics

60

As determined by policy

0

The recommended posted speed limit may be checked against the prevailing speeds of the roadway and the road's safety performance.

Comments:



Automated Speed Limit Guidelines

FORM A - Automated Speed Limit Guidelines Spreadsheet

Version:
10-Apr-09

Name of Corridor:	Veness Road		
Segment Evaluated:	Poundmaker Rd	to	160m South of Boudreau rd
Geographic Region:	City of St. Albert		
Road Agency:	St. Ablert		
Road Classification:	Arterial	Length of Corridor:	1,770 m
Urban / Rural:	Urban	Design Speed: (Required for Freeway, Expressway, Highway)	0 km/h
Divided / Undivided:	Undivided	Current Posted Speed: (For information only)	60 km/h
Major / Minor:	Major	Prevailing Speed:	51 km/h
# Through Lanes Per Direction:	1 lane	(85th Percentile - for information only) Policy: (Maximum Posted Speed)	0 km/h

		RISK	Score
A1	GEOMETRY (Horizontal)	Lower	2
A2	GEOMETRY (Vertical)	Lower	2
A3	AVERAGE LANE WIDTH	Medium	4
B	ROADSIDE HAZARDS	Higher	3
C1	PEDESTRIAN EXPOSURE	Lower	3
C2	CYCLIST EXPOSURE	Medium	6
D	PAVEMENT SURFACE	Lower	1
E1	NUMBER OF INTERSECTIONS WITH PUBLIC ROADS	<i>Number of Occurrences</i>	7
	STOP controlled intersection	1	
	Signalized intersection	1	
	Roundabout or traffic circle	0	
	Crosswalk	0	
	Active, at-grade railroad crossing	1	
	Sidestreet STOP-controlled or lane	6	
E2	NUMBER OF INTERSECTIONS WITH PRIVATE ACCESS DRIVEWAYS	<i>Number of Occurrences</i>	1
	Left turn movements permitted	0	
	Right-in / Right-out only	2	
E3	NUMBER OF INTERCHANGES	<i>Number of Occurrences</i>	0
	Number of interchanges along corridor	0	
F	ON-STREET PARKING	Lower	3

Total Risk Score:

32

Recommended Posted Speed Limit (km/h):

As determined by road characteristics

70

As determined by policy

0

The recommended posted speed limit may be checked against the prevailing speeds of the roadway and the road's safety performance.

Comments:



Automated Speed Limit Guidelines

FORM A - Automated Speed Limit Guidelines Spreadsheet

Version:
10-Apr-09

Name of Corridor:	Erin Ridge Road / Villeneuve Road 1		
Segment Evaluated:	Erin Ridge dr	to	420m West of St. Albert Trail
Geographic Region:	City of St. Albert		
Road Agency:	St. Ablert		
Road Classification:	Arterial	Length of Corridor:	810 m
Urban / Rural:	Urban	Design Speed: (Required for Freeway, Expressway, Highway)	0 km/h
Divided / Undivided:	Undivided	Current Posted Speed: (For information only)	40 km/h
Major / Minor:	Major	Prevailing Speed:	39 km/h
# Through Lanes Per Direction:	1 lane	(85th Percentile - for information only) Policy: (Maximum Posted Speed)	0 km/h

		RISK	Score
A1	GEOMETRY (Horizontal)	Lower	2
A2	GEOMETRY (Vertical)	Lower	2
A3	AVERAGE LANE WIDTH	Medium	4
B	ROADSIDE HAZARDS	Higher	3
C1	PEDESTRIAN EXPOSURE	Lower	3
C2	CYCLIST EXPOSURE	Higher	9
D	PAVEMENT SURFACE	Lower	1
E1	NUMBER OF INTERSECTIONS WITH PUBLIC ROADS	<i>Number of Occurrences</i>	23
	STOP controlled intersection	1	
	Signalized intersection	2	
	Roundabout or traffic circle	0	
	Crosswalk	1	
	Active, at-grade railroad crossing	0	
	Sidestreet STOP-controlled or lane	0	
E2	NUMBER OF INTERSECTIONS WITH PRIVATE ACCESS DRIVEWAYS	<i>Number of Occurrences</i>	15
	Left turn movements permitted	8	
	Right-in / Right-out only	0	
E3	NUMBER OF INTERCHANGES	<i>Number of Occurrences</i>	0
	Number of interchanges along corridor	0	
F	ON-STREET PARKING	Higher	9

Total Risk Score:

71

Recommended Posted Speed Limit (km/h):

As determined by road characteristics

50

As determined by policy

0

The recommended posted speed limit may be checked against the prevailing speeds of the roadway and the road's safety performance.

Comments:



Automated Speed Limit Guidelines

FORM A - Automated Speed Limit Guidelines Spreadsheet

Version:
10-Apr-09

Name of Corridor:	Villeneuve Road 2		
Segment Evaluated:	420m West of St. Albert Trail	to	Ray Gibbon Dr
Geographic Region:	City of St. Albert		
Road Agency:	St. Ablert		
Road Classification:	Arterial	Length of Corridor:	2,710 m
Urban / Rural:	Urban	Design Speed: (Required for Freeway, Expressway, Highway)	0 km/h
Divided / Undivided:	Undivided	Current Posted Speed: (For information only)	60 km/h
Major / Minor:	Major	Prevailing Speed:	47 km/h
# Through Lanes Per Direction:	1 lane	(85th Percentile - for information only) Policy: (Maximum Posted Speed)	0 km/h

		RISK	Score
A1	GEOMETRY (Horizontal)	Lower	2
A2	GEOMETRY (Vertical)	Lower	2
A3	AVERAGE LANE WIDTH	Lower	2
B	ROADSIDE HAZARDS	Lower	1
C1	PEDESTRIAN EXPOSURE	Higher	9
C2	CYCLIST EXPOSURE	Medium	6
D	PAVEMENT SURFACE	Lower	1
E1	NUMBER OF INTERSECTIONS WITH PUBLIC ROADS	<i>Number of Occurrences</i>	2
	STOP controlled intersection	0	
	Signalized intersection	1	
	Roundabout or traffic circle	0	
	Crosswalk	0	
	Active, at-grade railroad crossing	0	
	Sidestreet STOP-controlled or lane	2	
E2	NUMBER OF INTERSECTIONS WITH PRIVATE ACCESS DRIVEWAYS	<i>Number of Occurrences</i>	4
	Left turn movements permitted	6	
	Right-in / Right-out only	0	
E3	NUMBER OF INTERCHANGES	<i>Number of Occurrences</i>	0
	Number of interchanges along corridor	0	
F	ON-STREET PARKING	Lower	3

Total Risk Score:

32

Recommended Posted Speed Limit (km/h):

As determined by road characteristics

70

As determined by policy

0

The recommended posted speed limit may be checked against the prevailing speeds of the roadway and the road's safety performance.

Comments:



Automated Speed Limit Guidelines

FORM A - Automated Speed Limit Guidelines Spreadsheet

Version:
10-Apr-09

Name of Corridor:	N Ridge Drive 1		
Segment Evaluated:	Giroux Rd	to	Hogan Rd
Geographic Region:	City of St. Albert		
Road Agency:	St. Ablert		
Road Classification:	Collector	Length of Corridor:	1,190 m
Urban / Rural:	Urban	Design Speed: (Required for Freeway, Expressway, Highway)	0 km/h
Divided / Undivided:	Undivided	Current Posted Speed:	50 km/h
Major / Minor:	Major	(For information only)	
# Through Lanes	1 lane	Prevailing Speed:	36 km/h
Per Direction:		(85th Percentile - for information only)	
		Policy:	0 km/h
		(Maximum Posted Speed)	

		RISK	Score
A1	GEOMETRY (Horizontal)	Medium	2
A2	GEOMETRY (Vertical)	Lower	1
A3	AVERAGE LANE WIDTH	Medium	4
B	ROADSIDE HAZARDS	Higher	3
C1	PEDESTRIAN EXPOSURE	Lower	3
C2	CYCLIST EXPOSURE	Medium	6
D	PAVEMENT SURFACE	Lower	1
E1	NUMBER OF INTERSECTIONS WITH PUBLIC ROADS	<i>Number of Occurrences</i>	11
	STOP controlled intersection	1	
	Signalized intersection	0	
	Roundabout or traffic circle	0	
	Crosswalk	3	
	Active, at-grade railroad crossing	0	
E2	NUMBER OF INTERSECTIONS WITH PRIVATE ACCESS DRIVEWAYS	<i>Number of Occurrences</i>	15
	Left turn movements permitted	99	
	Right-in / Right-out only	0	
E3	NUMBER OF INTERCHANGES	<i>Number of Occurrences</i>	0
	Number of interchanges along corridor	0	
F	ON-STREET PARKING	Lower	3

Total Risk Score:

49

Recommended Posted Speed Limit (km/h):

As determined by road characteristics

50

As determined by policy

0

The recommended posted speed limit may be checked against the prevailing speeds of the roadway and the road's safety performance.

Comments:



Automated Speed Limit Guidelines

FORM A - Automated Speed Limit Guidelines Spreadsheet

Version:
10-Apr-09

Name of Corridor:	Erin Ridge Drive 1		
Segment Evaluated:	Boudreau Rd	to	Elliot Pl
Geographic Region:	City of St. Albert		
Road Agency:	St. Ablert		
Road Classification:	Collector	Length of Corridor:	460 m
Urban / Rural:	Urban	Design Speed: (Required for Freeway, Expressway, Highway)	0 km/h
Divided / Undivided:	Undivided	Current Posted Speed: (For information only)	40 km/h
Major / Minor:	Major	Prevailing Speed:	47 km/h
# Through Lanes Per Direction:	1 lane	(85th Percentile - for information only) Policy: (Maximum Posted Speed)	0 km/h

		RISK	Score
A1	GEOMETRY (Horizontal)	Medium	2
A2	GEOMETRY (Vertical)	Lower	1
A3	AVERAGE LANE WIDTH	Medium	4
B	ROADSIDE HAZARDS	Higher	3
C1	PEDESTRIAN EXPOSURE	Lower	3
C2	CYCLIST EXPOSURE	Medium	6
D	PAVEMENT SURFACE	Lower	1
E1	NUMBER OF INTERSECTIONS WITH PUBLIC ROADS	<i>Number of Occurrences</i>	24
	STOP controlled intersection	1	
	Signalized intersection	1	
	Roundabout or traffic circle	0	
	Crosswalk	2	
	Active, at-grade railroad crossing	0	
	Sidestreet STOP-controlled or lane	3	
E2	NUMBER OF INTERSECTIONS WITH PRIVATE ACCESS DRIVEWAYS	<i>Number of Occurrences</i>	1
	Left turn movements permitted	1	
	Right-in / Right-out only	0	
E3	NUMBER OF INTERCHANGES	<i>Number of Occurrences</i>	0
	Number of interchanges along corridor	0	
F	ON-STREET PARKING	Higher	9

Total Risk Score:

54

Recommended Posted Speed Limit (km/h):

As determined by road characteristics

50

As determined by policy

0

The recommended posted speed limit may be checked against the prevailing speeds of the roadway and the road's safety performance.

Comments:



Automated Speed Limit Guidelines

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Version:
10-Apr-09

Name of Corridor:	Erin Ridge Drive 2		
Segment Evaluated:	Elliot Pl	to	Everitt Dr
Geographic Region:	City of St. Albert		
Road Agency:	St. Ablert		
Road Classification:	Collector	Length of Corridor:	1,100 m
Urban / Rural:	Urban	Design Speed: (Required for Freeway, Expressway, Highway)	0 km/h
Divided / Undivided:	Undivided	Current Posted Speed:	40 km/h
Major / Minor:	Major	(For information only)	
# Through Lanes	1 lane	Prevailing Speed:	35 km/h
Per Direction:		(85th Percentile - for information only)	
		Policy:	0 km/h
		(Maximum Posted Speed)	

		RISK	Score
A1	GEOMETRY (Horizontal)	Lower	1
A2	GEOMETRY (Vertical)	Lower	1
A3	AVERAGE LANE WIDTH	Medium	4
B	ROADSIDE HAZARDS	Higher	3
C1	PEDESTRIAN EXPOSURE	Lower	3
C2	CYCLIST EXPOSURE	Medium	6
D	PAVEMENT SURFACE	Lower	1
E1	NUMBER OF INTERSECTIONS WITH PUBLIC ROADS	<i>Number of Occurrences</i>	9
	STOP controlled intersection	0	
	Signalized intersection	0	
	Roundabout or traffic circle	0	
	Crosswalk	4	
	Active, at-grade railroad crossing	0	
E2	NUMBER OF INTERSECTIONS WITH PRIVATE ACCESS DRIVEWAYS	<i>Number of Occurrences</i>	7
	Left turn movements permitted	16	
	Right-in / Right-out only	0	
E3	NUMBER OF INTERCHANGES	<i>Number of Occurrences</i>	0
	Number of interchanges along corridor	0	
F	ON-STREET PARKING	Higher	9

Total Risk Score:

44

Recommended Posted Speed Limit (km/h):

As determined by road characteristics

50

As determined by policy

0

The recommended posted speed limit may be checked against the prevailing speeds of the roadway and the road's safety performance.

Comments:



Automated Speed Limit Guidelines

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Version:
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Name of Corridor:	Erin Ridge Drive 3		
Segment Evaluated:	Everitt Dr	to	Bellerose Dr
Geographic Region:	City of St. Albert		
Road Agency:	St. Ablert		
Road Classification:	Collector	Length of Corridor:	860 m
Urban / Rural:	Urban	Design Speed: (Required for Freeway, Expressway, Highway)	0 km/h
Divided / Undivided:	Undivided	Current Posted Speed: (For information only)	40 km/h
Major / Minor:	Minor	Prevailing Speed:	30 km/h
# Through Lanes Per Direction:	1 lane	(85th Percentile - for information only) Policy: (Maximum Posted Speed)	0 km/h

		RISK	Score
A1	GEOMETRY (Horizontal)	Medium	2
A2	GEOMETRY (Vertical)	Lower	1
A3	AVERAGE LANE WIDTH	Medium	4
B	ROADSIDE HAZARDS	Higher	3
C1	PEDESTRIAN EXPOSURE	Lower	3
C2	CYCLIST EXPOSURE	Medium	6
D	PAVEMENT SURFACE	Lower	1
E1	NUMBER OF INTERSECTIONS WITH PUBLIC ROADS	<i>Number of Occurrences</i>	11
	STOP controlled intersection	1	
	Signalized intersection	0	
	Roundabout or traffic circle	0	
	Crosswalk	4	
	Active, at-grade railroad crossing	0	
E2	NUMBER OF INTERSECTIONS WITH PRIVATE ACCESS DRIVEWAYS	<i>Number of Occurrences</i>	15
	Left turn movements permitted	62	
	Right-in / Right-out only	0	
E3	NUMBER OF INTERCHANGES	<i>Number of Occurrences</i>	0
	Number of interchanges along corridor	0	
F	ON-STREET PARKING	Higher	9

Total Risk Score:

55

Recommended Posted Speed Limit (km/h):

As determined by road characteristics

40

As determined by policy

0

The recommended posted speed limit may be checked against the prevailing speeds of the roadway and the road's safety performance.

Comments:



Automated Speed Limit Guidelines

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Version:
10-Apr-09

Name of Corridor:	Oak Vista Drive		
Segment Evaluated:	Bellerose Dr	to	Otter Crescent
Geographic Region:	City of St. Albert		
Road Agency:	St. Ablert		
Road Classification:	Collector	Length of Corridor:	880 m
Urban / Rural:	Urban	Design Speed: (Required for Freeway, Expressway, Highway)	0 km/h
Divided / Undivided:	Undivided	Current Posted Speed: (For information only)	50 km/h
Major / Minor:	Minor	Prevailing Speed:	39 km/h
# Through Lanes Per Direction:	1 lane	(85th Percentile - for information only) Policy: (Maximum Posted Speed)	0 km/h

		RISK	Score
A1	GEOMETRY (Horizontal)	Medium	2
A2	GEOMETRY (Vertical)	Lower	1
A3	AVERAGE LANE WIDTH	Lower	2
B	ROADSIDE HAZARDS	Higher	3
C1	PEDESTRIAN EXPOSURE	Lower	3
C2	CYCLIST EXPOSURE	Medium	6
D	PAVEMENT SURFACE	Lower	1
E1	NUMBER OF INTERSECTIONS WITH PUBLIC ROADS	<i>Number of Occurrences</i>	9
	STOP controlled intersection	1	
	Signalized intersection	0	
	Roundabout or traffic circle	0	
	Crosswalk	2	
	Active, at-grade railroad crossing	0	
E2	NUMBER OF INTERSECTIONS WITH PRIVATE ACCESS DRIVEWAYS	<i>Number of Occurrences</i>	15
	Left turn movements permitted	78	
	Right-in / Right-out only	0	
E3	NUMBER OF INTERCHANGES	<i>Number of Occurrences</i>	0
	Number of interchanges along corridor	0	
F	ON-STREET PARKING	Higher	9

Total Risk Score:

51

Recommended Posted Speed Limit (km/h):

As determined by road characteristics

40

As determined by policy

0

The recommended posted speed limit may be checked against the prevailing speeds of the roadway and the road's safety performance.

Comments:



Automated Speed Limit Guidelines

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Version:
10-Apr-09

Name of Corridor:	Oakland Drive S / Oakland Drive N		
Segment Evaluated:	Otter Crescent	to	Oakmont Dr
Geographic Region:	City of St. Albert		
Road Agency:	St. Ablert		
Road Classification:	Collector	Length of Corridor:	1,700 m
Urban / Rural:	Urban	Design Speed: (Required for Freeway, Expressway, Highway)	0 km/h
Divided / Undivided:	Undivided	Current Posted Speed: (For information only)	50 km/h
Major / Minor:	Minor	Prevailing Speed:	40 km/h
# Through Lanes Per Direction:	1 lane	(85th Percentile - for information only) Policy: (Maximum Posted Speed)	0 km/h

		RISK	Score
A1	GEOMETRY (Horizontal)	Medium	2
A2	GEOMETRY (Vertical)	Lower	1
A3	AVERAGE LANE WIDTH	Lower	2
B	ROADSIDE HAZARDS	Higher	3
C1	PEDESTRIAN EXPOSURE	Lower	3
C2	CYCLIST EXPOSURE	Medium	6
D	PAVEMENT SURFACE	Medium	2
E1	NUMBER OF INTERSECTIONS WITH PUBLIC ROADS	<i>Number of Occurrences</i>	10
	STOP controlled intersection	2	
	Signalized intersection	0	
	Roundabout or traffic circle	0	
	Crosswalk	2	
	Active, at-grade railroad crossing	0	
E2	NUMBER OF INTERSECTIONS WITH PRIVATE ACCESS DRIVEWAYS	<i>Number of Occurrences</i>	15
	Left turn movements permitted	104	
	Right-in / Right-out only	0	
E3	NUMBER OF INTERCHANGES	<i>Number of Occurrences</i>	0
	Number of interchanges along corridor	0	
F	ON-STREET PARKING	Higher	9

Total Risk Score:

53

Recommended Posted Speed Limit (km/h):

As determined by road characteristics

40

As determined by policy

0

The recommended posted speed limit may be checked against the prevailing speeds of the roadway and the road's safety performance.

Comments:



Automated Speed Limit Guidelines

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Version:
10-Apr-09

Name of Corridor:	Oakmont Drive		
Segment Evaluated:	Oak Vista Dr	to	Bellerose Dr
Geographic Region:	City of St. Albert		
Road Agency:	St. Ablert		
Road Classification:	Collector	Length of Corridor:	940 m
Urban / Rural:	Urban	Design Speed: (Required for Freeway, Expressway, Highway)	0 km/h
Divided / Undivided:	Undivided	Current Posted Speed: (For information only)	50 km/h
Major / Minor:	Minor	Prevailing Speed:	38 km/h
# Through Lanes Per Direction:	1 lane	(85th Percentile - for information only) Policy: (Maximum Posted Speed)	0 km/h

		RISK	Score
A1	GEOMETRY (Horizontal)	Higher	3
A2	GEOMETRY (Vertical)	Lower	1
A3	AVERAGE LANE WIDTH	Medium	4
B	ROADSIDE HAZARDS	Higher	3
C1	PEDESTRIAN EXPOSURE	Lower	3
C2	CYCLIST EXPOSURE	Medium	6
D	PAVEMENT SURFACE	Medium	2
E1	NUMBER OF INTERSECTIONS WITH PUBLIC ROADS	<i>Number of Occurrences</i>	16
	STOP controlled intersection	1	
	Signalized intersection	1	
	Roundabout or traffic circle	0	
	Crosswalk	4	
	Active, at-grade railroad crossing	0	
	Sidestreet STOP-controlled or lane	7	
E2	NUMBER OF INTERSECTIONS WITH PRIVATE ACCESS DRIVEWAYS	<i>Number of Occurrences</i>	15
	Left turn movements permitted	28	
	Right-in / Right-out only	0	
E3	NUMBER OF INTERCHANGES	<i>Number of Occurrences</i>	0
	Number of interchanges along corridor	0	
F	ON-STREET PARKING	Higher	9

Total Risk Score:

62

Recommended Posted Speed Limit (km/h):

As determined by road characteristics

40

As determined by policy

0

The recommended posted speed limit may be checked against the prevailing speeds of the roadway and the road's safety performance.

Comments:



Automated Speed Limit Guidelines

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Version:
10-Apr-09

Name of Corridor:	Woodlands Road		
Segment Evaluated:	Sir Winston Churchill Ave	to	Woodcrest Ave
Geographic Region:	City of St. Albert		
Road Agency:	St. Ablert		
Road Classification:	Collector	Length of Corridor:	540 m
Urban / Rural:	Urban	Design Speed: (Required for Freeway, Expressway, Highway)	0 km/h
Divided / Undivided:	Undivided	Current Posted Speed: (For information only)	50 km/h
Major / Minor:	Minor	Prevailing Speed:	30 km/h
# Through Lanes Per Direction:	1 lane	(85th Percentile - for information only) Policy: (Maximum Posted Speed)	0 km/h

		RISK	Score
A1	GEOMETRY (Horizontal)	Medium	2
A2	GEOMETRY (Vertical)	Medium	2
A3	AVERAGE LANE WIDTH	Lower	2
B	ROADSIDE HAZARDS	Medium	2
C1	PEDESTRIAN EXPOSURE	Lower	3
C2	CYCLIST EXPOSURE	Medium	6
D	PAVEMENT SURFACE	Lower	1
E1	NUMBER OF INTERSECTIONS WITH PUBLIC ROADS	<i>Number of Occurrences</i>	6
	STOP controlled intersection	0	
	Signalized intersection	0	
	Roundabout or traffic circle	0	
	Crosswalk	1	
	Active, at-grade railroad crossing	0	
E2	NUMBER OF INTERSECTIONS WITH PRIVATE ACCESS DRIVEWAYS	<i>Number of Occurrences</i>	15
	Left turn movements permitted	25	
	Right-in / Right-out only	0	
E3	NUMBER OF INTERCHANGES	<i>Number of Occurrences</i>	0
	Number of interchanges along corridor	0	
F	ON-STREET PARKING	Higher	9

Total Risk Score:

48

Recommended Posted Speed Limit (km/h):

As determined by road characteristics

50

As determined by policy

0

The recommended posted speed limit may be checked against the prevailing speeds of the roadway and the road's safety performance.

Comments:



Automated Speed Limit Guidelines

FORM A - Automated Speed Limit Guidelines Spreadsheet

Version:
10-Apr-09

Name of Corridor:	Willoughby Drive		
Segment Evaluated:	Woodlands Rd	to	Woodlands Rd
Geographic Region:	City of St. Albert		
Road Agency:	St. Ablert		
Road Classification:	Collector	Length of Corridor:	960 m
Urban / Rural:	Urban	Design Speed: (Required for Freeway, Expressway, Highway)	0 km/h
Divided / Undivided:	Undivided	Current Posted Speed: (For information only)	50 km/h
Major / Minor:	Minor	Prevailing Speed:	32 km/h
# Through Lanes Per Direction:	1 lane	(85th Percentile - for information only) Policy: (Maximum Posted Speed)	0 km/h

		RISK	Score
A1	GEOMETRY (Horizontal)	Medium	2
A2	GEOMETRY (Vertical)	Lower	1
A3	AVERAGE LANE WIDTH	Medium	4
B	ROADSIDE HAZARDS	Higher	3
C1	PEDESTRIAN EXPOSURE	Lower	3
C2	CYCLIST EXPOSURE	Medium	6
D	PAVEMENT SURFACE	Lower	1
E1	NUMBER OF INTERSECTIONS WITH PUBLIC ROADS	<i>Number of Occurrences</i>	16
	STOP controlled intersection	2	
	Signalized intersection	0	
	Roundabout or traffic circle	0	
	Crosswalk	2	
	Active, at-grade railroad crossing	0	
E2	NUMBER OF INTERSECTIONS WITH PRIVATE ACCESS DRIVEWAYS	<i>Number of Occurrences</i>	15
	Left turn movements permitted	36	
	Right-in / Right-out only	0	
E3	NUMBER OF INTERCHANGES	<i>Number of Occurrences</i>	0
	Number of interchanges along corridor	0	
F	ON-STREET PARKING	Higher	9

Total Risk Score:

60

Recommended Posted Speed Limit (km/h):

As determined by road characteristics

40

As determined by policy

0

The recommended posted speed limit may be checked against the prevailing speeds of the roadway and the road's safety performance.

Comments:



Automated Speed Limit Guidelines

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Version:
10-Apr-09

Name of Corridor:	Waverly Drive / Kingswood Drive		
Segment Evaluated:	Willoughby Dr	to	Sir Winston Churchill Ave
Geographic Region:	City of St. Albert		
Road Agency:	St. Ablert		
Road Classification:	Collector	Length of Corridor:	1,100 m
Urban / Rural:	Urban	Design Speed: (Required for Freeway, Expressway, Highway)	km/h
Divided / Undivided:	Undivided	Current Posted Speed: (For information only)	50 km/h
Major / Minor:	Minor	Prevailing Speed: (85th Percentile - for information only)	35 km/h
# Through Lanes Per Direction:	1 lane	Policy: (Maximum Posted Speed)	

		RISK	Score
A1	GEOMETRY (Horizontal)	Medium	2
A2	GEOMETRY (Vertical)	Lower	1
A3	AVERAGE LANE WIDTH	Medium	4
B	ROADSIDE HAZARDS	Higher	3
C1	PEDESTRIAN EXPOSURE	Lower	3
C2	CYCLIST EXPOSURE	Medium	6
D	PAVEMENT SURFACE	Medium	2
E1	NUMBER OF INTERSECTIONS WITH PUBLIC ROADS	<i>Number of Occurrences</i>	15
	STOP controlled intersection	2	
	Signalized intersection	1	
	Roundabout or traffic circle	0	
	Crosswalk	0	
	Active, at-grade railroad crossing	0	
E2	NUMBER OF INTERSECTIONS WITH PRIVATE ACCESS DRIVEWAYS	<i>Number of Occurrences</i>	15
	Left turn movements permitted	55	
	Right-in / Right-out only	0	
E3	NUMBER OF INTERCHANGES	<i>Number of Occurrences</i>	0
	Number of interchanges along corridor	0	
F	ON-STREET PARKING	Higher	9

Total Risk Score:

60

Recommended Posted Speed Limit (km/h):

As determined by road characteristics

40

As determined by policy

The recommended posted speed limit may be checked against the prevailing speeds of the roadway and the road's safety performance.

Comments:

0



Automated Speed Limit Guidelines

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Version:
10-Apr-09

Name of Corridor:	Kingsway Drive		
Segment Evaluated:	Kingswood Dr	to	Kingswood Blvd
Geographic Region:	City of St. Albert		
Road Agency:	St. Ablert		
Road Classification:	Collector	Length of Corridor:	710 m
Urban / Rural:	Urban	Design Speed: (Required for Freeway, Expressway, Highway)	km/h
Divided / Undivided:	Undivided	Current Posted Speed: (For information only)	50 km/h
Major / Minor:	Minor	Prevailing Speed: (85th Percentile - for information only)	28 km/h
# Through Lanes Per Direction:	1 lane	Policy: (Maximum Posted Speed)	

		RISK	Score
A1	GEOMETRY (Horizontal)	Medium	2
A2	GEOMETRY (Vertical)	Lower	1
A3	AVERAGE LANE WIDTH	Medium	4
B	ROADSIDE HAZARDS	Higher	3
C1	PEDESTRIAN EXPOSURE	Lower	3
C2	CYCLIST EXPOSURE	Medium	6
D	PAVEMENT SURFACE	Lower	1
E1	NUMBER OF INTERSECTIONS WITH PUBLIC ROADS	<i>Number of Occurrences</i>	15
	STOP controlled intersection	2	
	Signalized intersection	0	
	Roundabout or traffic circle	0	
	Crosswalk	0	
	Active, at-grade railroad crossing	0	
E2	NUMBER OF INTERSECTIONS WITH PRIVATE ACCESS DRIVEWAYS	<i>Number of Occurrences</i>	15
	Left turn movements permitted	38	
	Right-in / Right-out only	0	
E3	NUMBER OF INTERCHANGES	<i>Number of Occurrences</i>	0
	Number of interchanges along corridor	0	
F	ON-STREET PARKING	Higher	9

Total Risk Score:

59

Recommended Posted Speed Limit (km/h):

As determined by road characteristics

40

As determined by policy

The recommended posted speed limit may be checked against the prevailing speeds of the roadway and the road's safety performance.

Comments:

0



Automated Speed Limit Guidelines

FORM A - Automated Speed Limit Guidelines Spreadsheet

Version:
10-Apr-09

Name of Corridor:	Kingswood Boulevard 3		
Segment Evaluated:	55m South of Kingsford Crescent	to	South Kingsmeade Crecent
Geographic Region:	City of St. Albert		
Road Agency:	St. Ablert		
Road Classification:	Collector	Length of Corridor:	600 m
Urban / Rural:	Urban	Design Speed: (Required for Freeway, Expressway, Highway)	km/h
Divided / Undivided:	Undivided	Current Posted Speed: (For information only)	50 km/h
Major / Minor:	Minor	Prevailing Speed: (85th Percentile - for information only)	0 km/h
# Through Lanes Per Direction:	1 lane	Policy: (Maximum Posted Speed)	

		RISK	Score
A1	GEOMETRY (Horizontal)	Lower	1
A2	GEOMETRY (Vertical)	Lower	1
A3	AVERAGE LANE WIDTH	Medium	4
B	ROADSIDE HAZARDS	Higher	3
C1	PEDESTRIAN EXPOSURE	Lower	3
C2	CYCLIST EXPOSURE	Medium	6
D	PAVEMENT SURFACE	Lower	1
E1	NUMBER OF INTERSECTIONS WITH PUBLIC ROADS	<i>Number of Occurrences</i>	6
	STOP controlled intersection	0	
	Signalized intersection	0	
	Roundabout or traffic circle	0	
	Crosswalk	0	
	Active, at-grade railroad crossing	0	
E2	NUMBER OF INTERSECTIONS WITH PRIVATE ACCESS DRIVEWAYS	<i>Number of Occurrences</i>	14
	Left turn movements permitted	17	
	Right-in / Right-out only	0	
E3	NUMBER OF INTERCHANGES	<i>Number of Occurrences</i>	0
	Number of interchanges along corridor	0	
F	ON-STREET PARKING	Higher	9

Total Risk Score:

48

Recommended Posted Speed Limit (km/h):

As determined by road characteristics

50

As determined by policy

The recommended posted speed limit may be checked against the prevailing speeds of the roadway and the road's safety performance.

Comments:



Automated Speed Limit Guidelines

FORM A - Automated Speed Limit Guidelines Spreadsheet

Version:
10-Apr-09

Name of Corridor:	Kingswood Boulevard 2		
Segment Evaluated:	South Kingsmeade Crecent	to	Kingsmoor Close
Geographic Region:	City of St. Albert		
Road Agency:	St. Ablert		
Road Classification:	Collector	Length of Corridor:	590 m
Urban / Rural:	Urban	Design Speed: (Required for Freeway, Expressway, Highway)	km/h
Divided / Undivided:	Undivided	Current Posted Speed: (For information only)	50 km/h
Major / Minor:	Minor	Prevailing Speed:	41 km/h
# Through Lanes Per Direction:	1 lane	(85th Percentile - for information only) Policy: (Maximum Posted Speed)	

		RISK	Score
A1	GEOMETRY (Horizontal)	Lower	1
A2	GEOMETRY (Vertical)	Medium	2
A3	AVERAGE LANE WIDTH	Medium	4
B	ROADSIDE HAZARDS	Higher	3
C1	PEDESTRIAN EXPOSURE	Lower	3
C2	CYCLIST EXPOSURE	Medium	6
D	PAVEMENT SURFACE	Lower	1
E1	NUMBER OF INTERSECTIONS WITH PUBLIC ROADS	<i>Number of Occurrences</i>	4
	STOP controlled intersection	0	
	Signalized intersection	0	
	Roundabout or traffic circle	0	
	Crosswalk	0	
	Active, at-grade railroad crossing	0	
E2	NUMBER OF INTERSECTIONS WITH PRIVATE ACCESS DRIVEWAYS	<i>Number of Occurrences</i>	0
	Left turn movements permitted	0	
	Right-in / Right-out only	0	
E3	NUMBER OF INTERCHANGES	<i>Number of Occurrences</i>	0
	Number of interchanges along corridor	0	
F	ON-STREET PARKING	Lower	3

Total Risk Score:

27

Recommended Posted Speed Limit (km/h):

As determined by road characteristics

60

As determined by policy

The recommended posted speed limit may be checked against the prevailing speeds of the roadway and the road's safety performance.

Comments:



Automated Speed Limit Guidelines

FORM A - Automated Speed Limit Guidelines Spreadsheet

Version:
10-Apr-09

Name of Corridor:	Kingswood Boulevard 1		
Segment Evaluated:	Kingsmoor Close	to	60m East of Knightsbridge
Geographic Region:	City of St. Albert		
Road Agency:	St. Ablert		
Road Classification:	Collector	Length of Corridor:	500 m
Urban / Rural:	Urban	Design Speed: (Required for Freeway, Expressway, Highway)	km/h
Divided / Undivided:	Undivided	Current Posted Speed: (For information only)	50 km/h
Major / Minor:	Minor	Prevailing Speed:	0 km/h
# Through Lanes Per Direction:	1 lane	(85th Percentile - for information only) Policy: (Maximum Posted Speed)	

		RISK	Score
A1	GEOMETRY (Horizontal)	Medium	2
A2	GEOMETRY (Vertical)	Lower	1
A3	AVERAGE LANE WIDTH	Lower	2
B	ROADSIDE HAZARDS	Higher	3
C1	PEDESTRIAN EXPOSURE	Lower	3
C2	CYCLIST EXPOSURE	Medium	6
D	PAVEMENT SURFACE	Lower	1
E1	NUMBER OF INTERSECTIONS WITH PUBLIC ROADS	<i>Number of Occurrences</i>	6
	STOP controlled intersection	0	
	Signalized intersection	0	
	Roundabout or traffic circle	0	
	Crosswalk	0	
	Active, at-grade railroad crossing	0	
	Sidestreet STOP-controlled or lane	6	
E2	NUMBER OF INTERSECTIONS WITH PRIVATE ACCESS DRIVEWAYS	<i>Number of Occurrences</i>	15
	Left turn movements permitted	23	
	Right-in / Right-out only	0	
E3	NUMBER OF INTERCHANGES	<i>Number of Occurrences</i>	0
	Number of interchanges along corridor	0	
F	ON-STREET PARKING	Higher	9

Total Risk Score:

48

Recommended Posted Speed Limit (km/h):

As determined by road characteristics

50

As determined by policy

The recommended posted speed limit may be checked against the prevailing speeds of the roadway and the road's safety performance.

Comments:



Automated Speed Limit Guidelines

FORM A - Automated Speed Limit Guidelines Spreadsheet

Version:
10-Apr-09

Name of Corridor:	Arlington Drive		
Segment Evaluated:	Herbert Rd	to	Akins Dr
Geographic Region:	City of St. Albert		
Road Agency:	St. Ablert		
Road Classification:	Collector	Length of Corridor:	1,380 m
Urban / Rural:	Urban	Design Speed: (Required for Freeway, Expressway, Highway)	km/h
Divided / Undivided:	Undivided	Current Posted Speed: (For information only)	50 km/h
Major / Minor:	Minor	Prevailing Speed: (85th Percentile - for information only)	37 km/h
# Through Lanes Per Direction:	1 lane	Policy: (Maximum Posted Speed)	

RISK Score

A1	GEOMETRY (Horizontal)	Medium	2
A2	GEOMETRY (Vertical)	Lower	1
A3	AVERAGE LANE WIDTH	Medium	4
B	ROADSIDE HAZARDS	Medium	2
C1	PEDESTRIAN EXPOSURE	Lower	3
C2	CYCLIST EXPOSURE	Medium	6
D	PAVEMENT SURFACE	Medium	2
E1	NUMBER OF INTERSECTIONS WITH PUBLIC ROADS	<i>Number of Occurrences</i>	11
	STOP controlled intersection	1	
	Signalized intersection	1	
	Roundabout or traffic circle	0	
	Crosswalk	3	
	Active, at-grade railroad crossing	0	
E2	NUMBER OF INTERSECTIONS WITH PRIVATE ACCESS DRIVEWAYS	<i>Number of Occurrences</i>	15
	Left turn movements permitted	110	
	Right-in / Right-out only	0	
E3	NUMBER OF INTERCHANGES	<i>Number of Occurrences</i>	0
	Number of interchanges along corridor	0	
F	ON-STREET PARKING	Higher	9

Total Risk Score:

55

Recommended Posted Speed Limit (km/h):

As determined by road characteristics

40

As determined by policy

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The recommended posted speed limit may be checked against the prevailing speeds of the roadway and the road's safety performance.

Comments:

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Automated Speed Limit Guidelines

FORM A - Automated Speed Limit Guidelines Spreadsheet

Version:
10-Apr-09

Name of Corridor:	Attwood Drive		
Segment Evaluated:	Annette Crescent	to	Arlington Dr
Geographic Region:	City of St. Albert		
Road Agency:	St. Ablert		
Road Classification:	Collector	Length of Corridor:	610 m
Urban / Rural:	Urban	Design Speed: (Required for Freeway, Expressway, Highway)	km/h
Divided / Undivided:	Undivided	Current Posted Speed:	50 km/h
Major / Minor:	Minor	Prevailing Speed:	0 km/h
# Through Lanes Per Direction:	1 lane	(85th Percentile - for information only)	
		Policy:	
		(Maximum Posted Speed)	

		RISK	Score
A1	GEOMETRY (Horizontal)	Lower	1
A2	GEOMETRY (Vertical)	Lower	1
A3	AVERAGE LANE WIDTH	Medium	4
B	ROADSIDE HAZARDS	Higher	3
C1	PEDESTRIAN EXPOSURE	Lower	3
C2	CYCLIST EXPOSURE	Medium	6
D	PAVEMENT SURFACE	Medium	2
E1	NUMBER OF INTERSECTIONS WITH PUBLIC ROADS	<i>Number of Occurrences</i>	11
	STOP controlled intersection	1	
	Signalized intersection	0	
	Roundabout or traffic circle	0	
	Crosswalk	1	
	Active, at-grade railroad crossing	0	
E2	NUMBER OF INTERSECTIONS WITH PRIVATE ACCESS DRIVEWAYS	<i>Number of Occurrences</i>	15
	Left turn movements permitted	45	
	Right-in / Right-out only	0	
E3	NUMBER OF INTERCHANGES	<i>Number of Occurrences</i>	0
	Number of interchanges along corridor	0	
F	ON-STREET PARKING	Higher	9

Total Risk Score:

55

Recommended Posted Speed Limit (km/h):

As determined by road characteristics

40

As determined by policy

The recommended posted speed limit may be checked against the prevailing speeds of the roadway and the road's safety performance.

Comments:



Automated Speed Limit Guidelines

FORM A - Automated Speed Limit Guidelines Spreadsheet

Version:
10-Apr-09

Name of Corridor:	Falstaff Avenue / Akins Drive 1		
Segment Evaluated:	Forrest Dr	to	Acorn Crescent
Geographic Region:	City of St. Albert		
Road Agency:	St. Ablert		
Road Classification:	Collector	Length of Corridor:	950 m
Urban / Rural:	Urban	Design Speed: (Required for Freeway, Expressway, Highway)	km/h
Divided / Undivided:	Undivided	Current Posted Speed: (For information only)	50 km/h
Major / Minor:	Major	Prevailing Speed: (85th Percentile - for information only)	38 km/h
# Through Lanes Per Direction:	1 lane	Policy: (Maximum Posted Speed)	

		RISK	Score
A1	GEOMETRY (Horizontal)	Medium	2
A2	GEOMETRY (Vertical)	Lower	1
A3	AVERAGE LANE WIDTH	Medium	4
B	ROADSIDE HAZARDS	Higher	3
C1	PEDESTRIAN EXPOSURE	Lower	3
C2	CYCLIST EXPOSURE	Medium	6
D	PAVEMENT SURFACE	Lower	1
E1	NUMBER OF INTERSECTIONS WITH PUBLIC ROADS	<i>Number of Occurrences</i>	13
	STOP controlled intersection	1	
	Signalized intersection	1	
	Roundabout or traffic circle	0	
	Crosswalk	2	
	Active, at-grade railroad crossing	0	
	Sidestreet STOP-controlled or lane	6	
E2	NUMBER OF INTERSECTIONS WITH PRIVATE ACCESS DRIVEWAYS	<i>Number of Occurrences</i>	15
	Left turn movements permitted	58	
	Right-in / Right-out only	0	
E3	NUMBER OF INTERCHANGES	<i>Number of Occurrences</i>	0
	Number of interchanges along corridor	0	
F	ON-STREET PARKING	Lower	3

Total Risk Score:

51

Recommended Posted Speed Limit (km/h):

As determined by road characteristics

50

As determined by policy

The recommended posted speed limit may be checked against the prevailing speeds of the roadway and the road's safety performance.

Comments:



Automated Speed Limit Guidelines

FORM A - Automated Speed Limit Guidelines Spreadsheet

Version:
10-Apr-09

Name of Corridor:	Alpine Boulevard		
Segment Evaluated:	Akins Dr	to	Akins Dr
Geographic Region:	City of St. Albert		
Road Agency:	St. Ablert		
Road Classification:	Collector	Length of Corridor:	890 m
Urban / Rural:	Urban	Design Speed: (Required for Freeway, Expressway, Highway)	km/h
Divided / Undivided:	Undivided	Current Posted Speed: (For information only)	50 km/h
Major / Minor:	Minor	Prevailing Speed: (85th Percentile - for information only)	36 km/h
# Through Lanes Per Direction:	1 lane	Policy: (Maximum Posted Speed)	

		RISK	Score
A1	GEOMETRY (Horizontal)	Medium	2
A2	GEOMETRY (Vertical)	Lower	1
A3	AVERAGE LANE WIDTH	Lower	2
B	ROADSIDE HAZARDS	Higher	3
C1	PEDESTRIAN EXPOSURE	Lower	3
C2	CYCLIST EXPOSURE	Medium	6
D	PAVEMENT SURFACE	Medium	2
E1	NUMBER OF INTERSECTIONS WITH PUBLIC ROADS	<i>Number of Occurrences</i>	10
	STOP controlled intersection	1	
	Signalized intersection	0	
	Roundabout or traffic circle	0	
	Crosswalk	2	
	Active, at-grade railroad crossing	0	
E2	NUMBER OF INTERSECTIONS WITH PRIVATE ACCESS DRIVEWAYS	<i>Number of Occurrences</i>	15
	Left turn movements permitted	69	
	Right-in / Right-out only	0	
E3	NUMBER OF INTERCHANGES	<i>Number of Occurrences</i>	0
	Number of interchanges along corridor	0	
F	ON-STREET PARKING	Higher	9

Total Risk Score:

53

Recommended Posted Speed Limit (km/h):

As determined by road characteristics

40

As determined by policy

The recommended posted speed limit may be checked against the prevailing speeds of the roadway and the road's safety performance.

Comments:



Automated Speed Limit Guidelines

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Version:
10-Apr-09

Name of Corridor:	Akins Drive 2 / Page Drive		
Segment Evaluated:	Arbor Crescent	to	Pineview Drive
Geographic Region:	City of St. Albert		
Road Agency:	St. Ablert		
Road Classification:	Collector	Length of Corridor:	820 m
Urban / Rural:	Urban	Design Speed: (Required for Freeway, Expressway, Highway)	km/h
Divided / Undivided:	Undivided	Current Posted Speed: (For information only)	50 km/h
Major / Minor:	Major	Prevailing Speed:	32 km/h
# Through Lanes Per Direction:	1 lane	(85th Percentile - for information only) Policy: (Maximum Posted Speed)	

		RISK	Score
A1	GEOMETRY (Horizontal)	Medium	2
A2	GEOMETRY (Vertical)	Lower	1
A3	AVERAGE LANE WIDTH	Medium	4
B	ROADSIDE HAZARDS	Higher	3
C1	PEDESTRIAN EXPOSURE	Lower	3
C2	CYCLIST EXPOSURE	Medium	6
D	PAVEMENT SURFACE	Lower	1
E1	NUMBER OF INTERSECTIONS WITH PUBLIC ROADS	<i>Number of Occurrences</i>	17
	STOP controlled intersection	1	
	Signalized intersection	1	
	Roundabout or traffic circle	0	
	Crosswalk	4	
	Active, at-grade railroad crossing	0	
	Sidestreet STOP-controlled or lane	5	
E2	NUMBER OF INTERSECTIONS WITH PRIVATE ACCESS DRIVEWAYS	<i>Number of Occurrences</i>	15
	Left turn movements permitted	41	
	Right-in / Right-out only	0	
E3	NUMBER OF INTERCHANGES	<i>Number of Occurrences</i>	0
	Number of interchanges along corridor	0	
F	ON-STREET PARKING	Higher	9

Total Risk Score:

61

Recommended Posted Speed Limit (km/h):

As determined by road characteristics

50

As determined by policy

The recommended posted speed limit may be checked against the prevailing speeds of the roadway and the road's safety performance.

Comments:



Automated Speed Limit Guidelines

FORM A - Automated Speed Limit Guidelines Spreadsheet

Version:
10-Apr-09

Name of Corridor:	Forest Drive		
Segment Evaluated:	Cunningham Rd	to	Boudreau Rd
Geographic Region:	City of St. Albert		
Road Agency:	St. Ablert		
Road Classification:	Collector	Length of Corridor:	1,510 m
Urban / Rural:	Urban	Design Speed: (Required for Freeway, Expressway, Highway)	km/h
Divided / Undivided:	Undivided	Current Posted Speed: (For information only)	50 km/h
Major / Minor:	Major	Prevailing Speed:	38 km/h
# Through Lanes Per Direction:	1 lane	(85th Percentile - for information only) Policy: (Maximum Posted Speed)	

		RISK	Score
A1	GEOMETRY (Horizontal)	Medium	2
A2	GEOMETRY (Vertical)	Lower	1
A3	AVERAGE LANE WIDTH	Medium	4
B	ROADSIDE HAZARDS	Higher	3
C1	PEDESTRIAN EXPOSURE	Lower	3
C2	CYCLIST EXPOSURE	Medium	6
D	PAVEMENT SURFACE	Lower	1
E1	NUMBER OF INTERSECTIONS WITH PUBLIC ROADS	<i>Number of Occurrences</i>	12
	STOP controlled intersection	2	
	Signalized intersection	1	
	Roundabout or traffic circle	0	
	Crosswalk	2	
	Active, at-grade railroad crossing	0	
	Sidestreet STOP-controlled or lane	10	
E2	NUMBER OF INTERSECTIONS WITH PRIVATE ACCESS DRIVEWAYS	<i>Number of Occurrences</i>	15
	Left turn movements permitted	117	
	Right-in / Right-out only	0	
E3	NUMBER OF INTERCHANGES	<i>Number of Occurrences</i>	0
	Number of interchanges along corridor	0	
F	ON-STREET PARKING	Higher	9

Total Risk Score:

56

Recommended Posted Speed Limit (km/h):

As determined by road characteristics

50

As determined by policy

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The recommended posted speed limit may be checked against the prevailing speeds of the roadway and the road's safety performance.

Comments:

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Automated Speed Limit Guidelines

FORM A - Automated Speed Limit Guidelines Spreadsheet

Version:
10-Apr-09

Name of Corridor:	Parkwood Drive 1		
Segment Evaluated:	50m South of Primrose Pl	to	Pineview Drive
Geographic Region:	City of St. Albert		
Road Agency:	St. Ablert		
Road Classification:	Collector	Length of Corridor:	510 m
Urban / Rural:	Urban	Design Speed: (Required for Freeway, Expressway, Highway)	km/h
Divided / Undivided:	Undivided	Current Posted Speed: (For information only)	50 km/h
Major / Minor:	Minor	Prevailing Speed: (85th Percentile - for information only)	34 km/h
# Through Lanes Per Direction:	1 lane	Policy: (Maximum Posted Speed)	

RISK Score

A1	GEOMETRY (Horizontal)	Medium	2
A2	GEOMETRY (Vertical)	Lower	1
A3	AVERAGE LANE WIDTH	Medium	4
B	ROADSIDE HAZARDS	Medium	2
C1	PEDESTRIAN EXPOSURE	Lower	3
C2	CYCLIST EXPOSURE	Medium	6
D	PAVEMENT SURFACE	Medium	2
E1	NUMBER OF INTERSECTIONS WITH PUBLIC ROADS	<i>Number of Occurrences</i>	15
	STOP controlled intersection	0	
	Signalized intersection	0	
	Roundabout or traffic circle	0	
	Crosswalk	4	
	Active, at-grade railroad crossing	0	
Sidestreet STOP-controlled or lane	7		
E2	NUMBER OF INTERSECTIONS WITH PRIVATE ACCESS DRIVEWAYS	<i>Number of Occurrences</i>	15
	Left turn movements permitted	21	
	Right-in / Right-out only	0	
E3	NUMBER OF INTERCHANGES	<i>Number of Occurrences</i>	0
	Number of interchanges along corridor	0	
F	ON-STREET PARKING	Higher	9

Total Risk Score:

59

Recommended Posted Speed Limit (km/h):

As determined by road characteristics

40

As determined by policy

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The recommended posted speed limit may be checked against the prevailing speeds of the roadway and the road's safety performance.

Comments:

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Automated Speed Limit Guidelines

FORM A - Automated Speed Limit Guidelines Spreadsheet

Version:
10-Apr-09

Name of Corridor:	Pineview Drive / Keiffor Drive		
Segment Evaluated:	Kingswood Blvd	to	Parkwood Dr
Geographic Region:	City of St. Albert		
Road Agency:	St. Ablert		
Road Classification:	Collector	Length of Corridor:	870 m
Urban / Rural:	Urban	Design Speed: (Required for Freeway, Expressway, Highway)	km/h
Divided / Undivided:	Undivided	Current Posted Speed: (For information only)	50 km/h
Major / Minor:	Minor	Prevailing Speed: (85th Percentile - for information only)	35 km/h
# Through Lanes Per Direction:	1 lane	Policy: (Maximum Posted Speed)	

		RISK	Score
A1	GEOMETRY (Horizontal)	Medium	2
A2	GEOMETRY (Vertical)	Lower	1
A3	AVERAGE LANE WIDTH	Lower	2
B	ROADSIDE HAZARDS	Medium	2
C1	PEDESTRIAN EXPOSURE	Lower	3
C2	CYCLIST EXPOSURE	Medium	6
D	PAVEMENT SURFACE	Lower	1
E1	NUMBER OF INTERSECTIONS WITH PUBLIC ROADS	<i>Number of Occurrences</i>	23
	STOP controlled intersection	3	
	Signalized intersection	0	
	Roundabout or traffic circle	0	
	Crosswalk	5	
	Active, at-grade railroad crossing	0	
E2	NUMBER OF INTERSECTIONS WITH PRIVATE ACCESS DRIVEWAYS	<i>Number of Occurrences</i>	15
	Left turn movements permitted	40	
	Right-in / Right-out only	0	
E3	NUMBER OF INTERCHANGES	<i>Number of Occurrences</i>	0
	Number of interchanges along corridor	0	
F	ON-STREET PARKING	Higher	9

Total Risk Score:

64

Recommended Posted Speed Limit (km/h):

As determined by road characteristics

40

As determined by policy

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The recommended posted speed limit may be checked against the prevailing speeds of the roadway and the road's safety performance.

Comments:

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Automated Speed Limit Guidelines

FORM A - Automated Speed Limit Guidelines Spreadsheet

Version:
10-Apr-09

Name of Corridor:	Centre street / Circle Drive		
Segment Evaluated:	Campbell Rd	to	142 st
Geographic Region:	City of St. Albert		
Road Agency:	St. Ablert		
Road Classification:	Collector	Length of Corridor:	800 m
Urban / Rural:	Urban	Design Speed: (Required for Freeway, Expressway, Highway)	km/h
Divided / Undivided:	Undivided	Current Posted Speed: (For information only)	50 km/h
Major / Minor:	Major	Prevailing Speed:	32 km/h
# Through Lanes Per Direction:	1 lane	(85th Percentile - for information only) Policy: (Maximum Posted Speed)	

RISK Score

A1	GEOMETRY (Horizontal)	Higher	3
A2	GEOMETRY (Vertical)	Lower	1
A3	AVERAGE LANE WIDTH	Medium	4
B	ROADSIDE HAZARDS	Medium	2
C1	PEDESTRIAN EXPOSURE	Higher	9
C2	CYCLIST EXPOSURE	Medium	6
D	PAVEMENT SURFACE	Lower	1
E1	NUMBER OF INTERSECTIONS WITH PUBLIC ROADS	<i>Number of Occurrences</i>	17
	STOP controlled intersection	3	
	Signalized intersection	0	
	Roundabout or traffic circle	0	
	Crosswalk	0	
	Active, at-grade railroad crossing	0	
E2	NUMBER OF INTERSECTIONS WITH PRIVATE ACCESS DRIVEWAYS	<i>Number of Occurrences</i>	8
	Left turn movements permitted	13	
	Right-in / Right-out only	0	
E3	NUMBER OF INTERCHANGES	<i>Number of Occurrences</i>	0
	Number of interchanges along corridor	0	
F	ON-STREET PARKING	Medium	6

Total Risk Score:

57

Recommended Posted Speed Limit (km/h):

As determined by road characteristics

50

As determined by policy

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The recommended posted speed limit may be checked against the prevailing speeds of the roadway and the road's safety performance.

Comments:

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Automated Speed Limit Guidelines

FORM A - Automated Speed Limit Guidelines Spreadsheet

Version:
10-Apr-09

Name of Corridor:	Carleton Drive 1		
Segment Evaluated:	North of Centre Street	to	Cust Ave
Geographic Region:	City of St. Albert		
Road Agency:	St. Ablert		
Road Classification:	Collector	Length of Corridor:	740 m
Urban / Rural:	Urban	Design Speed: (Required for Freeway, Expressway, Highway)	km/h
Divided / Undivided:	Undivided	Current Posted Speed: (For information only)	50 km/h
Major / Minor:	Minor	Prevailing Speed:	0 km/h
# Through Lanes Per Direction:	1 lane	(85th Percentile - for information only) Policy: (Maximum Posted Speed)	

		RISK	Score
A1	GEOMETRY (Horizontal)	Higher	3
A2	GEOMETRY (Vertical)	Lower	1
A3	AVERAGE LANE WIDTH	Higher	6
B	ROADSIDE HAZARDS	Lower	1
C1	PEDESTRIAN EXPOSURE	Higher	9
C2	CYCLIST EXPOSURE	Medium	6
D	PAVEMENT SURFACE	Lower	1
E1	NUMBER OF INTERSECTIONS WITH PUBLIC ROADS	<i>Number of Occurrences</i>	11
	STOP controlled intersection	2	
	Signalized intersection	0	
	Roundabout or traffic circle	0	
	Crosswalk	0	
	Active, at-grade railroad crossing	0	
E2	NUMBER OF INTERSECTIONS WITH PRIVATE ACCESS DRIVEWAYS	<i>Number of Occurrences</i>	9
	Left turn movements permitted	13	
	Right-in / Right-out only	0	
E3	NUMBER OF INTERCHANGES	<i>Number of Occurrences</i>	0
	Number of interchanges along corridor	0	
F	ON-STREET PARKING	Higher	9

Total Risk Score:

56

Recommended Posted Speed Limit (km/h):

As determined by road characteristics

40

As determined by policy

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The recommended posted speed limit may be checked against the prevailing speeds of the roadway and the road's safety performance.

Comments:

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Automated Speed Limit Guidelines

FORM A - Automated Speed Limit Guidelines Spreadsheet

Version:
10-Apr-09

Name of Corridor:	Carleton Drive 2		
Segment Evaluated:	South of Center Street	to	Cust Ave
Geographic Region:	City of St. Albert		
Road Agency:	St. Ablert		
Road Classification:	Collector	Length of Corridor:	760 m
Urban / Rural:	Urban	Design Speed: (Required for Freeway, Expressway, Highway)	km/h
Divided / Undivided:	Undivided	Current Posted Speed: (For information only)	50 km/h
Major / Minor:	Minor	Prevailing Speed:	0 km/h
# Through Lanes Per Direction:	1 lane	(85th Percentile - for information only) Policy: (Maximum Posted Speed)	

		RISK	Score
A1	GEOMETRY (Horizontal)	Higher	3
A2	GEOMETRY (Vertical)	Lower	1
A3	AVERAGE LANE WIDTH	Medium	4
B	ROADSIDE HAZARDS	Lower	1
C1	PEDESTRIAN EXPOSURE	Lower	3
C2	CYCLIST EXPOSURE	Medium	6
D	PAVEMENT SURFACE	Lower	1
E1	NUMBER OF INTERSECTIONS WITH PUBLIC ROADS	<i>Number of Occurrences</i>	16
	STOP controlled intersection	3	
	Signalized intersection	0	
	Roundabout or traffic circle	0	
	Crosswalk	0	
	Active, at-grade railroad crossing	0	
E2	NUMBER OF INTERSECTIONS WITH PRIVATE ACCESS DRIVEWAYS	<i>Number of Occurrences</i>	12
	Left turn movements permitted	18	
	Right-in / Right-out only	0	
E3	NUMBER OF INTERCHANGES	<i>Number of Occurrences</i>	0
	Number of interchanges along corridor	0	
F	ON-STREET PARKING	Higher	9

Total Risk Score:

56

Recommended Posted Speed Limit (km/h):

As determined by road characteristics

40

As determined by policy

The recommended posted speed limit may be checked against the prevailing speeds of the roadway and the road's safety performance.

Comments:



Automated Speed Limit Guidelines

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Version:
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Name of Corridor:	Chevigny Street		
Segment Evaluated:	Circle Drive	to	Corriveau Ave
Geographic Region:	City of St. Albert		
Road Agency:	St. Ablert		
Road Classification:	Collector	Length of Corridor:	510 m
Urban / Rural:	Urban	Design Speed: (Required for Freeway, Expressway, Highway)	km/h
Divided / Undivided:	Undivided	Current Posted Speed: (For information only)	50 km/h
Major / Minor:	Major	Prevailing Speed:	36 km/h
# Through Lanes Per Direction:	1 lane	(85th Percentile - for information only) Policy: (Maximum Posted Speed)	

		RISK	Score
A1	GEOMETRY (Horizontal)	Lower	1
A2	GEOMETRY (Vertical)	Lower	1
A3	AVERAGE LANE WIDTH	Lower	2
B	ROADSIDE HAZARDS	Lower	1
C1	PEDESTRIAN EXPOSURE	Higher	9
C2	CYCLIST EXPOSURE	Medium	6
D	PAVEMENT SURFACE	Lower	1
E1	NUMBER OF INTERSECTIONS WITH PUBLIC ROADS	<i>Number of Occurrences</i>	17
	STOP controlled intersection	2	
	Signalized intersection	0	
	Roundabout or traffic circle	0	
	Crosswalk	0	
	Active, at-grade railroad crossing	0	
E2	NUMBER OF INTERSECTIONS WITH PRIVATE ACCESS DRIVEWAYS	<i>Number of Occurrences</i>	15
	Left turn movements permitted	17	
	Right-in / Right-out only	0	
E3	NUMBER OF INTERCHANGES	<i>Number of Occurrences</i>	0
	Number of interchanges along corridor	0	
F	ON-STREET PARKING	Lower	3

Total Risk Score:

56

Recommended Posted Speed Limit (km/h):

As determined by road characteristics

50

As determined by policy

The recommended posted speed limit may be checked against the prevailing speeds of the roadway and the road's safety performance.

Comments:



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Name of Corridor:	Carnegie Drive / Curial Drive		
Segment Evaluated:	100m North of Corriveau Ave	to	Carswell St
Geographic Region:	City of St. Albert		
Road Agency:	St. Ablert		
Road Classification:	Collector	Length of Corridor:	1,000 m
Urban / Rural:	Urban	Design Speed: (Required for Freeway, Expressway, Highway)	km/h
Divided / Undivided:	Undivided	Current Posted Speed: (For information only)	50 km/h
Major / Minor:	Major	Prevailing Speed: (85th Percentile - for information only)	38 km/h
# Through Lanes Per Direction:	1 lane	Policy: (Maximum Posted Speed)	

		RISK	Score
A1	GEOMETRY (Horizontal)	Medium	2
A2	GEOMETRY (Vertical)	Lower	1
A3	AVERAGE LANE WIDTH	Lower	2
B	ROADSIDE HAZARDS	Higher	3
C1	PEDESTRIAN EXPOSURE	Higher	9
C2	CYCLIST EXPOSURE	Medium	6
D	PAVEMENT SURFACE	Lower	1
E1	NUMBER OF INTERSECTIONS WITH PUBLIC ROADS	<i>Number of Occurrences</i>	12
	STOP controlled intersection	2	
	Signalized intersection	1	
	Roundabout or traffic circle	0	
	Crosswalk	0	
	Active, at-grade railroad crossing	0	
E2	NUMBER OF INTERSECTIONS WITH PRIVATE ACCESS DRIVEWAYS	<i>Number of Occurrences</i>	11
	Left turn movements permitted	21	
	Right-in / Right-out only	0	
E3	NUMBER OF INTERCHANGES	<i>Number of Occurrences</i>	0
	Number of interchanges along corridor	0	
F	ON-STREET PARKING	Higher	9

Total Risk Score:

56

Recommended Posted Speed Limit (km/h):

As determined by road characteristics

50

As determined by policy

The recommended posted speed limit may be checked against the prevailing speeds of the roadway and the road's safety performance.

Comments:



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Name of Corridor:	Sunset Boulevard		
Segment Evaluated:	Cunningham Rd	to	Sheridan Dr
Geographic Region:	City of St. Albert		
Road Agency:	St. Ablert		
Road Classification:	Collector	Length of Corridor:	630 m
Urban / Rural:	Urban	Design Speed: (Required for Freeway, Expressway, Highway)	km/h
Divided / Undivided:	Undivided	Current Posted Speed: (For information only)	50 km/h
Major / Minor:	Minor	Prevailing Speed:	34 km/h
# Through Lanes Per Direction:	1 lane	(85th Percentile - for information only) Policy: (Maximum Posted Speed)	

		RISK	Score
A1	GEOMETRY (Horizontal)	Medium	2
A2	GEOMETRY (Vertical)	Lower	1
A3	AVERAGE LANE WIDTH	Medium	4
B	ROADSIDE HAZARDS	Higher	3
C1	PEDESTRIAN EXPOSURE	Lower	3
C2	CYCLIST EXPOSURE	Medium	6
D	PAVEMENT SURFACE	Lower	1
E1	NUMBER OF INTERSECTIONS WITH PUBLIC ROADS	<i>Number of Occurrences</i>	13
	STOP controlled intersection	1	
	Signalized intersection	0	
	Roundabout or traffic circle	0	
	Crosswalk	1	
	Active, at-grade railroad crossing	0	
E2	NUMBER OF INTERSECTIONS WITH PRIVATE ACCESS DRIVEWAYS	<i>Number of Occurrences</i>	15
	Left turn movements permitted	42	
	Right-in / Right-out only	0	
E3	NUMBER OF INTERCHANGES	<i>Number of Occurrences</i>	0
	Number of interchanges along corridor	0	
F	ON-STREET PARKING	Higher	9

Total Risk Score:

57

Recommended Posted Speed Limit (km/h):

As determined by road characteristics

40

As determined by policy

The recommended posted speed limit may be checked against the prevailing speeds of the roadway and the road's safety performance.

Comments:



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Name of Corridor:	Salisbury Avenue		
Segment Evaluated:	Sunset Blvd	to	Sunset Blvd
Geographic Region:	City of St. Albert		
Road Agency:	St. Ablert		
Road Classification:	Collector	Length of Corridor:	1,000 m
Urban / Rural:	Urban	Design Speed: (Required for Freeway, Expressway, Highway)	km/h
Divided / Undivided:	Undivided	Current Posted Speed: (For information only)	50 km/h
Major / Minor:	Minor	Prevailing Speed: (85th Percentile - for information only)	33 km/h
# Through Lanes Per Direction:	1 lane	Policy: (Maximum Posted Speed)	

		RISK	Score
A1	GEOMETRY (Horizontal)	Medium	2
A2	GEOMETRY (Vertical)	Lower	1
A3	AVERAGE LANE WIDTH	Medium	4
B	ROADSIDE HAZARDS	Higher	3
C1	PEDESTRIAN EXPOSURE	Lower	3
C2	CYCLIST EXPOSURE	Medium	6
D	PAVEMENT SURFACE	Lower	1
E1	NUMBER OF INTERSECTIONS WITH PUBLIC ROADS	<i>Number of Occurrences</i>	10
	STOP controlled intersection	1	
	Signalized intersection	0	
	Roundabout or traffic circle	0	
	Crosswalk	2	
	Active, at-grade railroad crossing	0	
E2	NUMBER OF INTERSECTIONS WITH PRIVATE ACCESS DRIVEWAYS	<i>Number of Occurrences</i>	15
	Left turn movements permitted	56	
	Right-in / Right-out only	0	
E3	NUMBER OF INTERCHANGES	<i>Number of Occurrences</i>	0
	Number of interchanges along corridor	0	
F	ON-STREET PARKING	Higher	9

Total Risk Score:

54

Recommended Posted Speed Limit (km/h):

As determined by road characteristics

40

As determined by policy

The recommended posted speed limit may be checked against the prevailing speeds of the roadway and the road's safety performance.

Comments:



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Name of Corridor:	Bishop Street		
Segment Evaluated:	Sturgeon Rd	to	Sir Winston Churchill Ave
Geographic Region:	City of St. Albert		
Road Agency:	St. Ablert		
Road Classification:	Collector	Length of Corridor:	500 m
Urban / Rural:	Urban	Design Speed: (Required for Freeway, Expressway, Highway)	km/h
Divided / Undivided:	Undivided	Current Posted Speed: (For information only)	50 km/h
Major / Minor:	Minor	Prevailing Speed:	37 km/h
# Through Lanes Per Direction:	1 lane	(85th Percentile - for information only) Policy: (Maximum Posted Speed)	

		RISK	Score
A1	GEOMETRY (Horizontal)	Higher	3
A2	GEOMETRY (Vertical)	Lower	1
A3	AVERAGE LANE WIDTH	Medium	4
B	ROADSIDE HAZARDS	Medium	2
C1	PEDESTRIAN EXPOSURE	Lower	3
C2	CYCLIST EXPOSURE	Medium	6
D	PAVEMENT SURFACE	Lower	1
E1	NUMBER OF INTERSECTIONS WITH PUBLIC ROADS	<i>Number of Occurrences</i>	16
	STOP controlled intersection	1	
	Signalized intersection	0	
	Roundabout or traffic circle	0	
	Crosswalk	2	
	Active, at-grade railroad crossing	0	
E2	NUMBER OF INTERSECTIONS WITH PRIVATE ACCESS DRIVEWAYS	<i>Number of Occurrences</i>	15
	Left turn movements permitted	23	
	Right-in / Right-out only	0	
E3	NUMBER OF INTERCHANGES	<i>Number of Occurrences</i>	0
	Number of interchanges along corridor	0	
F	ON-STREET PARKING	Higher	9

Total Risk Score:

60

Recommended Posted Speed Limit (km/h):

As determined by road characteristics

40

As determined by policy

The recommended posted speed limit may be checked against the prevailing speeds of the roadway and the road's safety performance.

Comments:



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Name of Corridor:	Burnham Avenue		
Segment Evaluated:	Sturgeon Rd	to	Sturgeon Rd
Geographic Region:	City of St. Albert		
Road Agency:	St. Ablert		
Road Classification:	Collector	Length of Corridor:	700 m
Urban / Rural:	Urban	Design Speed: (Required for Freeway, Expressway, Highway)	km/h
Divided / Undivided:	Undivided	Current Posted Speed: (For information only)	50 km/h
Major / Minor:	Minor	Prevailing Speed:	32 km/h
# Through Lanes Per Direction:	1 lane	(85th Percentile - for information only) Policy: (Maximum Posted Speed)	

		RISK	Score
A1	GEOMETRY (Horizontal)	Higher	3
A2	GEOMETRY (Vertical)	Lower	1
A3	AVERAGE LANE WIDTH	Lower	2
B	ROADSIDE HAZARDS	Higher	3
C1	PEDESTRIAN EXPOSURE	Lower	3
C2	CYCLIST EXPOSURE	Medium	6
D	PAVEMENT SURFACE	Lower	1
E1	NUMBER OF INTERSECTIONS WITH PUBLIC ROADS	<i>Number of Occurrences</i>	11
	STOP controlled intersection	1	
	Signalized intersection	0	
	Roundabout or traffic circle	0	
	Crosswalk	0	
	Active, at-grade railroad crossing	0	
E2	NUMBER OF INTERSECTIONS WITH PRIVATE ACCESS DRIVEWAYS	<i>Number of Occurrences</i>	15
	Left turn movements permitted	42	
	Right-in / Right-out only	0	
E3	NUMBER OF INTERCHANGES	<i>Number of Occurrences</i>	0
	Number of interchanges along corridor	0	
F	ON-STREET PARKING	Higher	9

Total Risk Score:

54

Recommended Posted Speed Limit (km/h):

As determined by road characteristics

40

As determined by policy

The recommended posted speed limit may be checked against the prevailing speeds of the roadway and the road's safety performance.

Comments:



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Name of Corridor:	Inglewood Drive		
Segment Evaluated:	Bellerose Dr	to	Boudreau Rd
Geographic Region:	City of St. Albert		
Road Agency:	St. Ablert		
Road Classification:	Collector	Length of Corridor:	980 m
Urban / Rural:	Urban	Design Speed: (Required for Freeway, Expressway, Highway)	km/h
Divided / Undivided:	Undivided	Current Posted Speed: (For information only)	50 km/h
Major / Minor:	Major	Prevailing Speed:	36 km/h
# Through Lanes Per Direction:	1 lane	(85th Percentile - for information only) Policy: (Maximum Posted Speed)	

		RISK	Score
A1	GEOMETRY (Horizontal)	Higher	3
A2	GEOMETRY (Vertical)	Medium	2
A3	AVERAGE LANE WIDTH	Medium	4
B	ROADSIDE HAZARDS	Medium	2
C1	PEDESTRIAN EXPOSURE	Lower	3
C2	CYCLIST EXPOSURE	Medium	6
D	PAVEMENT SURFACE	Lower	1
E1	NUMBER OF INTERSECTIONS WITH PUBLIC ROADS	<i>Number of Occurrences</i>	8
	STOP controlled intersection	0	
	Signalized intersection	2	
	Roundabout or traffic circle	0	
	Crosswalk	0	
	Active, at-grade railroad crossing	0	
E2	NUMBER OF INTERSECTIONS WITH PRIVATE ACCESS DRIVEWAYS	<i>Number of Occurrences</i>	9
	Left turn movements permitted	18	
	Right-in / Right-out only	0	
E3	NUMBER OF INTERCHANGES	<i>Number of Occurrences</i>	0
	Number of interchanges along corridor	0	
F	ON-STREET PARKING	Higher	9

Total Risk Score:

47

Recommended Posted Speed Limit (km/h):

As determined by road characteristics

50

As determined by policy

The recommended posted speed limit may be checked against the prevailing speeds of the roadway and the road's safety performance.

Comments:



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Name of Corridor:	Everitt Drive North		
Segment Evaluated:	Element Dr N	to	Erin Ridge Dr
Geographic Region:	City of St. Albert		
Road Agency:	St. Ablert		
Road Classification:	Collector	Length of Corridor:	670 m
Urban / Rural:	Urban	Design Speed: (Required for Freeway, Expressway, Highway)	km/h
Divided / Undivided:	Undivided	Current Posted Speed: (For information only)	40 km/h
Major / Minor:	Major	Prevailing Speed:	33 km/h
# Through Lanes Per Direction:	1 lane	(85th Percentile - for information only) Policy: (Maximum Posted Speed)	

RISK Score

A1	GEOMETRY (Horizontal)	Medium	2
A2	GEOMETRY (Vertical)	Lower	1
A3	AVERAGE LANE WIDTH	Medium	4
B	ROADSIDE HAZARDS	Higher	3
C1	PEDESTRIAN EXPOSURE	Lower	3
C2	CYCLIST EXPOSURE	Medium	6
D	PAVEMENT SURFACE	Lower	1
E1	NUMBER OF INTERSECTIONS WITH PUBLIC ROADS	<i>Number of Occurrences</i>	16
	STOP controlled intersection	1	
	Signalized intersection	0	
	Roundabout or traffic circle	0	
	Crosswalk	3	
	Active, at-grade railroad crossing	0	
E2	NUMBER OF INTERSECTIONS WITH PRIVATE ACCESS DRIVEWAYS	<i>Number of Occurrences</i>	15
	Left turn movements permitted	56	
	Right-in / Right-out only	0	
E3	NUMBER OF INTERCHANGES	<i>Number of Occurrences</i>	0
	Number of interchanges along corridor	0	
F	ON-STREET PARKING	Higher	9

Total Risk Score:

60

Recommended Posted Speed Limit (km/h):

As determined by road characteristics

50

As determined by policy

The recommended posted speed limit may be checked against the prevailing speeds of the roadway and the road's safety performance.

Comments:



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Name of Corridor:	Element Drive North		
Segment Evaluated:	Everitt Dr N	to	Neil Ross Rd
Geographic Region:	City of St. Albert		
Road Agency:	St. Ablert		
Road Classification:	Collector	Length of Corridor:	510 m
Urban / Rural:	Urban	Design Speed: (Required for Freeway, Expressway, Highway)	km/h
Divided / Undivided:	Undivided	Current Posted Speed: (For information only)	40 km/h
Major / Minor:	Major	Prevailing Speed:	40 km/h
# Through Lanes Per Direction:	1 lane	(85th Percentile - for information only) Policy: (Maximum Posted Speed)	

RISK Score

A1	GEOMETRY (Horizontal)	Medium	2
A2	GEOMETRY (Vertical)	Lower	1
A3	AVERAGE LANE WIDTH	Medium	4
B	ROADSIDE HAZARDS	Medium	2
C1	PEDESTRIAN EXPOSURE	Lower	3
C2	CYCLIST EXPOSURE	Medium	6
D	PAVEMENT SURFACE	Lower	1
E1	NUMBER OF INTERSECTIONS WITH PUBLIC ROADS	<i>Number of Occurrences</i>	17
	STOP controlled intersection	2	
	Signalized intersection	0	
	Roundabout or traffic circle	0	
	Crosswalk	0	
	Active, at-grade railroad crossing	0	
Sidestreet STOP-controlled or lane	1		
E2	NUMBER OF INTERSECTIONS WITH PRIVATE ACCESS DRIVEWAYS	<i>Number of Occurrences</i>	4
	Left turn movements permitted	4	
	Right-in / Right-out only	0	
E3	NUMBER OF INTERCHANGES	<i>Number of Occurrences</i>	0
	Number of interchanges along corridor	0	
F	ON-STREET PARKING	Higher	9

Total Risk Score:

49

Recommended Posted Speed Limit (km/h):

As determined by road characteristics

50

As determined by policy

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The recommended posted speed limit may be checked against the prevailing speeds of the roadway and the road's safety performance.

Comments:

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Automated Speed Limit Guidelines

FORM A - Automated Speed Limit Guidelines Spreadsheet

Version:
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Name of Corridor:	Dunbar Street/ Liberton Drive 1		
Segment Evaluated:	Deerbourn Dr	to	Lennox Dr
Geographic Region:	City of St. Albert		
Road Agency:	St. Ablert		
Road Classification:	Collector	Length of Corridor:	820 m
Urban / Rural:	Urban	Design Speed: (Required for Freeway, Expressway, Highway)	km/h
Divided / Undivided:	Undivided	Current Posted Speed: (For information only)	40 km/h
Major / Minor:	Major	Prevailing Speed:	31 km/h
# Through Lanes Per Direction:	1 lane	(85th Percentile - for information only) Policy: (Maximum Posted Speed)	

		RISK	Score
A1	GEOMETRY (Horizontal)	Higher	3
A2	GEOMETRY (Vertical)	Lower	1
A3	AVERAGE LANE WIDTH	Lower	2
B	ROADSIDE HAZARDS	Higher	3
C1	PEDESTRIAN EXPOSURE	Lower	3
C2	CYCLIST EXPOSURE	Medium	6
D	PAVEMENT SURFACE	Lower	1
E1	NUMBER OF INTERSECTIONS WITH PUBLIC ROADS	<i>Number of Occurrences</i>	17
	STOP controlled intersection	2	
	Signalized intersection	1	
	Roundabout or traffic circle	0	
	Crosswalk	2	
	Active, at-grade railroad crossing	0	
	Sidestreet STOP-controlled or lane	1	
E2	NUMBER OF INTERSECTIONS WITH PRIVATE ACCESS DRIVEWAYS	<i>Number of Occurrences</i>	12
	Left turn movements permitted	19	
	Right-in / Right-out only	0	
E3	NUMBER OF INTERCHANGES	<i>Number of Occurrences</i>	0
	Number of interchanges along corridor	0	
F	ON-STREET PARKING	Higher	9

Total Risk Score:

57

Recommended Posted Speed Limit (km/h):

As determined by road characteristics

50

As determined by policy

The recommended posted speed limit may be checked against the prevailing speeds of the roadway and the road's safety performance.

Comments:



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Name of Corridor:	Liberton Drive 2		
Segment Evaluated:	Lennox Dr	to	McKenney Ave
Geographic Region:	City of St. Albert		
Road Agency:	St. Ablert		
Road Classification:	Collector	Length of Corridor:	610 m
Urban / Rural:	Urban	Design Speed: (Required for Freeway, Expressway, Highway)	km/h
Divided / Undivided:	Undivided	Current Posted Speed: (For information only)	40 km/h
Major / Minor:	Major	Prevailing Speed: (85th Percentile - for information only)	37 km/h
# Through Lanes Per Direction:	1 lane	Policy: (Maximum Posted Speed)	

		RISK	Score
A1	GEOMETRY (Horizontal)	Higher	3
A2	GEOMETRY (Vertical)	Lower	1
A3	AVERAGE LANE WIDTH	Medium	4
B	ROADSIDE HAZARDS	Higher	3
C1	PEDESTRIAN EXPOSURE	Lower	3
C2	CYCLIST EXPOSURE	Medium	6
D	PAVEMENT SURFACE	Lower	1
E1	NUMBER OF INTERSECTIONS WITH PUBLIC ROADS	<i>Number of Occurrences</i>	12
	STOP controlled intersection	1	
	Signalized intersection	1	
	Roundabout or traffic circle	0	
	Crosswalk	0	
	Active, at-grade railroad crossing	0	
E2	NUMBER OF INTERSECTIONS WITH PRIVATE ACCESS DRIVEWAYS	<i>Number of Occurrences</i>	5
	Left turn movements permitted	6	
	Right-in / Right-out only	0	
E3	NUMBER OF INTERCHANGES	<i>Number of Occurrences</i>	0
	Number of interchanges along corridor	0	
F	ON-STREET PARKING	Lower	3

Total Risk Score:

41

Recommended Posted Speed Limit (km/h):

As determined by road characteristics

50

As determined by policy

The recommended posted speed limit may be checked against the prevailing speeds of the roadway and the road's safety performance.

Comments:



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Name of Corridor:	Lennox Drive / Inglewood Drive		
Segment Evaluated:	Inglewood Dr	to	Dawson Rd
Geographic Region:	City of St. Albert		
Road Agency:	St. Ablert		
Road Classification:	Collector	Length of Corridor:	750 m
Urban / Rural:	Urban	Design Speed: (Required for Freeway, Expressway, Highway)	km/h
Divided / Undivided:	Undivided	Current Posted Speed: (For information only)	40 km/h
Major / Minor:	Major	Prevailing Speed:	35 km/h
# Through Lanes Per Direction:	1 lane	(85th Percentile - for information only) Policy: (Maximum Posted Speed)	

		RISK	Score
A1	GEOMETRY (Horizontal)	Medium	2
A2	GEOMETRY (Vertical)	Lower	1
A3	AVERAGE LANE WIDTH	Lower	2
B	ROADSIDE HAZARDS	Medium	2
C1	PEDESTRIAN EXPOSURE	Lower	3
C2	CYCLIST EXPOSURE	Medium	6
D	PAVEMENT SURFACE	Lower	1
E1	NUMBER OF INTERSECTIONS WITH PUBLIC ROADS	<i>Number of Occurrences</i>	23
	STOP controlled intersection	2	
	Signalized intersection	1	
	Roundabout or traffic circle	0	
	Crosswalk	4	
	Active, at-grade railroad crossing	0	
	Sidestreet STOP-controlled or lane	4	
E2	NUMBER OF INTERSECTIONS WITH PRIVATE ACCESS DRIVEWAYS	<i>Number of Occurrences</i>	15
	Left turn movements permitted	44	
	Right-in / Right-out only	0	
E3	NUMBER OF INTERCHANGES	<i>Number of Occurrences</i>	0
	Number of interchanges along corridor	0	
F	ON-STREET PARKING	Lower	3

Total Risk Score:

58

Recommended Posted Speed Limit (km/h):

As determined by road characteristics

50

As determined by policy

The recommended posted speed limit may be checked against the prevailing speeds of the roadway and the road's safety performance.

Comments:



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Name of Corridor:	Langholm Drive		
Segment Evaluated:	60m South of Lorne Crescent	to	Dawson Rd
Geographic Region:	City of St. Albert		
Road Agency:	St. Ablert		
Road Classification:	Collector	Length of Corridor:	840 m
Urban / Rural:	Urban	Design Speed: (Required for Freeway, Expressway, Highway)	km/h
Divided / Undivided:	Undivided	Current Posted Speed: (For information only)	40 km/h
Major / Minor:	Minor	Prevailing Speed: (85th Percentile - for information only)	31 km/h
# Through Lanes Per Direction:	1 lane	Policy: (Maximum Posted Speed)	

RISK Score

A1	GEOMETRY (Horizontal)	Higher	3
A2	GEOMETRY (Vertical)	Lower	1
A3	AVERAGE LANE WIDTH	Medium	4
B	ROADSIDE HAZARDS	Higher	3
C1	PEDESTRIAN EXPOSURE	Lower	3
C2	CYCLIST EXPOSURE	Medium	6
D	PAVEMENT SURFACE	Lower	1
E1	NUMBER OF INTERSECTIONS WITH PUBLIC ROADS	<i>Number of Occurrences</i>	14
	STOP controlled intersection	2	
	Signalized intersection	0	
	Roundabout or traffic circle	0	
	Crosswalk	1	
	Active, at-grade railroad crossing	0	
E2	NUMBER OF INTERSECTIONS WITH PRIVATE ACCESS DRIVEWAYS	<i>Number of Occurrences</i>	15
	Left turn movements permitted	69	
	Right-in / Right-out only	0	
E3	NUMBER OF INTERCHANGES	<i>Number of Occurrences</i>	0
	Number of interchanges along corridor	0	
F	ON-STREET PARKING	Higher	9

Total Risk Score:

59

Recommended Posted Speed Limit (km/h):

As determined by road characteristics

40

As determined by policy

The recommended posted speed limit may be checked against the prevailing speeds of the roadway and the road's safety performance.

Comments:



Automated Speed Limit Guidelines

FORM A - Automated Speed Limit Guidelines Spreadsheet

Version:
10-Apr-09

Name of Corridor:	Deer Ridge Drive 1		
Segment Evaluated:	Dorchester Point	to	Dennison Dr
Geographic Region:	City of St. Albert		
Road Agency:	St. Ablert		
Road Classification:	Collector	Length of Corridor:	540 m
Urban / Rural:	Urban	Design Speed: (Required for Freeway, Expressway, Highway)	km/h
Divided / Undivided:	Undivided	Current Posted Speed: (For information only)	50 km/h
Major / Minor:	Minor	Prevailing Speed: (85th Percentile - for information only)	0 km/h
# Through Lanes Per Direction:	1 lane	Policy: (Maximum Posted Speed)	

		RISK	Score
A1	GEOMETRY (Horizontal)	Medium	2
A2	GEOMETRY (Vertical)	Lower	1
A3	AVERAGE LANE WIDTH	Lower	2
B	ROADSIDE HAZARDS	Higher	3
C1	PEDESTRIAN EXPOSURE	Lower	3
C2	CYCLIST EXPOSURE	Medium	6
D	PAVEMENT SURFACE	Lower	1
E1	NUMBER OF INTERSECTIONS WITH PUBLIC ROADS	<i>Number of Occurrences</i>	7
	STOP controlled intersection	0	
	Signalized intersection	0	
	Roundabout or traffic circle	0	
	Crosswalk	1	
	Active, at-grade railroad crossing	0	
E2	NUMBER OF INTERSECTIONS WITH PRIVATE ACCESS DRIVEWAYS	<i>Number of Occurrences</i>	15
	Left turn movements permitted	56	
	Right-in / Right-out only	0	
E3	NUMBER OF INTERCHANGES	<i>Number of Occurrences</i>	0
	Number of interchanges along corridor	0	
F	ON-STREET PARKING	Higher	9

Total Risk Score:

49

Recommended Posted Speed Limit (km/h):

As determined by road characteristics

50

As determined by policy

The recommended posted speed limit may be checked against the prevailing speeds of the roadway and the road's safety performance.

Comments:



Automated Speed Limit Guidelines

FORM A - Automated Speed Limit Guidelines Spreadsheet

Version:
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Name of Corridor:	Deer Ridge Drive 2		
Segment Evaluated:	75m west of Donald Pl	to	Giroux Rd
Geographic Region:	City of St. Albert		
Road Agency:	St. Ablert		
Road Classification:	Collector	Length of Corridor:	750 m
Urban / Rural:	Urban	Design Speed: (Required for Freeway, Expressway, Highway)	km/h
Divided / Undivided:	Undivided	Current Posted Speed: (For information only)	50 km/h
Major / Minor:	Minor	Prevailing Speed: (85th Percentile - for information only)	45 km/h
# Through Lanes Per Direction:	1 lane	Policy: (Maximum Posted Speed)	

		RISK	Score
A1	GEOMETRY (Horizontal)	Medium	2
A2	GEOMETRY (Vertical)	Lower	1
A3	AVERAGE LANE WIDTH	Medium	4
B	ROADSIDE HAZARDS	Higher	3
C1	PEDESTRIAN EXPOSURE	Lower	3
C2	CYCLIST EXPOSURE	Medium	6
D	PAVEMENT SURFACE	Lower	1
E1	NUMBER OF INTERSECTIONS WITH PUBLIC ROADS	<i>Number of Occurrences</i>	11
	STOP controlled intersection	0	
	Signalized intersection	1	
	Roundabout or traffic circle	0	
	Crosswalk	2	
	Active, at-grade railroad crossing	0	
	Sidestreet STOP-controlled or lane	5	
E2	NUMBER OF INTERSECTIONS WITH PRIVATE ACCESS DRIVEWAYS	<i>Number of Occurrences</i>	15
	Left turn movements permitted	48	
	Right-in / Right-out only	0	
E3	NUMBER OF INTERCHANGES	<i>Number of Occurrences</i>	0
	Number of interchanges along corridor	0	
F	ON-STREET PARKING	Lower	3

Total Risk Score:

49

Recommended Posted Speed Limit (km/h):

As determined by road characteristics

50

As determined by policy

The recommended posted speed limit may be checked against the prevailing speeds of the roadway and the road's safety performance.

Comments:



Automated Speed Limit Guidelines

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Name of Corridor:	Dorchester Drive		
Segment Evaluated:	Deer Ridge Dr	to	Deer Ridge Dr
Geographic Region:	City of St. Albert		
Road Agency:	St. Ablert		
Road Classification:	Collector	Length of Corridor:	1,290 m
Urban / Rural:	Urban	Design Speed: (Required for Freeway, Expressway, Highway)	km/h
Divided / Undivided:	Undivided	Current Posted Speed: (For information only)	50 km/h
Major / Minor:	Minor	Prevailing Speed: (85th Percentile - for information only)	0 km/h
# Through Lanes Per Direction:	1 lane	Policy: (Maximum Posted Speed)	

RISK Score

A1	GEOMETRY (Horizontal)	Medium	2
A2	GEOMETRY (Vertical)	Lower	1
A3	AVERAGE LANE WIDTH	Lower	2
B	ROADSIDE HAZARDS	Higher	3
C1	PEDESTRIAN EXPOSURE	Lower	3
C2	CYCLIST EXPOSURE	Medium	6
D	PAVEMENT SURFACE	Medium	2
E1	NUMBER OF INTERSECTIONS WITH PUBLIC ROADS	<i>Number of Occurrences</i>	13
	STOP controlled intersection	2	
	Signalized intersection	0	
	Roundabout or traffic circle	0	
	Crosswalk	4	
	Active, at-grade railroad crossing	0	
Sidestreet STOP-controlled or lane	10		
E2	NUMBER OF INTERSECTIONS WITH PRIVATE ACCESS DRIVEWAYS	<i>Number of Occurrences</i>	15
	Left turn movements permitted	95	
	Right-in / Right-out only	0	
E3	NUMBER OF INTERCHANGES	<i>Number of Occurrences</i>	0
	Number of interchanges along corridor	0	
F	ON-STREET PARKING	Higher	9

Total Risk Score:

56

Recommended Posted Speed Limit (km/h):

As determined by road characteristics

40

As determined by policy

The recommended posted speed limit may be checked against the prevailing speeds of the roadway and the road's safety performance.

Comments:



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Name of Corridor:	Lacombe Drive		
Segment Evaluated:	Giroux Rd	to	Giroux Rd
Geographic Region:	City of St. Albert		
Road Agency:	St. Ablert		
Road Classification:	Collector	Length of Corridor:	740 m
Urban / Rural:	Urban	Design Speed: (Required for Freeway, Expressway, Highway)	km/h
Divided / Undivided:	Undivided	Current Posted Speed: (For information only)	50 km/h
Major / Minor:	Minor	Prevailing Speed:	29 km/h
# Through Lanes Per Direction:	1 lane	(85th Percentile - for information only) Policy: (Maximum Posted Speed)	

		RISK	Score
A1	GEOMETRY (Horizontal)	Higher	3
A2	GEOMETRY (Vertical)	Lower	1
A3	AVERAGE LANE WIDTH	Medium	4
B	ROADSIDE HAZARDS	Higher	3
C1	PEDESTRIAN EXPOSURE	Lower	3
C2	CYCLIST EXPOSURE	Medium	6
D	PAVEMENT SURFACE	Medium	2
E1	NUMBER OF INTERSECTIONS WITH PUBLIC ROADS	<i>Number of Occurrences</i>	16
	STOP controlled intersection	2	
	Signalized intersection	0	
	Roundabout or traffic circle	0	
	Crosswalk	0	
	Active, at-grade railroad crossing	0	
E2	NUMBER OF INTERSECTIONS WITH PRIVATE ACCESS DRIVEWAYS	<i>Number of Occurrences</i>	15
	Left turn movements permitted	65	
	Right-in / Right-out only	0	
E3	NUMBER OF INTERCHANGES	<i>Number of Occurrences</i>	0
	Number of interchanges along corridor	0	
F	ON-STREET PARKING	Higher	9

Total Risk Score:

62

Recommended Posted Speed Limit (km/h):

As determined by road characteristics

40

As determined by policy

The recommended posted speed limit may be checked against the prevailing speeds of the roadway and the road's safety performance.

Comments:



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Name of Corridor:	Larose Drive 1		
Segment Evaluated:	Lucerne Crescent	to	Lawrence Crescent
Geographic Region:	City of St. Albert		
Road Agency:	St. Ablert		
Road Classification:	Collector	Length of Corridor:	1,290 m
Urban / Rural:	Urban	Design Speed: (Required for Freeway, Expressway, Highway)	km/h
Divided / Undivided:	Undivided	Current Posted Speed: (For information only)	50 km/h
Major / Minor:	Minor	Prevailing Speed: (85th Percentile - for information only)	35 km/h
# Through Lanes Per Direction:	1 lane	Policy: (Maximum Posted Speed)	

		RISK	Score
A1	GEOMETRY (Horizontal)	Medium	2
A2	GEOMETRY (Vertical)	Lower	1
A3	AVERAGE LANE WIDTH	Medium	4
B	ROADSIDE HAZARDS	Higher	3
C1	PEDESTRIAN EXPOSURE	Lower	3
C2	CYCLIST EXPOSURE	Medium	6
D	PAVEMENT SURFACE	Lower	1
E1	NUMBER OF INTERSECTIONS WITH PUBLIC ROADS	<i>Number of Occurrences</i>	6
	STOP controlled intersection	0	
	Signalized intersection	0	
	Roundabout or traffic circle	0	
	Crosswalk	3	
	Active, at-grade railroad crossing	0	
E2	NUMBER OF INTERSECTIONS WITH PRIVATE ACCESS DRIVEWAYS	<i>Number of Occurrences</i>	15
	Left turn movements permitted	95	
	Right-in / Right-out only	0	
E3	NUMBER OF INTERCHANGES	<i>Number of Occurrences</i>	0
	Number of interchanges along corridor	0	
F	ON-STREET PARKING	Lower	3

Total Risk Score:

44

Recommended Posted Speed Limit (km/h):

As determined by road characteristics

50

As determined by policy

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The recommended posted speed limit may be checked against the prevailing speeds of the roadway and the road's safety performance.

Comments:

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Version:
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Name of Corridor:	Laydon Drive		
Segment Evaluated:	Larose Dr	to	McKenney Ave
Geographic Region:	City of St. Albert		
Road Agency:	St. Ablert		
Road Classification:	Collector	Length of Corridor:	660 m
Urban / Rural:	Urban	Design Speed: (Required for Freeway, Expressway, Highway)	km/h
Divided / Undivided:	Undivided	Current Posted Speed: (For information only)	50 km/h
Major / Minor:	Major	Prevailing Speed:	28 km/h
# Through Lanes Per Direction:	1 lane	(85th Percentile - for information only) Policy: (Maximum Posted Speed)	

		RISK	Score
A1	GEOMETRY (Horizontal)	Medium	2
A2	GEOMETRY (Vertical)	Lower	1
A3	AVERAGE LANE WIDTH	Medium	4
B	ROADSIDE HAZARDS	Higher	3
C1	PEDESTRIAN EXPOSURE	Lower	3
C2	CYCLIST EXPOSURE	Medium	6
D	PAVEMENT SURFACE	Lower	1
E1	NUMBER OF INTERSECTIONS WITH PUBLIC ROADS	<i>Number of Occurrences</i>	22
	STOP controlled intersection	2	
	Signalized intersection	0	
	Roundabout or traffic circle	0	
	Crosswalk	3	
	Active, at-grade railroad crossing	0	
E2	NUMBER OF INTERSECTIONS WITH PRIVATE ACCESS DRIVEWAYS	<i>Number of Occurrences</i>	15
	Left turn movements permitted	44	
	Right-in / Right-out only	0	
E3	NUMBER OF INTERCHANGES	<i>Number of Occurrences</i>	0
	Number of interchanges along corridor	0	
F	ON-STREET PARKING	Higher	9

Total Risk Score:

66

Recommended Posted Speed Limit (km/h):

As determined by road characteristics

50

As determined by policy

The recommended posted speed limit may be checked against the prevailing speeds of the roadway and the road's safety performance.

Comments:



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Name of Corridor:	Mission Avenue		
Segment Evaluated:	Mt Royal Dr	to	McKenney Ave
Geographic Region:	City of St. Albert		
Road Agency:	St. Ablert		
Road Classification:	Collector	Length of Corridor:	1,310 m
Urban / Rural:	Urban	Design Speed: (Required for Freeway, Expressway, Highway)	km/h
Divided / Undivided:	Undivided	Current Posted Speed: (For information only)	50 km/h
Major / Minor:	Major	Prevailing Speed:	35 km/h
# Through Lanes Per Direction:	1 lane	(85th Percentile - for information only) Policy: (Maximum Posted Speed)	

		RISK	Score
A1	GEOMETRY (Horizontal)	Medium	2
A2	GEOMETRY (Vertical)	Lower	1
A3	AVERAGE LANE WIDTH	Medium	4
B	ROADSIDE HAZARDS	Higher	3
C1	PEDESTRIAN EXPOSURE	Lower	3
C2	CYCLIST EXPOSURE	Medium	6
D	PAVEMENT SURFACE	Lower	1
E1	NUMBER OF INTERSECTIONS WITH PUBLIC ROADS	<i>Number of Occurrences</i>	9
	STOP controlled intersection	1	
	Signalized intersection	0	
	Roundabout or traffic circle	0	
	Crosswalk	4	
	Active, at-grade railroad crossing	0	
E2	NUMBER OF INTERSECTIONS WITH PRIVATE ACCESS DRIVEWAYS	<i>Number of Occurrences</i>	15
	Left turn movements permitted	61	
	Right-in / Right-out only	0	
E3	NUMBER OF INTERCHANGES	<i>Number of Occurrences</i>	0
	Number of interchanges along corridor	0	
F	ON-STREET PARKING	Lower	3

Total Risk Score:

47

Recommended Posted Speed Limit (km/h):

As determined by road characteristics

50

As determined by policy

The recommended posted speed limit may be checked against the prevailing speeds of the roadway and the road's safety performance.

Comments:



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Name of Corridor:	Malmo Avenue		
Segment Evaluated:	Mission Ave	to	St Vital Ave
Geographic Region:	City of St. Albert		
Road Agency:	St. Ablert		
Road Classification:	Collector	Length of Corridor:	540 m
Urban / Rural:	Urban	Design Speed: (Required for Freeway, Expressway, Highway)	km/h
Divided / Undivided:	Undivided	Current Posted Speed: (For information only)	50 km/h
Major / Minor:	Minor	Prevailing Speed:	32 km/h
# Through Lanes Per Direction:	1 lane	(85th Percentile - for information only) Policy: (Maximum Posted Speed)	

		RISK	Score
A1	GEOMETRY (Horizontal)	Medium	2
A2	GEOMETRY (Vertical)	Lower	1
A3	AVERAGE LANE WIDTH	Medium	4
B	ROADSIDE HAZARDS	Higher	3
C1	PEDESTRIAN EXPOSURE	Lower	3
C2	CYCLIST EXPOSURE	Medium	6
D	PAVEMENT SURFACE	Lower	1
E1	NUMBER OF INTERSECTIONS WITH PUBLIC ROADS	<i>Number of Occurrences</i>	19
	STOP controlled intersection	2	
	Signalized intersection	0	
	Roundabout or traffic circle	0	
	Crosswalk	0	
	Active, at-grade railroad crossing	0	
E2	NUMBER OF INTERSECTIONS WITH PRIVATE ACCESS DRIVEWAYS	<i>Number of Occurrences</i>	15
	Left turn movements permitted	29	
	Right-in / Right-out only	0	
E3	NUMBER OF INTERCHANGES	<i>Number of Occurrences</i>	0
	Number of interchanges along corridor	0	
F	ON-STREET PARKING	Lower	3

Total Risk Score:

57

Recommended Posted Speed Limit (km/h):

As determined by road characteristics

40

As determined by policy

The recommended posted speed limit may be checked against the prevailing speeds of the roadway and the road's safety performance.

Comments:



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Name of Corridor:	St Vital Avenue 1		
Segment Evaluated:	Mission Ave	to	Mt Royal Dr
Geographic Region:	City of St. Albert		
Road Agency:	St. Ablert		
Road Classification:	Collector	Length of Corridor:	510 m
Urban / Rural:	Urban	Design Speed: (Required for Freeway, Expressway, Highway)	km/h
Divided / Undivided:	Undivided	Current Posted Speed: (For information only)	50 km/h
Major / Minor:	Minor	Prevailing Speed:	26 km/h
# Through Lanes Per Direction:	1 lane	(85th Percentile - for information only) Policy: (Maximum Posted Speed)	

RISK Score

A1	GEOMETRY (Horizontal)	Medium	2
A2	GEOMETRY (Vertical)	Lower	1
A3	AVERAGE LANE WIDTH	Lower	2
B	ROADSIDE HAZARDS	Medium	2
C1	PEDESTRIAN EXPOSURE	Lower	3
C2	CYCLIST EXPOSURE	Medium	6
D	PAVEMENT SURFACE	Lower	1
E1	NUMBER OF INTERSECTIONS WITH PUBLIC ROADS	<i>Number of Occurrences</i>	24
	STOP controlled intersection	2	
	Signalized intersection	0	
	Roundabout or traffic circle	0	
	Crosswalk	1	
	Active, at-grade railroad crossing	0	
E2	NUMBER OF INTERSECTIONS WITH PRIVATE ACCESS DRIVEWAYS	<i>Number of Occurrences</i>	15
	Left turn movements permitted	20	
	Right-in / Right-out only	0	
E3	NUMBER OF INTERCHANGES	<i>Number of Occurrences</i>	0
	Number of interchanges along corridor	0	
F	ON-STREET PARKING	Higher	9

Total Risk Score:

65

Recommended Posted Speed Limit (km/h):

As determined by road characteristics

40

As determined by policy

The recommended posted speed limit may be checked against the prevailing speeds of the roadway and the road's safety performance.

Comments:



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Name of Corridor:	St Vital Avenue 2		
Segment Evaluated:	Mt Royal Dr	to	St Albert Trail
Geographic Region:	City of St. Albert		
Road Agency:	St. Ablert		
Road Classification:	Collector	Length of Corridor:	710 m
Urban / Rural:	Urban	Design Speed: (Required for Freeway, Expressway, Highway)	km/h
Divided / Undivided:	Undivided	Current Posted Speed: (For information only)	50 km/h
Major / Minor:	Minor	Prevailing Speed: (85th Percentile - for information only)	33 km/h
# Through Lanes Per Direction:	1 lane	Policy: (Maximum Posted Speed)	

		RISK	Score
A1	GEOMETRY (Horizontal)	Medium	2
A2	GEOMETRY (Vertical)	Medium	2
A3	AVERAGE LANE WIDTH	Medium	4
B	ROADSIDE HAZARDS	Lower	1
C1	PEDESTRIAN EXPOSURE	Medium	6
C2	CYCLIST EXPOSURE	Medium	6
D	PAVEMENT SURFACE	Medium	2
E1	NUMBER OF INTERSECTIONS WITH PUBLIC ROADS	<i>Number of Occurrences</i>	15
	STOP controlled intersection	1	
	Signalized intersection	1	
	Roundabout or traffic circle	0	
	Crosswalk	2	
	Active, at-grade railroad crossing	0	
	Sidestreet STOP-controlled or lane	2	
E2	NUMBER OF INTERSECTIONS WITH PRIVATE ACCESS DRIVEWAYS	<i>Number of Occurrences</i>	5
	Left turn movements permitted	7	
	Right-in / Right-out only	0	
E3	NUMBER OF INTERCHANGES	<i>Number of Occurrences</i>	0
	Number of interchanges along corridor	0	
F	ON-STREET PARKING	Higher	9

Total Risk Score:

52

Recommended Posted Speed Limit (km/h):

As determined by road characteristics

40

As determined by policy

The recommended posted speed limit may be checked against the prevailing speeds of the roadway and the road's safety performance.

Comments:



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Name of Corridor:	Muir Drive		
Segment Evaluated:	McKenney Ave	to	St Albert Trail
Geographic Region:	City of St. Albert		
Road Agency:	St. Ablert		
Road Classification:	Collector	Length of Corridor:	580 m
Urban / Rural:	Urban	Design Speed: (Required for Freeway, Expressway, Highway)	km/h
Divided / Undivided:	Undivided	Current Posted Speed: (For information only)	50 km/h
Major / Minor:	Major	Prevailing Speed:	34 km/h
# Through Lanes Per Direction:	1 lane	(85th Percentile - for information only) Policy: (Maximum Posted Speed)	

RISK Score

A1	GEOMETRY (Horizontal)	Higher	3
A2	GEOMETRY (Vertical)	Lower	1
A3	AVERAGE LANE WIDTH	Medium	4
B	ROADSIDE HAZARDS	Medium	2
C1	PEDESTRIAN EXPOSURE	Lower	3
C2	CYCLIST EXPOSURE	Medium	6
D	PAVEMENT SURFACE	Lower	1
E1	NUMBER OF INTERSECTIONS WITH PUBLIC ROADS	<i>Number of Occurrences</i>	29
	STOP controlled intersection	3	
	Signalized intersection	1	
	Roundabout or traffic circle	0	
	Crosswalk	1	
	Active, at-grade railroad crossing	0	
E2	NUMBER OF INTERSECTIONS WITH PRIVATE ACCESS DRIVEWAYS	<i>Number of Occurrences</i>	7
	Left turn movements permitted	8	
	Right-in / Right-out only	0	
E3	NUMBER OF INTERCHANGES	<i>Number of Occurrences</i>	0
	Number of interchanges along corridor	0	
F	ON-STREET PARKING	Lower	3

Total Risk Score:

59

Recommended Posted Speed Limit (km/h):

As determined by road characteristics

50

As determined by policy

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The recommended posted speed limit may be checked against the prevailing speeds of the roadway and the road's safety performance.

Comments:

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Version:
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Name of Corridor:	Riel Drive		
Segment Evaluated:	Sir Winston Churchill Ave	to	Levasseur Rd
Geographic Region:	City of St. Albert		
Road Agency:	St. Ablert		
Road Classification:	Collector	Length of Corridor:	1,990 m
Urban / Rural:	Urban	Design Speed: (Required for Freeway, Expressway, Highway)	km/h
Divided / Undivided:	Undivided	Current Posted Speed: (For information only)	50 km/h
Major / Minor:	Major	Prevailing Speed:	37 km/h
# Through Lanes Per Direction:	1 lane	(85th Percentile - for information only) Policy: (Maximum Posted Speed)	

RISK Score

A1	GEOMETRY (Horizontal)	Medium	2
A2	GEOMETRY (Vertical)	Lower	1
A3	AVERAGE LANE WIDTH	Medium	4
B	ROADSIDE HAZARDS	Lower	1
C1	PEDESTRIAN EXPOSURE	Higher	9
C2	CYCLIST EXPOSURE	Lower	3
D	PAVEMENT SURFACE	Medium	2
E1	NUMBER OF INTERSECTIONS WITH PUBLIC ROADS	<i>Number of Occurrences</i>	4
	STOP controlled intersection	0	
	Signalized intersection	1	
	Roundabout or traffic circle	0	
	Crosswalk	0	
	Active, at-grade railroad crossing	1	
	Sidestreet STOP-controlled or lane	6	
E2	NUMBER OF INTERSECTIONS WITH PRIVATE ACCESS DRIVEWAYS	<i>Number of Occurrences</i>	11
	Left turn movements permitted	43	
	Right-in / Right-out only	0	
E3	NUMBER OF INTERCHANGES	<i>Number of Occurrences</i>	0
	Number of interchanges along corridor	0	
F	ON-STREET PARKING	Lower	3

Total Risk Score:

40

Recommended Posted Speed Limit (km/h):

As determined by road characteristics

50

As determined by policy

--

The recommended posted speed limit may be checked against the prevailing speeds of the roadway and the road's safety performance.

Comments:

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Automated Speed Limit Guidelines

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Version:
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Name of Corridor:	Grenfell Avenue		
Segment Evaluated:	Gatewood Ave	to	Grosvenor Blvd
Geographic Region:	City of St. Albert		
Road Agency:	St. Ablert		
Road Classification:	Collector	Length of Corridor:	650 m
Urban / Rural:	Urban	Design Speed: (Required for Freeway, Expressway, Highway)	km/h
Divided / Undivided:	Undivided	Current Posted Speed: (For information only)	30 km/h
Major / Minor:	Minor	Prevailing Speed:	23 km/h
# Through Lanes Per Direction:	1 lane	(85th Percentile - for information only) Policy: (Maximum Posted Speed)	

		RISK	Score
A1	GEOMETRY (Horizontal)	Lower	1
A2	GEOMETRY (Vertical)	Lower	1
A3	AVERAGE LANE WIDTH	Medium	4
B	ROADSIDE HAZARDS	Higher	3
C1	PEDESTRIAN EXPOSURE	Lower	3
C2	CYCLIST EXPOSURE	Medium	6
D	PAVEMENT SURFACE	Medium	2
E1	NUMBER OF INTERSECTIONS WITH PUBLIC ROADS	<i>Number of Occurrences</i>	12
	STOP controlled intersection	1	
	Signalized intersection	0	
	Roundabout or traffic circle	0	
	Crosswalk	1	
	Active, at-grade railroad crossing	0	
E2	NUMBER OF INTERSECTIONS WITH PRIVATE ACCESS DRIVEWAYS	<i>Number of Occurrences</i>	15
	Left turn movements permitted	36	
	Right-in / Right-out only	0	
E3	NUMBER OF INTERCHANGES	<i>Number of Occurrences</i>	0
	Number of interchanges along corridor	0	
F	ON-STREET PARKING	Lower	3

Total Risk Score:

50

Recommended Posted Speed Limit (km/h):

As determined by road characteristics

50

As determined by policy

The recommended posted speed limit may be checked against the prevailing speeds of the roadway and the road's safety performance.

Comments:



Automated Speed Limit Guidelines

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Name of Corridor:	Grosvenor Boulevard 1		
Segment Evaluated:	Grandin Rd	to	130m South of Grenfell Ave
Geographic Region:	City of St. Albert		
Road Agency:	St. Ablert		
Road Classification:	Collector	Length of Corridor:	600 m
Urban / Rural:	Urban	Design Speed: (Required for Freeway, Expressway, Highway)	km/h
Divided / Undivided:	Undivided	Current Posted Speed: (For information only)	50 km/h
Major / Minor:	Minor	Prevailing Speed:	22 km/h
# Through Lanes Per Direction:	1 lane	(85th Percentile - for information only) Policy: (Maximum Posted Speed)	

		RISK	Score
A1	GEOMETRY (Horizontal)	Medium	2
A2	GEOMETRY (Vertical)	Lower	1
A3	AVERAGE LANE WIDTH	Medium	4
B	ROADSIDE HAZARDS	Medium	2
C1	PEDESTRIAN EXPOSURE	Lower	3
C2	CYCLIST EXPOSURE	Medium	6
D	PAVEMENT SURFACE	Lower	1
E1	NUMBER OF INTERSECTIONS WITH PUBLIC ROADS	<i>Number of Occurrences</i>	12
	STOP controlled intersection	1	
	Signalized intersection	0	
	Roundabout or traffic circle	0	
	Crosswalk	1	
	Active, at-grade railroad crossing	0	
E2	NUMBER OF INTERSECTIONS WITH PRIVATE ACCESS DRIVEWAYS	<i>Number of Occurrences</i>	15
	Left turn movements permitted	29	
	Right-in / Right-out only	0	
E3	NUMBER OF INTERCHANGES	<i>Number of Occurrences</i>	0
	Number of interchanges along corridor	0	
F	ON-STREET PARKING	Lower	3

Total Risk Score:

49

Recommended Posted Speed Limit (km/h):

As determined by road characteristics

50

As determined by policy

The recommended posted speed limit may be checked against the prevailing speeds of the roadway and the road's safety performance.

Comments:



Automated Speed Limit Guidelines

FORM A - Automated Speed Limit Guidelines Spreadsheet

Version:
10-Apr-09

Name of Corridor:	Grosvenor Boulevard 2		
Segment Evaluated:	25m North of Grandora Crescent	to	Levasseur Rd
Geographic Region:	City of St. Albert		
Road Agency:	St. Ablert		
Road Classification:	Collector	Length of Corridor:	690 m
Urban / Rural:	Urban	Design Speed: (Required for Freeway, Expressway, Highway)	km/h
Divided / Undivided:	Undivided	Current Posted Speed: (For information only)	50 km/h
Major / Minor:	Minor	Prevailing Speed: (85th Percentile - for information only)	28 km/h
# Through Lanes Per Direction:	1 lane	Policy: (Maximum Posted Speed)	

		RISK	Score
A1	GEOMETRY (Horizontal)	Lower	1
A2	GEOMETRY (Vertical)	Lower	1
A3	AVERAGE LANE WIDTH	Medium	4
B	ROADSIDE HAZARDS	Medium	2
C1	PEDESTRIAN EXPOSURE	Lower	3
C2	CYCLIST EXPOSURE	Medium	6
D	PAVEMENT SURFACE	Lower	1
E1	NUMBER OF INTERSECTIONS WITH PUBLIC ROADS	<i>Number of Occurrences</i>	11
	STOP controlled intersection	1	
	Signalized intersection	0	
	Roundabout or traffic circle	0	
	Crosswalk	0	
	Active, at-grade railroad crossing	0	
E2	NUMBER OF INTERSECTIONS WITH PRIVATE ACCESS DRIVEWAYS	<i>Number of Occurrences</i>	15
	Left turn movements permitted	39	
	Right-in / Right-out only	0	
E3	NUMBER OF INTERCHANGES	<i>Number of Occurrences</i>	0
	Number of interchanges along corridor	0	
F	ON-STREET PARKING	Higher	9

Total Risk Score:

53

Recommended Posted Speed Limit (km/h):

As determined by road characteristics

40

As determined by policy

The recommended posted speed limit may be checked against the prevailing speeds of the roadway and the road's safety performance.

Comments:



Automated Speed Limit Guidelines

FORM A - Automated Speed Limit Guidelines Spreadsheet

Version:
10-Apr-09

Name of Corridor:	Graham Avenue / Heritage Way		
Segment Evaluated:	90m South of Gainsborough Ave	to	Heritage Dr
Geographic Region:	City of St. Albert		
Road Agency:	St. Ablert		
Road Classification:	Collector	Length of Corridor:	290 m
Urban / Rural:	Urban	Design Speed: (Required for Freeway, Expressway, Highway)	km/h
Divided / Undivided:	Undivided	Current Posted Speed: (For information only)	50 km/h
Major / Minor:	Minor	Prevailing Speed: (85th Percentile - for information only)	33 km/h
# Through Lanes Per Direction:	1 lane	Policy: (Maximum Posted Speed)	

RISK Score

A1	GEOMETRY (Horizontal)	Higher	3
A2	GEOMETRY (Vertical)	Lower	1
A3	AVERAGE LANE WIDTH	Medium	4
B	ROADSIDE HAZARDS	Medium	2
C1	PEDESTRIAN EXPOSURE	Lower	3
C2	CYCLIST EXPOSURE	Medium	6
D	PAVEMENT SURFACE	Medium	2
E1	NUMBER OF INTERSECTIONS WITH PUBLIC ROADS	<i>Number of Occurrences</i>	19
	STOP controlled intersection	1	
	Signalized intersection	0	
	Roundabout or traffic circle	0	
	Crosswalk	0	
	Active, at-grade railroad crossing	0	
Sidestreet STOP-controlled or lane	3		
E2	NUMBER OF INTERSECTIONS WITH PRIVATE ACCESS DRIVEWAYS	<i>Number of Occurrences</i>	15
	Left turn movements permitted	30	
	Right-in / Right-out only	0	
E3	NUMBER OF INTERCHANGES	<i>Number of Occurrences</i>	0
	Number of interchanges along corridor	0	
F	ON-STREET PARKING	Lower	3

Total Risk Score:

58

Recommended Posted Speed Limit (km/h):

As determined by road characteristics

40

As determined by policy

The recommended posted speed limit may be checked against the prevailing speeds of the roadway and the road's safety performance.

Comments:



Automated Speed Limit Guidelines

FORM A - Automated Speed Limit Guidelines Spreadsheet

Version:
10-Apr-09

Name of Corridor:	Hardwood Drive		
Segment Evaluated:	Heritage Way	to	Heritage Dr
Geographic Region:	City of St. Albert		
Road Agency:	St. Ablert		
Road Classification:	Collector	Length of Corridor:	930 m
Urban / Rural:	Urban	Design Speed: (Required for Freeway, Expressway, Highway)	km/h
Divided / Undivided:	Undivided	Current Posted Speed: (For information only)	50 km/h
Major / Minor:	Minor	Prevailing Speed:	33 km/h
# Through Lanes Per Direction:	1 lane	(85th Percentile - for information only) Policy: (Maximum Posted Speed)	

		RISK	Score
A1	GEOMETRY (Horizontal)	Medium	2
A2	GEOMETRY (Vertical)	Lower	1
A3	AVERAGE LANE WIDTH	Medium	4
B	ROADSIDE HAZARDS	Medium	2
C1	PEDESTRIAN EXPOSURE	Lower	3
C2	CYCLIST EXPOSURE	Medium	6
D	PAVEMENT SURFACE	Medium	2
E1	NUMBER OF INTERSECTIONS WITH PUBLIC ROADS	<i>Number of Occurrences</i>	15
	STOP controlled intersection	2	
	Signalized intersection	0	
	Roundabout or traffic circle	0	
	Crosswalk	0	
	Active, at-grade railroad crossing	0	
E2	NUMBER OF INTERSECTIONS WITH PRIVATE ACCESS DRIVEWAYS	<i>Number of Occurrences</i>	15
	Left turn movements permitted	53	
	Right-in / Right-out only	0	
E3	NUMBER OF INTERCHANGES	<i>Number of Occurrences</i>	0
	Number of interchanges along corridor	0	
F	ON-STREET PARKING	Lower	3

Total Risk Score:

53

Recommended Posted Speed Limit (km/h):

As determined by road characteristics

40

As determined by policy

The recommended posted speed limit may be checked against the prevailing speeds of the roadway and the road's safety performance.

Comments:



Automated Speed Limit Guidelines

FORM A - Automated Speed Limit Guidelines Spreadsheet

Version:
10-Apr-09

Name of Corridor:	Heritage Drive		
Segment Evaluated:	Hardcastle Pl	to	Harvest Ct
Geographic Region:	City of St. Albert		
Road Agency:	St. Ablert		
Road Classification:	Collector	Length of Corridor:	1,890 m
Urban / Rural:	Urban	Design Speed: (Required for Freeway, Expressway, Highway)	km/h
Divided / Undivided:	Undivided	Current Posted Speed: (For information only)	50 km/h
Major / Minor:	Minor	Prevailing Speed:	35 km/h
# Through Lanes Per Direction:	1 lane	(85th Percentile - for information only) Policy: (Maximum Posted Speed)	

RISK Score

A1	GEOMETRY (Horizontal)	Medium	2
A2	GEOMETRY (Vertical)	Lower	1
A3	AVERAGE LANE WIDTH	Medium	4
B	ROADSIDE HAZARDS	Higher	3
C1	PEDESTRIAN EXPOSURE	Lower	3
C2	CYCLIST EXPOSURE	Medium	6
D	PAVEMENT SURFACE	Medium	2
E1	NUMBER OF INTERSECTIONS WITH PUBLIC ROADS	<i>Number of Occurrences</i>	7
	STOP controlled intersection	0	
	Signalized intersection	0	
	Roundabout or traffic circle	0	
	Crosswalk	1	
	Active, at-grade railroad crossing	0	
E2	NUMBER OF INTERSECTIONS WITH PRIVATE ACCESS DRIVEWAYS	<i>Number of Occurrences</i>	15
	Left turn movements permitted	67	
	Right-in / Right-out only	0	
E3	NUMBER OF INTERCHANGES	<i>Number of Occurrences</i>	0
	Number of interchanges along corridor	0	
F	ON-STREET PARKING	Lower	3

Total Risk Score:

46

Recommended Posted Speed Limit (km/h):

As determined by road characteristics

50

As determined by policy

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The recommended posted speed limit may be checked against the prevailing speeds of the roadway and the road's safety performance.

Comments:

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Automated Speed Limit Guidelines

FORM A - Automated Speed Limit Guidelines Spreadsheet

Version:
10-Apr-09

Name of Corridor:	Parkwood Drive 2 / Kirkwood Drive		
Segment Evaluated:	Park Ave	to	Kingswood Blvd
Geographic Region:	City of St. Albert		
Road Agency:	St. Ablert		
Road Classification:	Collector	Length of Corridor:	670 m
Urban / Rural:	Urban	Design Speed: (Required for Freeway, Expressway, Highway)	km/h
Divided / Undivided:	Undivided	Current Posted Speed: (For information only)	50 km/h
Major / Minor:	Minor	Prevailing Speed: (85th Percentile - for information only)	36 km/h
# Through Lanes Per Direction:	1 lane	Policy: (Maximum Posted Speed)	

RISK Score

A1	GEOMETRY (Horizontal)	Higher	3
A2	GEOMETRY (Vertical)	Lower	1
A3	AVERAGE LANE WIDTH	Medium	4
B	ROADSIDE HAZARDS	Higher	3
C1	PEDESTRIAN EXPOSURE	Lower	3
C2	CYCLIST EXPOSURE	Medium	6
D	PAVEMENT SURFACE	Medium	2
E1	NUMBER OF INTERSECTIONS WITH PUBLIC ROADS	<i>Number of Occurrences</i>	14
	STOP controlled intersection	2	
	Signalized intersection	0	
	Roundabout or traffic circle	0	
	Crosswalk	0	
	Active, at-grade railroad crossing	0	
E2	NUMBER OF INTERSECTIONS WITH PRIVATE ACCESS DRIVEWAYS	<i>Number of Occurrences</i>	15
	Left turn movements permitted	57	
	Right-in / Right-out only	0	
E3	NUMBER OF INTERCHANGES	<i>Number of Occurrences</i>	0
	Number of interchanges along corridor	0	
F	ON-STREET PARKING	Higher	9

Total Risk Score:

60

Recommended Posted Speed Limit (km/h):

As determined by road characteristics

40

As determined by policy

--

The recommended posted speed limit may be checked against the prevailing speeds of the roadway and the road's safety performance.

Comments:

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Automated Speed Limit Guidelines

FORM A - Automated Speed Limit Guidelines Spreadsheet

Version:
10-Apr-09

Name of Corridor:	Meadowview Drive Rural		
Segment Evaluated:	West City Limits	to	Ray Gibbon Drive
Geographic Region:	City of St. Albert		
Road Agency:	St. Ablert		
Road Classification:	Arterial	Length of Corridor:	1,680 m
Urban / Rural:	Rural	Design Speed: (Required for Freeway, Expressway, Highway)	km/h
Divided / Undivided:	Undivided	Current Posted Speed: (For information only)	60 km/h
Major / Minor:	Major	Prevailing Speed: (85th Percentile - for information only)	0 km/h
# Through Lanes Per Direction:	2+ lanes	Policy: (Maximum Posted Speed)	

		RISK	Score
A1	GEOMETRY (Horizontal)	Lower	3
A2	GEOMETRY (Vertical)	Lower	3
A3	AVERAGE LANE WIDTH	Higher	9
B	ROADSIDE HAZARDS	Lower	3
C1	PEDESTRIAN EXPOSURE	Higher	6
C2	CYCLIST EXPOSURE	Higher	9
D	PAVEMENT SURFACE	Medium	6
E1	NUMBER OF INTERSECTIONS WITH PUBLIC ROADS	<i>Number of Occurrences</i>	5
	STOP controlled intersection	0	
	Signalized intersection	1	
	Roundabout or traffic circle	0	
	Crosswalk	0	
	Active, at-grade railroad crossing	0	
	Sidestreet STOP-controlled or lane	1	
E2	NUMBER OF INTERSECTIONS WITH PRIVATE ACCESS DRIVEWAYS	<i>Number of Occurrences</i>	4
	Left turn movements permitted	10	
	Right-in / Right-out only	0	
E3	NUMBER OF INTERCHANGES	<i>Number of Occurrences</i>	0
	Number of interchanges along corridor	0	
F	ON-STREET PARKING	Lower	1

Total Risk Score:

49

Recommended Posted Speed Limit (km/h):

As determined by road characteristics

70

As determined by policy

The recommended posted speed limit may be checked against the prevailing speeds of the roadway and the road's safety performance.

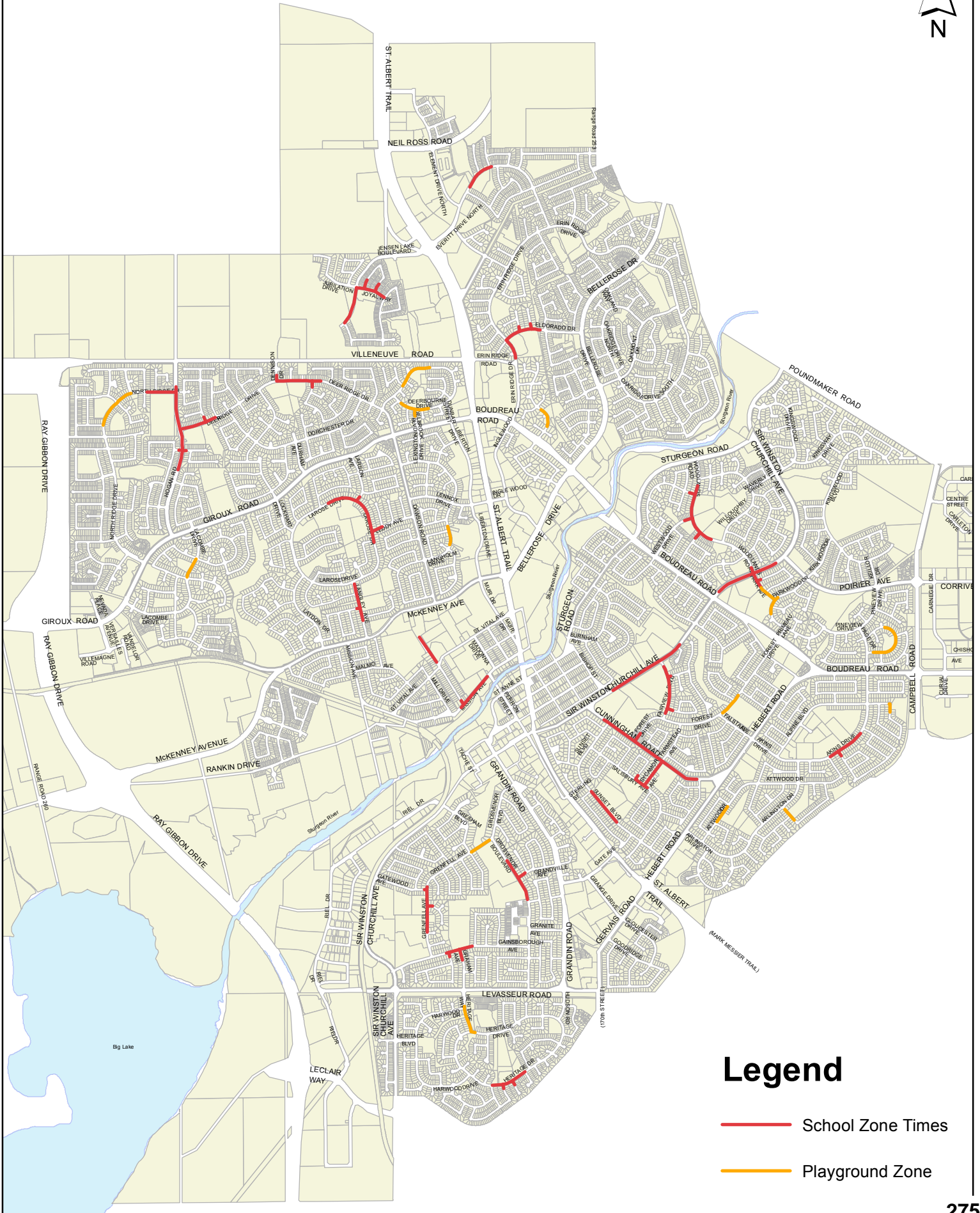
Comments:



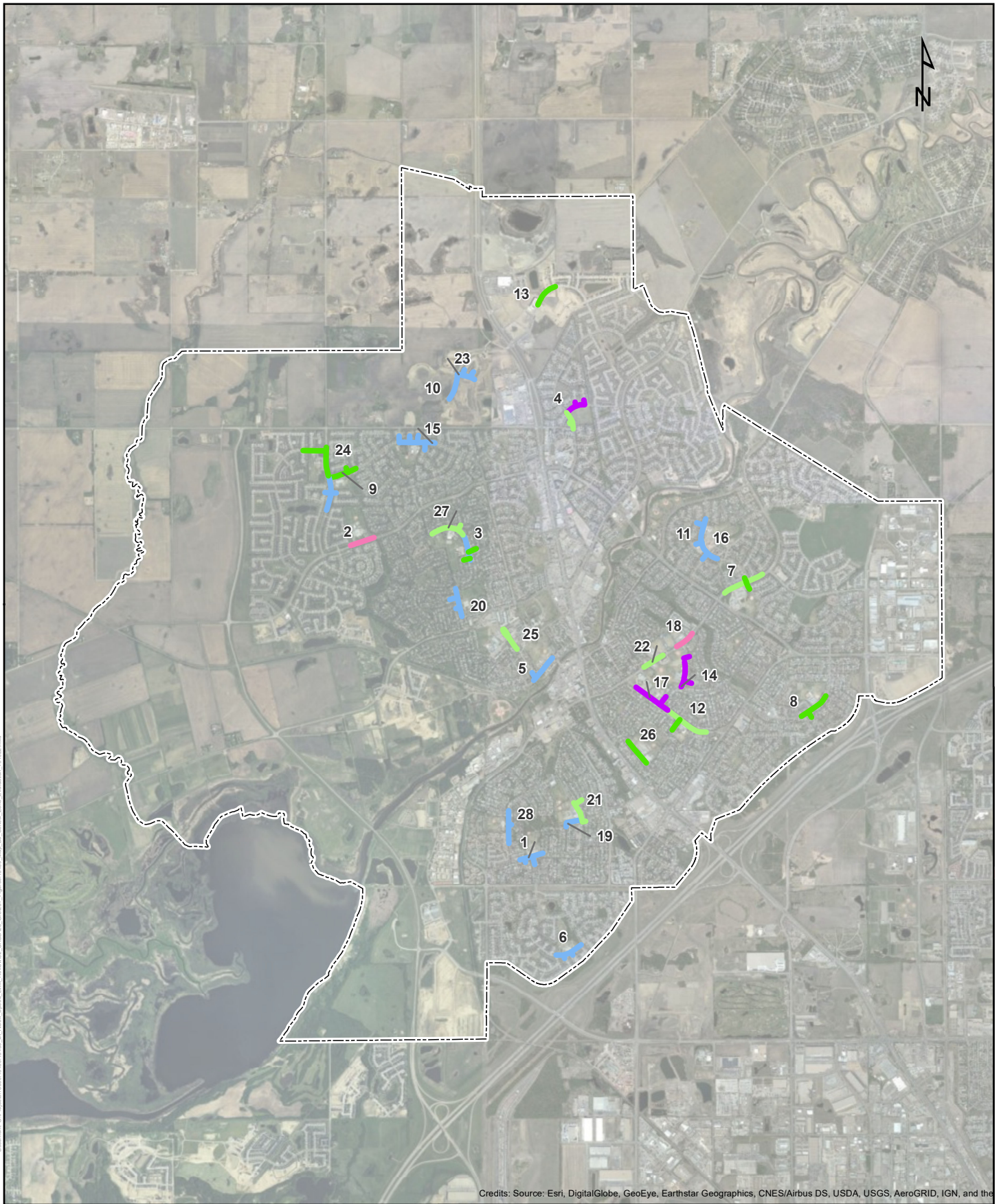
APPENDIX
AT Playground /School Zone/Area Inputs/Results

D

School & Playground Zones



- ### Legend
- School Zone Times
 - Playground Zone



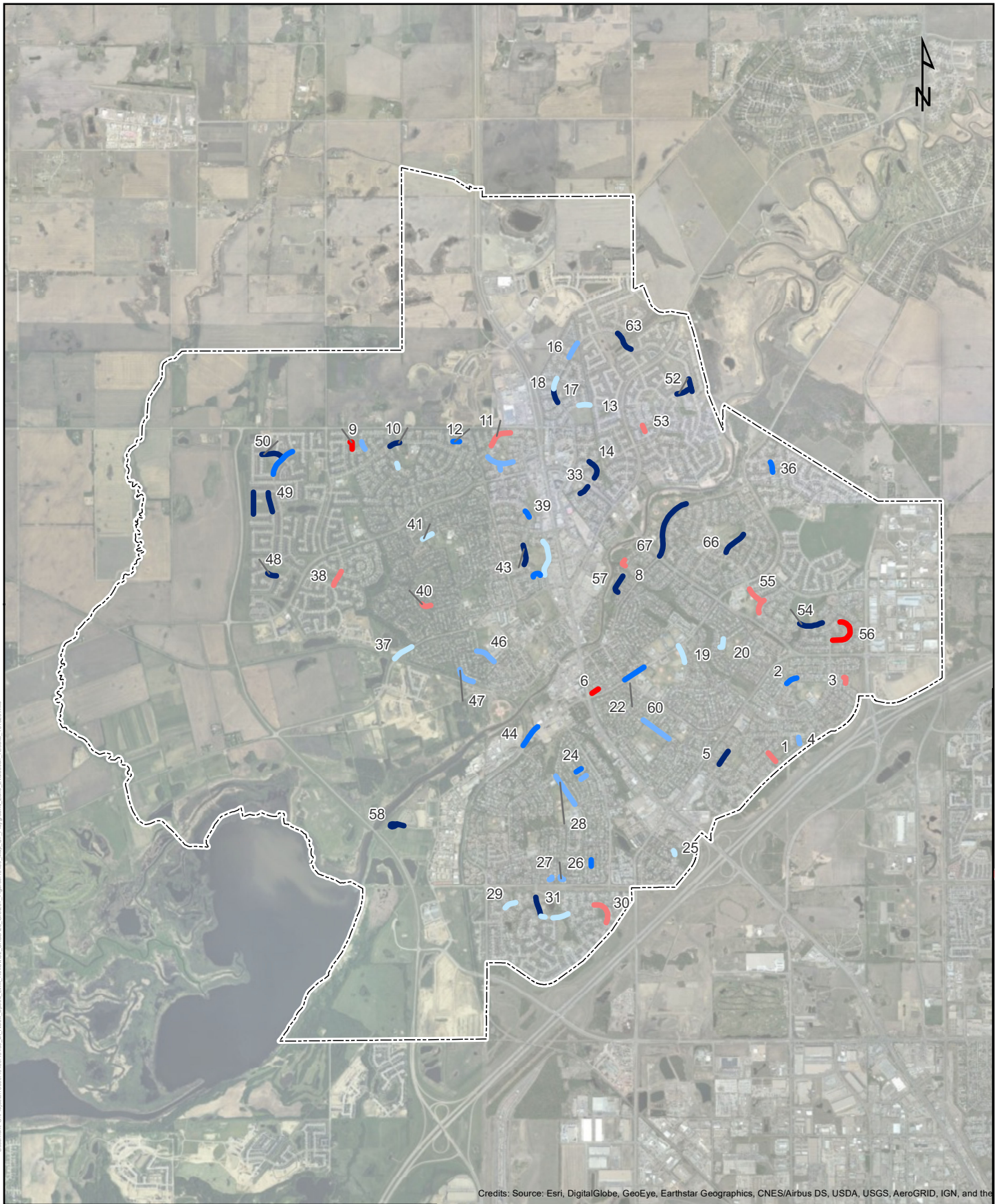
Credits: Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the

0 0.5 1 2 km
 CANA83-3TM114 1:55,000

- City of St. Albert
- 41-50 (School Area)
- 51-60 (School Area)
- 61-70 (School Zone or Area)
- 71-80 (School Zone or Area)
- 81-90 (School Zone)
- 91-100 (School Zone)

**SCHOOL ZONE
EVALUATION RESULTS**





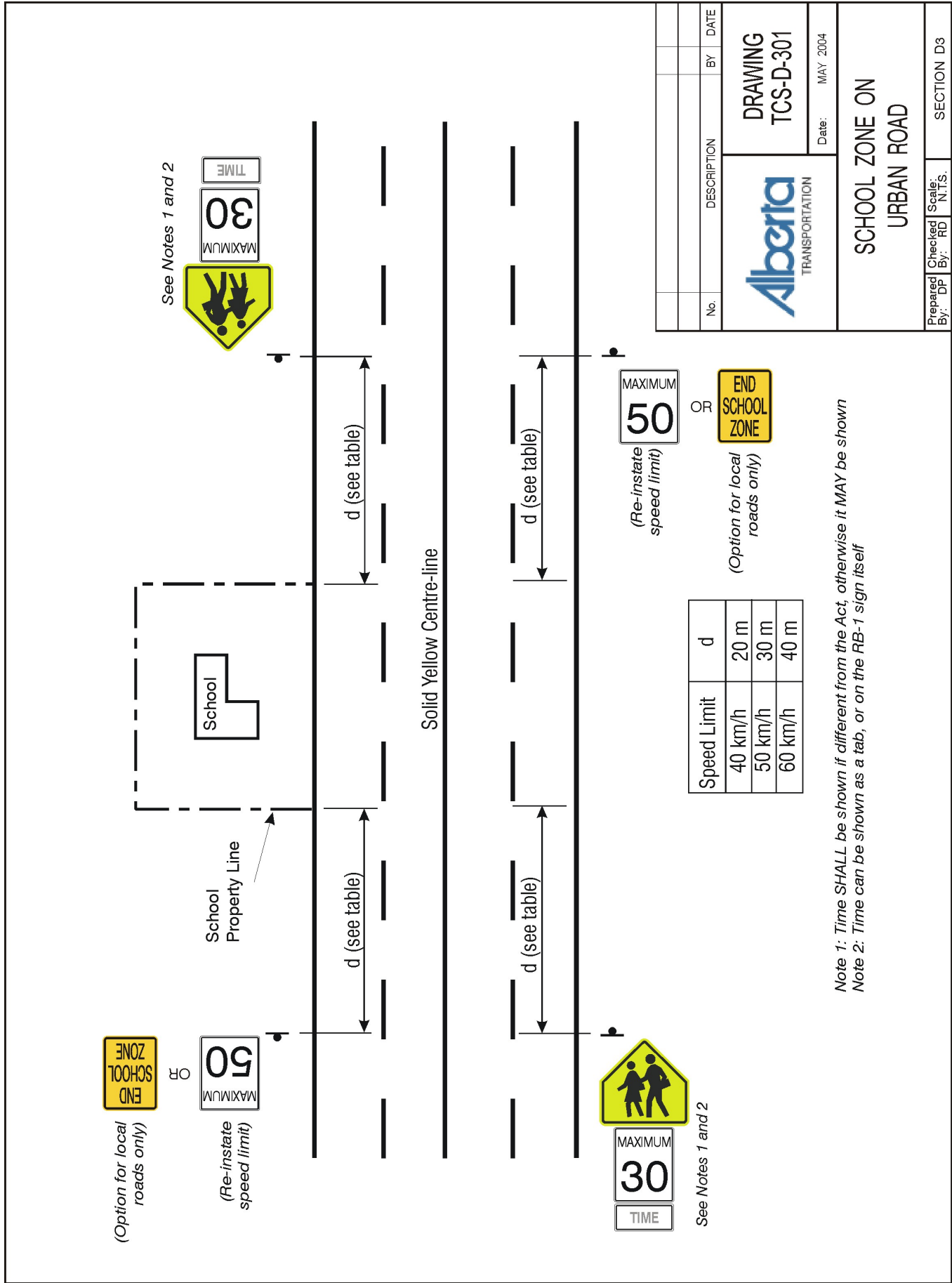
Credits: Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the

0 0.5 1 2 km
 CANA83-3TM114 1:55,000

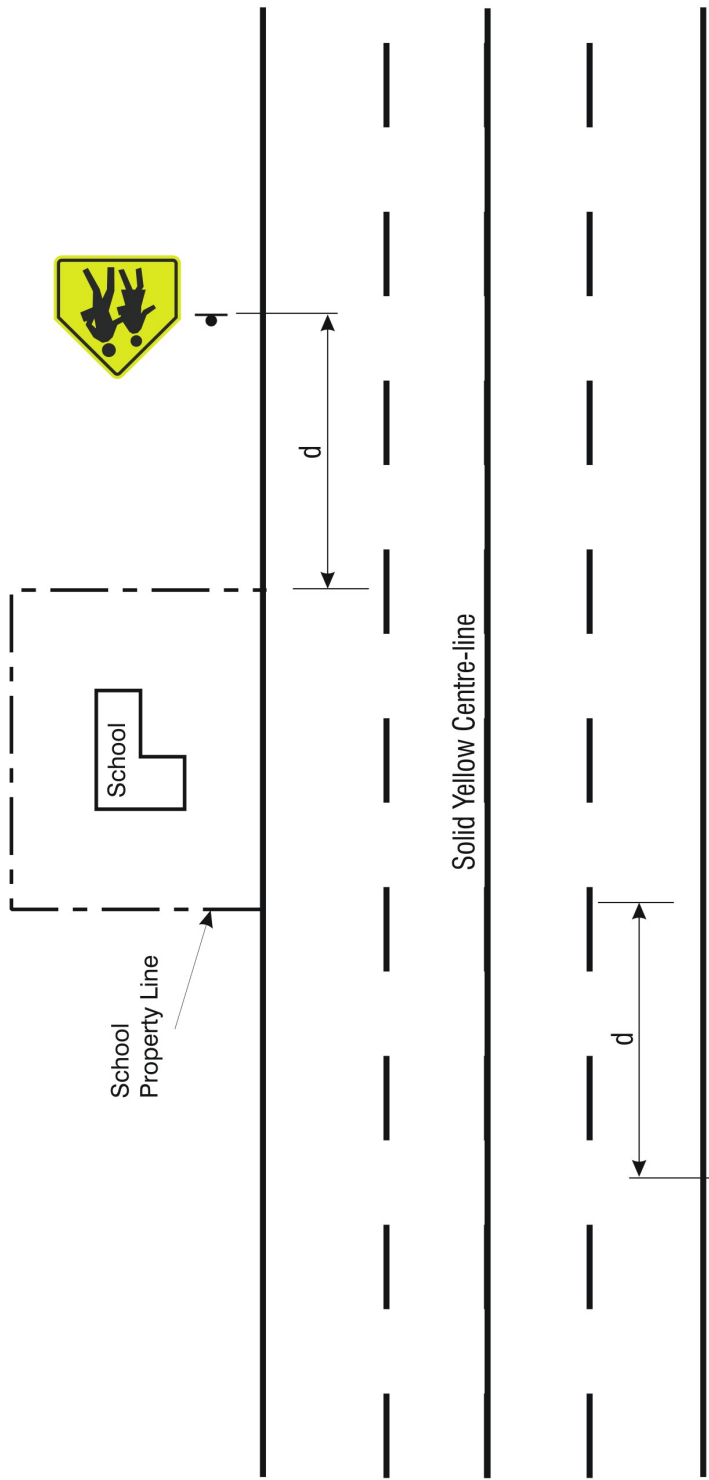
- City of St. Albert
- 41-50 (Playground Area)
- 51-60 (Playground Area)
- 61-70 (Playground Area)
- 71-80 (Playground Area)
- 81-90 (Playground Zone)
- 91-100 (Playground Zone)

**PLAYGROUND ZONE
 EVALUATION RESULTS**



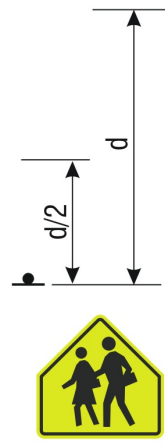
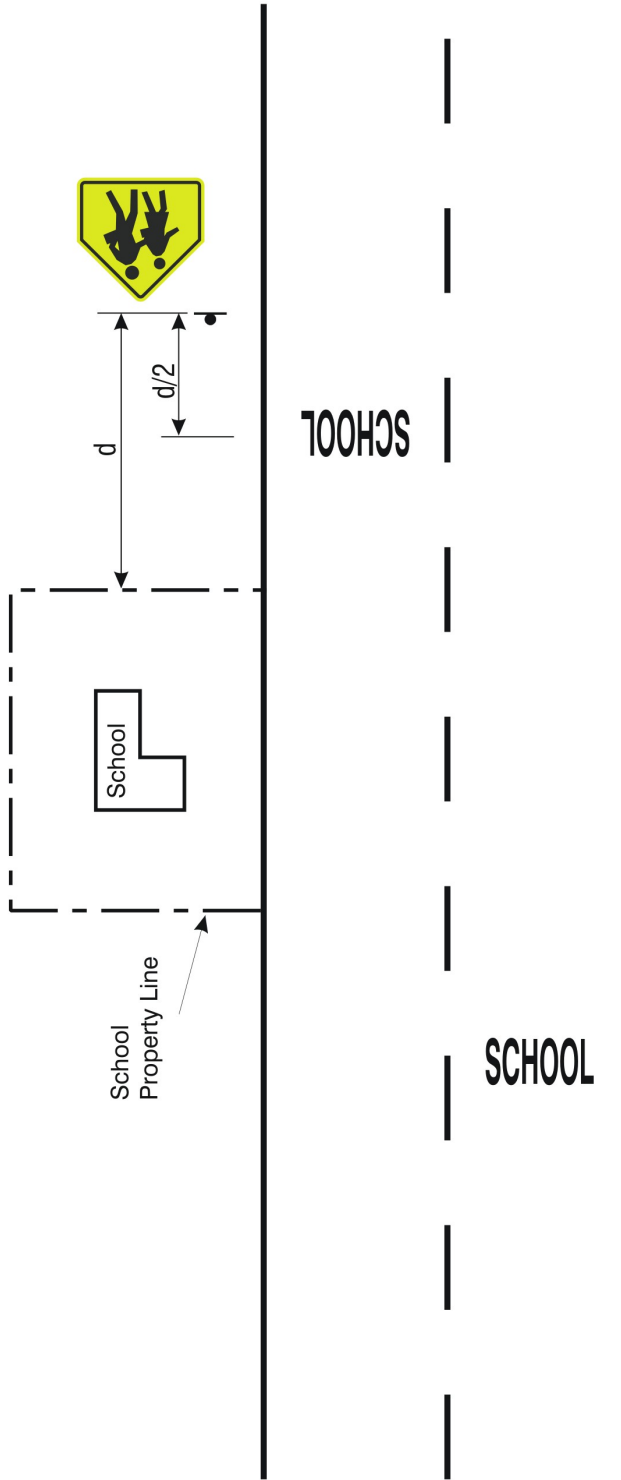


No.	DESCRIPTION	BY	DATE
		DRAWING TCS-D-301	
		Date: MAY 2004	
SCHOOL ZONE ON URBAN ROAD			
Prepared By: DP	Checked By: RD	Scale: N.T.S.	SECTION D3



Speed Limit	d
40 km/h	10 m
50 km/h	20 m
60 km/h	30 m
70 km/h	40 m
80 km/h	50 m

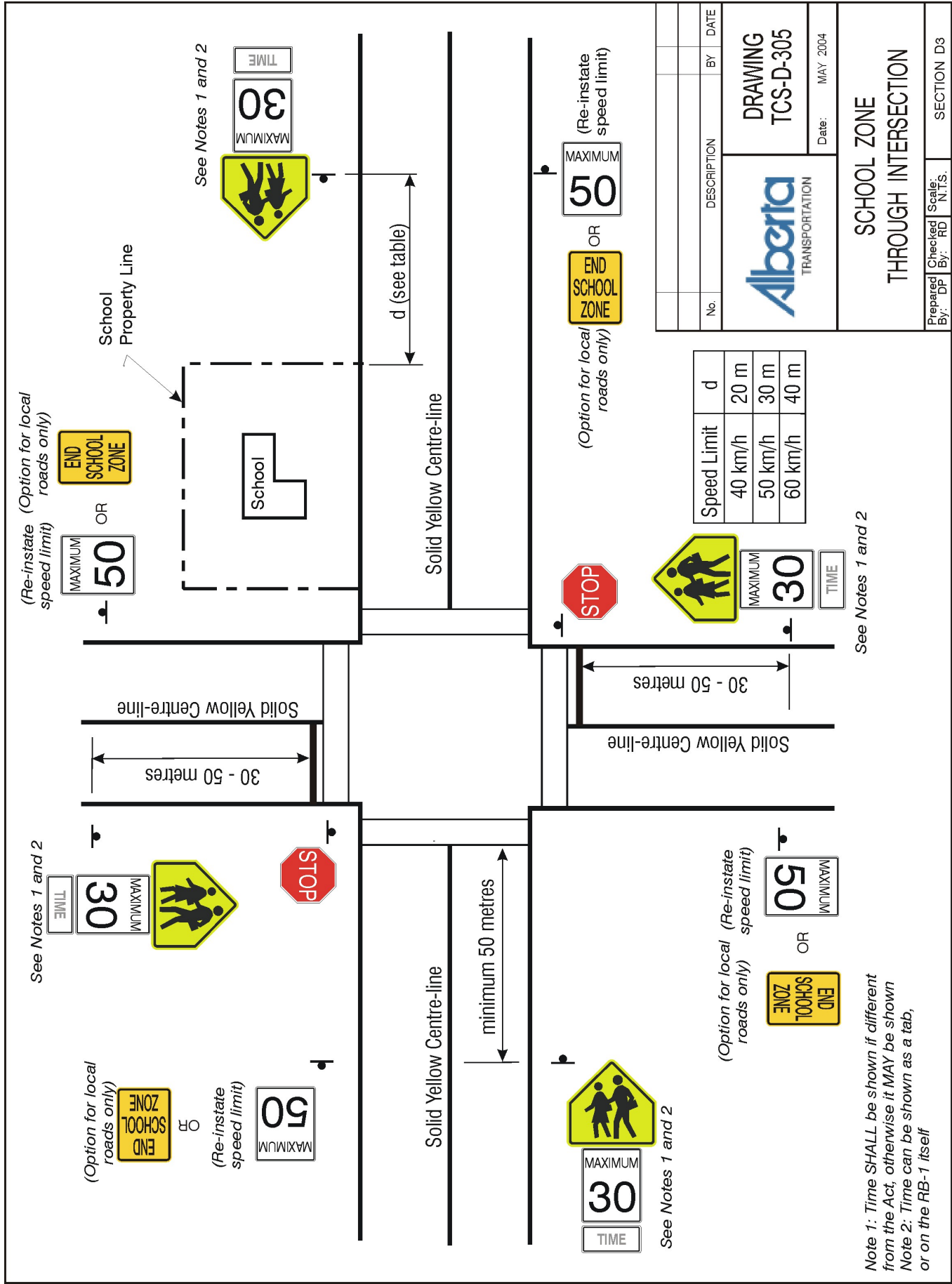
No.	DESCRIPTION	BY	DATE
		DRAWING	
		TCS-D-302	
		Date:	MAY 2004
		SCHOOL AREA ON	
		URBAN ROAD	
Prepared By: DF	Checked By: RD	Scale: N.I.S.	SECTION D3



Speed Limit	d
50 km/h	20 m
60 km/h	30 m
70 km/h	40 m
80 km/h	50 m
90 km/h	60 m
100 km/h	70 m

Note: All signs oversized for speed limits of 70km/h or more

No.	DESCRIPTION	BY	DATE
		DRAWING TCS-D-304	
		Date: MAY 2004	
SCHOOL AREA ON RURAL ROAD			
Prepared By: DP	Checked By: RD	Scale: N.T.S.	SECTION D3

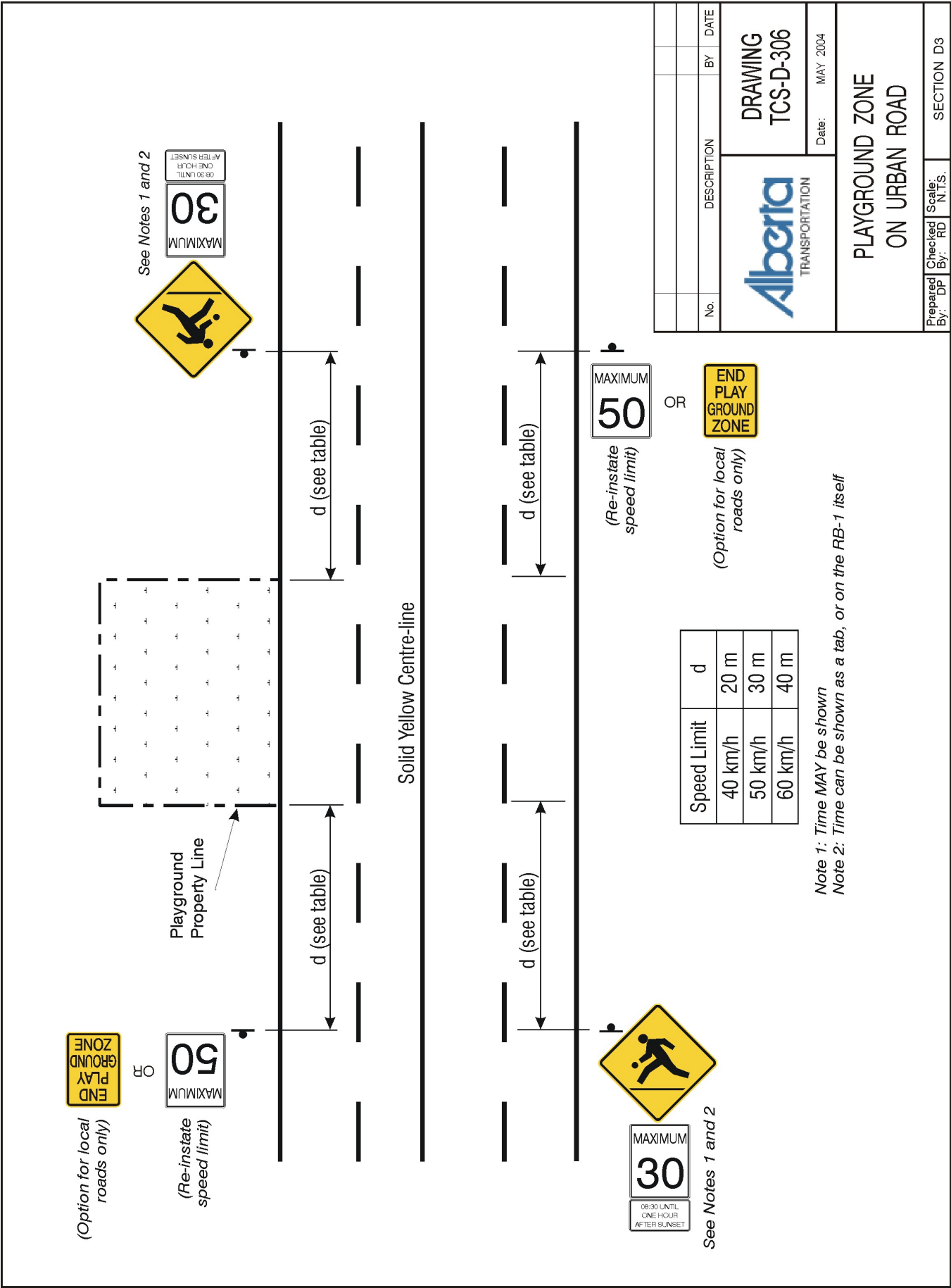


Speed Limit	d
40 km/h	20 m
50 km/h	30 m
60 km/h	40 m

No.	DESCRIPTION	BY	DATE
Alberta TRANSPORTATION		DRAWING TCS-D-305	
		Date: MAY 2004	
SCHOOL ZONE THROUGH INTERSECTION			
Prepared By: DP	Checked By: RD	Scale: N.T.S.	SECTION D3

See Notes 1 and 2

Note 1: Time SHALL be shown if different from the Act, otherwise it MAY be shown
 Note 2: Time can be shown as a tab, or on the RB-1 itself



(Option for local roads only)

OR
 MAXIMUM
50
 (Re-instate speed limit)

Playground Property Line

See Notes 1 and 2
 MAXIMUM
30
 09:30 UNTIL ONE HOUR AFTER SUNSET

d (see table)

d (see table)

d (see table)

d (see table)



MAXIMUM
30
 09:30 UNTIL ONE HOUR AFTER SUNSET

See Notes 1 and 2

MAXIMUM
50
 (Re-instate speed limit)

OR

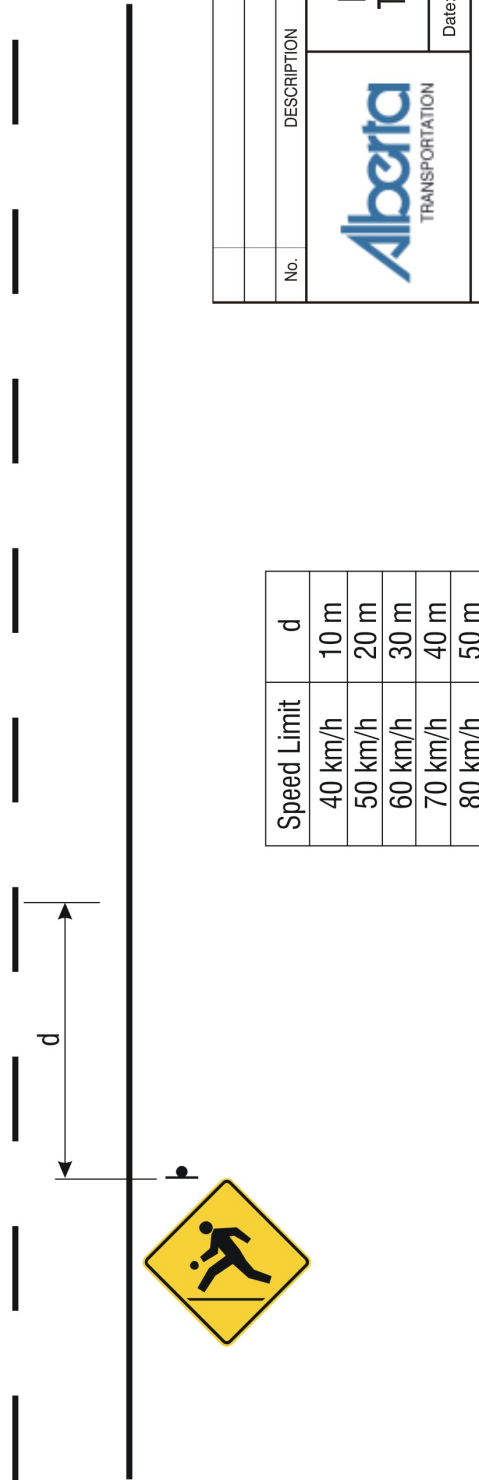
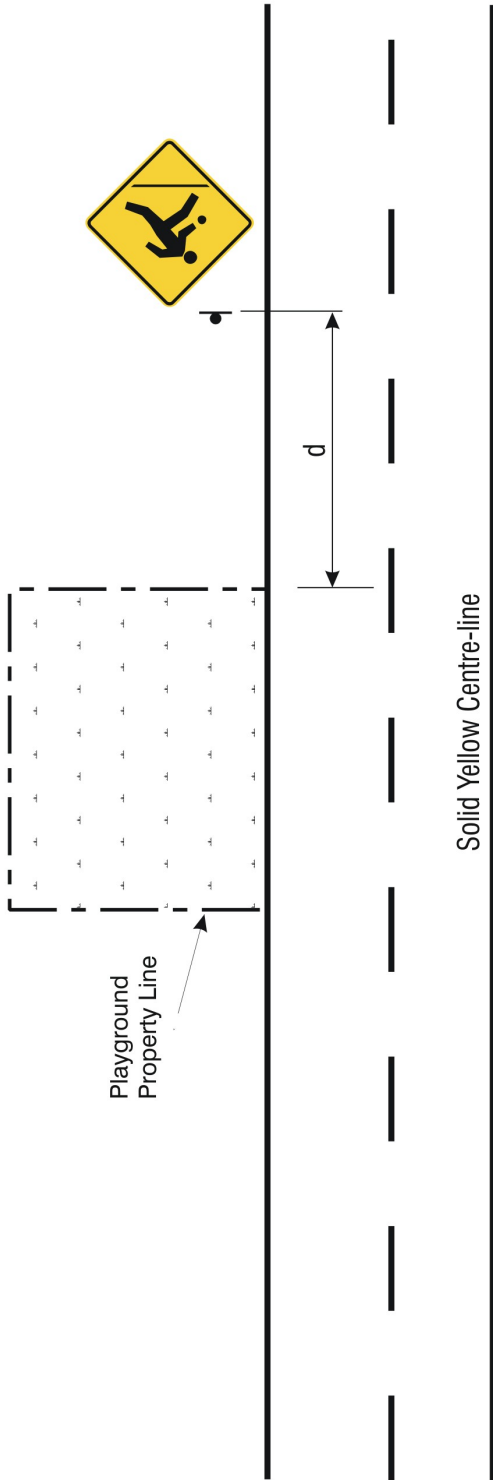
END PLAY GROUND ZONE

(Option for local roads only)

Speed Limit	d
40 km/h	20 m
50 km/h	30 m
60 km/h	40 m

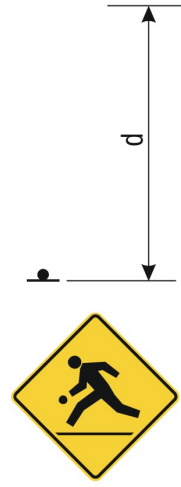
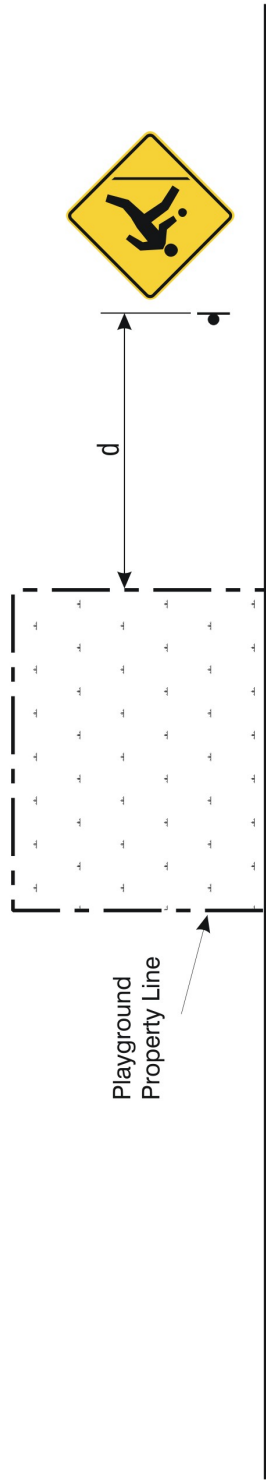
Note 1: Time MAY be shown
 Note 2: Time can be shown as a tab, or on the RB-1 itself

No.	DESCRIPTION	BY	DATE
		DRAWING TCS-D-306	
		Date:	MAY 2004
PLAYGROUND ZONE ON URBAN ROAD			
Prepared By: DP	Checked By: RD	Scale: N.T.S.	SECTION D3



Speed Limit	d
40 km/h	10 m
50 km/h	20 m
60 km/h	30 m
70 km/h	40 m
80 km/h	50 m

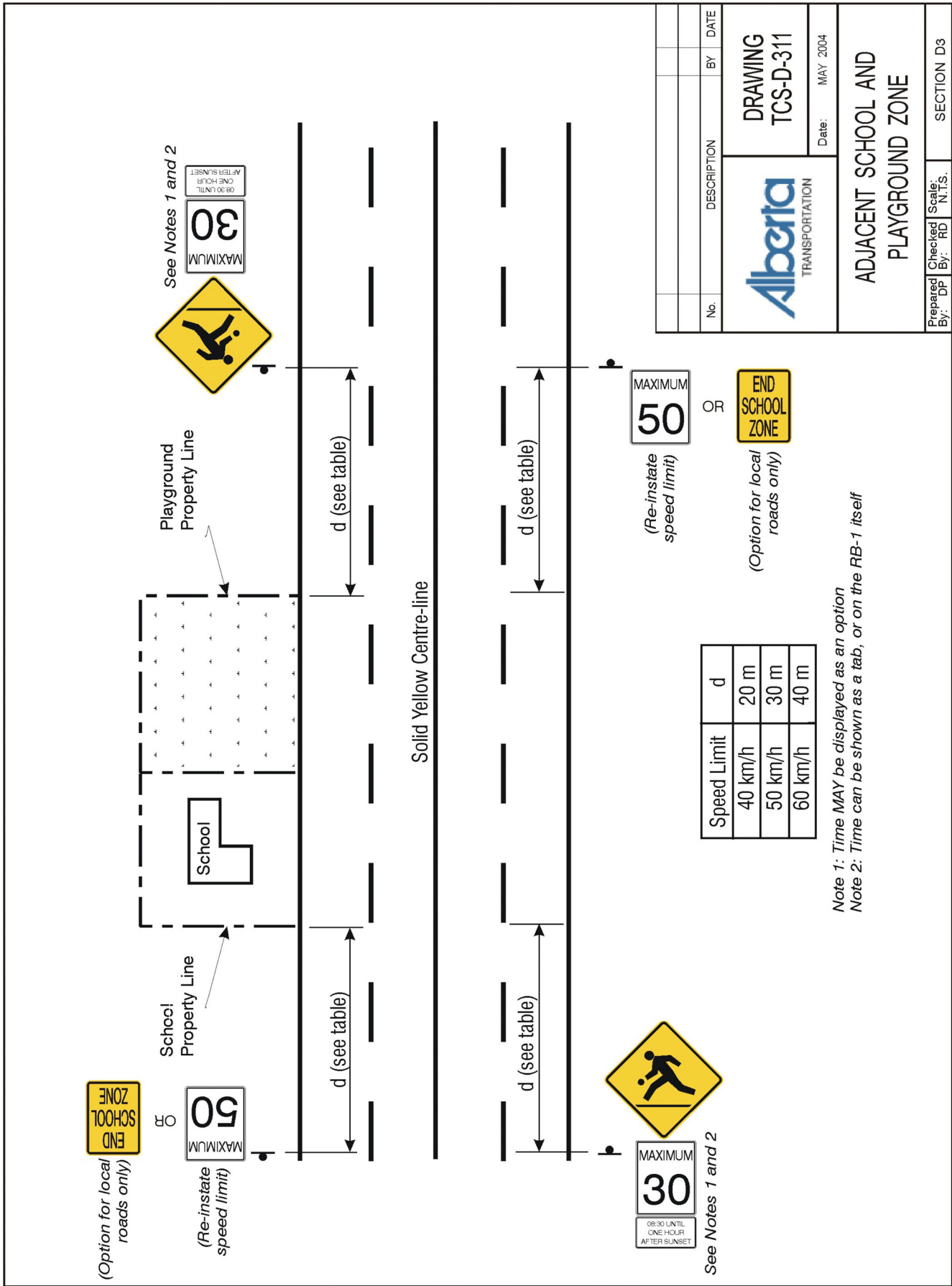
No.	DESCRIPTION	BY	DATE
		DRAWING TCS-D-307	
		Date: MAY 2004	
PLAYGROUND AREA ON URBAN ROAD			
Prepared By: DP	Checked By: RD	Scale: N.T.S.	SECTION D3



Speed Limit	d
50 km/h	20 m
60 km/h	30 m
70 km/h	40 m
80 km/h	50 m
90 km/h	60 m
100 km/h	70 m

Note: All signs oversized for speed limits of 70 km/h or more

No.	DESCRIPTION	BY	DATE
		DRAWING TCS-D-309	
		Date: MAY 2004	
PLAYGROUND AREA ON RURAL ROAD			
Prepared By: DP	Checked By: RD	Scale: N.T.S.	SECTION D3



No.	DESCRIPTION	BY	DATE
		DRAWING TCS-D-311	
		Date: MAY 2004	
ADJACENT SCHOOL AND PLAYGROUND ZONE			
Prepared By: DP	Checked By: RD	Scale: N.T.S.	SECTION D3

Variable Seasonal Times for Playground Zones

Recommendation

That the June 25, 2019, City Operations report CR_6043, be received for information.

Previous Council/Committee Action

At the May 8, 2018, City Council meeting, the following motion was passed:

5. That Administration bring a report outlining options or recommendations for variable seasonal times for playground zones based on operational data.

and provide a report back on Parts 1 to 4 with a due date of the August 14, 2018, Urban Planning Committee meeting and Part 5 with a due date of Second Quarter 2019.

Executive Summary

Council approved the implementation of harmonized playground zones in September 2017. Since that time, 150 standalone playgrounds were installed and 242 school zones were converted to playground zones. Playground zones in Edmonton currently have a 30 km/h speed limit in effect between 0730-2100 hours year-round.

Residents have raised concerns about the effectiveness of playground zone speed limits in the evening, during the winter or when school is not in session. In response, Council requested Administration bring forward options for seasonal playground zones.

For this report, Administration looked at operational data and other jurisdictions to consider three options for variable times:

- Continue zones around schools at the existing hours (0730-2100), but change time for standalone playgrounds
- Reconsider effective times for all playground zones
- Continue with status quo

Playground zones have been in place for less than one year. While collision data is limited, early information points towards a decrease in the number and severity of collisions occurring in playground zones. Adding variable or seasonal times could put vulnerable road users (children, those with limited mobility, etc.) at greater risk due to increased vehicle speeds outside of existing playground effective hours.

Based on local data and available information from other jurisdictions, as well as the pending decision on lower residential speed limits, Administration does not recommend variable effective time changes for playground zones.

Report

Background

In September 2015, the City of Edmonton adopted Vision Zero, a traffic safety strategy designed to eliminate fatalities and serious injuries on roadways. Roadway speeds factor significantly in collision likelihood and the severity of injuries. When pedestrians are struck by a vehicle traveling at 30 km/h, they have a 90 percent chance of surviving the impact; at 50 km/h, the survival rate drops to 20 percent. Children are more vulnerable than adults and often experience life-threatening or permanent injuries if struck by a vehicle, especially at higher speeds.

The introduction of 30km/h zones near elementary schools in September 2014 was found effective in reducing all types of collisions, including injury collisions. The zones were in effect 0800 -1630 on school days. City Council approved the expansion of school zones to include any schools with junior high grades (seven to nine) in May 2017, which were installed September 2017.

Council approved playground zones in September 2017, creating 150 standalone playgrounds and expanding the operational hours of 242 school zones. Playground zone speed limits are 30 km/hr between 0730-2100 daily.

The Traffic Safety Act sets the default hours for playground zones as “8:30 am until one hour after sunset,” but allows municipalities to vary those times by bylaw. Edmonton playground zones and times are consistent with those in Calgary, Red Deer and Medicine Hat. Some municipalities use different enforcement hours for playground zones; however, none in Alberta vary hours by season, such as summer and winter. Some use a daily variable time that changes based on daylight. Attachment 1 outlines various school and playground zones in Alberta.

Playground Safety

Edmonton

In 2014, the City installed 30 km/h school zones at 233 schools with elementary grades. In October 2016, Administration presented Effects of 2014 Change in Elementary School Zones to 30 km/h (October 17, 2016, City Operations report CR_1504), which showed a marked decrease in collisions and injuries after the introduction of the reduced speed limit. The data showed that 30 km/h speed limits

around schools reduced total injury collisions from 17 to 10 in the year post speed limit reduction. Injury collisions involving pedestrians and cyclists were reduced from seven collisions to two in the year after implementation.

Based on the roadway safety improvements following the implementation of school zones, City Council approved the extension of the zones to include junior high schools in May 2017. Administration completed installation by September 2017.

City Council also approved the implementation of playground zones in September 2017, and all existing school zones were subsequently converted to playground zones by spring 2018. School zones sometimes caused confusion for drivers due in part to public, Catholic, and charter schools having different schedules and vacation days. Some schools also follow a year-round schedule. The consistent hours of playground zones help to reduce driver confusion and increase safety.

Since the implementation of playground zones, Administration has received both positive and negative feedback from the public regarding their implementation. The common theme of concern is that playground zones are not necessary due to low temperature, darkness, or when school is not in session.

Calgary

The City of Calgary opted to combine school zones and playground zones in August 2015. The City then implemented 30 km/h playground zones with consistent hours of operation citywide.

In 2017, the University of Calgary, Department of Civil Engineering, conducted a study to determine the safety impacts. Comparing the periods before school and playground zones were combined, the study found:

- The mean speed decreased from 36 km/h to 30 km/h; and
- Pedestrian collisions within school and playground zones decreased by 33 percent (from 30 pedestrian collisions prior to combination to 20 collisions after), including a drop from 10 collisions to three between the hours of 1730-2100.

Based on a survey that was conducted after the zones were combined, more than 80 percent of the respondents found it easier to remember the zone times when the time was consistent throughout the week and the year.

Edmonton Playground Zone Collision Data 2014 - 2018

The current best practice is to use a minimum of three years before-and-after data to evaluate the effectiveness of safety engineering measures. Since playground zones have been in place for approximately one year, Administration cautions against using

this data conclusively. The data provided in Attachment 2 shows collisions on roadway segments that are now defined as standalone or combined playground zones. Definitions are summarized in Attachment 3.

Current data indicates that injury collisions occur in playground zones year-round and at all times of day. Between 2014 and 2018, there were 43 instances where a motor vehicle struck a pedestrian or cyclist aged 15 and younger in areas that are now playground zones. Of these collisions, 35 percent (15 of 43) occurred outside of the previous school zone hours of 0800-1630.

Standalone Playground Zones Injury Collisions

Between 2014 and 2018, there were 118 injury collisions involving any roadway user in locations that are now standalone playground zones:

- 21 of the 118 collisions involved pedestrians and cyclists
 - five of the 21 occurred between the hours of 1900-2100
 - 12 of the 21 occurred in winter months (November to February)

Combined Playground Zones Injury Collisions

Between 2014 and 2018, there were 330 injury collisions involving any roadway user in locations that are now combined playground zones:

- 77 of the 330 collisions involved pedestrians and cyclists
 - 30 of the 77 occurred between the hours of 1700-2100
 - nine out of 77 occurred in summer months (July and August)

Variable Seasonal Times for Playground Zones

Administration considered three options for variable seasonal times for playgrounds:

1. Maintain the zones around schools at the existing hours (0730-2100) but change times of standalone playgrounds
2. Change the effective times for all playground zones
3. Maintain the status quo

Option 1 - Maintain the zones around schools at the existing hours (0730-2100) but change times of standalone playgrounds

This option would allow existing 30 km/h playground zones to remain at combined playground zones (playgrounds adjacent to schools) but change the effective times based on season for standalone playground zones.

Standalone playground zones have been in effect for approximately one year and drivers are still adjusting to the new hours. Changing the effective hours of these zones could lead to roadway user uncertainty and frustration.

Data from both before and after playground zone installation indicates that injury collisions with vulnerable road users occur during evening hours and evenly during all seasons. Although data is limited, early indications are that these lower limits are having a positive impact on collision reduction and severity.

The addition of seasonal playground zone effective times, such as sunrise to sunset, would require additional budget for communications for the changing hours as well as for new sign production and installation.

Option 2 - Change the effective times for all playground zones

This option would allow varied effective times for all playground zones. The effective times could be based on seasonality (i.e. differing effective times for the summer versus winter months), or, alternatively, on the effective time period set out in the *Use of the Highway and Rules of the Road Regulation* (i.e. commencing at 8:30 a.m. and ending one hour after sunset seven days a week).

There are no municipalities in Alberta that use a variable playground zone time based on season. Some municipalities use a daily variable time based on sunrise and sunset. Introducing multiple operational times and/or variable seasonal times would lead to increased driver confusion for operational hours given Edmonton's current playground zones being in effect for static hours. Amendments to the existing Speed Zones Bylaw, public education campaigns and installation of new signs would be required to mitigate driver confusion with any changes.

Generally, most drivers will not be aware of exact sunrise and sunset times, and effective months due to seasonality (e.g., November to March for winter) may not match perception due to weather. Enforcement for the edges of variable times due to the sun or season could also prove challenging.

Edmonton's school systems have differing daily and weekly hours of operation, scheduled holidays and some have year-round programs. Schools and playgrounds are used during evening hours, weekends and holidays by children and adults for various community gatherings or athletic activities. A variable playground zone could put these users at risk as inconsistency of playground zone active times would likely decrease driver compliance with lower speed limits.

Option 3 - Maintain the status quo

Playground zones have been in effect for less than one year and drivers are still adjusting to the playground locations and effective times. Although data from after playground zone installation is limited, early indications are that the lower limits are having a positive impact on collision reduction and severity. Keeping the status quo would allow for the collection of additional data and allow for a more comprehensive post installation collision review.

Result of Analysis

Administration suggests that making changes to playground zone hours now would negatively impact driver and pedestrian safety as both road users are becoming accustomed to the current hours. Council will also be considering lowered residential speed limits in early 2020, which could change effective playground hours and sign requirements. That decision and additional collision data will help provide stronger evidence in favor of keeping or changing the playground zones.

Administration does not currently recommend variable seasonal times or changes to daily effective times for any playground zones for a number of reasons. Schools have high activity levels at many times of day and during the year. Younger pedestrians and cyclists are more likely to sustain serious injuries when they are involved in collisions because of their physical size. School boards in Edmonton have expressed their support for the present playground zone hours. From a Vision Zero perspective, lower speed limits at schools during all times of the year is an important element in protecting not only children, but all vulnerable road users.

Corporate Outcomes and Performance Management

Corporate Outcome(s): Edmonton is a Safe City			
Outcome(s)	Measure(s)	Result(s)	Target(s)
The city's road networks promote safety and security for all Edmontonians.	Monthly average of vulnerable road user injury collisions in combined and standalone playground zones	24 percent decrease after playground zone installation (preliminary 2018 results)	TBD - Will be set after three year review period (2021)

Attachments

1. School Zones and Playground Zones in other Alberta Municipalities
2. Edmonton Playground Zone Collision Data 2014 - 2018
3. Edmonton Playground Zone Definitions

Others Reviewing this Report

- R. Kits, Acting Deputy City Manager, Financial and Corporate Services
- C. Owen, Deputy City Manager, Communications and Engagement
- S. McCabe, Deputy City Manager, Urban Form and Corporate Strategic Development
- B. Andriachuk, City Solicitor

School Zones and Playground Zones in other Alberta Municipalities

Municipality	School Zones	Playground Zones
Calgary	-	7:30am - 9:00pm
Edmonton	-	7:30am - 9:00pm
Red Deer	8:00am - 4:30pm School Days*	8:00am - 9:00pm
St. Albert	8:00am - 4:00pm School Days	8:30am - one hour after sunset
Strathcona County	7:30am - 4:30pm School Days	8:30am - one hour after sunset
Medicine Hat	-	7:30am - 9:00pm
Leduc	8:00 - 9:30am; 11:30 - 1:30pm; 3:00 - 4:30pm	8:30am - one hour after sunset
Spruce Grove	8:00 - 9:30am; 11:30 - 1:30pm; 3:00 - 4:30pm	Half hour before sunrise - half hour after sunset
Lethbridge	7:30am - 4:30pm School Days	8:30am - one hour after sunset
Grande Prairie	7:30am - 4:30pm School Days	7:30am - one hour after sunset

* Red Deer has only one school zone with hours 8:00am to 4:30pm. All their other schools are harmonized and have playground zones in place from 8:00am - 9:00pm year-round.

Edmonton Playground Zone Collision Data 2014 - 2018

Vulnerable Road User (VRU) Collisions in Playground Zones involving children aged 15 years old and younger 2014-2018

Hour \ Month	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0730 - 0800	1	0	0	0	0	0	0	0	0	1	0	1
0800 - 0900	0	1	2	2	3	3	0	0	1	0	1	1
0900 - 1000	0	0	0	0	0	0	0	0	0	0	0	0
1000 - 1100	0	0	0	0	0	0	0	0	0	0	0	0
1100 - 1200	0	0	0	0	0	0	0	0	0	0	0	0
1200 - 1300	0	0	0	0	0	0	0	1	0	0	0	0
1300 - 1400	0	0	1	0	0	0	0	0	2	0	0	0
1400 - 1500	0	0	0	0	1	0	0	0	0	0	0	0
1500 - 1600	0	0	0	1	0	0	0	0	0	0	0	0
1600 - 1700	0	0	1	1	1	1	0	0	0	0	3	0
1700 - 1800	0	1	0	0	4	0	1	0	0	0	0	0
1800 - 1900	0	0	0	0	0	0	0	0	0	0	1	0
1900 - 2000	0	0	0	0	0	0	1	1	0	0	0	0
2000 - 2100	0	0	0	0	1	1	0	2	0	0	0	0

Standalone Playground Zones Injury Collisions

Injury Collisions 2014 - 2018 (118 Collisions)
 → All Road Users

Hour \ Month	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	
0730 - 0800	0	0	0	0	0	0	1	0	1	0	0	0	2
0800 - 0900	2	1	1	1	1	2	1	0	1	0	0	2	12
0900 - 1000	0	0	0	1	0	0	0	0	0	0	1	1	3
1000 - 1100	0	0	0	0	0	0	2	1	0	0	0	0	3
1100 - 1200	0	0	0	2	1	1	0	1	0	1	2	1	9
1200 - 1300	2	1	1	1	1	0	1	0	0	0	3	1	11
1300 - 1400	2	0	0	0	0	1	1	2	0	1	1	1	9
1400 - 1500	5	1	2	3	2	0	0	0	1	2	0	2	18
1500 - 1600	2	0	0	1	4	2	3	1	2	1	3	1	20
1600 - 1700	0	1	1	1	0	1	2	0	2	0	0	0	8
1700 - 1800	1	1	0	1	0	2	0	0	1	0	1	0	7
1800 - 1900	1	2	0	1	1	0	0	0	2	0	2	0	9
1900 - 2000	1	0	0	0	0	1	2	1	1	1	0	0	7
2000 - 2100	0	0	0	0	1	0	1	0	1	0	0	1	4
	16	7	5	12	11	10	14	6	12	6	13	10	

Injury Collisions 2014 - 2018 (21 Collisions)
 → Pedestrians & Cyclists

Hour \ Month	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	
0730 - 0800	0	0	0	0	0	0	0	0	1	0	0	0	1
0800 - 0900	0	0	0	0	0	1	0	0	0	0	0	0	1
0900 - 1000	0	0	0	0	0	0	0	0	0	0	0	1	1
1000 - 1100	0	0	0	0	0	0	0	0	0	0	0	0	0
1100 - 1200	0	0	0	0	0	0	0	0	0	0	0	0	0
1200 - 1300	0	0	0	0	0	0	0	0	0	0	1	0	1
1300 - 1400	1	0	0	0	1	0	0	0	0	0	1	0	3
1400 - 1500	0	0	0	0	0	0	0	0	0	0	0	0	0
1500 - 1600	1	0	0	1	0	0	0	0	0	0	0	0	2
1600 - 1700	0	0	0	0	2	1	1	0	0	0	1	0	5
1700 - 1800	0	1	0	0	0	1	0	0	0	0	0	0	2
1800 - 1900	0	1	0	0	0	0	0	0	0	0	0	0	1
1900 - 2000	0	0	0	1	0	0	0	0	1	0	0	0	2
2000 - 2100	0	0	0	0	0	0	0	0	1	1	0	0	2
	2	2	0	2	3	3	1	0	3	1	3	1	

Combined Playground Zones Injury Collisions

Injury Collisions 2014 - 2018 (330 Collisions)

→ All Road Users

Hour \ Month	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	
0730 - 0800	2	1	1	3	1	1	0	0	1	3	1	1	15
0800 - 0900	3	5	4	4	6	5	1	2	5	4	8	2	49
0900 - 1000	0	1	0	3	0	0	3	0	2	1	1	1	12
1000 - 1100	1	0	1	0	1	0	1	1	3	0	1	1	10
1100 - 1200	0	1	3	3	0	1	1	5	1	3	2	0	20
1200 - 1300	1	5	4	1	2	0	2	0	4	2	2	1	24
1300 - 1400	0	2	1	3	2	2	5	0	1	1	4	0	21
1400 - 1500	2	3	3	2	2	1	1	4	3	0	1	0	22
1500 - 1600	2	1	4	4	3	2	1	6	6	3	5	2	39
1600 - 1700	1	2	4	0	4	1	2	1	5	1	0	1	22
1700 - 1800	5	4	4	2	1	2	1	3	4	1	4	4	35
1800 - 1900	1	0	2	4	2	1	2	3	1	1	1	0	18
1900 - 2000	2	1	2	0	2	2	3	4	0	2	2	3	23
2000 - 2100	2	0	0	0	2	1	4	1	2	4	2	2	20
	22	26	33	29	28	19	27	30	38	26	34	18	

Injury Collisions 2014 - 2018 (77 Collisions)

→ Pedestrians & Cyclists

Hour \ Month	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	
0730 - 0800	2	0	0	1	0	0	0	0	0	2	0	1	6
0800 - 0900	1	1	2	4	4	2	0	0	1	1	1	1	18
0900 - 1000	0	0	0	0	0	0	0	0	0	0	1	0	1
1000 - 1100	0	0	0	0	1	0	0	0	0	0	0	0	1
1100 - 1200	0	0	0	1	0	0	0	1	0	0	0	0	2
1200 - 1300	0	0	2	0	0	0	0	0	2	2	1	0	7
1300 - 1400	0	1	0	1	0	0	0	0	0	0	0	0	2
1400 - 1500	0	0	1	0	0	1	0	2	0	0	0	0	4
1500 - 1600	0	0	1	1	1	0	0	0	0	0	3	0	6
1600 - 1700	0	1	1	0	2	0	0	0	0	0	0	1	5
1700 - 1800	1	0	1	0	0	1	0	1	2	0	1	1	8
1800 - 1900	0	0	0	1	0	0	1	1	1	0	0	0	4
1900 - 2000	1	1	1	0	0	1	0	2	0	1	2	0	9
2000 - 2100	0	0	0	0	1	0	1	0	1	0	0	1	4
	5	4	9	9	9	5	2	7	7	6	9	5	

Average Injury Collisions per month Before & After Playground Zones

Average Collisions per Month Pedestrian & Cyclist injury collisions - 15 years old and younger	
Before (September 2014 - August 2017)	After (April 2018 - December 2018)
All Zones (7:30 - 21:00)	
0.8	0.7
Standalone Zones (7:30 - 21:00)	
0.1	0.1
Combined Zones (7:30 - 21:00)	
0.7	0.6
Combined Zones (Previous School Zone Hours 8:00 - 16:30)	
0.6	0.4
Combined Zones (Outside School Zone Hours 8:00 - 16:30)	
0.2	0.2

Average Collisions per Month Pedestrian & Cyclist injury collisions - All Ages	
Before (September 2014 - August 2017)	After (April 2018 - December 2018)
All Zones (7:30 - 21:00)	
1.7	1.3
Standalone Zones (7:30 - 21:00)	
0.4	0.1
Combined Zones (7:30 - 21:00)	
1.3	1.2
Combined Zones (Previous School Zone Hours 8:00 - 16:30)	
0.9	1.0
Combined Zones (Outside School Zone Hours 8:00 - 16:30)	
0.5	0.4

Edmonton Playground Zone Definitions

Standalone Playground: A playground that is not adjacent to a school. Standalone playgrounds represent approximately 40 percent of all playground zones.

Combined Playground: A playground that is adjacent to a school. These replaced previous school zones (same speed limit but with extended hours 0730 - 2100) or replaced previous school zones and extended the zone to cover adjacent parks.

School Zone: School zones were introduced in September 2014 for Elementary Schools and expanded to include Junior High Schools in September 2017. These zones had a posted speed limit of 30 km/h 0800 - 1630 on School Days.



APPENDIX
Stakeholder Presentation

E



Transportation Network

Speed Limit Review

Project Statement

Network level assessment of the speed limits within St Albert, including arterials, collectors, locals, playground zones/areas and school zones/areas based on previous studies, emerging best practices, current guidelines, and safe systems.



History of Speed Limits

- Traffic Safety Act
 - Previous Provincial Law
 - Default of 50 km/h
 - School zone times set
 - Recent Transfer to Municipalities
 - Setting default speeds, reduced speed zones
- St. Albert Story,
 - **Dean/Sudip** – Do you have any specific “story points” to add, do you have a vision zero logo?
 - Past Projects
 - Vision Zero
 - Public Concerns/Council Initiatives?



Presentation Outline

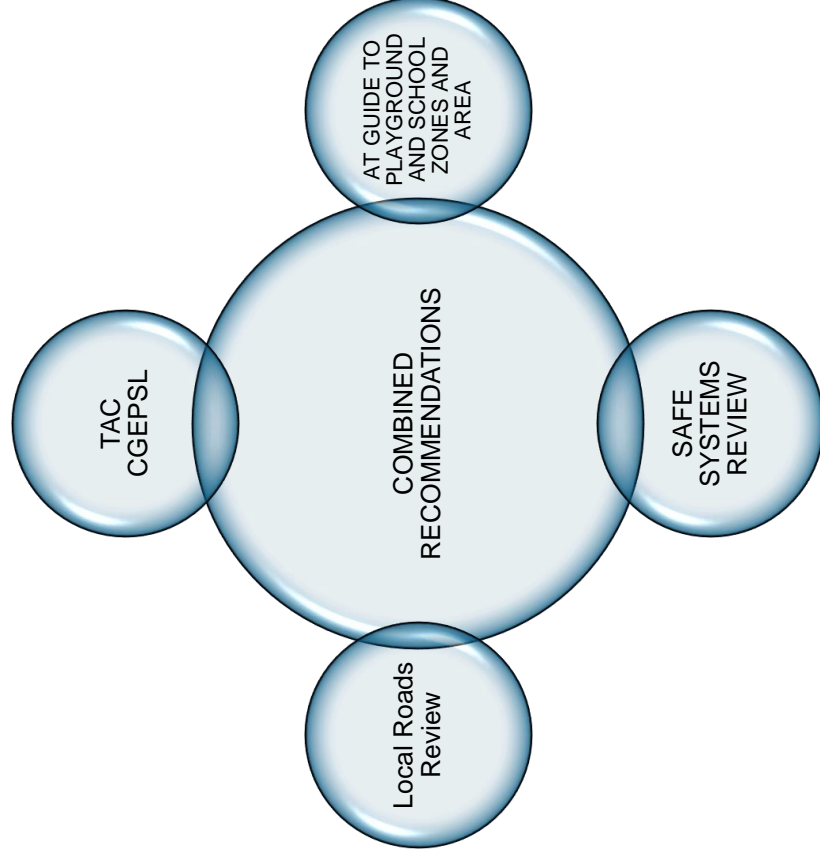
1. Purpose of Presentation
2. Project Overview
3. Background Information Review
4. Best Practices Review
5. Applying Transportation Association of Canada (TAC) Canadian Guidelines to Establishing Posted Speed Limit (CGEPSL)
6. Local Roadway Review
7. Applying Alberta Transportation (AT) Playground and School Zone and Area Guideline
8. Safe Systems Review
9. Recommendations

Presentation Purpose

- Present Preliminary Recommendations
- Obtain Feedback
 - Impact of recommendations by stakeholder group
- Incorporate feedback into report presented to executive committee on February 12, 2020

Project Overview

A Merge of Different Speed Setting Philosophies



Separate Recommendations From Each Focus Area

1. Transportation Association of Canada Canadian Geometric Guidelines to Establishing Posted Speed Limits (TAC CGEPSL)
2. Alberta Transportation Guide to Playground and School Zones and Areas
3. Local Roads Review
4. Safe Systems Review

Preliminary Recommendations

- Combined from all areas

Background Data Review

Review and implications

Background Data

- Challenges associating collision data to speeds
- Speed and count data used in review

Legislation

- Traffic Bylaw (existing speed limit map) - used
- Transportation System Bylaw – used in review

Background Data Review

Review and implications

Report/Plans

- Municipal Development Plan (currently being updated)
- TMP Principal 1 – Creating a livable community
- Applicable Transportation Safety Plan Strategies
 - Speed consistent with road design
 - Road designs to achieve target speed
 - Encouraging Lower Speeds
 - Safe speeds and speed limit strategy implications to classifications and design standards
 - Project = TAC Assessment and review of prevailing speeds
- Potential implications to Engineering standards

Best Practices Review

- **Outline**
- **Who**
 - Canadian
 - Similar size
 - City of Edmonton and City of Calgary
- **Questions Themes:**
 - Approach to setting speed limits
 - Default speed limits
 - Review triggers
 - Current state of review
 - Acceptable thresholds
 - Signage

City of St. Albert
City of Airdrie, AB
Strathcona County, AB
City of Calgary, AB
City of Edmonton, AB
City of Red Deer, AB
City of Saskatoon, SK
City of Hamilton, ON
City of London, ON
City of Leduc AB
City of Spruce Grove, AB
Town of Okotoks, AB
City of Lethbridge, AB
City of Medicine Hat, AB
City of Grande Prairie, AB

Best Practices Review

Emerging Trends and Best Practices - Highlights

Arterials

- Variation in approach to setting speeds
- Utilization of TAC Guidelines for arterials and collectors, Design speed, Design speed + 10 km/h

Collectors

- Similar as arterials

Locals

- Most default 50 km/h,
- Consideration for lowering speeds

School and Playground Zones

- AT Guidelines for School/Playground Zones in Alberta
- City of Edmonton and Calgary, Playground Zones for Schools



Best Practices Review

City of Alberta's Current Practice to Setting Speed Limits

Arterials

- TAC CGEPSL

Collectors

- Generally default 50 km/h

Locals

- Similar to collectors, except recent changes in Erin Ridge North

School and Playground Zones

- AT Guide,
- School Zone: 8 – 4 PM
- Playground Zone: 8:30 AM to 1 Hour after sunset

Canadian Guidelines for Establishing Posted Speed Limits

Overview



Canadian Guidelines for Establishing Posted Speed Limits

- Application = Collector, Arterials
- Recommendations = 40 km/h and Greater
- Risk Based Approach
- Guidelines (not standards, non-statutory)



Canadian Guidelines for Establishing Posted Speed Limits


Methodology (inputs)

Segment Creation

- Minimum 500 m sections (TAC requirements)
- Homogenous sections

Data Inputs

- Non-geometric
 - Classification, Urban/Rural, Major/Minor, Design Speed, Posted Speed, Design Speed, Posted Speed, Posted Speed, Posted Speed
- Geometric
 - Divided or Undivided, Number of Lanes, Segment Length, Horizontal Alignment, Vertical Alignment, Average Lane Width, Pedestrian Exposure, Cyclist Exposure, Pavement Surface, Number of Intersections, Number of Accesses, Number of Interchanges and On-street Parking



Automated Speed Limit Guidelines
FORM A - Automated Speed Limit Guidelines Spreadsheet

Version: 10-Apr-19

Name of Corridor: St. Albert Trail 4

Segment Evaluated: 500m North of Boulevard/Gloucester rd to Northern City Limits

Geographic Region: City of St. Albert

Road Agency: St. Albert

Road Classification: Arterial

Urban / Rural: Urban

Divided / Undivided: Divided

Major / Minor: Major

Through Lanes Per Direction: 2 - Lanes

Length of Corridor: 2,360 m

Design Speed (Required for Freeway, Expressway, Highway): 0 km/h

Current Posted Speed (For information only): 60 km/h

Prevailing Speed: 0 km/h

Risk Parameter - (for information only): 0 km/h

Maximum Permitted Speed: 0 km/h

	RISK SCORE	
A1 GEOMETRY (Horizontal)	Lower	2
A2 GEOMETRY (Vertical)	Lower	2
A3 AVERAGE LANE WIDTH	Medium	4
B ROADSIDE HAZARDS	Lower	1
C1 PEDESTRIAN EXPOSURE	Higher	9
C2 CYCLIST EXPOSURE	Medium	6
D PAVEMENT SURFACE	Lower	1
E1 INTERSECTIONS	Number of Occurrences	0
STOP - controlled intersection	Number of Occurrences	5
STOP - uncontrolled intersection	Number of Occurrences	0
Roundabout or traffic circle	Number of Occurrences	0
Active, at-grade, all-traffic crossing	Number of Occurrences	0
Suburban STOP - controlled intersection	Number of Occurrences	0
E2 INTERSECTIONS	Number of Occurrences	3
WYTH ABRAHAM ACCESS	Number of Occurrences	0
Left turn movements at permitted	Number of Occurrences	0
Right-of-way / Right-way only	Number of Occurrences	6
E3 INTERCHANGES	Number of Occurrences	0
Number of interchange along corridor	Number of Occurrences	0
F ON-STREET PARKING	Lower	3

Calculate Total Risk Score: 42

Posted Speed Limit (km/h): As determined by load characteristics

As determined by load characteristics: 80

As determined by polling: 0

The recommended posted limit may be the result of the automated calculation ready to be used for data performance.

Comments:



Integrated Expertise. Locally Delivered.



Canadian Guidelines for Establishing Posted Speed Limits

Outputs

Roadway Type

- Classification
- Number of Lanes
- Major/Minor
- Divided/Undivided

Risk Score for Roadway Type

Recommended Speed

Table 4.1: TAC Recommend Posted Speed Limit Criteria (Arterials)

Arterials	Recommended Speed Associated Risk Score	Recommended Posted Speed Limit (by risk level)				
		90 km/h	80 km/h	70 km/h	60 km/h	50 km/h
Urban Divided Major (1 lane or 2+ lanes)	<25	26 – 33	34 – 41	42 – 59	>60	
	Recommended Speed Associated Risk Score	80 km/h	70 km/h	60 km/h	50 km/h	
Urban Undivided Major or Divided Minor (1 lane or 2+ lanes)	<29	30 – 48	49 – 64	>65		
	Recommended Speed Associated Risk Score	70 km/h	60 km/h	50 km/h	>57	

Table 4.2: TAC Recommend Posted Speed Limit Criteria (Collectors)

Collectors	Recommended Speed Associated Risk Score	Recommended Posted Speed Limit (by risk level)				
		80 km/h	70 km/h	60 km/h	50 km/h	40 km/h
Urban Divided Major (1 lane or 2+ lanes)	<29	30 – 36	37 – 39	>40		
	Recommended Speed Associated Risk Score	70 km/h	60 km/h	50 km/h	>38	
Urban Undivided Major or Divided Minor (1 lane or 2+ lanes)	<33	34 – 50	51			
	Recommended Speed Associated Risk Score	60 km/h	50 km/h	40 km/h	>51	

Canadian Guidelines for Establishing Posted Speed Limits

Results

- **Recommends speeds – TAC CGEPSL Results**
- **Not statutory**
- **Overall Results:** 99 of 110 segments within 10 km/h of recommended speed
 - 43 match exactly
 - 56 within 10 km/h
- **Increase in Speed:** 39 segments
 - Increase of 20 km/h: 11 segments
- **Decrease in Speed Limit:** 28 segments

Canadian Guidelines for Establishing Posted Speed Limits

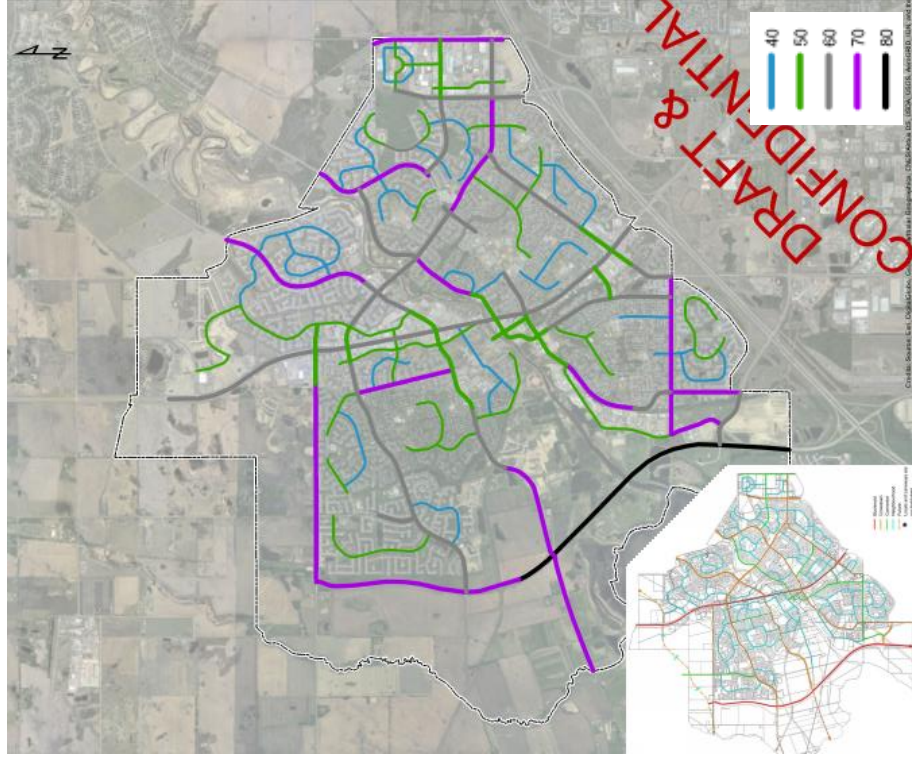
Discussion - Neighbourhood Roadways (Collectors)

- **Overall Results:**
 - 28 of 57 segments recommended at 40 km/h
- **Updated Results**
 - Reclassify as minor (as per complete streets policy)
 - 40 of 57 segments recommended at 40 km/h
 - 11 of 57 segments within <10% of threshold for recommendation at 40 km/h
 - 5 of 57 segments within <20% of threshold for recommendation at 40 km/h

Canadian Guidelines for Establishing Posted Speed Limits

Key Outcomes

- TAC recommends more increases in speed than decreases
- Several segments recommended for increase of 20 km/h
 - Reflect high standard of roads
 - Prevailing speed shows more drivers below speed limit
- Neighbourhood roads recommended @ 40 km/h



Local Roadway Review

Overview

- **Non-CGEP SL Applicable**
- **Field Observations**
 - 10 segments with various land use and configuration
 - Practical assessment of driving roads and experience
- **Literature review**

Local Roadway Review

Review

Parking and Width

- Narrower cross section
- Parked vehicles limit space



Lot Width and Driveway

- Older areas:
 - Wider lots
 - Single Car Driveways and Street Parking
- Newer areas:
 - Narrower lots
 - Double Car Driveways and Street Parking

Local Roadway Review

Review

Horizontal Curves

- 90 degree corners, require substantial speed reduction



Adjacent Land Use

- Majority residential
- Shared play space



Local Roadway Review

Key Outcomes

50 km/h not a practical speed limit, due to:

- Parked vehicles
- Narrower roadway widths
- Adjacent land use
- Horizontal Curves

Considerations:

- Long straight sections, with:
 - Narrow lots and double car driveway
 - Limited on-street parking opportunities
 - May need additional features

Alberta Transportation Guidelines for School and Playground Zones and Areas



Outline

- Application = Playgrounds and School Zones and Area
 - 30 km/h Zones
 - Similar Risk Based Approach
 - Recommendation Based on Point System
- Guidelines (not standards, non-statutory)

GUIDELINES FOR

SCHOOL AND PLAYGROUND

ZONES AND AREAS

Version 2

Date of Issue: December 2007

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Alberta Transportation Guidelines for School and Playground Zones and Areas

School Zone Methodology

Inputs

- School Type
- Fencing Type
- Adjacent Road Classification
- Property Line Set Back
- School Entrance
- Sidewalks

Score up to 100

- School Zone @ 65 points or greater

Alberta Transportation Guidelines for School and Playground Zones and Areas

Playground Zone Methodology

Inputs

- Playground Type (Capacity)
- Fencing
- Adjacent Road Classification
- Property Line Setback (from play equipment)
- Entrance Location
- Sidewalks

Score up to 100

- Playground Zone @ 81 points or greater

Alberta Transportation Guidelines for School and Playground Zones and Areas

Results

- School Zones
 - 46 School Zones warranted
 - 60 currently posted
 - School type typically dictates the results
 - Most elementary schools are warranted, and some junior high schools
 - Results consistent with current signed playground zones within the City
- Playground Zones
 - 13 playground zones warranted
 - 18 currently posted
 - Generally, parks with fields are not recommended playground zones
 - 53 playground areas warranted
 - 12 currently posted
 - Most roadway segments evaluated warranted an area



Recommended Area
Recommended Zone

Alberta Transportation Guidelines for School and Playground Zones and Areas

Discussion

- School Zone as Playground Zone
 - Schools that warrant playground = 1 of 30 elementary and junior high schools
 - Playground zones have longer hours of effect and are in effect every day
 - Playgrounds on school property are larger and attract higher numbers of vulnerable users
 - To reflect this, the playground zone evaluation was modified and the threshold was lowered.
 - All elementary schools warranted playground zones with the new criteria
 - All junior high schools recommended school zones

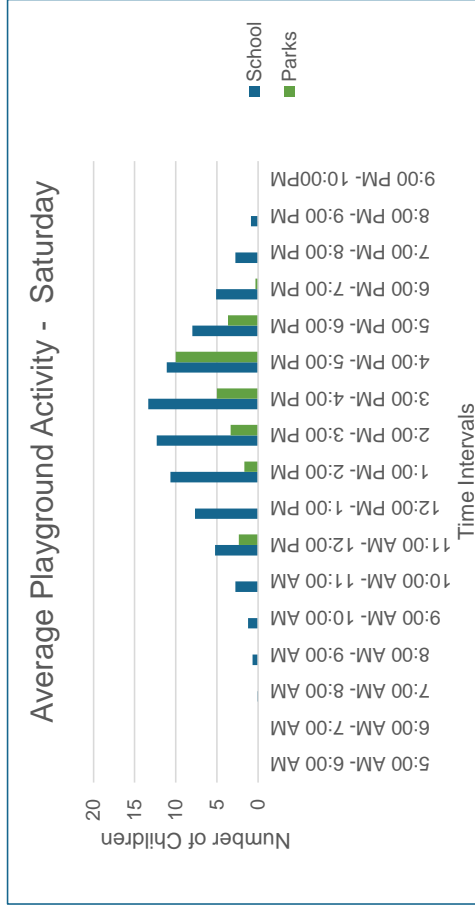
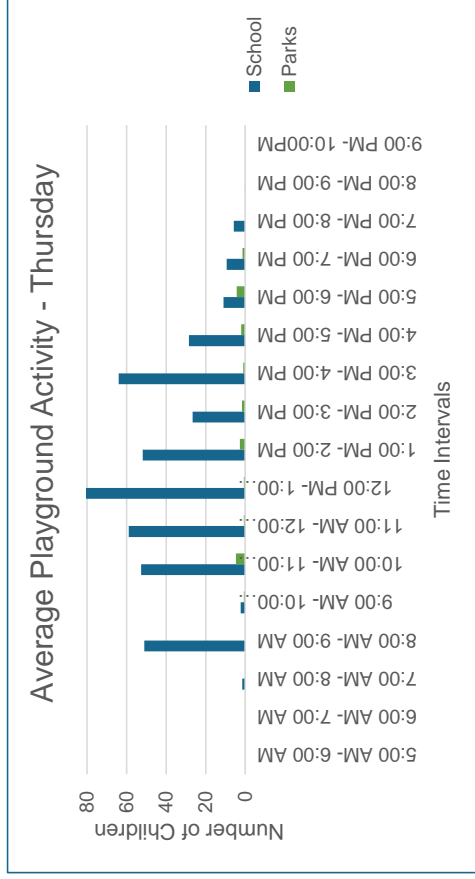
Table 6.12: School Playground Zone Evaluation Results (Applying Modified AT Playground Zone)

AT Playground Zone Worksheet Score	Elementary School Total Number (Within score range)	Junior High School Total Number (Within score range)	Playground Zone Warranted (min. 65 score)
>80	10	0	Yes
71-80	10	0	Yes
65-70	2	0	Yes
<65	0	8	No
Total	22	8	23 of 30

Alberta Transportation Guidelines for School and Playground Zones and Areas

Results

- Time of Day
 - Collision data and playground activity data
 - School Zone times recommended from 7:00 AM to 5:00 PM
 - Playground Zone times recommended from 7:00 AM to 9:00 PM
 - These time were set assuming increased activity in the mornings and evenings during warmer months (activity data from October)



Safe Systems Review

Methodology

Overview

- Emphasis on roadway user error and that such errors should not result in an injury or fatality
- Focus on reducing lowering speed limits to reduce severity
- Application results in lower speed than other methods
- Policy focused

Application

- Assessing vulnerable user presence related to land use and road type
- Setting speed limits related to land use and road type

Safe Systems Review

Results

Boulevards

- Maintain existing speeds, except
 - 80 – 70 km/h at north of St. Albert Trail
 - 60 – 50 km/h, through with no sidewalk separation

Crosstowns

- 50 km/h Recommended
 - Consistency with Complete Streets Guidelines
 - Common speed approach
 - Hebert Road, Campbell Road, Giroux Road



Safe Systems Review

Results

Connectors

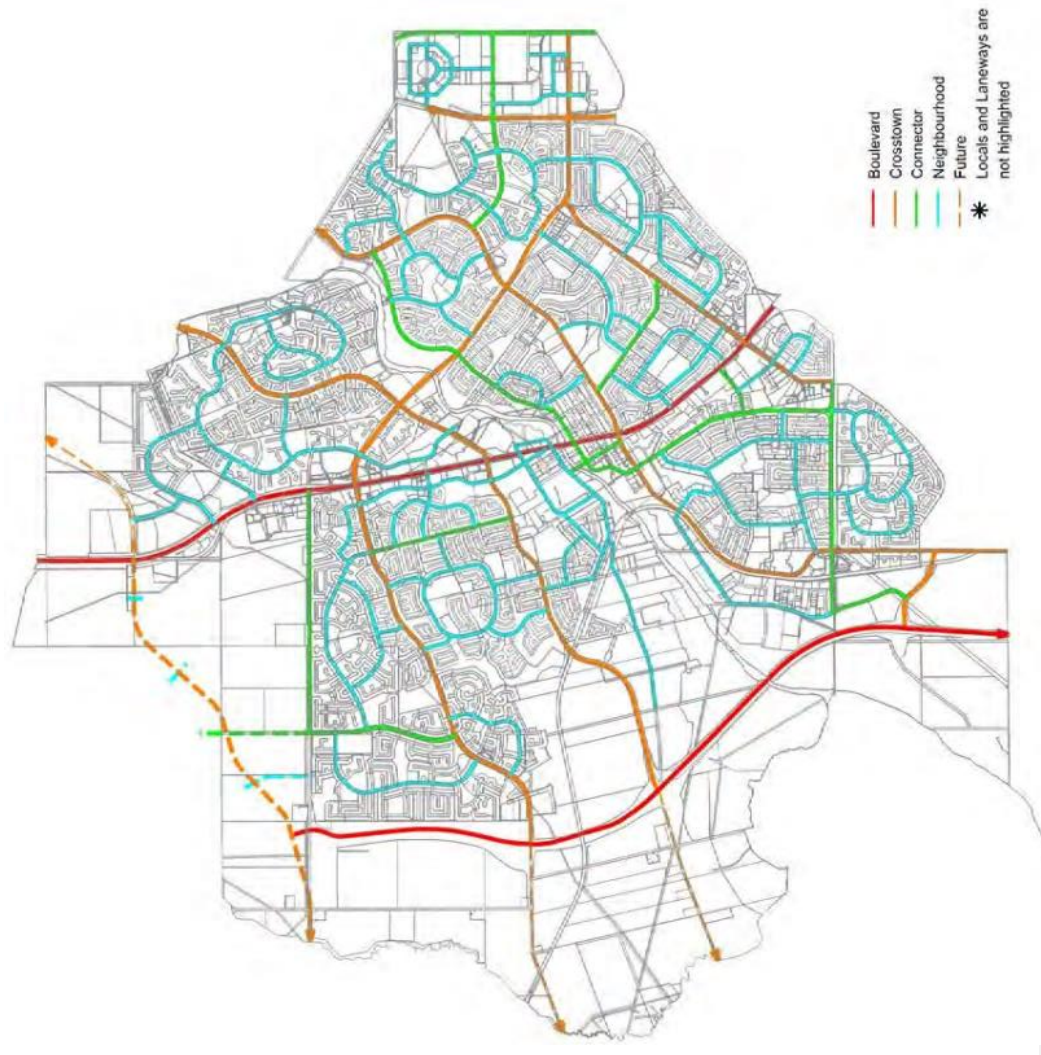
- Limited number of connectors
- No changes recommended

Neighbourhoods

- 40 km/h Recommended
 - Within communities
 - Provide direct access, transit, on-street cycling
 - Higher interactions with vulnerable users

Locals

- 30 km/h recommended
- Similar to neighbourhoods,
 - More access, vulnerable users, road activities



Recommendations

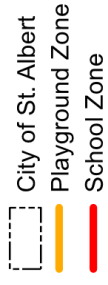
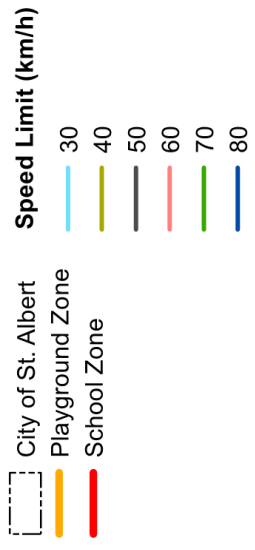
Boulevards

- **St. Albert Trail and Ray Gibbon Drive**
- **Regional roadways serving local and regional traffic**
- **Ray Gibbon Drive**
 - CGEPSL recommended higher speed limit, but not recommended due to current congestion levels. Future consideration with widening
- **St. Albert Trail**
 - Extension of 60 km/h @ north St. Albert Trail
 - Maintain 60 km/h and address separation requirement for sidewalk within central St. Albert Trail

Recommendations

Crosstowns

- **Description**
 - Allow drivers to travel across the City without changing corridors
 - Transit and heavy vehicles (most as truck routes)
 - Significant residential land uses
- **Two Varying Results**
 - **Safe Systems:** Vulnerable users first
 - **CGESPL:** Recommended increases of 20 km/h not recommended, 10 km/h compromise.
- **Recommendations**
 1. **Giroux Road (Nevade Place to Liberton Drive):** Reduce from 60 – 50 km/h
 2. **Hebert Road (St. Albert Trail to Boudreau Road):** Reduce from 60 – 50 km/h
 3. **Campbell Road (South City Limit to Centre Street):** Reduce from 60 – 50 km/h
 4. **Boudreau Road (Liberton Drive to Inglewood Drive):** Reduce from 60 – 50 km/h
 5. **Villeneuve Road (Commercial Area to St. Albert Trail):** Reduce from 60 – 50 km/h
 6. **Sir Winston Churchill Avenue (Reil Drive to Levasseur Road):** Increase from 50 – 60 km/h
 7. **Bellerose Drive (Evergreen Drive to City Limits):** Increase from 50 – 60 km/h.



Recommendations - Crosstowns

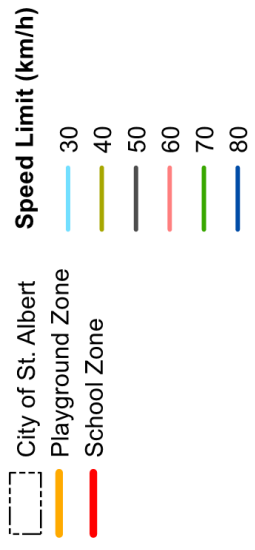


Integrated Expertise. Locally Delivered.

Recommendations

Connectors

- **Description**
 - Connect crosstowns together
 - Mostly adjacent to residential and commercial
- Recommendations
 - **40 km/h Posted Connectors**
 - Downtown
 - Maintain based on Safe Systems
 - CGEPSL increases not recommended
 - **50 km/h Posted Connectors**
 - Increase by 10 km/h where CGEPSL recommends 20 km/h increase
 - Compromise of built roadway standard and Safe Systems
 1. **Sturgeon Road (St. Albert Trail to Boudreau Road):** Increase from 50 – 60 km/h
 2. **Dawson Road (Giroux Road to McKenney):** Increase from 50 – 60 km/h
 - **60 km/h Posted Connectors**
 - Maintain
 - Investigate and improve pedestrian crossings



Recommendations - Connectors



Integrated Expertise. Locally Delivered.

Recommendations

Neighbourhoods and Local

- **Description**
 - Within communities, with similar land use
 - Provide high levels of access, on-street cycling, high levels of vulnerable users
- **Recommend a consistent approach for both types of roadways**
 - Not practical to expect drivers to differentiate between local and neighbourhood
- **40 km/h default posted speed limit**
 - Consistent with CGEPSL, Safe Systems Approach
 - Practical application based on field observations of local roadways

Recommendations

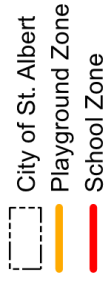
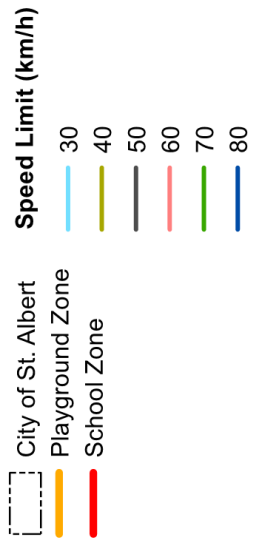
Playground and School Zones

- Playground Zone for all Elementary Schools
 - Children were observed using the playground equipment well outside of the current School Zone hours and on weekends
- School Zone for all Junior High Schools
 - Except those adjacent to Elementary Schools (combined with Playground Zone)
- Zone Times
 - School Zone times from 7:00 AM to 5:00 PM
 - Playground Zone times from 7:00 AM to 9:00 PM
 - Both based on the collision and playground utilization data

Recommendations

Short 30 km/h Sections

- Do not meet minimum 500 m section recommended by CGEPSL
- Remove and incorporate with adjacent speeds
- Install advisory speed signs (where necessary for curves)
 - **Sturgeon Road:** Burns Street to Burnham Avenue
 - **Mission Avenue:** Between St Vital Avenue and Malmo Avenue
 - **Grosvenor Boulevard:** Gaylord Place to south of Grenfell Avenue
 - **Grenfell Avenue:** Gatewood Avenue to Greenwich Crescent
 - **Meadowview Drive:** Mission Avenue to 150 m west of Mission Avenue
 - **Cunningham Road:** South of Sycamore Avenue to Stanley Drive



Recommendations - All



Integrated Expertise. Locally Delivered.

Recommendations

Implications of Recommendations

- Implications on Municipal Engineering Standards for neighbourhoods and locals
 - Current design speed is 50 km/h.
- Incorporate design principals to achieve target speeds where needed.
 - Example on long tangent sections that have minimal inherent traffic calming component.
 - Open fields
 - Narrower lots, wide driveways and minimal parking
- Updating Complete Streets Guidelines
 - 40 km/h on neighbourhood and local roadways is recommended.
- Updating the Traffic Bylaw

School & Playground Zones

Based on recommendations #6-9 from the ISL Engineering report, the City proposed changing current elementary school zones to playground zones, establishing a time of day for playground zones, and removing playground zones at Attwood Park on Attwood Drive, Forest Park on Forest Drive, and Deerbourne Park on south

Deerbourne Drive.

In both surveys, roughly two-thirds of people disagreed with the proposal to change school zones into playground zones. Opinion was more evenly split about whether to establish a time of day for playground zones from 8 am to 8 pm. Of the

people who responded to a question about removing playground zones on the online survey, roughly three-quarters agreed; this question was not included on the postcard survey due to layout constraints.

ONLINE SURVEY RESULTS

REPLACE ELEMENTARY SCHOOL ZONES WITH PLAYGROUND ZONES

Overall, of the 2,937 responses in the survey, 34% of the people who responded agreed with changing ex-

isting school zones at all elementary schools to playground zones, while 66% disagreed. Based on these per-

centages and sample sizes, the margin of error was 2%.

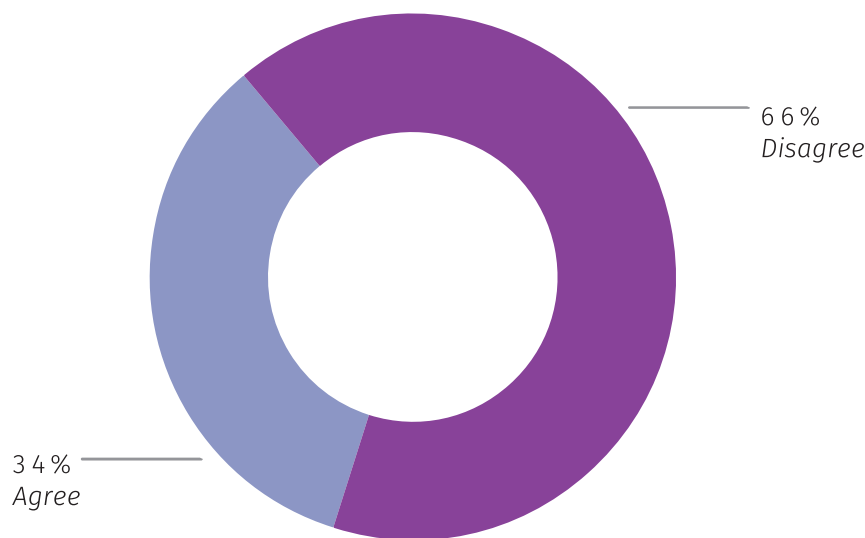


Figure 11: Online Survey Response to Replacing Elementary School Zones with Playground Zones

PLAYGROUND ZONES: TIME OF DAY RULE

Opinion was more evenly divided on the proposal to make playground zones effective from 8 a.m. to 8 p.m.

every day of the year. Out of the 2,941 responses, 47% of the people who responded agreed with this pro-

posed change, while 53% disagreed. The margin of error was 2%.

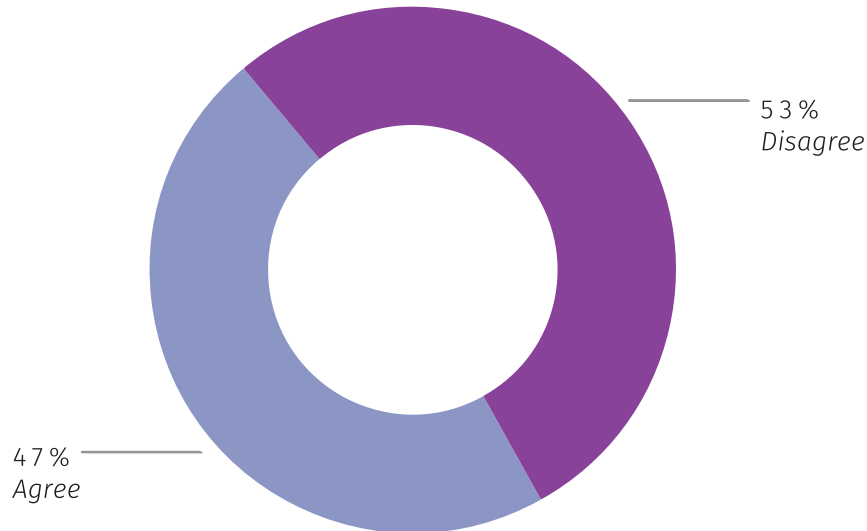


Figure 12: Online Survey Response to Time of Day Rule for Playground Zones

PLAYGROUND ZONE REMOVALS

The majority of residents of St. Albert agree with the proposal to remove playground zones at Atwood Park on Attwood Drive, Forest Park on Forest Drive, and Deerbourne Park on

south Deerbourne Drive.

Of the 2,803 responses in the survey, 74% of the people who responded agreed with removing playground

zones at these locations, while 26% disagreed. The margin of error was 2%.

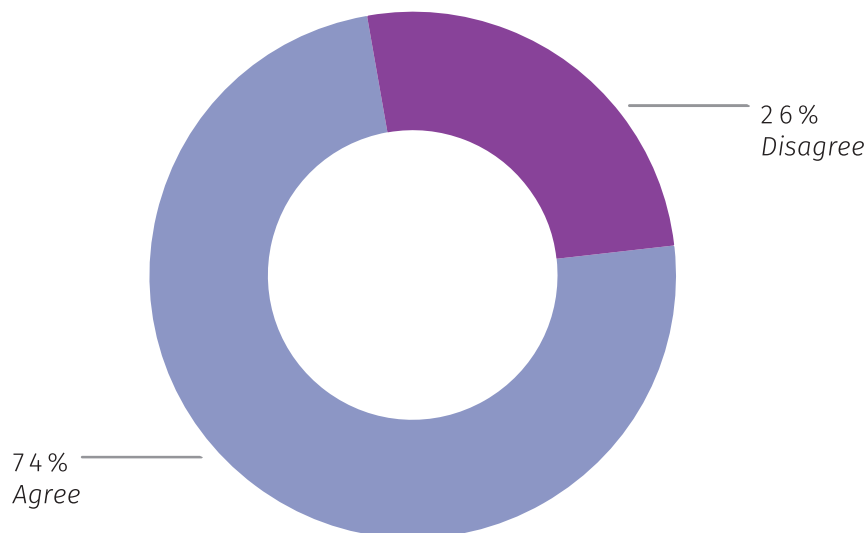


Figure 13: Online Survey Response to Playground Zone Removals

POSTCARD SURVEY RESULTS

REPLACE SCHOOL ZONES WITH PLAYGROUND ZONES

The postcard survey included two questions related to changes to school zones and playground zones.

The first question asked whether people agreed or disagreed with the proposal to “change existing elementary School Zones to Playground Zones.” 5,185 people responded to

this question; of these, 34% indicated that they agreed, and 66% indicated that they disagreed (with a margin of error of 1%).

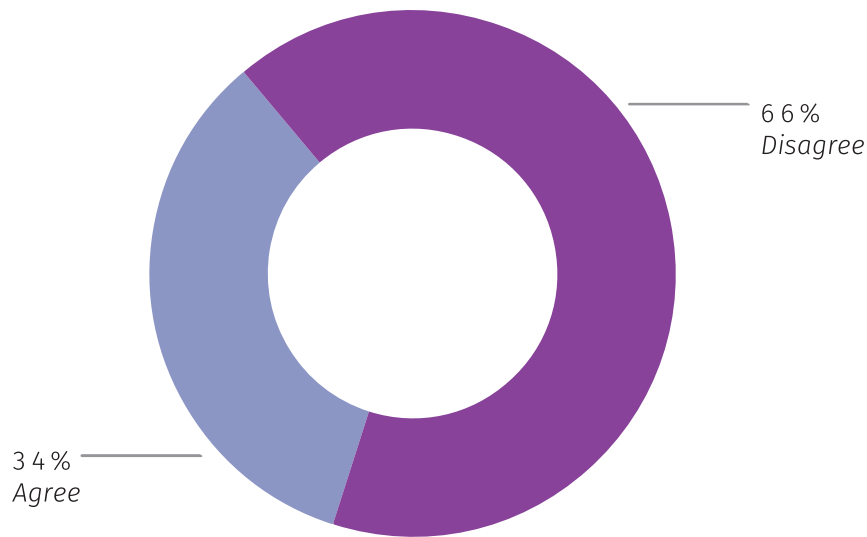


Figure 14: Postcard Survey Response to Replacing Elementary School Zones with Playground Zones

PLAYGROUND ZONES: TIME OF DAY RULE

The second question about playground zones on the postcard survey concerned the proposed time of day rule. The survey question asked whether people agreed or disagreed with the proposal to “set Playground Zone times from 8 a.m. to 8 p.m.”

5,208 people responded, with 59% indicating that they agreed and 41% indicating that they disagreed. The

margin of error for this question was also 1%.

This is noticeably different from the results of the online survey, in which the proportions were 47% in favour and 53% against with a 2% margin of error. We suspect, however, that the difference in the results can be explained by a difference in wording: The online survey question explic-

itly stated that the new time of day rules would apply every day of the year, whereas the postcard question - which was shortened for brevity - did not. Qualitative analysis of resident feedback, below, shows that concerns about seasonal application of this rule were common among respondents who agreed and who disagreed with the proposal.

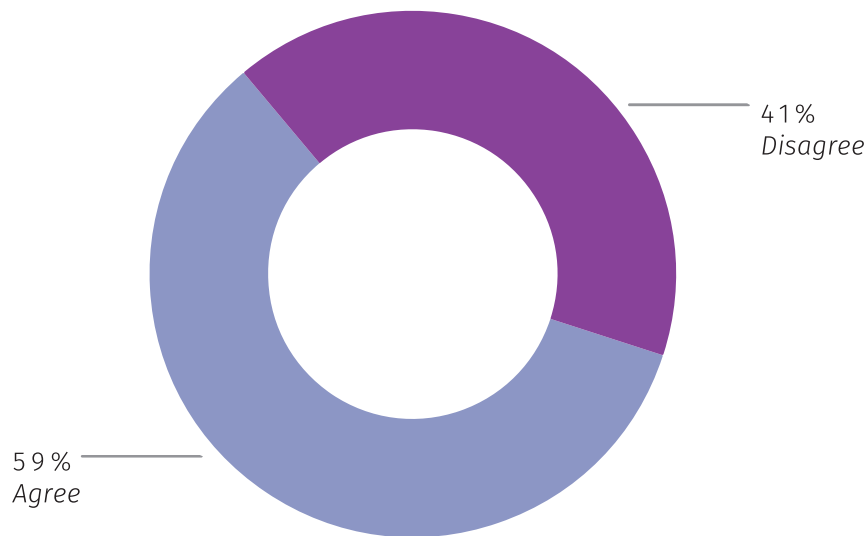


Figure 15: Postcard Survey Response to Time of Day Rule for Playground Zones

WHY PEOPLE AGREE OR DISAGREE

The open-ended question in this section of the online survey related to the three different playground zone questions - changing elementary school zones to playground zones, changing time of day provisions for playground zones and eliminating playground zones in particular areas. As such, we are unable to provide proportions of comments for or against each change, since some commenters were in favour of one change but against another, and their comments related to one or both of the changes. Nonetheless, all comments were

coded to draw out key themes. These themes provide some insight into the survey findings in each case.

School Zones to Playground Zones

A strong majority of respondents (66% in both surveys) were against this proposed change. Three themes emerged from their comments: The necessity (or lack thereof) for this change; concerns about the impact on busy roads; and concerns about decreased driver compliance.

First, some residents viewed this change as unnecessary. Reasons for this included the fact that, in the respondents’ opinion, school playgrounds were sufficiently separated from roads by school buildings or fences to decrease the risk of children interacting with traffic, or that existing crosswalk lights and traffic calming measures were sufficient outside of school hours. Respondents also wrote that they rarely saw children using the school playgrounds outside of school hours, or during the summer. A very small number of respondents

argued that children should be better educated about traffic safety, or suggested that this change was intended to increase photo radar revenues for the City.

Second, some respondents expressed concern about the impact that this change would have on major roadways, in particular Sir Winston Churchill Avenue.

Third, some of the respondents noted that school zones seem to be more respected by drivers than playground zones. As a result, they were concerned that a change from school zones to playground zones would result in decreased compliance with the lower speed limit, and thus increase the risk of accident.

Among the minority of people who agreed with this change, there were few comments that explained this view. Of those, respondents often appeared to suggest this was common sense (there are playgrounds at elementary schools, so they should be playground zones) or wished to see the time of day extension applied to elementary schools.

Time of Day Change for Playground Zones

While a significant majority of respondents disagreed with changing school zones into playground zones, views on whether to extend time of day rules for playground zones to 8 a.m. to 8 p.m. were more evenly split. Moreover, comments suggest that resident perspectives on both sides of the issue are heavily influenced by climactic and seasonal concerns. A change to the proposal to take into account St. Albert's climate is likely to receive greater support.

In total, we received 156 comments referencing different time requirements in different seasons and 158 comments related to the specific times suggested: 8 a.m. to 8 p.m. Similar comments were also made in the focus group. These comments were often substantively similar and highlighted three related issues: Climate, seasonality, and school timing.

In terms of climate, respondents noted that children tend to be present at playgrounds when it is warm enough to comfortably play outside. During the winter months, children are far less present at playgrounds.

Seasonal changes in daylight hours were also raised by respondents, who noted that children tend to be present at playgrounds during daylight hours, which fluctuate substantially in St. Albert during different times of year. These respondents argued that seasonal changes in daylight hours should be taken into account in setting times for playground zones.

With regard to timing, respondents noted a potential problem with this change in conjunction with the proposal to replace elementary school zones with playground zones. For school zones, times must be set early enough to encompass all children's walk to school. In some cases, residents pointed out that this might be earlier than 8 a.m.

A variety of changes to this proposal were suggested by survey respondents:

1. There should be different times for playground zones in the summer and the winter, with summer times being extended (to 6 p.m., 8 p.m., or in some cases later) and winter hours ending much earlier. Ideally, according to some resi-

dents, winter playground hours should end before 5 p.m., when the evening commute is in full swing.

2. Playground speed reductions should be suspended in the winter, since very few children play on the equipment in very cold weather.
3. Playground zones should be in effect later in the day (typically 9 p.m. to 11 p.m.) in the summer months.
4. "Dawn to Dusk" rules should be applied rather than specific times of days. Others suggested a change to "when children are present" rather than times of day.
5. Some residents viewed "dusk" times as unnecessary even in the summer, since most children were inside, in their view, by 6 p.m.
6. Playground zones should take effect at 7:30 a.m. when some children are already walking to school or waiting for buses in school zones.

While the solutions varied, what all of these comments had in common was a view that the proposal from 8 a.m. to 8 p.m. year-round needed to be more nuanced. As one resident put it, "It is very frustrating especially during winter to have to drive 30 km/hr when [it is] -35 deg C outside and no kids."

Removal of Playground Zones at Atwood Drive, Forest Drive, and Deerbourn Drive

While the majority of respondents agreed with these changes in the online survey, some expressed concerns about specific locations. We have consolidated these comments and relayed them to City staff.