

Making Alberta Roads Safer for Cyclists

Proposed Amendments to the *Traffic Safety Act*

Prepared for:

Alberta Ministry of Transportation

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EXECUTIVE SUMMARY

PURPOSE AND METHOD OF THIS REPORT

The Alberta Cycling Coalition (ACC) was formed through the partnership of various cycling organizations within Alberta [see complete list in Appendix 1] with the mandate to improve cycling safety in Alberta. As part of this mandate the ACC has reviewed Alberta's *Traffic Safety Act* and affiliated Regulations (TSA) related to cycling. Through our combined experience and research of the world around us, the ACC has created this report which recommends modifications to these existing regulations and in turn, improved safety for cyclists on our streets.

The aims of this report include the following:

- Clarify the rights and duties of road users thereby improving understanding and compliance with the TSA and reducing conflict between all road users
- Acknowledge the differences between road user groups' abilities and vulnerabilities, and recognize the increased risks faced by cyclists who are classified as vulnerable road users
- Align the Regulations and accompanying TSA sections with current best practices to improve safety for vulnerable road users
- Reduce the likelihood of collisions involving vulnerable road users
- Reduce the severity of injuries resulting from collisions involving cyclists (a class of vulnerable road user)

FINDINGS AND CONCLUSION

Cycling is an increasingly popular leisure activity, competitive sport, and means of transportation, which has shown significant growth in Alberta, both in terms of infrastructure spending and number of cyclists (Ramage-Morin, 2017; Surtees & Pettitt, 2018). Cycling is evolving with new types of bikes and changed demographics of riders utilizing Alberta's roads, which have both increased the speed cyclists travel and the number of cyclists sharing the roads.

The TSA provides regulations specific to cyclists on the road and how motorists are expected to interact with cyclists. However these regulations are out of date and can be improved by drawing on current best practices for cycling safety and evidence-based research on providing the safest environment.

Review of the current TSA regulations reveals they are at odds with modern, safe cycling practices. This forces cyclists to choose between operating a bicycle according to the written rules of the road or employing common safe cycling practices, which often are not aligned.

RECOMMENDATIONS FOR INCREASING CYCLING SAFETY

Recommendations for improving the TSA are broken down into the following priorities and options as described below.

	Summary of TSA Amendment Recommendations
Our Priorities	<p>It is the ACC’s opinion that the following three TSA amendments, supported by education, will have the greatest impact on vulnerable road users:</p> <ul style="list-style-type: none"> ● Overtaking and Passing - Quantify safe passing distance to one metre and 1.5 metres at speeds greater than 60km/h ● Travel single file - Allow two abreast riding ● As near as practicable to the curb – Cyclists to ride as far to the right as is safe versus as is practicable ● An educational campaign is launched to inform motorists and vulnerable road users of the TSA amendments (the ACC has applied for a \$25,000 grant to help fund these efforts)
Our Options	<p>Enforcement activities are increased along with an educational campaign and all other amendment recommendations are accepted, which include:</p> <ul style="list-style-type: none"> ● Use of hand signals – Ability to use either hand to signal ● Right of way at intersection – standardizing the definition and rules of who needs to yield and when at intersections ● Two hands on handlebars – Ability to ride with one hand on the handle bar ● As near as practicable to the curb – Replace practicable with safe ● Horn – Ability to ride with/without a horn or bell and use voice

BACKGROUND

Cycling is an increasingly popular leisure activity, competitive sport, and means of transportation, which has shown significant growth in Alberta. Despite the increase in segregated (mostly urban) cycling infrastructure, the steeper grades, rougher surfaces, lower speed limits, circuitous routing and sometimes crowded conditions of these facilities often make existing roads the more efficient choice for long distance commuter and recreational cyclists. As well, shifting rider demographics with faster and lighter bicycle technology means the province’s roads are witnessing an inevitable increase in cyclist/motorist interactions.

The current Alberta *Traffic Safety Act* (TSA) provides regulations specific to cyclists on the road and how motorists interact with cyclists, however with changes to cycling many of the TSA regulations are out of date and can be improved upon by drawing on current best practices and evidence-based research on providing the safest environment.

The Alberta Cycling Coalition was formed through the partnership of several of Alberta’s top cycling organizations [see complete list in Appendix 1] with the mandate to improve cycling safety in Alberta. As part of this mandate, the ACC has reviewed the TSA as it relates to cycling and through our combined experience and research of best practices has created this report which includes proposed revisions to improve safety for cyclists. These proposed revisions draw upon the experience of several other jurisdictions. For example, safe passing distances have been specified by over 27 jurisdictions in North America, including Ontario, Quebec, New Brunswick and Nova Scotia. New Brunswick passed Ellen’s Law (legislation that bears the name of Ellen Watters who died from injuries sustained when hit by an overtaking motor vehicle) to protect cyclists.

Recent incidents within Alberta such as the fifteen cyclists that were struck by an overtaking truck while riding on the Sherwood Park Freeway on August 18 of 2018 (resulting in five hospitalized riders, two in serious condition), help to illustrate how vulnerable cyclists are and how stronger regulations are required to protect these vulnerable road users. Government of Canada data shows that vulnerable road users such as cyclists, pedestrians and motorcyclists face an inherently greater risk of death or injury when in collision with motor vehicles. Alberta cyclists also face higher likelihood of injury and death compared to motor vehicle occupants (Luo, 2016) and the City of Edmonton published a report titled “Vision Zero Edmonton”. Below is a summary of collisions comparing vehicles and bicycles (Edmonton, 2017).

Table 1: 2017 Comparison of injury rates of vehicles versus cyclists

	Number of Collisions	Number of Injuries	Percentage (%) of collisions resulting in injury
Vehicle	23,906	3,389	14%
Bicycle	143	120	84%

Evidence-based changes will have an obvious positive impact on Alberta road safety. In addition, these changes will help ensure clarity to all road users and provide a better mechanism for enforcement. Review of the current TSA reveals that it is at odds with modern, safe, and best cycling practices. This forces cyclists to choose between operating a bicycle according to the provincial rules or using known safe cycling practices.

Cyclists are sometimes stigmatized as scofflaws (or cited for violating the TSA) for riding in such a way that their own safety takes precedence over the convenience of motor traffic (e.g., controlling the lane when the lane is too narrow to share). Furthermore, when a claim for injuries arises due to an incident, cyclists can often be found negligent for violating a TSA rule even if they were operating according to known safer cycling practices.

Finally, the proposed regulation changes provide an opportunity for education and awareness. The ACC is committed to working with Alberta partners to implement training and awareness campaigns for all Albertans regarding safe practices and further shift the culture of all road users to a safe shared use environment.

Ultimately, modernizing the TSA will help Alberta Transportation move towards the Alberta Traffic Safety Plan's bold "Vision Zero" of zero deaths and serious injuries on Alberta's roads.

PURPOSE OF THIS REPORT

The aims of this report include:

- Clarifying the rights and duties of road users to improve understanding and compliance with the TSA and reduce conflict between all road user groups
- Acknowledging the differences between road user groups' abilities and vulnerabilities, and recognizing the increased risks faced by cyclists, who are classified as a vulnerable road user
- Aligning the Regulations and accompanying TSA sections with current best practices for safer road use by vulnerable road users
- Reducing the likelihood of collisions involving vulnerable road users
- Reducing the severity of injuries resulting from collisions involving vulnerable road users

SCOPE OF THIS REPORT

In this report the Alberta Cycling Coalition examines Alberta's Regulations and accompanying TSA sections affecting cyclists. The Coalition has identified regulations that offered the greatest opportunity to improve the safety of vulnerable road users and have provided proposed amendments to the regulations and accompanying TSA sections, which are supported by third party research, scientific research, recognized best safety practices, and the experiences of Alberta road users.

REPORT STRUCTURE

In the next section the Alberta Cycling Coalition has highlighted existing regulations within the TSA that affect cyclists. The regulations have been copied from the TSA with a proposed amendment that follows for ease of comparison. The amendment or recommendation may include a subtle change, the addition of a new subsection, a repeal to the existing regulations, etc. Following each recommendation are justifications for the amendment with third party research, scientific research, recognized best safety practices, and the experiences of Alberta road users.

RECOMMENDED AMENDMENTS

USE OF HIGHWAY AND RULES OF THE ROAD, REGULATION 304/2002, PART 1 RULES OF THE ROAD

Use of hand signals

Existing section

11(b) – Use of hand signals

11(b) in the case of turning to the right, by extending that person's left hand and arm beyond the left side of the vehicle and upward as shown in illustration No. 2 of Schedule 1.

Proposed amendment

REPEAL subsection 11(b) and substitute:

11(b) in the case of turning right:

- (i) by extending that person's left hand and arm beyond the left side of the vehicle and upward as shown in illustration No. 2 of Schedule 1; or
- (ii) in the case of an operator of a bicycle, by extending that person's right hand and arm horizontally from and beyond the right side of the vehicle

Justification

Cyclists use their hands to balance, steer and brake. Further, on North American bicycles, the front brake, which supplies approximately 75% of stopping power, is operated by the left hand, which is the hand generally used for signaling.

As cyclists use their hands to control the bicycle, and removing the hands could constitute a safety risk, cyclists should have the option to use their right hand to signal a right turn.

Overtaking and passing

Existing section

23 – Restrictions on overtaking and passing

23 Notwithstanding anything in this Regulation, a person driving a vehicle shall not drive the vehicle so as to overtake and pass or attempt to overtake or to pass another vehicle

- (a) by driving off the roadway,
- (b) by driving in a parking lane, or
- (c) when the act of overtaking and passing cannot be made safely.

Proposed amendment

ADD subsection 23 (d): when overtaking a bicycle or power bicycle shall

- (i) not travel within 1m lateral clearance of said cycle and
- (ii) at least 1.5 metres when the overtaking vehicle is traveling at a speed greater than 60km/hr, whether the bicycle or power bicycle is being operated on the roadway, the paved shoulder or a designated bicycle lane contiguous with the roadway.

Justification

The regulation does not currently define a minimum passing distance for motorists overtaking cyclists. A one-meter buffer for cyclists is recognized as a minimum safe passing distance (Katz, Johnson, Gaudry, Grant, O'Connor, & Sampson, 2013). Safe passing distances have been specified by over 27 jurisdictions in North America (Katz, Johnson, Gaudry, Grant, O'Connor, & Sampson, 2013), including Ontario (Legislative Assembly of the Province of Ontario, 2015), Nova Scotia¹, Quebec, PEI, and New Brunswick. The Province of Quebec *Highway Safety Code* now states drivers are required to give bicyclists 1.5 metres of space when passing on roads where the speed limit is more than 50 km/h. On roads where the speed limit is 50 km/h or less, drivers must give cyclists a one-metre berth (Montreal, 2016).

A cyclist can do little to avoid being hit from behind and an objective, easy to estimate minimum passing distance is better than a subjective standard of safe driving behavior for much the same reason that a maximum speed limit exists.

There is a consensus among those jurisdictions that have specified safe passing distances that one meter is an appropriate minimum distance (Cavacuiti, 2012). However, other jurisdictions, like Quebec, mandate the safe passing distance is increased to 1.5 metres when speeds are more than 60 km/h².

The proposed amendment would provide clarification that a motorist has a duty to leave a safe passing distance when passing a cyclist as well as objective guidance on the minimum distance. This removes subjectivity by a motorist as to what constitutes a safe distance and provides a quantifiable standard for enforcement.

¹ The Nova Scotia Motor Vehicle Act RSNS 1989, c. 293 was amended in 2010 to include a safe passing distance of 1 m: SNS 2010, c. 59, s. 10.

² A separate analysis of overtaking maneuvers between motorists and cyclists showed that a one-metre distance is entirely in keeping with regular movements, and that the average passing distance on two-lane roads without bike lanes was 1.339 meters, while on four-lane roads without bike lanes it was 2.911 meters: Kushal Mehta, Babak Mehran & Bruce Hellinga, "An Analysis of the Lateral Distance Between Motorized Vehicles and Cyclists During Overtaking Maneuvers." Transportation Research Board 94th Annual Meeting. No. 15-2150. 2015.

Right of way at intersection

Existing section

34 – Right of way at intersections

(1) Except as otherwise provided in this Part or Part 2, when 2 vehicles approach or enter an intersection from different highways at approximately the same time, the person driving the vehicle to the left shall yield the right of way to the vehicle on the right.

(2) A person driving a vehicle shall not turn or attempt to turn the vehicle to the left across the path of an approaching vehicle unless the turn can be completed in safety.

Current definition of a crosswalk within the regulation:

“crosswalk” means:

- 1. that part of a roadway at an intersection included within the connection of the lateral line of the sidewalks on opposite sides of the highway measured from the curbs, or in the absence of curbs, from the edges of the roadway; or
- 2. any part of a roadway at an intersection or elsewhere distinctly indicated for pedestrian crossing by traffic control devices or by line or by other markings on the road surface;

Section 41-Yielding to pedestrians

- (1) A person driving a vehicle shall yield the right of way to a pedestrian crossing the roadway within a crosswalk.
- (2) Where a vehicle is stopped at a crosswalk to permit a pedestrian to cross the roadway, a person driving any other vehicle that is approaching the stopped vehicle from the rear shall not overtake and pass the stopped vehicle.
- (3) At any place on a roadway other than at a crosswalk, a person driving a vehicle has the right of way over pedestrians unless otherwise directed by a peace officer or a traffic control device.
- (4) Nothing in subsection (3) relieves a person driving a vehicle from the duty of exercising due care for the safety of pedestrians.

Proposed amendment

Definitions

“multi-use crosswalk” means

- (i) any part of a roadway at an intersection or elsewhere distinctly indicated for pedestrian and bicycle crossing by signs or by lines or by other markings on the road surface;

Multi-use crosswalk

(1) A person operating a bicycle that is about to enter a multi-use crosswalk need not stop the bicycle before entering the crossing but that person shall yield the right of way to all vehicles and pedestrians that are in the multi-use crosswalk being entered

(2) When crossing a roadway within a multi-use crosswalk:

- a pedestrian; or
- a person riding a bicycle;
- has the same rights and obligations of a pedestrian using a crosswalk.

Yielding to bicycles

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(1) A person driving a vehicle shall yield the right of way to a bicycle crossing the roadway within a multi-use crosswalk.

(2) Where a vehicle is stopped at a multi-use crosswalk to permit a bicycle to cross the roadway, a person driving any other vehicle that is approaching the stopped vehicle from the rear shall not overtake and pass the stopped vehicle.

Justification

Calgary has a bylaw to designate multi-use crosswalks³ giving people riding bikes the same status as pedestrians in multi-use crossings.

Edmonton has used yield signs (shown in the image below) to achieve a similar effect: bikes aren't required to stop, but yield to traffic already in the crossing, while cars must come to a full stop outside of the crosswalk and allow bikes to proceed.



Figure 1 Yield sign in multi-use crosswalk

Both use the following signage as well as road surface markings to indicate multi-use crossings:



Figure 2 Calgary signage used to indicate road surface and crossing

Standardizing the definitions and rules, and including them in driver education, enables consistent application and expectations. This will enable municipalities to proceed with clarity, consistency, and confidence when designing shared-use infrastructure, without having to spend as much effort creating custom solutions and localized education campaigns.

³ [Link to Calgary bylaw](#)

**USE OF HIGHWAY AND RULES OF THE ROAD, REGULATION 304/2002, PART 2
OPERATION OF VEHICLES**

Two hands on handle bars

Existing section

- 77(1) A person who is operating a cycle on a highway
 - (a) shall keep both hands on the handlebars of the cycle, except when making a signal in accordance with this Regulation or shifting the gears of the cycle,

Proposed amendment

- 77(1) A person who is operating a cycle on a highway
 - (a) shall keep at least one hand on the handlebars of the cycle at all times,

Justification

Virtually all jurisdictions have regulations requiring the operator of a cycle to be in control of their vehicle at all times, and specify that the operator shall keep one or both hands on the handlebars at all times. The most common wording of these regulations requires the operator to keep at least one hand on the handlebars at all times. Of the jurisdictions (AB, BC, PEI, NFL) that have a specific regulation for bicycles, only Alberta uses the “both hands except” wording; the other three jurisdictions use “at least one hand at all times”.

The existing regulation requiring both hands to be kept on the handlebars at all times also requires exceptions to be explicitly identified. When operating a bicycle, the existing identified exceptions do not cover all the possible legitimate reasons for taking one hand off the handlebars. For example, it may be necessary to remove one hand from the handlebars to operate a bell, indicate your intent to make a turn, or to make a full shoulder check before changing lanes.

The proposed simplified wording of the existing regulation reflects the intent of the regulation - that the operator of a cycle be in control of the vehicle at all times - while eliminating the need to attempt to identify all possible legitimate exceptions to a “both hands” regulation. It also brings Alberta in line with the three other provinces which have a similar regulation.

As near as practicable to the curb

Existing section

- 77(2) – Operation of cycle
- 77(2) A person who is operating a cycle, other than a motor cycle, on a highway shall operate the cycle as near as practicable to the right curb or edge of the roadway unless that person is making a left turn with the cycle.

Proposed amendment

Replace existing section 77(2) with: A person who is operating a cycle, other than a motorcycle, on a highway shall operate the cycle as near as safe to the right curb or edge of the roadway including the paved shoulder if present, unless that person is in the process of making a left turn.

Existing section

- 77(3) – Operation of cycle
- 77(3) Notwithstanding subsection (2), a person who is operating a cycle, other than a motor cycle, on a one-way highway in an urban area shall ride as near as practicable to either curb or edge of the roadway unless that person is in the process of crossing from one curb or edge of the roadway to the opposite curb or edge of the roadway.

Proposed amendment

Replace existing subsection 77(3) with: Notwithstanding subsection (2), a person who is operating a cycle, other than a motor cycle, on a one-way highway in an urban area shall ride as near as safe to either curb or edge of the roadway including the paved shoulder if present, unless that person is in the process of crossing from one curb or edge of the roadway to the opposite curb or edge of the roadway.

Existing section

77(4) – Operation of cycle

77(4) Notwithstanding subsection (2), a person who is operating a cycle, other than a motorcycle, on a highway that has shoulders

- (a) in the case of a highway that has paved shoulders, shall operate the cycle on the right shoulder, and
- (b) in the case of a highway that does not have paved shoulders, shall operate the cycle as far to the right of the roadway as practicable, unless that person is in the process of making a left turn.

Proposed amendment

Delete 77(4) as it would become redundant with the new wording proposed in Section 77(2).

JUSTIFICATION

If the term “practicable” is intended to impose a duty to stay as far to the right as is safe for the cyclist, then that is not clear in the language as the word “safe” is not used in the regulation. If the term could be interpreted as an obligation for cyclists to stay as far to the right as is physically possible given the condition of the highway, then the duty conflicts with safer cycling practices. The risk of *dooring*⁴, for example, is increased when cyclists travel too far to the right, see Figure 3 below.



Figure 3 Avoiding the door zone

Therefore, it is not as clear for cyclists how the term “practicable” applies to them. Furthermore, what is “practicable” to an experienced cyclist may not be to a new and less experienced cyclist. Cyclists are likely to bear a disproportionate burden in bringing expert evidence to settle questions of what is “practicable” in relation to safer cycling practices.

Best cycling practice includes riding only so far to the right to remove the risk of collision with a vehicle travelling in the same direction while:

- Avoiding the “door zone” which differs from vehicle to vehicle
- Avoiding debris or road surface conditions that may cause the cyclist to lose control

⁴ Doorings is a traffic collision in which a cyclist rides into a car door or is struck by a car door that was opened quickly without checking the side mirror for cyclists.

- Protecting the cyclist's lane in instances when vehicles attempt to pass the cyclist three abreast thereby putting the cyclist and others at risk of collision or worse
- Maintaining a position that is visible for traffic, as shown in Figure 4 below with the "checkmark" method of positioning versus the "X" method where the cyclist is staying as close as practicable to the right

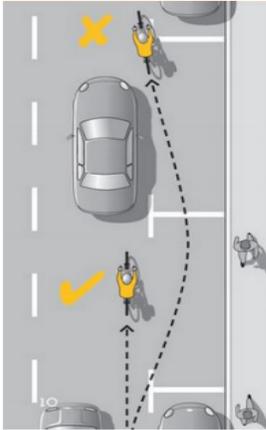


Figure 4 Maintaining line of sight

With respect to riding in shoulders, many are unfit to ride on due to (but not limited to):

- The condition of pavement
- Parked cars
- Gravel and debris
- Rumble strips that leave too little space to the right
- Animal carcasses
- Other cyclists
- Slow moving farm equipment
- Sewer grates

Riding in the shoulder is preferred by cyclists provided it is safe to do so.

Travel single file

Existing section

78 – Travel single file

78 A person who is operating a cycle on a highway in the same direction in the same traffic lane, except when overtaking and passing another cycle,

(a) shall not operate the cycle adjacent to another cycle travelling in the same direction, and

(b) in the case of a cycle other than a motor cycle, where more than one cycle is travelling in the near vicinity of and in the same direction as another cycle, shall operate the cycle directly in line with and to the rear or front of the other cycle.

Proposed amendment

REPEAL section 78 and substitute:

Travel single or double file

78(1) A person who is operating a motor cycle or power bicycle on a highway in the same direction in the same traffic lane, except when overtaking and passing another motor cycle or power bicycle, shall not operate the motor cycle or power bicycle adjacent to another motor cycle or power bicycle travelling in the same direction.

(2) A person operating a bicycle on a highway may, if reasonably safe having regard to traffic conditions, ride adjacent to another bicycle unless otherwise directed by a peace officer.

(3) In the case of a cycle other than a motor cycle, where more than one cycle is travelling in the near vicinity of and in the same direction as another cycle, a person operating the cycle shall not follow another cycle more closely than is reasonable and prudent having regard to:

- (a) the speed of the cycles;
- (b) the amount and nature of traffic on the highway;
- (c) the condition of the highway.

Justification

Side by side cycling, also known as "two abreast cycling", has been practiced by cyclists around the world since the bicycle was invented some 160 years ago (Olscher, 1994). It remains a common method of cycling in all European countries. It is also a common method among club cyclists in North America, including local bike clubs who "double up" typically on rural road outside of major centers. All this most often without issue. It should be noted that in 160 years of cycling there has been absolutely no data showing side by side cycling increases risks to road users (Olscher, 1994).

In the United States it is legal in 39 states to ride two abreast and in 21 of these states, cyclists may ride two abreast only if they are not impeding traffic, which is similar to Toronto's bylaw (Bicyling.com, 2016). Virginia is the only state known to forbid the practice (Bicyling.com, 2016).

European countries and Australia permit two abreast cycling. The UK Highway Code states "when cycling, do not ride more than two abreast" (Olscher, 1994).

In Canada, eight provinces and two territories explicitly forbid two abreast cycling. Ontario allows two abreast cycling and Saskatchewan has no specific rule (Olscher, 1994). Two abreast riding is allowed in Canada's National Parks (*National Parks Highway Traffic Regulations*, 2018).

"34 Every person riding a bicycle on a highway shall ride as close as possible to the right-hand edge or curb of the highway and, when riding with other persons, shall not ride more than two abreast."

Eight riders cycling side-by-side may take up 10 metres of road space as shown in Figure 5 below., The same eight riders in single file will take up 20 metres, meaning it is more difficult and less safe for a driver to overtake. In a video⁵ of this scenario, the single file group took 50% longer for the vehicle to pass compared to the group riding two abreast placing the motorist in the way of oncoming traffic for a longer period and increasing the risk for all parties.

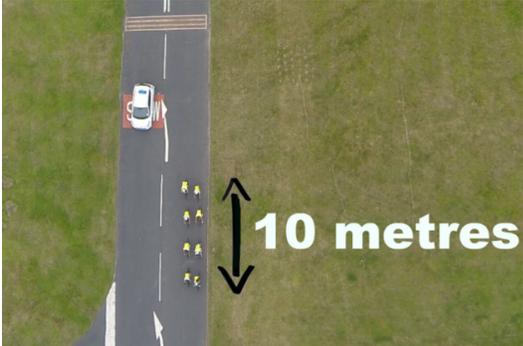


Figure 5 Cycling riding two abreast

Riding single file makes it easier for the motorist to squeeze cyclists to the side of the road in order to pass, and this is especially problematic on rural roads. As an example, a group of 12 cyclists are riding on a narrow two lane rural road. A motor vehicle approaches from the rear of the cyclists at the same time as one approaches in the opposite direction. In such a situation, it is likely that a motor vehicle might be tempted to pass in the same lane as the cyclists who are travelling in a single file. This puts everyone at risk. The safe group practice is to "double up" (and thus occupy about the same space as a motor vehicle). Motorists then are forced to slow down and wait until the adjacent lane is clear and safe to pass. This is the safest group riding practice and is performed by cycling clubs all over the world.

Further, "Our landscape is a bit unique in that we're very reliant on motor vehicles" states Lewis Smith from Canada's Safety Council (Dube, 2018). Smith further elaborates that "In certain areas of the country, especially, it's just not possible to get around with a bike and still maintain the same type of lifestyle." (Dube, 2018). For example, a worker in rural Saskatchewan might have several kilometres to get to work, in which case riding a bike wouldn't be a viable option, Smith says (Dube, 2018). So unlike Europe, cycling in Canada is not part of the regular lifestyle and therefore isn't integrated into much of its infrastructure, Smith explains, which makes ensuring safety a bit difficult (Dube, 2018). As a result, cyclists need safe riding style options that do not require infrastructure changes. Riding two abreast is one such option.

Section 83 – Horn

Existing section

83(1) A person shall not use the horn or other audible warning device of a motor vehicle, motor cycle, moped, power bicycle or bicycle

(a) except for the purposes of giving notice to other persons that are on or approaching a highway or within the vicinity of the vehicle, or

(b) so that it makes more noise than is reasonably necessary to give notice to other persons that are on or approaching a highway or within the vicinity of the vehicle.

(2) A person operating a motor vehicle, motor cycle, moped, power bicycle or bicycle shall sound the vehicle's horn or other audible warning device whenever it is reasonably necessary to warn persons on or approaching the highway in the vicinity of the vehicle.

⁵ [Link to video showing the rationale for two abreast riding.](#)

Proposed amendment

REPLACE existing section with new section:

83(1) A person shall not use the horn or other audible warning device of a motor vehicle, motor cycle, moped or power bicycle

(a) except for the purposes of giving notice to other persons that are on or approaching a highway or within the vicinity of the vehicle, or

(b) so that it makes more noise than is reasonably necessary to give notice to other persons that are on or approaching a highway or within the vicinity of the vehicle.

(2) A person operating a motor vehicle, motor cycle, moped or power bicycle shall sound the vehicle's horn or other audible warning device whenever it is reasonably necessary to warn persons on or approaching the highway in the vicinity of the vehicle.

(3) A person operating a bicycle shall give an audible warning by voice or bell/horn whenever it is reasonably necessary to warn persons on or approaching the highway in the vicinity of the bicycle.

Justification

There is no research into the effect of bicycle bells on safety. There are no standards for the operating characteristics of a bicycle bell, so the loudness of the numerous different designs for bells varies. In a highway situation with motorised vehicles a bicycle bell is often of no practical use.

Five provinces (AB, ON, NB, PEI, NS) require bicycles to be equipped with a bell. As the requirement for bicycles to be equipped with bells is not universal and rarely enforced, many bicycles are not so equipped. An audible warning may be appropriate in situations where bicycles and pedestrians share the same facility. However, the reaction of pedestrians on hearing a bell sounded behind them can be erratic and unpredictable, e.g. jumping to the left and into the cyclist versus moving to the right. Also, the use of earphones by pedestrians (and cyclists) may render the warning bell inaudible.

The proposed amendment removes reference to bicycles from sections 83(1) and 83(2), and adds a new subsection 83(3) requiring the operator of a bicycle to give an audible warning whenever reasonably necessary. Removing the requirement for the audible warning to be made by a bell is consistent with removing the requirement for bicycles to be equipped with a bell (cf. *Vehicle Equipment Regulation*, Section 60 below). Most cyclists are capable of using their voice to provide an audible warning of appropriate volume. Most bicycle/pedestrian conflicts occur in municipalities, and the municipalities can and do use other mechanisms, usually their Traffic Bylaw and/or Parks Bylaw, to require bicycles to be equipped with bells and to use them as an audible warning when appropriate.

VEHICLE EQUIPMENT REGULATION, REGULATION 122/2009 PART 4 OTHER EQUIPMENT

Section 60 – Horn, bell

Existing section

60 A motor vehicle, power bicycle and bicycle must have a horn or bell.

Proposed amendment

REPLACE existing section with new section:

60 A motor vehicle and power bicycle must have a horn or bell.

In addition to the justification provided above, the proposed amendment deletes the requirement for a bicycle to be equipped with a bell. Most cyclists are capable of using their voice to provide an audible warning of appropriate volume. Most bicycle/pedestrian conflicts occur in municipalities on shared-use facilities, and the municipalities can and already do use other mechanisms, usually their Traffic Bylaw and/or Parks Bylaw, to require bicycles to be equipped with bells and to use them as an audible warning when appropriate.

BIBLIOGRAPHY

Bicycling.com. (2016, May 4). *Bicycle Safety: Do You Legally Have to Ride Single File?* Retrieved from Bicycling.com: <https://www.bicycling.com/rides/a20026266/bicycle-safety-do-you-legally-have-to-ride-single-file/>

Canada, G. o. (n.d.). *Let's talk vulnerable road users*. Retrieved from Government of Canada: <https://letstalktransportation.ca/VRU/faqs>

Canada, T. (2011). *Government of Canada*. Retrieved from Road safety in Canada: <https://www.tc.gc.ca/eng/motorvehiclesafety/tp-tp15145-1201.htm#s38>

Cavacuiti, C. D. (2012). *An overview of cycling research: selected facts, statistics, citations and quotations* .

CBC. (2015, September 21). *Cycling safety recommendations: What the city wants*. Retrieved from CBC: <https://www.cbc.ca/news/canada/montreal/cycling-safety-recommendations-what-the-city-wants-1.3237064>

Dube, D.-E. (2018, June 14). *More bicyclists are being killed on Canadian roads. Are we taking bike safety seriously?* Retrieved November 13, 2018, from Global News: <https://globalnews.ca/news/4272816/several-reported-biking-fatalities-in-june-has-canadians-talking-bike-safety/>

Edmonton. (2017). *Motor Vehicle Collisions 2017*. (Edmonton, Producer) Retrieved from https://www.edmonton.ca/transportation/PDF/2017MVC_AnnualReport.pdf

Katz, R., Johnson, M., Gaudry, T., Grant, M., O'Connor, N., & Sampson, S. (2013). *ACT Parliament - Inquiry into Vulnerable Road Users*. Amy Gillett Foundation .

Legislative Assembly of the Province of Ontario. (2015). *Transportation Statute Law Amendment Act (Making Ontario's Roads Safer)*, 2015, S.O. 2015, c. 14 - Bill 31. Ontario.

Luo, A. (2016). *2016 Motor Vehicle Collisions* . Edmonton: City of Edmonton.

Montreal, C. N. (2016, July 4). *Cars and bicycles: Minimum passing distance now in effect*. Retrieved November 24, 2018, from CTV News Montreal: <https://montreal.ctvnews.ca/cars-and-bicycles-minimum-passing-distance-now-in-effect-1.2972051>

National Parks Highway Traffic Regulations. (2018, September 26). Retrieved from Justice Law Website: https://laws-lois.justice.gc.ca/eng/regulations/C.R.C.,_c._1126/FullText.html

Olscher, W. (1994, February 2). *"SINGLE FILE VS TWO ABREAST CYCLING"*. Retrieved from <https://www.vehicularcyclist.com>: <https://www.vehicularcyclist.com/2abreast.html>

Ramage-Morin, P. L. (2017). *Health Reports Cycling in Canada*. Retrieved from <https://www150.statcan.gc.ca/n1/pub/82-003-x/2017004/article/14788-eng.htm>

Surtees, J., & Pettitt, D. (2018). *Bicycle Law in Alberta*. Retrieved November 13, 2018, from Law Now: <https://www.lawnow.org/bicycle-law-in-alberta/>

APPENDIX 1 | ENDORSED BY

Organization / Person	Contact
Alberta Cycling Association	Heather Lothian
Alex Steida	Alex Steida
Bike Calgary	Gary Millard
Bike Edmonton	Chris Chan
Bow Cycle Cyclemeisters	Aric Hartley
Cycle-Logic	Richard Schafenacker
Devon Bicycle Association	Stew Hutchings
Drayton Valley Community Foundation	Erin Luc
Edmonton Bicycle and Touring Club	Charles World
Edmonton Masters Cycling Club	Curtis Roper
Edmonton Road and Track Club	Albert Nguyen
Elbow Valley Cycling Club	Maria Saley
Juventus	Gail Wozny
Juventus	Santino Pasutto (ACC)
Lori Ann Meunzer	Lori Ann Meunzer
Multiple Sclerosis Society of Canada	Nicole Gasior
Paths for People	Dave Buchanan
Red Deer Commuters Association for Bicycle Commuting	Bill Franz
Shift Happens Bicycle Repair	Pepper Harlton
Alberta Peloton Association	Peter Verhesen
United Cycle	Mandy Costache
Velocity Cycling Club	Ed Heacock