School Safety Zones in Ontario
Evaluation and Recommendations Report

Produced By

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Contents

Executive Summary

Purpose

The following report has three purposes.

1. To explore experts' and community members' opinions of the Highway Traffic Act's definition and treatment of school safety zones (SSZs) in Ontario.
2. To explore experts' and community members' opinions of risks, definitions, and treatments of SSZs.
3. To be the two-phase development process of recommendations for a new SSZ definition that applies to the Highway Traffic Act and for regional policies, guidelines and/or practices that impact SSZs.

Process

Under the guidance of a province-wide working group, the authors disseminated a survey from April – June 2023 (N = 73) to school board, transportation, enforcement, and public health experts across Ontario who have a professional interest in school safety zones and a survey to community members (N = 299) from September – December 2024. Divided into three categories, questions were multiple choice, ranking, and open-text questions: current SSZs, future SSZs, and the local context. The authors analyzed the data using Microsoft© Excel® and summarized for discussion with the working group.

Outcomes

The experts and community members provided feedback that strongly indicates a need to:

1. Explore new definitions of SSZs within the Highway Traffic Act and associated regional policies and/or guidelines.
2. Establish best practices for application of the current definition to effectively support active school travel and the safety of children near schools.

Overview

In early 2023, 13 experts from the public health, transportation, and education sectors with an interest in and professional knowledge of school safety zones (SSZs) came together to explore whether the Ontario Highway Traffic Act's (HTA) definition and use of School Safety Zones developed in 1995 serves today's needs. This small group was responding to regular reports from families and school staff who often consider SSZs the most dangerous area for students on the way to school.[1] Supporting the experiences of families and school staff, observational studies of SSZs have identified dangerous driving behaviours occurring daily at 88% of observed schools.[2]

The HTA first defined SSZs in 1995 when neighbourhoods and transportation demands were different than they are in 2023. In 1995, fewer families drove students in single-family vehicles and more students used active modes of travel. Hence, the HTA focused on speed reduction. However, in the almost 30 years of defined SSZs, the number of students driven to school has grown, increasing the number of single-family vehicles travelling in and around school zones and intensifying risks to children due to congestion and unsafe maneuvers by drivers.

The additional vehicular traffic by families and community members poses significant safety concerns (e.g., sight line issues and challenging crossings for pedestrians), environmental risks (e.g., increased air pollution in a concentrated area), and decreased overall health and wellbeing (e.g., less physical activity is related to poor mental and physical health as well as academic performance).[3] These congested areas relate to poor decision-making by drivers, and pinch points for vehicles and vulnerable road users.[4]

Families dropping off and picking up students at schools contribute to increased safety concerns within SSZs. With more drop offs and pick ups occurring on roads adjacent to schools, there are more children crossing roadways and parking areas at official/unofficial crossings. A greater volume of vehicles contributes to poor sight lines, congestion, and poor air quality that puts students at risk for vehicle-pedestrian collisions, and poorer health and wellbeing. In addition, families who witness this congestion suffer increased fear of the roads and are less likely to allow their children to use active school travel.

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(1) Ontario Active School Travel. (2020). An urgent problem. Ontario Active School Travel. https://ontarioactiveschooltravel.ca/an-urgent-problem/
(2) Rothman L, Howard A, Buliung R, Macarthur C, Macpherson A. Dangerous student car drop-off behaviors and child pedestrian-motor vehicle collisions: An observational study. Traffic Inj Prev. 2016 Jul 3;17(5):454-9. doi: 10.1080/15389588.2015.1116041. Epub 2016 Jan13.
(3) Ontario Active School Travel. Benefits of active school travel. 2020. https://ontarioactiveschooltravel.ca/benefits-of-active-school-travel/
(4) Unhaggle. The dangerous effects of commuting on your brain. October 22, 2013. https://blog.unhaggle.com/commuting-dangers/

In recent years, focus has been on evidence-informed solutions to address challenges of SSZs that are unaddressed by the current definition and treatments afforded in the HTA. The founding principle is that vulnerable road users such as children "be separated in time and space from motor vehicles, and where this is not possible, traffic speeds should be capped at 30 km/hr reflecting crash survivability."[5] **These surveys and report explores experts' and community members' perspectives on the purpose of SSZs and the changes they recommend for Ontario guidelines and policies to produce greater safety in school zones.**

A. Current Definition of School Safety Zones

Highway Traffic Act Item 128 (5)[6]
The council of a municipality may by by-law,
(a) designate a portion of a highway under its jurisdiction that adjoins the entrance to or exit from a school and that is within 150 metres along the highway in either direction beyond the limits of the land used for the purposes of the school: and,
(b) for motor vehicles driven, on days on which school is regularly held, on the portion of a highway so designated, prescribe a rate of speed that is lower than the rate of speed otherwise prescribed under subsection (1) or (2) for that portion of highway, and prescribe the time or times at which the speed limit is effective. R.S.O. 1990, c. H.8, s. 128 (5); 2002, c. 17, Sched. F, Table; 2002, c. 18, Sched. P, s. 29 (2); 2006, c. 32, Sched. D, s. 4 (6).

Methods and Methodology

A. Advisory Group

In November 2022, the authors invited experts working with SSZs from across Ontario to a meeting to discuss the project (hereon, advisors). The authors selected advisors based on prior partnerships and ongoing professional interest in SSZs. In total, ten advisors and three authors supported the development of this SSZ project. Since November 2022, the advisory group has met five times to provide feedback and discuss the project's goals and processes with the opportunity to provide further feedback via email.

(5) Cloutier M-S, Beaulieu E, Fridman L, et al. State-of-the-art review: Preventing child and youth motor vehicle collisions: Critical issues and future directions. Inj Prev 2020 27(1): 77-84. doi:10.1136/injuryprev-2020-043829. (P. 82)
(6) Highway Traffic Act, Pub. L. No. R.S.O. 1990, c. H.8, King's Printer for Ontario (2023). https://www.ontario.ca/laws/statute/90h08#BK0.

B. PHASE 1

Survey

The three authors, with feedback from the advisors, designed the survey. The survey aims to (1) understand the local SSZ context, (2) explore perceptions of the current SSZ definition within the HTA, and (3) explore options for enhancing SSZs. The survey questions can be accessed **here**. The authors created and circulated the survey using Microsoft© Forms®.

Recruitment

Using purposeful and snowball sampling between 4 April 2023 and 30 June 2023 for the expert survey. The survey link circulated across Ontario. The intended respondents were individuals working with SSZs in a professional capacity (hereon, experts). Using existing communication channels, the authors and advisors emailed the link with a call for the individual receiving the email to complete the survey and/or to pass it along to a more appropriate respondent. Three reminder emails went out through the communication channels to encourage further responses.

Data Analysis

The first author exported the data into Microsoft© Excel® for analysis. Quantitative data underwent descriptive and correlational statistical analysis, while qualitative data underwent general qualitative analysis. Together the qualitative and quantitative data provides an integrated and fulsome depiction of the local, current, and potential future of SSZs.

Findings

Local Context

There were seventy-three experts from across Ontario who participated in this survey (Figure 1). To protect respondent anonymity, the survey did not include location or other identifying information. Experts came from municipal government (n = 46), education (n = 15), non-government organizations (n = 3), and four (n = 4) preferred not to answer. Table 1.1 provides a breakdown of their roles.

Perceived Purpose

When asked what the current definition indicates is the SSZ's purpose, they primarily answered "to manage traffic speed" (n = 51) and "to indicate that a school is nearby" (n = 37). Comparatively, when asked what purpose the SSZ should serve, the experts answered in open text that protection of vulnerable road users such as children, pedestrians, and cyclists, and drivers' awareness that there is a high likelihood of encountering children.

Safety Concerns in SSZs

Respondents ranked nine potential safety concerns in SSZs. Children's safety crossing streets (62.5%), children using active transportation (43.1%), and children accessing school buses (50.0%) were the top three concerns, respectively. Contrastingly, community members (38.9%) and vehicular traffic efficiency (62.5%) were the least important (Table 1.2).

Definition Sufficiency
Given the current HTA definition of SSZs, experts rated the definition as insufficient (53.4%) or partially sufficient (28.8%). Experts who reported the definition was sufficient were more likely to consider the definition's purpose to address vehicular movements (r (71) = .01, p = .05) and speed management (r (71) = .003, p = .05). Figure 1.1 provides a further breakdown of the definition's sufficiency by purpose.

SSZ Size
The HTA definition provides a minimum SSZ size of 150 metres. Experts reported using minimum SSZs across districts. Additionally, experts reported school active travel areas (i.e., areas close enough to the school that students are ineligible for a school bus) were on average 1 571 metres. Thus, there is a perceived 1 471-metre discrepancy between how far students must travel for school and the SSZ (Figure 1.2).

School Entrance/Exit
The HTA does not explicitly define the entrance/exit of a school. Thus, the experts perceived the entrance/exit to be for drivers only (38.9%), active travel users only (8.3%), and both (43.1%). Seven experts (9.7%) selected "other" and expanded by sharing their confusion over the ambiguity of the definition. Figure 1.3 graphically depicts the perceived intended users of school entrances/exits.

Suggested Enhancements

Measuring the SSZ
Table 1.3 defines five options for measuring a SSZ based on current practices and peer-reviewed literature that aims to improve safety in SSZs. Experts significantly preferred to treat SSZs similarly to community safety zones where local authorities can determine length and position of the safety zone (n = 23, 31.5%) or to include all portions of highway surrounding the school (n = 21, 28.8%).

Additionally, most experts (n = 55, 75.3%) reported that the 150-metre maximum SSZ are too small.

Additions
In addition to expanded SSZ sizes and the current speed rate management, experts reported a desire for additional regulations to control dangerous driving behaviours and increase vulnerable road user safety (Figure 1.4). Experts selected elements that should be in a new policy addressing SSZs and had the opportunity to expand on their responses in a subsequent open text question. Additions included:

- Implementing pedestrian-first crossings (i.e., crossing treatments that give pedestrians the right of way) (81.9%);
- Parking restrictions on the school (80.6%) and opposite sides of the highway (61.1%);
- Restricting U-turns (75.0%);
- Increased fines for distracted driving (73.6%); and
- Increased fines for all existing road laws (70.8%).

Further comments around additional measures to increase vulnerable road user safety in SSZs noted a need for using multiple measures rather than speed management only.

Other Considerations

When implementing any changes to the HTA's SSZs, experts offered additional comments through open text questions indicating a need for additional human and financial resources (Figure 1.6) to implement any associated changes. Experts were also concerned about the communication and education strategies needed to bring awareness to the risks of SSZs and the regulatory changes that may occur. Moreover, with the suggested increased safety regulations noted above, experts conveyed their apprehension over the resources needed to adequately enforce the SSZs. **Thus, next steps must incorporate community engagement and multi-sector partnerships to ensure there is alignment and support from all interest users.**

Contrastingly, experts highlighted built environment and program changes that could occur to enhance SSZ efficiency. Of note were the use of complete street designs that place vulnerable road users at the centre of neighbourhood design.[7] [8] [9] Additionally, school streets were encouraged for increasing student safety and overall wellbeing.[10] **Therefore, more research is needed to explore the feasibility, implementation, community engagement, and financial supports necessary for addressing these potential built environment and program changes.**

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(7) Maisel, J. L., Baek, S.-R., & Choi, J. (2021). Evaluating users' perceptions of a Main Street corridor: Before and after a Complete Street project. Journal of Transport & Health, 23, 101276. https://doi.org/10.1016/j.jth.2021.101276.
(8) McAndrews, C., Schneider, R. J., Yang, Y., Kohn, G., Schmitz, A., Elliott, F., Pittner, J., & Purisch, H. (2022). Toward a gender-inclusive complete streets movement. Journal of Planning Literature, 088541222210874. https://doi.org/10.1177/08854122221087472.
(9) City of Hamilton. (2023). Complete Streets Design Manual. City of Hamilton. https://www.hamilton.ca/build-invest-grow/planning-development/planning-policies-guidelines/complete-streets-design-manual.
(10) 8 80 Cities. (2023). School streets. 8 80 Cities. https://www.880cities.org/portfolio_page/school-streets/.

Phase 1 Tables and Figures

Table 1.1. Expert respondents by their sector and roles.

Sector	*N* (%)	Roles	*n* (%)
Municipal Government	46 (63.0%)	Transportation Parking and Planning Transportation Engineering Law Enforcement Public Health Crossing Guard Programs	14 (30.4%) 13 (28.3%) 2 (4.3%) 8 (17.4%) 9 (19.6%)
Education	15 (20.5%)	Educator School Administrator School Board Facilities School Board Planning	1 (6.7%) 10 (66.7%) 1 (6.7%) 3 (20.0%)
Non-Government	8 (10.9%)	Researcher Non-Profit/Charity Other	1 (12.5%) 5 (62.5%) 2 (25.0%)
Prefer Not to Answer	4 (5.5%)		

Table 1.2. Ranking of safety concerns in SSZs.

Ranked Safety Concerns (%)	One	Two	Three	Four	Five	Six	Seven	Eight	Nine	Sparkline
Children crossing safely	62.5	34.72	4.17	0	0	0	0	0	0	
Children walking or rolling safely	33.33	43.06	15.28	9.72	0	0	0	0	0	
Children accessing buses safely	1.39	18.06	50	22.22	6.94	2.78	0	0	0	
Children accessing single-family vehicles safely	1.39	2.78	13.89	33.33	16.67	16.67	11.11	2.78	2.78	
Community members moving safely through the zone	1.39	0	9.72	22.22	27.78	16.67	8.33	15.28	0	
Vehicles moving safely through the zone	1.39	2.78	8.33	6.94	25	30.56	9.72	16.67	0	
School buses moving efficiently through the zone	0	0	0	5.56	15.28	23.61	48.61	6.94	1.39	
Community members moving efficiently through the zone	0	0	0	0	5.56	4.17	18.06	38.89	34.72	
Vehicles moving efficiently through the zone	0	0	0	1.39	4.17	6.94	5.56	20.83	62.5	

Table 1.3. Proposed alternative methods to measuring a SSZ ($\chi 2(4, N=73) = 14.05$, $p = .007$).

Proposed Zone Measurement	***n***
Portion of highway at the school frontage (current definition)	5
Portions of highway on all sides of school block	**21**
Designated similarly to a Community Safety Zone	**23**
Concentric circle from school site	13
Other	11

*Figure 1.1. Sufficiency of current SSZ definition by perceived purpose. *Significant correlation, p < .05.*

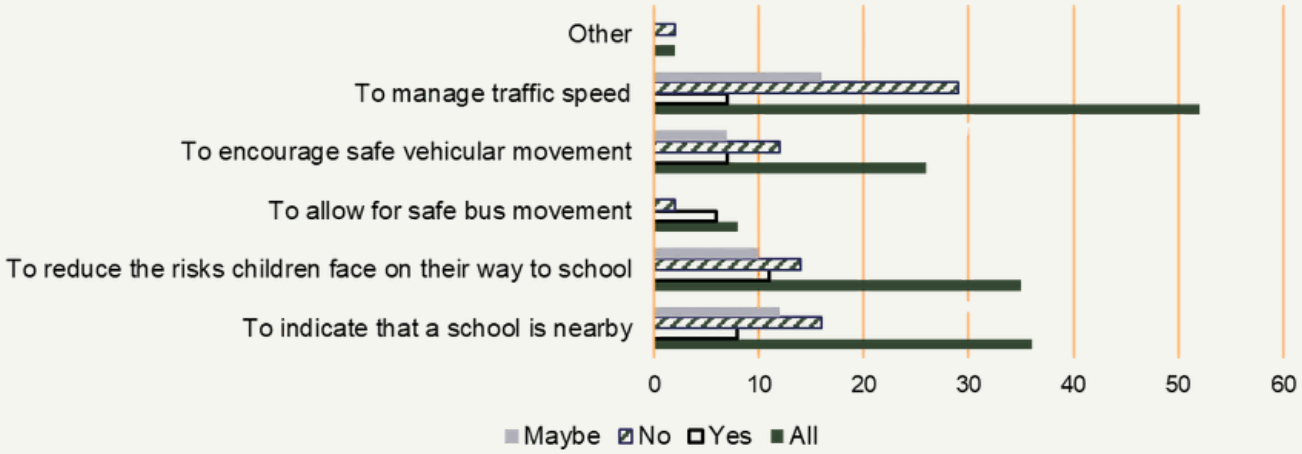


Figure 1.2. Student active travel distances compared to school safety zone sizes as reported by expert sector.

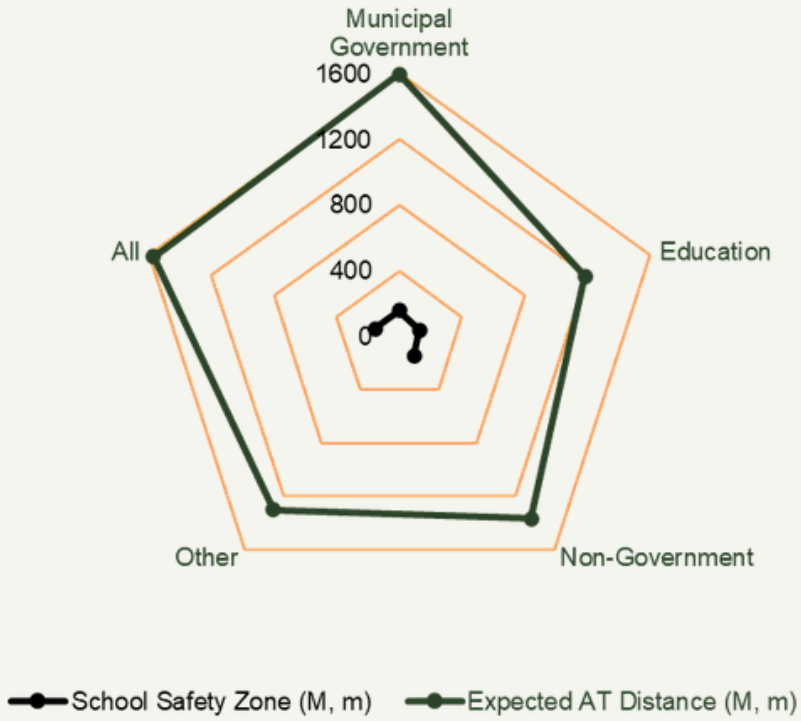


Figure 1.3. Does "entrance/exit to the school" as defined by the HTA refer to where drivers enter the school or where pedestrians/cyclists enter the school? This question indicates whether the definition clearly defines the focal point for the SSZ or not. ($\chi 2(3, N=72) = 29.67, p = .00001$).

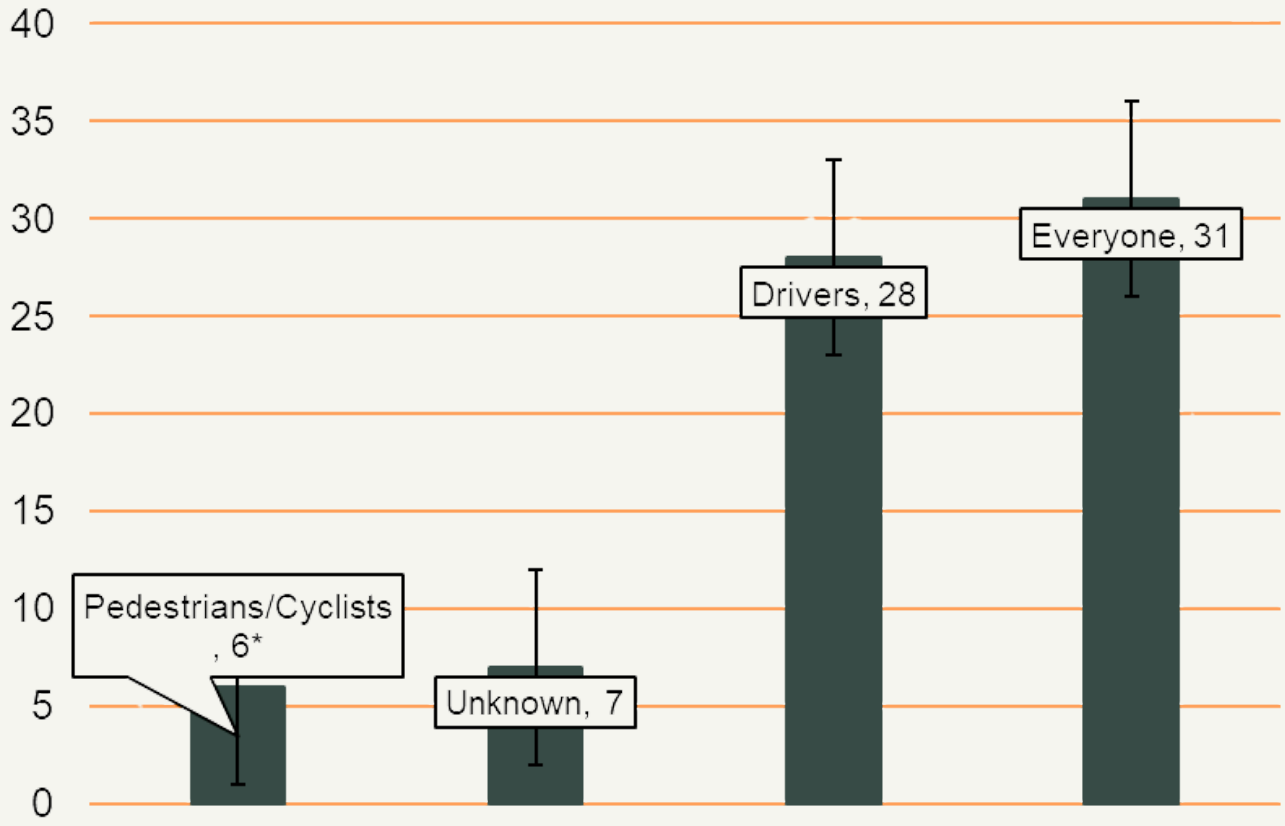


Figure 1.4. Expert choices of elements that should be considered in new policy addressing SSZs.

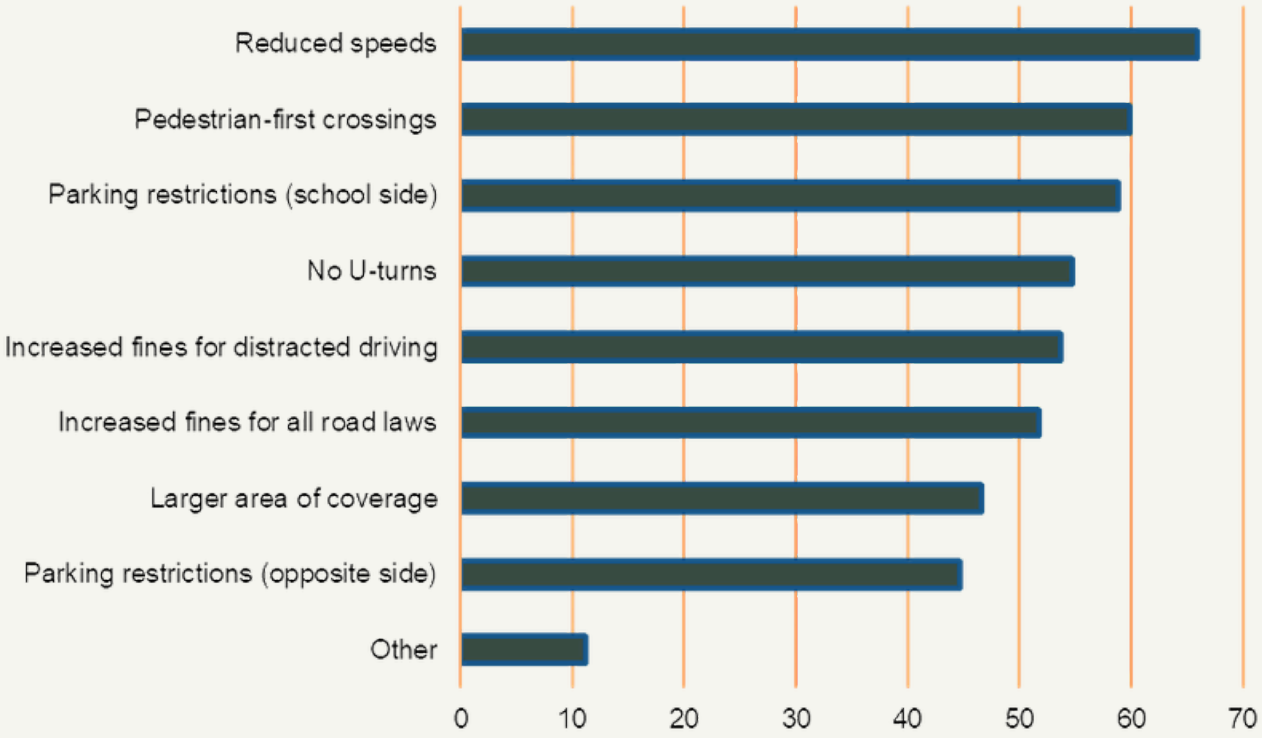


Figure 1.5. Methods and considerations for effecting change to SSZs contributed to open-ended question.

C. Phase 2

Survey
In collaboration with McMaster University, a community survey was developed to (1) understand the local SSZ context, (2) explore perceptions of the current SSZ definition within the HTA, (3) explore phase 1 expert provided options for enhancing SSZs, (4) and build on the recommendations from the phase 1 expert results. The authors created and circulated the survey using Microsoft© Forms®.

Recruitment
Using purposeful and snowball sampling between September and December 2024, the survey link circulated across Ontario. The intended respondents were school community members such as students, students' caregivers, and school staff (hereon, community members). Using existing communication channels, the authors and advisors emailed the link with a call for the individual receiving the email to complete the survey and/or to pass it along to a more appropriate respondent. Three reminder emails went out through the communication channels to encourage further responses.

Data Analysis
The first author exported the data into Microsoft© Excel® for analysis. Quantitative data underwent descriptive and correlational statistical analysis ($p < .05$), while qualitative data underwent general qualitative analysis. Together the qualitative and quantitative data provides an integrated and fulsome depiction of the local, current, and potential future of SSZs.
Findings

Demographics
299 respondents resided across Ontario and were predominantly parent/guardian's (270 (90.3%); students, 2 (.7%); school staff, 8 (2.7%); community member, 19 (6.4%)). 188 (62.9%) respondents identified as White, 11 (3.7%) as Indigenous, 9 (3.0%) as South Asian, 3 (1.0%) as Southeast Asian, 6 (2.0%) as East Asian, 19 (6.4%) as Biracial, and 63 (21.1%) preferred not to answer. All demographics are in Table 2.1.

Travel Choices
Most respondents owned two or more vehicles (174, 58.2%) or one vehicle (113, 37.8%), with 12 "no responses" (4.0%). The primary school travel mode was walking (94, 31.4%); however, driving was the predominant cumulative travel mode (161, 53.8%) (Figure 2.1). Respondents provided more details on how they commute to school and the reasons they make those choices (Table 2.2).

Understanding the School Safety Zone
Prior to reading the Highway Traffic Act definition of a school safety zone, respondents believed that they understood (170, 56.9%) what it was but had no knowledge of the distance it encompassed (158, 52.8%). Most respondents believed that the school safety zone should be to reduce the risks children experience (260, 87.0%) (Table 2.3).

Upon reading the Highway Traffic Act definition of a school safety zone, respondents believed that the definition was insufficient (129, 43.1%) and that its primary role was to reduce the risks children experience (274, 91.6%) (Table 2.3).

Table 2.1. Respondents' demographic information.

Residence	*N*	%	Residence	*N*	%	Residence	*N*	%	Residence	*N*	%
Adjala-Tosorontio	1	0.3	Kawartha Lakes	6	2	Oakville	1	0.3	Whitby	1	0.3
Bradford	1	0.3	Kingston	1	0.3	Ottawa	3	1	Wilmot	2	0.7
Brampton	1	0.3	Kitchener	2	0.7	Peterborough	14	4.7	York	8	2.7
Brantford	5	1.7	Lindsay	2	0.7	Port Arthur	3	1	No Response	3	1
Cambridge	3	1	London	23	7.7	Port Colbourne	2	0.7			
Cameron	1	0.3	Mariday park	1	0.3	Rosslyn	1	0.3			
Cobourg	1	0.3	Markham	1	0.3	Scarborough	6	2			
Durham	2	0.7	McKellar	1	0.3	Shuniah	1	0.3			
Etobicoke	2	0.7	Middlesex	1	0.3	Slate River	2	0.7			
Gorham	1	0.3	Milton	1	0.3	South Gillies	1	0.3			
Grand Erie	1	0.3	Mississauga	4	1.3	Thornhill	1	0.3			
Halton	1	0.3	Neebing	3	1	Thunder Bay	115	38.5			
Hamilton	20	6.7	North Huron	1	0.3	Timiskaming	1	0.3			
Headlake	1	0.3	Northwestern Ontario	3	1	Toronto	36	12			
Huron County	1	0.3	Northwood	1	0.3	Waterloo	5	1.7			
School Type	*N*	%	**Role**	*N*	%	**Gender**	*N*	%	**Disability Status**	*N*	%
Elementary	242	80.9	Parent/ Guardian	270	90.3	Woman/Girl	117	39.1	No	265	88.6
Middle	12	4	School Staff	8	2.7	Man/Boy	102	34.1	Yes	17	5.7
Secondary	44	14.7	Student	2	0.7	Transgender Woman/Girl	3	1	*Hearing Impairment*	1	0.3
No Response	1	0.3	Community Member	19	6.4	Transgender Man/Boy	2	0.7	*Physical Impairment*	3	1
						Non-Binary	2	0.7	*Learning Disorder*	21	7
						Prefer Not to Answer	73	24.4	*Developmental Disability*	7	2.3
									Prefer Not to Answer	17	5.7

Figure 2.1. School travel modes by primary and cumulative use.

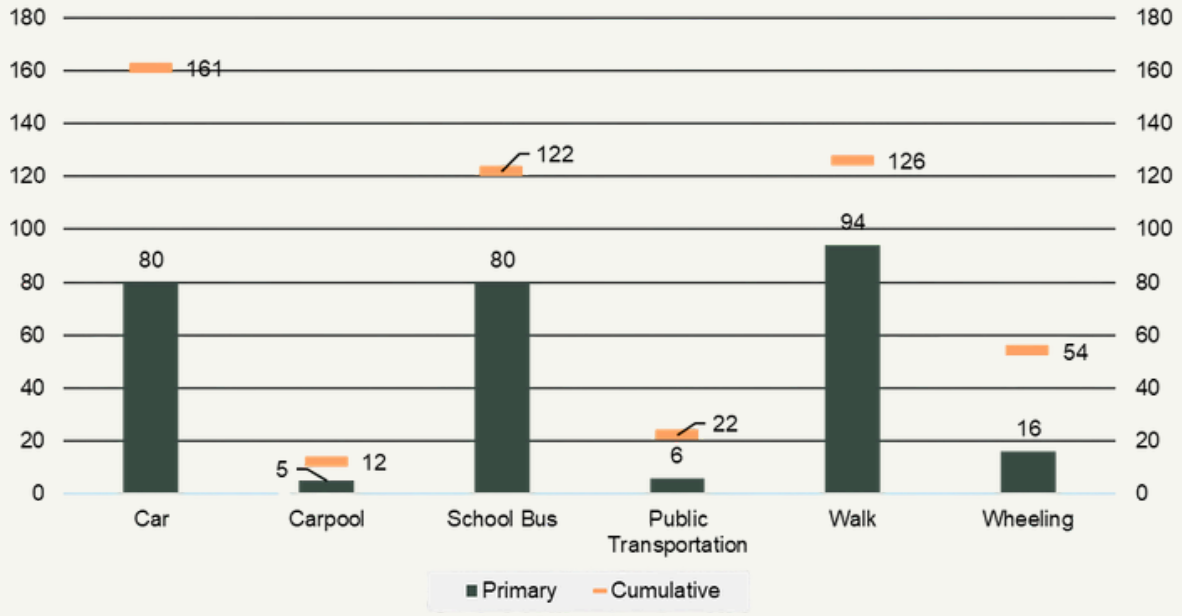


Table 2.2. Details of the respondents' school commutes and influencing factors.

Details	*N*	%
Student's Travel Companion		
Adult	198	66.2
Another Child/Sibling	26	8.7
Nobody	61	20.4
No Response	14	4.7
Frequency of Companion		
Daily	162	54.2
1 – 4 Days/Week	32	10.7
Less than 1 Day/Week	25	8.4
Never	13	4.3
No Response	67	22.4
Time to School		
Less than 10 mins	102	34.1
10 – 15 mins	79	26.4
15 – 20 mins	38	12.7
20 – 30 mins	30	10.0
30+ mins	34	11.4
No Response	16	5.4
Frequency of Safety Issues		
Daily	73	24.4
Weekly	47	15.7
Monthly	18	6.0
Seasonally	40	13.4
Yearly	4	1.3
Never	96	32.1
No Response	21	7.0

	N	%
Reasons for Travel Mode		
Convenience	116	38.8
Schedule	109	36.5
Live Near School	99	33.1
Live Far from School	90	30.1
Traffic Risks	83	27.8
Stranger Risks	54	18.1
Mobility	14	4.7
Accessibility	13	4.3
Values	13	4.3
Childcare	7	2.3

Table 2.3. Understanding the school safety (SSZ) definition, pre- and post-reading the Highway Traffic Act.

	N	%
Pre-Reading Understanding		
Yes	170	56.9
Somewhat	85	28.4
Not At All	44	14.7
SSZ Distance Knowledge		
Yes	75	25.1
No	158	52.8
Not Sure	66	22.1
Pre-Reading Purpose		
School Proximity	203	67.9
Reduce Children's Risk	260	87.0
Safe Bus Movement	149	49.8
Safe Vehicle Movement	180	60.2
Manage Traffic Speed	194	64.9
Post-Reading, Sufficiency		
Yes	75	25.1
Somewhat	67	22.4
No	129	43.1
I Don't Know	28	9.4
Post-Reading, Purpose		
School Proximity	205	68.6
Reduce Children's Risk	274	91.6
Safe Bus Movement	183	61.2
Safe Vehicle Movement	217	72.6
Manage Traffic Speed	237	79.3

Current Challenges in SSZs

Respondents felt that the sidewalks, bus loading zones, and school entry/exits were safe. Contrastingly, the pedestrian crossings, bike lanes, and roadways were perceived as unsafe (Table 2.4). Contributing to the respondents' perceived safety were the numerous risky behaviours observed within the school safety zone (Figure 2.2). There were noted differences in who reported safety concerns. Drivers were less likely to notice dangerous reversing and more likely to notice bylaw and parking violations. Walkers were more likely to report dangerous reversing and U-turns, and less likely double parking. Whereas cyclists were less likely to report bylaw violations and more likely to note double parking, bus zone violations, U-turns, speeding, and midblock crossings.
Moreover, there were five types of safety concerns with only 59 (19.7%) responding that they had no barriers to using active travel modes (Figure 2.3).

FIgure 2.2. Observed risky behaviours in the school safety zone.

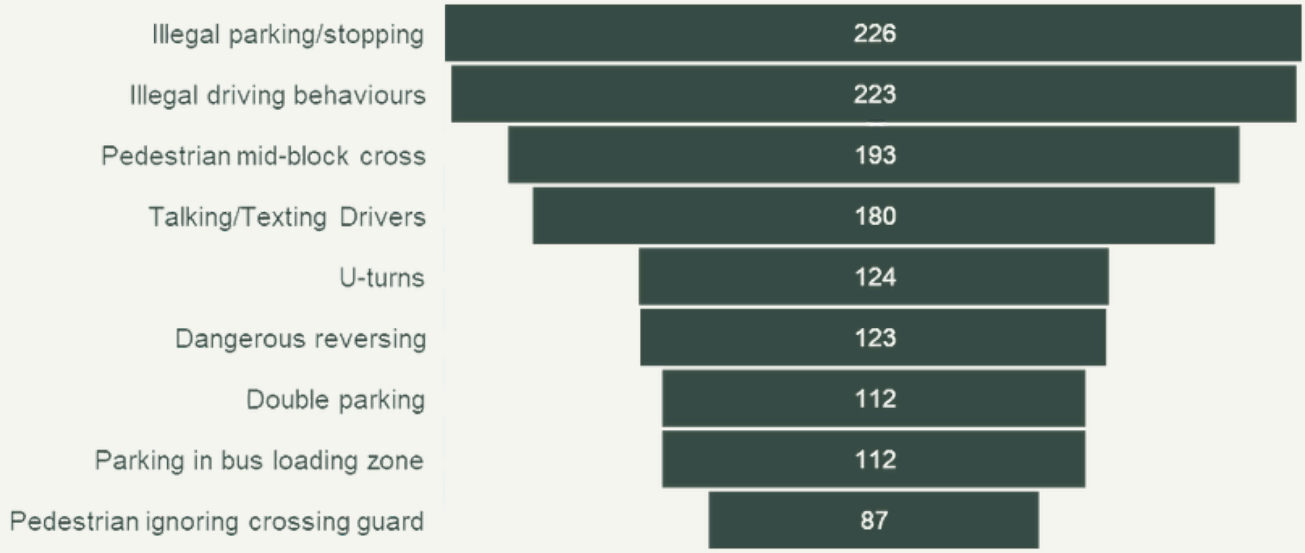
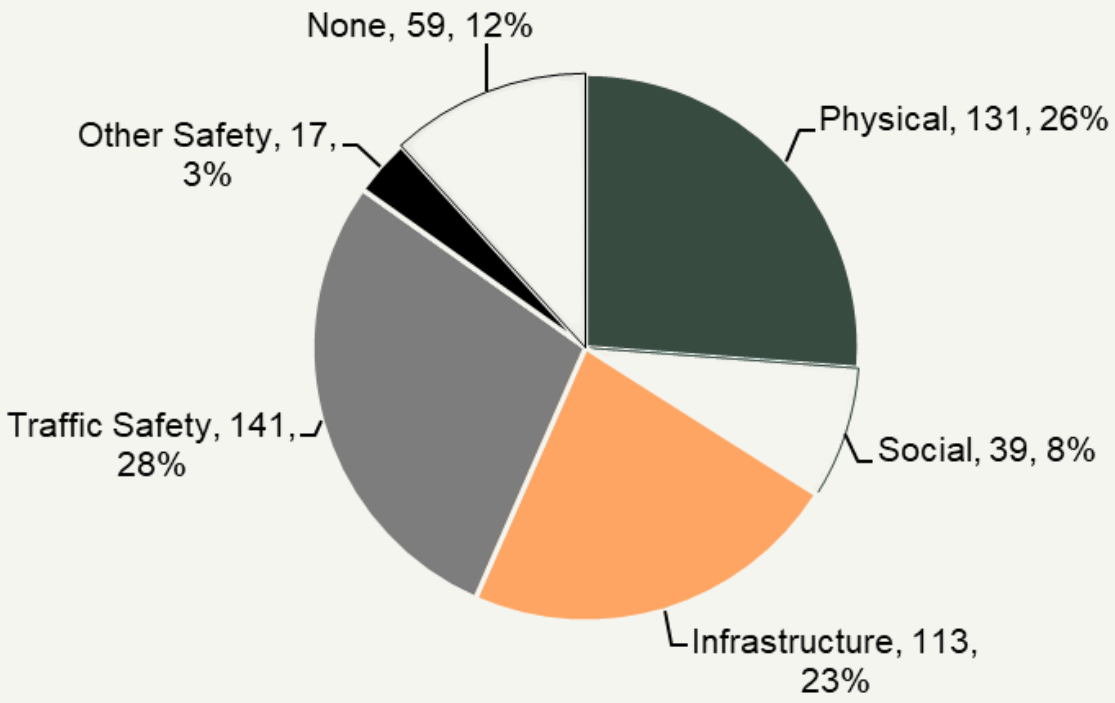


FIgure 2.3. Barriers to using active travel modes for the school commute.



Potential interventions for SSZs

Public respondents ranked a list of ten various interventions (Table 2.5) identified through the phase one expert survey. As a first choice, public respondents chose Automated Speed Enforcement (i.e. speed cameras) more often (n.= 41) and School Streets (i.e. closure of the school zone during arrival and dismissal periods) as a last choice more often (n.= 98). To reveal overall priorities from public respondents, weighted scoring (Table 2.5.1) assigned points in descending order from first to last choices. For public respondents, traffic calming emerged as the most supported choice, with ASEs second and more crossing guards, reduced speed, and more pedestrian crossovers all close behind ASEs. Significant support was also given to more patrolling, increased fines, and education while separate entrances and school streets were ranked lowest.

*Table 2.4.*Perceived safety of infrastructure in the school safety zone (n (%)). Highlighted cells denote the highest rating per infrastructure type.

	Sidewalks	*Pedestrian Crossings*	*Bus Loading Zone*	*Bike Lanes*	*School Entry/Exit*	*Roadways*
Safe	**104 (34.8)**	57 (19.1)	**114 (38.1)**	19 (6.4)	**112 (37.5)**	26 (8.7)
Somewhat Safe	82 (27.4)	57 (19.1)	61 (20.4)	31 (10.4)	65 (21.7)	58 (19.4)
Neutral	34 (11.4)	39 (13.0)	54 (18.1)	78 (26.1)	39 (13.0)	51 (17.1)
Somewhat Unsafe	35 (11.7)	74 (24.7)	32 (10.7)	47 (15.7)	41 (13.7)	**80 (26.8)**
Unsafe	40 (13.4)	**68 (22.7)**	17 (5.7)	**89 (29.8)**	33 (11.0)	78 (26.1)
Prefer Not to Answer	4 (1.3)	4 (1.3)	21 (7.0)	35 (11.7)	9 (3.0)	6 (2.0)

Table 2.5. Ranked potential interventions for improving the safety in school safety zones (First - Highest Priority; Tenth - Lowest Priority). Highlighted cells have the highest vote for the corresponding rank.

All Respondents	First	Second	Third	Fourth	Fifth	Sixth	Seventh	Eighth	Ninth	Tenth
ASEs	**41**	35	36	36	23	33	22	21	23	23
Reduced speed	38	33	39	35	35	17	24	23	25	24
Traffic calming	33	**49**	**43**	**43**	34	31	27	19	11	3
Increased fines	18	27	21	34	**39**	24	31	29	43	27
More patrolling	26	36	33	28	21	**37**	23	38	31	20
More crossing guards	35	37	34	22	31	**37**	43	25	18	11
More pedestrian crossovers	30	31	36	32	31	27	**45**	28	19	14
Education	25	15	17	31	35	36	30	**44**	29	31
Separate entrances	17	17	24	17	25	32	27	43	**49**	42
School streets	30	13	10	15	19	19	21	23	45	**98**

Table 2.6.Weighted ranking of potential school zone safety improvements by mode. Weighting based on rank in Table 2.5 (1st place =10 pts to 10th place = 1 pts).

	All Respondents (n.= 281)
1	Traffic calming
2	ASEs
3	More crossing guards
4	Reduced speed
5	More pedestrian crossovers
6	More patrolling
7	Increased fines
8	Education
9	Separate entrances
10	School streets

Correlations Within Community Respondents

Primary Mode Choice vs. Reason for Mode Choice

Car choice was more likely when family schedule (p = .03) was a reason for mode choice and less likely for accessibility needs (p = -.02) as respondents noted using accessible transit options that were categorized as either a school bus or public transit.

Carpooling was less likely when modes choice was impacted by family schedule (p = -.04), living far from the school (p = -.03), childcare needs (p = -.02), and personal values (p = -.03).

School bus was less likely when childcare (p = -.04) and personal values (p = -.02) were selected reasons for mode choice.

Public transit was less likely when convenience (p = -.02), mobility (p = -.03), childcare (p = -.02), personal values (p = -.03), stranger risks (p = -.01), and traffic risks (p = -.04) were reasons for mode choice. Contrastingly, public transit was more likely when family schedule (p = .04) was selected.

Walking was only correlated to personal values (p = .001) with respondents noting they chose to walk because they saw the health, well-being, and climate benefits of doing so.

Wheeling includes biking, scootering, wheeling – basically any non-walking active travel. Respondents chose to wheel when childcare (p = -.04) and traffic risks (p = -.05) were not perceived but did choose wheeling when accessibility (p = .02) was a consideration.

Perceptions of Safety by Mode Choice
Perceived safety issues were positively related to choosing public transit (p = .03).

School Safety Zone Purpose – Before and After Reading the Definition
Respondents who thought the SSZ was for reducing risks to children were less likely to select increasing the safety for active travel users after reading the SSZ definition (p = -.01). Comparatively, respondents who initially thought the SSZ managed traffic speed were more likely to select active travel safety (p = .02). Selecting proximity to school as the SSZ purpose led to respondents not selecting reducing risks to children after reading the SSZ definition (p = -.03). Respondents who thought the SSZ was to reduce overall risks were more likely to select school proximity (p = .03) and children's safety (p = .04), and less likely to select active travel safety (p = -.02) after reading the SSZ definition. Finally, respondents who initially thought the SSZ was to increase active travel safety were less likely to think so after reading the definition (p = -.01) and more likely to think the SSZ purpose was to reduce risks to children (p = .02) and manage traffic speed (p = .04).

Barriers to Active Travel by Primary Mode Choice
Respondents who primarily drove noted infrastructure (p = .04) and traffic safety (p = .05) barriers to active travel. Whereas carpool users were more likely to perceive social (p = .03) and physical (p = .04) barriers, and less likely to perceive general safety (p = -.03) barriers. Public transit users identified less infrastructure (p = -.01), traffic safety (p = -.04), and general safety (p = -.04) barriers than other respondents. Respondents who used a wheeling mode of travel were more likely to perceive traffic safety (p = .04) or no barriers (p = .03) to active travel. School bus users and walkers did not note any barriers significantly different from other respondents.

Place of Residence as a Factor
Respondents living in rural areas owned more vehicles (p = .03), were more likely to use public transit (p = .005) as the primary travel mode but to use private vehicles as an alternative (p = .03). Mode choice for rural residents was less influenced by schedule (p = .05), accessibility (p = .04), personal values (p = .04), and stranger risks (p = .03). Urban residents observed more bus zone (p = .04) and crossing guard infractions (p = .007) than rural residents. However, more rural residents noted that crossing guards and school buses were not available in their region. Finally, rural residents felt that pedestrian crossings (p = .01) and bike lanes (p = .04) were less safe than urban respondents.

Disability Status as a Factor
Individuals who identified as having a disability were more likely to have access to a personal vehicle (p = .05), less likely to walk to school (p = -.02), and more likely to wheel to school (p = .05). These respondents also identified more reasons for their mode choice decisions: convenience (p = .03), schedule (p = .01), proximity to school (p = -.01), mobility (p = -.03), accessibility (p = .05), childcare (p = -.05), and personal values (p = -.04). Considering the barriers to active travel, individuals with a disability were more likely to identify social barriers (p = .04) and less likely to identify no barriers (p = -.04) than those without disability.

Conclusion

This project asked the question "what is a school safety zone" and "what is it for?" of two audiences: municipal and school board experts who work with and around school safety zones, and members of the public who are associated with schools as students, student caregivers, and school staff. When exposed to the definition of a School Safety Zone as written in the Highway Traffic Act, and after sharing their observations of school safety zones in action, there was consensus from both experts and the public that the definition should focus on children's safety and that it does not go far enough to protect children as currently stated.

Suggestions were made by experts and affirmed by the public that could be considered to improve SSZs, including:

- Expand SSZs beyond 150 m
- Install pedestrian crossovers in SSZs
- Reduce speeds
- Restrict parking on the street abutting the school
- Restrict parking across the street from the school
- Restrict U-turns
- Increase fines
- Increase traffic calming
- Reconsider Automated Speed Enforcement
- Support widespread driver and student road safety education

This report indicates a disconnect between the purpose of a SSZ and its' efficacy. Thus, it is time to explore opportunities for greater safety in a space highly used by vulnerable road users.