School Neighbourhood Activation Playbook

May 2026

TRANSLINK

BRITISH COLUMBIA

Acknowledgements

The School Neighbourhood Activation Playbook (SNAP) was prepared under the direction of TransLink and the BC Ministry of Transportation and Transit (MOTT) with the participation and valuable input of interest holders across British Columbia, Canada, and internationally, including municipal staff, regional Health Authorities, researchers, and not-for-profit organizations working in health, transportation, and education.

This initiative was led by TransLink through its role coordinating and advancing the TravelSmart4Kids Strategy through strong collaboration, knowledge sharing, and collective action by regional and provincial partners. Development of the SNAP was supported by Urban Systems Ltd.

The SNAP is co-funded by MOTT, reflecting a shared commitment to advancing active and sustainable transportation, health, and climate goals for children and their communities across British Columbia.

The project team acknowledges that this work takes place on the traditional and unceded territories of First Nations across British Columbia. We recognize Indigenous Peoples as rights holders and affirm the importance of working in respectful relationship with First Nations, Inuit, and Métis communities. The SNAP gratefully honours traditional Indigenous ways of knowing and being that inform community-centred design and aims to support safe, healthy travel modes and neighbourhoods that reflect the unique needs, priorities, and strengths of First Nations, Inuit, and Métis communities across British Columbia.

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The School Neighbourhood Activation Playbook was created by TransLink, co-funded by Ministry of Transportation and Transit with support by Urban Systems. TransLink would like to thank all those involved in the creation of this resource.

All photos courtesy of Urban Systems unless otherwise noted.

Children crossing the street to get to the school bus

Section 1.0

The Case for School Neighbourhoods: Introduction and Evidence Overview

This section establishes the purpose and scope of the guide, connections to provincial and regional policies, and the intended audience. This section also includes an overall navigation guide for the document.

SNAP Background and Purpose

A Continued Investment in Children's Active and Sustainable Transportation

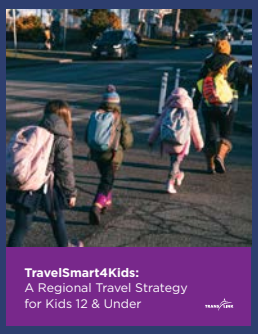
TransLink and the Province both have a long history of supporting active and sustainable travel for children through funding active school travel programs, initiatives, and infrastructure. This includes Walking School Buses and Bike Buses, school and play streets, cycling education programs, and free transit for kids 12 and under, all of which help to equip children with the skills and confidence to get around their communities by walking, cycling, rolling, and taking transit. These programs and initiatives are made possible by coordination, commitment, and passion of diverse interest holders who work together with the shared goal to support healthy children and communities.

QUICK DEFINITIONS

Active transportation includes any form of human-powered transportation, including walking, cycling, or rolling using a skateboard, in-line skates, wheelchair, or other wheel-based forms of human-powered transportation. It also includes winter-based active modes, water-based active modes, and horseback riding, although these modes are typically more recreational in nature.

Active school travel (AST) is the practice of using active transportation for the journey to and from school. Common modes include walking on foot, rolling in mobility devices such as wheelchairs, and wheel-based modes like bicycling, scootering, and skateboarding.

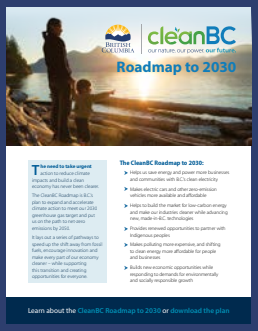
Relevant Plans and Strategies



TravelSmart4Kids Strategy: A Regional Travel Strategy for Kids 12 and Under, TransLink, 2022

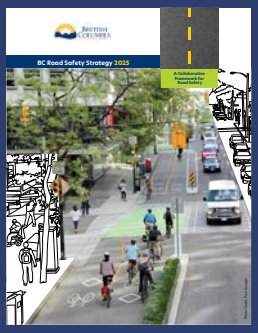
The TravelSmart4Kids Strategy is Metro Vancouver's regional sustainable transportation strategy for children aged 12 and under, created to advance the regional and provincial plans below and developed in collaboration with interest holders. The Strategy presents an innovative and holistic approach to active and sustainable travel for children and youth, combining traditional aspects of school travel planning such as planning, policy, infrastructure, programming, engagement, and education with a regional health, climate, safety, and equity lens. Strategy engagement and feedback further revealed the need for a school neighbourhood resource.

Transportation 2050, TransLink, 2022



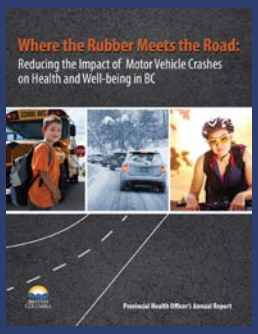
CleanBC Roadmap to 2030, Government of BC, 2021

Clean Air Plan, Metro Vancouver, 2021



BC Vision Zero Road Safety Strategy, Government of BC, 2025

Move. Commute. Connect. Active Transportation Strategy, Government of BC, 2019



Where Rubber Meets the Road: Reducing the Impact of Motor Vehicle Crashes on Health and Well-being in BC Government of BC, 2016

Scope and Target Audience

SNAP Scope and Objectives

The School Neighbourhood Activation Playbook (SNAP) is a supplement to the *TravelSmart4Kids Strategy* and the *BC Active Transportation Design Guide*, recognizing that school neighbourhoods are a key setting where many active and sustainable transportation initiatives take place. The focus is on elementary schools (Kindergarten to Grade 7) since early childhood is critical for shaping lifelong sustainable travel habits.

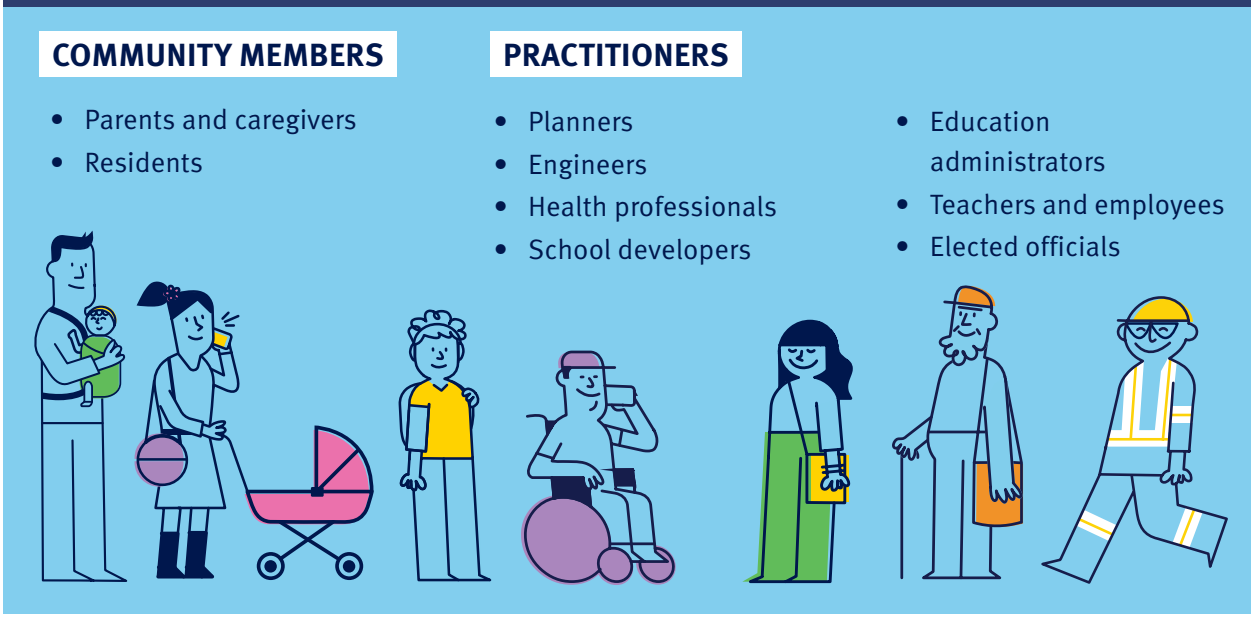
The SNAP consolidates best practices, strategies, and tools to support active school travel for elementary school children in urban, suburban, and rural contexts across British Columbia. It offers guidance to help communities make school neighbourhoods safer, healthier, and more active.

Target Audience

The SNAP is intended for interest holders advocating for, promoting, and advancing active transportation for children and youth. This includes local government transportation planning and engineering staff, school administrators and staff, elected officials, public health professionals, parents, and caregivers.

Acting as a bridge document, the SNAP aims to create a shared language and foster coordination across sectors, including between community members and practitioners across transportation, health, and education. It also aims to support interest holders with planning and prioritizing different interventions that can enhance school neighbourhoods and promote active transportation. For interest holders seeking more technical details, the SNAP refers practitioners to other design guidelines (see Section 4.0 Activating School Neighbourhoods: Intervention Toolkit).

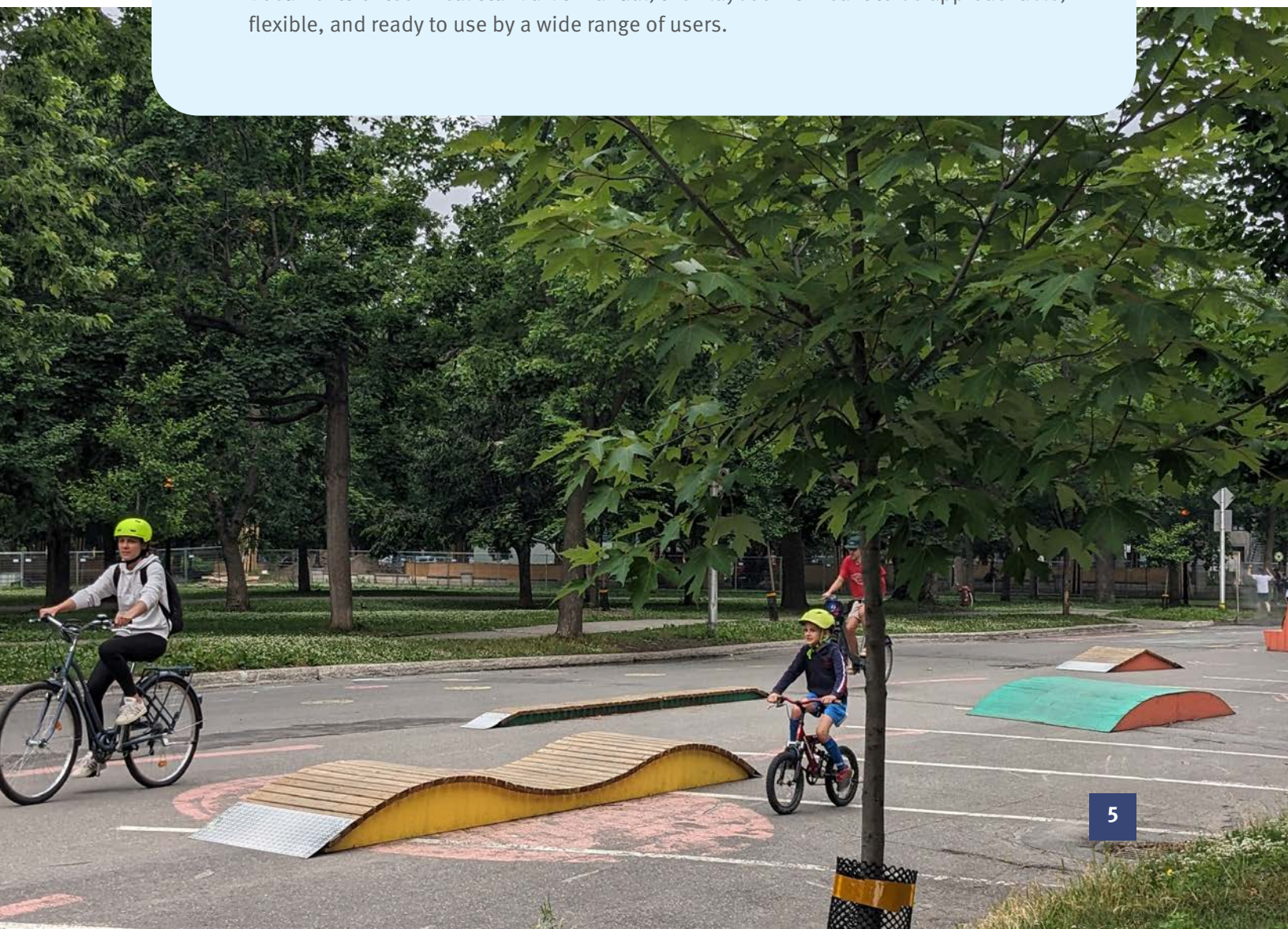
Figure 1: Target Audience: Who was the SNAP created for?



What's in a Name: The School Neighbourhood Activation Playbook

The name of this document was chosen to reflect both the purpose and spirit of the document:

- **School Neighbourhood** highlights the key focus of the document. School neighbourhoods are the immediate areas surrounding schools where children, parents and caregivers, and community members interact daily. This area is critical for transportation safety, accessibility, and community connection.
- **Activation**: "Activation" calls for a proactive, action-oriented approach. It is about moving from planning to implementation through targeted transportation interventions that encourage more active modes such as walking, rolling, and cycling. It also reflects a commitment to empowering interest holders to play a more active role in shaping their school neighbourhoods.
- **Playbook**: Conveys how this is a practical, easy-to-use guide filled with strategies, tools, and examples that can be adapted to various local contexts. Unlike formal policy documents or technical standards manual, the Playbook is meant to be approachable, flexible, and ready to use by a wide range of users.



How to Use the SNAP: Guide Navigation

The SNAP has been divided into the following sections:

SECTION 1.0

The Case for School Neighbourhoods: Introduction and Evidence Overview

Establishes what school neighbourhoods are and why they are a high priority for intervention, the purpose and scope of the guide, connections to provincial and regional plans, and the intended audience. This section also includes a navigation guide for the document.

SECTION 2.0

Understanding School Neighbourhoods: Planning and Design Context

Explains how school neighbourhoods are distinct from other neighbourhoods due to the planning and design considerations for children, diverse contexts across the province, and policy contexts.

SECTION 3.0

Working Together: Partnerships and Coordination Strategies

Outlines the key players who are generally involved in the process of making school neighbourhoods safer, healthier, and more active and their roles and responsibilities in this process. Includes a high-level guide on how to successfully build partnerships as well as strategies to address coordination, sustainability, and legacy challenges that come with school neighbourhood improvements.

SECTION 4.0

Activating School Neighbourhoods: Intervention Toolkit

Includes a toolkit with policy, infrastructure, and program interventions to make school neighbourhoods safer, healthier, and more active for children, referencing additional resources and case studies.

NEW TO THE SNAP?

If you're looking for practical actions to kick start active travel in your school neighbourhood, Section 4.0's Intervention Toolkit is the place to start.

SECTION 5.0

Making Progress: Implementation Instruments

Provides an overview of how these interventions are funded and implemented, including a list of recurring grant opportunities. Makes the case for evaluating school neighbourhood initiatives, suggests relevant metrics, and recommends methods for reporting on results.

APPENDICES

Includes a glossary of terms throughout the SNAP 2025 costing estimates, and references.

Navigation Cues

CASE STUDIES

Examples of active school travel in practice across British Columbia and beyond.

RESEARCH SAYS

Findings to support evidence-based decision-making with active school travel.

TIPS

Key practical insights and takeaways drawn from research and practice.

What are School Neighbourhoods?

Moving Beyond the Classroom

School neighbourhoods are the heart of a community, serving not only as educational spaces for children but as important community hubs for learning, connection, recreation, and growth across generations.

Beyond the school day, school facilities such as the school building, fields, and playground often remain open to the public, offering safe and familiar spaces for recreation, social interaction, and informal play. Many schools also host versatile spaces for broader community programs and activities, including use as childcare centres, kitchens, meeting rooms, adult education, libraries, and recreational programming, making schools dynamic gathering places that reflect and respond to local needs.

The policies, infrastructure, and programming of school neighbourhoods directly influence how people move, interact with public space, and connect with their community. When planned and designed with care, school neighbourhoods can support healthy lifestyles, reduce social isolation, and foster intergenerational connections to serve everyone in a community beyond the classroom and into their daily lives.

School neighbourhoods present a unique mix of transportation issues and opportunities. These neighbourhoods are active, busy areas where children, parents and caregivers, and community members come together. It's also where multiple transportation modes such as walking, rolling, cycling, school buses, transit, and driving often converge. These interactions between people and transportation modes are especially concentrated during peak periods when children are getting to and from school, highlighting the need for thoughtful planning and design to create safe, active, and healthy environments for the entire community.

This playbook strives to equip key actors with guidance on transforming school neighbourhoods into safe, healthy, and active environments where both students and the wider community can live, learn, play, and thrive. When the SNAP is applied successfully, children and caregivers will have the skills, confidence, and support to make travel choices that promote their well-being and contribute to a healthier, more connected community.

Defining a School Neighbourhood

A school neighbourhood refers to the immediate surrounding area of a school, generally the 200-400 metres surrounding the school property. This is the zone where students and families most directly experience and participate in the street environment during pick-up and drop-off, and where active school travel interventions are most concentrated.

This is different than a school catchment, which is a larger geographic boundary set by the school district. The catchment determines which school a student is eligible to attend based on their home address. Every school neighbourhood sits within a catchment area, but the catchment itself is broader and can span several kilometres from the school.

In school travel planning, a 400-metre straight-line radius from the school site is often used to represent a five-to-15-minute walk for elementary school aged children. Using an "as-the-crow-flies" approach allows for consistent and efficient analysis across different neighbourhoods and communities. With these considerations in mind, the SNAP focuses on transportation interventions most applicable within 200–400 metres, or two to four blocks, of the school site. When developing plans for active and sustainable travel, such as active transportation network plans, transit plans, and school travel plans, practitioners should consider the school catchment area beyond the school neighbourhood to identify key connections and access points, while recognizing that implementation efforts may focus primarily within one to four blocks of the school.

Figure 2: School Catchment Area Versus School Neighbourhood Area

TIP

While 200–400 metres can provide a helpful benchmark, actual walking distances can vary depending on topography, street connectivity, and barriers, such as major roads or natural elements (e.g., waterways or forests). Seasonal and temporal factors, like daylight or weather, may also impact which routes are comfortable or accessible throughout the year. Consider these local conditions when mapping your school neighbourhood radius.

TIP

Children are more likely to walk or cycle to school when they live closer to their school

Distance from school is consistently the strongest predictive factor of active school travel, although even long distances to school can include walking and rolling for part of the journey when the school neighbourhood encourages and prioritizes active modes. Research has found that the threshold distances for active modes range by location and age, with older students, and their parents or caregivers, generally feeling more comfortable travelling longer distances independently. As a reference point, many American practitioners use 1.6 km as the maximum walking distance for elementary school children and 2.4 km for secondary school children, according to the Safe Routes to School Partnership.[1]

Why Are School Neighbourhoods a High Priority for Intervention?

School neighbourhoods are unique; they support people at different ages and stages of life, including students, caregivers, and the broader community. A child's education doesn't stop at the classroom walls; the environment around a school affects how children navigate their community, their physical safety, and their developmental outcomes.[2] Community members and caregivers are also continually taking cues from the built and natural environments as well as each other, with their perceptions and behaviours often dictating how their children and dependents move. This is a core tenet of why school neighbourhoods matter: they are a familiar, daily setting that influences a child's worldview and habits, and where community members and caregivers can learn and model healthy behaviours for an active and connected neighbourhood.

RESEARCH SAYS

Grade school trips account for **18 per cent** of weekday morning peak vehicle travel in Metro Vancouver – almost **1 in every 5 car trips** from 7am to 9am.[12]

Benefits of a safe, healthy school neighbourhood include:

Children

Brain Boost

Children who incorporate movement and play into their daily routine experience a better mood, sleep, and focus at school and home, while lowering stress, which may reduce the risk of anxiety and depression.[3, 4]

Strong, Healthy Bodies

Daily activity builds healthy hearts, lungs, bones, and improves quality of life.[5]

Play and Independent Mobility

Safe and active school neighbourhoods promote children's development and resilience through play and building independence.[6]

Navigation Skills

Children build awareness and enhance their confidence in a safer, more enjoyable environment when traffic volumes are low, and their mobility is high.[7]

Caregivers

More Quality Time, Reduced Stress

Choosing to travel actively means less time spent stuck in drop-off and pick-up congestion and more time for what matters, such as family, work, social connection, or wellness.

Saving Money

Walking, biking, and rolling may cut costs on fuel, parking, and vehicle maintenance.[8]

Community

Safer Streets for All

Calmer traffic and safer neighbourhoods increase travel options for people of all ages and decrease avoidable traffic injuries and fatalities – motor vehicle incidents were the second leading cause of accidental injury-related child deaths from 2017 to 2021 in British Columbia.[9]

Reduced Congestion

Vehicle congestion decreases as more students and families choose to walk, bike, or roll to school – not just for families but for the broader community, including goods and service movement, and people travelling to work.

Community Building

Neighbourhoods that support walking and rolling naturally bring neighbours together through casual, repeated interactions, deepening belonging and trust in the neighbourhood across ages and grade levels. Parents and caregivers who are well connected to their neighbourhood may be more likely to have children who engage in active transportation.[10]

Improved Air Quality

Switching to active transportation modes reduces vehicle congestion, traffic related air pollution, and idling around the school, creating cleaner, healthier air for the entire neighbourhood. This virtuous cycle makes active transportation modes more appealing and enjoyable, further encouraging the swap to active modes.[11]

Find all citations in the References on page 164 of this guide.

RESEARCH SAYS

An evaluation of the air quality benefits of School Streets in London, UK found that polluting nitrogen dioxide levels at school were

reduced by up to 23 per cent

when closing the road to cars during pick-up and drop-off times.[13]

RESEARCH SAYS

What is traffic-related air pollution (TRAP)?

Traffic-related air pollution is a harmful mix of pollutants from vehicles and road dust. Children are especially vulnerable due to their developing lungs, closer distance to tailpipes, and higher breathing rates. TRAP contributes to about 1,200 premature deaths in Canada each year, along with 210,000 asthma symptom days and 2.7 million acute respiratory symptom days – contributing to an estimated $9.5B per year in socioeconomic costs.[14]

TIP

To browse more research and datasets on children's active travel and mobility, check out the Online Resource Centre at www.translink.ca/travelsmartforkids

Goldstone Bike Parade, Surrey, British Columbia

Section 2.0

Understanding School Neighbourhoods: Planning and Design Context

This section will explain how school neighbourhoods, the 200-400 metres around a school, are distinct from other neighbourhoods due to the unique planning and design considerations for children. This section also introduces common barriers to active school travel and provides an overview of the diverse school, development, and neighbourhoods contexts across the province.

Planning and Designing for Children

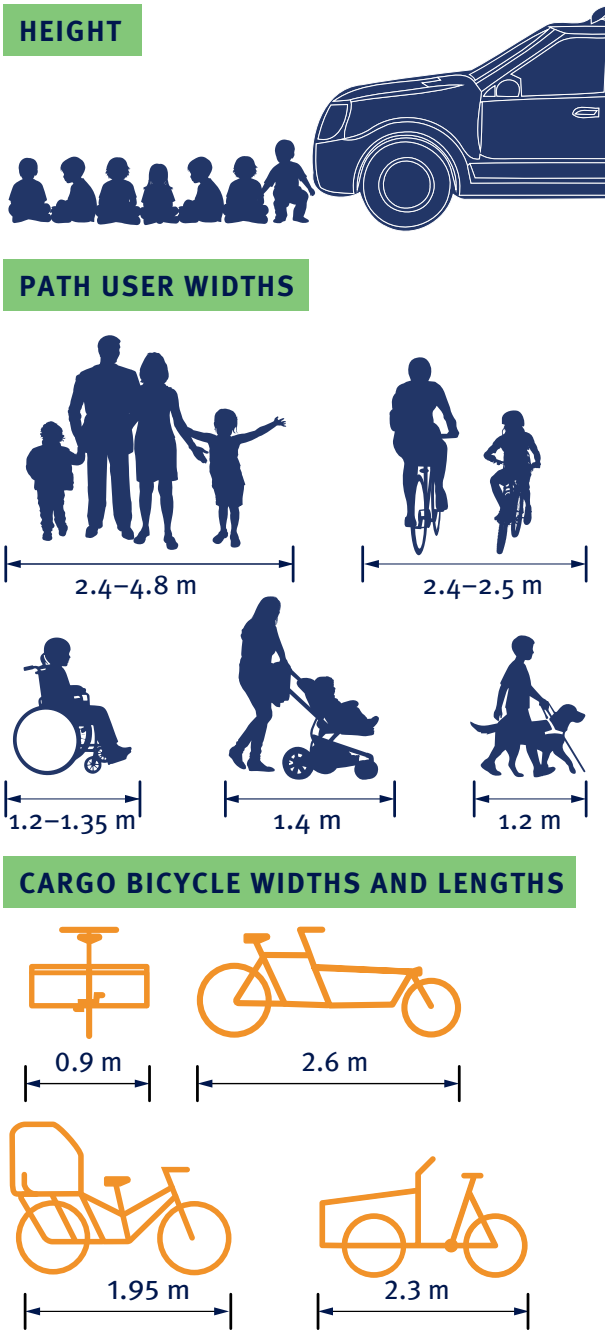
There are many guides for designing streets, but most are made with adults in mind. When streets are in school neighbourhoods, it's important to consider that children have different physical and psychological characteristics compared to adults.

Height

The smaller stature of children makes it more difficult for them to spot hazards and for people driving to see them. Parked vehicles, overgrown vegetation, snowbanks, street furniture, signage, and other objects that obstruct sightlines can create safety concerns in school neighbourhoods. Children are also physically closer to the source of tailpipe emissions from vehicles and more vulnerable to their impacts.

Width

Most active transportation design guidelines recommend a minimum width of 1.8 metres for two adults using wheelchairs to comfortably pass each other. However, sometimes caregivers may be accompanying multiple children that want to walk or cycle side by side. Similarly, wider devices such as strollers and cargo bikes may also be more common in school neighbourhoods. Children are also less likely to travel in a straight line when walking or riding a bicycle, increasing the need for wider, safe spaces for learning how to navigate streets and sidewalks. For all these reasons, wider active transportation infrastructure ranging from 2.4 to 4.8 metres tend to be more appropriate in school neighbourhoods.



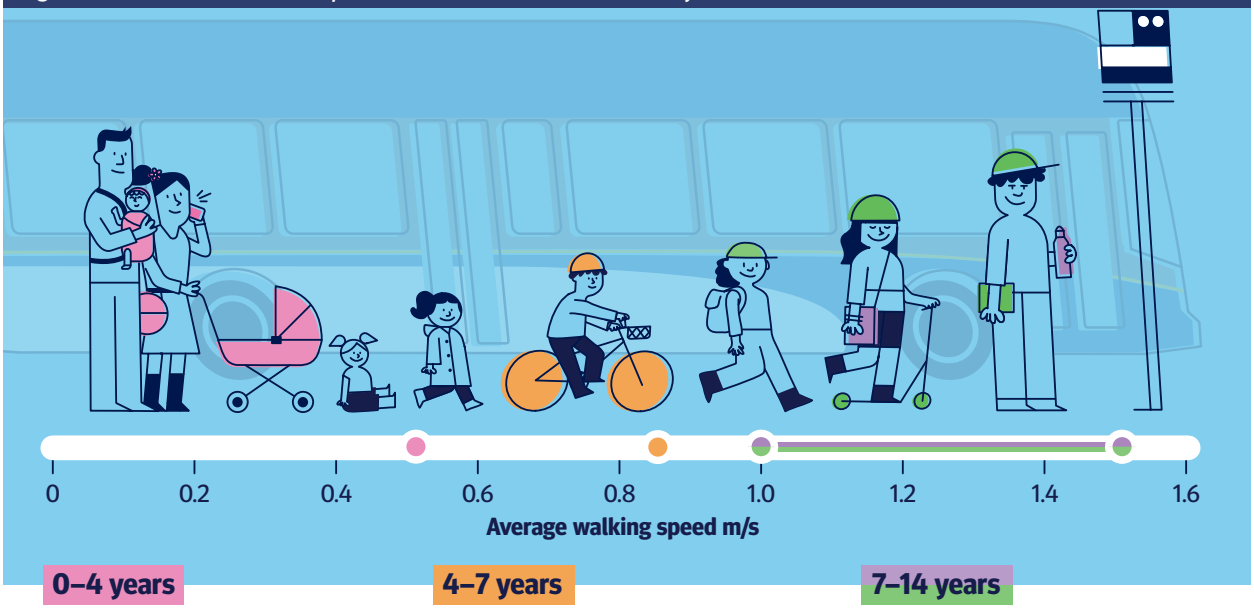
Speeds

A commonly accepted walking speed for design purposes is 1.0m/s, as recommended by the Transportation Association of Canada (TAC). However, children often travel at a much slower speed with frequent stops. This has important implications at intersections where signal timings could be insufficient to accommodate these slower speeds – as low as 0.52 meters/second for children aged two and under. Additionally, on multi-use facilities where faster devices such as e-bikes and pedestrians share a pathway, the speed differential may increase risk of collision. Wider facilities may be preferred to support safer passing, particularly on uphill or narrow sections.

Development

Extensive research has shown that a child's perception of streets differs greatly from that of an adult. Young children have egocentric thinking, meaning they only understand objects in their immediate point of view, and typically do not begin to understand other perspectives until the age of seven. Neurodiverse children may experience additional difficulty when navigating unfamiliar situations. Overall, children have a harder time understanding what people driving intend to do, making it more difficult for them to judge right-of-way. They also lack experience judging the speed and distance of approaching vehicles. As a result, four-way stops, yield control, and complex intersection treatments may not be appropriate in school neighbourhoods. Practitioners should not rely on signage and pavement markings alone as navigation cues because children may have a hard time interpreting these, especially at complex crossings.

Figure 3: How Children Develop and How This Affects Road Safety



0–4 years

Childcare centres

- Around 0.52 meters/second
- Well below TAC adult walking speed
- Cannot adjust pace

4–7 years

Elementary school

- Around 0.84 meters/second
- Below TAC adult walking speed
- Cannot adjust pace

7–14 years

Elementary/secondary school

- 1.0–1.5 meters/second
- Meets or exceeds TAC adult walking speed
- Will adapt pace when crossing

*Source: Lárúsdóttir, A. R., & Dederichs, A. S. (2016). Evacuation dynamics of children: Walking speeds, flows through doors in daycare centres. PhD Research, Technical University of Denmark. kias.dk/wp-content/uploads/2016/02/Walking-speed-children.pdf

Table 1: How Children Develop and How This Affects Road Safety

	0 – 4 years	4 – 7 years	7 – 10 years	10 – 14 years
Perspective-development	**Egocentric** "If I see you, you see me" Only aware of objects/vehicles in direct view Cannot understand vehicle speed	**Egocentric** "If I see you, you see me" Cannot account for sightline gaps (e.g., parked cars) Little understanding of vehicle speed	**Emerging Awareness** Begins to read driver intentions Visual scanning behaviour still developing Developing understanding of vehicle speed	**Developing well** Notices obstructed sightlines and adjusts Understands speeds and traffic rules Complex intersections and cycling scenarios still challenging
Attention & distraction	**Fully reactive** Drawn to moving objects Reactions unpredictable	**Easily captured** Cannot filter traffic cues from background noise Hazards easily missed	**Partial control** Easily distracted	**Greater control** Greater selective attention New distraction sources such as phones, peers
Impulse control & risk	**None** No concept of danger Runs into road without warning No cause-and-effect understanding	**Minimal** Knows rules but cannot act on them under distraction Consequences not understood	**Building slowly** Risk perception and preventative behaviour developing Rules known but errors in judgement	**Risk-taking rises** Risk-taking may increase due to peer pressure and reward sensitivity
Independent travel	**None** Young children do not yet have the skills required to participate in traffic independently	**Low** Adult supervision needed in most circumstances	**Medium** Short, independent trips become more common, especially with familiar routes	**High** Capable of independent travel

Adapted from SWOV Institute for Road Safety Research. (2025). Children — how do children develop and how does this affect road safety? swov.nl/en/fact/children-6-how-do-children-develop-and-how-does-affect-road-safety

Stamina

Children tend to have lower stamina than adults, therefore providing comfortable places to rest and shelter from the elements are important elements of school neighbourhoods. Regularly spaced parklets, plazas, and street furniture offer places to pause, rest, play, and learn. These rest spaces can also benefit caregivers, especially when children are accompanied by older adults, people with disabilities, or caregivers carrying cargo to complete errands along the way (i.e., trip chaining).

Sound

Exposure to noise pollution from road traffic while at school reduces children's ability to concentrate and their cognitive function while increasing stress levels. Children exposed to continuous and fluctuating disruptive noise experience poorer academic outcomes, including reduced reading comprehension and slower development in working memory.[15, 16] Traffic noise isn't just an annoyance – it correlates with measurable behavioural and development outcomes in children, who are much more susceptible to noise-induced interference than adults.[17]

Physical Activity

According to the Canadian 24-Hour Movement Guidelines, children ages four and under need at least **three hours of daily movement**, and children ages five to 17 need at least **60 minutes per day** of moderate to vigorous physical activity, as well as several hours of light physical activity. This is considerably higher than the recommendations for adults of 150 minutes per week of moderate to vigorous physical activity. School neighbourhoods should encourage daily movement for all, especially as a daily habit for children who need additional opportunities to move.

RESEARCH SAYS

Only 43.9 per cent of Canadian children and youth get the recommended amount of physical activity per day[18] and only 9.3 per cent of British Columbian children in Grades 4–5 and 3.5 per cent of children in Grades 6–8 are meeting all three recommendations for sleep, movement, and screen time.[19]

Common Barriers to Active School Travel

There are many barriers that can discourage children, parents, and caregivers from choosing active modes of travel to and from school. These challenges span physical infrastructure, systemic coordination, and cultural norms, each influencing the decision on how children travel to and from school.

Some common barriers include:

Speeding in school zones: Excessive vehicle speeds near schools increase the risk of collisions, reducing the perception of safety for children and their parents or caregivers. Parents and caregivers may be less willing to allow children to walk, bicycle, or roll to school. Children may feel unsafe to navigate the area independently.

Congestion at pick-up and drop-off: High volumes of motor vehicles during peak school pick-up and drop-off hours can create chaotic, stressful, and unsafe environments. Difficulty accessing school entrances and exits can discourage walking, cycling, and rolling. Increased motor vehicle traffic can block sidewalks, crosswalks, and cycling infrastructure, which reduces the visibility of pedestrians and cyclists and can make crossings more unsafe.

Unsafe crossings: A lack of marked, designated crossings can make it challenging for children to navigate where to safely cross the street, creating unsafe and inaccessible conditions. Caregivers may not feel comfortable with their children walking, cycling, or rolling, especially if they must cross busy roads without support or supervision from an adult.

Insufficient infrastructure: Many school routes are missing basic safety features. There may be no sidewalks, sidewalks that suddenly end, no safe cycling routes, unsafe crossings, poor lighting, or unclear signage. In some cases, this might force children to walk on the road, cross wide streets without proper signals, or share space with fast-moving traffic. When safe walking and cycling routes are not available, families may feel they have no choice but to drive, even if they live near the school.

Community silos: A lack of coordination and communication between key players and interest holders such as local government, school districts, the Ministry of Education, parents, and caregivers can result in piecemeal solutions, fragmented efforts, and lost opportunities.

Culture and confidence: Prevailing social norms such as a reliance on car culture, expectations of constant adult supervision, fears of crime or stranger danger, time pressures and scheduling, and limited peer participation can discourage children and their caregivers from getting to and from school by active modes. Without intentional efforts to shift these norms and build the skills, confidence, and culture to walk, cycle, and roll, active school travel uptake may remain low.

CASE STUDY

Keeping Children Safe in Socially Vulnerable Neighbourhoods

Chicago, Illinois

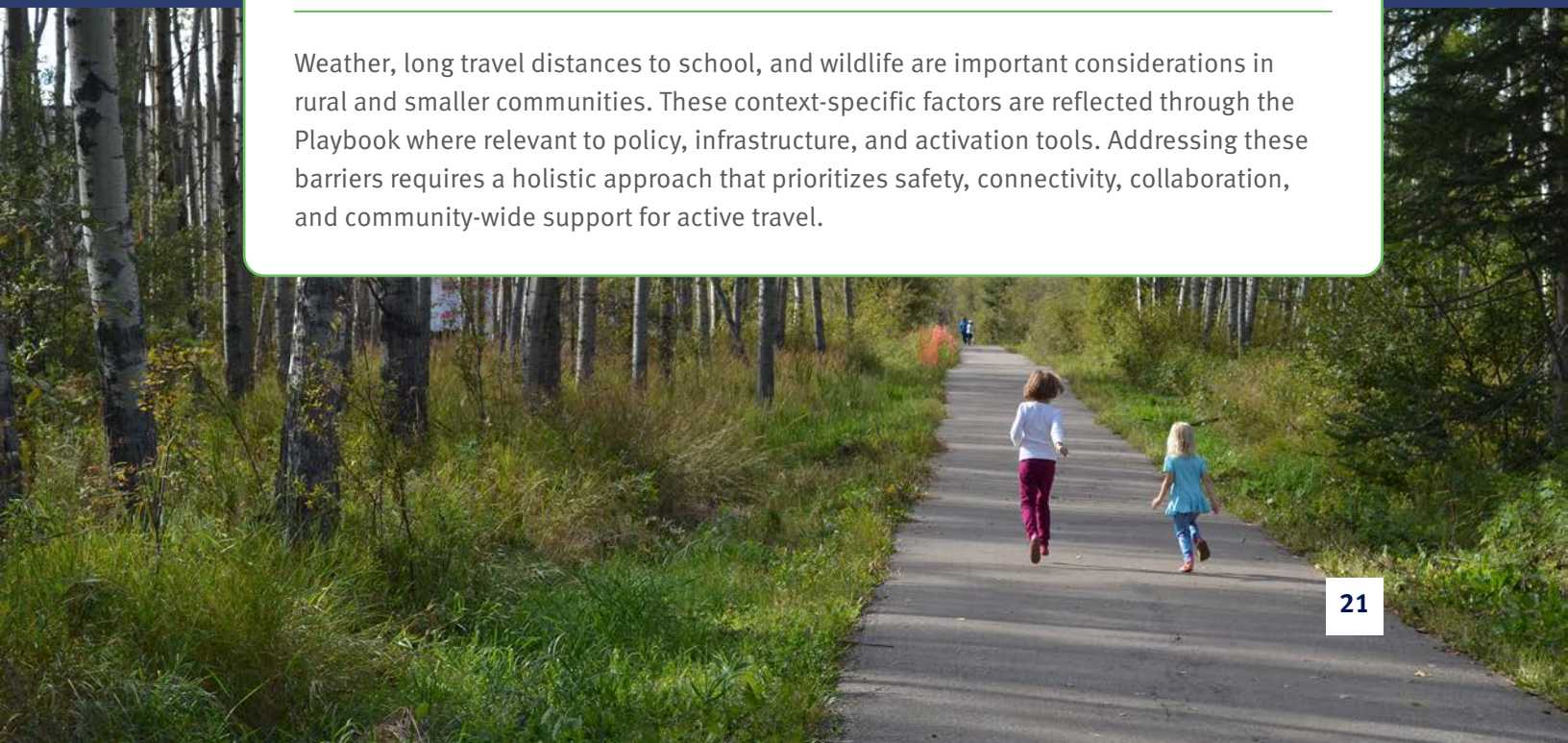
Some routes to school might pass through socially vulnerable neighbourhoods struggling with higher rates of crime, homelessness, or substance use. While social planning is often outside the scope of active school travel, some communities are exploring innovative strategies to address both road safety and community safety issues.

Since 2009, Chicago has hired trusted adults from community-based organizations to escort children during school arrival and dismissal times. Research on Chicago's Safe Passage Program found that neighbourhoods that participated in the program experienced an average 14 per cent reduction in violent crime. The Winnipeg School Division is currently examining potential interventions to improve both community and road safety for children and families travelling to and from their schools – including a Safe Passage Program similar to the one in Chicago. These interventions would serve to support existing community safety programs such as the Bear Clan, an Indigenous-led community safety patrol.[20]

TIP

Weather, Wildlife, and Distance: Designing for Active Travel in Rural Communities

Weather, long travel distances to school, and wildlife are important considerations in rural and smaller communities. These context-specific factors are reflected through the Playbook where relevant to policy, infrastructure, and activation tools. Addressing these barriers requires a holistic approach that prioritizes safety, connectivity, collaboration, and community-wide support for active travel.



Planning and Designing for Diverse Contexts

Planning and design approaches for school neighbourhoods vary depending on the school type, its development context, and the surrounding neighbourhood context. These diverse contexts shape active travel behaviours to and from school.

School Type

In British Columbia, **elementary schools** typically serve students from Kindergarten to Grade 7, generally ranging in age from five to 12 years old. **Middle and secondary schools**, on the other hand, usually include Grades 7 or 8 through Grade 12, depending on the structure of the local school district and community.

The SNAP focuses on elementary schools.

Development Context

The built environment and developmental context surrounding schools have a profound impact on students' transportation choices. Whether a school has been in place for decades or is in its early planning and design phase, thoughtful planning and design can help shape school neighbourhoods that support safe and active travel.

The SNAP offers guidance for all development contexts.

When planning **new school sites**, there is a greater opportunity to integrate active travel from the outset by locating a school near to where students live, in connection to existing walking and biking routes, and nearby other community facilities. Co-location of schools and community facilities creates multi-purpose destinations that increase convenience for children and their caregivers but requires substantial planning in early stages. Once the site is selected, practitioners should also consider how the orientation and layout of the school on the site can further support active travel.

TIP

For an example of guidance on school siting for elementary and secondary schools, York Region has a Designing for Active Transportation: School Sites Design Guideline intended to help interest holders create communities that promote active school travel through effective school siting and school orientation.

Existing schools may face constraints related to their school site location and surrounding environment and infrastructure. Retrofit approaches such as addressing gaps in the sidewalk or cycling network and redesigning pick-up and drop-off zones can be made to improve the safety of schools. Co-locating community facilities in existing schools can also be achieved by optimizing underused infrastructure, transforming schools into central hubs for neighbourhood activity.

Neighbourhood Context

School neighbourhoods can generally be categorized into three distinct contexts: **urban**, **suburban**, and **rural**. Each context reflects unique patterns of development, land use, and transportation infrastructure that influence how children travel to and from school.

The SNAP provides guidance for all neighbourhood contexts.

The **School Neighbourhood** is an effective starting area to prioritize improvements, but is does not define the full extent of where improvements may be needed to support safe and active trips to school.

Urban School Neighbourhood

- **Location:** Located in urban centres of cities and in developed rural cores where compact, walkable blocks are present. Developed rural cores such as main streets in smaller communities can also function as an urban school neighbourhood when they feature mixed uses, higher density, and a walkable compact street network.
- **Land Use:** Characterized by mixed-use development (e.g., institutional, residential, commercial) with high residential density. Open park and green space for school fields may be limited.
- **Street Classification and Network:** Dense grid network with major arterials, collectors, and frequent intersections.
- **Radius:** 200–400m.

Suburban School Neighbourhood

- **Location:** Located outside of the urban centre, often in master-planned and subdivision residential communities.
- **Land Use:** Predominantly single-family housing with pockets of commercial and institutional land use. School grounds tend to be larger compared to urban schools, with more open space, parks, and green space.
- **Street Classification and Network:** Curvilinear street patterns with cul-de-sacs featuring collector and local streets.
- **Radius:** 200–400m.

Rural School Neighbourhood

- **Location:** Situated in smaller towns, remote communities, or agricultural areas outside of the urban core. These schools often serve larger geographic catchments.
- **Land Use:** Low-density residential, often adjacent to agricultural or natural lands with minimal surrounding development.
- **Street Classification and Network:** Sparse road network with long block lengths, typically rural roads with painted shoulders rather than dedicated or separated active transportation infrastructure.
- **Radius:** 200m.

TIP

How to Identify Your School Neighbourhood Context

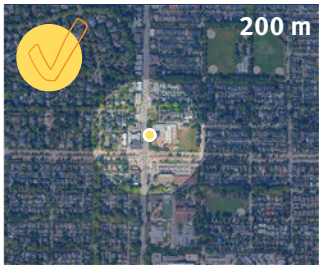
200–400 metres from a school looks very different across the province depending on where you are. See the examples below for the appropriate school neighbourhood radius depending on the context.

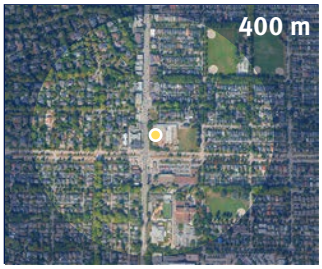
Urban School Neighbourhood

Emily Carr Elementary, Vancouver

› 200 metre

High residential density and a compact grid street network ensures a 200 metre radius includes key travel routes and streets.



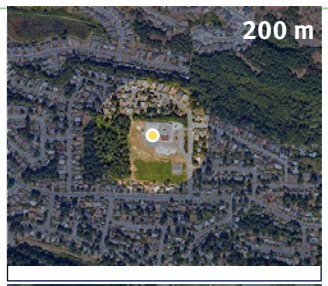


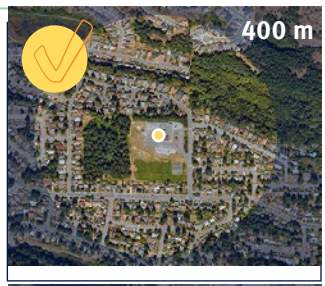
Suburban School Neighbourhood

Uplands Park Elementary, Nanaimo

› 400 metre

Larger school grounds and a curvilinear street network lends to a 400 metre radius that is inclusive of key travel routes and streets.



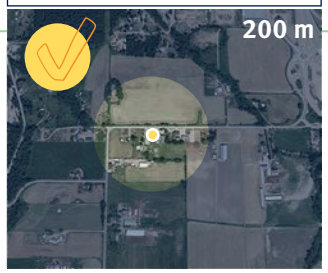


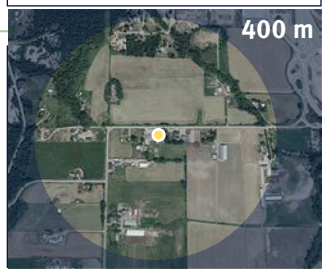
Rural School Neighbourhood

Salmon Arm West Elementary

› 200 metre

Low density land use and long block lengths in rural setting support a 200 metre radius.





Understanding the barriers to active school travel is essential to creating safer, healthier, and more active school neighbourhoods across the province. **Table 2** provides examples of how the six barriers identified earlier in Section 2.0 manifest differently in urban, suburban, and rural school neighbourhood contexts.

Table 2: Common Barriers to Active School Travel Across School Neighbourhood Contexts in British Columbia

Common Barrier to Active School Travel	Urban School Neighbourhood	Suburban School Neighbourhood	Rural School Neighbourhood
 **Speeding in School Zones**	High traffic volumes, frequent arterial roads near schools.	Speeding on collector roads, local streets used as through roads or short-cuts on neighbourhood streets.	Speeding on rural roads with limited enforcement.
 **Congestion at Pick-up and Drop-off**	Limited curb space. High density leads to traffic bottleneck.	Long pick-up and drop-off queues in cul-de-sacs and school loops.	Fewer vehicles, but limited infrastructure can still cause backups.
 **Unsafe Crossings**	Busy intersections and high pedestrian-vehicle conflict.	Fewer crossings, long blocks, wider roads, and indirect routes.	Sparse crossings, a lack of marked crosswalks or signals.
 **Insufficient Infrastructure**	Limited dedicated bicycle lanes and constrained space for improvements.	Gaps in sidewalk networks; no dedicated bicycle lane; disconnected walking and cycling routes.	No sidewalks, gravel shoulders, minimal lighting or signage.
 **Community Silos**	Interest holders operating independently.	Interest holders operating independently.	Limited local capacity and resources, fewer organizations to support active school travel.
 **Culture and Confidence**	Car-centric habits, road safety, and community safety concerns may deter walking, rolling, and cycling despite proximity.	Car-centric habits and road safety concerns may deter walking, rolling, and cycling despite proximity.	Long distances, wildlife, and isolation reduce confidence in walking, rolling, or cycling.

School pathway painting at Cindrich Elementary School. Surrey, British Columbia

Section 3.0

Working Together: Partnerships and Coordination Strategies

This section will outline the roles and responsibilities of key players who are generally involved in the process of making school neighbourhoods safer, healthier, and more active. It provides high-level guidance on how to build strong partnerships and identifies strategies to address the coordination, sustainability, and legacy challenges that accompany school neighbourhood improvements.

School neighbourhoods are shaped by a range of interest holders, which vary depending on jurisdictional context and different active school transportation interventions. Addressing barriers to active school travel requires identifying local interest holders and clarifying their roles and responsibilities. Interest holders may be involved in two ways: as **implementation partners**, those delivering programs, policies, and infrastructure on the ground, or as **supportive partners**, those providing planning, funding, policy alignment, and long-term sustainability in alignment with regional and provincial strategies and goals. Collaboration across partners and jurisdictions is key for planning and sustaining safe and healthy travel in school neighbourhoods.

Implementation Partners

The following list offers a starting point for identifying key players and their roles and responsibilities with active school transportation interventions:

LOCAL GOVERNMENT STAFF

Responsible for land use, development, and key components of the transportation system including sidewalks, bikeways, local roads, bus stops, parking, and curb space.

- These responsibilities typically fall to transportation planning and engineering staff within departments such as Engineering and Public Works, Transportation Services, Community Planning and Development, or Sustainability and Environment. Some local governments also have dedicated school travel planning teams or active transportation coordinators who support active school travel initiatives and Vision Zero priorities.

SCHOOL DISTRICTS/BOARDS

Support the learning and education of students and are involved in certain aspects of school transportation that typically interface directly with the school site, including school busing. School districts also set school catchments, which influence walkability, and determine the location and types of programs offered at schools.

- The Facilities Planning, Capital Planning, and Sustainability departments typically oversee school access points and pick-up/drop-off, bicycle storage, and school transportation programming.

HEALTH AUTHORITIES

Provide evidence on the health benefits of active transportation, apply an equity and broad population-health lens to transportation and built environment plans and strategies, and support the implementation of active travel initiatives at schools.

Teams involved in healthy environments, health promotion and population health, and injury prevention are often directly involved in supporting increased active school travel through policy development, active travel initiatives, and built environment improvements.

COMMUNITY AND NOT-FOR-PROFIT ORGANIZATIONS

Play many roles including advocacy, research, and program delivery. Community organizations are responsible for delivering many of the active school travel programs available around British Columbia, including Walking School Bus, Bike Bus, and cycling education.

POLICE

Support with the enforcement of road safety violations, deliver pedestrian and road safety education in schools, and assist with crossing guard programs. Police departments also collaborate with local governments, school districts, and community partners on traffic-calming and safety initiatives around schools. However, vehicle parking enforcement rests within the responsibility of local governments, not police.

SCHOOL COMMUNITY

Includes principals, teachers, PACs, and students, all of whom play a vital role in championing active travel by fostering a culture of safety, supporting school travel planning, and collaborating with local partners.

- **School administration/staff:** Provide leadership and coordination within the school. Often the main point of contact with other interest holders to coordinate and collaborate on different active school travel initiatives.
- **Parent Advisory Committee (PAC):** Serve as a liaison between parents/caregivers and the school, champion active school travel initiatives, and provide feedback on school conditions and safety concerns.
- **Students:** The primary users of school travel routes and participants in active school travel initiatives.
- **Parents and Caregivers:** Advocate for safer active transportation routes and infrastructure improvements and may help lead or organize active school travel initiatives.

FIRST NATIONS, MÉTIS, AND INUIT COMMUNITIES

Hold inherent rights, traditional knowledge, and deep connections to the lands on which school neighbourhoods are located. They are key partners in transportation and land-use planning, offering holistic perspectives that prioritize community safety, environmental stewardship, and cultural values aligned with children's mobility and well-being.

Supportive Partners

Supportive partners ensure funding, policy alignment, planning support, and long-term sustainability of school neighbourhood interventions. They are less likely to be on-site and more likely to enable implementation through strategic and systemic supports.

TransLink

As Metro Vancouver's regional transportation authority, TransLink plans, funds, delivers, and maintains a multimodal transportation system including active transportation, transit, roads, bridges, and goods movement. TransLink collaborates with local governments, school districts, and partners to advance regional and provincial priorities, including the TravelSmart4Kids Strategy, children's transportation programs, and supportive infrastructure.

- Several teams within TransLink are involved in supporting infrastructure, planning, programming, transportation demand management, and policy that advances children's mobility and traffic safety.

BC Transit

As the provincial transit agency serving communities outside of Metro Vancouver, BC Transit provides safe, reliable, and affordable transit options that connect children and families to schools and other destinations. BC Transit partners with local governments and the Province to support active and sustainable travel through transit services, infrastructure investments, and initiatives like Kids Ride Free (ages 12 and under).

Provincial Government

Responsible for education curricula, public infrastructure, planning and improving transportation networks, public health services, and support for all children in British Columbia to live in safe, healthy, and nurturing environments.

- **Ministry of Transportation and Transit:** Oversees provincial transportation networks and infrastructure, funds projects to improve safety and connectivity nearby schools, and coordinates with local governments on school zone improvements and active transportation connections on streets within provincial jurisdiction. Regional district roads are an example of roadways that often fall under provincial jurisdiction.
  - Learn more about who to contact for issues on provincial roads on their website.

- **Ministry of Education and Childcare:** Establishes the education framework, supports safe and inclusive learning environments, integrates active transportation into curricula, and guides school site planning.
- **Ministry of Health:** Promotes public health and wellness, provides evidence on the health benefits of active transportation, and support programs that encourage children's physical activity.
- **Ministry of Infrastructure:** Provides major capital project planning services, procurement, and delivery for new and upgraded schools.

ICBC (Insurance Corporation of British Columbia)

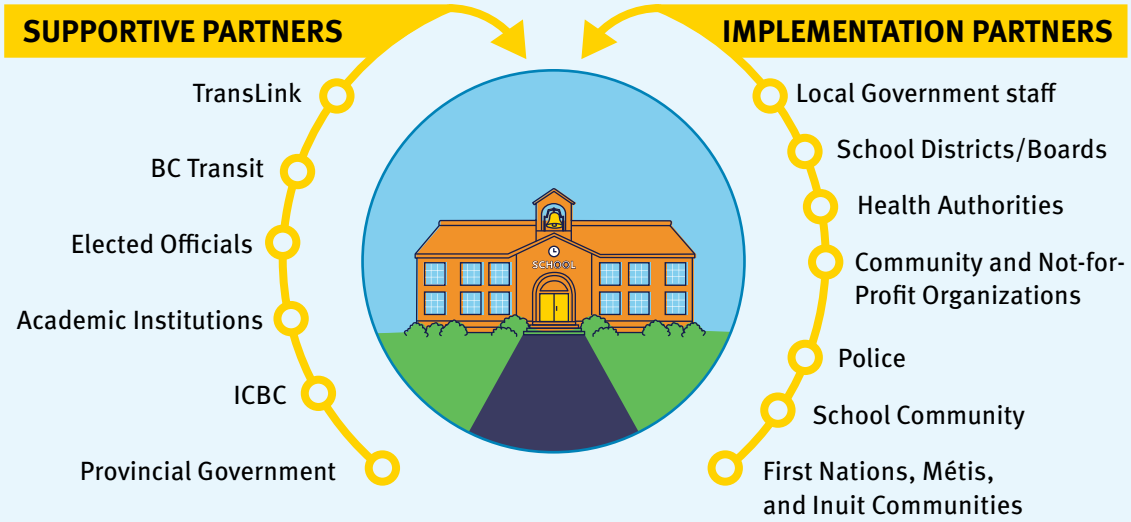
Advocates for road safety, collects and shares collision data, delivers school safety campaigns and education programs, funds infrastructure improvements nearby schools, and partners with local governments and school districts/boards on road safety initiatives.

Academic Institutions

Supports research, monitoring, and evaluation related to school neighbourhood interventions and can help build evidence to inform future action or support.

Elected Officials

Municipal, provincial, and federal politicians shape the policies, investments, and regulations that influence school neighbourhood safety, infrastructure, and active travel opportunities.

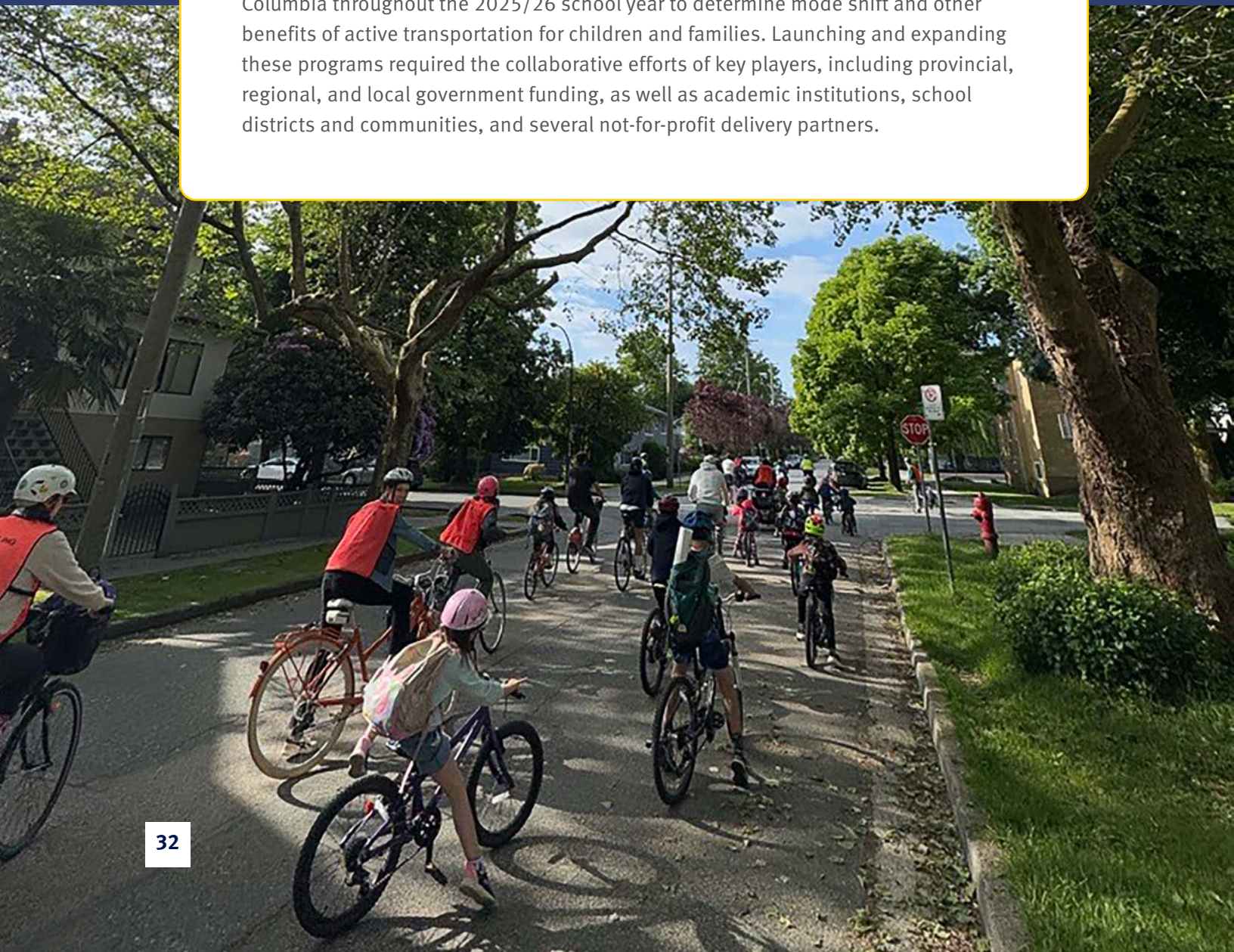


CASE STUDY

Working Together to Deliver Provincial Walking School Bus and Bike Bus Program

Metro Vancouver, British Columbia

The development of a regional Walking School Bus (WSB) program was one of the first actions prioritized from the TravelSmart4Kids Strategy in 2019 by TransLink and is a key example of partnerships in motion. The Ministry of Transportation and Transit, TransLink, and Urban Systems worked with municipalities, school districts, and community partners to pilot both paid and volunteer programs with Society for Children and Youth of BC, a local not-for-profit society. The WSB program expanded provincially in the 2024/25 school year as a program run and funded by the Province of BC. Bike Buses were included in the provincial expansion, led by HUB Cycling. These programs were evaluated by a research team at the University of British Columbia throughout the 2025/26 school year to determine mode shift and other benefits of active transportation for children and families. Launching and expanding these programs required the collaborative efforts of key players, including provincial, regional, and local government funding, as well as academic institutions, school districts and communities, and several not-for-profit delivery partners.



Building Successful Partnerships

Where to Begin?

After identifying the key players involved in making school neighbourhoods safer, healthier, and more active, the next step is building meaningful relationships and partnerships with interest holders to plan and implement interventions.

Step 1 Identify Issues and Opportunities

Determine the specific issues or opportunities you aim to address to make the school neighbourhood safer, healthier, and more active. Refer to the SNAP intervention toolkit (Section 4.0) to understand which interventions address the barriers to active school travel in your community.

Step 2 Build Strategic Partnerships and Relationships

Identify potential partners who can support your efforts. Establish shared interests and goals and clearly define roles and responsibilities to ensure effective collaboration.

Step 3 Collaborate and Coordinate Action:

- **Establish shared goals, roles, and responsibilities** – Confirm a shared purpose for improving school neighbourhood safety, health, and active travel; successful partnerships are built on mutual benefit. Define roles, responsibilities, decision-making authority, and communication expectations, and document these agreements to support continuity.
- **Develop an action plan that reflects partner needs** – Identify the unique needs of each partner, such as capacity, timelines, or mandates. Develop a coordinated action plan that aligns the needs and availably of each partner and identify where external support may be needed through existing networks.
- **Implement actions for sustainable, long-term impact** – Launch according to the action plan, establishing regular communication to maintain alignment and trust. Embed strategies that support continuity, such as documenting decisions, creating feedback loops (i.e., surveys, debriefs, check-ins), and planning for legacy. Guidance and ideas on these approaches are provided in the “Strategies for Addressing Coordination, Sustainability, and Legacy” section.

Step 4 Monitor and Evaluate

Track the implementation and impact of your interventions. Ensure monitoring and evaluation are built into the process and use feedback and evaluation tools to assess progress towards your goals and adjust as needed. Ideas for key performance indicators and monitoring approaches can be found in Section 5.0.

Strategies for Addressing Coordination, Sustainability, and Legacy

There are limited measures in place to support the sustainability and legacy of active transportation initiatives in school neighbourhoods. Programs may be a one-off and lose momentum due to a lack of resources, parents and children aging out of the school, and lack of strategic and coordinated planning. This section highlights strategies to develop sustainable support for active school travel through dedicated staff positions, working groups, parent advisory committees, and broader planning projects. Further opportunities to institutionalize collaboration through Memorandums of Understanding (MOU) are described on page 159.

Dedicated Staff Position for Active School Travel (AST)

Creating a dedicated, paid AST position helps coordinate and deliver on work across organizations and jurisdictions, effectively leverage resources and fill gaps, and build support and partnerships to amplify efforts. A dedicated role also brings leadership and direction, strategically aligning the community or region's investments into long-term cycles of sustainable travel culture and programs in school neighbourhoods. These roles can take different forms depending on local capacity or governance structures. While each position has its own benefits and limitations, there is no single ideal model or mix; the most effective approach ensures both implementation and supportive partners have capacity to advance AST through dedicated positions that function in a coordinated network across organizations and jurisdictions.

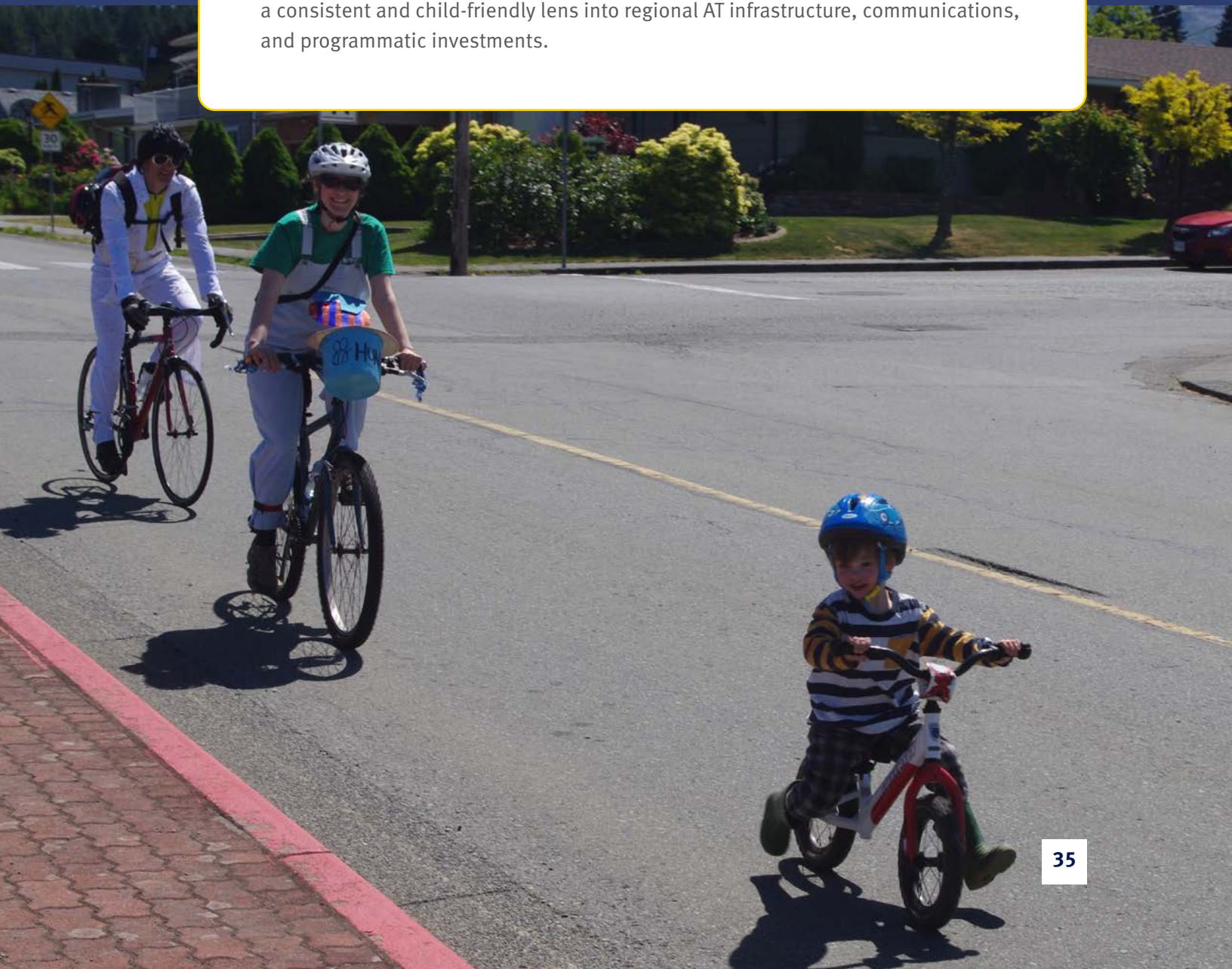
Regional AST Coordinator	Coordinates partnerships, funding, and strategic direction across levels of government and organizations. Ensures consistency and supports regional data collection and evaluation.
Municipal AST Lead	Bridges policy and implementation by embedding and delivering on AST priorities in municipal transportation and safety plans. Fosters partnerships between municipal teams, schools, and community organizations and supports on-the-ground project delivery.
School District AST Coordinator	Supports AST education, initiatives, and infrastructure across school sites, tracking progress, supporting PAC-led initiatives, and integrating AST goals into on-site district operations, facilities, and communications.
Non-profit AST Program Manager	Leads the delivery of education and programs that encourage walking, biking, and rolling to school.

CASE STUDY

Regional Coordinator for Children's Active Travel

Metro Vancouver, British Columbia

As one of the four priority actions in the TravelSmart4Kids Strategy, TransLink and the Ministry of Transportation and Transit (MOTT) cost-shared a full-time Regional Coordinator role that started in 2024 to deliver the Strategy and monitor its progress. This role was identified early in the planning stages as a necessary component of delivering the actions set out in the TS4K Strategy. Key duties include; hosting a quarterly TravelSmart4Kids Regional Working Group meeting, monitoring projects and annual Strategy progress, consolidating existing resources and filling gaps, supporting the setup and delivery of AST initiatives, and generally embedding a consistent and child-friendly lens into regional AT infrastructure, communications, and programmatic investments.



Working Groups and Committees

Ongoing collaboration through working groups and committees builds institutional memory and shared ownership of initiatives in school neighbourhoods. These groups bring together local governments, school districts, PAC representatives, transportation, health, enforcement/safety authorities, and community organizations to identify needs, share resources and data, and plan and implement solutions. Regular meetings build relationships, increase understanding, and create accountability despite change in parents, staff, or volunteers over time – a common barrier to maintaining momentum in school neighbourhoods. Regular meetings should be decision- and action-oriented to propel momentum.

CASE STUDY

Yennadon Elementary AST Committee

Maple Ridge, British Columbia

Yennadon Elementary's Active School Travel Committee began as a grassroots initiative led by parents who wanted safer, calmer streets around their school. Supported by the school's PAC and City of Maple Ridge staff, the committee convened parents, teachers, and local government representatives to identify the key barriers to active travel in their school neighbourhood. Through ongoing collaboration and grant funding from BC Healthy Communities, the group introduced a series of programmatic and infrastructure solutions. To encourage walking, biking, and rolling amongst students, they started a Drive to 5 program, various walking and biking events, cycling education, and a city-wide AST Symposium to exchange ideas, highlight success, and build momentum. Collaborating with city staff, they improved sidewalk conditions, added art and beautification, installed four flashing crosswalks (Rapid Rectangular Flashing Beacons, or RRFBs), and cut down overgrown bushes for visibility. The Yennadon AST Committee is a model of how collaborative efforts can drive tangible infrastructure and behavioural change in their school neighbourhood and beyond.

Parent Advisory Committees

Parent Advisory Committees (PACs) are a specific kind of committee within schools composed of parents and caregivers. PACs play a pivotal role in championing and delivering Active School Travel programs and initiatives at the school level. Parents and caregivers have a strong understanding of local school attitudes, enabling agile and context-specific AST programs and support. Many schools face similar challenges to sustaining AST initiatives, and knowledge-sharing can help capture lessons learned, recognize patterns of success, and reduce duplicated efforts and resources. PAC involvement and knowledge-sharing can take different forms, including:

- Shared AST resource hubs
- Participating in dedicated AST committees
- Events and symposiums
- Dedicated AST role within a PAC
- Fundraising for AST events, programs, or bike racks

Integration with Planning and Projects

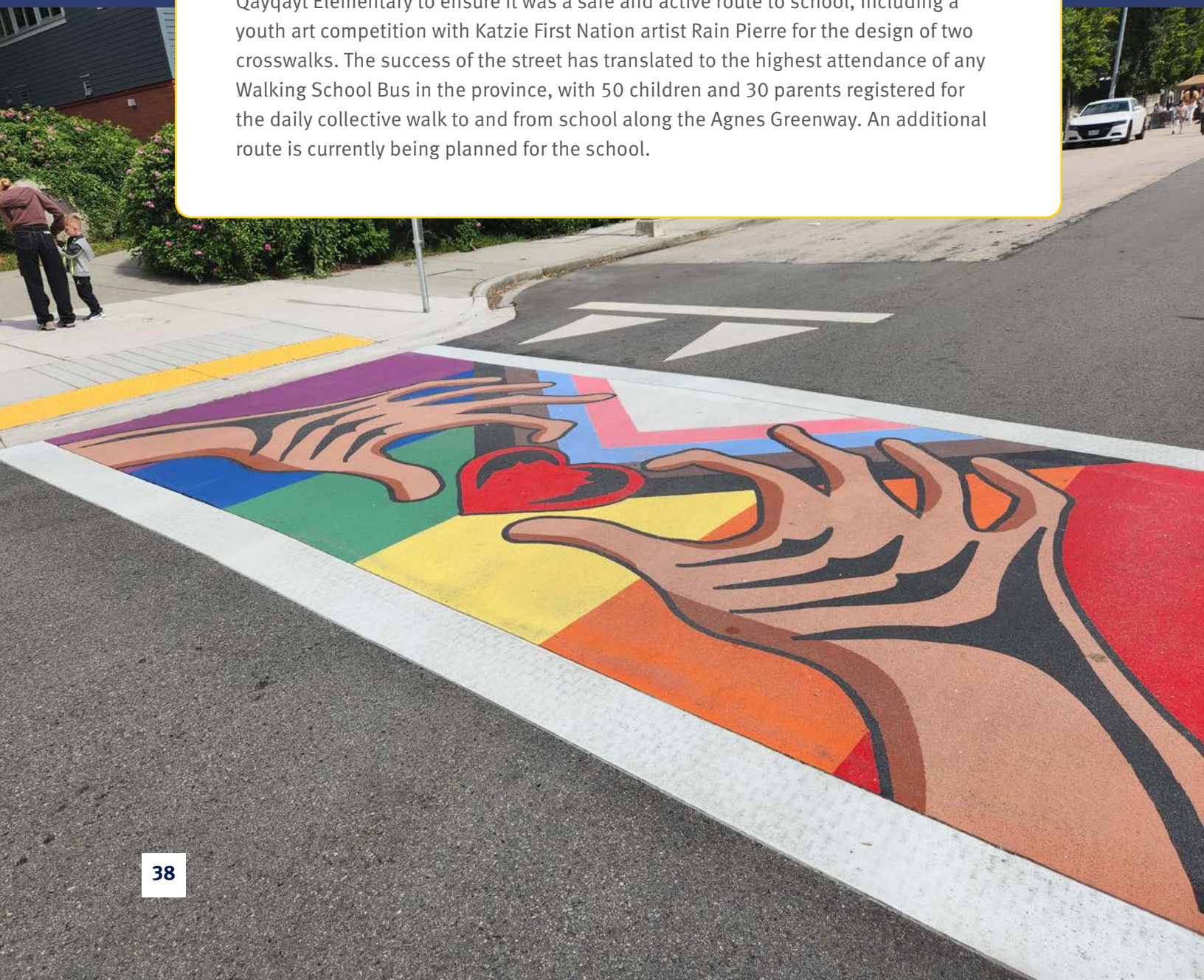
Integrating AST priorities into broader municipal and regional planning ensures that school neighbourhood improvements are not isolated one-off projects. Start by demonstrating quick-wins to build support and demonstrate alignment with municipal and regional climate, health, and sustainability goals. Embedding AST into Official Community Plans (OCPs), Transportation Master Plans (TMPs), Active Transportation Plans, and School Travel Plans (STPs) helps secure sustainable funding and identify opportunities to align with long-term capital plans. Coordinating school neighbourhood improvements with other construction projects can save money and increase opportunities for children's participation.

CASE STUDY

Agnes Greenway: Partnership in Action

New Westminster, British Columbia

The City of New Westminster's Agnes Greenway exemplifies how active school travel priorities and city projects can align to deliver broader community benefits. The one-kilometre Agnes Greenway was designed to provide a safe and comfortable corridor with improved facilities for biking, walking, sitting, and playing. This project was made possible through cost-sharing with the Province (BC Active Transportation Infrastructure Grants Program), TransLink (Bicycle Infrastructure Capital Cost Share Program), and the City of New Westminster. The city worked directly with nearby Ecole Qayqayt Elementary to ensure it was a safe and active route to school, including a youth art competition with Katzie First Nation artist Rain Pierre for the design of two crosswalks. The success of the street has translated to the highest attendance of any Walking School Bus in the province, with 50 children and 30 parents registered for the daily collective walk to and from school along the Agnes Greenway. An additional route is currently being planned for the school.



Navigating Jurisdictional Contexts

School neighbourhoods sit at the intersection of multiple jurisdictions: provincial ministries, school districts, local governments, First Nations governments, ICBC, transit agencies, and health authorities. Each operate under different funding streams, timelines, and mandates, and few have dedicated staff or resources focused on active school travel. This makes coordination complex and can leave walking, biking, and rolling infrastructure as an afterthought dependent on ad-hoc grants or municipal resources and capacity. Understanding these overlapping responsibilities helps identify where and how to coordinate and prioritize active transportation early in the process with the right partners at the table.

There are **two general streams** that can lead to school neighbourhood upgrades: on-site capital projects and off-site school neighbourhood projects.

School Capital Projects (on-site)

School capital projects, such as new builds, additions, or major upgrades, are led by **school districts** and funded through the **Ministry of Infrastructure's Education and Childcare Capital Branch**. Each June, school districts submit an annual capital plan to the Ministry outlining their top priorities for new or expanded facilities. The Ministry of Infrastructure undertakes a comparative analysis of all the requests against the annual program budget and what the government deems as the highest priorities.

If projects are supported to proceed to business case, the school district is responsible for conducting feasibility studies and preliminary budgeting, design, and hiring within the parameters set out by the Ministry – a process that can take several years. If the business case is formally approved by the government, funding is released to the school district, with various checks and balances in place to communicate project status to the Ministry throughout the project. The school district manages the project, hires architects, consultants, and builders, and ensures that designs comply with local bylaws and engineering requirements. Designs adhere to local municipal bylaws and standards; there are no provincial design guidelines for school sites nor neighbourhoods in BC.

The Ministry of Infrastructure funds only on-site and frontage works required under the Local Government Act. Beyond that, responsibility in the school neighbourhood shifts to local governments for off-site infrastructure like sidewalks, bike routes, amenities, and safe crossings.

The Ministry of Transportation and Transit may be involved if the school fronts or connects to provincially controlled roads or highways. TransLink or BC Transit may collaborate with school districts to support connections to transit, sidewalks, or bikeways.

Photo credit: North Vancouver School District, Cloverley Elementary

First Nations School Capital Projects

Schools located on reserve lands fall under the jurisdiction of the respective First Nation. Capital projects may be funded through Indigenous Services Canada (ISC), provincial or federal active transportation programs, or other independent First Nations capital initiatives (see page 148). Planning, design, and approvals processes will be unique to each community and should be guided by the Nation's governance structures, priorities, and protocols. Early coordination between First Nations governments, ISC, and local governments is essential where school neighbourhoods cross jurisdictional boundaries (e.g., where sidewalks or crossings connect reserve lands to municipal streets). This involves clarifying the approval process with the relevant First Nations governance bodies and ensuring their consent and oversight are incorporated into project planning.

Prioritize meaningful consultation with First Nations community members. Through engagement, community members can provide guidance on evaluating project outcomes and feedback loops that continue to involve the community. Consider providing Indigenous language signage, educational materials, and communication that are culturally appropriate, to support accessibility and inclusivity. These elements strengthen cultural visibility, accessibility, and community ownership of school neighbourhood improvements.

TIP

Explore the BC First Nations Transportation Planning Guide for specific guidance designed to support First Nation communities in BC in identifying transportation priorities, engaging partners, and planning safe and connected routes. Assessment tools, such as SWOT and SMART, are available to support collaborative project planning, strategic decision-making, and measurable outcomes.

KEY TAKEAWAY

Early coordination during the design phase will ensure active travel connections are planned with any other projects and built with the school rather than after.

School Neighbourhood Projects (typically off-site)

For existing schools not tied to new capital funding, improvements are led and funded locally. **Local governments** tend to lead these projects by funding and delivering school neighbourhood improvements through public works, traffic calming, or active transportation programs. These investments can encompass a combination of policy and planning, infrastructure, or programs and education, unlike capital funding that can only be applied to the physical school site construction. The Ministry of Transportation and Transit will be involved if roads that fall under provincial jurisdiction are marked for upgrades in a school neighbourhood. This generally includes highways, roads with regional or provincial significance, and roads in unincorporated areas.

Projects are often identified through existing School Travel Plans, Active Transportation Plans, or road safety assessments, although they may be spearheaded by a PAC or community group to address a specific challenge in a neighbourhood. Projects involve local government staff, the school district and PACs. ICBC may also participate in funding road safety studies or upgrades, and health authorities may support initiatives that align with children's wellbeing and health goals.

Additional funding outside of municipal budgets can be sourced through cost-share programs and grants (found in Section 5.0). These flexible funding sources will still require local government coordination, as upgrades will occur on municipal streets and facilities.

First Nations School Neighbourhood Projects

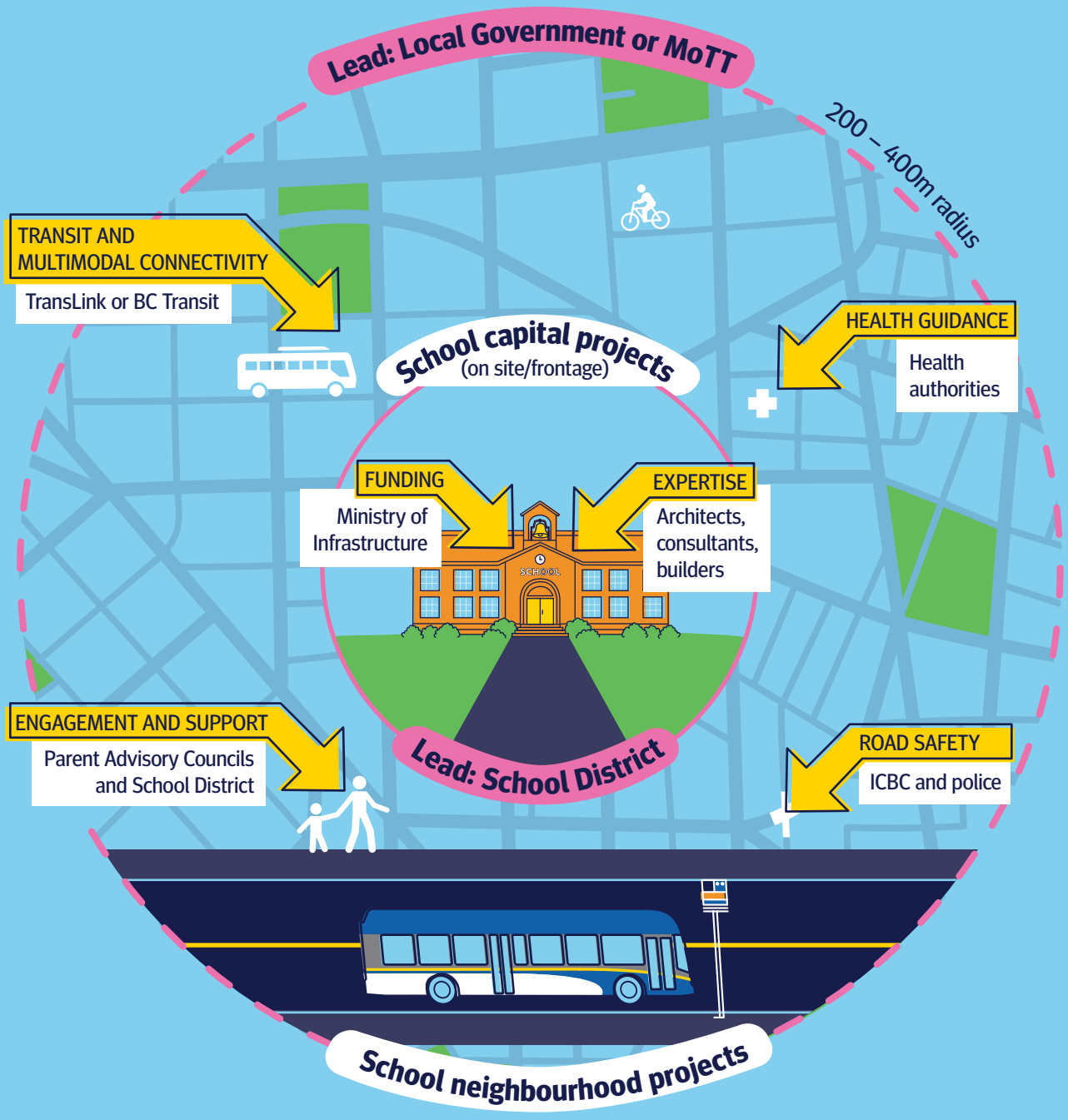
Many First Nations communities are also investing in safe routes in their school neighbourhoods. Specific funding streams are available for First Nations school neighbourhoods. including holistic funding programs for projects that support cultural revitalisation, health and wellness, and economic development. School neighbourhood improvement projects create opportunities for Indigenous language signage, community art, pathways that connect to important cultural sites or support land-based activities, and educational materials that are culturally appropriate.

When pathways or roads travel through multiple jurisdictions, First Nations governments and local governments should collaborate to ensure continuity of safe routes, signage, and maintenance. Projects tend to be most successful when clear roles and responsibilities are defined collaboratively between First Nations governments and local governments. Refer to the First Nations Transportation Planning Tools and Guide for guidance and resources to ensure projects are responsive to currently community needs and are sustainable and resilient in the long term.

KEY TAKEAWAY

AST activation for existing school sites can take a variety of formats. These projects can be mobilized locally for small-scale and high impact. They require local government coordination and are strengthened by partnerships with community organizations and the school.

Figure 4: School Neighbourhood Jurisdictions



If school site or neighbourhood is on reserve land, this falls under First Nation jurisdiction

Understanding how jurisdictional roles, timelines, and funding intersect allows partners to better coordinate investments and advocate for consistent, child-centred design, setting the stage for the collaboration and shared responsibility outlined in Section 3.0.

Lord Roberts Elementary School, City of Vancouver

Section 4.0

Activating School Neighbourhoods: Intervention Toolkit

This section Includes a toolkit with policy, infrastructure, and program interventions to make school neighbourhoods safer, healthier, and more active for children, referencing additional resources and case studies.

Intervention Toolkit Overview

There are a variety of interventions that can help make school neighbourhoods more accessible, safe, and vibrant. For clarity, this guide organizes these interventions into three main categories:

Planning and Policy

These interventions focus on guiding infrastructure decisions and changing regulations that influence travel behaviours within school neighbourhoods.

Infrastructure

These interventions focus on physical changes to streets and public spaces, such as traffic calming, crossing improvements, active transportation facilities, placemaking and wayfinding, and traffic gardens.

Programming and Activation

These interventions focus on providing educational and social supports for walking, rolling, cycling, and using transit to get to school.

Integrated approaches that combine complementary interventions tend to deliver the most benefits for school neighbourhoods. For example, pairing speed limit reductions with traffic calming features (like speed humps or curb extensions) can maximize the impact on speeding motorists. Always consider how interventions will work together to promote active school travel.

The table on the following page summarizes potential interventions, based on their effectiveness at reducing crashes (crash modification factors) and 2025 cost estimates. Actual effectiveness and costs may vary depending on project scale and materials. Crash reduction is just one measure of success for interventions, and other measures of success (like inducing mode shift or increasing accessibility) can provide justification for interventions even if they appear 'low' on the crash modification factors effectiveness scale.

Interventions are costed on a per-unit basis (i.e., one flashing beacon or one Walking School Bus route) or per 100 metres of linear infrastructure (i.e., 100 metres of a sidewalk). There is also a summary list of 2025 cost estimates for each intervention in the appendices.

While this section provides capital costs, regular maintenance of active transportation infrastructure is essential to keeping facilities safe, attractive, and usable year-round. Practitioners should develop operating cost estimates by identifying the required equipment, setting appropriate levels of service, and allocating appropriate staff capacity to maintain active transportation infrastructure. Context-specific factors—such as the available budget, project timeline, and other planned interventions—will affect which interventions are most suitable for each school neighbourhood. Collaboration among key players is essential to select and implement the most effective interventions, based on both technical analysis and community engagement.

SNAP Intervention Toolkit

Barriers addressed

Speeding · Congestion · Unsafe Crossings · Insufficient Infrastructure · Community Silos · Culture & Confidence

Planning & Policy

1 School travel planning

2 Speed limit reduction

3 On-street parking management

Infrastructure Traffic Calming

4 Signage

5 Pavement markings and surface treatments

6 Vertical deflection

7 Horizontal deflection

8 Traffic diversion

Infrastructure Crossing Improvements

9 Flashing beacons

10 New crosswalk

11 New signal

12 Additional crossing time

13 Curb ramps

14 Curb extension

15 Raised intersection

16 Pedestrian refuge island

Infrastructure Placemaking & Wayfinding

17 Placemaking

18 Traffic garden

Infrastructure Active Transportation

Cost of active transportation infrastructure depends on the scale and type of materials used.

19 Pedestrian facility

20 Cycling facility

21 Multi-use facility

22 Bicycle parking

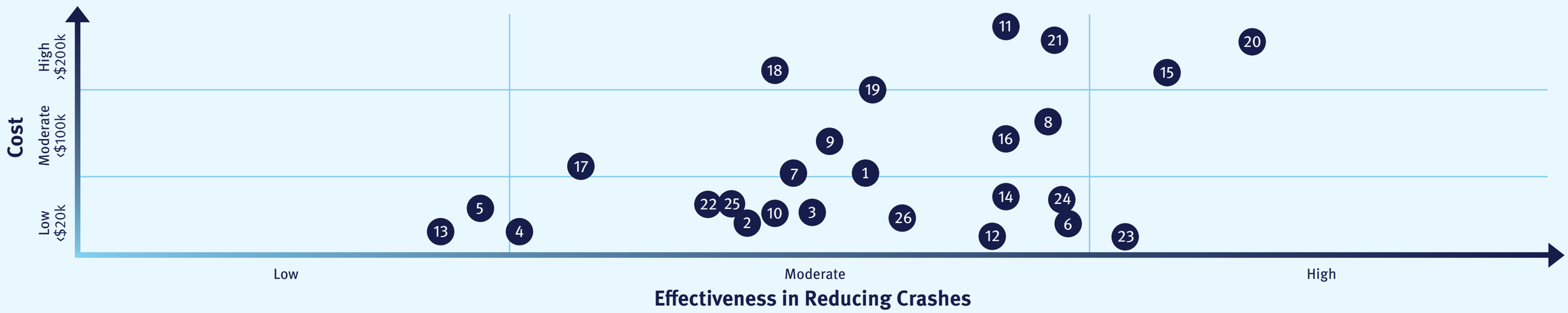
Programming & Activation

23 School streets and play streets

24 Walking school bus and bike bus

25 Drive to 5

26 Crossing supervision



Note: Crash Modification Factors (CMFs) are evidence-based measures that estimate how much a specific infrastructure intervention reduces crashes. In this chart, "effectiveness" reflects an intervention's ability to improve safety outcomes, including reducing collisions, increasing safe behaviours, and supporting active travel. Programmatic and placemaking interventions do not have established CMFs from ICBC, so their effectiveness ratings are based on peer-reviewed literature. Because direct links to crash reduction are less frequently studied for these interventions, their effectiveness may be underrepresented relative to infrastructure measures.

Planning and Policy

Barriers Addressed

Community Silos

Culture and Confidence

School Travel Planning

What is School Travel Planning?

School Travel Planning (STP) is a collaborative and comprehensive process that helps communities identify and address transportation issues around schools. It involves assessing the existing conditions of a school neighbourhood and developing tailored action recommendations through creating an Active School Travel Plan. The STP process integrates infrastructure improvements, policy changes, education, and community engagement to make it safer for students to use active modes to get to and from school. STP requires dedicated capacity (such as an STP Facilitator) and ongoing monitoring to measure and communicate progress.

There are five phases of developing a School Travel Plan[21]:

1. **Set up**
   Identify a project coordinator and establish a committee of partners to support the project. You may want to establish two committees: one with community members and one with practitioners.

2. **Evaluate local context**
   Collect baseline data by conducting travel surveys, traffic observations, and a walkabout.

3. **Develop action plan**
   Using Phase 2 findings, write a comprehensive action plan that incorporates all equity, education, engineering, enforcement, and evaluation, with clear roles and responsibilities.

4. **Implement action plan**
   Each partner implements their assigned tasks, and the STP Facilitator tracks progress.

5. **Review action plan status**
   Measure progress at regular intervals using a follow-up travel survey, traffic observations, and walkabouts, as needed. Communicate outcomes, such as through a project report.

Table 3: Key Considerations by School Neighbourhood Context

All Communities	**Avoid transition periods:** Avoid conducting School Travel Planning during major school transitions: renovations, relocation, leadership changes may deprioritize school travel planning. **Follow the school year:** Align School Travel Planning process with the school year: Starting the School Travel Planning process in September to October is ideal.

Cost and Effectiveness: How to Implement?

Cost: Moderate

- The costs for STP vary depending on the scale, scope, and complexity of interventions. For example, STP can span from a 12–18-month process to a multi-year program and always involves engagement with the school community. Implementation costs can increase the budget significantly and are dependent on the recommended approaches that emerge from the STP.

Effectiveness: Moderate

- STP sets the stage for creating long-term behaviour change by identifying infrastructure improvements, policy recommendations, and strategies for education and awareness. Its effectiveness depends on the implementation and monitoring of an Active School Travel Plan, which is often influenced by the capacity and resources of interest holders.

Roles and Responsibilities: Who is Involved?

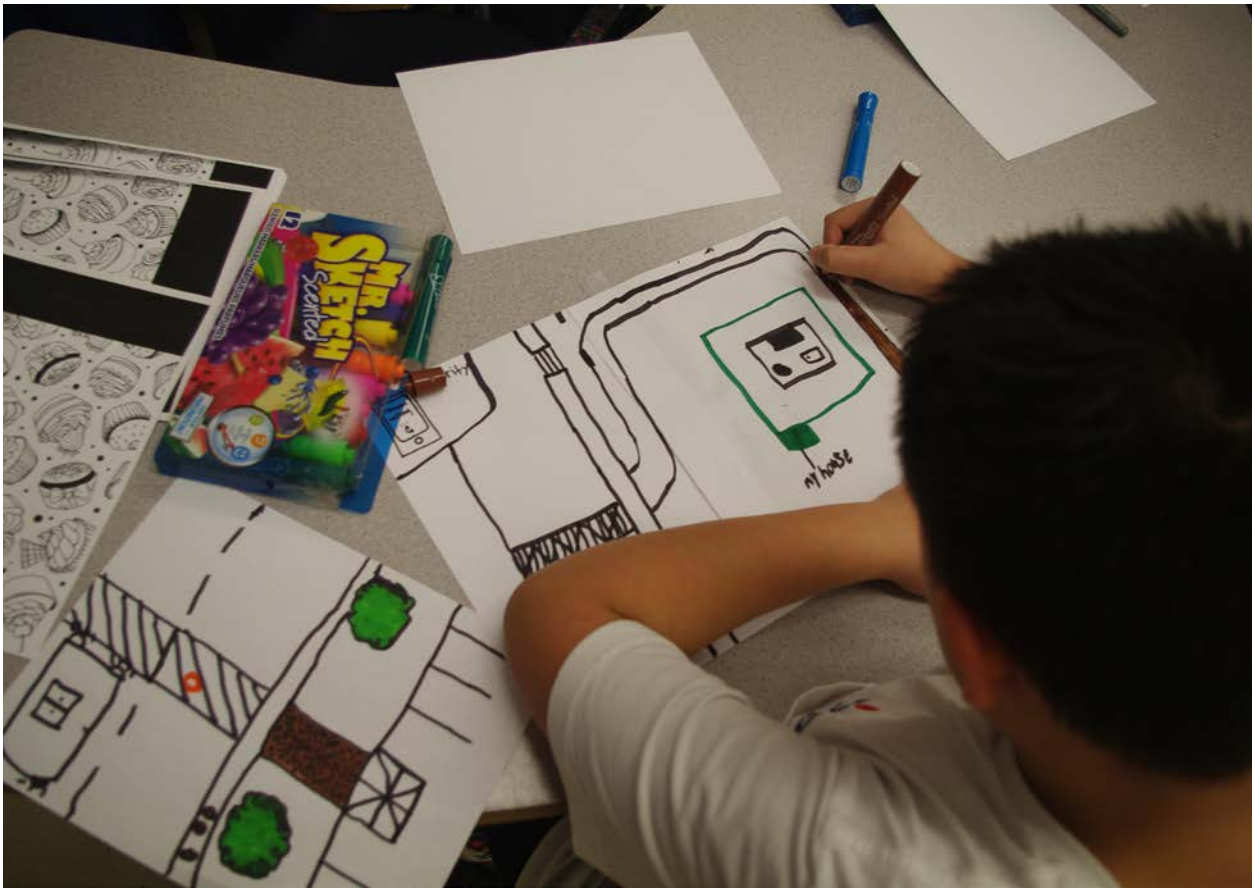
- **Local Government:** Local government transportation planning and engineering staff typically lead school travel planning programs, identifying schools to undergo the STP process. Staff time and costs often go towards engagement with the school community, designing infrastructure interventions, reviewing, and constructing interventions in the school neighbourhood.
- **Ministry of Transportation and Transit:** The Ministry of Transportation and Transit may be involved in School Travel Plans if there are streets within the study area fall under provincial jurisdiction.
- **School District/Board:** The School District/Board helps coordinate and identify which schools. They also will assist with coordination of getting school agreements signed and getting in contact with school staff to start the STP process.
- **Private or Community Organizations:** Private or community organizations who have expertise in developing Active School Travel Plans may be involved with leading the development of an Active School Travel Plan. This may occur in local governments that do not have dedicated active school travel staff.
- **School Community:** The school community should be engaged throughout the STP process to ensure they are aware, share their experiences, and support the implementation of the Active School Travel Plan.
    - **School Administration/Staff:** The school principal serves as the primary point of contact, coordinating with teachers and liaising with the Parent Advisory Council (PAC) throughout the school travel planning process.
    - **PACs:** PACs play a crucial role in raising awareness about the STP process, sharing information, and mobilizing support within the school community.
    - **Students:** Engaging with students helps ensure the Active School Travel Plan reflects their experiences. Their insights and participation foster ownership and enthusiasm during the STP process and share their experiences about how they travel to and from school.
    - **Parents and Caregivers:** The input of parents, guardians, and caregivers is essential to learning more about the existing conditions, getting their buy-in, and sustaining support. They often become champions for school travel planning.

Resources: Where to Look?

Green Communities Canada School Travel Planning Toolkit provides comprehensive step by step guidance and tools to implement school travel planning.

RESEARCH SAYS

Programs that integrate School Travel Planning with implementation funding show measurable mode-shift, safety, and economic benefits. In a large multi-state study of 801 American schools, Safe Routes to School implementation was linked to increased walking/biking, with infrastructure (engineering) associated with an ~18% relative increase and cumulative education/encouragement effects projected to produce around 25% relative increases over five years.[22] Economic evidence also indicates benefits typically exceed costs; a systematic review reported a median benefit–cost ratio of around 4.4:1 across evaluated active school travel interventions.[23] Jurisdictions that require STPs to unlock implementation funds have been shown to strengthen the plan-to-project pipeline. Ohio is a leading example, requiring state-approved STPs and investing $64 million across 550 planning and implementation projects.



Speed Limit Reductions

Barriers Addressed

Speeding

What are Speed Limit Reductions?

In school neighbourhoods, speed limit reductions are an important traffic safety measure aimed at lowering vehicle speeds in areas where children are present. These typically take the form of School Zones, designated areas around schools with reduced speeds to protect children traveling to and from class, and Playground Zones, which reduce speeds near playgrounds to improve safety for children at play.

Key features of areas with speed limit reductions include:

- **Location:** School zones and playground zones typically include the streets adjacent to the school or playground and may extend one or two blocks in each direction.
- **Reduced Speed Limit:** In British Columbia, motor vehicle speeds are reduced to 30 km/hr in school zones and playground zones. A school area and speed zone tab or a playground area and speed zone tab are required for enforcement.
- **Time-based Enforcement:** Under the Province's Motor Vehicle Act, school zones are in effect from 8 a.m. to 5 p.m. on school days and playground zones are in effect every day from dawn to dusk. Local governments have the authority to increase the time-in-effect hours for both school zones and playground zones by updating their traffic bylaws.
- **Signage and Markings:** Signage and pavement markings are used to alert drivers when they are entering a school zone and playground zone. Signage is mandatory for the speed limit to be in effect.

Local governments have taken different approaches to implement this through various approaches such as identifying streets by classification, streets without continuous yellow centre lines, and corridors that are designated bicycling or active transportation routes.

Speed limit reductions are often paired with infrastructure interventions such as traffic calming to increase effectiveness.

Table 4: Key Considerations by School Neighbourhood Context

All	**Pair with traffic calming:** Pair reduced speed limits with traffic calming for greatest effectiveness. **Standardized signage:** Clear, standardized signage will help drivers know when and where reduced speed limits are applicable. **Awareness campaigns:** Education campaigns and enforcement can help raise awareness about reduced speed limits. This could include informational signage, speed display devices, and public education initiatives. **Major road consultation:** Schools may be located on major arterials or collectors where speed limit reductions are more impactful on motor vehicle movement. Local interest holders, including emergency services, transit agencies, goods movement representatives, and others should be consulted regarding proposed speed limit reductions along higher classification roadways.
Urban	**School frontage:** Urban school zones are often contained to the immediate school frontage.
Suburban	**School frontage:** Suburban school zones are often contained to the immediate school frontage.
Rural	**Transitional speed zones:** Schools in rural areas are often located along rural roads or highways where posted speed limits exceed 60 km/hr. As drivers approach these schools, it is important to consider implementing transitional speed reductions to gradually lower speed limits in advance of the school to ensure drivers have enough time to slow down and adjust to the reduced speeds nearby schools. **Extended zone coverage:** Rural school zones are more likely to extend beyond the school frontage.

Cost and Effectiveness: How to Implement?

Cost: Low

- The costs for speed limit reductions are associated with traffic signage and paint.

Effectiveness: Low to Moderate (without complementary interventions)

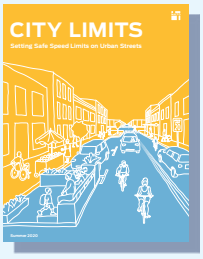
- Reducing speed limits is an important first step to addressing transportation safety around schools. However, its effectiveness is dependent on other complementary interventions and measures such as infrastructure improvements like traffic calming, education and awareness campaigns, and consistent enforcement to ensure lasting and meaningful changes in driver behaviour. Signage alone leads to modest speed reductions.

Roles and Responsibilities: Who is Involved?

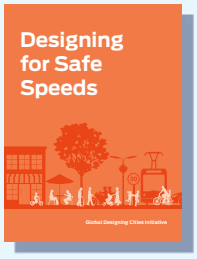
- **Local Government:** Local governments have the authority to lower speed limits on roads under their jurisdiction by posting signs on a block-by-block basis and may choose to amend bylaws to include locations where speed limits are reduced. They can also increase the time-in-effect hours for school and playground zones. To implement these changes, local governments are responsible for installing and maintaining signage and pavement markings, as well as leading education and awareness campaigns about the speed reductions.
- **Health Authorities:** Health authorities can conduct and share injury prevention research to show the relationship between speed, crash severity, and survival rates. They can also provide public health data to demonstrate the health effect of high speeds and play an advocacy and educational role.
- **TransLink / Ministry of Transportation and Transit:** May need to be consulted by local governments to make changes to specific roads that have regional or provincial significance in the transportation network. The Ministry sets design standards for roads under provincial jurisdiction.
- **ICBC:** ICBC may monitor before and after collision data when speed limit reductions are implemented.
- **Police:** Police conduct enforcement of speed limit reductions and have authority to ticket offenders.
- **Private or Community Organizations:** These groups play a key role in advocating for reduced speed limits and mobilizing community support. They may collaborate with local government and schools to co-deliver education and awareness about the importance of reduced speed limits.
- **Academic Institutions:** Academic institutions can conduct research and studies on the impact of speed reductions, providing practitioners and policymakers with evidence-based insights and data to guide decision-making and evaluate outcomes.
- **School Community:** Students, parents, and educators can share their lived experiences and highlight safety concerns to advocate for speed limit reductions.

Resources: Where to Look?

NACTO's City Limits (2020) guide provides guidance on how to strategically establish speed limits on urban streets to reduce traffic fatalities and injuries by using a Safe System approach.



GDCI's Designing for Safe Speeds (2025) guide shares new tools, strategies, examples, and case studies of effective speed management for life-saving outcomes.



TAC hosted a webinar reviewing key findings from an upcoming synthesis of practice Design and Operation of Lower Speed Collector and Arterial Roads.

Table 5 provides an overview of examples of local governments who have explored speed limit reductions in their community

Table 5: Examples of BC Local Governments with Reduced Speed Limits

Local Government	Approach to Speed Limit Reduction
City of Vancouver	School zones on arterial streets have their speed limits reduced from 50 km/hr to 40 km/hr, excluding schools on the Major Road Network. School zones on collector streets have their speed limits reduced from 50 km/hr to 30 km/hr excluding schools on the Major Road Network. School zone and playground zones 30 km/hr extended hours 24/7. All residential side streets without a centre line reduced from 50 km/hr to 30 km/hr (beginning in 25 neighbourhoods over three years).
City of Burnaby	School zones extended hours in effect Monday to Friday, 7 a.m. to 10 p.m.
City of New Westminster	School zone hours extended in effect Monday to Friday, 7 a.m. to 10 p.m. (to align with City of Burnaby).
Township of Langley	School zones extended hours in effect 24 hours on school days.
District of Saanich	Streets without a continuous yellow centreline and/or streets with an existing or proposed neighbourhood bikeway to have a maximum speed limit of 30 km/hr. Conduct a Safe Speed Study to determine speed limits on streets with a continuous yellow centre line.
City of Victoria, City of Duncan, Township of Esquimalt, City of Rossland, Resort Municipality of Whistler, and Town of Creston	Commitment to change all local streets from 50 km/hr to 30 km/hr.
City of Campbell River	Birch Street neighbourhood bikeway speed limit has been lowered from 50 km/hr to 30 km/hr. School zones and playground zones along Birch Street are in effect 24/7. Several residential areas have been identified to reduce the speed limit from 50 km/hr to 40 km/hr.
City of Nelson	Nelson has a blanket 40 km/hr speed limit (unless otherwise signed and for school/playground zones and the provincial highway) via bylaw and perimeter signage as you enter the city.

TIP

Beyond Enforcement – Education and Awareness

Education and awareness campaigns and initiatives are critical to the success of speed limit reduction policies. The public needs to understand why these changes are happening, how speed limit reductions improve safety, and what it means for their daily travel.

Examples of education and awareness initiatives may include:

- A public education campaign to raise awareness
- Installation of new signage in the affected areas
- Targeted notifications to residents in impacted neighbourhoods and streets
- Encouraging community involvement by providing free lawn signs about reducing speeds that residents can use t and display to spread the message
- Partnerships with schools and community groups to explain the benefits for children and the community

RESEARCH SAYS

The Life-Saving Impact of Lower Speeds

Research has found that a person hit by a motor vehicle travelling at 56 km/hr is five times more likely to be killed than a person hit by a motor vehicle travelling at 32 km/hr.[24] A study found that reducing speed limits from 50 to 30 km/hr in school zones significantly reduced injuries by 45.3 per cent and injuries to vulnerable road users by 55.3 per cent.[25]

Barriers Addressed

Congestion

Unsafe Crossings

On-Street Parking Management

What is On-Street Parking Management?

On-street parking management involves setting and enforcing rules for on-street parking and stopping during school hours. While parked cars along a street can narrow the field of driving (by introducing "side friction") and slow traffic, unmanaged parking near schools can increase congestion and safety risks. Effective parking management reduces student-vehicle conflicts, increases student visibility, and lowers noise and tailpipe emissions, making active modes more desirable and comfortable.

Because parking management can make driving less convenient, it should always be paired with communications, education, and active travel options so families have desirable alternatives that contribute to a healthy, safe school neighbourhood.

Parking management can take several forms:

Parking Strategy	Description
Stopping and Parking Restrictions	Restricts vehicle stopping or parking near school crossings, corners, and entrances to maintain clear sightlines and reduce conflicts, or for emergency vehicles. Can apply permanently or during pick-up/drop-off hours.
Short-Term or Time-Limited Parking ("Kiss and Go")	Allows brief stops for pick-up/drop-off or quick errands, improving turnover while maintaining some curb access. May allow drivers to briefly leave vehicle or may require drivers to remain in vehicle.
Time-Variable or Mode-Specific Curb Use	Allocates curb space to different users or modes at different times of day or week.
Seasonal or Pilot Restrictions	Temporarily restricts vehicle access to the street in front of a school during arrival and dismissal times to create a safer, car-free environment for students. See **School Streets and Play Streets** on page 118.

RESEARCH SAYS

A 2024 study in seven Canadian municipalities found risky driving behaviour observed at 98 per cent of 552 schools. The most commonly observed risky behaviour? Dropping a child off on the opposite side of a street with the child subsequently crossing midblock with no traffic controls.[26]

TIP

Reducing parking minimums in municipal bylaws is a way for local governments to prioritize active travel and public realm improvements on school sites. Fewer vehicles will also improve visibility and safety for children travelling to school, while reducing vehicle emissions near school grounds.

Key Considerations by School Neighbourhood Context

All	**Street-side PUDO:** Locate bus and vehicle pick-up/drop-off (PUDO) areas on the school street rather than the school site. This reduces conflicts between students and vehicles and allows the schoolyard to be maximized for students. **Clockwise flow:** Use a clockwise flow for PUDO where possible. **Coordinate PUDO:** Plan your parking and PUDO areas around existing crossings and transportation infrastructure to reduce risky mid-block crossings. **Single-file entry:** Provide a single, one-way entrance and exit so that vehicles travel single file rather than in opposite directions. **Rear staff parking:** Place on-site staff and visitor parking areas at the back of the school away from the main entrance to maintain safe and accessible entrances to the school. **Prioritize active modes:** When space is limited, prioritize space for bus loading, sidewalks, and bikeways over caregiver drop-offs, staff parking, and delivery zones.[27] **Peak hour demand:** Parking demand should be a consideration when evaluating parking management. If there is only parking demand in the peak hours, it may create a scenario in off-peak when the road is much wider without parked vehicles.
Urban	**Limit parking:** Limit on-site parking supply and consider flexible or dynamic parking management.
Suburban	**Segment curb zones:** Where school site frontage is long, consider segmenting curb zones for buses, caregivers, and staff parking to reduce congestion.
Rural	**Clear pedestrian paths:** Where shoulder drop-offs are used, provide marked pedestrian pathways or crossings connecting directly to the school entrance. **Year-round access:** Plan for all-year access so snow storage or inclement weather do not interfere with walking and rolling routes.

Cost and Effectiveness: How to Implement?

Cost: Low

- Includes signage, curb paint, and consultation. More complex changes may reach moderate costs.

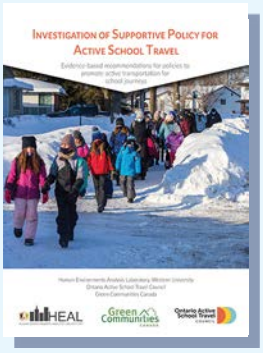
Effectiveness: Moderate

- When combined with enforcement and education, parking management can reduce congestion, improve visibility and access, and increase safety.

Roles and Responsibilities: Who is Involved?

- **Local Government:** Local governments have the authority to regulate on-street parking, signage, and curb usage in school neighbourhoods and through bylaws. They are responsible for designing, installing, and maintaining parking and drop-off zones on city-owned streets. Local governments will align parking management with broader transportation and school travel plans, often engaging the school community in the process.
- **School District/Board:** School districts oversee parking and circulation within a school property. They are responsible for coordinating with local governments on the frontage of the school site – this should be done as early as possible to ensure parking rules complement internal circulation patterns on the school site.
- **School Community:** The broader school community, including school staff, the PAC, students, and parents and caregivers, can help identify and raise issues around parking. Their knowledge and experience can support local governments in identifying the best solutions for the local context.
- **TransLink / Ministry of Transportation and Transit:** May need to be consulted by local governments to make changes to specific roads that have regional or provincial significance in the transportation network. The Ministry sets and enforces standards for access, signage, and curbside regulations on corridors within provincial jurisdiction.

Resources: Where to Look?



Ontario Active School Travel Council's Integration of Supportive Policy for Active School Travel summarizes how municipalities and school boards can align parking, site design, and transportation policies to support AST.

Velo Quebec's Guide de sécurisation des accès aux écoles is a French-language guide outlining best practices for improving safety, accessibility, and active mobility around schools. It contains specific school neighbourhood parking guidance and scenarios.

Infrastructure

Barriers Addressed

Speeding
Congestion

Traffic Calming

Traffic calming is an umbrella term for engineering measures that can slow drivers down and reduce traffic volumes. Traffic calming measures are typically grouped together based on their physical form and impact on people driving, as described below.

Signage encourages people driving to slow down by drawing attention to the speed limit.

- Example: Speed display signs, school zone speed limit signs

Pavement markings and surface treatments encourage people driving to slow down by drawing attention to a change in the street environment or creating the perception that vehicle speed is increasing by placing pavement markings increasingly close together.

- Example: Textured pavement, rumble strips, converging chevrons, dragon's teeth, transverse bars

Vertical deflection measures introduce minor grade changes to the travel lane in order to slow motor vehicles down.

Example: Raised crosswalk, raised intersection, speed cushion, speed hump, speed table

Horizontal deflection measures narrow or add curves to the travel lane in order to slow motor vehicles down.

- Example: Chicane, curb extension, speed kidney, traffic circle, lane narrowing, on-street parking, raised median island, vertical centreline treatment

Traffic Diversion Measures allow people walking, rolling, or cycling to travel through an intersection while restricting movement for people driving and reducing overall vehicle volumes.

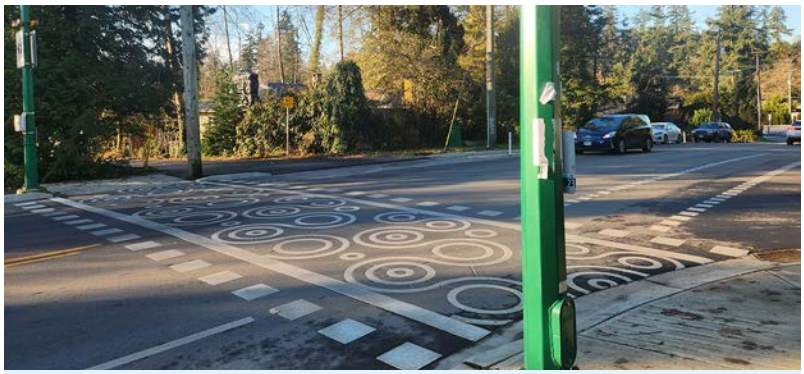
- Example: Directional closure, diverter, intersection channelization

Traffic Calming Measures

SIGNAGE

School Zone Speed Limit Sign

PAVEMENT MARKINGS AND SURFACE TREATMENTS



Painted Crosswalk

Textured Surface

Pavement Markings

VERTICAL DEFLECTION

Raised Crossing

Speed Hump

HORIZONTAL DEFLECTION

Traffic Circle

Lane Narrowing

Raised Median

Curb Bulges

TRAFFIC DIVERSION METHODS

Full Directional Closure

Full Closure

RESEARCH SAYS

In BC, three children are killed and 402 are injured in crashes while walking or cycling every year. 50 of these injuries occur in September alone as students head back to school. An ICBC survey also revealed that 36 per cent of BC drivers have witnessed a collision or near miss while driving in a school zone, with 50 per cent saying the incident involved a child.[28]

Key Considerations

All	**Road type:** Local roads or collector roads with speed limits of ‹ 60 km/hr tend to be the most appropriate for traffic calming, because they were designed for lower vehicle volumes and speeds. Traffic calming can be possible on some arterial roads and roads with higher speed limits, depending on the local policy context and design considerations. **Consider context:** Vertical and horizontal deflection tend to be less suitable near existing driveways, curves, and grades over eight per cent. **Vertical deflection constraints:** Vertical deflection does not mix well with transit, trucks, and emergency services, so most local governments do not have policies to support this. **Avoid intersection conflict:** Avoid placing raised crosswalks, speed humps, tables, and cushions approximately 75 metres before signalized intersections where people driving have to decide when and if to break.
Urban	Prioritize **vertical deflection** and **traffic diversion measures.**
Suburban	**Cut-through traffic:** Schools may be built on a collector road adjacent to an arterial – focus on horizontal deflection and traffic diversion measures to reduce cut-through traffic.
Rural	**Vertical deflection** may be less appropriate on roads with limited lighting, agricultural equipment, and oversized vehicles. **School buses:** Higher reliance on school buses and long travel distances increase importance of safe pull-outs and managed flow over traffic diversion measures.

Road Classification

Roads are dynamic spaces that serve the key functions of moving people and goods while also providing access to destinations. Transportation practitioners use road classification systems to determine the balance of mobility and access functions and make design decisions that align with this function. Sometimes the existing road classification does not align with the existing function or design because these change over time as a community grows. Not all interventions are applicable on all road classifications.

- **Highways** are typically designed for the highest vehicle volumes and speeds to facilitate movement between communities across the region or province.
- **Arterial Roads** are typically designed for higher vehicle volumes and speeds to facilitate movement between neighbourhoods within a community.
- **Collector Roads** are typically designed for moderate vehicle volumes and speeds to provide access to arterial roads, commercial, and recreation areas.
- **Local Roads** are typically designed for lower vehicle volumes and speeds to provide access residential neighbourhoods.

Cost and Effectiveness: How to implement?

	Cost	Effectiveness
Signage	$$$$$	★☆☆☆☆
Pavement markings and surface treatments	$$$$$	★☆☆☆☆
Vertical deflection	$$$$$	★★★★★
Horizontal deflection	$$$$$	★★★★☆
Traffic diversion measures	$$$$$	★★★★★

LEGEND

Low $$$$$ | ★☆☆☆☆

Moderate $$$$$ | ★★★★☆

High $$$$$ | ★★★★★

Cost

Signage, pavement markings, and surface treatments tend to be the cheapest and quickest to implement.

Vertical and horizontal deflection measures take low to moderate time and resources to implement, depending on the choice of rapid or traditional implementation approach.

Traffic diversion measures tend to take the most time and cost more to implement due to the extra time for community engagement, as traffic diversion measures have the largest impact on motor vehicle movement.

Costs can be reduced by using rapid implementation techniques – quicker, lighter, and cheaper methods to changing streets and implementing traffic-calming. More permanent measures that require poured concrete or changes to drainage patterns tend to take more time and cost more to implement.

Effectiveness

Signage, pavement markings, and surface treatments tend to be the least effective, because they rely on self-enforcement from people driving. Vertical deflection, horizontal deflection, and traffic diversion measures tend to be more effective because they physically change the built environment to make it harder to speed and take short cuts.

Traffic calming measures tend to be more effective when implemented together and strategically placed throughout a neighbourhood. In contrast, speed humps on one block may not be effective on its own, especially if people driving can choose another route to avoid it.

Roles and Responsibilities: Who to Involve?

- **Local government:** Staff typically lead the planning and implementation of traffic calming measures, because local governments are responsible for the ongoing operation of most roads in a school neighbourhood.
- **TransLink / Ministry of Transportation and Transit:** May need to be consulted by local governments to make changes to specific roads that have regional or provincial significance in the transportation network. The Ministry sets design standards for roads under provincial jurisdiction.
- **School community:** School administration/staff, PACs, students, parents, and caregivers should be involved in the planning process because they have insight on how proposed traffic calming measures will impact local travel patterns and opportunities to integrate placemaking (e.g., community gardens in chicanes).
- **Large vehicle operators:** Traffic calming can impact large vehicle operators, including staff from Operations that are responsible for winter maintenance and garbage collection, Transit, and Emergency Services. They should be involved in the planning process because they can share feedback on how to alter designs to reduce impacts on their access. They should also be notified prior to implementation to avoid unexpected impacts.

Resources: Where to look?

The Province of BC's Active Transportation Design Guide provides in depth guidance for planning, designing, and implementing traffic calming measures.

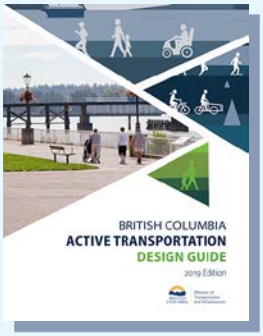
TransLink's Tactical Urbanism Toolkit provides information on quick-build materials that can be used for traffic calming.

Global Designing Cities Initiative's Designing for Safe Speeds provides direction on managing speeds through design parameters and strategies for safer, more liveable streets.

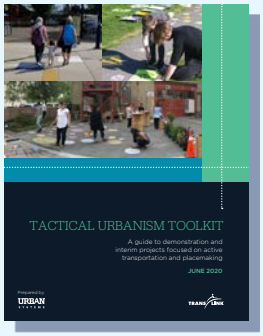
TransLink's Rapid Implementation Design Guide for Bikeways in Metro Vancouver provides guidance for the planning, design, implementation, maintenance, and monitoring of bikeways, focusing on treatments with flexible and low-cost materials that can be implemented rapidly without significant changes to the existing roadway.

Local government websites for information on local traffic calming policies and design guidance. For example, the City of Kelowna has a web page dedicates to its Neighbourhood Traffic Calming Program.

The Transportation Association of Canada's (TAC) Canadian Guide to Traffic Calming for more information on the technical benefits and limitations of different traffic calming treatments. This resource is behind a paywall, but most local governments have access to a copy.



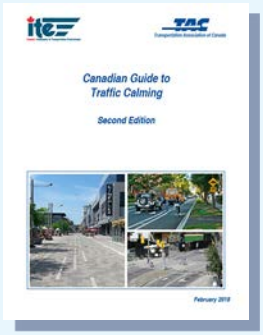
BC Active Transportation Design Guide



Tactical Urbanism Toolkit

Designing for Safe Speeds

Rapid Implementation Design Guide for Bikeways in Metro Vancouver



Canadian Guide to Traffic Calming

Barriers Addressed

Unsafe crossings
Insufficient infrastructure
Culture and confidence
Speeding

Crossing Improvements

Crossings and intersections are typically the most dangerous areas of school neighbourhoods, because they were traditionally designed to optimize motor vehicle flow, with little consideration for vulnerable road users. People walking, rolling, and cycling are considered vulnerable road users because they are more likely to be killed or injured in a collision with a motor vehicle.

Children are uniquely at risk because of their size and psychology. Their smaller stature makes it more difficult for them to identify hazards and be seen by other road users, while their developing attention span, impulse control, and ability to judge right-of-way makes crossings more difficult to navigate. Intersection controls that rely on users negotiating right-of-way, such as all-way stops, yield control, and other complex intersection treatments, may not be appropriate in school neighbourhoods.

School neighbourhoods should be planned and designed with safer crossings, by prioritizing low motor vehicle speeds, short crossing distances for pedestrians, unobstructed sightlines, and clear right-of-way. There are several crossing improvements that may be suitable, depending on the context of the corridor and overall school neighbourhood.

Table 6: Crossing Improvement Comparison

Crossing Improvement	Lower speed	Reduced distance	Clear sightlines	Clear right-of-way	Improved accessibility
Signals indicate the right-of-way for people walking, rolling, cycling, and driving in different directions.				✓	
Additional crossing time extends the pedestrian phase at signalized crossings. Refer to Section 2.0 for guidance on walking speeds.			✓		✓
Countdown timers display the seconds left in the pedestrian phase of signalized crossings.				✓	
Crosswalks mark locations where pedestrians have right-of-way to cross motor vehicle lanes.				✓	
Curb extensions (also known as curb bulges or bulb-outs) extend the sidewalk into the street at crosswalks, narrowing the crossing and making people driving turn more slowly.	✓	✓	✓		✓
Extended corner clearance limits parking at intersection corners to provide more visibility and clearer sightlines.			✓		✓
Curb ramps provide a smooth, graded transition from the sidewalk to the street.					✓
Leading pedestrian intervals allow pedestrians to start crossing before the light turns green for motor vehicles.			✓	✓	
Pedestrian refuge islands create protected space between traffic lanes to help people cross multi-lane roads.		✓			✓
Raised intersections or crossings allow pedestrians to continue walking at sidewalk height and force motorists to slow down.	✓				
Flashing beacons draw attention to pedestrians before they start crossing.				✓	

TIP

TECHNICAL WARRANTS

Technical warrants are tools used by transportation planners and engineers to prioritize locations for potential crossing improvements. In general, corridors with higher traffic volumes, vehicle speeds, and pedestrian activity are more likely to warrant crossing improvements. Their goal is to support evidence-based decision-making that is consistent, fair, and transparent—while still allowing room for public input and professional judgment.

One of the key benefits of using technical warrants is that they help prevent decisions being driven solely by the most vocal interest holders (the "squeaky wheel gets the grease" problem). However, a major limitation is that warrants can oversimplify complex situations and may overlook important local context. For example, in rural areas where overall pedestrian volumes are low, a particular crossing may still be necessary due to localized pedestrian activity, such as near a school, park, or transit stop.

Technical warrants should serve as a starting point for the school community and transportation practitioners to work together on implementing crossing improvements where they will have the greatest impact on vulnerable road user safety.

CASE STUDY

Safer Crossing at Marysville Elementary

Kimberley, BC

In 2023, the City of Kimberley made important safety upgrades along 306 Street in front of Marysville Elementary School in Kimberley. With funding support from the Province of BC's Active Transportation Infrastructure Grants program, the City implemented several complimentary tactics to increase safety for children walking and rolling, including a raised crosswalk, parking restrictions, and a new sidewalk.

Before the improvements, the painted crosswalk was faded and the large gravel area directly in front of the school doubled as a drop-off and pick-up area as well as a path for students walking and rolling, creating potential for conflict and reducing safety. The gravel area significantly increased the crossing distance and extended the period of time that children were exposed to traffic. Both the City and the school recognized these concerns, and Marysville Elementary School wrote a letter of support for the City's application.

A coordinated set of interventions was implemented to improve safety and support for active school travel:

- **Raised crosswalk:** The crosswalk was lifted to the same level as the new sidewalk, allowing pedestrians to continue walking at the sidewalk height (particularly increasing visibility for children) and forcing motorists to slow down.
- **Shorter crossing distance:** The road was narrowed at the crossing to reduce the time that children spend in the street.
- **Pavement markings and signage**: New, bright pavement markings and signage clearly identify the crossing.
- **Safer vehicle parking and access**: Vehicles can no longer drive up to the front of the school on the gravel nor park near the crossing, improving sightlines for drivers and students, increasing space to play and use active modes, and supporting better air quality by increasing the distance between tailpipe emissions and school entrances.
- **New 250-metre sidewalk**: A paved sidewalk replaced the informal gravel path, increasing safety and accessibility for walking and rolling to school.
- **Boulevard buffer**: A strip of space between the road and the sidewalk adds separation and safety from parked or moving vehicles.

Table 7: Key considerations by context

All	**Complex conditions:** Crossing improvements on streets with sharp turns, steep grades, railway crossings, underpasses, and overpasses may require more extensive planning and design. **Crossing proximity:** Avoid creating new safety issues by implementing crossing improvements too close to an existing intersection. The Transportation Association of Canada (TAC) typically recommends 100-200-metre between crosswalks. **Lighting:** Ensure adequate or enhanced street lighting at crossing locations. **Clear connections:** Place crosswalks to connect key destinations (e.g., transit stops, schools, parks, or commercial areas) and minimize detours from pedestrian desire lines. **Embed accessibility:** People with disabilities can experience challenges navigating crossings, especially when crossings are not designed and maintained with an accessibility lens. **Signal timing:** Ensure signal timing accommodates the context and user needs (e.g., longer walk times near schools, hospitals, and senior centres). See **Figure 3** on page 17 for more details on children's walking speeds. **Sightlines:** Along curved streets, avoid crossing improvements in areas with poor sightlines. **Desire lines:** Improve crossing safety along pedestrian desire lines, ensuring direct connections between key origins and destinations (e.g., secondary school sites and nearby shopping complexes). **Placemaking:** Explore opportunities for placemaking (e.g., decorative crosswalks) and green infrastructure (e.g., rain gardens in curb extensions).
Urban	**Plan for signals:** Along corridors with high traffic volumes, increase cost estimates to accommodate for signal changes and installations.
Suburban	**Shorten crossings:** Consider median refuge islands or lane narrowing to reduce crossing distance and slow vehicle speeds where appropriate.
Rural	**Safe crossing:** In areas without sidewalks, crosswalks may funnel everyone to cross at one location. Consider strategies to discourage pedestrians from walking with their backs to traffic to access the crosswalk.

Cost and Effectiveness: How to implement?

Cost: Moderate to High

The cost of crossing improvements depends on the materials required. Changes that only require signs, pavement markings, or changes to existing signal phasing tend to be the least expensive. Rapid implementation techniques can be used to deploy curb bulges and pedestrian refuge islands more quickly and cost-effectively. More permanent measures such as raised intersections that require poured concrete or changes to drainage patterns, as well as new signals that require permanent electrical wiring, tend to take the most time and cost to implement.

Effectiveness: Moderate to High

- Crossing improvements tend to be most effective when they reduce exposure to or eliminate conflicts between people walking, rolling, cycling, and driving. A common example of this would be providing separate crossing time or space for vulnerable road users via traffic signals.
- Crossing improvements that support clear sightlines are effective at improving vulnerable road user safety, but not effective as interventions that eliminate conflicts.

Roles and Responsibilities: Who is Involved?

- **Local government:** Staff typically lead the planning and implementation of crossing improvements, because local governments are responsible for the ongoing operation of roads in most school neighbourhoods.
- **TransLink / Ministry of Transportation and Transit:** May need to be consulted by local governments to make changes to specific roads that have regional or provincial significance in the transportation network. The Ministry sets standards for the design of provincial roadways that pass through school neighbourhoods.
- **School community:** School administration/staff, PACs, students, parents, and caregivers should be involved in the planning process because they have insight on how proposed crossing improvements will impact local travel patterns and opportunities to integrate placemaking (e.g., decorative crosswalks).

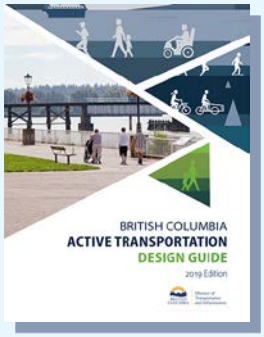
Resources: Where to look?

The Province of BC's Active Transportation Design Guide provides in depth guidance for planning, designing, and implementing crossing improvements for people walking, cycling, and rolling across BC.

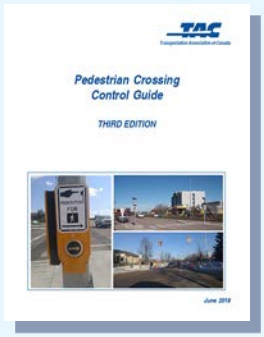
The Pedestrian Control Crossing Manual for British Columbia outlines standards and warrants for pedestrian crossing treatments on provincially and municipally managed roads.

TAC Pedestrian Crossing Control Guide (2018) provides national best practices for selecting and designing pedestrian crossing controls, complementing BC-specific manuals. This resource is behind a paywall, but most local governments have access to a copy.

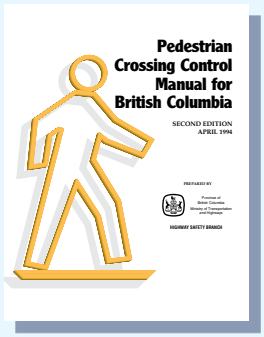
Manual for Traffic Control Devices Canada (MUTCDC) establishes national standards for traffic control devices. This resource is behind a paywall, but most local governments have access to a copy.



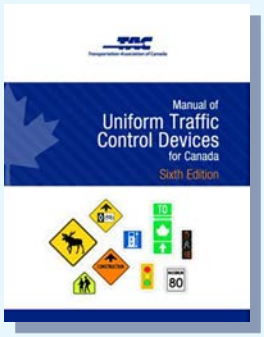
BC Active Transportation Design Guide



TAC Pedestrian Crossing Control Guide



Pedestrian Control Crossing Manual for British Columbia



Manual for Traffic Control Devices Canada

Active Transportation Facilities

Pedestrian, Cycling, and Multi-Use Facilities

Barriers addressed

Insufficient infrastructure

Active transportation facilities provide safe spaces for people walking, rolling, and cycling. High-comfort facilities separate people from motor vehicles and tend to attract the widest range of ridership, from children riding strider bikes to older adults using e-bikes. When high-comfort active transportation facilities connect and provide continuous routes across communities, caregivers and children are more likely to choose active school travel. Active transportation facilities are typically categorized based on their intended user, as described below:

Pedestrian facilities such as pedestrian paths and sidewalks are usually intended for people walking and using mobility devices.

Cycling facilities such as bicycle paths, neighbourhood bikeways, and protected bike lanes, are usually intended for people using bicycles and other devices with small wheels.

Multi-use facilities are typically intended as shared spaces between people walking and those using mobility devices, bicycles, and other devices with small wheels.

Key considerations by context

All	**Traffic Volumes and Speeds:** Where traffic volumes and speeds are high, physical protection should be provided; where traffic volumes and speeds are low, shared facilities are acceptable. **Typical Usable Width:** Facilities should be wide enough to comfortably accommodate a wide range of users, including social riding, passing, and larger cargo bicycles. **Intersections:** Intersections should be thoughtfully designed to eliminate or reduce conflicts, reduce speeds, and improve visibility for people walking, cycling, or rolling. **Grades:** Grades should be below three per cent wherever possible, but mitigation measures can be provided if grades are higher, such as switchbacks and handrails. **Lighting:** Facilities should have adequate lighting along the entire length of the corridor. **Maintenance:** Facilities should be well-maintained year-round. Both debris on the facility (e.g., snow, gravel, broken glass, leaves) and poor conditions (e.g., cracks, potholes, root heaving, puddles due to poor drainage) can create slipping hazards for people walking, rolling, and cycling. **Legibility:** Facilities should be well signed and marked for easy navigation.
Urban	**User Separation:** Separate spaces should be provided for people walking, cycling, and driving where volumes are higher. **Curbside Activity:** On busy corridors with on-street parking and loading, ensure pedestrians have accessible, safe opportunities to cross cycling facilities and that people on bicycles are not at risk of being hit by opening vehicle doors.
Suburban	**Driveways and other conflict points:** Avoid bi-directional and multi-use facilities along corridors with frequent driveways, such as strip malls and industrial areas. Use conflict paint or consider another facility type. **Network integration:** Explore opportunities to connect off-street facilities (e.g., park trails) with on-street facilities (e.g., protected bicycle lanes) to improve community connections.
Rural	**Motorized Recreation Vehicles:** Consider how to manage speeds by adding trail etiquette signage telling users to slow down, adding horizontal and vertical curvature to the trail, or adding an uphill grade, textural surface contrast, transverse paint lines, and yield markings. **Surface:** Paved travel surfaces should be provided, and surfaces should be smooth, well-maintained, and in good condition. On facilities with lower volumes, compacted aggregate may be an acceptable alternative to asphalt but may not be accessible for people using mobility devices with smaller wheels.

Cost and Effectiveness: How to implement?

Cost: Moderate to High

The cost of active transportation facilities depends on the length of the corridor and type of facility. Rapid implementation techniques can be used to implement active transportation facilities more quickly and cost-effectively. More permanent measures that require poured concrete or changes to drainage patterns also tend to take more time and cost more to implement.

Effectiveness: High

'Comfortable for Most' facilities tend to be more effective at improving accessibility and safety for people walking, rolling, and cycling, compared to low-comfort that do not provide protection or separation from higher motor vehicle speeds or volumes. User-separated facilities such as sidewalks and cycling facilities tend to more accessible, comfortable, and safe for people walking, rolling, and cycling, compared to multi-use facilities.

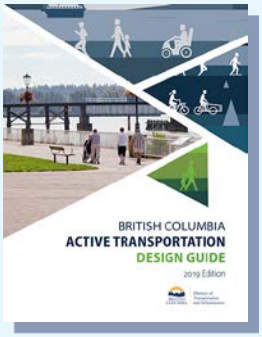
RESEARCH SAYS

In the Canadian CHASE (Child Active-Transportation Safety and the Environment) study conducted across 552 schools in four provinces in 2018 and 2019, cycling infrastructure was one of the key modifiable built environment features at the school level associated with higher levels of AST (in addition to the presence of adult crossing guards and a higher WalkScore).[29]

Roles and Responsibilities: Who is Involved?

- **Local government:** Staff typically lead the planning and implementation of active transportation facilities, because local governments are responsible for the ongoing operation of most roads in a school neighbourhood.
- **TransLink / Ministry of Transportation and Transit:** May need to be consulted by local governments to make changes to specific roads that have regional or provincial significance in the transportation network. The Ministry sets design standards for roads under provincial jurisdiction.
- **School community:** School administration/staff, PACs, students, parents, and caregivers should be involved in the planning process because they have insight on how proposed active transportation facilities will impact local travel patterns and opportunities to integrate placemaking (e.g., painting concrete barriers with children's art).

Resources: Where to look?



The Province of BC's Active Transportation Design Guide provides in depth guidance on network planning, facility selection, facility design, and maintenance.

TransLink's Rapid Implementation Design Guide for Bikeways in Metro Vancouver provides guidance on planning and designing active transportation projects using a rapid implementation approach, including material selection.

Alta Planning and Design's Winter Bike Lane Maintenance White Paper summarizes best practices for planning for snow storage, snow clearance, de-icing, and prioritization strategies for cycling facilities in winter communities.

Barriers addressed

Insufficient infrastructure

Bicycle Parking

What is Bicycle Parking?

Bicycle parking refers to the dedicated spaces, racks, or facilities where students can safely and securely park their bicycles during school hours. Providing high-quality, safe, and secure bicycle parking is important to making cycling to school more convenient and to encourage more students and school staff to cycle or roll to school. There are two kinds of bicycle parking:

- Short-term bicycle parking: convenient, outdoor parking for short term use
- Long-term bicycle parking: secure, weather-protected parking for long-term or recurring use

The focus of this section is on outdoor, short-term bicycle parking that can be added to existing school sites. For more information on long-term bicycle parking, review the recommended resources.

The selection, installation, and ongoing maintenance of bicycle parking is essential to ensuring both the safety and security of students' bicycles and the effectiveness of the bicycle parking. Well-designed and installed bicycle parking can reduce the risk of theft and damage while also helping foster a culture of cycling and rolling within the school community.

Types of Bicycle Racks

RECOMMENDED

Inverted U-racks (also called staple or loop)

The most desirable bicycle rack type. This bicycle rack supports all types of bicycles in the upright position, providing two points of contact with the frame, and allows the frame and at least one wheel to be securely locked to the rack. Typical dimensions should be 0.9m high (0.80 m minimum) to support adult sized bikes, and 0.60 m wide (0.45 m minimum) to allow for the front frame along with the wheel to be locked with a D-Lock while simultaneously locking the rear frame and wheel with a D-Lock. This also provides greater stability when parked bikes are accidentally bumped as to not fall over, creating damage to the bike and a tripping hazard to other pedestrians.

ACCEPTABLE

Staggered wheelwell-secure racks

Must have two locking points. Designed to stagger handlebars to increase parking density. This design helps fit more bikes into constrained or retrofitted spaces but reduces the usability and limits the kinds of bikes accommodated.

Post and ring racks

Can accommodate a variety of bicycles and micromobility devices, but may not offer two secure points of contact for smaller children's bicycles. Post and ring racks may be suitable where single-point installation is required

AVOID

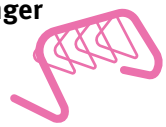
Wave racks, spiral racks, and u-wall mounts

Less desirable bicycle racks because they often fail to meet their advertised bicycle parking capacity and are less space efficient. Wave racks and spiral racks only support the frame at one location and can require lifting the wheel to park a bicycle.

Wheelwell and Schoolyard

Comb, grid, toaster, or wheelwell racks only support the frame at one location and can lead to wheel damage.

Coat hanger racks



Sometimes provide two points of contact with the frame but limit the types of bikes that can be accommodated and are less durable than other racks.

Bollard

Similar to Post and Ring rack, but narrower design typically does not support bicycles at two locations.

TIP

How to Identify a Safe and Secure Bicycle Rack?

The following table outlines criteria for evaluating the performance of a bicycle rack.

Criteria	Details
Supportive	Supports a bicycle in the upright position, providing two points of contact with the frame
Lockable	Allows the frame and at least one wheel to be securely locked to the rack using a U-lock
Flexible	Accommodates a variety of bicycles and attachments
Intuitive	Easy to recognize and use, and does not require lifting the bicycle
Secure	Made from durable materials (e.g., stainless-steel tubing) and installed using tamper-proof bolts

Adapted from BC Active Transportation Design Guide 2019

MATERIALS

Bicycle racks are typically constructed of carbon steel or stainless steel, with a range of coatings that impact cost and durability. Consider local conditions and context, such as the colours of the school, winter conditions, and whether the bike parking is covered.

Choose bike racks that are easily identifiable as bike racks to encourage use.

SITING

Bicycle racks should be accessible and visible on school grounds – both to students arriving at school and by school administrators or staff during the school day. Locate bicycle racks nearby main entrances and directly accessible by main cycling or active travel routes to the school – ideally 10 metres from the appropriate school entrance, or a maximum of 30 metres. Maintain distance from walls, stairs, foliage, or other barriers that could reduce accessibility and usability of racks. Locate racks to the side of major walkways or access points, maintaining a clear path for everyone accessing the school or moving around school grounds.

Provide covered bike parking when possible to keep bikes dry – covered space may be available near the school entrance overhang, which is often near the front office, supporting visibility. Consider well-lit spaces to support easier locking and unlocking for year-round cycling.

INSTALLATION

Install bicycle racks on concrete – avoid asphalt, pavers, grass, or other soft surfaces, as these can degrade over time, reduce the utility of the rack, and provide less security.

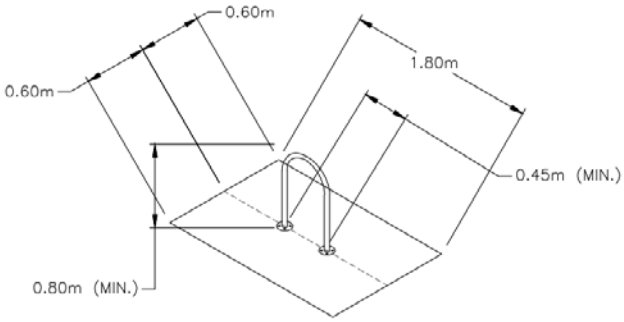
Ensure the racks have at least 0.60 m spacing between them if you intend to have one bicycle at each rack on the same horizontal plane or 0.91m spacing to accommodate two bicycles at each rack.

Install tamper resistant hardware or security nuts to increase security and reduce the risk of theft.

Unsecured bike racks installed on pavers.

Courtesy of Greg Bokenfohr

Minimum clearance between bicycle racks and other sidewalk elements.



Source: BC Active Transportation Design Guide 2019

Poor placement of a bike rack on grass.

Table 8: Key Considerations by School Neighbourhood Context

All	**Access to racks:** Directly accessible from key active transportation routes, and racks are accessible from all sides. **Access to school:** Racks are close to commonly used school entrances. **Weather protected:** Locate racks under weather protection whenever possible (e.g., covered shelters) to encourage year-round cycling. **Visible upon arrival:** Racks should be easy for school members and guests to see upon arrival. **Visible from within school:** Racks should be placed near school windows, ideally that face into the main office. **Well lit:** Install bicycle racks in well-lit areas, and ensure adequate lighting is provided, particularly in communities that experience longer periods of darkness. **Install on cement:** Locate bike racks on cemented surfaces that cover the entire area of the rack. Do not place racks on grassy or permeable surfaces, or asphalt.

Cost and Effectiveness: How to Implement?

Cost: Low

- The cost of bicycle parking varies depending on the type and amount of bicycle parking needed. If installing both short term and long term bicycle parking, purchase all racks at the same time to reduce costs.

Effectiveness: Moderate

- Bicycle parking's effectiveness is dependent on the type of bicycle parking available as well as its installation and maintenance.

Roles and Responsibilities: Who is Involved?

- **School District/Board:** The School District/Board Facilities Planning department is responsible for working with schools to provide and maintain bicycle parking on school grounds. Bicycle parking should be included during the initial school design and cost-estimated before construction.
- **Local Governments:** Local governments may allocate a portion of the budget for cycling infrastructure projects near schools for school bicycle parking or dedicate a specific fund or grant for bicycle parking at schools.
- **Provincial Government:** The Ministry of Infrastructure includes new, upgraded, or maintenance of bike racks as an eligible expenditure through their Annual Facility Grant.
- **School Community:** Students, parents and caregivers, and educators can advocate for more bicycle parking. PACs could lead community fundraising for bicycle racks, as well.

Resources: Where to Look?

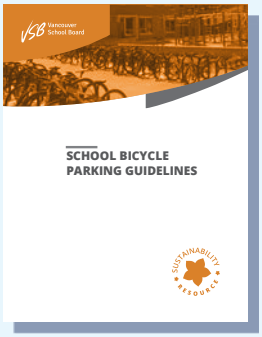
The Province of BC's Active Transportation Design Guide provides detailed guidance for short-and-long-term bicycle parking.

The Association of Pedestrian and Bicycle Professionals' Bicycle Parking Guidelines provides several resources on best practice for bicycle parking.

The Vancouver School Board's School Bicycle Parking Guidelines outlines bicycle parking practices and guidance for a school context including the siting guidance process for ordering bicycle racks for schools.

BC Active Transportation Design Guide

Bicycle Parking Guidelines



School Bicycle Parking Guidelines

CASE STUDY

Funding Bicycle Parking Improvements at Schools

The Improving Bicycle and Scooter Parking at Elementary and Secondary Schools in Vancouver report, released in 2024, conducted national and international case studies to explore funding mechanisms for improving bicycle parking at schools. The research highlights how relatively modest investments in quality bicycle parking can remove a key barrier to active school travel. The report profiled several case studies, including:

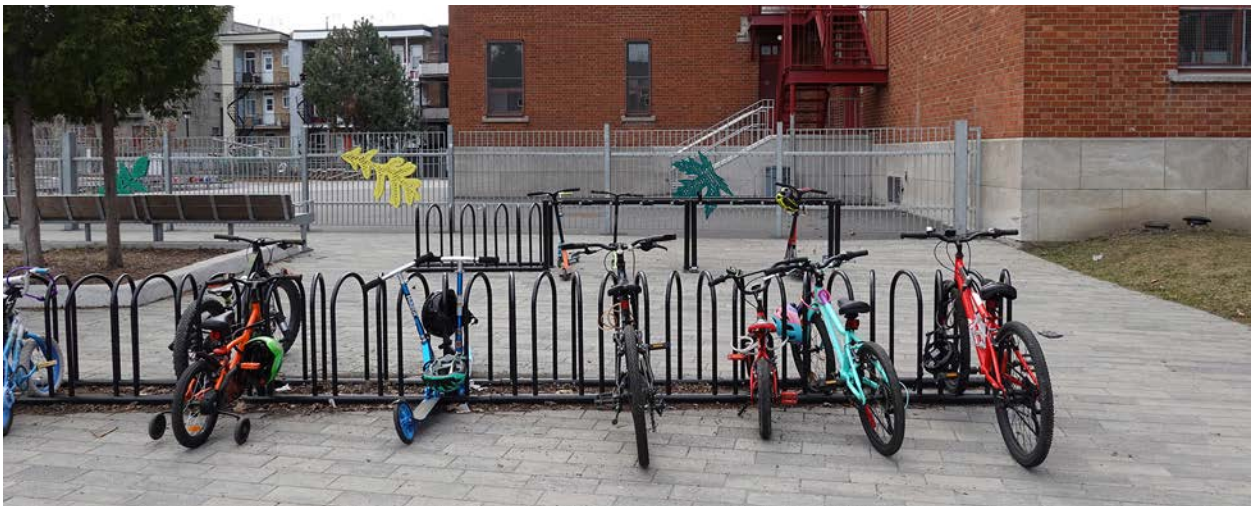
- **The City of Edmonton's School Bike Parking Grant** was launched to support schools to enhance the security and quality of bicycle parking. Eligible schools could receive up to $15,000 to create new or upgrade existing bicycle parking facilities. In 2024, the City allocated $75,000 to the grant program, drawing from a broader $1 million allocation for bicycle parking within the municipal budget. To support application and implementation, the City provided an information guide outlining bicycle parking best practices and requirements to ensure funded projects aligned with best practice guidance.
- **The Regional Municipality of Peel's School Bicycle Parking Program** provides eligible schools with the opportunity to apply and receive funding for a maximum of four bicycles. Applications are prioritized based on demonstrated bicycle demand and participation in active transportation-related education and outreach initiatives. The program funds the purchase of bicycle racks only and does not include installation costs.
- **Transport Scotland's School Cycle and Scooter Parking Grant** provides funding to eligible schools to cover up to 50 per cent of the total cost bicycle and scooter parking. In addition to this national-level funding, schools may also be eligible for complementary support through local government funding such as the Cycling Walking Safer Streets fund. Between 2015 and 2020, this fund received £3.7 million to support local walking and cycling initiatives.

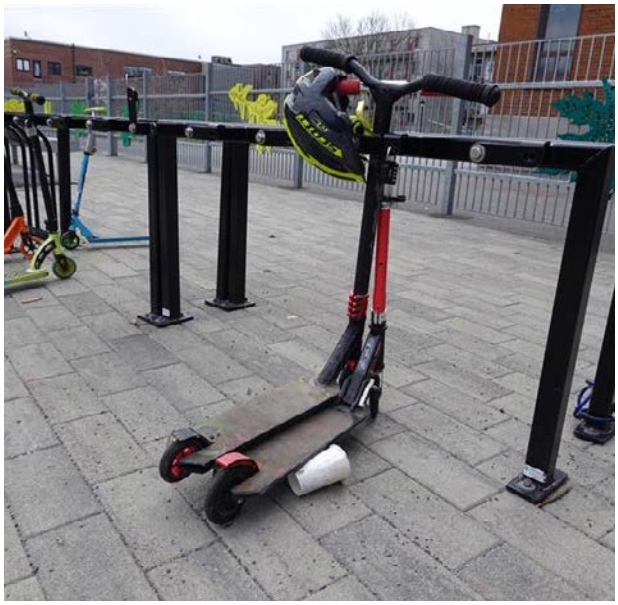
Research found that successful funding for bicycle parking at schools typically relies on leveraging multiple funding sources, including municipal and school district budgets, regional or provincial grant funding, and PAC and community fundraising.

TIP

Scooter Parking

To prevent scooter clutter in hallways and classrooms, providing dedicated parking for kick scooters is helpful to support children to roll to school. While several types of bicycle racks can support scooter parking, there are also dedicated scooter parking racks that can support locking scooters.





Barriers Addressed

Culture and Confidence

Speeding

Placemaking

PLACEMAKING

What is Placemaking?

Placemaking transforms streets from functional transportation corridors to welcoming, multipurpose spaces where children, parents, and caregivers can connect, learn, and play along their trip. The journey to and from school may include eating, resting, socializing, playing, and getting organized – activities that are difficult when streets are only designed for movement. Shifting these everyday behaviours from the private realm of homes or vehicles to the shared public realm creates opportunities for connection and community building.

When designed with care, the public realm becomes a healthy extension of the school and community, inviting children, parents, and caregivers to linger and participate in community life. Placemaking also enhances safety and comfort, supporting the physical, social, and emotional wellbeing of all who pass through the school neighbourhood.

Key features of placemaking around schools:

Pause Spaces: Places along the street to pull over and rest, wait, or regroup. Pause spaces are not designated for a specific use.

Seating and shade: Dedicated spaces along a street to sit, rest, or take a break.

Consider covering certain seating for comfortable use in rain, snow, and heat.

Playful Elements: Interactive or informal play opportunities that may accommodate a vast array of activities, playing, and socializing.

Photo credit: Seattle Department of Transportation, shared by Playful Learning Landscapes

Signage and Wayfinding: Child-friendly, accessible signs that help people identify where they are and help them get where they need to go.

- Use both ground and vertical surfaces. Consider a child's height when installing signage on vertical surfaces.
- School neighbourhoods should highlight "landmarks" for easy navigation.
- Illustrate the distance to the school in child-friend terms, such as "two minutes by bike" or "five minutes on foot".

Public Art: Murals, pavement art, and installations should involve children's participation. Art celebrates the school identity and fosters ownership and care for the neighbourhood.

Natural and Green Features: Green infrastructure provides multiple benefits, improving the experience for people using the street while also supporting street maintenance and environmental management. People enjoy comfort, shade, fresh air, and beauty, while cities benefit from reduced stormwater runoff and snow storage.

Amenities and Comfort: Toilets, waste and recycling bins, wi-fi, and water fountains support comfort, cleanliness, and extended use of outdoor space throughout the day.

- Consider gender-neutral toilets for parents and caregivers of all genders to safely and comfortably use them with children.
- Provide changing tables and consider making sinks accessible to children either by lowering sinks or providing a step.
- Consider alternatives to automatic hand dryers, many of which operate at unsafe noise levels for children.[30]

Street Lighting: Pedestrian-scale street lighting increases safety and provides opportunities for children to play and stay outside after sunset – extending physical activity into the colder, darker months in British Columbia.

- Minimize uplighting and glare by using fixtures that point downward to the street level. Warmer lighting is preferred.
- Lighting can be functional and playful – consider incorporating interactive lighting at child height.

CASE STUDY

Playing at the Bus Stop – Vancouver's SeeSawSeat

Vancouver, British Columbia

The SeeSawSeat in Vancouver, created in 2018 by artist Germaine Koh, operates not only as a bus bench, but a teeter-totter. The act of waiting for the bus is transformed into a social activity, encouraging collaboration and interaction with others in the space. The bus stop embeds an unexpected element of play into an otherwise ordinary moment of waiting for transit and particularly makes transit more fun and exciting for children (or the child at heart)!

SeeSawSeat, 2018 by Germaine Koh. Photo credit: Dani Boynton. Courtesy of City of Vancouver Public Art Program

CASE STUDY

Painted sidewalks boost the school journey

Calgary, Alberta

At Jennie Elliot School in Calgary, the route to school just got a whole lot brighter. The school collaborated with Lakeview Community Association, local residents, and local artist Sheila Kernan to activate and beautify a busy stretch of road in the school neighbourhood that connected the school to nearby parks and homes. Using colourful paint, patterns, signage, and seating, the walking route was transformed to feel safer and more people-centric. An ongoing feedback loop was set up while the project was underway to help people share their ideas and thoughts via a forum at a bus stop along the route.

Children from the school were included in the painting, as well as parents, local residents, and older adults – even passersby learned about the project as they travelled past and returned later wearing painting clothes to lend some help.

This project was made possible through grant funding from the Federation of Calgary Communities' ActivateYYC Grant, a community focused tactical urbanism program in Calgary that aims to encourage low-cost, creative experimentation in the public realm to strengthen neighbourhoodconnection, promote mobility, and make public space inclusive.

Photo credit: Lakeview Community Association – Federation of Calgary Communities

CASE STUDY

Increasing Visibility and Legibility of School Routes

Toronto, Ontario

As part of its school safety and Vision Zero initiatives, the City of Toronto is aiming to make the trip to school easier and more fun. The City used clear signage and sidewalk pavement markings along the most popular school routes, encouraging students along the trip to school and embedding play into the journey. Signage was designed specifically for school contexts and were installed at child-friendly heights along the 300-metre, 600-metre, and 900-metre distance points from the school, each indicating the name and distance in minutes to the school by biking or walking. A progression of colour from purple to green to blue shows increasing proximity to the school site. Students can also engage in a variety of playful sidewalk markings that encourage a variety of educational and exploratory movements and make school routes easy to find and follow for children.

New signage oriented to drivers was also posted along the school routes (the sneakers sign) to increase driver attention to the presence of children and to encourage slower speeds, as school routes extend beyond the designated school zone where speeds are regulated.

Several lessons emerged from this project. The City recommended larger wayfinding signs along the school route and to consider ongoing maintenance of painted sidewalks. Also, consider coordinating the stencilled sidewalks with driveways: use the "low activity" stencils (i.e., Walk, Alphabet Line, Number Line) in areas near driveways, and use "high activity" stencils (i.e., Hopscotch, Run, Jump) in areas without obstructions or far from pathways that may cross vehicles.

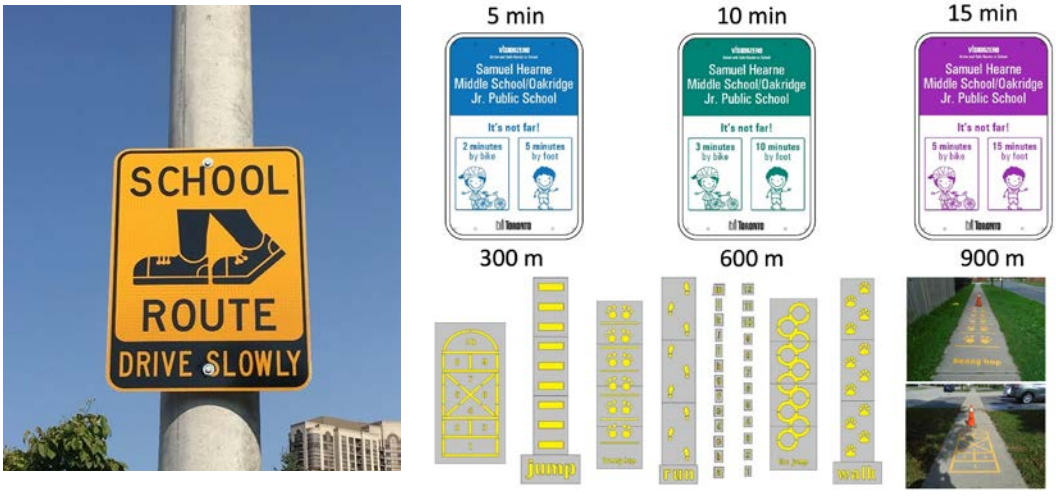


Photo credit: City of Toronto, from Green Communities Canada webinar: Signs of the Time: School Wayfinding

RESEARCH SAYS

Numerous studies demonstrate that children have better brain development and improved cognitive functions, ability to focus, and motor skills when there are more trees and greenery in their neighbourhood. Natural spaces foster more creative play behaviours and a sense of community safety as opposed to places with fewer trees.[31]

RESEARCH SAYS

Drivers naturally reduce vehicle speeds when public realm features like street trees are near the roadway and there is pedestrian activity to create visual friction.[32] Even with no major street geometry changes, adding visual complexity and cues of pedestrian and child presence can prepare drivers to anticipate people and regulate their speed.[33]

Table 9: Key Considerations by School Neighbourhood Context

All	**All-seasons design:** The public realm can transform the all-seasons appeal of a school neighbourhood. Consider local weather conditions and plan features that shelter and protect from weather and enable all-year outdoor travel. **Seasonal sunlight:** Consider public space nodes that maximize seasonal sunlight conditions. **Child-scale placemaking:** Use placemaking tools to enrich the experience of the street for children, such as dividing the wider street into smaller areas or nodes.
Urban	**Compact interventions:** Focus on high visibility, compact interventions using available space in school neighbourhoods. Consider forgotten corners for micro-plazas or parklets.
Suburban	**Gateways:** Enhance school gateways with signage, children's art, and greenery to signal a point of arrival and identity. **Activate open space:** Activate large, open areas with multi-use play features and seating.
Rural	**Weather protection:** Prioritize weather protection and seating, especially in areas where people may get picked up by the bus or a caregiver. **Cold climate materials:** Special attention should be given to material selection in cold climates, choosing low thermal conductivity and visually warm textures.

Cost and Effectiveness: How to Implement?

Cost: Low to Moderate

- Costs vary widely depending on the scale and selected features. Temporary installations, murals, and planters are low-cost, while permanent street furniture, shade structures, or sidewalk changes will be higher cost.

Effectiveness: Low to Moderate

- Public realm improvements can have a significant impact in building a culture of people who enjoy spending time in the school neighbourhood and experiencing it on foot or wheel, although safety benefits are indirect and context-specific. When the community is involved and well represented, placemaking can increase safety, comfort, and pride in an area, which can make active modes more attractive.

TIP

Involve the community through student-led initiatives and engagement. Highlighting students' artwork and creativity is particularly powerful in fostering stewardship by the students and awareness for drivers.

Roles and Responsibilities: Who is Involved?

- **Local Government:** Leads the design, installation, and maintenance of public realm elements on local government streets.
- **School District/Board:** Integrate outdoor learning and play opportunities that connect visually and physically to the public realm outside of the school site. Ensure clear communication with local government staff on maintenance on shared boundaries.
- **Private or Community Organizations:** Local arts councils and not-for-profit organizations can support the engagement and delivery of placemaking projects.
- **School Community:** Brings community knowledge on the priority areas needing amenities to foster vitality and play. The school community can be involved in the co-creation of placemaking efforts.

Resources: Where to Look?

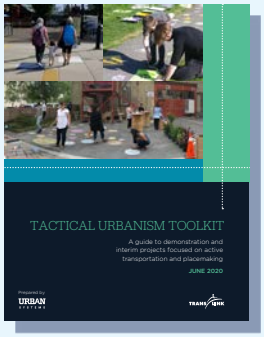
TransLink's Tactical Urbanism Toolkit (TransLink, 2021) offers guidance on low-cost, quick-build placemaking opportunities.

Global Designing Cities Initiative's Designing Streets for Kids provides guidance and global examples of placemaking with a child focus, particularly in Chapter 5: Street Design Elements.

Ontario Active School Travel's recorded webinar "The Signs of the Time: School Wayfinding Best Practices" highlights best practices in wayfinding for schools in Ontario and Quebec with examples and lessons learned.

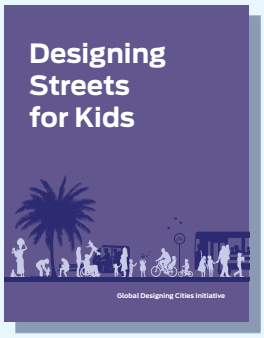
Town Team Movement's Safer Speeds and Better Places Community Toolkit is designed to provide information on vehicle speeds, its impact on the community, and opportunities for community-led placemaking to be part of changes to improve the safety and vibrancy of their local streets.

My Main Street's Placemaking Toolkit is a guide for placemaking projects in Southern Ontario but contains transferable knowledge for the rest of Canada around the definition and benefits of placemaking, practical advice and resources, equity considerations, and effective monitoring and evaluation.



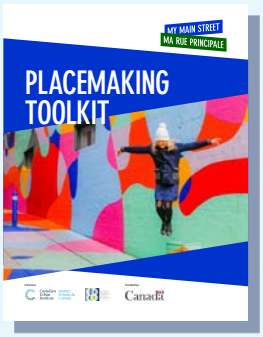
Tactical Urbanism Toolkit

The Signs of the Time: School Wayfinding Best Practices



Designing Streets for Kids

Safer Speeds and Better Places Community Toolkit



Placemaking Toolkit

Barriers addressed

Community Silos

Culture and Confidence

Traffic Gardens

What are Traffic Gardens?

Traffic gardens are dedicated learning and play spaces featuring miniature streets with scaled-down traffic features designed to equip children with road safety and bicycling skills in a safe, car-free environment. By replicating real-world features such as crosswalks, intersections, signage, and signals, traffic gardens help children build confidence and practice skills through a hands-on experience. Whether through unstructured play, structured school programming, or community events, traffic gardens offer a stress-free and engaging space that fosters independence, active learning, and fun. They are an ideal setting to introduce children to active habits that support independent mobility.

School neighbourhoods present ideal opportunities to install traffic gardens, as they can support curriculum-based physical education and cycling education programs such as Everyone Rides Grades 4/5 and Kids on Wheels while serving as a shared asset for recreation, play, and community events beyond school hours.

Traffic Gardens are Not a Pump Track

A pump track is a recreational, car-free cycling facility made up of rolling mounds and banked turns where riders use body movement and momentum, rather than pedalling, to maintain speed and practice technical skills. While pump tracks facilitate play, skill-building, and physical activity – similar to traffic gardens- they do not include traffic education features like signage, intersections, or road markings.

Huntington Park

Aerial view of a colourful traffic garden in Waynesboro, Virginia

A Traffic Garden by Many Names

Traffic gardens are known by many names, including traffic playground, traffic park, safety village, safety town, bike playground, and bicycle education park. In French, they are referred to as parc d'éducation cycliste.

PLANNING YOUR TRAFFIC GARDEN

Traffic Garden Typologies

Traffic gardens come in many different layouts, appearances, and purposes. There is no single type of traffic garden, especially since traffic gardens aim to replicate the road network of the community in which they are located to simulate real-world situations that cyclists may face. In general, traffic gardens follow typologies based on their durability and materials used.

Permanent Traffic Gardens: outdoor and weather resistant materials such as permanent paint products, small-scale asphalt or concrete streets, and/or curbs. They are intended for long-term installation.

- **Built-infrastructure Traffic Garden:** Miniature street networks constructed with scaled-down asphalt or concrete roads, complete with curbs, pavement markings, and traffic signage. These are designed as permanent outdoor installations.
- **Surface Applied Traffic Garden:** Miniature street networks and traffic features are installed by applying permanent paint products to hard outdoor surfaces. Traffic signage may be stenciled on the surface or added as portable elements.

Short-Term Traffic Gardens are short-term installations created using portable or removable materials that naturally wear away over time, such as chalk, duct tape, and spray paint. They are typically used for community events, demonstrations, or educational programs and do not include long-term maintenance plans. Installations may last from a few hours to several months.

- **Temporary Traffic Garden:** Miniature street network using temporary or removeable materials. Typically installed for a few hours (e.g., duct tape, chalk) to a few months (e.g., paint) for community events or demonstrations.
- **Mobile Traffic Garden:** Miniature street network built from portable components that can be easily assembled indoors or outdoors. Designed for temporary use during events or programs and intended to be repacked and reused as part of a mobile kit.

Photo Credit to City of Burnaby: Mobile Traffic Garden at a pop-up event in Burnaby

***Typologies are from Oregon Safe Routes to School Traffic Gardens in Oregon*

Table 10: Permanent and Temporary Traffic Garden Infrastructure Types

	PERMANENT		TEMPORARY	
	Built-Infrastructure Traffic Garden	**Surface-Applied Traffic Garden**	**Temporary Traffic Garden**	**Mobile Traffic Garden**
Duration	Years	Months to years depending on surface wear and maintenance	A few hours to a few months	Temporary and reusable, designed for repeated usage
Ideal Application	Schools, municipalities, or organizations seeking a permanent, outdoor educational facility	Schools or community facilities with existing paved surfaces	Pilot projects, seasonal programs, community events, or short-term educational activations	Organizations or educators needing flexible, transportable setups for indoor/outdoor use
Cost	Very High	High	Low	Moderate
Example	Penticton Safety Village	Montreal Jardin du petit monde à bicyclette	City of Tacoma's Traffic Garden Pilot	Burnaby Bike Learning Zone as a part of Public Engagement Child Care Action Council Mobile Traffic Garden Kids on Wheels – a balance bike program for kids ages two to six – sets up their mobile traffic garden at each camp!

The SNAP focuses on permanent traffic gardens.

For guidance on temporary traffic gardens, see
Resources: Where to Look? on page 117

CASE STUDY

The Intersection of Traffic Gardens and Bicycle and Pedestrian Safety Education

Seattle, WA

In Seattle, traffic gardens serve as dedicated learning environments that support the district's bicycle and pedestrian safety education initiatives. Programs such as All Kids Bike (Pre-kindergarten-Grade 2), Let's Go (Grades 3-5), and Let's Go Further (Grades 6-8) are integrated into physical education, helping students build confidence and road safety skills in active transportation.

Seattle Public Schools has committed to installing traffic gardens at every elementary and K-8 school in the district to support both in-class education and out-of-class play. As of 2025, 21 out of 74 schools have traffic gardens in their schools, and they are installing approximately 10-12 traffic gardens per year.

The City of Seattle's Safe Routes to School Program has funded the Let's Go curriculum since 2015, which has since expanded to include Let's Go Further and All Kids Bike (funded by a Washington State Safe Routes to School Grant). Seattle's local commitment has served as a model for the statewide School-Based Bicycle Education Grant Program, established under state legislation (RCW 47.04.390). This legislation directs the Washington State Department of Transportation to fund bicycle education programs for students in Grades 3-8 and 6-12. The grant program provides resources such as bicycles, helmets, and instructional support, and prioritizes equitable access by partnering with schools and non-profit organizations.

Seattle's traffic gardens serve as a critical infrastructure component that enables the successful delivery of these programs, aligning local efforts with statewide goals to promote safe, active transportation for children and youth.

> **"Traffic gardens can change how children, parents, and whole communities think about the street — transforming streets from something to fear into something to understand and enjoy."**
>
> — Seattle Department of Transportation, 2023

RESEARCH SAYS

In a study of over 800 children in Japan, using a traffic garden frequently as a young child (before entering school) significantly improved traffic rule awareness into grade school over those who did not use a traffic garden before entering school or used one infrequently. Specifically, behaviours such as riding bicycles on the correct side of the road, slowing at yellow lights, stopping at stop signs, and stopping for pedestrians in a crosswalk saw notable improvements amongst children who used traffic gardens once a week or three times a month before they entered school.

The study also emphasized the importance of exposing children to realistic traffic scenarios at an early age for maximum impact, as traffic garden usage and frequency declined once children began school. The authors identify early childhood (ages five and under) as a critical period for traffic safety education, with diminishing returns as children age and have competing interests for their time through school and out-of-school activities.[34]

SITE SELECTION

Site Selection Considerations

Traffic gardens can be installed in various locations within school neighbourhoods. Selecting the most suitable site involves assessing several key considerations:

- **Connectivity to cycling networks:** Prioritize sites that are easily accessible by bicycle, especially those connected to high-comfort cycling facilities.
- **Inclusive public realm:** Choose a location that is welcoming to children, parents, and caregivers with amenities such as seating, shaded rest areas, and washrooms.
- **Co-location opportunities:** Avoid creating new hard surfaces for traffic gardens. Instead share existing hard surfaces available near schools, parks, or community and recreation facilities encourage shared multiple uses and programming.
- **Central and convenient access:** Prioritize locations that are close to key community hubs and easy to reach.
- **Public transit accessibility:** If available, prioritize locations that are reachable by transit can support equitable access for parents and caregivers without cars.

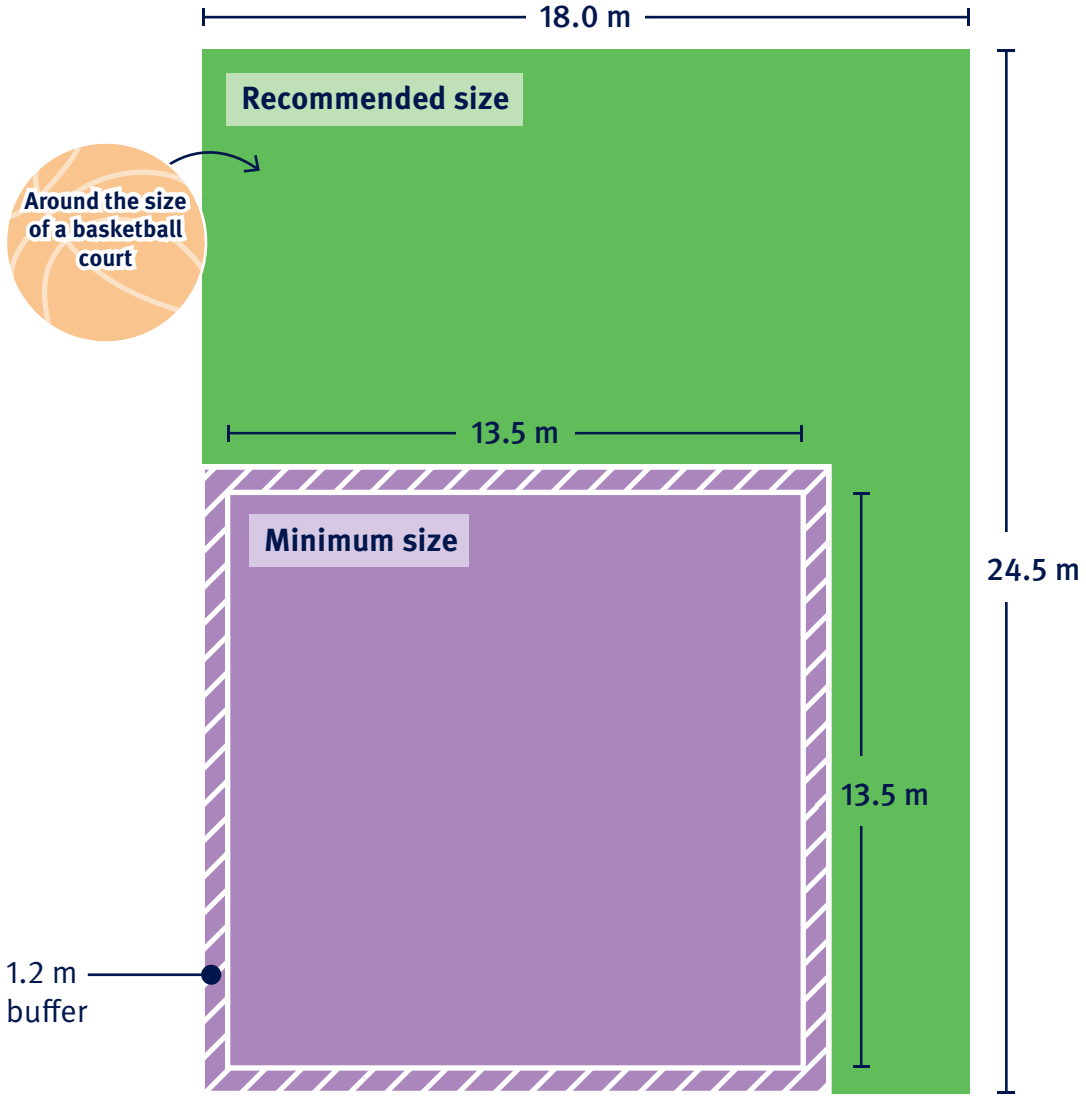
Within the school neighbourhood context, locations could include school grounds, parks, and community and recreation facilities. Underutilized spaces such as parking lots could also be candidate locations.

How big should a traffic garden be?

The recommended site dimensions for a traffic garden are 18 metres by 24.5 metres (60 by 80 feet) or larger. The minimum size of a traffic garden should be 13.5 by 13.5 metres, including a buffer of 1.2 metres around the site.

A wide range of shapes are possible if the size meets the minimum width and a site can work around existing features like basketball poles by providing adequate buffer zones.

Minimum site dimensions: 13.5 metres by 13.5 metres



CASE STUDY

They Painted a Parking Lot and Put Up a Traffic Garden

Montréal, Quebec

Montréal's Jardin du petit monde à bicyclette is a traffic garden created by converting the Pavillon Calixa-Lavallée parking lot in Parc La Fontaine. Spearheaded by Vélo Québec, in collaboration with the Plateau-Mont-Royal Borough and supported by the City of Montréal's Vision Zero initiative and the Caisse Desjardins du Plateau-Mont-Royal, the project repurposed an underutilized asphalt parking lot into a traffic garden where children can develop cycling skills and road safety awareness. Situated within a popular park and just 400 metres from two elementary schools, the traffic garden is located in a central place to serve the school community and residents.

The traffic garden features native plantings, shade trees, and seating, creating a biodiverse and welcoming space for children, parents, and caregivers. Adjacent to the traffic garden, a street closed to motor vehicles has temporary mountain biking bumps and skill-building modules, allowing children to practice navigation and maneuvering in a playfully setting.

Operating seasonally from May to October, the traffic garden includes on-site storage with an equipment lending counter offering children's bicycles, balance bicycles, and helmets in various sizes. This fleet is stored in a mobile shipping container and was funded from Sport el Loisir de l'île de Montréal's PARC ACTIF program, supporting active outdoor learning environments.

TIP

Greening Traffic Gardens

Incorporating green infrastructure, such as shrubs, trees, rain gardens, and planters, can enhance the attractiveness and functionality of traffic gardens. Beyond aesthetics, greenery transforms these spaces into pleasant, refreshing environments that may help mitigate heat island effects and manage stormwater, contributing to improved air quality, reduced noise pollution, and an inviting space for people. The inclusion of green infrastructure also contributes to the overall multifunctionality of the site by creating opportunities for learning about rainwater management and biodiversity.

When selecting the location for a traffic garden, consider the existing site conditions and seek opportunities for maintaining or integrating green infrastructure:

- **Existing asphalt/concrete surfaces:** Seek opportunities to introduce greenery and green infrastructure into the space.
- **Underutilized existing green spaces:** Seek opportunities to integrate the traffic garden into the existing natural landscape while preserving natural features.

Key considerations when selecting plants and green infrastructure:

- **Opt for low-maintenance, draught-resistant, slow-growing species:** Choose plants and green infrastructure elements that require minimal pruning and maintenance over time.
- **Maintain clearances:** Locate trees and shrubs so they do not obstruct sight lines, considering both horizontal and vertical clearances. When planting adjacent to pathways and bikeways, account for the mature spread of shrubs to ensure adequate growing space and prevent encroachment into adjacent infrastructure.
- **Avoid obstructive placement:** Avoid locating plants or green infrastructure in areas that block access for maintenance equipment or emergency vehicles.
- **Rainwater management:** Consider innovative and sustainable solutions when directing surface runoff from impervious areas. For example, directing flow to tree trenches or rain gardens, or incorporating permeable surfaces.
- **Plan for ongoing maintenance:** Include regular watering, pruning, and/or seasonal care (if applicable) in the traffic garden maintenance plan.

When incorporating green infrastructure into traffic garden design, arborists, landscape architects and stormwater specialists should be consulted to ensure that plant selection, placement, and integration to support long-term sustainability, preserve natural site functions, and enhance the educational and experiential value of the traffic garden.

Checklist: Evaluating Potential Traffic Garden Sites

Use **Table 11** to carefully evaluate the suitability of potential sites to ensure safety, accessibility, and long-term usability.

Table 11: Traffic Garden Key Site Considerations

Site Consideration	Description/Guidance
Dimensions	Site is at least 13.5 metres by 13.5 metres (includes a minimum 1.2-metre buffer zone)
Surface	Evaluate surface conditions to ensure the area is safe and even. Select smooth asphalt or concrete surfaces. Assess the potential costs for resurfacing or repairing cracks.
Accessibility and Visibility	Ensure unobstructed access for individuals using mobility devices or strollers. Ensure site is accessible by diverse modes, including transit, walking, biking, and rolling.
Ownership	Prioritize sites that are part of an existing public facility. Identify responsible parties for facility maintenance and renewal funding.
Grading	Avoid sites with slopes greater than 4.9 per cent and dips. The ideal slope for drainage and perception of mostly flat conditions is between 1.5 per cent to 2 per cent.
Safety	Avoid sites located near safety hazards such as motor vehicles, trenches, or obstacles. Identify and mitigate nearby safety hazards and concerns. Select sites that do not permit motor vehicle access, vehicle crossing, turning or backing into the site on a routine basis.
Drainage	Ensure there is adequate drainage available to avoid water pooling in the middle of the space.

DESIGNING YOUR TRAFFIC GARDEN

Traffic Garden Guiding/Design Principles

Traffic gardens should be designed to encourage road safety and cycling skills in children and new learners to support their skill building and confidence to eventually apply these learnings to the real-world streets. The following six design principles are listed below to support this goal.

Accessible and Universal Design

Traffic gardens should be accessible and inclusive for people of all ages and abilities, regardless of income and experience with cycling.

- **Barrier-free:** Ensure smooth surfaces and obstacle-free areas to accommodate all bicycles, wheelchairs, strollers, and mobility aids.
- **Places to rest:** Include shaded seating areas to support people who many need breaks, such as children, caregivers, and older adults. Where possible, ensure access to nearby washroom facilities is available to support comfort and dignity for all users.
- **Inclusive programming:** Consider offering activities and programming tailored to diverse needs reflective of the community. This may include providing bicycles at no-cost or adaptive bicycles, or courses delivered in multiple languages.

Child-centred Scale and Experience

Traffic gardens should be designed and programmed for children's needs.

- **Right-sized elements:** Streets, signage, and intersections should match children's physical dimensions and field of vision, allowing them to navigate the space comfortably and confidently
- **Developmentally appropriate features:** Design to align with children's cognitive and motor skills. Use simple layouts, clear visual cues, and interactive components to promote hands-on learning.

Safe and Comfortable

Traffic gardens should be safe and free of hazards.

- **Car-free zone:** Traffic gardens should completely prohibit motor vehicle access to ensure a safe and controlled environment.
- **Smooth surfaces:** Smooth, non-slip surfaces such as asphalt and concrete provide a stable, even surface for all users.
- **Emergency and maintenance access:** Designated access points for emergency and maintenance vehicles should be provided.

Realistic and Relevant

Traffic gardens should reflect actual street environments to support children in building the skills and confidence in getting around by bicycle in their communities.

- **Community-specific layouts:** Designs and layouts should reflect the local street network to increase children familiarity with their community.
- **Standard signage and pavement markings:** Using signage and pavement markings that are found in the real world will familiarize children with road safety skills.

Attractive and Fun

Traffic gardens should be visually engaging, attractive, and inviting to spark curiosity and play.

- **Playful aesthetics:** Use bright colours, murals, themed zones, and interactive elements like mini buildings to create a joyful and imaginative environment that encourages exploration.
- **Welcoming signage and wayfinding:** Include friendly welcome signs and child-friendly icons to help users navigate the space confidently and feel a sense of belonging.
- **Multi-use appeal:** Design the traffic garden to support various uses, such as cycling education skills courses, community events and gathering, and outdoor learning, making it a vibrant and flexible space for all ages.

Nature and Resilience

Traffic gardens should incorporate green infrastructure to enhance environmental sustainability, support stormwater management, and create healthier, resilient spaces for children and the community.

- **Nature:** Include shade trees and native plantings to create a welcoming biodiverse environment. Seek opportunities to maintain and integrate the natural landscapes.
- **Resilience:** Use permeable surfaces such as permeable asphalt and porous concrete and stormwater management features to reduce runoff and improve air quality.

TRAFFIC GARDEN ELEMENTS

To maximize a traffic garden's educational value, traffic gardens should reflect both current and future conditions of the local built environment.

Important traffic garden elements to include are:

Streets: Simulate local road layouts to mirror the routes children will encounter.

Intersections: Include a variety of intersection types (e.g., four-way stops, roundabouts, T-junctions) to teach right-of-way and turning rules.

Painted Crossings: Use clearly marked crosswalks to reinforce pedestrian safety, visibility, and how to share space with other active users.

Sidewalks: Provide designated walking areas to model safe pedestrian behaviour and separation from vehicle traffic.

Pavement Markings: Include pavement markings such as bicycle symbols, stop bars, and shark's teeth to teach children how to interpret and respond to common pavement markings.

Traffic Signage: Use traffic signage to familiarize children with road safety rules and visual cues.

Additional features: Miniature bus stops, parking, buildings, full-scale shelters or indoor space, natural features, and storage.

By grounding the design of the traffic garden with familiar and locally relevant features, traffic gardens become more than play spaces but immersive learning environments to instill the confidence and skills needed for cycling.

On-Site Storage

Including on-site storage is highly recommended. Storage can take many forms, including a room in an existing facility, a free-standing building, or a dedicated storage container near the site. Storage can accommodate portable signage, bicycles, helmets, educational materials, and programmatic supplies, supporting programming and activation of the site without ongoing equipment movement and vehicle access.

TIP

Integrating Traffic Garden Elements into Playground Design

Traffic garden elements can be seamlessly incorporated into new playground designs or retrofitted into existing ones with minimal disruption and at relatively low cost. For example, paved areas within a playground can be expanded or enhanced with painted pavement markings such as crosswalks, stop bars, and directional lanes to help children learn essential road safety skills through play. Adding miniature traffic signage further reinforces these lessons and creates opportunities for interactive learning.

These types of designs are already underway in local community parks in Metro Vancouver:

Sumas Park, Burnaby: located within 400 metres of Sperling Elementary School in the City of Burnaby, the playground update at Sumas Park included a paved loop surrounding the new swing set. This paved loop featured a cross walk, stop bar, and directional lanes to allow children to practice cycling skills in a safe, designated space at the park.

Blue Mountain Park, Coquitlam: located nearby Como Lake Middle School in the City of Coquitlam, Blue Mountain Park added miniature traffic signs to existing pathway network, enhancing play and pathway spaces without major infrastructure changes.

These design considerations can transform traditional playgrounds into dynamic learning environments where children explore cycling and road safety in a hands-on, engaging way. By embedding traffic garden elements into neighbourhood parks, local governments can promote active transportation, foster early safety education, and support inclusive play for children of all ages and abilities.

INSTALLATION AND UPKEEP

Traffic Garden Maintenance and Lifespan

The lifespan of a traffic garden is influenced by many factors such as surface material, paint quality, weather, and maintenance and upkeep. In general, the same principles that apply to maintaining and preserving any outdoor painted surface applies to traffic gardens. When properly installed and maintained, traffic gardens can last up to 10 years.

Installation Considerations

Careful considerations are needed during installation to ensure the safety and durability of traffic gardens.

- **Surface condition:** Repair cracks, potholes, or uneven areas before installation to ensure a smooth surface. Confirm the surface is suitable for a traffic garden (e.g., smooth asphalt or concrete)
- **Surface preparation:** Ensure the surface is clean, dry, and free of dirt and debris before installation.
- **Weather condition:** Schedule installation during dry, sunny weather to support proper installation, curing, and adhesion of materials.
- **Materials and application:** If using paint, apply two coats to ensure visibility and durability. Use materials designed for outdoor, high usage environments.
- **Installation approach:** Where feasible, consider professional installation to ensure proper application.

Maintenance Considerations

A proactive maintenance approach will extend the lifecycle of a traffic garden while also maintaining a safe and high-quality experience.

- **Maintenance planning:** Develop a maintenance plan that outlines expected wear and impacts related to traffic garden site use, a maintenance schedule including frequency and scope of work, a checklist for routine and periodic inspections, and a budget for maintenance activities.
- **Roles and responsibilities:** Clearly define responsibilities for maintenance, especially if the site is under multiple jurisdictions.
- **Monitoring and reporting:** Establish a clear process for the public to report issues, damages, or safety concerns.

Key Considerations by School Neighbourhood Context

All	**Shared community use:** Leverage proximity to community centres, recreation facilities, and parks to support shared use and programming. Co-located traffic gardens can benefit from existing amenities and attract diverse users, making them ideal for multi-purpose educational and recreational activities. **Pilot with temporary:** Temporary traffic gardens as a pilot strategy may be an approach to build awareness and support within the school community and greater community. These short-term installations can demonstrate the value of traffic gardens, engage students and families, and generate momentum for future permanent infrastructure through feedback, participation, and advocacy.
Urban	**Retrofit underutilized space:** Schools may have limited open space and school grounds space. Consider retrofitting underutilized paved areas such as school parking lots or small park corners using surface-applied or temporary traffic garden typologies.
Suburban	**Larger grounds advantage:** Schools may have larger grounds or adjacent parks, allowing for built-infrastructure or surface-applied traffic gardens with more complex layouts.
Rural	**Expansive grounds opportunity:** Schools may have access to expansive grounds, making them ideal for built-infrastructure traffic gardens with realistic layouts and natural features.

Cost Effectiveness: How to Implement?

Cost:

- Pop up: Low
- Temporary: Moderate
- Permanent: High
- The costs to plan, implement, and operate a traffic garden are dependent on its size, components, and materials used. For example, permanent built-infrastructure traffic gardens are the most expensive because they require permanent materials such as curbs and long-term maintenance, while pop-up traffic gardens that are meant to last a few hours or a day significantly reduce costs.

Effectiveness: Moderate

- Traffic gardens are most effective when paired with structured cycling education programs and hands-on workshops that reinforce road safety skills. Evidence supports behaviour change, although research on real-world crash reduction is limited.
- Strategic siting and programming are essential to ensure traffic gardens serve as active learning environments rather than passive installations.
- Permanent installations increase long-term effectiveness.

TIP

Leveraging Schools and Parks Capital Upgrades for Traffic Gardens

School Capital Upgrades

The Province provides most of the capital funding for school infrastructure projects ranging from new school construction to renovations. Each year, school districts submit detailed five-year capital plans to the Ministry of Education and Childcare to identify facility priorities such as new school construction, school additions and renovations, and playground equipment. There is also a Playground Equipment Program which allocates funding based on demonstrated need, prioritising schools without existing playgrounds followed by those with aging infrastructure.

These capital upgrades present a strategic opportunity to integrate traffic gardens into school environments. Whether as part of new construction, renovation projects, or playground enhancements, traffic gardens can be designed to complement physical education and cycling programs, support active transportation goals, and provide inclusive, car-free spaces for children to learn road safety skills.

Parks Capital Upgrades

Local governments generally have a Parks and Recreation Master Plan, which identifies capital investment priorities for both existing and new park developments. These plans often include upgrades to playgrounds, trails, seating, landscaping, and active transportation infrastructure within parks. Funding for these projects may come from municipal budgets, development cost charges (DCCs), provincial grants, or federal programs such as the Canada Community-Building Fund.

Traffic gardens can be a complementary feature in addition to parks capital projects – particularly in parks that are considering including a bike skills area or are located near cycling infrastructure. By integrating traffic gardens into new park designs or retrofitting underutilized paved areas or green spaces in existing parks, municipalities can create engaging learning spaces that promote active play and community connection while offering a way for children to build confidence in cycling skills.

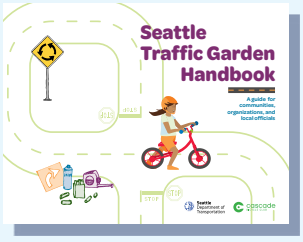
Roles and Responsibilities: Who is Involved?

Depending on the context, the roles and responsibilities among interest holders may vary.

- **Local Government:** May range from leading or supporting planning, design, and implementation; providing technical expertise on design layouts; providing facility space; identifying potential locations through planning strategies, providing funding through municipal budgets, DCCs, or grant funding; to upkeep and maintenance.
- **School District/Board:** May range from leading or supporting planning, design, and implementation; providing facility space; integration into school curriculum; to submitting capital plans and funding programs.
- **Province:** Provides major and minor capital funding for school infrastructure and grant funding opportunities; integrating cycling education into school curriculum; providing educators with professional development for cycling education.
- **Private or Community Organization:** Dependent on the organization and context, may range from leading or supporting planning and design, educational programming, community events, and/or advocacy and outreach.
- **School Community:** May range from advocacy, use and stewardship, to co-designing.

Resources: Where to Look?

Oregon Safe Routes to School's Traffic Gardens in Oregon provides a detailed overview of each of the traffic garden typologies, with details about target audience, operation, materials, installation tools, set up and storage, design, and suitable site and location.



Seattle Department of Transportation's Seattle Traffic Garden Handbook includes example site layouts, step-by-step project planning guidance, and practical tools for installation and maintenance. It covers traffic garden elements, site types, materials, and surfaces, and offers worksheets to support site selection and design. The handbook also includes strategies for integrating traffic gardens into school grounds and maximizing their educational value through mobility education and programming.

Arlington County's Planting One Traffic Garden at a Time offers practical, accessible instructions for creating mobile, pop-up, and permanent traffic gardens, regardless of available space or resources. It includes planning checklists, activity sheets, and real-world examples.

Programming

Barriers Addressed

Community Silos
Culture and Confidence
Congestion

School Streets and Play Streets

What are School Streets?

School Streets are time-limited or permanent interventions that restrict vehicle access on streets adjacent to schools to create safer, healthier environments for children while supporting walking, cycling, and rolling. Models vary based on duration, design, and level of permanence.

School Street models:

- **Permanent School Streets:** Permanent changes to the street design that prioritize children's movement and safety, often reducing vehicle parking or access. Unlike time-based closures, these interventions are built into the physical design of the street and operate at all times.
- **Year-round School Streets:** Regular, time-limited street closures during student arrival and dismissal throughout the school year. Motor vehicle access is restricted for a defined period (e.g., 30 – 60 minutes). These become part of the school's daily or weekly routine, use temporary materials, and require strong coordination between the school community and local government.
- **Seasonal School Streets:** Time-limited street closures implemented during warmer months or specific portions of the school year. Motor vehicle access is restricted for a defined period (e.g., 30 – 60 minutes) using temporary materials. Seasonal models can serve as an intermediate step between a pop-up and year-round implementation.
- **Pop-up or Pilot School Streets:** Short-term, temporary street closures used to test feasibility, build community support, and gather feedback. These are implemented using temporary materials and may coincide with special events such as Go by Bike Week, Earth Day, or Walk to School initiatives. Pilot models help partner assess operations and community response before committing to longer-term implementation.

What are Play Streets?

Play Streets are temporary street closures that create safe, welcoming public spaces for children's play and community gathering. They can occur on any street, including School Streets. Play Streets promote community connection, increase equitable access to public space, and support physical, social, and mental wellbeing, and often invite co-creation and collaboration with children. Programming can range from free play to facilitated activities, including outdoor chalk, bike/scooter courses, street hockey, balance boards, badminton, volleyball, and more. While Play Streets are relatively new to British Columbia, they have a rich history in other communities including Bristol, UK and Philadelphia, USA, where they have been running for over 50 years.

Play Street models:

- **Recurring Play Streets:** Play Streets that occur on a regular schedule (e.g., weekly or monthly) throughout a defined season or school term. These are typically hosted on the same street and build familiarity and routine within the community.
- **Pop-up or Pilot Play Streets:** Short term, one-time, or limited-duration street closures used to test feasibility, build community interest, and demonstrate the benefits and possibilities of reclaiming street space for play.

Paid and Volunteer Models

Both School Streets and Play Street can operate through paid and volunteer models. **Paid models** involve paid staff (often hired through a community organization) to plan the event and coordinate set-up, take-down, equipment transportation and storage, and communications with partners and volunteers. **Volunteer models** involve school community members or Parent Advisory Councils (PAC) to complete these tasks.

SELECTING THE RIGHT STREET

Consider the criteria below when choosing the right site for a School Street or Play Street.

- **School Bus Access (School Street only):** Consider how the school bus loading will be affected by street closures.
    - A School Street at Montview Elementary in Toronto temporarily relocated school bus loading to an adjacent street. Students would walk the remaining 50 metres through School Streets zone to reach the school entrance.[35]
- **Resident Access:** Consider how residents on the block with driveways will enter/exit during the street closures if they do not have alternative access (e.g., via alley). Avoid blocking driveways to multi-unit residential buildings, if possible.
- **Popular Entrances:** Consider entrances that are used most frequently. Selecting streets that are close to popular school entrances and community spaces are more likely to be well-used by the community.
- **Shade and Water:** Prioritize locations with shade, including tree canopy, temporary shade sails, and access to water to improve comfort in all weather.
- **Street Selection:** Residential and low-traffic streets are typically more desirable. While not impossible, arterial or collector streets will require more significant local government support and coordination. Avoid selecting streets with transit routes.
- **Bike Access:** If your School Street is implemented on a bikeway, consider how people on their bikes will interact and move through the space. Temporary cones or signs may increase safety and avoid conflict between people on bikes and children in the streets.

TIP

What's the Difference Between School Streets and Play Streets?

While School Streets always take place directly adjacent to a school, Play Streets may occur in a variety of settings and are not necessarily connected to schools or school neighbourhoods. Play Streets can occur on residential streets, at events or festivals, in urban centres, or on a School Street.

TIP

What about people living in the School Streets or Play Streets zone?

Early, clear communication can minimize disruption and build neighbourhood support for School Streets and Play Streets. Provide advance notice through letters to all impacted residents and businesses within at least two blocks of the site, reinforce messaging through school communication channels, and install physical signage well before launch. Identify and clearly communicate alternative pick-up/drop-off areas and parking options. Address common congestion concerns directly, emphasizing that these initiatives are designed to reduce long-term traffic issues, improve safety, and support children's play and movement. Clearly framing the purpose can help residents understand the broader community benefits and long-term vision for the neighbourhood.

Table 12: Key Considerations by School Neighbourhood Context

All	**Permitting:** Work with your local government to ensure you have the correct permits. The permit could be called a street occupancy permit, special event permit, road and sidewalk closure permit, etc. School Streets and Play Streets may not be the primary use of these permits and may require some creativity in identifying the right approach. **Define roles:** Identify and define the roles and responsibilities for planning and implementing the closures. If budget is available, paid School Street and Play Street models may support implementation. **Temporary closure materials:** Consider what materials to use when implementing temporary street closures, such as sawhorse barricades, mobile planters, gates, or cones.
Suburban / Rural	**Drive to 5 integration:** In communities where there may be a lack of walking and cycling infrastructure or children have to travel longer distances, consider incorporating a Drive to 5 program into the School Street.

Cost Effectiveness: How to Implement?

Cost:

School Streets

- Temporary School Streets: Low
- Permanent School Streets: Moderate to High
- Play Streets: Low
- Costs increase if paid staff are hired to support implementation. Permanent School Streets involve significantly higher costs associated with infrastructure changes.

Effectiveness: Medium to High

- Removing vehicles access during peak times leads to reduced conflicts and improved safety conditions and is the most effective programmatic measure to mitigate crashes. Several School Streets programs in Vancouver and in communities in Ontario have found that School Streets encouraged more families to use active travel more often to get to and from school during the School Streets program, supported community building and social connection, observed a reduction of motor vehicle volumes on streets adjacent to schools, and students, caregivers, and teachers reported feeling safer during the School Streets program.[36]

Roles and Responsibilities: Who is Involved?

School and Play Streets can be implemented by many groups.

- **Local Government:** Local governments, particularly transportation planning and engineering departments, play a central role in approving and managing temporary street closures. They coordinate logistics such as traffic management, signage, and physical infrastructure (e.g., barriers, cones), and may lead or support implementation, depending on the initiative. Municipal staff also help develop or adapt policies to enable School Streets and Play Streets, provide funding or in-kind resources, and oversee monitoring and evaluation to assess impact and inform future planning.
- **Local Enforcement:** Municipal by-laws, community police, and even fire departments all prioritize school zone safety and are often keen to be involved with the proactive and positive tactics that prevent reactionary initiatives like infractions, tickets, and accidents.
- **School District/Board:** School districts and boards support implementation by aligning School Streets and Play Streets with broader educational policies and priorities. They may contribute funding, facilitate coordination with school administrators, and ensure that programming complements school schedules and student needs.
- **Ministry of Transportation and Transit:** The province has supported School Streets and Play Streets through policy guidance, funding programs, and capacity-building resources. This includes grants, toolkits, and training for local governments and school districts to plan, implement, and sustain initiatives that promote active transportation and child-friendly environments.
- **Private or Community Organizations:** These groups may be responsible for delivering the program, offering financial or in-kind support, building community engagement, and advocating for School Streets and Play Streets.
- **School Community:** The school community, including the students, PAC, parents and caregivers, and school staff, is encouraged to actively participate in the design and implementation of School Streets and Play Streets. Their involvement may include planning, volunteer coordination, and program delivery.

CASE STUDY

School Streets and Play Streets

Vancouver, British Columbia

In partnership with the Vancouver School Board (VSB), the City of Vancouver launched its School Streets Program in 2021 as a rapid response to the COVID-19 pandemic. With parents restricted from entering school grounds, there was an urgent need for additional space to prevent crowding at the school entrances. What began as a four-week pilot at three schools in 2021 has matured to an ongoing program in the City's school active transportation strategy. The City's program now includes several streams including the annual Spring School Streets Program which sees an average of five schools participate for 4-6 weeks each spring, as well as a year-round School Streets Program which supports schools to run School Streets from September to June on either a weekly or daily basis. Since 2021, 13 schools have participated in the program.

The City is also participating in the National Active School Streets Initiative (NASSI), led by Green Communities Canada and funded by the Public Health Agency of Canada. This Canada-wide project will implement over 30 School Streets initiatives across six provinces, and in 2024, NASSI was expanded with funding from the Province to ten additional sites across BC outside of Vancouver. As one of four level-up communities, the City is working with two local schools to pilot Year-Round School Streets with paid staff.

In 2022, in partnership with the Society for Children and Youth of BC (SCY), the initiative expanded to include Play Streets at several schools– activating existing School Streets with programming, activities, and games during a lengthened afternoon street closure. To support these activations, on-site "Play Boxes" were installed at several schools to securely store play equipment and games when not in use.

Implementation

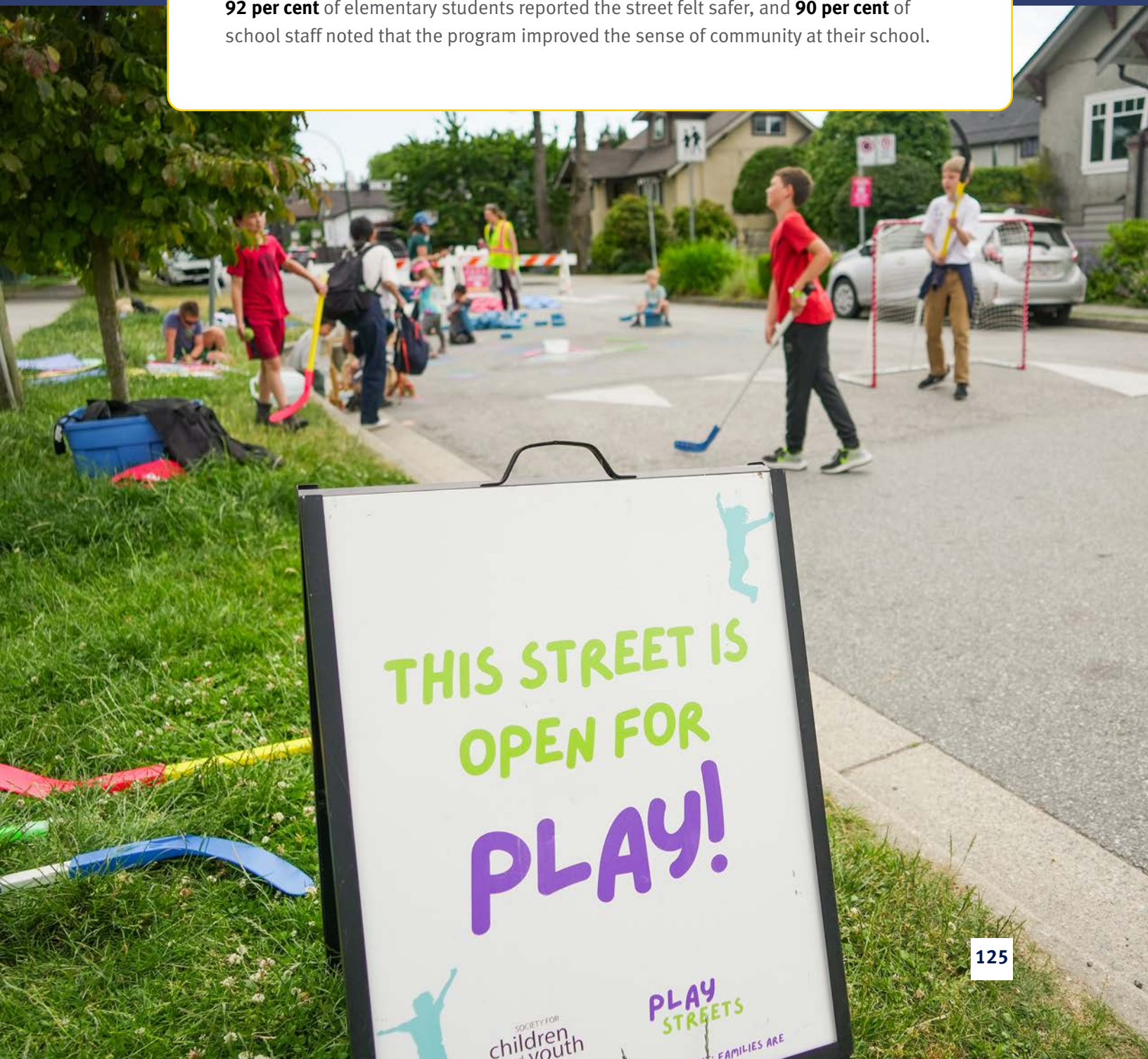
The recruitment process begins each September with an Expression of Interest. Schools already participating are prioritized for continuity, allowing for natural growth in frequency. A standout example is Selkirk Elementary, which evolved from a four-week pilot in 2023 to a year-round, daily School Street for the entire 2025/26 academic year as part of the NASSI initiative.

School selections are finalized by the City in December, with launches occurring in May to avoid Spring Break disruptions and align with warmer weather. The City facilitates working group meetings with school admin and parent coordinators from all participating schools to facilitate collaborative program planning and knowledge sharing in the lead up to launch day. While most sites utilize a parent-volunteer model – relying on a dedicated group of parents and school staff to implement the School Street closures – the City recognized that volunteer capacity varies by neighbourhood.

In 2025, the City introduced a paid leader model in partnership with SCY. This model provides contracted staff to manage barriers and safety, creating an alternative for schools who may not have volunteer capacity or are experiencing volunteer burnout.

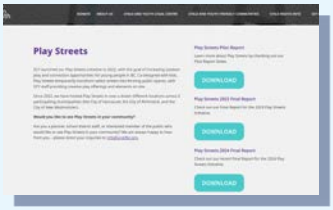
Program Impact

The program made big strides in supporting active modal shift and improving social cohesion. In 2025, evaluation data showed that **22 per cent** of participating families reported walking more, and **39 per cent** of families reporting an increase in biking. Beyond transportation, the program had a profound impact on the school environment: **92 per cent** of elementary students reported the street felt safer, and **90 per cent** of school staff noted that the program improved the sense of community at their school.

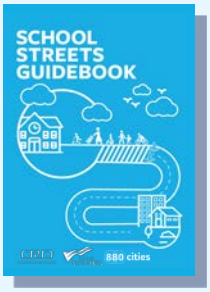


Resources: Where to Look?

The City of Vancouver's School Streets site shares program reports, impacts, and videos.



Society for Children and Youth of BC's Play Streets page shares program report and contact information.



880 Cities' School Streets Guidebook was created in collaboration with the Capital Regional District and City of Victoria to support local school street implementation.

FIA Foundation's School Streets: Putting Children and the Planet First report features case studies from cities across Europe and North America, showcasing diverse approaches to implementation, community engagement, and policy support.

Physical Activity Research Centre's Guide to Implementing Play Streets in Rural Communities provides guidance on how to implement Play Streets in rural communities, with examples from rural communities in Maryland, North Carolina, Oklahoma, and Texas.

Playing Out's Playing Out Toolkit provides guidance for organizing community-led Play Streets based on research and work conducted in the U.K.

Barriers Addressed

Congestion

Community Silos

Culture and Confidence

Walking School Bus and Bike Bus

What is a Walking School Bus and Bike Bus?

A Walking School Bus is an organized group of children walking to and from school together with the support of one or more adults, following a designated route of "bus stops" to pick up more students along the way. A Bike Bus works similarly but students ride their bicycles in a group supported by adults riding their bicycles along a designated route. These initiatives can be community-led by school community caregivers and volunteers or staff-led through a Walking School Bus or Bike Bus program.

There are two main types of walking school buses and bike buses:

- **Informal** walking school buses and bike buses involve families choosing to walk or cycle together to and from school on their own initiative.
- **Formal** models are organized by volunteers or paid leaders who manage regular, scheduled pick-ups and drop-offs, ensuring a consistent and supervised group travel experience.

Within the formal model, there are several different types of formal program models where the cost and time to implement ranges:

- **Volunteer leader model:** The Walking School Bus and Bike Bus leaders are volunteers from the school and local community, often parents and caregivers. Volunteer-led models rely on keen parent and caregiver involvement and are coordinated by a community organization.
- **Paid leader model:** This model involves hiring, training, and compensating professional Walking School Bus and Bike Bus leaders. A community organization will be needed to coordinate the program.
- **Trainer model:** A paid leader rotates between schools during the year, teaching students and adults road safety and how to run a walking school bus or bike bus. After about eight weeks of training at each site, the program shifts to the volunteer leader model for continued operation.

Common Challenges	Solutions
Shortage of adult volunteers and leaders	Offer a stipend or incentive if parents or caregivers can commit to a minimum number of days. Ask parents to contribute a minimum effort as a prerequisite for their child participating. Proactively identify potential leaders within the school community. Provide one-on-one mentorship training and "starter kits" to guide them.
Lack of consistent participation	Create a punch card with small rewards for students' participation. Organize events and celebrations around the program, aligning with Bike to School Week or other annual events.
Cold weather	Swap a bike bus for a walking school bus if the roads are icy, wet, or snowy. Hot chocolate and small incentives can boost participation. Launch initiatives in fall or spring when the weather is warmer and daylight lasts longer. In spring, momentum may be stronger due to existing social bonds and connections at the school.
Long distance to school	Implement a "Drive to 5" program where students from long distances are dropped off at a shared location to bike or walk to school.
Busy intersections and short crossing signals along the route	Reach out to your local government to identify opportunities to extend signal timing and safety along the route.
Choosing a route that is effective, safe, and central for families	Distribute surveys or use planning guides from external cycling organizations to map out existing demand, or a logical "best-guess" route and remain flexible, adjusting the route, stop locations, and time based on feedback after the first few weeks.

CASE STUDY

Maintaining Bike Bus Momentum Through the Seasons

Vancouver, British Columbia

At Gordon Elementary in Vancouver, the Bike Bus leaders use simple incentives to keep the momentum and participation high throughout the school year. Students collect punch card stamps for each weekly ride they join, encouraging consistency rather than one-off rides. Hot chocolate days help encourage students to ride through the colder months, providing a warm welcome at the end of chillier rides. Themed events also build excitement, visibility, and a strong sense of community, such as on Earth Day when students decorated their bikes and helmets. Low-cost strategies that build fun, recognition, and celebration into the journey can get students motivated and excited to ride, no matter the weather.

Table 13: Key Considerations by School Neighbourhood Context

All	**Upgrade the route:** Schools that lack safe and comfortable active transportation infrastructure surrounding the school may consider alternate routes and infrastructure upgrades to support a Walking School Bus or Bike Bus route. **Engage the community:** Limited capacity or engagement from the school community may hamper efforts. **Secure funding:** Funding and community support are essential for successful and sustainable programs that include a paid leader. **Dedicated leadership:** Either paid staff or dedicated champions to both coordinate the program and lead regular walks/bike rides are required for successful programs. Shortage of adult volunteers to lead or support the initiative may hamper efforts. **Scale up support:** Large walking school buses and bike buses will require additional adult support and volunteers. **Flat route:** Choose flat routes with minimal hills, when possible. **Multilingual outreach:** Consider the need for multilingual outreach to engage with diverse community members. **Bike parking:** Consider the bicycle parking availability and security at the school and identify a solution with the school to accommodate large numbers of bikes if the existing racks are not sufficient. **Prioritize safe routes:** Route planning should prioritize the safest routes to school when identifying 'bus stops' close to those interested in participating. **Seasonal incentives:** Programs operating year-round often involve incentives, such as hot chocolate days or small giveaways, to motivate students to keep walking and biking through all seasons. **Multiple routes:** Multiple routes may be implemented at a school depending on the program's capacity, where the school is located within a catchment, or to support non-catchment schools (e.g., French Immersion).
Suburban	**Drive to 5:** Consider a "Drive to 5" approach where families drive partway and walk or bus the final five minutes can offer a practical alternative.
Rural	**Wildlife safety:** If wildlife encounters are a known risk, adult supervisors should carry bear spray and be trained in its use and storage. **Winter adaptations:** In snowy or icy conditions, consider adapting Bike Bus routes to a Walking School Bus. **Rural route planning:** Rural routes may require additional planning for trail maintenance, seasonal darkness, and emergency communication where services or cell coverage are limited. **Drive to 5:** Consider a "Drive to 5" approach where families drive partway and walk or bus the final five minutes can offer a practical alternative.

Cost Effectiveness: How to Implement?

Cost:

- Volunteer model: Low
- Trainer model: Low
- Paid model: Low to Moderate (per route)

Effectiveness: Moderate to High

- Walking School Bus and Bike Bus programs directly increase safety while travelling to school by having a responsible adult support safe travel habits and the visibility of a group.

Roles and Responsibilities: Who is Involved?

- **Local Government**: Local government transportation planning and engineering staff can help identify potential schools and help plan safe routes for the walking school bus and bike bus. Local governments may also contribute funding, particularly as a promotional tactic to build familiarity of new supportive infrastructure around the school.
- **Provincial Government:** Provincial government staff may provide financial support, particularly to advance goals and priorities around sustainability, transportation, children's health and wellbeing, and education.
- **School District/Board**: School district staff can help distribute program information to parents or within the school and should be involved in the planning process.
- **Private or Community Organizations**: Private or community organizations may be involved with delivering walking school bus or bike bus programs at a school and developing toolkits or educational materials to support schools in starting their own routes.
- **School Community**: The school community should be engaged with to confirm the level of interest in these initiatives and capacity for their role and involvement.
    - **Parents and Caregivers:** Parents, guardians, and caregivers should be engaged to determine level of interest in the walking school bus or bike bus. They may also have a role with the planning and implementation of the walking school bus or bike bus depending on the walking school bus or bike bus model.
    - **Students and Young People:** Ideally, the people who will be walking and/or biking each day should be engaged in the planning process to determine level of interest, factors that may increase participation, and aid in program design.

Resources: Where to Look?

Society for Children and Youth of BC's website to learn more about their walking school bus program in Metro Vancouver, Vancouver Island, BC Interior, and Northern BC to see if your community is eligible for their Walking School Bus program.

HUB Cycling's website highlights the Bike Bus program in Metro Vancouver and Saanich.

Several organizations have created their own guides to help communities get started:

- **Walking School Bus**
  - Ecology Action Centre's Walking School Bus Guide
  - Canadian Cancer Society's Walking School Bus Guide
  - California Department of Public Health's Step by Step Walking School Bus
- **Bike Bus**
  - HUB Cycling's Bike Bus resources
  - Bike Bus World's How to Start a Bike Bus Guide

RESEARCH SAYS

Walking School Buses and Bike Buses: Proven Strategies for Healthier, Safer Travel

Walking School Buses and Bike Buses are proven strategies to increase children's physical activity and support active school travel. Research shows these programs encourage healthier travel behaviours while reducing traffic congestion, vehicle emissions, and safety risks around schools.[37]

In British Columbia, local evidence reinforces these benefits. Families participating in the Society for Children and Youth of BC's Walking School Bus Program report meaningful shifts in travel behaviour, including driving less and walking more. In 2025, seven Walking School Bus routes on Vancouver Island demonstrated significant mode shift:

- Morning car trips to school decreased from **60 per cent** pre-program to **33 per cent** post-program
- Afternoon car trips decreased from **64 per cent** to **24 per cent**
- Morning walking trips increased from **16 per cent** to **47 per cent**
- Afternoon walking trips increased from **14 per cent** to **64 per cent**

These results demonstrate a clear shift from driving to walking, particularly in the afternoon. In contrast, students who did not participate in the Walking School Bus at these schools saw car trips remain stable, with a slight decrease in walking trips over the same period.

Beyond mode shift, parents of both Bike Bus and Walking School Bus participants on Vancouver Island and in Metro Vancouver reported increased navigation skills and safer walking or biking habits. Parents also noticed their children making new friends at school, increasing their willingness to walk or bike outside of school trips, and improving physical stamina.[38]

TIP

Align your Walking School Bus or Bike Bus launch with existing celebrations to build excitement and buy-in. Examples could include Bike to School Week, Walktober, the Walk30 Challenge, and National Walking Month. Explore what celebratory walking and biking events are taking place near you!

Barriers Addressed

Culture and Confidence

Congestion

Drive to 5

What is Drive to 5?

Drive to 5 is an initiative providing alternative school drop-off and pick-up locations for parents and caregivers. Drive to 5 locations are typically within a five-minute safe and accessible walk to school. Underutilized public parking lots, community centres, parks, or church parking lots are common Drive to 5 locations. Parents and caregivers can either park and walk with their child(ren) or drop them off to walk independently or with other students.

Criteria for selecting suitable Drive to 5 sites may include:

- Ample parking space
- Connected sidewalk infrastructure along the full route to school
- Pedestrian activated traffic signals at crosswalks (consider crossing guards at major intersections)

Consider multiple locations in different directions to the school to support children accessing the school from across the catchment.

TIP

Use signage to clearly indicate your Drive to 5 drop-off locations and route.

Table 14: Key Considerations by School Neighbourhood Context

All	**Safe route to school:** Ensure Drive to 5 locations are connected by safe, well-maintained sidewalks, crossings, and pathways suitable for children of all ages and abilities. **Clear wayfinding:** Use clear signage and markings to guide families from drop-off points to the school. **Community engagement:** Include parents, caregivers, and school staff in identifying the convenient locations. **Organized support:** Consider volunteer-led walking groups or Walking School Buses to support younger children walking independently. **Year-round accessibility:** Consider local climate conditions and provide guidance or infrastructure to make sites accessible year-round (e.g., covered waiting space). **Municipal sites:** Consider municipally owned sites if adding signage or making changes to the site.
Rural	**Natural hazards:** Consider natural hazards (e.g., wildlife, poor lighting, snow) and implement mitigation strategies like fencing, lighting, or seasonal adjustments.

Cost Effectiveness: How to Implement?

Cost: Low

- This may include costs for signage, mapping, and community outreach.

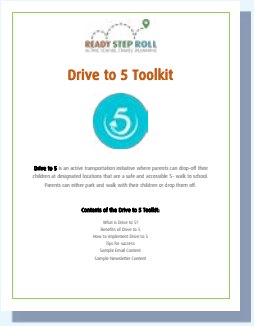
Effectiveness: Low to Moderate

- Reduces congestion at school frontages, increasing visibility and safety, however research linking crash reduction to Drive to 5 is limited.

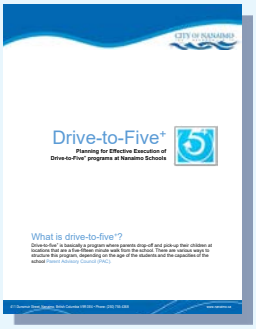
Roles and Responsibilities: Who is Involved?

- **Local Government**: Assess and approve suitable Drive to 5 locations based on traffic safety, accessibility, and proximity to schools. Ensure safe walking routes from Drive to 5 zones, including sidewalks, crossings, signage, and lighting.
- **School District/Board**: Support consistent messaging to families and staff about the purpose, benefits, and logistics of Drive to 5.
- **School Community**: Help identify practical and safe Drive to 5 locations based on lived experience and daily travel patterns. Organize walking groups, Walking School Buses, or supervision at drop-off points to support younger students.

Resources: Where to Look?

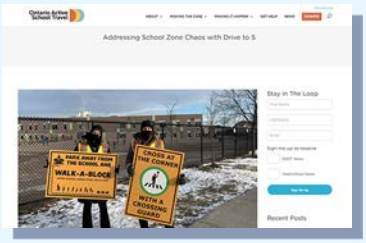


Capital Regional District's Drive to 5 toolkit offers guidance for implementing Drive to 5 programs, including benefits, site selection tips, promotional materials, and examples from the CRD's Ready Step Roll initiative.

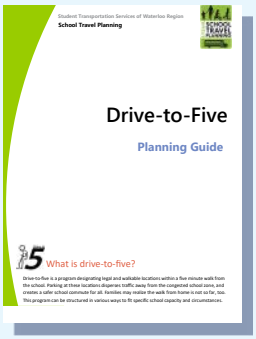


City of Nanaimo's Drive to 5 Toolkit provides four options for Drive to 5 and templates for parent communications.

School Travel's Drive to 5 toolkit outlines customizable approaches to Drive to 5, including mapping safe drop-off zones, engaging families through school communications, and organizing walking school buses.



Ontario Active School Travel's Drive to 5 page offers insight, examples, and resources to launch the program.



Student Transportation Services of Waterloo Region's Drive to 5 Planning Guide presents a tiered approach to Drive to 5, from simple email campaigns to full-scale programs with mapped drop-off zones, signage, parent greeters, and walking school buses. It includes templates, mapping instructions, and strategies for building comfort and participation among families.

CASE STUDY

Drive to 5

Capital Regional District, British Columbia

In January 2025, the Capital Regional District (CRD) launched a Drive to 5 program at Tillicum Elementary School in Victoria in response to significant construction on the three streets fronting the school, which disrupted typical drop-off and pick-up patterns and required alternate, safer travel options for students and families. Drive to 5 locations were selected from municipally owned sites to avoid insurance and permission challenges, and to permit Drive to 5 signage on site. These locations were evaluated based on clear criteria, including available parking, continuous sidewalks to the school, pedestrian-activated traffic signals, and crossing guards at major intersections.

While crossing guards did not walk with the students, each route included staffed crossings at key intersections to support independent travel by students. Custom Drive to 5 signage was designed by CRD staff and funded, installed, and maintained by the municipality. To build enthusiasm and a positive response to the sites, the CRD hosted launch parties during the first week with refreshments and Timbits for students and their parents/guardians, while the school and PAC communications emphasized how safety increased as more families participated together.

Key lessons included the importance of involved local police early to confirm route safety and assessing routes during real arrival and dismissal conditions.

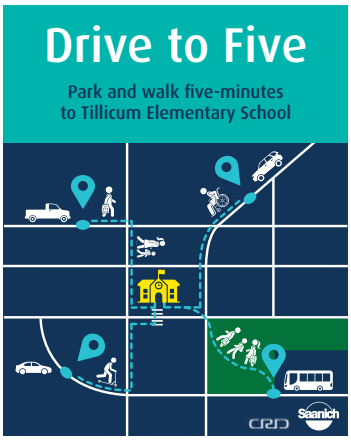


Photo credit: Capital Region District

Barriers Addressed

Culture and Confidence

Unsafe Crossings

Crossing Supervision Programs

What are School Crossing Supervision Programs?

Crossing supervision programs provide on-the-ground support to help children and families safely navigate street crossings near schools. Both adults and youth can be trained to supervise school crossings. Their key responsibilities are improving road safety, modelling safe behaviour, and creating a welcoming, predictable environment that encourages families to walk, roll, and cycle to school.

Crossing supervision programs are usually placed close to the school, although may expand to the 200–400m radius from the school when there is an unavoidable barrier along the route to school, such as a highway.

There are two models of crossing supervision:

Adult Crossing Guards

Trained, employed adults who help children cross the street safely by identifying or creating gaps in traffic and communicating to children and vehicles when they can safely move. Adult Crossing Guards will often physically indicate safe crossing opportunities by standing in the street, using an approved STOP paddle, and serving as a trusted adult to support children's journey to school. A single adult is typically stationed at a crosswalk.

Employed Crossing Guards can be funded by the local government, school district, law enforcement, PAC, and/or community organizations. Volunteer Crossing Guards may include school staff, the principal, teachers, or PAC members who rotate shifts.

Crossing Guards are not trained traffic controllers and do not have general traffic control authority. Their authority to stop vehicles is limited to the use of an approved STOP paddle; hand signals can be used as a supplementary communication tool.

Student Safety Patrols

Trained student leaders (Grades 5 to 7) help guide students across legally marked crosswalks within school zones. Certain communities may have their own programs, however, this program is most commonly facilitated in British Columbia schools by BCAA. Teams of three patrollers per crosswalk learn set procedures to patrol safely from the curbside.

This role helps youth develop important personal skills such as leadership, teamwork, volunteerism, and social responsibility. BCAA's School Safety Patrol Program has operated for decades throughout the province, with over 1,000 students participating in the program.

BCAA provides all the equipment and training resources free of charge to interested schools. To learn more, visit: BCAA School Safety Patrol Program.

Table 15: Key Considerations by School Neighbourhood Context

All	**Marked crosswalk:** Ensure you have a legally marked crosswalk on the school route for crossing guards and safety patrols to manage. **Prioritize hotspots:** Prioritize sites that are complex, have high pedestrian volumes, or are a known challenge in a neighbourhood. These may fall outside of the immediate school neighbourhood radius. **Consistent training:** Ensure consistency through training, high-visibility uniforms, signage, and daily supervision hours.
Suburban	**Drive to 5:** To reduce congestion, pair Drive to 5 with crossing supervision along the route.
Rural	**High-speed roads:** Focus on presence near high-speed roads or provincial highways. **Seasonal operations:** Consider seasonal operations depending on daylight, snow, or walking volumes. **Drive to 5:** To reduce congestion, pair Drive to 5 with crossing supervision along the route.

Cost Effectiveness: How to Implement?

Cost:

- One staffed location (annual cost): Low
- Volunteer or student crossing program (all locations, annual cost): Low
    - Costs include staffing, training, uniforms, signage, and administration

Effectiveness: Moderate

- Supervision and support at crossings, which are often the most complex part of a journey to school, increases both safe behaviour and perceived safety, though research on crash mitigation is limited.

RESEARCH SAYS

Crossing guards noted as one of the top three factors that increase AST in school neighbourhoods in the CHASE study, which observed the travel behaviours of almost 118,000 students at 552 schools in seven Canadian communities.[39]

Roles and Responsibilities: Who is Involved?

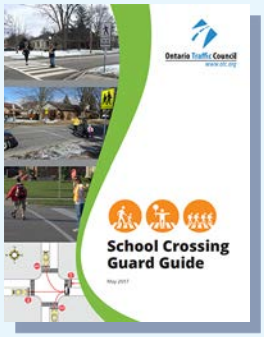
- **Local Government:** Provides funding and/or coordination, conducts site assessments, and collaborates with schools for clear communications and scheduling.
- **School District:** Provides funding and/or coordination, hiring of crossing guards, supervision, and alignment with school district priorities and policies.
- **Police or Enforcement:** Provides training, visibility, and enforcement at certain crossing locations, as needed. Certain enforcement departments may directly administer safety patrol programs or provide training.
- **School Administration & Staff:** Selects and supervises student patrollers, schedules and tracks attendances, and liaises with families.
- **Parent Advisory Committee (PAC):** Supports with volunteer recruitment, communications with families, and fundraising, as needed.
- **Students:** Act as peer leaders who model and support safe crossing behaviour and maintain safe routes to school.

Resources: Where to Look?

Ontario Traffic Council's School Crossing Guard Guide provides municipalities and school communities in Ontario with warrant methodologies, site inspection protocols, and guidance on how to integrate equity lens and Vision Zero principles into deploying adult school crossing guards.

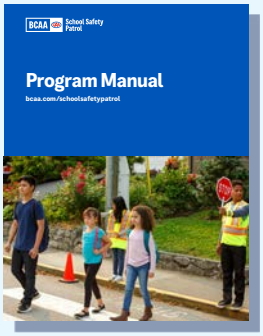
Safe Routes to School Adult School Crossing Guard Guidelines outlines the role of adult crossing guards, how to identify appropriate crossing locations, and procedures for hiring, training, and equipping guards.

BCAA's School Safety Patrol Program is a provincial program training students in grades 5–7 to assist peers at school crossings. It promotes leadership, teamwork, and safety awareness while reducing traffic congestion near schools. The program is free to schools and includes equipment, training materials, and supervisor support.



School Crossing Guard Guide

Adult School Crossing Guard Guidelines



School Safety Patrol Program

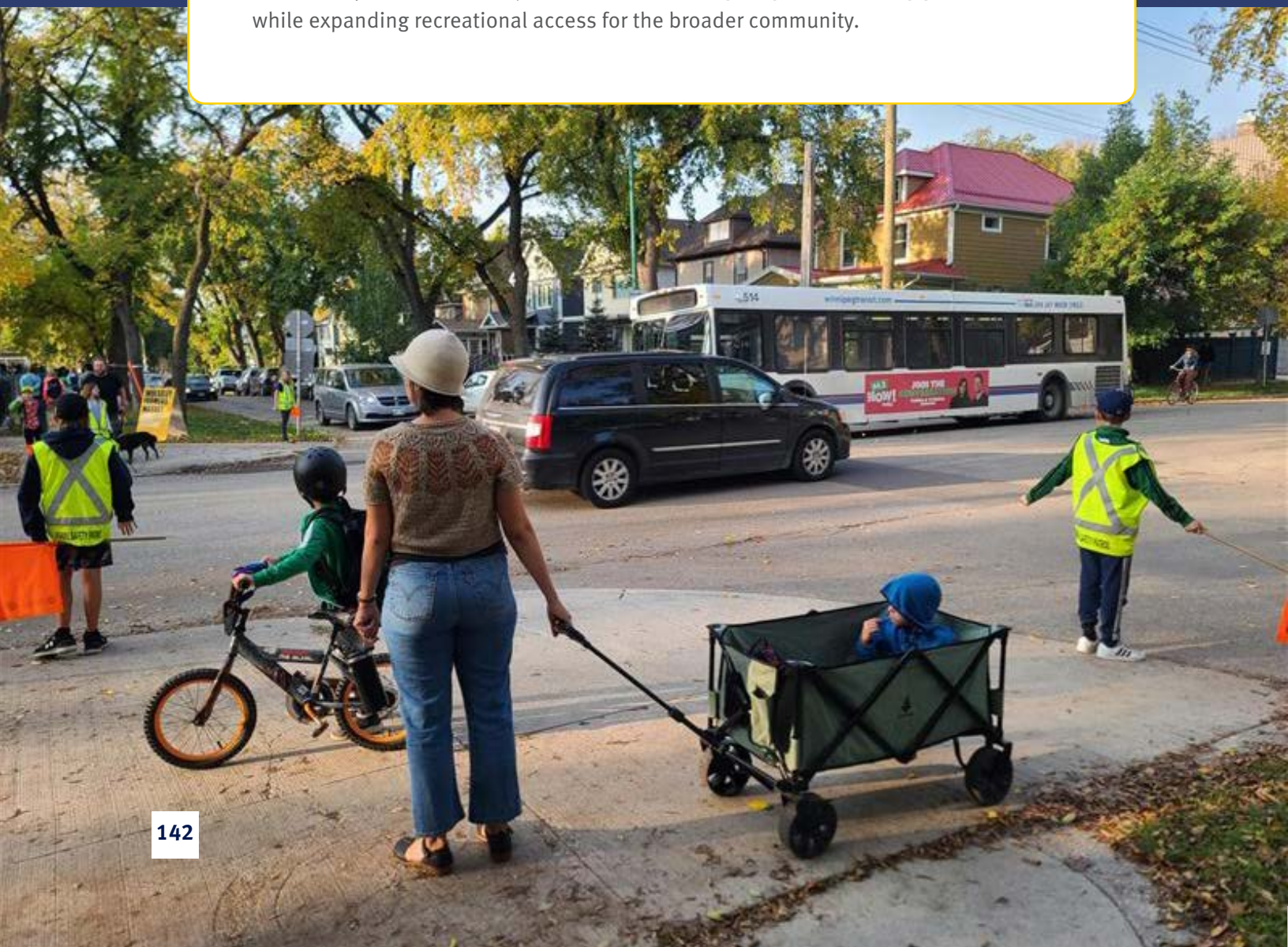
CASE STUDY

Delta Funds Crossing Guards to Support School Safety[40]

Delta, British Columbia

In 1999, The City of Delta and the Delta School District established a Memorandum of Understanding (MOU) to support the continuation of the crossing guard program across the city. Through this agreement, the City provides annual funding for crossing guards while the Delta School District administers the program, including determining locations and managing staff. In exchange, the City is granted expanded access to facilities and fields that are maintained by the school district, supporting broader community access and recreation.

As of 2025, this partnership continues to fund approximately 30 crossing guards at 19 locations around the city, supporting safe and active travel routes for students across Delta's 24 public elementary schools and ensuring long-term crossing guard services, while expanding recreational access for the broader community.



A walking school bus crossing the street together

Section 5.0

Making Progress: Implementation Instruments

Bringing together the right people with the tools and vision to transform school neighbourhoods is an important first step. The next step is implementing solutions and monitoring their impact to highlight successes, learn and adapt, build support, and make the case for future projects and funding, such as making pilots permanent or scaling up successful interventions. This section guides practitioners on how to fund, monitor, and evaluate the interventions outlined in Section 4, enabling and amplifying positive outcomes in school neighbourhoods that increase active travel, social connection, and safety.

Funding Strategies

Sustainable funding sources are essential for implementing tools for safer school neighbourhoods. While volunteers may be part of a school's active travel programs, relying on volunteerism from the school community is a known barrier to sustainable school programs and culture, exacerbated in equity-deserving communities with limited volunteer capacity. Children and their families also age out of schools, limiting the legacy of programs and efforts led by champions. Hybrid funding models are common in school neighbourhoods, drawing on a wide variety of sources from multiple levels of government, school districts, health authorities, and grants or private partnerships.

When considering physical changes to the streets and built environment in school neighbourhoods, ongoing maintenance and operation costs must be considered in addition to the upfront capital costs.

Organizational Strategies

LOCAL GOVERNMENT

Local governments play an important role in funding, supporting, and maintaining school neighbourhood upgrades, which usually occur on municipal streets.

Strategies:

- Align public works upgrades with school neighbourhood infrastructure priorities.
- Establish local government funding programs for children's active travel. These grants are often available through youth or sustainability streams for community members interested in leading a program.
- Consider requiring new development projects to provide high quality infrastructure for pedestrians, cyclists, and transit users.
- Hire a dedicated position for active school travel coordination and support or consider adding this to the job description for another position with alignment and capacity.

CASE STUDY

School Zone Speeding Camera

Seattle, Washington

Since 2012, Seattle has redirected school zone speeding camera revenue into Safe Routes to School infrastructure improvements. In partnership with the Seattle Department of Transportation, fine revenues generate millions of dollars a year that contribute to AST investment, with an expected $14 million from 2025 to 2026. Over 260 projects have been partially funded through this revenue, including new crosswalks, a new bike and pedestrian school curriculum. Safe Routes to School program investments have led to a reduction in vehicle speeds on nearby arterials by 21 per cent and established long-term sustainability of active travel investment and outcomes across Seattle.[41]

SCHOOL DISTRICT

School districts' transportation budgets are usually restricted to school bus service and do not often include funding for active school travel interventions. However, school districts play an important role in championing and supporting AST, often in partnership with other levels of government.

Strategies:

- Hire an Active School Travel Coordinator or include AST in the job description of a sustainability coordinator or similar role.
- Dedicate a portion of discretionary or sustainability funding to sustainable travel (such as installing bike racks or purchasing equipment for a Walking School Bus).
- Prioritize active travel options and access in the design of new or upgraded schools, including on site (high quality bike racks, staff bike storage, and end-of-trip facilities) and the streets around the school (traffic circulation and pedestrian priority).

CASE STUDY

Co-funded Safe Routes to School Coordinators in Oregon

Beaverton, Oregon

Beaverton School District has three coordinator roles for Safe Routes to School Coordination within the transportation department, which are co-funded by Oregon's Department of Transportation and the Oregon Metro District.[42]

TRANSLINK AND BC TRANSIT

TransLink and BC Transit play an important role in connecting school neighbourhoods to the broader active and sustainable transportation network. Both fund programs and provide technical support and coordination to make active modes safer and more accessible in school neighbourhoods.

Strategies:

- Hire a dedicated position or inclusion in a staff job description for active school travel coordination and support.
- Fund AST programming through not-for-profit delivery partners.
- Cost-share infrastructure upgrades in school neighbourhoods to fill gaps in transit, walking, and cycling networks.
- Fund research and evaluation on school neighbourhood infrastructure and programs to support longevity.

LOCAL BUSINESSES AND SPONSORS

Private organizations and local businesses can fund programs, education, and infrastructure, quickly filling gaps and sustaining momentum beyond public budgets. Engage businesses in your school neighbourhood to gauge interest in supporting safe and active school travel.

Strategies:

- Collaborate with local businesses to sponsor amenities and equipment like bike racks, benches, helmets, and bikes, or sponsor events and programs.

TIP

In many Safe Routes to School programs, local businesses contribute food, event prizes, or space for walking and biking events. Small-scale contributions or sponsorships can amplify engagement, reduce costs, and strengthen community ownership of Active School Travel initiatives within a school community.

Ongoing Grants and Cost-Share Funding

Grant funding is an essential tool to bring school neighbourhood improvements and Active School Travel (AST) programs to life. Permanent grant programs are available across British Columbia to support both infrastructure upgrades and education or engagement initiatives that make it easier and safer for children to walk, bike, and roll to school. Cost-sharing is a strategic way to leverage funding from multiple sources and often leads to more capacity building, ownership and accountability towards the work.

Communities are encouraged to research local and current funding opportunities and align applications with municipal, regional, or school district priorities. A regularly updated list of provincial AST grant opportunities can be found at: www.translink.ca/travelsmartforkids

ONGOING GRANTS

- **Annual Facility Grant (Ministry of Infrastructure)**
  Discretionary annual funding granted to school districts to address repair and maintenance priorities on school sites, including site upgrades like sidewalk repairs, traffic gardens, traffic safety, and bike racks. Learn more about the Annual Facility Grant.
- **Canadian Active Transportation Fund (Government of Canada)**
  The Government of Canada has invested $400 million over five years to support the expansion and enhancement of active transportation infrastructure. A minimum of 10 per cent of the funding envelope is allocated for Indigenous recipients.
  Learn more about Canadian Active Transportation Fund.
- **Community Infrastructure Programs** – *First Nations communities only* **(Indigenous Services Canada)** Provides funding to support First Nations communities in planning, designing, and constructing community infrastructure on reserve lands, including safe active transportation connections and school access improvements. Learn more about Community Infrastructure Programs.
- **Vision Zero Road Safety Grants (Ministry of Health and Ministry of Transportation and Transit, administered by Regional Health Authorities)** Provides up to $20,000 per project for infrastructure and programmatic initiatives that reduce road injuries, particularly for vulnerable road users like children. Learn more about Vision Zero Road Safety Grants.
- **Community Grants Program (ICBC)**
  Supports road safety initiatives designed for not-for-profit community organizations that make streets safer for all users – including children. Grant amounts vary.
  Learn more about Community Grants Program.

COST-SHARE FUNDING

- **BC Active Transportation Infrastructure Grants (Ministry of Transportation and Transit)**
  Annual provincial funding for up to $500,000 per project for active transportation infrastructure improvements. Eligible Indigenous and local governments can also apply for the active transportation network planning funding. Learn more about BC Active Transportation Infrastructure Grants.
- **BICCS and WITT Grants (TransLink – Metro Vancouver only)**
  TransLink has two infrastructure cost-share programs for local governments to improve pedestrian and cycling connections to schools, transit, and community destinations called WITT (Walking Infrastructure to Transit) and BICCS (Bicycle Infrastructure Capital Cost Share). Both competitive and allocated funding streams are available and encourage or require a minimum of 1% of the grant to be used towards promotion & education of the new infrastructure.

Monitoring and Evaluation

Why Evaluate School Travel Plans?

School travel plans should include a monitoring and evaluation strategy to track progress on implementation over time. However, there is rarely funding allocated for ongoing monitoring of completed school travel plans. As a result, there is a lack of BC-specific evidence on the impact of school travel plans on long-term behaviour change. Ideally, school travel plans will be supported with funding to complete monitoring and evaluation one to three years after adoption.

Why Evaluate School Neighbourhood Interventions?

Monitoring and evaluating an intervention's impact is a critical component to any school neighbourhood project. Monitoring helps identify what works, secure funding for future projects, and build momentum for long-term change. An evaluation strategy should be included in the planning phase before the project's implementation, identifying opportunities for qualitative and/or quantitative data from before, during, and after the project period. Monitoring that is built into the project design will lead to effective and quality outcomes.

Effective evaluation aims to:

- Verify that interventions are achieving the desired goals.
- Provide evidence to support ongoing investment, maintenance, and scale-up.
- Identify learnings to improve future interventions and adjust accordingly.
- Highlight compelling stories for partners to demonstrate impact and rally support.

Evaluation Process

For the most part, a similar process can be used for both school travel plans and projects, with the main difference being scale. School travel plans tend to collect more data across a broader scale (e.g., multiple corridors that represent the school catchment area), while data collection for projects tend to focus on a smaller scale (e.g., a single corridor where the intervention will be implemented).

1

Understand the context and what data exists

Before you plan your evaluation, understand the context of the school neighbourhood and what evaluation has already taken place. Existing project data may offer opportunities for comparison or alignment.

2

Determine key barriers

Consider which barriers you plan to overcome through your intervention. Prioritize and choose evaluation metrics linked to these barriers.

3

Plan the data collection

Plan what data to collect, who to engage, and when, where, and how to carry out data collection. Select the appropriate methods and tools, including observational tools and interactive tools.

4

Collect and analyze "before" data

Visit the school neighbourhood to understand existing conditions. Take "before" photos and collect desired qualitative or quantitative data. Organize the "before" data to inform the intervention and adjust accordingly, involving the community in the findings.

5

Implement project and collect "during" data

Collect data during programs or pilots that are temporary or temporal, using the same metrics from the "before" collection.

6

Collect "after" data, organize, and standardize all data

Collect the same metrics from "before" and "during" (if applicable) implementation. Observe impacts throughout the project and ensure results are comparable and use the same methodologies.

7

Gather insights: compare before and after data

Review the success of the initiative in overcoming the school neighbourhood barriers initially identified.

8

Communicate findings

Share the results with the project team and school neighbourhood community through storytelling and visuals. Consider amplifying positive outcomes to media outlets, elected officials, and decision-makers.

9

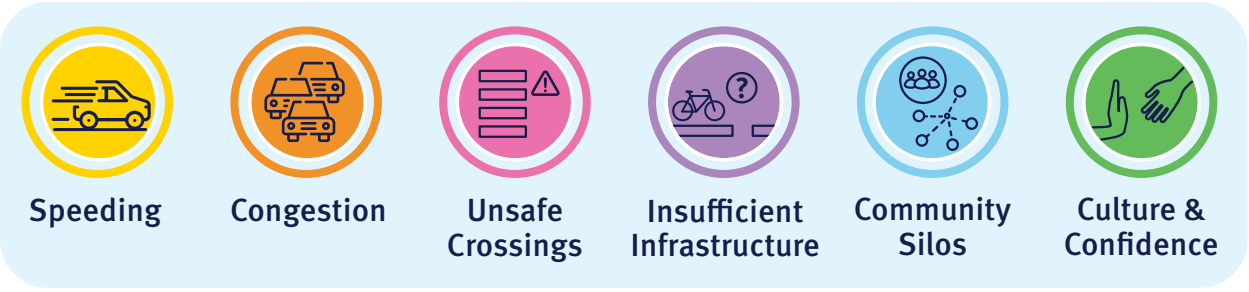
Move towards long-term impact

After assessing and sharing the impact, make recommendations for how the project can advance, such as making pilots permanent, securing sustainable funding, and expanding impact.[43]

Measuring the Impact

Prioritize "mode shift": The primary goal of evaluation is to see increased levels of active school travel. When measuring the impact of any school neighbourhood intervention, prioritize measuring how many children have switched to walking and rolling to school (called "mode shift").

In addition to mode shift, consider using secondary evaluation metrics that demonstrate how interventions have overcome the key barriers to active school travel identified in Section 2.0:



The table below was adapted from "How to evaluate street transformations near schools" (Global Designing Cities Initiative, 2024) to offer secondary data points related to each of the six barriers. Plan these metrics as early as possible for consistent monitoring before, during, and after implementation. Where possible, align metrics with local, regional, or provincial reporting frameworks to enable comparability.

	Physical and operational changes	Changes in use and function	Resulting impacts
 **Community silos**	↑ Frequency of AST community/coordination meetings ↑ Number of cross-sector partnerships or MOUs ↑ Number of community activation events or co-hosted programs per year ↑ Presence of community boards or youth councils involved in design decisions	↑ Participation in joint events or meetings ↑ Number of shared communications or co-branded campaigns ↑ Volunteers engaged ↑ Diversity of groups represented in planning and design	↑ Sustained partnerships beyond pilot period ↑ Funding or co-funding sources ↑ Policy integration across sectors (e.g., OCPs, TMPs, School District Plans)
 **Culture and confidence**	↑ Programming outside of school hours ↑ Number of schools offering cycling or pedestrian safety training ↑ Family-friendly or educational signage and murals on streets around school ↑ Number of age-appropriate recreational elements ↑ Number of play elements ↑ Size of pedestrian-only space in front of schools ↑ Sidewalk width in front of schools ↑ Number of seating elements ↑ Number of trees or plants	↑ Time spent on the streets around the school ↑ Number of children and caregivers using streets after school hours ↑ Caregiver and child participation in AST events ↑ Number of children and youth spending time in space, by age and gender ↑ Perception of connectedness or social cohesion between children, caregivers, and community members ↑ Caregiver reports that they feel safe about their children walking or cycling independently ↑ Number of social interactions or "linger" time ↑ Number of children travelling independently	↑ Self-reported sense of safety and belonging ↑ Self-reported confidence when travelling independently ↓ Levels of self-reported loneliness, stress, and/or mental illness ↑ School attendance ↑ Affordability of transportation for families

	Physical and operational changes	Changes in use and function	Resulting impacts
 **Speeding**	↑ Number of traffic calming elements ↓ Posted speed limit ↑ Number of speed enforcement campaigns ↑ % of school zones with extended or permanent 30 km/h designation	↓ Average vehicle speeds ↑ % of vehicles complying with the speed limit	↓ Number of traffic conflicts and near-misses ↓ Killed or seriously injured rates for children ↑ Reported caregiver perception of traffic safety ↑ Child independence in travel mode choice
 **Congestion**	↓ Number of parking stalls in front of school ↑ Distance from school entrance to parent loading zones ↑ Number of enforced no-stopping or loading zones	↓ Vehicle volumes ↓ Traffic conflicts ↓ Vehicle queue length and waiting time ↓ Idling time near schools ↑ Number of students arriving by active modes	↓ Traffic-related air pollution and noise levels ↓ Traffic conflicts between vehicles and pedestrians ↑ Air quality near school grounds ↑ Caregiver satisfaction with school drop-off
 **Unsafe Crossings**	↑ Number of marked, signalized, or raised safe crosswalks ↑ Refuge islands or curb extensions added ↑ Number of crossings with crossing guards ↓ Crossing distances ↑ Pedestrian crossing time	↓ Number of children crossing midblock and/or outside of a marked crossing ↑ Number of drivers yielding to pedestrians ↑ % of caregivers and children reporting crossings feel safe ↑ Caregiver reports that they feel safe about their children walking or cycling independently ↑ Observed safe crossing behaviours by students	↓ Number of traffic conflicts and near-misses ↓ Killed or seriously injured (KSI) rates for children ↑ Reported caregiver perception of traffic safety ↑ Child independence in travel mode choice

	Physical and operational changes	Changes in use and function	Resulting impacts
 **Insufficient Infrastructure**	↑ Width of sidewalks ↑ Length of protected sidewalk or bike lane network ↑ Presence or number of traffic calming elements ↑ Number of curb ramps ↑ % of school frontage with pedestrian or cycling infrastructure ↑ Number of bicycle racks or storage ↓ Vehicle lane width	↑ Number of children walking and/or cycling to school ↑ Number and percentage of children using infrastructure ↓ Number of caregivers driving children to school ↑ Number of students using bike parking ↑ Number of caregivers and children who have switched to active modes from inactive modes ↓ Number of children walking on the road shoulders or through parking lots ↑ Caregiver reports that they feel safe about their children walking or cycling independently	↑ Number of children meeting Canadian daily movement guidelines ↑ Self-reported physical and mental wellbeing ↑ Academic performance and focus at school ↑ Air quality near school grounds

Adapted from How to evaluate street transformations near schools (Global Designing Cities Initiative, 2024)

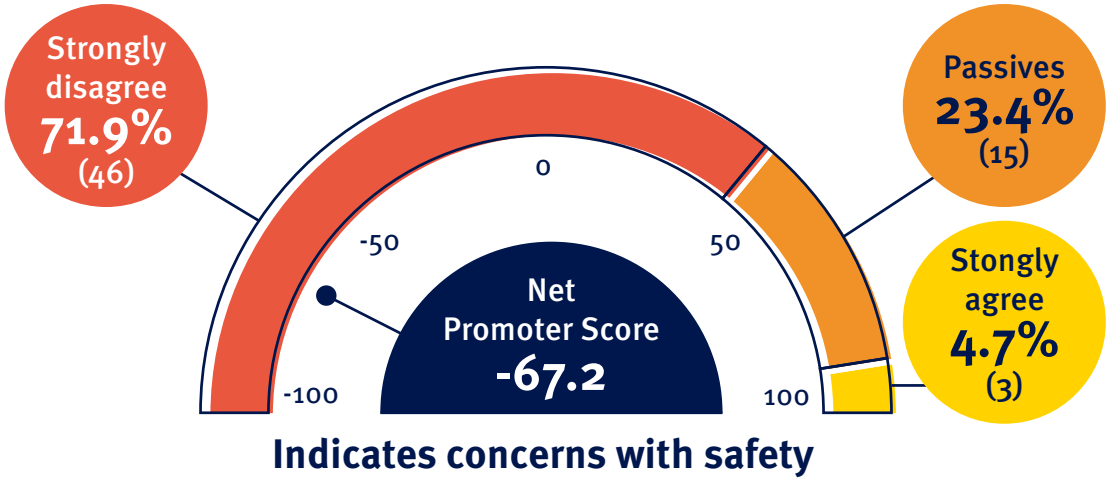
CASE STUDY

Courtenay's Innovative Approach to Assessing Perceived Safety

Courtenay, British Columbia

Net Promoter Score (NPS) is a widely used metric for gauging customer sentiment toward a product, service, or initiative. Respondents rate their agreement with a statement on a scale from 0 to 10, where 0 means "strongly disagree" and 10 means "strongly agree." Scores are categorized into three groups: Detractors (0–6), Passives (7–8), and Promoters (9–10). The overall NPS is calculated by subtracting the percentage of Detractors from the percentage of Promoters, resulting in a score that can range from -100 to +100.

In Courtenay, BC, NPS was used to assess perceived safety and inform the development of school travel plans. The survey asked parents and guardians to rate their agreement with the statement, "*My neighbourhood is safe for children to walk, bike, or roll to school.*" The 2025 results showed that 71.9% of respondents fell into the Detractor category (scores 0–6), 23.4% were Passives (scores 7–8), and only 4.7% were Promoters (scores 9–10). This produced a NPS of -67.2, indicating significant concerns about safety for children traveling to school. The NPS approach allowed the project team to easily interpret community sentiment and establish a baseline for measuring changes in perceived safety over time, as more interventions are implemented to address barriers to school travel.



Using the Appropriate Methods and Tools

There are two main data collection techniques you can use to evaluate school neighbourhood interventions: observation and interactive methods. Partnering with academic researchers and institutions will ensure the most appropriate methods and tools are applied; involve academic partners as early as possible.

Observation Methods

Observation methods involve systematically observing and recording specific aspects of a situation or behaviour without intervening, often capturing direct, tangible evidence of environmental, safety, and experiential change.

Site analysis and inventory

Document specific existing street conditions such as geometry, accessibility, greenery, street furniture, and parking. Establish a baseline for how the school frontage and surrounding network support active modes.

Counts and observations

Count and observe pedestrian, cyclist, and vehicle volumes, queue times, and behaviours before and after interventions to identify mode shifts, safety improvements, amenity use, and behavioural changes.

Air quality monitoring

Measure pollutants like particulate matter ($PM_{2.5}$) and nitrogen dioxide (NO_2) to evaluate how interventions improve local air quality.

Noise level assessments

Monitor noise levels before and after a transformation to understand changes and potential impacts on wellbeing.

Interactive Methods

Interactive data collection provides an opportunity to engage with children, caregivers, and the school community, capturing the nuanced outcomes and aspects that observational methods may not capture on their own.

Surveys

Capture community attitudes, opinions, and behaviours, often revealing qualitative dimensions like preferences, perceptions, and feelings about interventions.

Example: A hands up survey is a simple, quick in-class poll primarily used in classrooms to measure how students travel to school and their preferred methods.

Interviews

Can be structured or open-ended to explore personal experiences in-person or online.

Focus groups

Gather individuals with shared traits to exchange perspectives and experiences.

Interactive boards

Ask questions or gather input using posters, sticky notes, stickers, and markers for a low-barrier, accessible format that encourages connection and participation.

Shadowing

Involves following, observing, and talking to pedestrians as they navigate streets near schools, documenting their actions, interactions, and reactions. Photos and videos may be included.

Adapted from How to evaluate street transformations near schools (Global Designing Cities Initiative, 2024)

TIP

How do I Complete a Hands Up Survey?

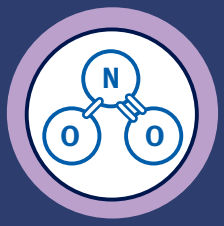
BikeWalkRoll is a browser-based web application developed and maintained by the Green Action Centre in Winnipeg. It is a quick, easy, and engaging online survey tool, designed for teachers with access to laptops or tablets in their classroom. This tool is commonly used to complete hands up surveys, collect data on how students get to school, and compare mode share with similar schools.

Air Quality Monitoring (AQM) – There's more than meets the eye

Air Quality Monitoring (AQM) is a valuable tool for evaluating environmental and health benefits of school neighbourhood improvements. While provincial networks track air quality at the regional scale, street-level assessments often require additional equipment to capture localized impacts of vehicle emissions, idling, and congestion.

Different types of monitors capture different traffic-related pollutants:

$PM_{2.5}$ monitors measure fine particulate matter associated with diesel combustion, tire and brake wear, and dust. They are affordable and commonly used for street-level or community-based studies.



NO_2 monitors measure nitrogen dioxide, the pollutant most closely linked to vehicle exhaust. These monitors are typically expensive and used in research or regional monitoring.

Information and Data Sharing

Why Information and Data Sharing Matters

Activating school neighbourhoods requires coordinated collaboration between key players that operate in different governance structures, from local governments and school districts to health authorities and police. Sharing information between key players builds a shared understanding of local issues and opportunities, promotes responsible stewardship of sensitive data, and prevents families from being repeatedly surveyed for similar initiatives. However, each key player may have different policies and procedures when it comes to information sharing and privacy. The best practice is for the key players implementing and supporting active school travel interventions to standardize their approach to information sharing. Formal agreements with clear governance structures are essential to sustaining collaboration over time, regardless of changes in staff or leadership.

Common Types of Agreements

Memorandum of Understanding

Formal agreements such as Memorandums of Understanding (MOUs) establish a shared understanding of roles, responsibilities, and intentions between partners. MOUs reduce ambiguity and ensure continuity of partnerships through staff or leadership changes. Topics may include data sharing, funding contributions, resource sharing, and coordination on projects in school neighbourhoods. Ideally, they also include timelines for regular review and renewal to ensure agreements are responsive to evolving needs. MOUs help institutionalize AST within and across organizations, embedding consistency and accountability for long-term sustainability of AST programs and partnerships.

Information Sharing Agreements

Also known as data sharing agreements, information sharing agreements (ISAs) tend to focus specifically on setting the terms for data and information sharing between parties. These detailed and legally binding agreements clarify each party's responsibilities when it comes to the collection, analysis, aggregation, de-identification, reporting, and secure storage of information. They can also clarify expectations when different parties have their own privacy policies that need to be resolved. In some cases, data or information sharing agreements may be required to comply with provincial privacy legislation for projects that involve the collection of personal information. For more information, review the Provincial Government's example information sharing agreements.

Memorandum of Agreements (MOA) also tend to be detailed and legally-binding, but they can address a wider range of issues beyond data and information sharing.

TIP:

MOU, ISA, or MOA?

An MOU is a general, non-binding agreement, while an ISA or MOA are typically more detailed and legally-binding, outlining specific terms and responsibilities for a project. While an ISA or MOU might be suitable for certain project-specific contexts, MOUs are generally more fitting to AST and school neighbourhood partnerships, outlining a broad framework for cooperation. Many school neighbourhood initiatives start with an MOU and can evolve into an ISA or MOA as data needs become more defined.

CASE STUDY

Finding the Appropriate Agreement: MOU, ISA, or MOA[44]

Tofino, British Columbia

In 2024, Pacific Rim School District (SD 70) and the District of Tofino signed an MOU to allow expanded community access to school spaces, including the gym, sports fields, and other school-owned spaces outside of school hours, and to partner on upgrading school grounds at Wickaninnish Community School. The partnership shows a shared commitment for sustainably fostering community wellbeing in their school neighbourhood and creating more space for physical activity and social connection as part of the community culture.

What Information is Typically Shared

Information sharing should be purpose-driven and limited to what is necessary to address barriers to active school travel. The following types of data are commonly shared to support active school travel plans and other projects to improve school neighbourhoods:

- **Collision data** to identify areas with a history of reported road safety issues. Sometimes this data can be publicly accessed through ICBC.
- **Demographic and socio-economic data**, such as family income and immigration status, to identify equity considerations and potential disparities in access to safe active transportation infrastructure.
- **Enforcement data**, such as the location of speeding tickets issued around schools, can help pinpoint locations with a history of unsafe driving behaviour.
- **Infrastructure data**, such as the location and connectivity of sidewalks and cycling facilities, to evaluate issues and opportunities in the existing transportation network. Sometimes this data can be publicly accessed through government open data portals.
- **Mode share data** to understand how students get to school under existing conditions, whether by walking, cycling, school bus, or private vehicle.
- **Program participation data**, such as involvement in Walking School Bus or other active school travel initiatives, to assess reach, impact, and gaps in existing programming.
- **School enrolment data**, such as aggregated and de-identified information about students' home neighbourhoods, to help understand general travel patterns to and from school without identifying individual students.

Equity and Privacy Considerations

Collecting information about children and youth requires a thoughtful approach that centres around equity and privacy. Information should be collected and analyzed with the explicit goal of helping students get to and from school safely, particularly those facing systemic barriers. An equitable approach to information sharing can help key partners fairly allocate active transportation infrastructure and programs where they are needed most. Information should never be used to stigmatize neighbourhoods or perpetuate stereotypes.

Information and data sharing practices must comply with applicable provincial and federal privacy legislation, including the Freedom of Information and Protection of Privacy Act (FOIPPA). Key partners should commit to transparency about what data will be collected, how it will be used, where it will be stored, who will have access, and how re-sharing will be limited.

Data is often aggregated and de-identified to protect the privacy of individual students.

- **Aggregated data** combines student information into group-level summaries to ensure no individual student can be identified. Examples of aggregated data include totals, percentages, or averages by school, grade, or catchment area.
- **De-identified data** removes or obscures personal identifiers such as student names, exact home addresses, student numbers, birthdates, or other details that could directly identify a child. Additional safeguards, such as suppressing data with small sample sizes or generalizing location information may be necessary to reduce the risk of identification, particularly in smaller schools or specialized programs.

CASE STUDY

Data Sharing MOU[45]

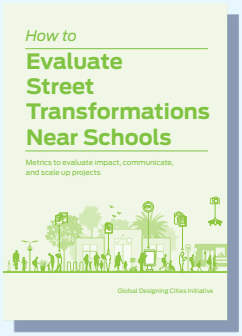
Vancouver, British Columbia

In 2021, a joint data-sharing MOU was signed by the City of Vancouver, the Vancouver Board of Parks and Recreation, the Vancouver Public Library, and the Vancouver School Board to share aggregated demographic, socio-economic, school enrollment, and other data to improve integrated planning within Vancouver communities – particularly for schools, student enrollment, and childcare planning. Data sharing MOUs enable organizations to coordinate more efficiently, minimize duplication and costs, and enable evidence-informed decision-making grounded in reliable, consistent data.

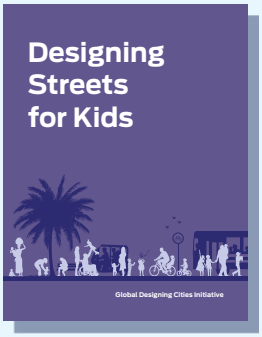
Resources: Where to Look?

Global Designing Cities Initiative's How to evaluate street transformations near schools provides guidance on evaluating street transformations near schools to measure impact, gather stories, and champion safer, healthier, and more joyful streets for kids. Find data collection tools, planning forms, worksheets, checklists, and ready-to-print templates to make evaluation clear and consistent.

Global Designing Cities Initiative's Designing Streets for Kids includes a variety of example metrics for effectively measuring the impact of projects over time.



How to evaluate street transformations near schools



Designing Streets for Kids

References

1 **Safe Routes Partnership.** (n.d.). Too far to walk? saferoutespartnership.org/too-far-walk

2 **Sallis, J. F., Spoon, C., Cavill, N., Engelberg, J. K., Gebel, K., Parker, M., Thornton, C. M., Lou, D., Wilson, A. L., Cain, K. L., & Ding, D.** (2015). Co-benefits of designing communities for active living: An exploration of literature. International Journal of Behavioral Nutrition and Physical Activity, 12, Article 30. https://doi.org/10.1186/s12966-015-0188-2

3 **Kleszczewska, D., Mazur, J., Bucksch, J., Dzielska, A., Brindley, C., & Michalska, A.** (2020). Active transport to school may reduce psychosomatic symptoms in school-aged children: Data from nine countries. International Journal of Environmental Research and Public Health, 17(23), Article 8709. https://doi.org/10.3390/ijerph17238709

4 **Gu, J., & Chen, S. T.** (2020). Association between active travel to school and depressive symptoms among early adolescents. Children, 7(5), Article 41. https://doi.org/10.3390/children7050041

5 **Larouche, R., Saunders, T. J., Faulkner, G., Colley, R., & Tremblay, M.** (2014). Associations between active school transport and physical activity, body composition, and cardiovascular fitness: A systematic review of 68 studies. Journal of Physical Activity and Health, 11(1), 206–227. https://doi.org/10.1123/jpah.2011-0345

6 **Brussoni, M., Olsen, L. L., Pike, I., & Sleet, D. A.** (2012). Risky play and children's safety: Balancing priorities for optimal child development. International Journal of Environmental Research and Public Health, 9(9), 3134–3148. https://doi.org/10.3390/ijerph9093134

7 **BC Healthy Communities.** (2024). Child and youth mental well-being resources: Play (Information guide, Section 2). bchealthycommunities.ca/wp-content/uploads/2024/03/CYMW_Play_2.pdf

8 **Litman, T.** (2025). Evaluating active transport benefits and costs: Guide to valuing walking and cycling improvements and encouragement programs. Victoria Transport Policy Institute. vtpi.org/nmt-tdm.pdf

9 **British Columbia Coroners Service, Child Death Review Unit.** (2022). Child mortality in British Columbia 2017–2021. Government of British Columbia. www2.gov.bc.ca/assets/gov/birth-adoption-death-marriage-and-divorce/deaths/coronersservice/child-death-review-unit/reports-publications/child_mortality_in_british_columbia_2017-2021.pdf

10 **Hume, C., Timperio, A., Salmon, J., Carver, A., Giles-Corti, B., & Crawford, D.** (2009). Walking and cycling to school: Predictors of increases among children and adolescents. American Journal of Preventive Medicine, 36(3), 195–200. https://doi.org/10.1016/j.amepre.2008.10.011

Panter, J. R., Jones, A. P., van Sluijs, E. M., & Griffin, S. J. (2010). Attitudes, social support and environmental perceptions as predictors of active commuting behaviour in school children. Journal of Epidemiology and Community Health, 64(1), 41–48. https://doi.org/10.1136/jech.2009.086918

11 **Greater London Authority.** (2021). School streets air quality study. london.gov.uk/programmes-and-strategies/environment-and-climate-change/environment-publications/school-streets-air-quality-study

12 **TransLink.** (2023). Trip diary 2023 (Tableau Public dataset). public.tableau.com/app/profile/translink/viz/Trip_Diary_2023

13 **Health Canada.** (2021). Traffic-related air pollution. Government of Canada. canada.ca/en/health-canada/services/air-quality/traffic-related-air-pollution.html

14 **Waygood, E. O. D.** (2025). Street design in the vicinity of elementary schools as influenced by child psychology. Transportation Association of Canada.

15 **Foraster, M., Esnaola, M., López-Vicente, M., Rivas, I., Álvarez-Pedrerol, M., Persavento, C., Sebastian-Galles, N., Pujol, J., Dadvand, P., & Sunyer, J.** (2022). Exposure to road traffic noise and cognitive development in schoolchildren in Barcelona, Spain: A population-based cohort study. PLOS Medicine, 19(6), Article e1004001. https://doi.org/10.1371/journal.pmed.1004001

16 **Weyde, K. V., Krog, N. H., Oftedal, B., Magnus, P., Øverland, S., Stansfeld, S., Nieuwenhuijsen, M. J., Vrijheid, M., de Castro Pascual, M., & Aasvang, G. M.** (2017). Road traffic noise and children's inattention. Environmental Health, 16, Article 127. https://doi.org/10.1186/s12940-017-0337-y

17 **Gheller, F., Spicciarelli, G., Scimemi, P., & Arfé, B.** (2024). The effects of noise on children's cognitive performance: A systematic review. Environment and Behavior, 56(3–4), 183–218. https://doi.org/10.1177/00139165241245823

18 **Statistics Canada.** (2023). Tracking health through daily movement behaviour: A data blog using the Physical Activity, Sedentary Behaviour, and Sleep (PASS) indicators. Government of Canada. canada.ca/en/public-health/services/reports-publications/health-promotion-chronic-disease-prevention-canada-research-policy-practice/vol-43-no-3-2023/tracking-health-daily-movement-behaviour.html

19 **Human Early Learning Partnership.** (2024). MDI 2024 provincial summary. University of British Columbia. earlylearning.ubc.ca/mdi-2024-provincial-summary

20 **University of Chicago.** (2019, December 23). Keeping students safe: Positive results from Chicago's Safe Passage program. Chicago Policy Review. chicagopolicyreview.org/2019/12/23/keeping-students-safe-positive-results-from-chicagos-safe-passage-program

21 **Green Communities Canada.** (n.d.). School travel planning toolkit. SchoolTravel.ca. schooltravel.ca/school-travel-planning-toolkit

22 **Stewart, O., Moudon, A. V., & Claybrooke, C.** (2014). Multistate evaluation of safe routes to school programs. American Journal of Health Promotion, 28(3 Suppl), S89–S96. doi.org/10.4278/ajhp.130430-QUAN-210

23 **Dinu, M., Lowe, M., Tucker, P., Fawcett, J., Danz, M., & Community Preventive Services Task Force.** (2021). Economics of interventions to increase active travel to school: A Community Guide systematic review. American Journal of Preventive Medicine, 60(1), e43–e51. pmc.ncbi.nlm.nih.gov/articles/PMC7770808/

24 **Tefft, B.C.** (2011). Impact Speed and a Pedestrian's Risk of Severe Injury or Death (Technical Report). Washington, D.C.: AAA Foundation for Traffic Safety.

25 **Ling, F., & Persaud, B.** (2019). Empirical Bayes safety evaluation of innovative bike-pedestrian crossings on urban roads. Canadian Journal of Civil Engineering, 46(7), 627–635. doi.org/10.1139/cjce-2018-0060

26 **Pitt, T. M., Macpherson, A., Fridman, L., Hagel, B. E., Winters, M., Cloutier, M. S., … Rothman, L.** (2026). Risky driving behaviors at school drop-off across Canadian municipalities: Findings from the Child Active Transportation Safety and the Environment (CHASE) study. Traffic Injury Prevention, 27(1), 84–88. https://doi.org/10.1080/15389588.2025.2478153

27 **Vélo Québec.** (2025). Guide de sécurisation des accès aux écoles. velo.qc.ca/ressources/guide-de-securisation-des-acces-aux-ecoles

28 **ICBC.** (2019). School's in but speeding shouldn't be: ICBC survey reveals drivers flunk on speeding near schools (News release). icbc.com/about-icbc/newsroom/2019-aug28

29 **Rothman, L., Hagel, B., Howard, A., Cloutier, M. S., Macpherson, A., Nettel-Aguirre, A., McCormack, G. R., Fuselli, P., Buliung, R., HubkaRao, T., Ling, R., Zanotto, M., Rancourt, M., & Winters, M.** (2021). Active school transportation and the built environment across Canadian cities: Findings from the child active transportation safety and the environment (CHASE) study. Preventive Medicine, 146, 106470. https://doi.org/10.1016/j.ypmed.2021.106470

30 **Keegan, N. L.** (2020). Children who say hand dryers "hurt my ears" are correct: A real-world study examining the loudness of automated hand dryers in public places. Paediatrics & Child Health, 25(4), 216–221. doi.org/10.1093/pch/pxz046

31 **National Association of City Transportation Officials.** (2017). Designing streets for kids (Chapter 5.6). nacto.org/publication/designing-streets-for-kids

32 **Dumbaugh, E., & Rae, R.** (2009). Safe urban form: Revisiting the relationship between community design and traffic safety. Journal of the American Planning Association, 75(3), 309–329. doi.org/10.1080/01944360902950349

33 **Dumbaugh, E., & Frank, L.** (2007). Traffic safety and urban form: Findings from the built environment. Journal of the American Planning Association. naturewithin.info/Roadside/TransSafety_JAPA.pdf

34 **Chakma, M., Matsuo, K., & Sugiki, N.** (2024). Impact of traffic parks on traffic safety education for elementary school students. Journal of the Eastern Asia Society for Transportation Studies, 15, 1953–1972. doi.org/10.11175/easts.15.1953

35 **8 80 Cities.** (2020). Mountview summary report. 880cities.org/wp-content/uploads/2020/06/8-80-Streets-Mountview-Summary-Report.pdf

36 **City of Vancouver.** (2025). School streets program report 2025. vancouver.ca/files/cov/school-streets-report-2025.pdf

Ontario Active School Travel. (2022). Ontario school streets pilot summary report. ontarioactiveschooltravel.ca/wp-content/uploads/2022/11/OSSP-Summary-Report_Final.pdf

37 **Larouche, R., & Mendoza, J. A.** (2018). Walking school buses and bicycle trains. In R. Larouche (Ed.), Children's active transportation (pp. 233–251). Elsevier. doi.org/10.1016/B978-0-12-811931-0.00015-6

38 **Society for Children and Youth of BC.** (2024). Walking school bus impact summary (2024–2025). scybc.ca

39 **Rothman, L., Hagel, B., Howard, A., Cloutier, M. S., Macpherson, A., Nettel-Aguirre, A., McCormack, G. R., Fuselli, P., Buliung, R., HubkaRao, T., Ling, R., Zanotto, M., Rancourt, M., & Winters, M.** (2021). Active school transportation and the built environment across Canadian cities: Findings from the child active transportation safety and the environment (CHASE) study. Preventive Medicine, 146, 106470.

40 **Delta Optimist.** (2021, September). Delta, BC crossing guards funded by city. delta-optimist.com/local-news/delta-crossing-guards-funded-by-city

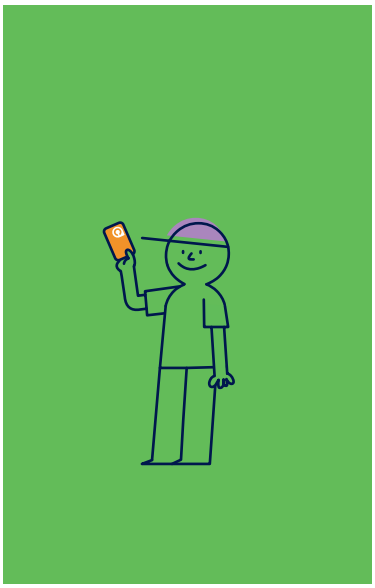
41 **Bhatt, C.** (2023). How to teach bike safety to kids: What Seattle is doing as traffic deaths rise. The Seattle Times. seattletimes.com/seattle-news/transportation/how-to-teach-bike-safety-to-kids-what-seattle-is-doing-as-traffic-deaths-rise

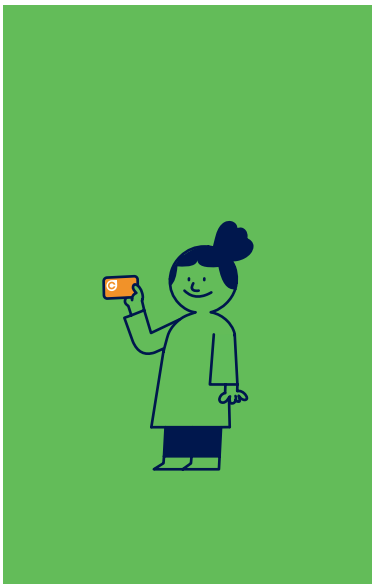
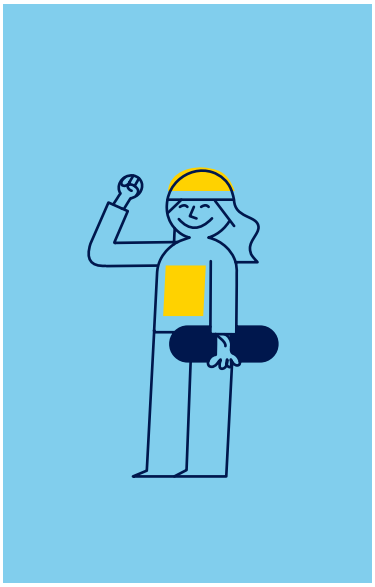
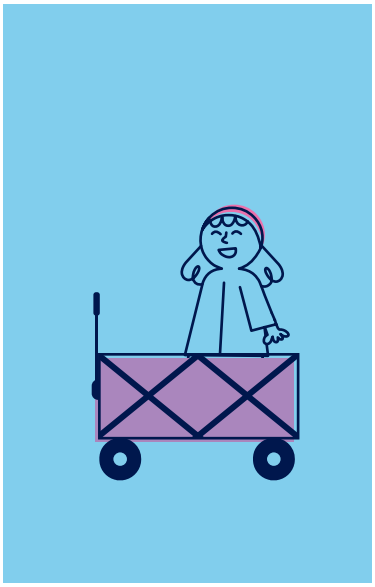
42 **Beaverton School District.** (2024). Safe routes to school annual report 2023–2024. beaverton.k12.or.us/departments/transportation/safe-routes-to-school/safe-routes-to-school-annual-report-2023-2024

43 **Global Designing Cities Initiative.** (2024). How to evaluate school street transformations. globaldesigningcities.org

44 **District of Tofino.** (2024). Data sharing MOU. tofino.ca/dot-prsd-mou-june-10-2024

45 **Vancouver School Board.** (2024). New joint data-sharing MOU with Vancouver School Board. vsb.bc.ca

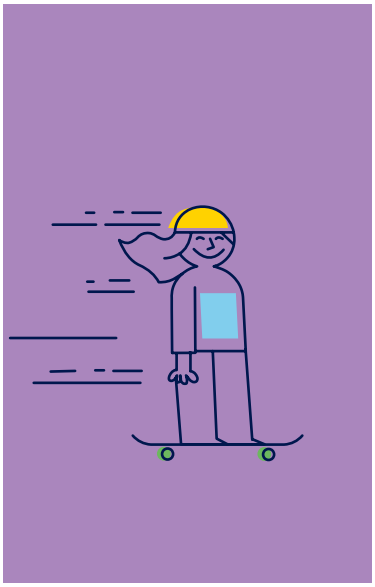


Appendix A

Glossary






Active transportation: any form of human-powered transportation, including walking, cycling, or rolling using a skateboard, in-line skates, wheelchair, or other wheel-based forms of human-powered transportation. It also includes winter-based active modes, water-based active modes, and horseback riding, although these modes are typically more recreational in nature.

Active school travel (AST): the practice of using active transportation for the journey to and from school. Common modes include walking on foot, rolling in mobility devices such as wheelchairs, and wheel-based modes like bicycling, scootering, and skateboarding.

Accessible: transportation facilities, infrastructure, and services that are designed or programmed to enable all people safe and comfortable access and use, regardless of age, physical or cognitive abilities, or socio-economic background.

Activation: uses, activities, and infrastructure elements that promote interaction amongst people, the public realm, streets, and the communities.

Amenities: features or facilities within the public realm that enhance a person's movement through or experience within the space. Examples include pedestrian lighting, secure bike parking, wayfinding, benches, garbage bins, water fountains, and shelters.

Bike Bus: an organized group of children riding bikes to school together along a set route with the support of one or more adults.

Built environment: the human-made design and layout of the communities in which people live, work, and play. The built environment is made up of neighbourhoods, homes, workplaces, schools, shops and services, sidewalks and cycle paths, streets and transportation networks, green spaces, parks and playgrounds, buildings, and other infrastructure.

Child-friendly design: the creation of environments, programs, and products that are safe, accessible, and appealing to children and consider children's development needs.

Children's independent mobility: the freedom of children to travel around their neighbourhood by themselves without adult supervision.

Chicane: a traffic calming design using a series of curb extensions or narrowings that creates a serpentine or S-shaped indirect path for drivers, forcing them to slow down.

Co-locating: the practice of placing two or more educational, recreational, commercial, or community amenities in close proximity to support shared use, improve convenience, and reduce travel time and costs. Co-location makes it easier to access multiple destinations within a single trip, which can be particularly beneficial for children and families.

Curvilinear: a street layout characterized by curved roads, loops, and cul-de-sacs rather than straight, connected grids.

End of Trip Facilities: designated spaces that support people using active forms of transportation. These often include bicycle racks, change rooms, lockers, long-term bicycle storage (rooms, cages, lockers), and bike maintenance tools.

Greenhouse Gas Emissions (GHGs): like the glass of a greenhouse, gases in Earth's atmosphere trap the sun's heat. These "greenhouse gases" allow the sun's rays to pass through and warm the planet but prevent this warmth from escaping the atmosphere into space. Human activities like burning fossil fuels have added huge quantities of carbon dioxide, methane, and nitrous oxide to the atmosphere, creating a "greenhouse effect" that traps energy from the sun and causes Earth's temperature to rise.

Health: a state of complete physical, mental, and social wellbeing and not merely the absence of disease or infirmity.

Micromobility: micromobility includes both human-powered mobility devices (bikes, kick scooters, etc.) and electric-assisted mobility devices (electric bikes, scooters, etc.) which can be personally owned or used in shared fleets.

Mode: a specific form of transportation, such as walking, rolling, cycling, taking transit, or driving.

Mode share: the percentage of trips being made by using a particular type of transportation (modes). Typical modes include walking, cycling, transit, driving alone, driving with others, and an 'other' category that can include taxi, motorcycle, etc.

Multi-modal: two or more modes of transportation. This typically includes the pattern of several modes during a single trip, such as walking to transit; characteristics of a street that accommodate more than one mode; and/or a transport hub that enables people to connect and transfer between different modes of transportation.

Public realm: an area that is publicly accessible, including streets, squares, parks, and open spaces and can be used to enable interaction and connection amongst people in a community.

RRFB (Rapid Rectangular Flashing Beacon): a pedestrian-activated safety device installed at crosswalks to alert drivers, using bright, irregular amber LED flashing patterns. RRFBs enhance visibility of people crossing, increasing driver yielding rates at marked crossings.

School neighbourhood: A school neighbourhood refers to the immediate surrounding area of a school, generally 200-400 metres surrounding the school property. This is the zone where students and families most directly experience and participate in the street environment during pick-up and drop-off, and where active school travel interventions are most concentrated.

Sustainable transportation: modes of transportation and/or systems that have a low impact on climate and the environment, while supporting the social and economic needs of the communities they serve. In school neighbourhoods, the most common modes of sustainable transportation are walking, rolling, bicycling, taking transit, or multimodal trips (i.e., Drive to 5).

Systems thinking: an approach to understanding complex questions by looking at things holistically rather than breaking them down into parts and addressing them individually.

Tactical urbanism: enables light, quick, and cheap implementation of projects that address safety issues, equity concerns, and infrastructure gaps while engaging with the community. It consists of a series of rapid, low-cost project implementation techniques that aim to test and showcase new ideas, enhance the public realm, and create lasting positive outcomes.

Traffic calming: physical measures implemented on streets to reduce traffic volume and/or speed.

Trip chaining: linking multiple destinations into a single journey, such as dropping a child off at school on the way to work or stopping at a store on the way home. Trip chaining is a common travel practice for caregivers.

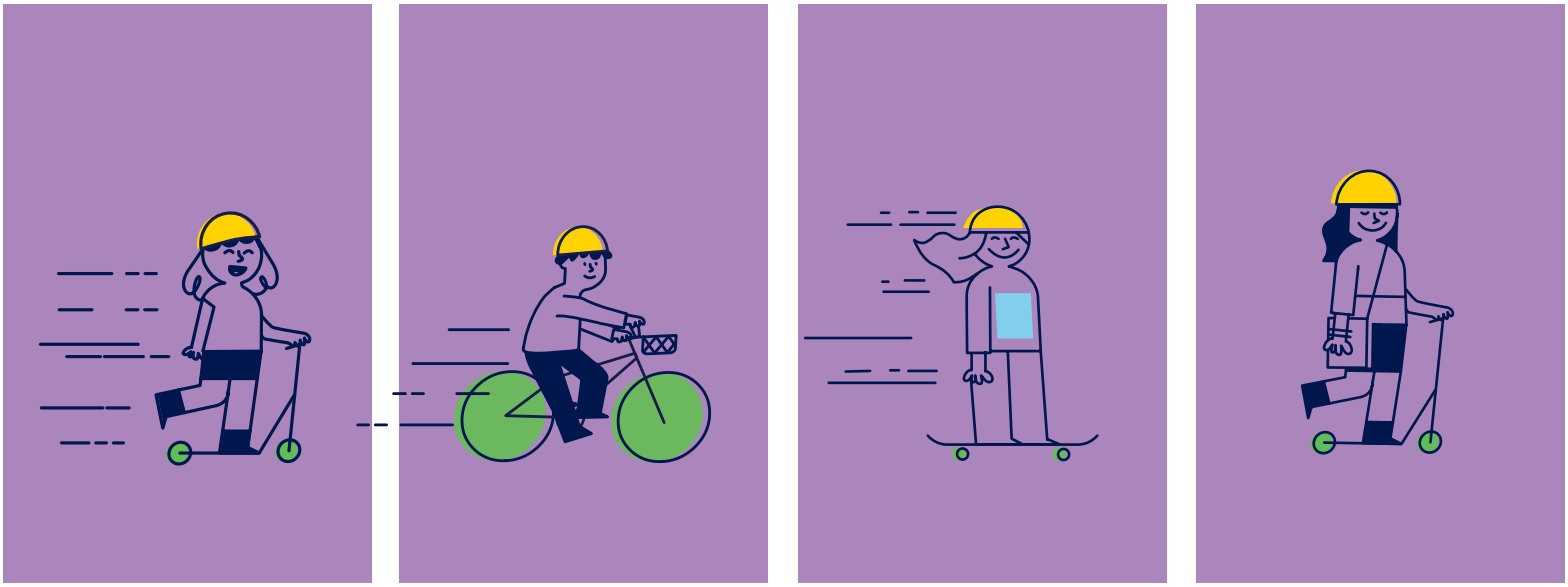
Walking and rolling: the mode of transportation of a pedestrian. It includes people travelling by foot and people using mobility devices, such as wheelchairs or walkers and people with strollers.

Walking School Bus: A Walking School Bus is an organized group of children walking to and from school together with the support of one or more adults, following a designated route of "bus stops" to pick up more students along the way.

Wayfinding: a system that assists travellers in orienting, navigating, and moving through an environment using architectural and urban design features, visual cues, and signage.

Appendix B

Intervention Cost Estimates (2025)



Intervention Cost Estimates (2025)

Cost Legend

Category	Intervention	Estimated Cost (2025)	Considerations
Planning and Policy	1. School Travel Plan	Moderate ($50K to $100K)	STP development only, per school. Does not include implementation costs or staff time.
	2. Speed Limit Reductions	Low ($5K to $15K per school)	Costs are associated with traffic signage and paint.
	3. On-Street Parking Management	Low (‹$5K to $20K)	Includes signage, curb paint, and consultation. More complex changes may reach moderate costs. Cost breakdown by type: signage ‹$10K; pavement markings and surface treatments ‹$20K; vertical and horizontal deflection ‹$40K (moderate); traffic diversion measures ›$100K (moderate).
Infrastructure – Traffic Calming	4. Signage	Low ($7K)	Signage, pavement markings, and surface treatments tend to be cheap and quick to implement.
	5. Pavement markings and surface treatments	Low (‹$20K)	
	6. Vertical deflection	Low (~$7K per speed hump)	Vertical and horizontal deflection measures take low to moderate time and resources to implement, depending on the choice of rapid or traditional implementation approach.
	7. Horizontal deflection	Moderate (›$50K)	
	8. Traffic diversion	Moderate (‹$100K)	Traffic diversion measures tend to take the most time and cost more to implement due to the extra time for community engagement, as traffic diversion measures have the largest impact on motor vehicle movement.

Category	Intervention	Estimated Cost (2025)	Considerations
Infrastructure – Crossing Improvements	9. Flashing beacons	Moderate to High ($70K to $200K)	Cost Dependent on the type of flashers required (ex. RRFB vs Overhead Flashers).
	10. New crosswalk	Low ($5K to $20K)	Cost associated with pavement marking and signage, and dependent on crossing distance and type of pavement marking required (Parallel lines vs Zebra crossings).
	11. New signal	High ($250K to $1M)	Signal costs dependent on crossing distance, number of signals/poles required, and extent of roadway reconstruction required. Lower bound cost is for pedestrian half signal with minimal roadway works required, while upper bound is for full signalized intersection with roadway reconstruction.
	12. Additional crossing time	Low (<$5K)	Cost for adjustment of signal timing. May vary depending on complexity of intersection.
	13. Curb ramps	Low ($7K each)	Cost for one single ramp.
	14. Curb extension	Moderate (~$35K each)	Cost for one curb extension. May vary depending on if the intersection roadway needs to be reconstructed to accommodate the curb extension.
	15. Raised intersection	High (~$300K)	Cost for reconstructing curb ramps and raised intersection. Cost may vary based on size of the intersection.
	16. Pedestrian refuge island	Moderate ($50k to 100k)	Cost may vary based on location of refuge island (arterial vs collector vs local roadways), and if the intersection needs to be reconstructed to accommodate the refuge island.
Infrastructure – Active Transportation	19. Sidewalk / Pedestrian Facility	Moderate (~$100K per 100m)	Includes curb cuts, tactile paving, and accessible pedestrian infrastructure. Rapid implementation techniques can reduce cost and timeline. More permanent measures (poured concrete, drainage changes) take more time and cost more.
	20. Cycling Infrastructure	High (~$200K per 100m)	'Comfortable for Most' cycling facilities such as protected bike lanes and cycle tracks. Costs increase significantly with physical separation, signal upgrades, or drainage changes.
	21. Multi-Use Path	High (~$200k per 100m)	Shared paths accommodating both pedestrians and cyclists. Costs vary based on width, surface material, and whether new right-of-way is required.
	22. Bicycle Parking (short-term)	Low (<$20K)	The cost of bicycle parking varies depending on the type and amount of bicycle parking needed. Including installation, an inverted U bike rack (recommended) costs around $750.

Category	Intervention	Estimated Cost (2025)	Considerations
Infrastructure – Placemaking and Wayfinding	17. Placemaking	Low to Moderate (‹$5K–$100K)	Costs vary widely by scale and features. Temporary installations, murals, and planters are low-cost; permanent street furniture, shade structures, or sidewalk changes are higher cost.
	18. Traffic Gardens	**Pop-Up** Low ($1K to $10K)	Temporary installations lasting hours or a single day. Uses paint, cones, and moveable props. Lowest cost and quickest to implement; ideal for pilots and community engagement events.
		Temporary Moderate ($10K to $50K)	Semi-permanent installations lasting weeks to months. May include modular planters, flexible signage, and painted surfaces. Allows testing of design concepts before committing to permanent infrastructure.
		Permanent High ($100K to $350K)	Built-infrastructure installations with permanent curbs, surfaces, and long-term maintenance requirements. Most expensive due to durable materials and ongoing upkeep.
Programming and Activation	23. School Streets	Low ($5K to $10K for temporary interventions)	Costs increase if paid staff are hired to support implementation. Permanent school streets involve significantly higher costs associated with infrastructure changes.
	23. Play Streets	Low (‹$1K to $5K)	Staffed or recurring play streets will increase costs.
	24. Walking School Bus and Bike Bus	Low to Moderate (‹$1K to $25K)	Costs vary by program model. A paid, twice-daily Walking School Bus route will run the highest cost.
	25. Drive to 5	Low (‹$20K)	May include costs for signage, mapping, and community outreach.
	26. Crossing Supervision Programs	**Per staffed location per year** Low ($5K to $15K)	Main costs include staffing, training, uniforms, signage, and administration.
		Volunteer or Student Safety Patrol (full school district) Low (‹$10K)	For volunteer or student led programs, costs include training, uniforms, signage, and administration.

**Cost estimates are based off of general 2025 costs in Metro Vancouver. Cost could greatly vary based on size of project, location/region, local conditions etc. For example, rural sites may see higher construction costs due to the need to transport materials further, while coastal locations may experience higher costs due to soil conditions.*

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TRANS LINK

BRITISH COLUMBIA