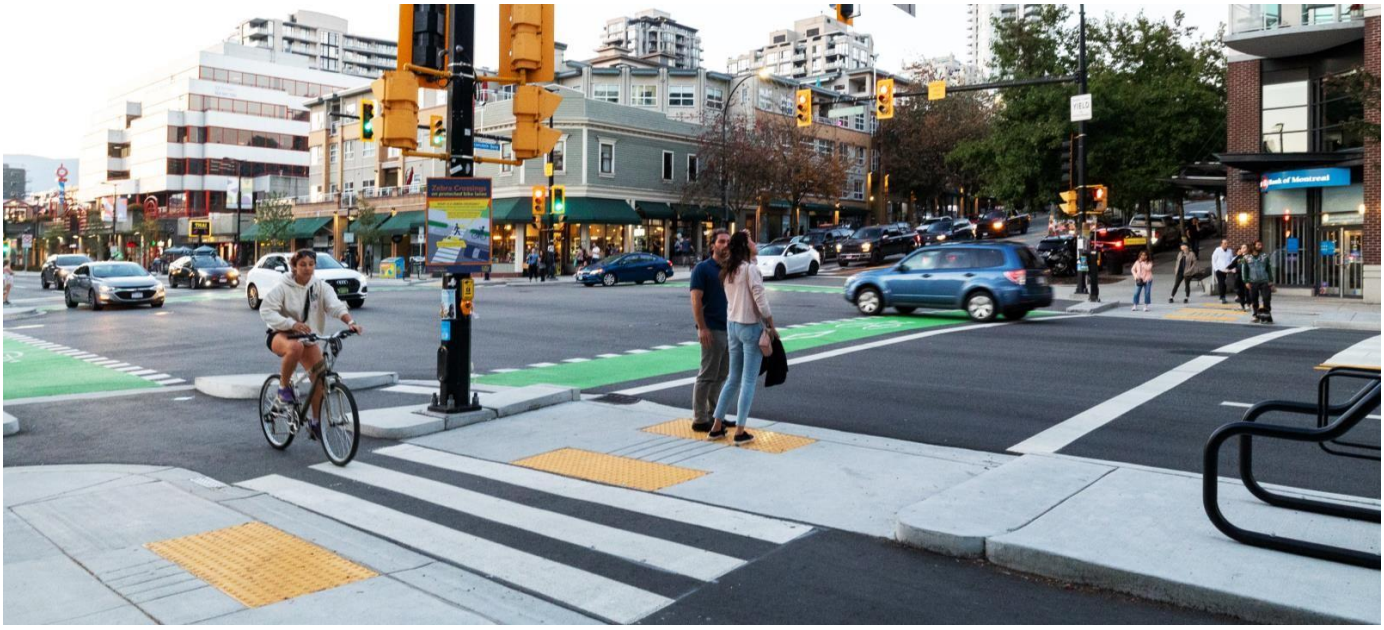


Airdrie on the Move
Active Transportation and Micromobility Plan

Executive Summary

Discover the transformative vision of Airdrie on the Move: Active Transportation and Micromobility Plan. This groundbreaking strategy aims to create a healthier, safer, and more connected community. The plan focuses on promoting active transportation through Small Rides (bicycles, e-bikes, scooters) and maintaining essential infrastructure for Big Rides (cars, trucks, buses).

Airdrie already boasts great recreational cycling routes, and this plan builds upon that by identifying opportunities to create a more direct network for commuters. Imagine a city where pedestrians and small ride users seamlessly navigate through well-designed pathways and low-stress streets. With over 360 kilometers of sidewalks and 150 kilometers of pathways, Airdrie is already on the right track. But this plan takes it further, filling in the gaps and enhancing connectivity to ensure everyone can move freely and safely.

Inspired by winter cities like Edmonton, Saskatoon, and Minneapolis, Airdrie's plan incorporates best practices to create safe, connected, low-stress routes for all users. Major projects include completing missing links, adding new grade-separated crossings, and expanding the rail trail. It's all about creating a seamless network that's accessible year-round.

The implementation plan outlines cost estimates categorized by project complexity, prioritizing improvements based on usage levels and proximity to alternative routes. Diverse funding sources, including federal programs and provincial grants, will help make this vision a reality.

Supporting bylaws and programs are also part of the package. Updates to the Traffic Bylaw will establish safe passing distances and regulate small-ride parking. The Parks Bylaw will allow small rides on park pathways, and the Land Use Bylaw will require end-of-ride facilities in new developments. It's all about creating a cohesive, user-friendly environment.

Community engagement is crucial, and the plan includes cultural programs like Safe Routes to School, cycling training, and education. Community grants will support local organizations promoting small rides and pedestrian culture. Additional recommendations include prioritizing pathway lighting, expanding snow and ice control policies, and enhancing wayfinding signage.

Importantly, this plan complements—not competes with—the networks for Big Rides (cars, trucks, buses). Airdrie has the advantage of room for complete networks for both small rides and big rides.

Airdrie on the Move is more than just a plan; it promises a brighter, more connected future for our city. Join us on this exciting journey towards sustainable and active transportation!

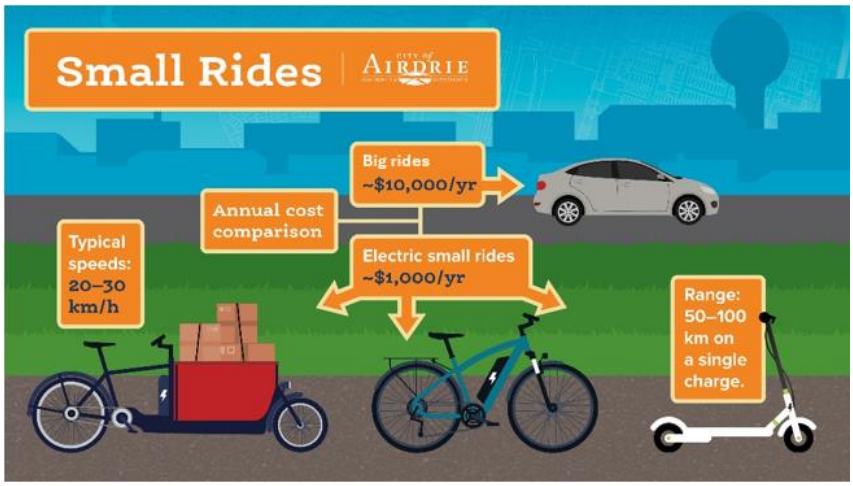
Contents

Maps

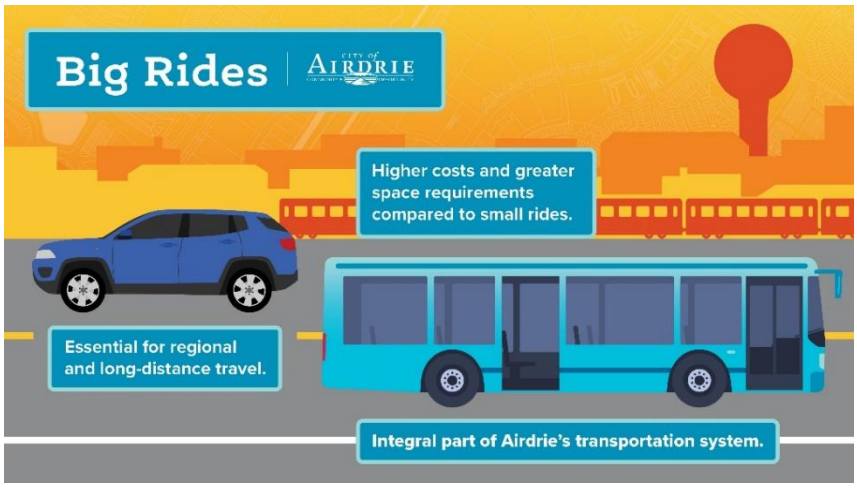
1.0 Introduction, Vision and Plan Overview

Airdrie is shaping its transportation future with **Airdrie on the Move: Active Transportation and Micromobility Plan**, a strategy to create a healthier, safer, and more connected community. While "Active Transportation" and "Micromobility" remain relevant for funding and policy alignment, this plan adopts more intuitive terms: **Small Rides and Big Rides**.

Small Rides include bicycles, e-bikes, scooters, and other compact, low-speed, short-distance options. They offer a **lower cost of ownership** than cars. They can be used for **local travel and shorter trips within the Calgary region**, particularly with the rise of electric-assist technology. Small rides **reduce congestion, improve connectivity, and provide a cost-effective alternative** for daily commuting and errands.



Big Rides include **cars, trucks, buses, and trains**—vehicles essential for long-distance travel and goods movement. Airdrie's **Transportation and Transit Master Plans** provide long-range strategies for big rides.



Airdrie boasts a high-quality recreational small rides and pedestrians network today, but now is the time to expand mobility options beyond recreation. This plan takes a multifaceted approach, recommending more direct commuter routes and bylaw updates (e.g., Traffic and Pathways/Parks bylaws) to ensure small ride users have a safe, efficient, and legal environment to travel in.

By investing in infrastructure improvements and policy updates, Airdrie can offer low-cost, convenient small rides options while maintaining a strong big rides network. This ensures that commuters and recreational users benefit from safe, reliable routes without disrupting the existing and planned big rides infrastructure and rules.

1.1 A Balanced Approach: Pedestrians, Small Rides, & Big Rides

For decades, "Active transportation" has referred to human-powered travel, such as walking and cycling. However, the rise of electric-assist options has blurred distinctions, making traditional terms less inclusive. This plan recognizes three key mobility groups:

- **Pedestrians** – Those walking or running, with opportunities to enhance safety and accessibility.
- **Small Rides** – Lightweight, manual, or electric-assist vehicles for flexible, sustainable travel.
- **Big Rides** – Motorized vehicles, such as cars, SUVs, trucks, and buses, essential for long trips and goods movement (***see Airdrie's Transit and Transportation Master Plans).***

Knowing that Airdrie has already built a strong recreational small rides network. This plan takes the next step—creating a safer, more efficient environment for daily, year-round small rides use, whether for work, errands, or recreation. It improves physical infrastructure (e.g., direct connections, lighting, snow clearing) and regulatory frameworks to support a predictable, user-friendly experience for all.

By strengthening small rides and pedestrian infrastructure, Airdrie can reduce transportation costs, improve mobility choices, and enhance commuter convenience—without compromising big ride networks or existing traffic rules.

This plan acknowledges that funding for these projects must compete with other city priorities. However, a clear plan ensures readiness when funding becomes available, often from provincial or federal grants. This plan outlines short-, medium- and long-term improvements (Section 4) and a budget strategy (Section 5) focusing on foundational projects, grants and essential studies.

1.2 Vision and Core Objectives

Our vision is a **safe, convenient, reliable network** for small rides and pedestrians whether using the network for recreation or commuting. Five key objectives guide this plan:

1. **Safety First:** Reduce conflicts and enhance safety through thoughtful design and policy updates.
2. **Equity:** Ensure the network is accessible for all ages and abilities.
3. **Seamless Connectivity:** Link neighbourhoods to Downtown, the South Transit Centre, recreation areas, and other key destinations.
4. **Direct Routes:** Offer efficient pathways with minimal detours, barriers, or regulatory gaps.
5. **Year-Round Use:** Provide lighting, snow clearing, and all-season infrastructure to make small rides practical in all weather conditions.

1.3 Current Review of Airdrie's Small Rides and Pedestrians Network & Culture

This review evaluates Airdrie's **existing infrastructure (Map 1), usage patterns (Map 2),** network gaps, public feedback, and relevant bylaws and policies that influence the small rides network. It forms the foundation for strategies to expand **year-round, all-purpose small rides use,** as outlined in **Maps 3 and 4** and detailed in **Sections 4 and 5** of the plan.

1. Existing Network

Sidewalks & Pathways

Airdrie's 360+ km of sidewalks and 150+ km of pathways form the backbone of its small rides and pedestrians network. While coverage is extensive, gaps in connectivity and quality limit accessibility. **Map 1** highlights existing sidewalks and pathways, while **Map 3** presents a long-term vision for a primary route grid (approx. 800m spacing) to complement local routes.

Low-Stress Streets (30 km/h Network)

Airdrie's default 30 km/h speed limit (unless otherwise posted) makes many local streets safe for small rides, reducing the severity of big ride/small ride/pedestrian conflicts. Expanding this low-stress network is essential to encourage broader participation, particularly for families and less confident users. **Map 1** highlights existing low-stress streets.

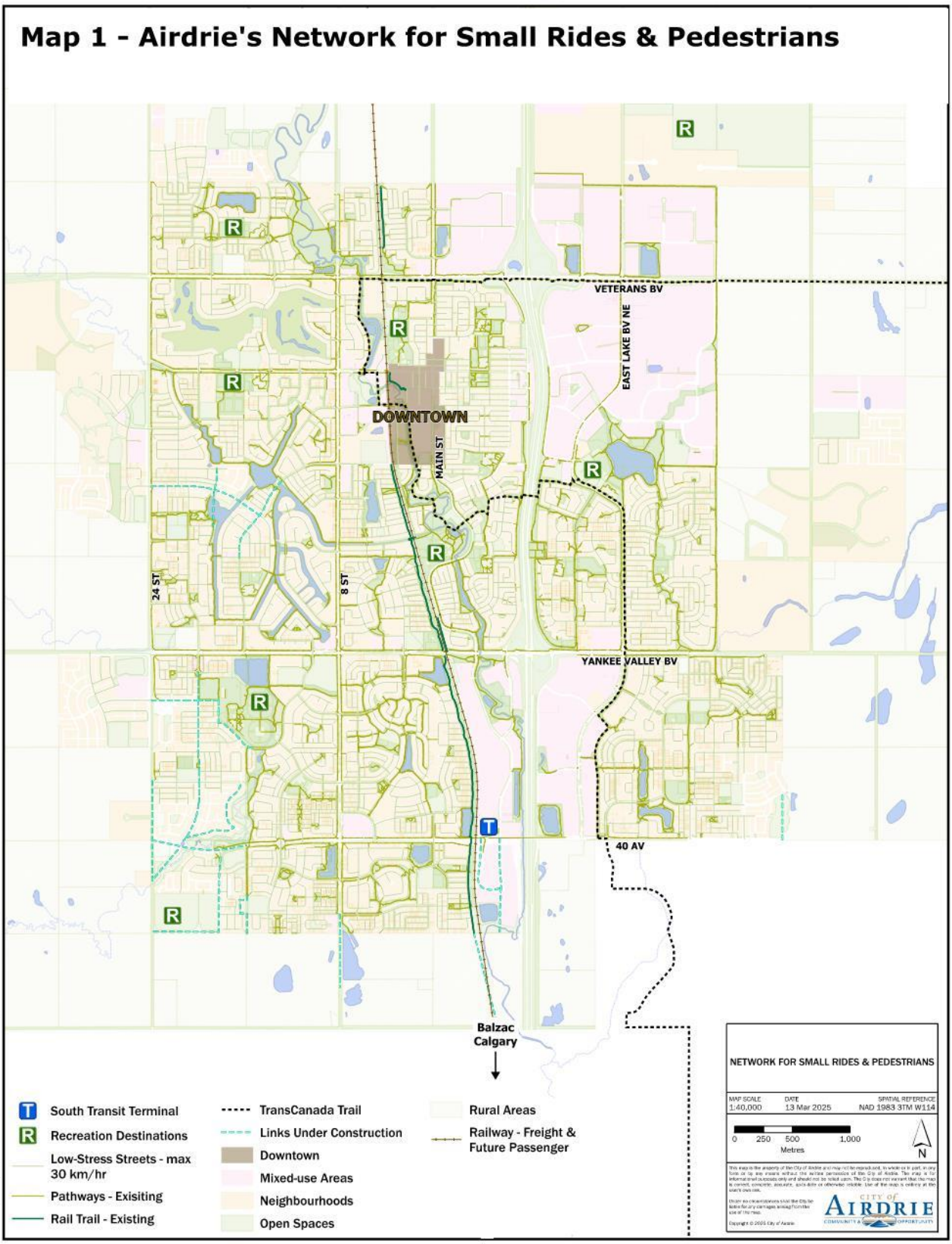
Network Usage (Strava Data)

Strava heat maps provide insights into high-traffic routes for walking, running, and cycling. Data from **Map 2** helps identify priority areas for infrastructure improvements.

Gaps Assessment

Preliminary analysis highlights missing connections in industrial and commercial areas, limiting access to key destinations. **Map 4** outlines priority gaps that should be addressed in upcoming projects (see Sections 4 and 5 for more details).

Map 1 - Airdrie's Network for Small Rides & Pedestrians



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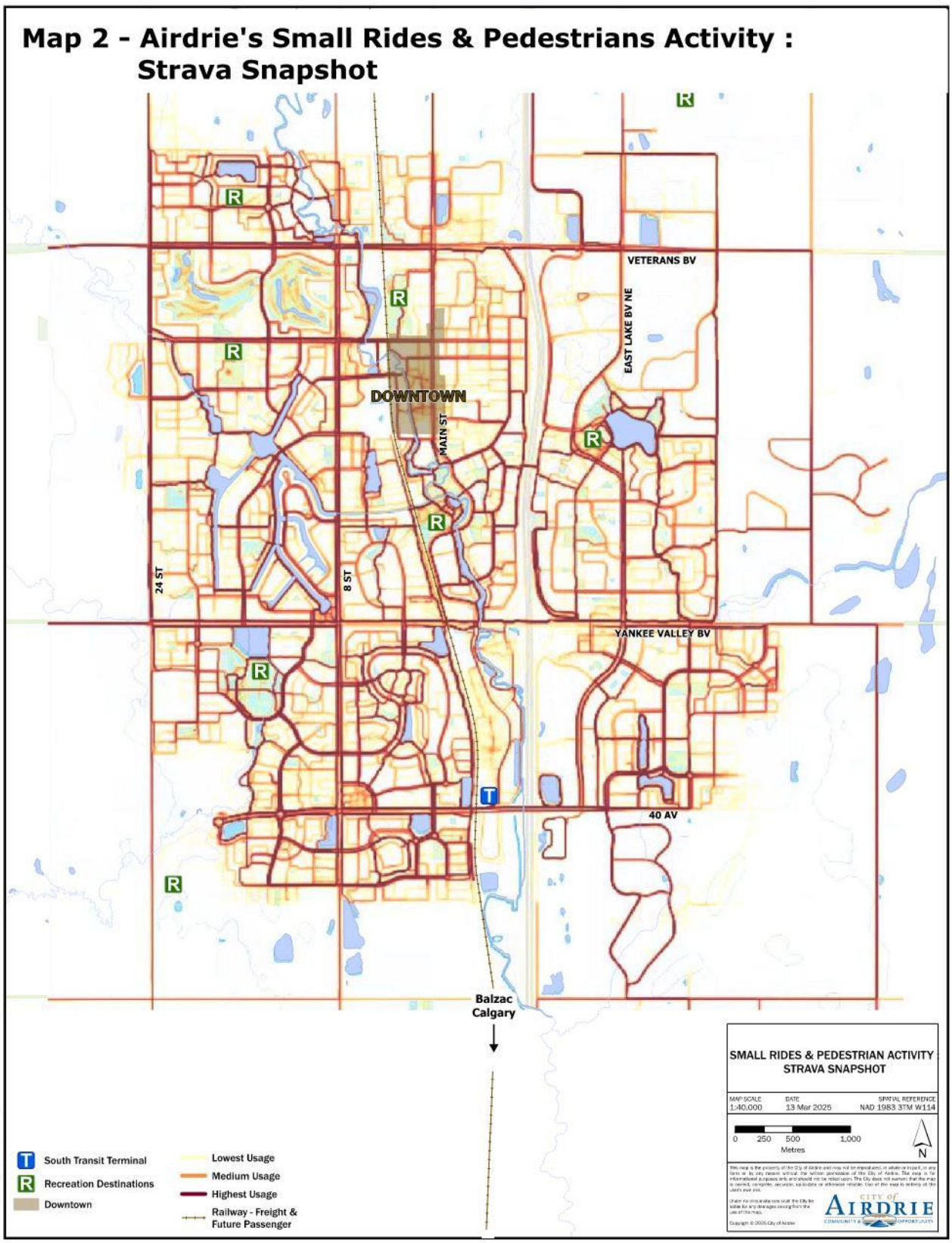
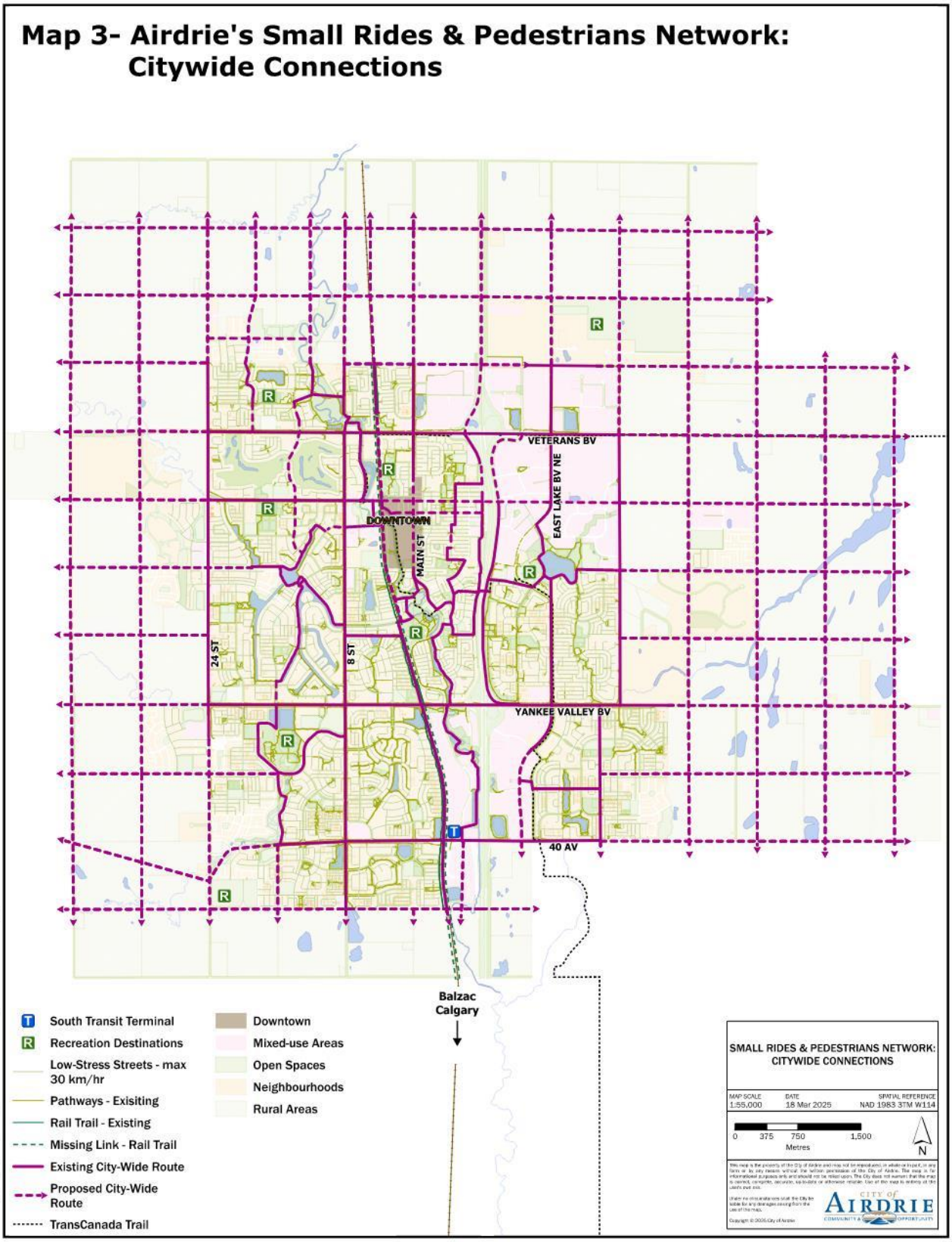
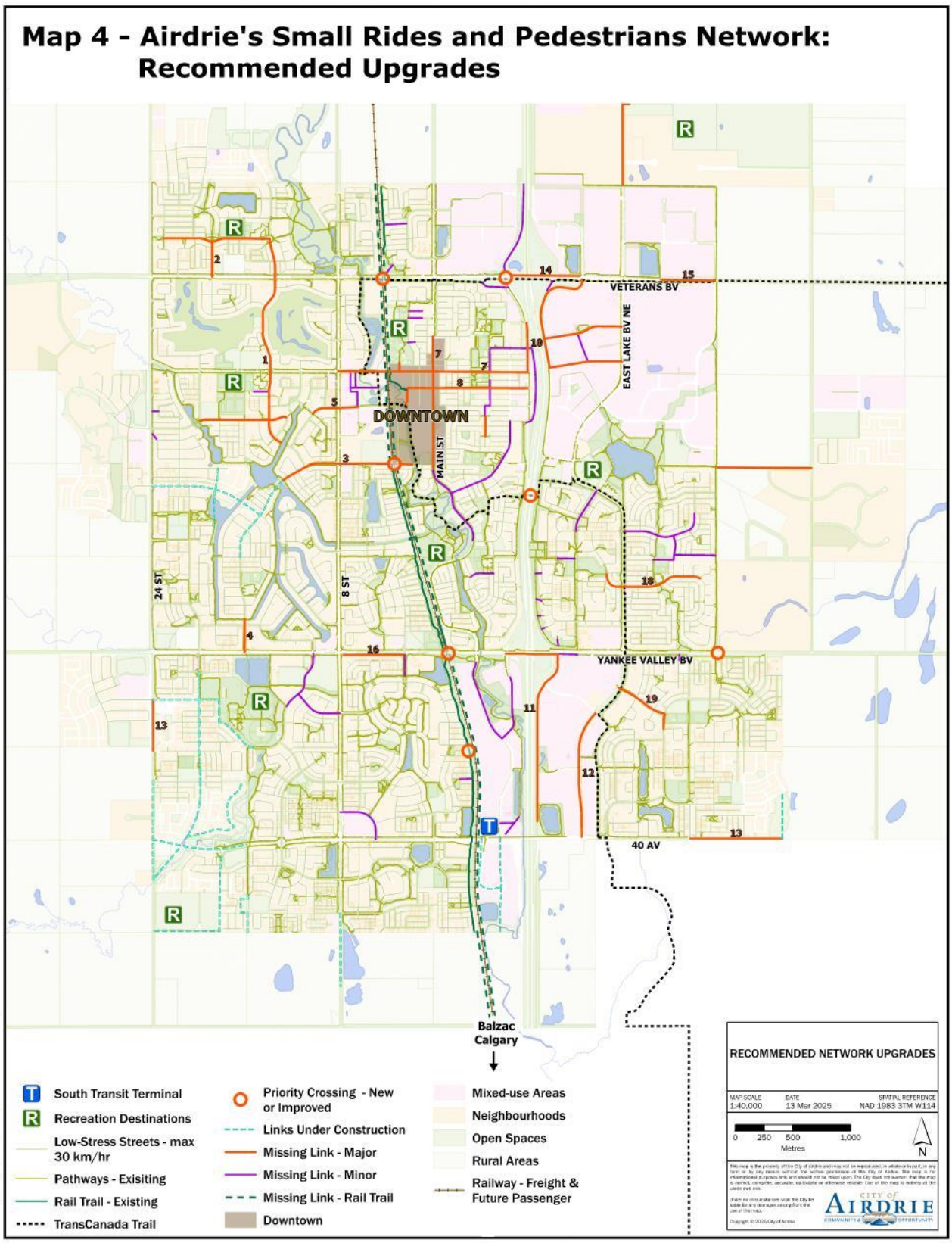
Map 2 - Airdrie's Small Rides & Pedestrians Activity : Strava Snapshot



Map 3- Airdrie's Small Rides & Pedestrians Network: Citywide Connections



Map 4 - Airdrie's Small Rides and Pedestrians Network: Recommended Upgrades



2. Relevant Bylaws

Airdrie's Traffic, Parks, and Land Use Bylaws regulate speed limits, small ride rules, and end-of-ride facilities. Updating these bylaws will improve safety, network usability, and inclusivity:

- **Traffic Bylaw** – Establish safe passing distances, confirm right-of-way for small rides at crossings, and regulate small ride parking & safety standards.
- **Parks Bylaw** – Allow small rides on park pathways while ensuring minimal disruption to recreational users.
- **Land Use Bylaw** – Require weather-protected small ride storage, showers, and secure parking in new developments, with direct, barrier-free connections to key destinations.

Revising these bylaws will create a cohesive, user-friendly small rides network while maintaining efficiency for big rides. (See Section 4 for more details)

3. Relevant Policy Plans

Transportation Master Plan (2020) – "140K Plan"

Envisions a connected city as Airdrie grows to 140,000 residents, with 49 km of new pathways linking downtown, transit, schools, and employment hubs.

Transit Master Plan (2016)

It prioritizes short—and medium-term transit improvements to support employment, education, shopping, and medical trips while working toward a 6% transit mode share.

Airdrie City Plan (2014) & 2025 Update

Guides land use and development, emphasizing sustainability and connectivity. The 2025 update may further support denser, walkable communities with improved grid-style street networks.

Downtown Growth Plan (2022)

It aims to make downtown a pedestrian- and small ride-friendly hub, including Main Street as a "complete street" with better crossings, sidewalks, and dedicated pathways.

Great Places Plan (2016)

Focuses on expanding pathway connections between parks, neighborhoods, and commercial areas, supporting local and regional mobility.

4. Regional Planning & Inter-Municipal Collaboration

Connecting Airdrie to Rocky View County & Calgary

The 2024 dissolution of the Calgary Metropolitan Region Board presents an opportunity/necessity for Airdrie, Rocky View County, and Calgary to collaborate on regional connectivity. Improved links to Balzac's commercial/industrial area and Calgary's Nose Creek pathway system would support economic and transportation benefits for residents.

Trans Canada Trail Feasibility Study (2022)

Explores potential trail routes between Airdrie and Calgary, with both direct and scenic options. Coordinated planning could make Airdrie a key node in a larger regional pathway system. Map 1 identifies the existing alignment through Airdrie.

5. Community Engagement

Public feedback is essential to understanding the community's needs and priorities for the small rides and pedestrians network. The City has engaged the public, City Council and the Airdrie Board of Youth Affairs (ABYA) to gather input on current issues and desired improvements.

Residents generally appreciate Airdrie's pathways for recreation but identified gaps in connectivity, safety concerns, and limited transit options as barriers to everyday use. Many indicated they would consider replacing some car trips with active transportation if the network better met their needs.

Challenges Identified included:

- **Connectivity Issues**: Missing sidewalks, unlinked trails, and limited crossings over Highway 2 and railway tracks create obstacles.
- **Safety Concerns**: Intersections, high-traffic areas, and limited separation from vehicles make some routes feel unsafe.
- **Wayfinding & Infrastructure**: Many residents are unsure how trails connect and would benefit from better signage, lighting, and maintained crossings.
- **Transit Integration**: Limited service, especially to Calgary, discourages combined transit and active travel trips.

Priorities for Improvement included:

- **A Connected North-South Route**: Many respondents highlighted the need for an uninterrupted active travel corridor through Airdrie, with Highway 2 and 8 Street cited as areas where improved connectivity would help.
- **Pedestrian Crossings**: More pedestrian bridges and safer crossings at major streets were suggested.
- **Trail & Sidewalk Enhancements**: Completing missing links and improving accessibility in key areas were common themes.
- **Transit Expansion**: Better service frequency, more stops, and connections to Calgary and Red Deer were recommended.
- **Maintenance & Safety Measures**: Winter clearing, pathway repairs, protected bike lanes, and intersection improvements were frequently mentioned.

A 2024 What We Heard Report is available as an attachment to the Council report associated with Council's consideration of this plan.

6. Cultural Programs and Community Groups

Cultural programs, including community-led groups, annual events, and city-led educational initiatives, build a supportive environment for the small rides and pedestrians network in Airdrie. Programs like the Multiple Sclerosis (MS) Bike Tour, hosted annually, provide residents with opportunities to participate in organized small rides travel events, raising both awareness and enthusiasm for small rides and pedestrians network opportunities.

Several local groups actively promote a culture of small rides in Airdrie:

- **Airdrie Cycling Community**: This group fosters community rides and discussions and advocates for cycling infrastructure, helping to build awareness and participation in small-ride travel.
- **Airdrie Hikers and Airdrie Ladies Walking Group**: Both groups support walking as a form of fitness and social engagement.
- **Cranked Bike Shop Group Rides**: Local bike shop, Cranked, hosts rides that promote skill-building, fitness and community among cyclists.
- **Airdrie's Awesome Run Club and Diamonds in the Community**: These clubs offer group walks and runs, encouraging physical fitness and mental well-being through outdoor activity.

Such groups strengthen Airdrie's small rides and pedestrians network culture and demonstrate a community-wide interest in expanding the network.

1.4 Defining Success for Airdrie's Small Rides and Pedestrians Network

A thriving small rides network is about more than just building paths—it's about making them a natural part of daily life. This plan sets a four-part framework to track progress in usability, connectivity, culture and accountability:

1. **Airdrie-Specific Needs:** Collect data on users, highlight e-rides' benefits and build public support.
2. **Connected, Low-Stress Network**: Ensure safe, seamless links between key locations including downtown, the South Transit Centre, recreation areas, schools, and jobs. For on-street routes, low-stress is defined as being streets with a speed limit maximum of 30km/hr. Start with high-priority areas like schools and downtown connections, using early feedback to refine and expand the network
3. **Fostering a Small Rides Culture**: Partner with schools, businesses, and organizations to promote small rides and walking through education and events.
4. **Clear Project Roadmap**: Define short, medium, and long-term priorities, costs, responsibilities, and funding strategies to ensure accountability.

This approach ensures that pedestrians and small rides users can enjoy and save money using a safe, accessible, and convenient network for recreational and commuting trips.

2.0 Understanding Our Network Users: Small Rides and Pedestrians Participants

2.1 Types of Small Ride Users and Their Needs

Airdrie has a strong foundation and plenty of room to fill the missing links needed to support all riders. By designing safe, comfortable, and connected routes, the city can encourage more people to ride. The following highlights key rider types and essential infrastructure considerations.

Types of Riders and Their Needs

- **Casual or Less Confident Riders –** Prefer low-traffic routes and separated pathways for a safer, more comfortable experience.
- **Interested but Concerned Riders** – Avoid busy streets and feel more at ease on scenic, well-marked paths.
- **Families** – Need wider pathways to accommodate side-by-side riding and group travel.
- **Confident Commuters** – Comfortable with traffic, they prefer direct routes combining roads and pathways.

Infrastructure Design Considerations

- **Low-stress, Separated Routes** – Encourage participation by minimizing interactions with big rides. Provide access to major destinations like Downtown, Airdrie South Transit Terminal and recreation centres.
- **Smooth, Direct, Well-Lit Paths** – Reduce detours and improve usability at all hours.
- **Safe Crossings** – Signalized intersections, wider crosswalks and traffic-calming measures enhance safety.

2.2 Characteristics of Pedestrians and People Using Mobility Aids

Pedestrians in Airdrie include those who walk, jog, use mobility aids, push strollers, or use personal grocery carts. A well-designed network considers physical ability, age, and situational needs to create a safe, intuitive environment for all users.

Age-Based Needs

- **Young Children (0-8)** – Need wide pathways, low-traffic zones, and visible crossings for safe exploration.
- **Older Youth (9-13)** – Require traffic-separated spaces with clear markings to navigate safely.
- **Teens & Young Adults (14-23)** – Benefit from secure independent travel spaces accommodating various modes like skateboards and e-scooters.
- **Adults (24-65)** – Rely on a seamless network for commuting, errands, and recreation.
- **Older Adults (65+)** – Require level paths, ample seating with shade options, and longer crossing times for safety and comfort.

Mobility Aid Users

- **Wheelchairs & Scooters** – Need smooth, wide, obstacle-free paths with accessible curb cuts.
- **Walking Aids (Canes, Walkers, Crutches)** – Require stable surfaces, gentle slopes, and extended crossing times.
- **Hearing & Vision Impairments** – Benefit from tactile guide strips, audible signals, and high-contrast markings.

3.0 Best Plans and Practices Informing Airdrie's Small Rides and Pedestrians Network

Airdrie has built a strong foundation with its big rides network and recreational small ride routes. The next step is to expand commuter-friendly routes, making small rides a practical, year-round option. This will provide residents with a low-cost, efficient way to get around.

This section highlights exemplary plans and best practices from other winter cities to guide Airdrie's approach to all-season small rides infrastructure.

3.1 Inspiration from Winter Cities

Edmonton's Bike Plan: Making Cycling Inviting for all Reasons in all Seasons

Edmonton's recent $100 million investment (2023-2026), in support of the 2020 Bike Plan, aims to enhance its active transportation network and make biking accessible in all seasons.

Key Components:

1. **Foundation and Vision**
    - Aligns with Edmonton's sustainable city goals.
    - Supports climate change mitigation through increased biking infrastructure.
    - Emphasizes year-round biking in the ***WinterCity Strategy***.
2. **Current and Future Networks**
    - Existing network includes shared pathways, protected lanes, and on-street bike lanes.
    - Future plans include district connectors, neighborhood routes, and regional links.
3. **Program Areas**
    - **Transit Integration**: Strengthens bike and public transit connections.
    - **End-of-Trip Facilities**: Adds bike parking, lockers, and showers.
    - **Shared Micromobility**: Explores bike-sharing options.
    - **Wayfinding and Lighting**: Improves safety with signage and lighting.
    - **Maintenance**: Ensures year-round upkeep, including snow clearing.
    - **Education**: Promotes biking through community programs such as City-guided Ride-Alongs organized by the City of Edmonton or Bike Edmonton's Access Program offering a range of free cycling services to low-income individuals.
    - **Laws and Policies**: Updates regulations for safer biking.
4. **Implementation and Monitoring**
    - Focuses on safe, connected small rides routes.
    - Regular evaluation for continuous improvement.

This plan promotes a bike-friendly culture, ensuring small rides are a safe and practical choice for all users.

Saskatoon's Active Transportation Plan: 'A Core Component of Saskatoon's Growth Plan to Half a Million'

Saskatoon's Active Transportation Plan focuses on creating safe, low-stress networks that minimize interactions with high-speed traffic and provide easy crossings. The city emphasizes inclusivity, particularly by collaborating with schools and community groups.

Key Elements:

- **Bike Education Program**: Teaches students about bike safety, maintenance, and riding etiquette.
- **Walking School Buses and Bike-to-School Days**: Encourages children and parents to walk or bike together, building confidence and fostering active transportation habits.

Year-Round Maintenance and Design
Saskatoon prioritizes snow removal and winter-friendly design elements, like wider, buffered paths, to ensure the network remains usable year-round. This approach encourages consistent use by making small rides and walking a reliable option in all seasons.

Minneapolis' Bicycling Plan: 'Increase the availability and safety of bicycling and micromobility travel'

In Minneapolis, over 30% of trips are less than three miles—ideal for bicycles and micromobility options like e-bikes and scooters. With more residents choosing these alternatives for commuting, errands, and recreation, the demand for safe and convenient routes continues to grow. Today, over two-thirds of Minneapolis residents report riding a bicycle at least occasionally, and the city has one of the highest bicycle commuting rates in the U.S.

A key factor in this success is the city's investment in an All Ages and Abilities Network, designed to make small rides a viable transportation choice for more people. The network prioritizes protected routes, safe crossings, and year-round accessibility, addressing common barriers such as narrow bike lanes, traffic exposure, and winter conditions.

Key Strategies for an Effective Small Rides Network

1. **Expand a Protected Network** – Prioritize physically separated routes to increase safety and comfort.
2. **Overcome Barriers** – Use bridges, tunnels, and improved crossings to connect fragmented routes.
3. **Improve Intersections** – Design safer crossings with signals, markings, and traffic-calming measures.
4. **Leverage Existing Corridors** – Repurpose former rail and utility corridors for efficient, direct routes.
5. **Ensure Year-Round Access** – Maintain paths in all seasons with snow clearing and surface treatments.
6. **Enhance Wayfinding and Parking** – Provide clear signage and parking for micromobility users.
7. **Encourage Adoption** – Support education, outreach, and community programs to attract new riders.

These strategies have helped Minneapolis build a safer, more accessible small rides network, increasing ridership and expanding transportation options citywide.

4.0 Pathways to Completion: Network Plan and Essential Design Upgrades

The existing and proposed small rides and pedestrian network is based on industry best practices and research findings. However, planning and design principles for these networks continue to evolve and must be adapted to Airdrie's unique context, considering both opportunities and challenges.

To achieve these principles, network standards were developed by analyzing global approaches and tailoring them to Airdrie's needs. These standards support a diverse, efficient transportation system for both recreational and commuter trips, integrating small rides, big rides, and pedestrian travel.

4.1 Network Plan

The Small Rides and Pedestrians Network Plan prioritizes walking and cycling connections across Airdrie, linking key destinations and regional routes. Major routes are spaced approximately every 800 metres. The primary routes network is shown in Map 3 and is complemented by local routes, including low-stress streets (max 30 km/h), sidewalks, and off-street multi-use pathways.

Table 1 outlines recommended network standards for new and existing areas. These standards should guide the design of new neighbourhoods and employment areas (via Area Structure Plans) and the retrofit of existing neighbourhoods, downtown, and employment districts.

Table 1: Small Rides and Pedestrians Trips – Network Principles & Standards

Network Principle	Network Standards Small Rides and Pedestrians

Connected: The small rides and pedestrians network offers accessible routes with multiple travel options, linking key destinations and integrating with the transit system.	• Walking routes should connect all key destinations, including homes, schools, workplaces, parks, businesses, event venues, recreation facilities, bus stops, and shopping areas.
	• Major barriers like railways, highways and waterways should have pedestrian crossings, with grade separation (underpasses) where needed.
	  ○ Sidewalks or pathways should be on both sides of all streets or, on collector streets, a sidewalk on one side and a pathway on the other.
	  ○ Cycling and small ride routes should provide access to key destinations with facilities, ie. boulevard separated pathways, that support safe travel.
	  ○ Route spacing should reflect demand, with denser networks in high-traffic areas:
	• City-wide cycling routes spaced a maximum of 800 m apart to support commuting trips. See map 3 for a visual representation.
	• Closer spacing in higher-density areas.

Direct: The small rides and pedestrians network provides direct routes that avoid circuitous detours, prefer lower vertical grades and avoid or limit out of direction travel or delays at intersections or crossings.	• Small ride and pedestrian routes should be as direct as possible and minimize delays • Travel distances for small rides and pedestrians should not require users to make detours that would add more than 25% to a trip's distance • Small ride and pedestrian routes should avoid exceeding vertical grades of 5%
Healthy: Reduce stress and safety concerns by addressing issues like noise, air pollution, headlight glare and vehicle spray. Ensure pathways are well-lit, separated from traffic where possible and designed for a comfortable, low-stress experience.	• Serve higher-density areas • Integrate with parks and natural areas • Include buffers from heavy-traffic roads • Ensure lighting along small ride and pedestrian routes
Accessible: Usable by all, including those with physical, vision, hearing or cognitive challenges.	• Sidewalks and/or pathways should connect all homes to destinations to support universal accessibility • Where there is high demand on pathways, separate walking and cycling / micromobility facilities should be provided • Accessible facilities should be provided such as ramps, tactile surface indicators and audible devices • Small ride routes should support use of adaptive bicycles, cargo bicycles, bikes pulling trailers and wheelchairs or other mobility aids • Where there are high demands on pathways, separate walking and cycling / small ride facilities should be provided

4.2 Major Network Improvement Projects

The following key projects to enhance Airdrie's small ride and pedestrian network by addressing gaps and improving city-wide connectivity:

1. **Completing Missing Links:** Add pathways along streets without dedicated small ride facilities, ensuring pathways on both sides of major arterials. Some sidewalks may be replaced or widened to accommodate more users.
2. **New Grade-Separated Crossings (underpass)**: Three priority crossings over the CPKC rail line are proposed north of Veterans Blvd, south of downtown and between Yankee Valley Blvd and 40 Avenue. The Yankee Valley underpass should include direct north-south connections for small rides and pedestrians.
3. **New Crosswalks:** Install at key locations to improve safety and accessibility.
4. **Rail Trail Expansion:** A rail-adjacent pathway could serve as a north-south arterial linking the South Transit Centre, downtown and future rail station while reducing vehicle interactions from 50 intersections to four. This path could extend regionally to Balzac and Calgary. Beyond connectivity, it could enhance emergency response and align with future regional passenger rail. Collaboration with stakeholders including Rocky View County, Calgary, the province and CPKC is essential.
5. **Other Regional Connections**: Explore future commuter pathways along Highway 2 and other regional routes as development progresses.
6. **Future Development Projects (ASPs, NSPs**): Pathways in new developments will be built by developers to City standards before being assumed into the network.
7. **Future Projects (Transportation Master Plan):** Multi-use pathways and on-street small ride routes will be

integrated into a 200-400m grid.

8. **Bylaw and Development Standards Updates:**
9. To support a safe and connected network, updates to key bylaws and development standards are required:
    a. Traffic Bylaw: Establishes right-of-way for small rides at crossings, regulates parking and ensures safety standards.
    b. Parks Bylaw: Allows small rides access to park pathways while maintaining recreational use.
    c. Land Use Bylaw: Mandates end-of-ride facilities, secure parking and direct pedestrian/cyclist connections in new developments.
    d. Transportation Master Plan/Construction Standards - Pathways and Sidewalks cross-section updates; endorse intersection and crossing designs that enable safe crossings for pedestrians and small rides ie. multi-modal crossings.
10. **Transit Centre Small Ride Parking:**
    - A secure, weather-protected small ride parking facility at Airdrie's South Transit Terminal would encourage seamless multimodal commuting. Live-cam monitoring would enhance security and user confidence.
    - Map 4 illustrates the locations of these major projects.

4.4 Design and Operation Recommendations

The following recommendations cover specific network design and operation interventions recommended to achieve the vision for the network.

1. Crosswalks

A follow-up study is recommended to assess crossing control standards across the network. It should include:

- An inventory of existing crossings, including traffic control, pavement markings and geometry
- A safety review covering sightlines, collision history and speeds
- An assessment of crossing lanes, parking and daily traffic volumes
- A compliance check with the TAC Pedestrian Crossing Control Guide (PCCG)

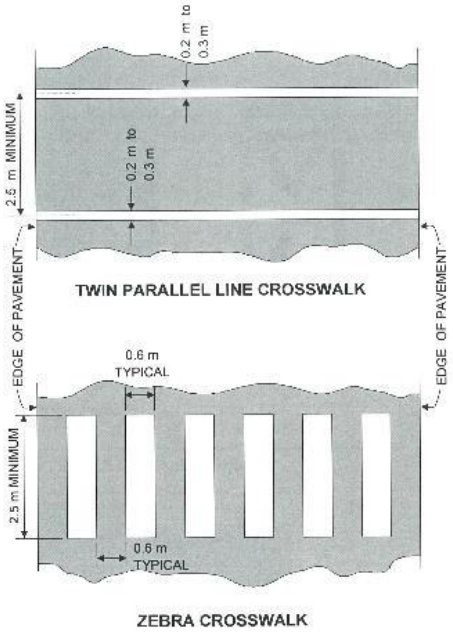
Design Principles for Safe and Convenient Crossings

Crossings should be:

- Available at appropriate intervals
- Clear and highly visible
- Direct and accessible to all users
- As short as possible

Airdrie primarily uses twin parallel line markings for cost efficiency, but zebra crossings enhance visibility for drivers (see Figure 1). Combining this with thoughtful curb ramp design and strategic network adjustments can further improve crossing safety.

Figure 1: Crosswalk Pavement Markings (Source: TAC Manual of Uniform Traffic Control Devices for Canada)



Zebra pavement markings are commonly used for mid-block crossings and school zones in Airdrie, while parallel markings are standard at most signalized and stop-controlled crossings. However, inconsistencies exist in their application. The City should audit its pavement marking practices, inventory intersection markings and evaluate where zebra markings would enhance visibility and safety.

Crosswalk Control Types

Crossing controls range from ground-mounted signs to pedestrian traffic signals, categorized as follows (see Figure 2 for examples):

- **Ground Mounted (GM1):** Traditional crosswalk signage on both sides of an undivided roadway or on the right side and median of a divided roadway. Markings include twin parallel or zebra lines, with zebra markings common in school zones and mid-block crossings. Advanced warning signs are used where visibility is limited, and stopping is prohibited within 5 m.
- **Ground Mounted + (GM+):** Enhanced GM1 with curb extensions, reflective poles, and optional overhead signage.
- **Rapid Rectangular Flashing Beacon (RRFB):** Ground-mounted flashing lights activated by push buttons.
- **Overhead Flashers (OF):** Similar to GM+ but with overhead illuminated crosswalk signage, alternating amber flashing beacons, and downlighting.
- **Pedestrian Traffic Signal (PTS):** Includes twin parallel markings, vehicle stop lines, signal indicators, and push buttons. Pedestrian traffic signals (or “half signals”) are more common in British Columbia but rare in Alberta. If warranted under TAC guidelines, Airdrie should consider installing full traffic signals for greater user familiarity and effectiveness.

Figure 2: Typical Crosswalk Control Types (Source: TAC PCCG)

Ground Mounted System (GM)

Enhanced Ground Mounted System (GM+)

Note: example illustrates overhead mounted signs and a curb extension. Other available enhancements are not illustrated in the picture.

Rectangular Rapid Flashing Beacon System (RRFB)

Overhead Flashing Beacon System (OF) or Special Crosswalk

Pedestrian Signal (TS)

Crosswalk Warrant Guidelines

According to the TAC PCCG, a crosswalk is typically warranted when:

- Hourly pedestrian volumes reach 8–15, depending on demographics.
- Daily traffic exceeds 1,500 vehicles.
- The location aligns with a pedestrian desire line.

Crosswalks should generally be spaced 100–200 m apart, depending on local conditions. The appropriate crossing control is based on lane configuration, traffic volume, and speed limit.

Earlier TAC PCCG guidelines required minimum pedestrian counts, discouraging crossings at perceived unsafe locations. In 2011, before current standards, Airdrie adopted a volume-based threshold for flashing crosswalks on arterial roads with 12,000+ vehicles/day at key pedestrian locations (e.g., schools, senior centres, health facilities, commercial areas, bus stops). This approach aligns with current TAC PCCG standards by prioritizing land use and connectivity over pedestrian volume alone.

Elephant's Feet Markings for Multi-Modal Crossings

To improve crossings for small ride users, Airdrie should consider elephant's feet pavement markings alongside parallel or zebra markings at pathway intersections. These 0.4 m square markings, spaced 0.4 m apart, alert drivers to expect both pedestrians and small ride users. Advisory signage should accompany these markings. Detailed guidance can be found in the TAC Bikeway Traffic Control Guidelines and MUTCDC (see Figures 3 and 4 for examples).

Figure 3: Intersection Pathway Crossing (Source: TAC Bikeway Traffic Control Guidelines)

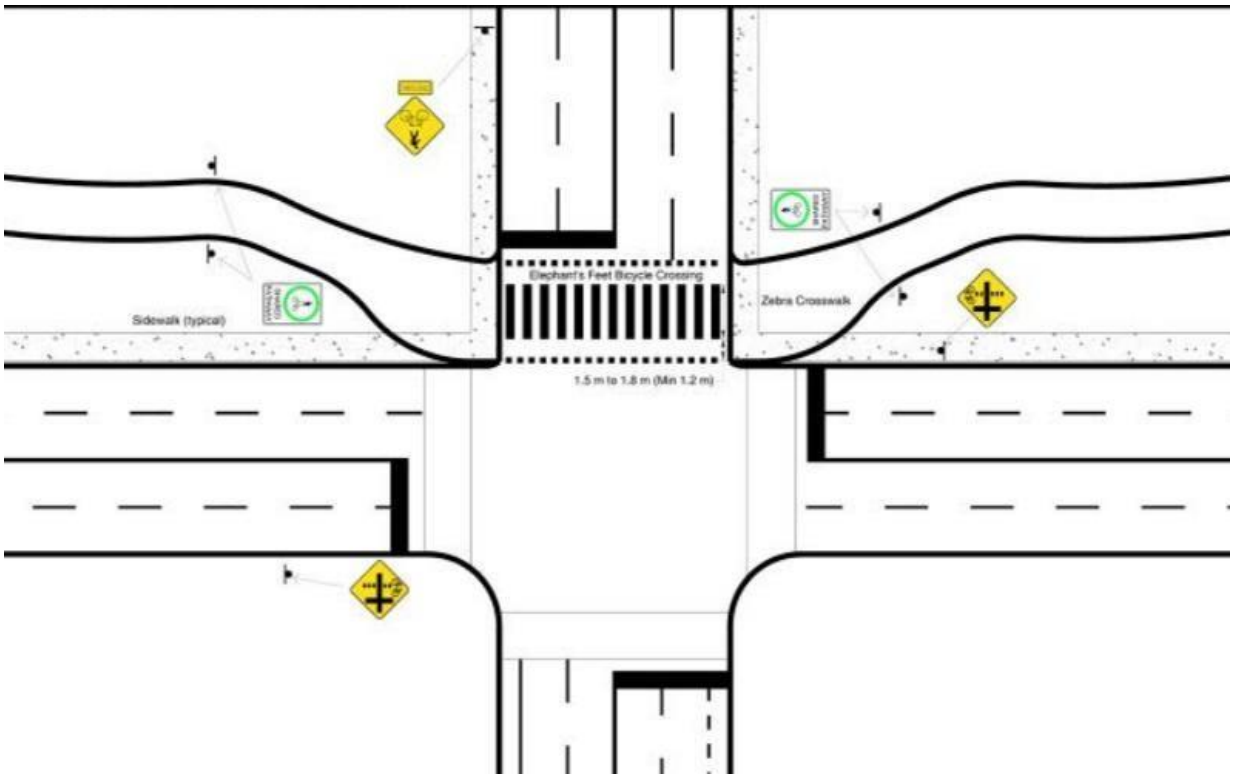


Figure 4: Mid-block Pathway Crossing (Source: TAC Figure 40, Bikeway Traffic Control Guidelines)

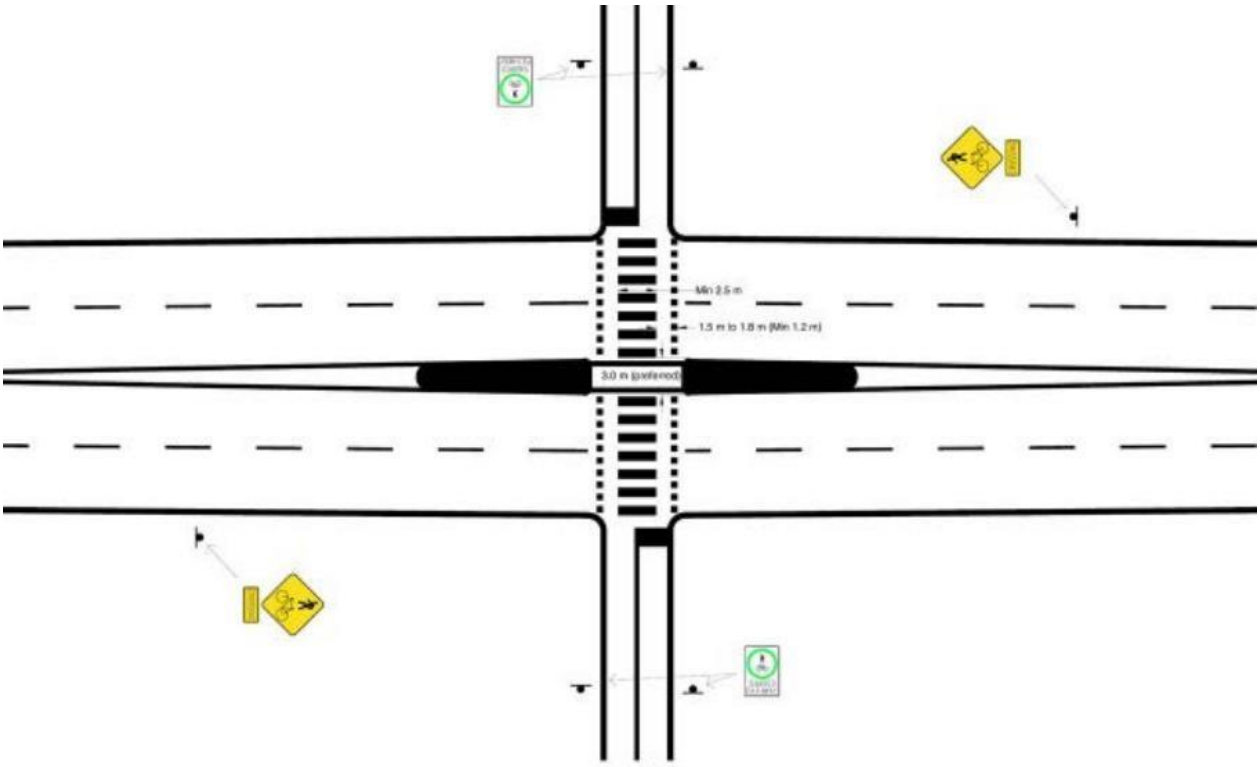


Figure 5: Elephant's Feet Crossing, with Zebra Markings (100 Avenue, West of 109 Street, Edmonton)

2. Accessibility Standards and Design Considerations

The City should conduct a follow-up study to establish accessibility standards, which may lead to a separate accessibility guide and amendments to the Land Use Bylaw and Municipal Development Plan.

Key design considerations, based on guidelines from CNIB's Clearing Our Path 2.0, CSA's Accessible Design for the Built Environment, Alberta's Barrier-Free Design Guide, and TAC GDGCR, are recommended to enhance pedestrian mobility and accessibility. These form a foundational framework for the City of Airdrie. Table 2 summarizes the requirements, while Figure 6 illustrates operating widths and horizontal envelopes.

Table 2: Accessible Design Considerations

(Sources: CNIB Clearing our Path, CSA Accessible Design for the Built Environment, TAC GDGCR, and Alberta Barrier-Free Design Guide)

Design Consideration	Design Requirements
Travel Path	• Must be straight, unobstructed and clearly defined. • Street furniture (benches, poles, signs, trees and garbage cans) should be placed within a furnishing zone, within 600 mm of the pedestrian route, ensuring detectability by white canes. • Turns should be as close to 90 degrees as possible.
Surface	• Must be firm, even, stable, slip-resistant and glare-free. • Avoid busy or heavily patterned surfaces to prevent visual confusion. • Use textured surfaces in open areas to distinguish travel paths from adjacent zones. • Gratings should have openings no wider than 13 mm, oriented perpendicular to travel direction and should not be in the pedestrian route.
Slopes	• Running slopes (parallel to travel): ≤ 5% preferred. • Cross slopes (perpendicular to travel): ≤ 2%. • Ramps with a vertical rise >13 mm: • 1:20 (5%) to 1:12 (8.33%) slope ratio.

Design Consideration	Design Requirements
Operating Envelope	*Horizontal Operating Envelope* • A pedestrian's typical width is **0.5 m**, with a **0.75 m** lateral operating envelope. • A pedestrian with a child requires **1.2 m**. • A pedestrian using crutches needs **0.92 m**, with no obstructions below **300 mm**. • A pedestrian with a long white cane requires **1.05 m**, detecting obstructions up to **685 mm**. • A pedestrian with a sighted guide or service animal requires **1.2 m**. • A pedestrian using a walker needs **635 mm by 710 mm**. • A manual wheelchair requires **0.75 m width, 1.2 m length**, with a **0.9 m** horizontal operating envelope. • A powered wheelchair requires **0.82 m by 1.39 m**, with a **1.5 m** best practice length and **0.9 m** horizontal envelope. **Lateral Passing Width** • Two wheelchairs passing: **1.8 m**. • Two pedestrians passing: **1.5 m** (or **1.8 m** including personal space). **Vertical Operating Envelope** • Pedestrian clearance: **2.1 m**. • Eye height: **1.3 to 1.7 m** for pedestrians, **1.1 m** for wheelchair users
Turning Areas	• The turning area of a manual wheelchair for a 180-degree turn is 2.1 m by 2.1 m. • The turning radius of a powered wheelchair is 2.25 m. • The turning radius of a large scooter is 3.15 m.

Design Consideration	Design Requirements

Tactile Walking Surface Indicators	• Tactile walking surface indicators inform people visually and by contact underfoot or with a cane.
	• Tactile Attention Indicators signal caution at changes in elevation, vehicular routes or train tracks.
	• Tactile Direction Indicators facilitate wayfinding in open areas and indicate possible routes.
	• A tactile walking surface shall:
	  • Have a base surface level with the surrounding surface or beveled edges no more than 3 mm above the applied surface.
	  • Be slip-resistant.
	  • Have an adjacent smooth walking surface at least 600 mm wide.

Drainage	• Pedestrian routes should be well-drained to prevent the accumulation of ice / water.

Figure 6: Horizontal Operating Envelopes and Other Pedestrian Dimensions (Sources: TAC GDGCR)

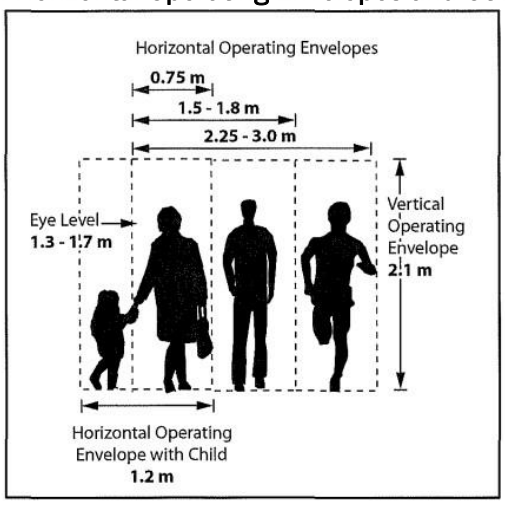


Figure 6.2.1: Typical Pedestrian Dimensions

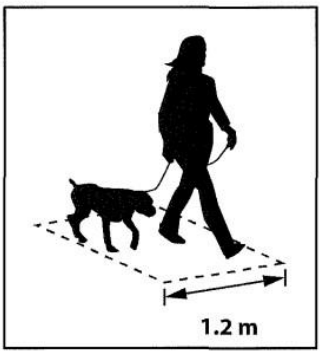


Figure 6.2.2: Horizontal Operating Envelope for a Person with a Service Animal

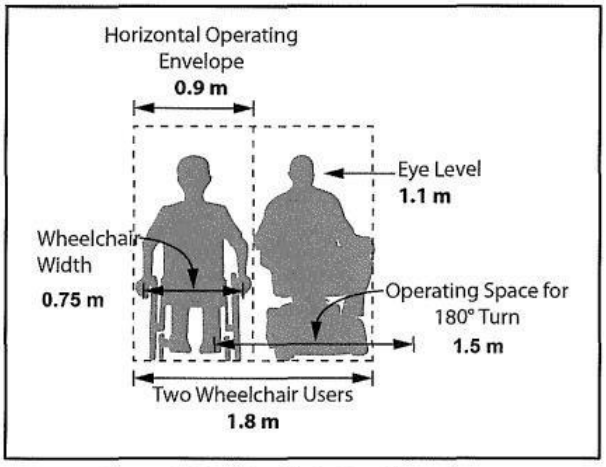


Figure 6.2.3: Wheelchair User Dimensions

A follow-up study is recommended to assess the accessibility of the small rides and pedestrian network for people of all ages and abilities based on the design requirements outlined above. The study should focus on the following key areas, along with an implementation plan for improvements:

- **Travel Path:** Widen and replace sidewalks and pathways that do not meet minimum accessibility standards, aligning upgrades with the lifecycle replacement of existing infrastructure where possible. The City should adopt 1.8 m as the absolute minimum lateral width to ensure pathways are accessible, particularly for an aging population and users requiring mobility aids.
- **Tactile Warning Surface Indicators (TWSI):** Airdrie currently follows the City of Calgary's standards, which require TWSI at collector-collector, collector-arterial, and arterial-arterial intersections. The City should continue implementing TWSI as intersections are upgraded, either through dedicated accessibility projects or as part of other infrastructure improvements.
- **Auditory Devices:** Airdrie plans to install audible crossing signals at all traffic signals, subject to funding availability. Additionally, the City could consider adding countdown pedestrian signal heads to improve accessibility and pedestrian safety.
- **Curb Ramps:** Any missing curb ramps should be installed. Ramps should be designed to direct pedestrians perpendicularly across the street using separate ramps for each crossing direction (e.g., two per corner). All new curb ramps should include TWSI.

2. Pathway Lighting

Providing pathway-specific lighting in strategic locations supports this plan's goal of ensuring the small rides and pedestrian network always remains accessible. Lighting should be prioritized at key intersections and off-street network segments.

A follow-up study is recommended to develop a prioritization plan for pathway lighting, balancing accessibility improvements with capital costs and potential impacts on nocturnal wildlife. Factors for prioritization should include:

- Usage levels
- Land use (e.g., proximity to schools, retail areas, recreational spaces)
- Connectivity and opportunities to create continuously lit corridors
- Security concerns, with priority given to narrow or isolated areas
- Proximity to winter amenities such as outdoor ice rinks
- Existing street lighting, with greater priority for trails lacking residual light
- Available capital funding

3. Traffic Signal Operations

Signal timing in Airdrie plays a key role in ensuring a safe and comfortable pedestrian experience. Optimized signal timing can encourage walking, while poor timing may discourage it. The following measures, as outlined in TAC GDGCR Section 6.4.7, should be considered for Airdrie's signalized intersections:

- **Adequate Crossing Time:** Providing sufficient pedestrian crossing time is essential for safety and accessibility. Crossing time includes observation and reaction time, walking speed, and a safety margin. Signal timing should ensure pedestrians can cross safely by incorporating both a sufficient "walk" interval and adequate clearance time.

Airdrie should review pedestrian clearance times to ensure they align with crossing width and walking speeds. The TAC PCCG recommends a standard walking speed of 1.0 m/s for the general population, with slower speeds of 0.8 m/s for people using mobility devices and 0.9 m/s for older adults and children.

- **Walk Interval:** Airdrie currently provides an 8-second walk interval, exceeding the TAC MUTCDC minimum recommendation of 7 seconds.
- **Pedestrian Clearance Interval:** A 2019 review led to updated pedestrian clearance timings based on a 1.2 m/s walking speed, consistent with previous TAC MUTCDC guidance. However, the latest edition recommends a lower speed of 1.0 m/s. Airdrie could consider updating clearance intervals to reflect this change.

- **Pedestrian Countdown Signals:** Countdown signals help pedestrians gauge remaining crossing time, improving both safety and compliance. These signals have been shown to reduce rear-end collisions, angle collisions, and vehicle-pedestrian crashes. The TAC MUTCDC and TAC PCCG provide guidance on location and operation. Airdrie should consider installing countdown pedestrian signals at all signalized intersections.

- **Leading Pedestrian Intervals:** LPIs give pedestrians a 3- to 7-second head start before vehicles can enter the crosswalk, improving visibility and safety. As pedestrian volumes grow in Downtown Airdrie, implementing LPIs—such as at Main Street and First Avenue—could enhance safety. Studies indicate LPIs reduce pedestrian-vehicle collisions by 19% (CMF of 0.81). Extended clearance or LPIs may also be beneficial at locations with high pedestrian volumes, parked vehicles, or a high proportion of slower-moving pedestrians (e.g., near seniors' residences, schools, hospitals)

- **Signal Timing Plans:** Traffic signals are primarily optimized for vehicle flow, but timing plans also impact pedestrian and small ride experiences. Longer wait times discourage compliance and reduce the attractiveness of walking and cycling.

  The Federal Highway Administration (FHWA) defines pedestrian Level of Service (LOS) ratings from A to F based on delay at signalized intersections. In urban areas, intersections are typically designed to a vehicle LOS of D or E, and pedestrian LOS should be considered on an equitable basis. Airdrie could use this framework to balance pedestrian and vehicle signal timing more effectively.

Table 3: Pedestrian Level of Service

Level of Service	Pedestrian Delay
A	<10 seconds
B	10 – 20 seconds
C	20 – 30 seconds
D	30 – 40 seconds
E	40 – 60 seconds
F	>60 seconds

The City should inventory existing peak-hour cycle lengths at signalized intersections and assess their location within the small rides and pedestrian network. To enhance pedestrian accessibility, cycle lengths should be

reduced to less than 90 seconds, ensuring pedestrian phases occur every 30 to 40 seconds, depending on left-turn requirements. Additionally, shorter cycle lengths should be considered for pedestrian half signals to provide frequent crossing opportunities within the same 30- to 40-second range.

Geometric Design Standards Update

The following considerations should be incorporated when updating the City's geometric design standards.

Design for People Walking

A well-designed pedestrian environment should include:

- **Direct and efficient routes:** Short, easily navigated paths between key destinations, including pedestrian shortcuts unavailable to vehicles.
- **Continuous, accessible pathways:** Direct, barrier-free routes that align with pedestrian "desire lines" for safe and convenient travel.
- **Adequate walking space:** Sufficient width to accommodate pedestrian flow comfortably.
- **Protection from environmental factors:** Shelter from inclement weather, noise, and air pollution.
- **Effective lighting:** Adequate illumination for safety, security, and visibility.
- **Separation from vehicle traffic:** Physical buffers where possible to enhance safety.
- **Safe crossing opportunities:** Clearly marked pedestrian crossings with unobstructed sightlines and appropriate traffic controls.
- **Engaging public spaces:** Streetscape elements such as shaded seating, water fountains, washrooms, natural views, and landscaping to enhance comfort and visual appeal.
- **A pedestrian-friendly atmosphere:** A welcoming environment with the presence of other pedestrians. (*Source: TAC GDGCR, Chapter 6 – Pedestrian Integrated Design*)

Key Elements of Pedestrian-Friendly Streets and Built Environments:
Common elements of pedestrian integrated design that are part of streets and the built environment include the following:

- Sidewalks, paths and trails
- Curb ramps and curb extensions
- Pedestrian crossings and traffic controls (e.g. signals, stop signs)
- Street furniture (benches, trash receptacles, planters)
- Landscaping (trees, shrubs, ground cover)
- Surface treatments with varied materials and colours
- Lighting (streetlights and pedestrian-scale lighting)
- Wayfinding elements (signage for walkways, washrooms and information kiosks)
- Transit stops and shelters
- Weather protection (awnings and covered walkways)
- Public art (sculptures, fountains, clocks and architectural features)
- Activated street frontages that encourage social interaction, shopping and recreation

Design for People Cycling and Using Other Small Rides

Based on TAC's GDGCR, cyclist design considerations and corresponding requirements are outlined in Table 4. Operational widths and horizontal operating envelopes for cyclists are illustrated in Figure 7.

Table 4: Cyclist Design Considerations (Source: TAC GDG)

Design Consideration	Design Requirements
Surface	• An even and firm riding surface free of obstacles and debris. • Smooth surface with adequate traction.
Design Speed	• Design speed of 30 km/h, with higher speeds considered on downhill segments. • Consider the speed differential of users based on abilities and bicycles/devices used.
Design Vehicle	• Many vehicles may be permitted to operate on small rides facilities, including regular bicycles, children's bicycles, adult tricycles, cargo bicycles, bicycles with trailers, electric bicycles (e-bikes), and recumbent bicycles. • Bicycle facilities should also consider other forms of small rides including in- line skaters, electric scooters (e-scooters), skateboards, and other forms of human powered or light electric vehicles.
Horizontal Operating Envelope	• The typical width of a bicycle is 0.75 m, which is the same width of a bicycle trailer. The horizontal operating envelope of a cyclist is 1.2 m to 1.5 m which accommodates variations in tracking. • On steep uphill grades, a horizontal operating envelope for cyclists should be at the higher end of the range to account for slower speeds and increased horizontal deviations. • The horizontal operating envelope of an in-line skater is 2.3 m, with a maneuvering envelope of 1.5 m.
Vertical Operating Envelope	• The vertical operating envelope of a cyclist is 2.5 m. • Eye Height: Eye height for a cyclist is 1.5 m. • Handlebar Height: The height of bicycle handlebars is 0.9 m to 1.1 m. • Lateral Offset to Fixed Objects (to avoid handlebar or pedal strikes): • 0.2 m minimum to a curb or other obstacle that is greater than 100 mm in height. • 0.5 m minimum to a vertical obstruction of 750 mm or greater in height.
Bicycle Length	• Length of an adult bicycle is 1.8 m. • Length of a trailer is 1.2 m, for a total length of 3.0 m when connected to an adult bicycle. • Length of a cargo bicycle is 2.4 m.
Curves	• Minimum radius of 6 m to 10 m but will vary based on design speed. • Horizontal alignment shift can be designed with a taper of between 1:3 and 1:10.

Figure 7: Horizontal Operating Envelopes and Other Cyclist Dimensions (Sources: TAC GDGCR)

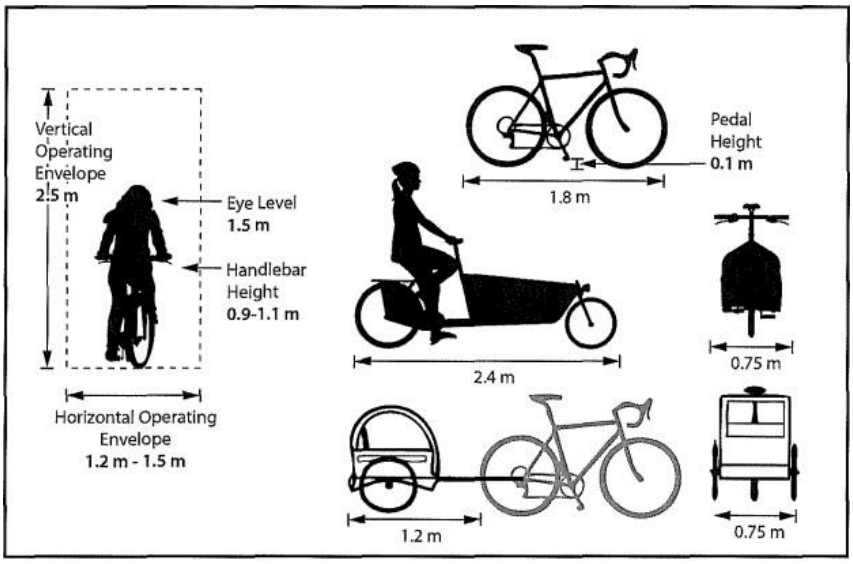


Figure 5.2.1: Bicycle Operating Space

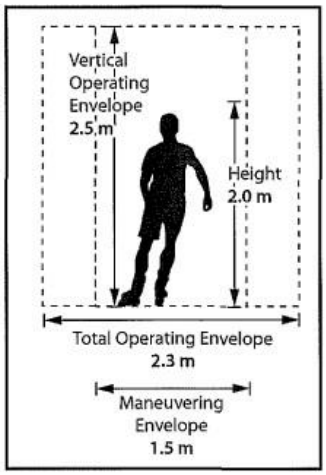


Figure 5.2.2: In-line Skater Operating Space

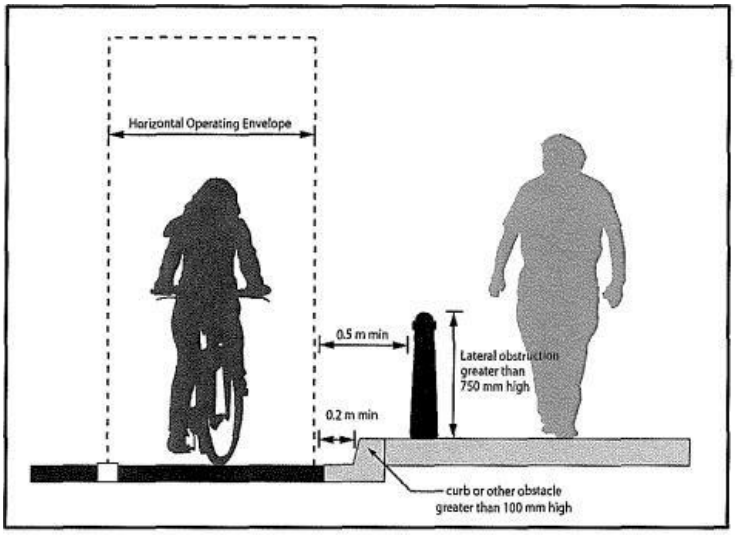


Figure 5.5.2: Horizontal Clearance

Sidewalk Zones

Sidewalk areas are typically divided into zones within the roadside, the space between the curb (or pavement edge) and the adjacent property line (see TAC GDGCR Section 6.3.1). These zones help allocate space for pedestrian movement, interaction, and streetscape elements.

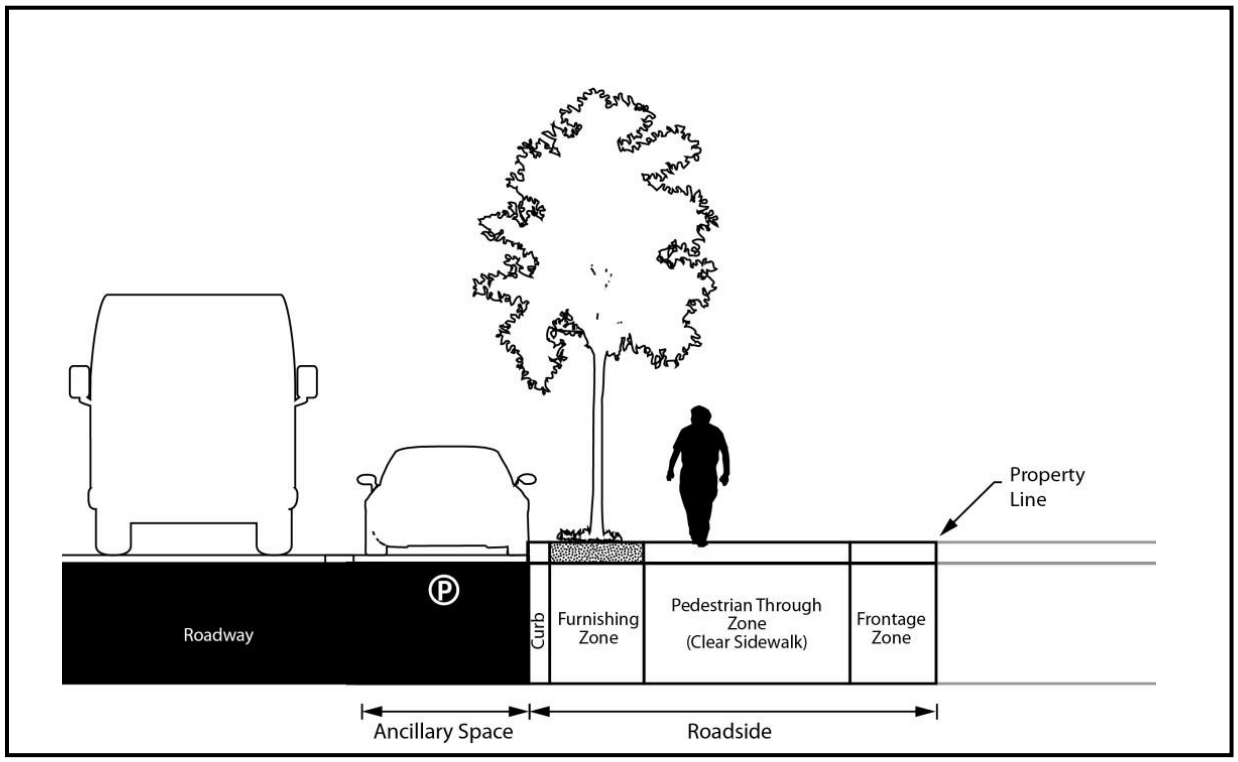
The TAC GDGCR emphasizes that in urban areas, the roadside is more than just a travel corridor; it is a place for people to gather, socialize, and engage with their surroundings. Well-designed roadways contribute to neighborhood character and create inclusive public spaces for all ages and abilities.

Figure 8 illustrates the typical zones of an urban roadside, including the curb, furnishing zone, pedestrian

through zone, and frontage zone. While this plan does not specify widths for furnishing and frontage zones or their design elements—such as street furniture, planters, and bicycle parking—these features are essential for pedestrian- and small ride-friendly streets. More details can be found in the TAC GDGCR and the Complete Streets guidelines used in Edmonton and Calgary.

Sidewalk design is also closely linked to land use. For example, a frontage zone is particularly important in areas with small front-lot setbacks, where commercial activity and access extend into the roadside space.

Figure 8: Zones of a Representative Urban Roadside (Source: TAC GDGCR)



Recommended dimensions to consider for the Pedestrian Through Zone are shown in Table 6.5. The width of the pedestrian through zone, which typically constitutes the sidewalk within street or walkway design, varies based on anticipated volumes of people walking.

Table 5: Design Domain: Pedestrian Through Zone (Source: TAC GDGCR)

Description	Recommended Range (in m)	
	Lower Limit	Upper Limit
Width (m), pedestrian through zone, peak pedestrian flow rate < 400 ped/15 min	1.8	2.0
Width (m), pedestrian through zone, peak pedestrian flow rate > 400 ped/15 min	2.25 to 3.0 or based on crowd capacity and maneuvering space	

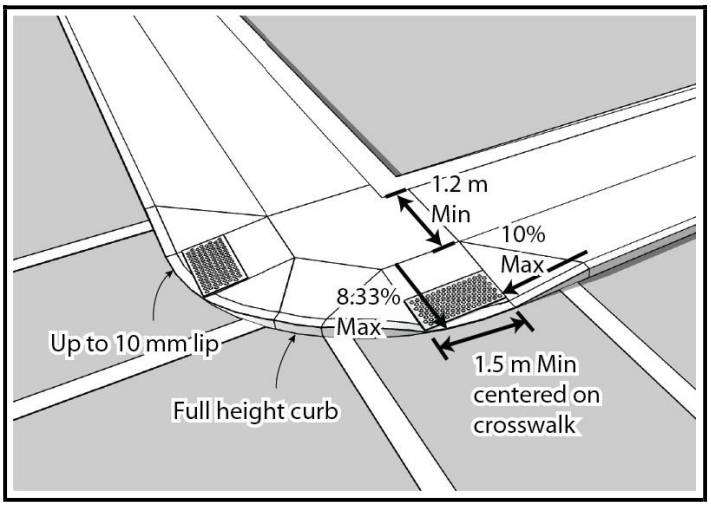
The City should review standard roadway cross-sections and consider updating the sidewalk standard to the minimum width recommended by TAC. For example, sheet R-2 for a 9.0 m residential road shows a 1.2 m sidewalk width, and many other cross-sections show 1.4 m widths, which are below the desired minimum and may impact accessibility for all users. In addition to other sidewalk requirements referenced in this plan, sidewalk widths related to accessibility should be updated and incorporated into design standard updates.

Sidewalks or multi-use paths should be provided on both sides of the street in all areas. Collector roads should have a multi-use path on at least one side. A gaps assessment for this plan identified several missing or disconnected sidewalks in older areas near downtown. The City should work to fill these gaps to ensure a complete and connected network in all areas of Airdrie.

Curb Ramps

At all intersections, one curb ramp per crossing direction should be implemented, or a total of two ramps per corner. A single ramp directs people toward the center of the intersection, which can be especially challenging for those with mobility impairments or visual impairments. For example, a single ramp could direct a wheelchair user into the path of traffic, forcing them to backtrack around the curb edge to enter the crosswalk safely. Implementing two ramps per corner may require relocating a crosswalk or adjusting intersection corner radii, both of which are also beneficial improvements. Figure 9 shows an example of the recommended curb ramp design.

Figure 9: Parallel Curb Ramps at Intersections (Source: TAC GDGCR)



The City should consider incorporating the above curb ramp standard.

Driveways

Conflicts between pedestrians and vehicles occur where driveways and alleys cross sidewalks. These should be managed through design, restrictions, consolidation, or removal in high-activity areas such as schools, commercial districts, and transit hubs. Design elements like raised crosswalks and reduced access frequency help slow vehicle speeds and improve safety.

Driveway apron-style crossings should be used in Airdrie for direct property access outside public streets. This design maintains sidewalk grade and material through the crossing, requiring vehicles to navigate a grade

change before entering the pedestrian zone (see Figures 10 and 11). This slows vehicles at conflict points and benefits small ride users, particularly children and those on multi-use pathways, by eliminating steep cross slopes.

Figure 10: Driveway Apron Style Crossings (Source: TAC GDGCR)

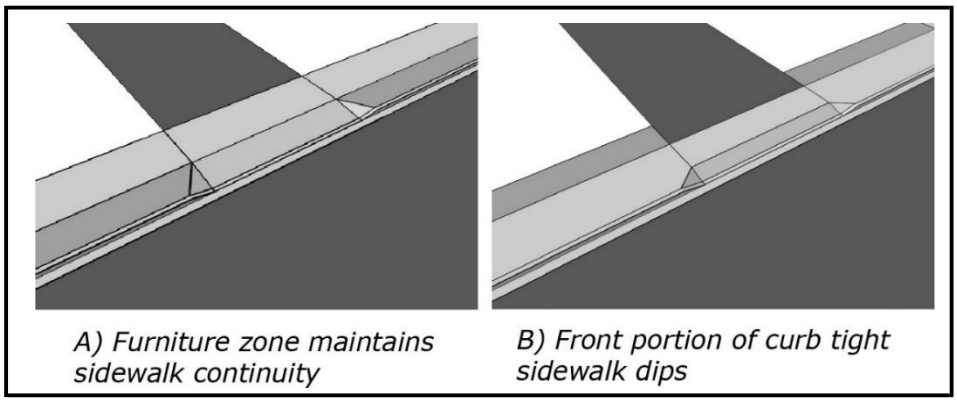


Figure 11: Example Level Crossing, Main Street Airdrie (Source: Google Streetview)

Smart Channel Right Turns

In high-traffic urban areas, channelized right turns increase capacity but also create conflicts between vehicles and pedestrians. At signalized intersections, the requirement for small ride users to dismount falls into a **regulatory grey area** under the Traffic Safety Act, disrupting route continuity.

A **Smart Channel** design, referenced in TAC GDGCR Section 9.15.2, improves safety by increasing the entry angle. Unlike traditional designs with wide turning radii and high free-flow speeds, Smart Channels slow vehicle speeds and enhance visibility.

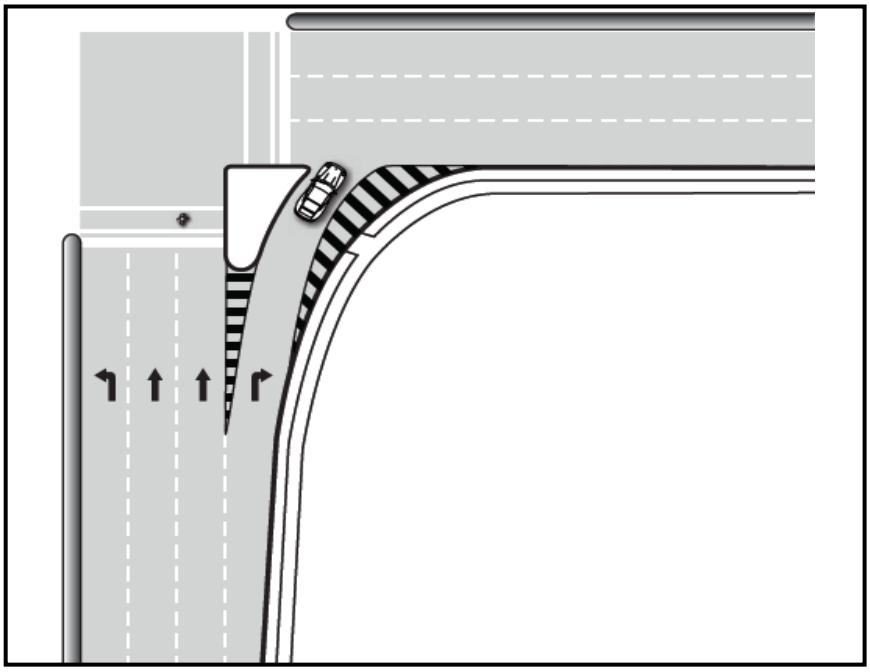
Airdrie has historically followed **Calgary's right-turn channel design,** which does not include Smart Channel features. However, Smart Channels, based on Edmonton's approach, are now widely used in new Calgary streets and have been incorporated into Airdrie's recent arterial planning studies.

The benefits of Smart Channels include:

- Lower turning speeds, often requiring a full stop.
- Improved pedestrian visibility for drivers.
- Safer right-turn movements, separated from merging traffic.

Implementing Smart Channels will enhance intersection safety and improve continuity for small ride users in Airdrie.

Figure 12: Example Smart Channel (Source: TAC GDGCR)



Curb Extensions

Curb extensions enhance pedestrian safety by reducing crossing distances and improving visibility. These features are beneficial at both intersections and mid-block locations. According to TAC GDGCR, curb extensions provide several advantages:

- Improve sightlines between pedestrians and large ride users
- Shorten roadway crossing distances, reducing pedestrian exposure to traffic
- Decrease vehicle speeds by narrowing the roadway
- Increase pedestrian queuing and landing space at curb ramps
- Create opportunities for pedestrian amenities and landscaping in the furnishing zone
- Protect parked vehicles and define curbside parking areas

Design Guidance (TAC GDGCR Section 6.4.3)

- **Width:** Curb extensions should extend **1.5 m to 2.2 m** from the curb line but may fill the entire available space in the parking lane. They must not encroach into the travel lane. See Figure 13 for an example.
- **Transition Curve Radius:** A **3.0 m to 5.0 m** radius allows street cleaning and snow clearing equipment to maneuver. Airdrie and Calgary currently use a **5.0 m** standard, which is appropriate.
- **Visual Markers:** Landscaping, flexible bollards, or signage should be incorporated.
- **Integration with Transit Stops:** Curb extensions can be lengthened to accommodate far-side or near-side transit stops and amenities.
- **Turning Radius Considerations:** At intersections, curb radii and roadway widths should accommodate expected turning vehicles. While curb extensions may tighten the effective turning radius, larger vehicles should still be able to navigate intersections along goods movement routes. Larger radii (e.g., **10 to 15 m**) should be justified, as they increase pedestrian crossing distances and exposure.

Temporary and Semi-Permanent Installations

Curb extensions can be tested using adaptable engineering solutions before making permanent modifications. Modular concrete blocks, as shown in Figure 14, are one example of a semi-permanent curb extension method.

Figure 13: Pedestrian-Motorist Sightlines at Intersection Crossings With and Without Curb Extensions (Source: TAC GDGCR)

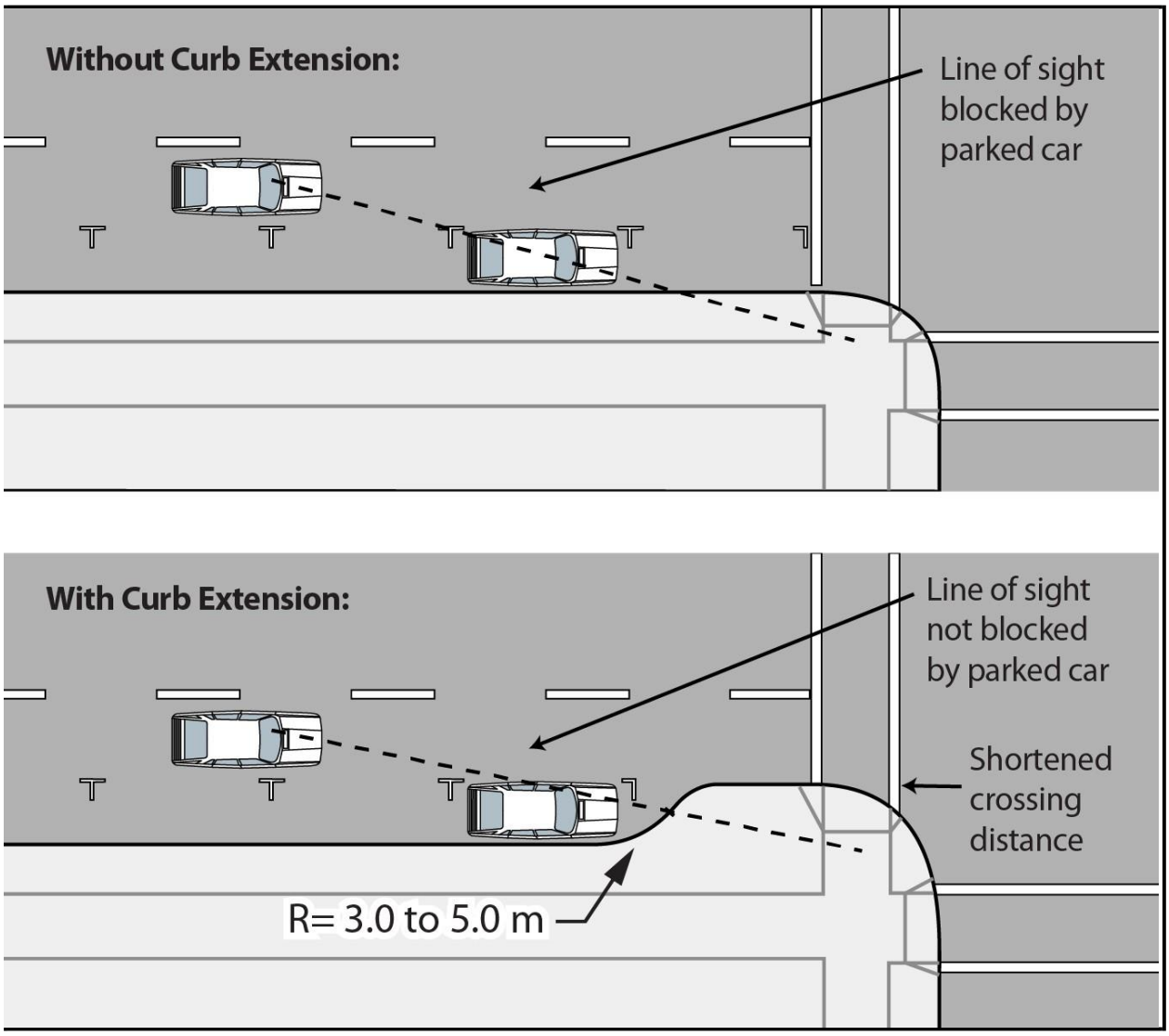


Figure 14: Adaptable Curb Extension Example (Source: City of Edmonton)

Raised Crosswalks and Continuous Crossings

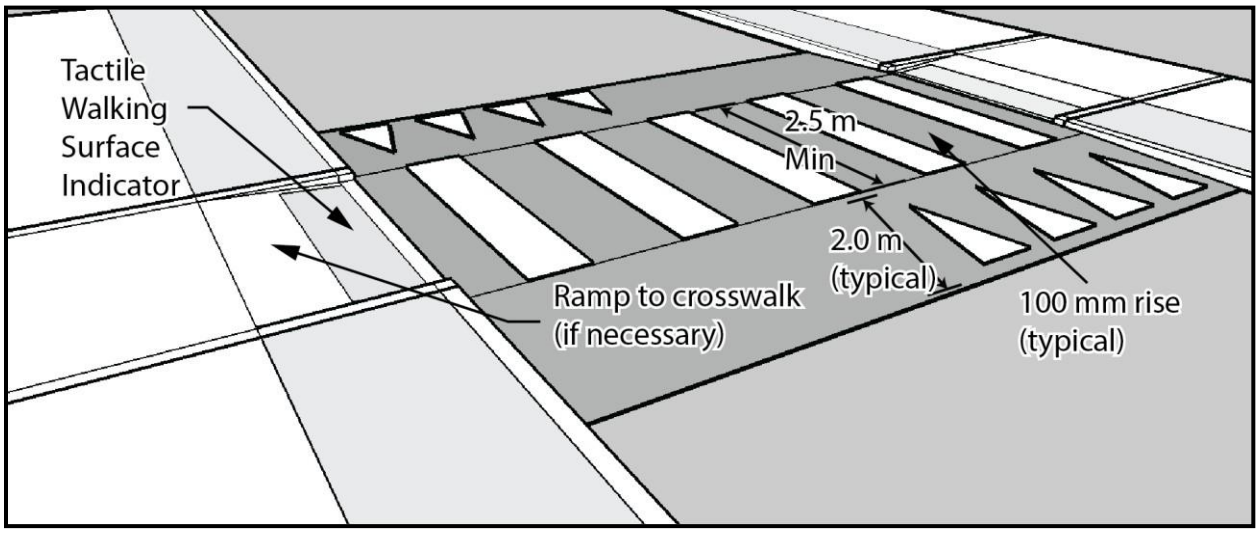
As shown in Figure 15, a raised crosswalk is a marked pedestrian crossing that elevates pedestrians to curb height, increasing their visibility and emphasizing pedestrian priority (see TAC GDGCR Section 6.4.2).

Benefits of Raised Crosswalks

- Reduce vehicle speeds by acting as a traffic calming measure
- Improve visibility for pedestrians and drivers
- Enhance safety at intersections or mid-block crossings
- Provide better accessibility for pedestrians, including those with mobility challenges
- Are especially beneficial near schools and high-pedestrian areas

Raised crosswalks are designed similarly to speed humps, ensuring a smooth but controlled transition for vehicles. They are particularly effective in areas where pedestrian safety is a priority.

Figure 15: Raised Crosswalk (Source: TAC GDGCR)



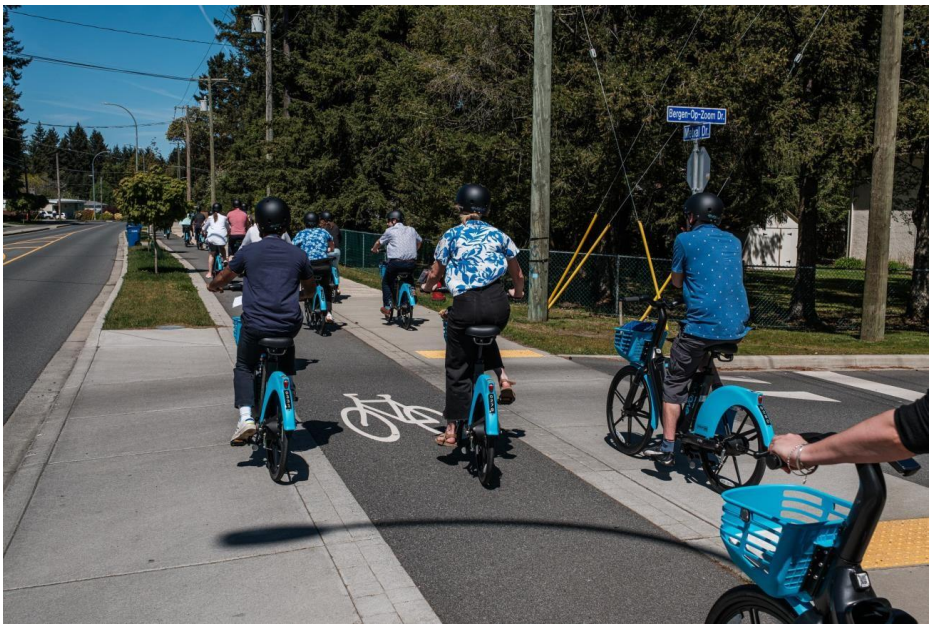
Continuous crossings are an emerging practice in Canadian cities that enhance pedestrian and cyclist priority at intersections. In this design, the minor roadway leg of an intersection is treated like a driveway, even though it remains a public street.

Key Benefits:

- Ensures pedestrian and multi-use path crossings remain clearly visible to approaching and turning drivers
- Prioritizes right-of-way for pedestrians and cyclists
- Enhances safety by reducing vehicle speeds at crossings

An example of a continuous crossing treatment is shown in Figure 16.

Figure 16: Continuous Crossing (Metral Drive, Nanaimo, BC)



Small Ride Selection Framework

Three primary types of bicycle infrastructure are most applicable in Airdrie:

1. **Neighbourhood streets** – Lower-speed streets where cyclists can comfortably share the roadway with vehicles.
2. **Protected small ride lanes** – Dedicated cycling lanes separated from vehicle traffic for enhanced safety.
3. **Multi-use paths** – Shared pathways accommodating cyclists, pedestrians and other small ride users.

The appropriate bicycle facility depends on the street's context, traffic speeds, and vehicle volumes. **Table 6** outlines the relationship between roadway conditions and recommended cycling infrastructure. Additional small ride facilities, as described in **TAC GDGCR Section 5.3**, may be considered in special circumstances.

Guidance like the recommendations above should be incorporated into the City's design standards.

Table 6: Bicycle Facility Selection Guide (Sources: TAC GDGCR, NACTO Designing for All Ages & Abilities)

Street Context				Bicycle Infrastructure Type
Posted Speed	Max Motor Vehicle Volume (AADT)	Motor Vehicle Lanes	Key Operational Considerations	
30 km/h	<1,000 – 2,000	No centerline, or single lane one-way	<50 motor vehicles per hour in the peak direction at peak hour	Neighbourhood small rides way
40 km/h	<500 – 1,500			
High-speed limited access roadways, natural corridors, or geographic edge conditions with limited conflicts		Any	Low pedestrian volume	Multi-Use Path
Any	Any	Any	Any of the following: high curbside activity, frequent buses, motor vehicle congestion, high pedestrian volume, or turning conflicts	Protected small rides lane

Small Rides Facility Design

Airdrie's small rides infrastructure will follow national design guidance and best practices. The City should incorporate these standards into its **design guidelines** to ensure consistency and safety.

Neighbourhood Small Ride Routes (with maintenance priority)

These shared roadways provide continuous, low-stress routes for small rides by limiting exposure to big ride traffic. They are typically located on local streets with traffic calming at intersections and midblock locations to restrict big ride through-access while maintaining small ride connectivity.

- Signage and pavement markings should alert big ride drivers to traffic calming measures.

- Routes should meet Low-Stress Street (LTS 1) standards, making them suitable for all ages and abilities.

- Recommended conditions: 30 km/h speed limit and fewer than 500 vehicles per day (see Figures 17 and 18).

Figure 17: Neighbourhood Bikeway Cross Section (Source: TAC GDGCR)

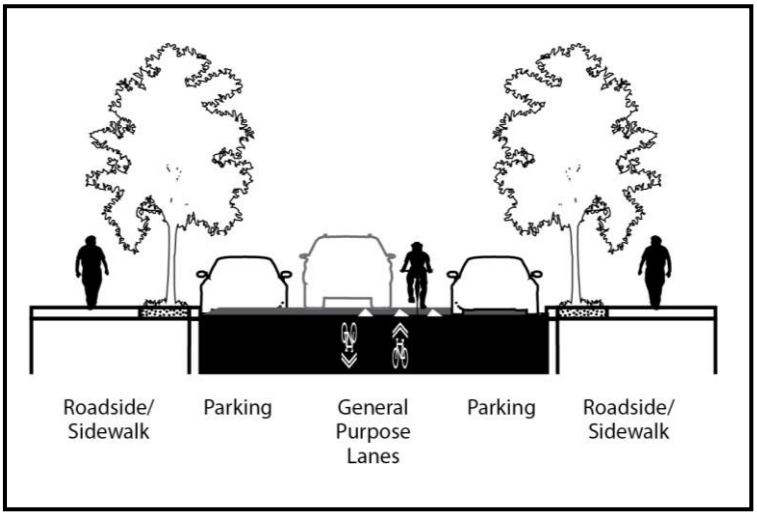
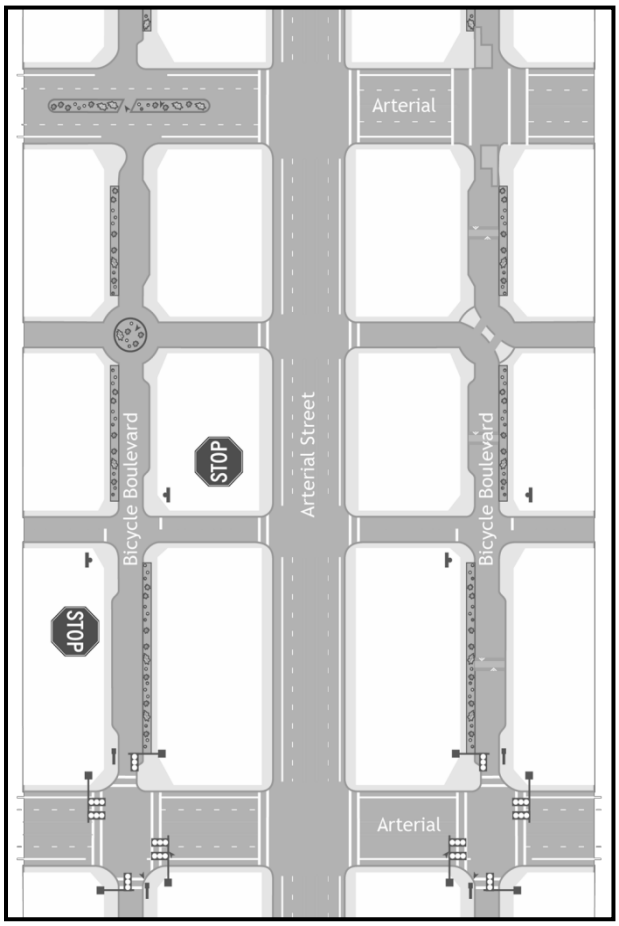


Figure 18: Neighbourhood Bikeway Plan View (Source: TAC GDGCR)



Protected Small Ride Lanes

Protected lanes provide exclusive on-street space for small rides, separated from big rides by a physical barrier or parking lane buffer.

- Can accommodate one-way travel (lanes on both sides of the street) or two-way travel (one protected lane on one side).
- Delineators should prevent vehicle encroachment while ensuring compatibility with snow clearing and sweeping equipment (see Figures 19 and 20).
- Design dimensions are detailed in Table 7.

Figure 19: One-way Protected Bike Lane (Source: TAC GDGCR)

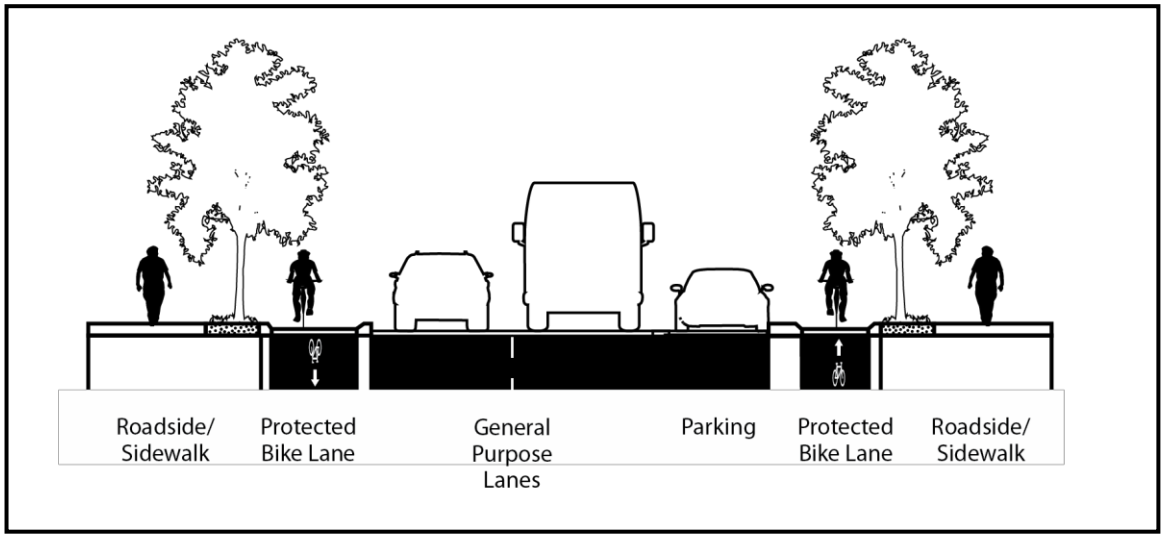


Figure 20: Two-way Protected Bike Lane (Source: TAC GDGCR)

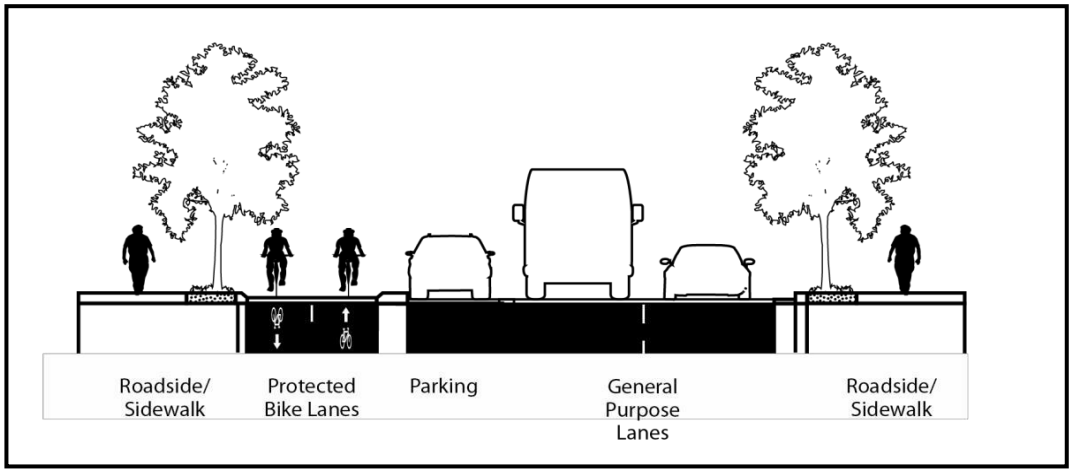


Table 7: **Design Domain: Protected Bike Lane Width** (Source: TAC GDGCR)

	Recommended Range (in m)	
	Recommended Lower Limit	Recommended Upper Limit
Width (m), protected bike lane, one-way, including delineator	2.1	3.5
Width (m), bike lane component, one-way	1.8	2.5
Width (m), delineator component	0.3 (0.6 if adjacent to parking)	1.0
Width (m), protected bike lane, two-way, including delineator	3.3	4.6
Width (m), bike lane component, two-way	3.0	3.6
Width (m), delineator component	0.3 (0.6 if adjacent to parking)	1.0

Multi-use Paths

They provide two-way, off-street shared use for pedestrians and small rides. While often roadside, they can also be located within parks and open spaces.

According to TAC GDGCR Section 5.3.1.4, segregating users should be considered when:

- Pedestrians make up more than 20% of users, and total volume exceeds 33 persons per hour per metre of path width
- Pedestrians make up less than 20% of users, and total volume exceeds 50 persons per hour per metre of path width

Design Considerations:

- The recommended minimum width for a multi-use path is 3.0 m, accommodating one cyclist per direction, two pedestrians walking abreast, or a coasting inline skater.
- Design should factor in maintenance equipment width, ensuring pathways can be properly cleared with sweepers and snowplows.

Table 8: **Design Domain: Multi-Use Paths Width** (Source: TAC GDGCR)

	Recommended Range (in m)	
	Recommended Lower Limit	Recommended Upper Limit
Width (m), shared multi-use path	3.0	6.0

Figure 21: Multi-Use Path (Source: TAC GDGCR)

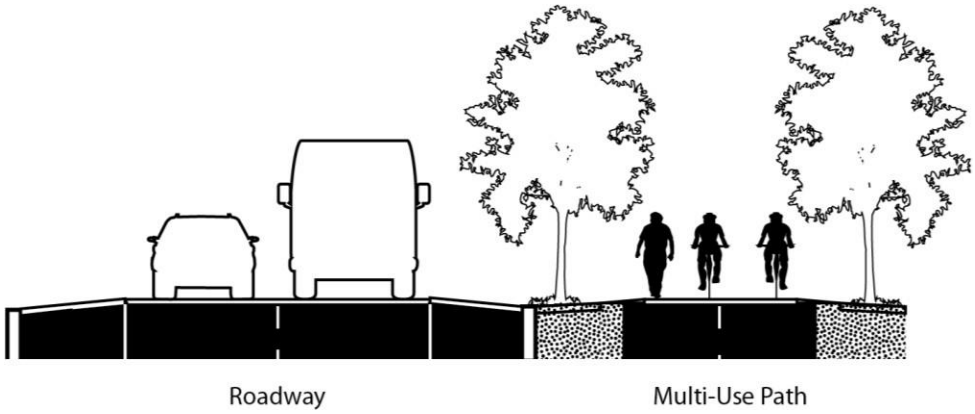
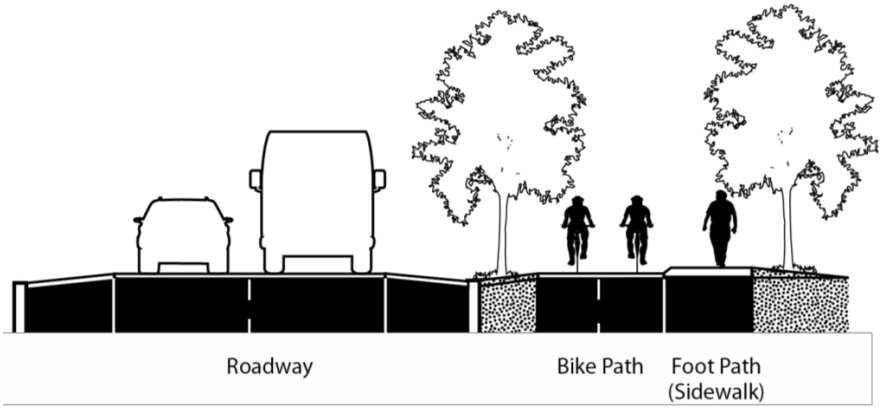


Figure 22: Multi-Use Path in a park within Airdrie

Figure 23: Segregated Multi-Use Path (Source: TAC GDGCR)



Bicycle End-of-Trip Facilities and Parking

It is recommended that updated design guidance for bicycle parking be developed for Airdrie and that this supportive infrastructure be considered in future Land Use Bylaw updates.

End-of-Trip Facilities

End-of-trip facilities support small ride users by providing parking, maintenance tools (e.g., tire pumps, repair stations), and storage. These facilities may include short- or long-term bike parking, change rooms, showers, and lockers.

The City can also install short-term parking in key public spaces to improve accessibility. By making small rides more convenient, these facilities encourage daily use, support multi-modal travel (e.g., biking to transit), and expand transit's effective service area.

Parking for Small Rides

Short-term small rides parking consists of basic outdoor racks with minimal weather protection and security, affecting user safety and confidence. According to the *Essentials of Bike Parking* (APBP), effective short-term parking should prioritize:

1. **Proximity** – Close to destinations for convenience.
2. **Ease of Use** – Visible and intuitive for visitors, typically staying up to two hours.

Long-Term Parking

Long-term parking provides weather protection and security for employees, residents, and transit users who leave their small rides unattended for extended periods. Options include:

- Enclosed rooms in buildings or workplaces
- Secure enclosures in parking garages
- Lockers at transit centers

Public facilities, such as staffed enclosures at transit hubs, serve broader users, while private options are restricted to specific groups. *Bicycle End-of-Trip Facilities* (Transport Canada) offers guidance on infrastructure, such as lockers, change rooms, and showers.

Installation Guidelines

The *Bicycle Parking Handbook* (City of Calgary) recommends:

- Easy access for bicycles
- 2.0m clearance in front of locker doors
- 2.0m aisle width between locker units
- Secure anchoring to concrete or asphalt surfaces

Table 9 summarizes considerations for short-term and long-term bicycle parking.

Table 9: Considerations for short-term bicycle parking and long-term bicycle parking (Source: adapted from APBP)

Consideration	Short-Term Bicycle Parking	Long-Term Bicycle Parking
Location	• Visible and close to the entrance • Weather protected • Area lighting of parking	• Varies with context • Users typically willing to trade a degree of convenience for weather protection and increased security • Signage for first-time users
Security	• Sturdy and well-anchored • Visible to the public, ideally seen from within the destination (e.g. reception area, etc.)	• Access to bicycles can be limited individually (lockers) or in groups (locked small ride rooms) • Access control
Quantity	• Varies with context	• Varies with context

The types of racks for short-term parking, high-density storage, and racks to avoid, as suggested by APBP, are provided in Figures 24-26, respectively.

Figure 24: Short-term Parking Options (Source: APBP)

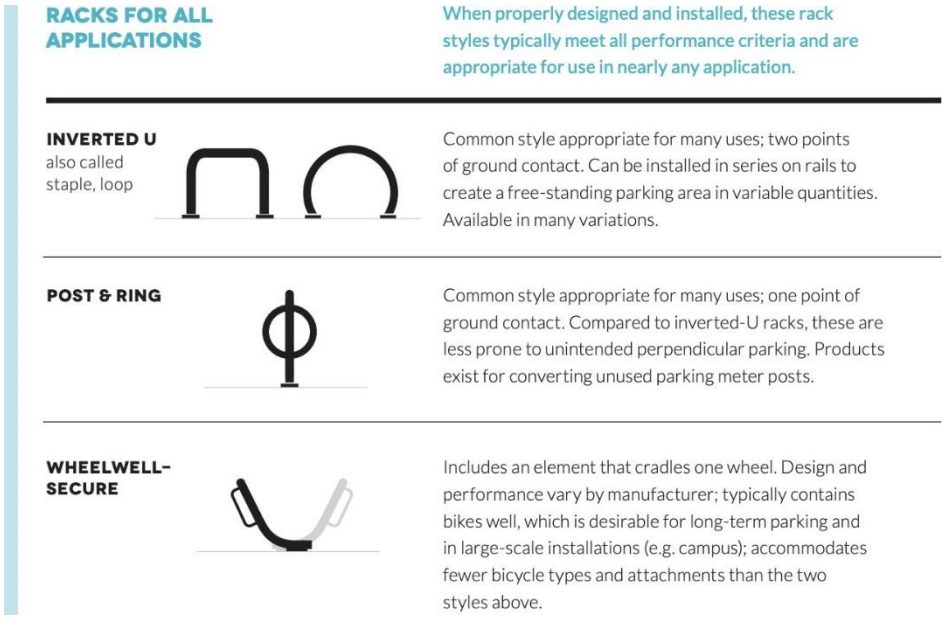


Figure 25: High-Density Racks (Source: APBP)

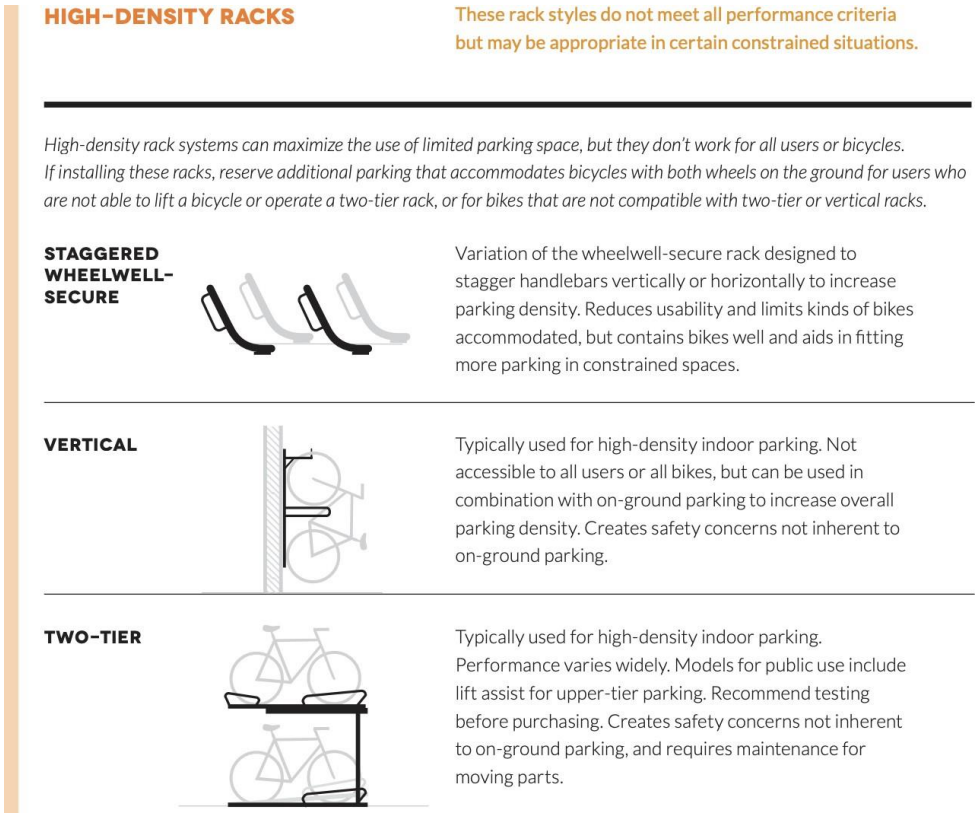


Figure 26: Racks to Avoid (Source: APBP)

RACKS TO AVOID

Because of performance concerns, APBP recommends selecting other racks instead of these.

WAVE
also called undulating or serpentine

Not intuitive or user-friendly; real-world use of this style often falls short of expectations; supports bike frame at only one location when used as intended.

SCHOOLYARD
also called comb, grid

Does not allow locking of frame and can lead to wheel damage. Inappropriate for most public uses, but useful for temporary attended bike storage at events and in locations with no theft concerns. Sometimes preferred by recreational riders, who may travel without locks and tend to monitor their bikes while parked.

COATHANGER

This style has a top bar that limits the types of bikes it can accommodate.

WHEELWELL

Racks that cradle bicycles with only a wheelwell do not provide suitable security, pose a tripping hazard, and can lead to wheel damage.

BOLLARD

This style typically does not appropriately support a bike's frame at two separate locations.

SPIRAL

Despite possible aesthetic appeal, spiral racks have functional downsides related to access, real-world use, and the need to lift a wheel to park.

SWING ARM SECURED

These racks are intended to capture a bike's frame and both wheels with a pivoting arm. In practice, they accommodate only limited bike types and have moving parts that create unneeded complications.

Snow and Ice Control

Snow and ice can deter small ride and pedestrian network users in winter. Even those comfortable with cold weather for recreation may avoid walking or riding due to unsafe surfaces. Slips and falls are a major safety concern, as most small rides and footwear lack adequate traction. A single bad experience can discourage year-round use.

Airdrie has clear snow and ice control policies for roads and sidewalks but lacks prioritization for pathways. Road clearing follows a tiered system, with arterial roads as Priority 1 and sidewalks requiring clearance within 24 hours by adjacent property owners.

To support year-round use, the City should consider expanding its snow and ice control policies for small rides and pedestrian routes. Best practices include:

Setting clearing standards (e.g., response time, snowfall thresholds) to improve reliability.
Prioritizing key routes by designating primary network pathways as Priority 1.
Ensuring consistency so users know what to expect.
Communicating with users about progress and changes.
Spring debris, particularly gravel at intersections and corners, poses another hazard. Simple removal using handheld or backpack blowers can improve safety.

Airdrie will review its Snow and Ice Control Policy in 2025, presenting an opportunity to formalize these improvements.

Signage

Traffic signage guidance is available in the TAC MUTCDC, Bikeway Traffic Control Guidelines, and PCCG. While not exhaustive, the following recommendations align with Airdrie's current practices and should be reviewed and updated as needed.

Effective signage enhances both real and perceived safety, encouraging greater use of the small rides and pedestrian network. Recommended signage includes:

- Share the Road: Advises drivers to accommodate small rides. Suitable for roads with <2,000 vehicles/day and speeds of 30-40 km/h where no parallel pathway exists. Higher-speed or high-volume roads should include dedicated infrastructure as outlined in this plan.

Figure 27: Share the Road Sign (from MUTCDC)

- **Wayfinding:** Public engagement indicates that many pedestrians and small ride users are still learning to navigate the network. While Airdrie has strong public transit branding, there is an opportunity to extend this to small rides through complementary wayfinding, improving connections to transit.
    - Currently, wayfinding signage is minimal or absent. Adding signage would enhance user experience and navigability. A follow-up wayfinding study is recommended.
    - Online mapping tools (e.g., Google Maps, Apple Maps) should be regularly updated with the latest small ride and pedestrian infrastructure to enhance wayfinding.

Figure 28: Wayfinding Example (83 Avenue/98 Street, Edmonton)

4. Small Rides and Pedestrians Network Culture Recommendations

The following recommendations are suggested to support a broader and stronger culture of using the small rides and pedestrians network in Airdrie.

Safe Routes to School

A partnership with **Ever Active Schools** offers an opportunity to expand a **Safe Routes to School** program across Airdrie, promoting education and cultural adoption of small rides. Key resources include:

- **School Travel Planning (STP):** A six-phase framework guiding schools through planning, participation, assessment, stakeholder collaboration, and progress measurement. Schools in the Calgary region have implemented STP actions such as small rides parking, cycling skills training, fun walking events, and winter maintenance for travel routes.
- **Supporting Tools:** The City can aid program development by providing network maps, a user feedback platform on travel barriers, and support for neighborhood traffic calming initiatives.

Another potential partner is **Youth En Route,** a Calgary-based non-profit encouraging cycling among middle and high school students. While currently focused on Calgary, community grants in Airdrie could help attract and leverage their grassroots approach.

Cycling Training and Education

Building a strong cycling culture requires accessible training and education. Key opportunities include:

- **School Curriculum:** Advocate through **Alberta Municipalities** for cycling skills training in Physical Education or develop community-led extracurricular programs.
- **CAN-BIKE Program:** Support adoption of **Cycling Canada's CAN-BIKE program**, which provides structured courses on safe and enjoyable road cycling. Training is delivered through local cycling associations, municipalities, and community groups.

Small Rides and Pedestrians Network Event Support

Hosting or supporting events can build cultural momentum for Airdrie's small rides and pedestrian network. Key event types include:

- **Recreational & Competitive Activities:** Events like fun runs, triathlons, and cycling races promote active participation. Airdrie already hosts events such as the **Bubble Chase 5K, Know Where to Turn Race,** and **PILSC Legacy Run/Walk.** Additional opportunities include a **Kids Triathlon, Tour of Bowness-style cycling race,** or a **marathon/half-marathon.**
- **Commuter Activities:** Events like **Bike to Work Week, Walk to Work Week,** or the **Commuter Challenge** (a national competition promoting non-vehicle travel) can encourage everyday use of the network.
- **Neighborhood Engagement:** Community-based events such as **Jane's Walks** (educational walkabouts in 500+ cities worldwide), themed small rides days (**"Bike or Walk for Ice Cream"**), or a **Small Rides Festival** can strengthen local engagement.

Community Grants

It is recommended that Airdrie establish a grant program to support community organizations that promote small rides and pedestrian culture. Grants could help cover costs for supplies, promotion, events, insurance, instructors, and related expenses.

Examples from Other Cities:

- **Vancouver – Walk, Bike, Roll Community Partnership Grant:** $500–$5,000 for events, workshops, educational campaigns, and promotional materials.
- **Halifax – Active Transportation Network Education and Promotion Grant:** Up to **$1,000** for small projects; **$5,000+** for more significant initiatives supporting the city's transportation plan.

Potential for Airdrie:
A small per capita budget (e.g., **$0.05–$0.10 per resident**) could create an initial **$4,000–$8,000 annual grant** program. A pilot phase would gauge community interest, with potential for expansion based on demand and success.

5. Supporting Bylaws and Program Recommendations

Bylaw Updates

Targeted updates to Airdrie's Traffic, Parks, and Land Use Bylaws will improve the safety, accessibility, and integration of small rides while aligning with best practices at the time of review.

1. **Traffic Bylaw**
    - Introduce a minimum passing distance (e.g., 1 meter at speeds up to 30 km/h, 1.5 meters above) to improve small ride safety.
    - Clarify right-of-way rules for small rides at designated crossings to enhance travel efficiency.
    - Regulate shared and private e-scooters by designating parking zones off sidewalks and pathways and requiring basic safety features such as brakes, lights, and speedometers.
    - Recent updates in Calgary's Traffic Bylaw could serve as a reference for similar amendments.
2. **Parks Bylaw**
    - Permit small rides on park pathways while maintaining pedestrian safety and recreational space.
    - Establish clear shared-use guidelines to support safe and efficient movement.
3. **Land Use Bylaw**
    - Require end-of-trip facilities in new developments, including secure indoor and outdoor small ride parking, showers, lockers, and maintenance tools.
    - Establish site design guidelines to ensure direct pathways, minimal grade changes, and connectivity between residential, commercial, and recreational areas.

These updates will help create a well-connected, user-friendly small rides network, allowing flexibility to incorporate emerging best practices.

Seamless Connections: Small Rides & Transit

Integrating small rides and pedestrian networks with transit improves mobility, extends transit access, and supports sustainable travel. The American Public Transit Association (APTA) emphasizes that strong integration requires a clear alignment with community and transit system goals, particularly by **enhancing first- and last-mile connections to transit stops.**

In Airdrie, this means:

- Prioritizing **network gaps** to improve small ride and pedestrian access to key transit routes.
- Providing **secure small ride parking** at transit hubs, bus stops, and onboard buses.
- Exploring **micromobility services** e.g. e-scooter sharing to further enhance connectivity.

Key Priorities for Bicycle Integration:

- Expand small ride parking and address network gaps at Main Street, 8 Street, East Lake Boulevard, and the South Transit Terminal.
- Improve access and parking along Route(s) to CrossIron Mills and NE Calgary, focusing on Main Street and the South Transit Terminal.
- Introduce small ride lockers at high-use stops to enhance security and convenience.

Transit Centres: Supporting Seamless Regional Commuting
Airdrie's South Transit Centre (Existing) and Planned North Transit Centre require secure, weather-protected

parking facilities to encourage small ride-transit integration. A safe, well-lit facility with live camera monitoring accessible on the Airdrie Transit website would increase user confidence, particularly in poor weather. These improvements would help make small rides a reliable commuting option, reducing car dependency and fostering sustainable travel habits.

Additional Recommended Actions

1. **Pop-up Businesses:** Encourage permanent or temporary vendors at key locations to improve user experience.
2. **Pathway Counters:** Install counters at strategic points to track usage trends and measure the impact of network improvements.
3. **Small Rides Repair Stands:** Provide repair stations at major network hubs and destinations to support riders.

5.0 Plan Implementation

The Implementation Plan outlines a clear strategy for a fully connected, accessible Small Rides and Pedestrian Network in Airdrie. It provides cost estimates, project priorities, and a phased approach to building a user-friendly system.

The plan focuses on practical improvements, including new construction and retrofits while addressing constraints like trees, utilities, and parking. Projects are categorized by complexity to guide budget-conscious investment, with priority given to rail and highway crossings, upgraded crosswalks, and other key infrastructure.

To accelerate progress, the plan emphasizes securing provincial and federal funding to reduce municipal costs and enable large-scale improvements. This phased, strategic approach will expand mobility options and enhance community connectivity.

5.1 Cost Estimates

Pathway Improvement Projects

Pathway projects include new construction and retrofits of existing corridors. Some segments require further study due to constraints such as trees, utilities, accesses, parking, and right-of-way limitations. In some cases, parking lanes may need to be repurposed to accommodate pathways.

Cost estimates (2024 dollars) are categorized by project complexity:

- **High Complexity** ($1,500/m) – Requires roadway reconstruction, tree removal, streetlight relocation, access modifications, or parking loss. Stakeholder engagement may be needed.
- **Average Complexity** ($750/m) – Typically replaces a sidewalk with a pathway and may involve minor boulevard, tree, or streetlight alterations.
- **Low Complexity** ($400/m) – Involves constructing a pathway in existing boulevard space or building an off-street pathway with minimal modifications.

The following is a summary table of projects recommended, their expected length and costs.

Table 10: Network Improvement Projects

Segment	Description	Complexity	Length	Costs
(1) Woodside Drive, Canals Boulevard	Upgrade existing monowalk to a pathway. Widening into the boulevard is constrained. May need to prohibit parking on one side and/or reconstruct portions of the roadway.	High	1,250 m	$1.9 M
(2) Reunion Gateway	Replace existing sidewalk with a boulevard pathway. May need to move light poles, remove trees and/or rebuild the roadway and/or curb to create space.	High	270 m	$400,000

(3) Bayside Boulevard (Central)	Replace the existing separate sidewalk with boulevard pathway from canal bridge to 8 Street (500 m), which appears to be feasible (assumed average complexity). Adding a boulevard pathway and/or upgrading monowalk to pathway, east of 8 Street (700 m) is more challenging.	High - Average	1,200 m	$1.3 M
(4) Bayside Boulevard (South)	Replace existing separate sidewalk with boulevard pathway. Could require loss of trees or reconstruction of roadway and/or curbs.	High	280 m	$400,000
(5) Railway Avenue	Upgrade boulevard walk to pathway from existing pathway on Canoe Drive to 8 Street.	Average	225 m	$200,000
(6) Main Street	Pathway improvements expected to be added as part of public realm improvements with the Downtown Revitalization Plan.	High	1,000 m	N/A
(7) 1 Avenue, Edmonton Trail	The existing wider sidewalk from 8 Street to Main Street appears sufficient as a pathway and excluded from the costs. Costs are estimated for adding a boulevard pathway from 8 Street to Edmonton Trail which may require roadway reconstruction, loss of trees or parking.	High	1,200 m	$1.8 M
(8) Central Avenue	Add a pathway from Nose Creek through Central Avenue to Edmonton Trail.	High	1,200 m	$1.8 M
(9) Nose Creek Crossing	Add a pathway across Nose Creek connecting with existing pathways to the west and future pathways to the east.			$1M
(10) East Lake Ramp, East Lake Crescent	Construct a mono or boulevard pathway, connecting from the pathway which ends at East Lake Crescent to Veterans Boulevard and East Lake Boulevard Pathways. Where development existing this may be a challenging retrofit due to the number of driveways, boulevard parking, utilities and other items.	Average	1,700 m	$1.3 M
(11) Kingsview Road	Connect from 40 Avenue pathways to Yankee Valley Boulevard. May apply a similar pathway design as East Lake Ramp Road.	Average	1,600 m	$1.2 M
(12) Kingsview Boulevard	Replace the existing separate sidewalk with a boulevard pathway.	Average	1,000 m	$750,000
(13) Off-Site Levy Funded Connections	New pathways on Arterial Streets	Average		Funded by OSL
NE Regional Park Connection	New Pathway alongside RR 292 to connect the north end of the city with the new NE Regional Park	High	800 m	$1.0 M
(14) Veterans Boulevard	Add a pathway to the north side of Veterans Boulevard. Requires additional study to verify feasibility and implications.	High	600 m	$0.9 M +
(15) Veterans Boulevard	Add pathway to the north side of Veterans Boulevard	Lower	460 m	$0.2 M
(16) Yankee Valley Boulevard	Add a pathway to the south side of Yankee Valley Boulevard. Complex because of grades.	High	520 m	$0.8 M

(17) Yankee Valley Boulevard	Add a pathway to the south side, through Highway 2 grade separation. Requires additional study to verify feasibility and implications	High	600 m	$0.9 M +
(18) Meadowbrook Drive	Upgrade existing monowalk to a pathway. Widening into the boulevard is constrained. May need to prohibit parking on one side and/or reconstruct portions of the roadway.	High	800 m	$1.4 M
(19) Kings Height Boulevard	Replace existing sidewalk with a boulevard pathway. May need to move light poles, remove trees and/or rebuild the roadway and/or curb to create space.	High	600 m	$0.9 M
(20) Minor Gaps	Formalize existing worn-in paths observed by the project team. These are short sections that have obvious signs of usage but no pathways.	Average	400 m	$300,000
Future Development Areas	Pathways are expected to be constructed with neighbourhoods in the southwest and southeast. No cost is provided for these items. The plans and design drawings for these areas should be reviewed to ensure pathways are planned to be construction.	Average	tbd	Tbd (developer funded)

Other Capital Construction Projects

Cost for other capital projects not listed in the above table.

- **New Rail and Highway Crossings:** Four (4) grade separated crossings are recommended and these are valued at $10 M per crossing.
- **New Crosswalks:** Two crosswalks are identified in the plan, one at Reunion Loop/Veterans Boulevard and another at 40 Avenue and the east boundary trail. Costs for RRFB's are estimated at $20,000 and for pedestrian signals are $200,000. A detailed crossing review is recommended for each location to verify the type of recommended crossing. The cost for the crossing review is estimated at $5,000 to $10,000 per location.

Supporting Studies

Cost for supporting studies include:

- **Concept Planning Study and Engineering Design:** The City should complete a concept planning and preliminary engineering report to study the projects listed in Table 10. The report should review the corridors in further detail, identify implications of installing pathways, review options for implementation, include an engagement aspect as needed and verify costs.
- **Accessibility Study:** $50,000 (study only). $250,000 is assumed per year for implementation.
- **Trail Lighting Prioritization Study:** $50,000 (study only). $500,000 is assumed per year for implementation.
- **Snow and Ice Control Review:** $180,000. Study is being undertaken in 2025.
- **Wayfinding Plan:** $50,000 (study only). $250,000 is assumed per year for implementation.

Administration

Assumed administratively led efforts are excluded from the cost estimates are as follows:

- **Design Standards Update**: Completed by city administration or budget $50,000 (portion for Small Rides and Pedestrians Network) if part of a third-party comprehensive update.
- **Land Use Bylaw Updates**: Completed by city administration or budget $25,000 (portion for Small Rides and Pedestrians Network) if part of a third-party comprehensive update.
- **Traffic Bylaw Updates:** to be completed by city administration.
- **Parks Bylaw Updates**: To be completed by city administration.
- **Snow and Ice Control Policy:** Completed by city administration.
- **Safe Routes to School:** Completed by city administration.
- **Community Grants:** $20,000 per year is assumed.
- **Traffic Signal Timing Review:**($170,000 in 2025 to review 26/50 intersections. Implementation is expected to be covered through typical signal maintenance/operating budgets for signal timing changes.

5.2 Prioritizing Improvements

Capital projects are prioritized based on usage levels and proximity to alternative routes:

- **Usage Levels:** Determined using Strava heat maps (e.g., Map 2, 2023 snapshot), which rank connections from **1 to 10** based on relative usage across the city.
- **Alternative Routes:** Distance to the nearest existing facility.
- **Implementation Timeline:** Categorized as short-, medium-, or long-term. Timelines remain flexible because:
    1. Projects must compete for municipal funding.
    2. Much of the required land is City-owned, allowing Council to adjust timing as needed.

Routes with higher usage and fewer alternatives are prioritized for earlier implementation.

Table 11: Priority and Implementation

Segment	Priority		
	Usage Levels*	Alternative Route	Implementation
(1) Woodside Drive, Canals Boulevard (Veterans Boulevard to Canoe Cresent)	10	500 m	Short Term
(2) Reunion Gateway	10	500 m	Short Term
(3) Bayside Boulevard (Central)	8	600 m	Short to Medium Term
(4) Bayside Boulevard (South)	10	400 m	Short Term
(5) Railway Avenue	10	400 m	Short Term
(7) 1 Avenue/Edmonton Trail	7	800 m	Medium Term
(8) Railway Avenue/Central Avenue	6	800 m	Medium Term
(9) Nose Creek Crossing			

(10) East Lake Ramp, East Lake Crescent	4	600 m	Long Term
(11) Kingsview Road	2	500 m	Long Term
(12) Kingsview Boulevard	8	150 m	Medium Term
(13) Boundary Pathways	6	N/A	Medium Term
(14) Veterans Boulevard	6	100 m	Long Term
(15) Veterans Boulevard	5	50 m	Long Term
(16) Yankee Valley Boulevard	2	100 m	Long Term
(17) Yankee Valley Boulevard	2	100 m	Long Term
(18) Meadowbrook Drive	8	500 m	Short Term
(19) Kings Height Boulevard	8	300 m	Short Term
Minor Gaps	9	N/A	Short Term

Short Term Priority Work

The short term is focused on closing major gaps in the network and crosswalks and completing supporting studies for accessibility, trail lighting, traffic signaling and wayfinding. It also includes a budget for supporting small rides and pedestrians network culture and other projects.

Table 12: Short Term Improvements

Short Term Priority Project	Cost
Bylaw Updates – Traffic, Parks, Land Use Bylaw	25,000
Education Campaign – Bylaw updates, sidewalks vs pathways, intersection crossings	25,000
Concept Planning/Preliminary Design (for short term projects)	$400,000
(10) East Lake Ramp, East Lake Crescent	$1.3 M
(1) Woodside Drive, Canals Boulevard (Veterans Boulevard to Canoe Cresent)	$1.9 M
(2) Reunion Gateway	$400,000
(4) Bayside Boulevard (South)	$400,000
(5) Railway Avenue	$200,000
(9) Nose Creek Crossing	$1.0 M
(14) Minor Gaps	$300,000
(18) Meadowbrook Drive	$1.4 M
(19) Kings Height Boulevard	$900,000
RR 292 to connect NE Regional Park to Hamilton BV NE	$800,000
Crosswalk Improvements (Study and Implementation)	$250,000
Accessibility Study	$50,000
Accessibility Improvements	$750,000
Trail Lighting Prioritization	$50,000
Wayfinding Study	$50,000

Wayfinding Implementation	$700,000
Community Grants	$60,000
Total	**$11.0 M**

Medium Term Work

Table 13: Medium Term Improvements

Medium Term Priorities	Cost
Concept Planning/Preliminary Design (for medium term projects)	$400,000
Grade Separated Crossing Concept Study *(for small rides and pedestrians, in support of separate funding for Grade separated crossings for Big Rides (cars, trucks, buses)*	$200,000
(3) Bayside Boulevard (Central)	$1.3 M
(7) 1 Avenue, Edmonton Trail	$1.8 M
(8) Central Avenue, Edmonton Trail	$1.8 M
(12) Kingsview Boulevard	$750,000
East Lake Avenue NE	$800,000
Accessibility Improvements	$750,000
Trail Lighting Implementation	$1.5 M
Community Grants	$60,000
Total	**$9.4 M**

Long Term Improvements

Long Term Priorities	Cost
(11) Kingsview Road	$1.2 M
(14) Veterans Boulevard	$900,000 +
(15) Veterans Boulevard	$200,000
(16) Yankee Valley Boulevard	$800,000
(17) Yankee Valley Boulevard	$900,000 +
Accessibility Improvements	$1 M
Trail Lighting Implementation	$3.0 M
Community Grants	$80,000
New Grade Separated Crossings	$10 M +
Rail Trail – Missing Links needing room from the CPKC ROW	Tbd if/when feasible
Total	**$18.1 M +**

5.3 Funding Sources

Expanding Airdrie's Small Rides and Pedestrian Network requires diverse funding sources to supplement municipal budgets. Securing external resources is essential to developing a safe, extensive network as demand grows. Fortunately, multiple funding opportunities exist, including federal programs like the **Active Transportation Fund** ($400 million for infrastructure and planning) and the **Investing in Canada Infrastructure Program** (which has allocated $58 million for small rides and pedestrian projects).

Key Funding Sources:

1. **Active Transportation Fund (ATF):** A five-year, $400 million federal program supporting pathways, small ride lanes, trails, and pedestrian bridges. Alberta has received $3.5 million.
2. **Investing in Canada Infrastructure Fund:** A $33 billion program with a COVID-19 Resilience stream, funding various infrastructure projects, including small rides and pedestrian networks. Many more recipients have received funding from the Infrastructure Fund, compared to the Active Transportation Fund. Highlights/examples of Infrastructure Fund projects are in the following table.

Table 15: Infrastructure Canada Fund Projects

Municipality	Funding	Project
Airdrie	$1.3 M	Luxstone CPR Crossing
Banff	42.95 M	Transit Lane, New Bow River Bridge
Edmonton	$8.8 M	Trail Rehab (Legislature)
Grande Prairie	$1.6 M	Ped bridge, other park improvements.
Medicine Hat	$4.3 M	Trail Rehab and New Trails
Red Deer	$6.6 M	Sidewalk Rehab, New Sidewalks and Trails
St. Albert	$4 M	Park Improvements, New Trails
Strathcona County	$2.7 M	New Sidewalks and Trails

3. **Canada Community-Building Fund (CCBF):** Formerly the Gas Tax Fund, providing flexible municipal funding for pathways, small ride lanes, and charging stations.
4. **Zero Emission Vehicle Infrastructure Program (ZEVIP):** Supports e-bike and small ride charging stations, ideal for Airdrie's transit hubs.
5. **Green Municipal Fund (GMF):** Funds sustainable infrastructure, including pathways, small ride parking, and e-scooter facilities.
6. **Alberta Ecotrust Foundation:** Supports projects that reduce car dependency and align with environmental goals.
7. **Health Canada's Healthy Communities Initiative:** Funds pedestrian and small ride infrastructure to promote public health.

By strategically leveraging these resources, Airdrie can expand its network while minimizing municipal costs.