

Getting Started with Active Transportation

A Guide to Challenges of Implementing Active Transportation Facilities



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2 Introduction

2.1 Scope and purpose

Increased popularity of active transportation infrastructure is necessitating its implementation across more and more municipalities across Ontario. Active transportation facilities play an integral role in transportation and should be valued as such. As this is a relatively new field, new challenges present themselves that include not only design elements but also design paradigm change, funding and building the cycling culture.

The intent of this manual is to provide initial guidance on challenges that come up when implementing active transportation infrastructure and possible mitigation strategies. Although a list of current design guidelines along with appropriate descriptions is included with this manual, it is not the main focus.

Affordability of active transportation networks and competing priorities can present challenges in implementing active transportation facilities. This manual provides information about long-term planning and funding opportunities that can be used by municipalities to support successful active transportation networks.

2.2 What is Active Transportation?

Active Transportation is self-propelled motion or getting around using human power, whether you are walking, cycling, jogging, skateboarding, in-line skating or travelling in a non-mechanical wheelchair. These modes are effective at conserving fuel, reducing vehicle emissions, bridging the first- and last-mile gap, and improving individual and public health.

2.3 Addition Considerations to Active Transportation

A number of micro mobility options that blur the lines between active and motorized transportation have become increasingly popular in recent years. For the purposes of this document, active transportation is considered to encompass modes of transportation with an electrical assist that do not fall under motorized vehicle definitions under the *Highway Traffic Act*. These modes include e-bikes, electric scooters (stand-up), self-balancing single wheel electric transporter, and other forms of electrically assisted transportation not intended for road use. These transportation modes are to be accommodated within active transportation infrastructure up to a designated speed limit, which is currently being identified by individual municipalities.

Consideration should also be given to electrically powered micro mobility for those with physical disabilities, such as motorized scooters (sit-down) and electric wheelchairs. While not specifically active modes of transportation, these modes can share space with active transportation modes due to low travel speeds, high environmental awareness, and substantial vulnerability to motorized vehicles.

3 Master Plans and Design Guidelines

3.1 Master Plans

The purpose of an Active Transportation Master Plan is to set targets and guide long-term decision making to achieve active transportation network implementation goals. Measurable targets, for example the percentage of active transportation mode share by a specific date, allow a municipality to track the impact of its actions over time. This understanding can support decisions to pivot long-term plans by modifying timelines or changing projects to have the largest impact.

Master Plans ensure the municipality understands gaps in active transportation networks, where active transportation facilities will be required in the future, and should include specific project information and timelines for implementation. Having a Master Plan in place allows for long term planning and actions such as land acquisition, utility relocation, and other initiatives ahead of capital construction of the specific active transportation elements.

Municipalities must ensure that master planning activities include a robust public engagement program including the general public, area businesses and developers, community groups, school boards, and accessibility committees.

Active transportation implementation requires a long-term strategy to build a successful network. In a manner similar to how vehicle networks were established, it should be expected that demand will be induced by the expansion of the network and a proactive approach to determining where key corridors and destinations are located is required. The network should be built incrementally to meet the highest demands while identifying and planning future connections to establish a tighter network once the key corridors are established. Engagement with public and private stakeholders to determine these key corridors and destinations will produce a more effective network that focuses on serving the users' needs.

Identify the required active Transportation to be developed in phases in long term, rather than in one shot. It would be better if the group of landowners or developers could be involved and engaged.

3.2 Design Guidelines

- Develop design guidelines for active transportation networks (or specify specific existing guidelines to be used
 - Ensures consistency in the design and construction of active transportation facilities
 - Promotes ease of maintenance due to consistency of facilities
 - Removes opportunities for actual or perceived changing rules depending on circumstance
 - Build-in sufficient flexibility that guidelines can be implemented over a range of land uses and topography

4 Planning and Design Resources

Introduction of Active Transportation infrastructure into the road corridor is complex and requires careful planning and design. The planning and design can include education, encouragement, enforcement, evaluation, engineering and equity.

The following sections provide guidance in the planning, design, data gathering and development of this infrastructure.

4.1 Planning Guides/Examples

- #CycleON: Ontario's Cycling Strategy
 - The Ontario Provincial Government released this document in 2013. The Strategy is a 20-year vision to have cycling recognized as a respected and valued mode of transportation within Ontario. It includes five strategic directions to guide action by the government and partners across Ontario

1. Design healthy, active and prosperous communities.
 2. Improve cycling infrastructure
 3. Make highways and streets safer
 4. Promote cycling awareness and behavior shifts
 5. Increase cycling tourism opportunities
- Active Transportation, Health and Community Design – Canadian Institute of Planners
 - Planning health communities' fact sheet discussing research on the associations between health and built environment. The purpose of this fact sheet is to provide Canadian planning practitioners and community stakeholders with a summary of the most current “made in Canada” research on health communities. It highlights leading edge Canada research carried out between 2007 and 2011.
 - Vision Zero – Vision Zero Canada
 - This program was founded in 2015 and advocates for the elimination of harm to any road users including drivers, passengers, pedestrians and cyclists. The Vision Zero approach is rooted in sound principles, including the premises that safe independent mobility is a natural right, and that no loss is acceptable.

4.2 Cycling Design Guidelines

- Bikeway Traffic Control Guidelines - Transportation Association of Canada (TAC)
 - Outlines the appropriate traffic control for the installation of signs and pavement markings on bikeways and contains diagrams of typical installations. Many of the guidelines may be applicable to both on-road and off-road bikeway.
- Cycling Facilities, Book 18 - Ontario Traffic Manual (OTM)
 - Provide information and guidance for transportation practitioners, and to promote uniformity of treatment in the design, application and operation of traffic control systems across Ontario.
- Safety Performance of Bicycle Infrastructure in Canada
 - Resource that characterizes the safety performance of different types of linear bicycle facilities and intersection treatment

4.3 Active Transportation Counters

Counters are an excellent method to gather data to determine where Active Transportation infrastructure should be placed and/or what type of infrastructure should be used. The data gathered from counters can also be used to communicate the program to elected officials or public.

Some counters will provide turn-key solutions for cyclists and pedestrians count and data analysis. They offer a complete range of products and services to collect and analyze data, including high-quality counters, automatic and wireless data transmission, remote reading, and professional online data analysis software, and in-depth exportable reports.

There are two (2) main types of counters:

- Tube – counter collects data by cyclists travelling over the tube. This type of counter does not count pedestrians

- Radar – counter collects data by radar and can count the number of cyclists and pedestrians. They offer solutions from tracking winter maintenance; how many people walk past the storefront in your Business Improvement Area.

4.4 AODA considerations

- Geometric Design Guide for Canadian Roads (TAC) Chapter 5 - Bicycle Integrated Design Dated June 2017
- Ontario Traffic Manual (OTM) Book 12A Bicycle Traffic Signals dated March 2018 3. Ontario Traffic Manual (OTM) Book 15 Pedestrian Crossing Treatments dated June 2016
- Guidelines for Understanding, Use and Implementation of Accessible Pedestrian Signals (TAC) dated 2008
- Integrated Accessibility Standards - Accessibility for Ontarians with Disability Act – Regulation 191/11
 - Provides design criteria for public spaces (Accessibility standards for the built environment).

4.5 Development (Site and Land)

- Bike storage is an important consideration at transportation change nodes (between cycling and rail) and destinations.
- Creation of connections to any active transportation system is important to increase use.

5 Maintenance Considerations

With respect to operational and maintenance needs, considerations need to be put forth toward the implementation of O. Reg 239/02 (minimum maintenance standards for municipalities). Summer and winter activities drive these standards.

5.1 Winter Maintenance

Winter plays a significant role in the conditions of Ontario's roads, sidewalks, and trails. There are time considerations set that dictate when various classes of roads and sidewalks/trails need to be cleared based on depth of snow and time taken for accumulation. Listed below are some factors that should be considered when developing maintenance plans:

- Drainage (freeze/thaw)
- Adequate clearance for plowing equipment to perform operations
- Salting - salt management
- Snow storage
- Driveway entrances (windrows blockages)

5.2 General Maintenance

There are many activities that take place on or near active transportation routes. These vary from transit to utility maintenance. Some examples are discussed below.

There is a notable focus on increasing ridership in transit in recent years. As a result, municipalities are increasing and optimizing transit routes through buses and light rail transit. Active transportation routes and transit routes are likely to cross paths or share the same sections of roadway. Attention should be given to the controls required for ensuring that active transportation and transit routes can intersect safely. Additional focus should also be given to the potential wear that multi-modal areas may experience which could have negative consequences on the user experience, such as asphalt wear or settlement around railway crossings.

To keep up with their infrastructure, various utility companies need to maintain their infrastructure quite regularly. As a result, this may temporarily impede some routes during the maintenance activities. Some examples of utilities are telecommunications, hydro, gas, water, storm, sanitary. Provisions should be made in agreements with utilities to provide a temporary solution for active transportation users during the maintenance activities if the permanent active transportation route is unusable for the duration.

There are overhead activities that may take place such as illumination repairs and tree trimming (street raising). Lighting needs to meet minimum maintenance standards and provide sufficient lighting for nighttime safety. Municipal and hydro forestry crews regularly maintain overhang of branches from trees. During the fall seasons, many municipalities provide leaf collection programs which can result in many operational equipment working on or near active transportation routes as they attempt to remove leaves from the boulevard.

There are many activities that take place near parks and sports fields, ranging from maintenance activities (turf cutting, trail repairs) to public use, and various sporting events. The impacts from these activities should be minor, however alternative routes to avoid heavily crowded areas may provide an improved user experience.

Another service provided by municipalities along many roadways and trails is garbage collection, which need to be cleared. These operations may temporarily impede the flow of traffic.

To meet minimum maintenance standards, many roadways need to be cleaned using sweepers. Facilities should incorporate the ability for this equipment to perform their duties.

Transportation departments maintain line painting and various traffic signage. These activities are necessary but can also temporarily impede active transportation facilities.

As active transportation routes continue to evolve and bike parking facilities continue to be installed, it will be important to consider how these locations will be maintained. For example, repairing bike racks/storage facilities, debris collection, winter activities (hand shoveling and salting).

With active transportation routes being implemented throughout a city, there is an impact regarding various residential and commercial driveway entrances. Considerations should be made around winter maintenance (windrow removal) and clear delineation for travel paths.

5.3 Development

Municipalities are continuing to evolve and grow with a focus on dense urban centers. Active transportation routes should consider the impacts of population dense urban centers and use the opportunity of these new developments to expand and improve active transportation routes. This would include new condominiums, subdivisions and reconstruction projects.

It is increasingly common for new developments to be required to provide bicycle storage on-site for residents. Developments located on or near major active transportation corridors should be required to provide a reasonable number of residents with secure storage options. Security is key with bicycle storage as bicycles are a commonly stolen item, and the developer or operator of these developments will have to ensure security and continued operation of the storage facilities using options such as lighting, security cameras, locking outdoor facilities or secure indoor spaces. These storage areas should be kept in good repair and unclaimed bicycles may need to be removed on a recurring basis to ensure that current residents can use the facilities as needed.

5.4 Repair Considerations

As part of ongoing municipal maintenance activities, the activities listed below are examples of impacts to active transportation routes:

- Road repair
 - Potholes or drainage issues
 - Crack sealing
- Utility cut repairs
 - These are repairs left in a temporary condition and typically require a permanent repair
 - Conditions of these cuts are typically adequate, however, can be at risk of being in an undesired state of repair (bumps, aesthetically out of place)
- Sidewalk repairs
 - If adjacent or part of, then needs to be treated same as O. Reg. 239/02
 - Address these deficiencies either by full sidewalk repair, mud jacking, grinding
 - This would result in shutting down sidewalks during repairs
- Water main breaks, water valve and pipe repairs
- Sanitary and storm sewer or structural repairs

These are some examples of impacts, but there can be many more based on varying service levels of municipalities.

6 Asset Management

6.1 Asset Management

As municipalities enhance and build upon their asset management system, it is important to incorporate active transportation into the life cycles of reconstruction projects. Assets should be defined within each organization to track and determine the most cost-effective methods of replacement, but also to clearly add it into existing databases.

Operational and maintenance costs associated to active transportation should be tracked separately so that it can help more accurately define strategic budgets for future replacements, life cycle costs, and the budgets required for operations and maintenance.

As part of life cycles and associated costs, risks are important factors as well. These risks include, but are not limited to probability and consequence, operations, finance, residents, and council.

7 Funding Sources

7.1 Internal Budgeting

7.1.1 Capital Budget

Active transportation falls under a similar, though distinct, umbrella as conventional roads for motor vehicle transportation. Capital funding of active transportation facilities is typically sourced from general municipal taxation and funding from the federal gas levy. Since active transportation routes are a road in and of themselves, for pedestrians and cyclists instead of drivers, a portion of the capital budget intended for road construction and maintenance should be dedicated to active transportation construction and maintenance as well.

Active transportation budgets can be approached with two different methods: standalone and integrated. Standalone active transportation projects may include the addition of AT facilities in unused portions of roadway right-of-ways or implemented independently of roads through parks or other dedicated right-of-ways. Integrated AT budgets include a comprehensive approach to road reconstructions where AT facilities are added as part of the overall project. Both approaches are valid and municipalities seeking to implement additional or higher-quality AT facilities should find a balance of both approaches to expand their network in an optimal way.

Cost estimation for AT facilities generally follows the same procedure as that for a road reconstruction, as it follows a similar method of construction but generally on a smaller scale. However, in standalone AT projects, cost estimation must include impacted aspects of the right-of-way, particularly impacts to stormwater management and traffic signals, if applicable. If a storm sewer or other stormwater management system must be constructed to facilitate the AT infrastructure, that cost must be included in the estimates. Similarly, if upgraded traffic signals, such as cyclist-specific signals, must be implemented, this cost must also be estimated in the overall project budget.

- Include incremental cost of adding active transportation elements when budgeting ROW work
- Have projects shovel ready for when funding is available
- Include any equipment that may be needed to adequately maintain active transportation facilities
- Determine the portion of capital costs that are growth related and include those costs in the Development Charges Background Study to be recovered by DCs rather than the general rate
- Cost estimation

7.1.2 Operating Budget

Annual operating costs of AT facilities should be considered on a corporation-wide scale and must be considered in Transportation Master Plans where long-term AT strategies are identified. The Operating budget takes multiple operating concerns into account, with winter maintenance and service life replacements claiming the vast majority of the budget.

Winter maintenance is a regularly occurring aspect of maintaining transportation infrastructure in Canada and other northern countries. Winter maintenance typically involves clearing snow accumulation on transportation surfaces and preventing the build-up of ice. In most municipalities this maintenance is achieved by small plows which can fit on active transportation surfaces, typically with a plow width of approximately 1.2m to allow for some variance on 1.5m wide sidewalks. Larger plow vehicles can be used for wider AT facilities such as 3m wide multi-use paths, where pickup trucks with a plow attachment are a feasible solution to plowing.

Budgeting for winter maintenance necessitates the municipality to set tolerances for snow accumulation and requirements for removal timelines. A smaller tolerance for snow accumulation (ie, 2 cm vs 5 cm) will increase the required budget, while a shorter timeline requirement for clearing (ie, 24 hours vs 48 hours) will also increase the required budget. Municipalities must determine the level of service they intend to provide to AT facilities and budget accordingly.

Lower snow accumulation tolerances and more frequent clearing requirements will necessitate either a larger staff and fleet for snow clearing by the municipality, or higher-value contracts with private contractors to provide snow-clearing services. In-house fleets provide greater flexibility to meet the needs of the community, while incurring maintenance costs and direct staffing costs for the machines and crew that the City purchases and hires. Contracts require careful wording to ensure that minimum requirements are spelled out unambiguously to avoid conflicts with contractors, while also allowing for the flexibility in the contract that unpredictable weather patterns may bring throughout the winter.

End-of-life rehabilitation costs are the most significant capital cost to be incurred by AT facilities. These costs are incurred when the quality of the AT surface has degraded to the point that it does not meet the required level of service and must be rehabilitated or replaced. Generally, asphalt AT facilities is designed with a 20-year service life, while concrete AT facilities aim for a 20-40 year service life. Rehabilitation of existing AT facilities typically costs less than that facility's original construction cost, however each facility should be assessed individually as the specific aspects of the subject site may lead to additional costs depending on how the area has developed in the time since original construction and whether there are unique concerns or site conditions that may impact the ability to rehabilitate the facility versus complete removal and replacement.

- Include year-round maintenance costs

- Understand the winter and other maintenance activities required to meet MMS

7.1.3 Development Charges

Development Charges are fees that municipalities may levy as a result to cover the capital costs of new infrastructure or the redevelopment of existing infrastructure required as a result of new growth. Municipalities experiencing high growth will be able to leverage Development Charges to a greater extent than those experiencing less growth.

New or planned active transportation facilities that are to be constructed within the planning period, are regional in nature, and are required as a result of growth should be included in the Development Charges background study to ensure that capital costs associated with their installation can be recovered. Master Planning can assist with having the information required for inclusion in the Development Charges Background Study.

7.2 Grants and Funding Programs

Numerous grants and funding programs from upper levels of government and other sources exist and are a useful tool for funding AT projects.

7.2.1 Federal Government Programs

- Federal active transportation projects most likely to come from Infrastructure Canada
- Federal application-based programs such as those focused on community infrastructure or recreation may also apply to active transportation elements
- Other federal programs can be used to fund active transportation facilities including but not limited to:
 - Federal Gas Tax

7.2.2 Provincial Government Programs

- Provincial active transportation projects are most likely to come from the Ministry of Transportation
- Provincial application-based programs such as those focused on community infrastructure or recreation may also apply to active transportation elements
- Other provincial programs can be used to fund active transportation facilities including but not limited to:
 - OCIF
 - Connecting Link

7.2.3 Other Programs

- Federation of Canadian Municipalities – Green Municipal Fund
 - This fund supports green and active transportation
- Ontario Trillium Foundation – Community Building Fund
 - Funding to repair, renovate or retrofit sport and recreation facilities

8 Changing the Culture

Even though master plan can include a pattern on Active Transportation networks, however, the implementation will not be successful if the people do not use it effectively or have a demand to use it. To create demand, some strategies could be taken so that people's habits and lifestyle can be changed with the use of these facilities. Businesses such as Doctor's Office can provide some incentives/promotions if people have ridden their bike to go there.

If the Developer is constructing the active transportation facilities, they should obtain the development charge credit from the Municipalities for all the works related to the AT work such as storm sewer, curb, grading, culverts, not only for AT facility.

Also, Active Transportation can help address many environmental challenges. Some of the most important benefits are reduced air pollution and greenhouse gas emissions. Other environmental benefits include energy saving, less noise pollution, less water pollution, and more.

Finally, there are many health benefits to the individual and community as a whole. Active Transportation. There are many health benefits to physical activity, but equally important are the community benefits

- increase contact with your neighbors and community
- Calmer and safer roads

The following studies and organizations provide assistance to creating the culture. The many partners / stakeholders can be valuable allies to create a culture change.

8.1 Studies / Supporting Organizations:

8.1.1 Local Health Unit

- The local health unit is a strong stakeholder in Active Transportation and can provide resources, programs and sometimes funding.

8.1.2 Clean Air Partnership

- Deliver timely research and distil emerging knowledge into accessible formats for decision makers.

8.1.3 Discovery Routes Trails Organization

- Discovery Routes is a not-for-profit organization that promotes the use of the trails in Northeastern Ontario in support of better health, tourism, strong communities, and environmental appreciation and protection. Discovery Routes is a volunteer partnership of community leaders, economic developers, environmental stewards and locally-based action groups.

8.1.4 Share the Road Cycling Coalition

- Provide resources, programs and funding.

8.1.5 Green Communities Canada

- Organization that with members organizations and partners work from the ground up for transformative change.

- 8.1.6 Ontario Active School Travel or KidActive
 - Ontario wide program dedicated to children's mobility, health and happiness. Delivered by Green Communities Canada
- 8.1.7 Centre for Active Transportation (TCAT)
 - Their mission is to advance knowledge and evidence to build support and inclusive streets and cycling. They believe that active transportation plays a critical role in creating environmentally and economically sustainable cities.
- 8.1.8 Federation of Canadian Municipalities (FCM) – Green Municipal Fund
 - Helps local governments switch to sustainable practices faster - funding, resources and training
- 8.1.9 TAC Active Transportation Integrated Committee
 - It is a center of expertise within TAC and a national forum for information exchange and problem solving related to active transportation, with a focus on walking and cycling.
 - Raising awareness of the importance of active transportation within TAC's councils, committees and general membership
 - Sharing information and promoting collaboration on active transportation initiatives undertaken by TAC councils and committees, through the active participation of members and direct communication between executives
 - Identifying emerging issues in active transportation, and technical activities to address them
- 8.1.10 Local advocate groups
 - Local cycling or active transportation associations or groups - these organizations can provide data to support new infrastructure and advocate to local and upper tier government.
 - Non-government (NG) companies - Insurance companies, large corporations, banks – many companies have either corporate policy to give back to the community or an indirect benefit. They can provide funding and become a partner in projects. Transportation of Canada (TAC) is developing a comprehensive list of NG companies supporting Vision Zero and Safe Systems.
 - Local businesses like bike shops or sporting goods stores
 - Senior clubs

9 Success Stories and Lessons Learned

Active transportation infrastructure is relatively new to Ontario and many options are being experimented. Having safety for the road users in mind, some of the options are eliminated for future use and some are improved based on experience.

The purpose of this section is to capture the successes and drawbacks based on the experience and share the knowledge with others. All the readers are encouraged to share their experience with the Municipal Engineers Association Active Transportation (MEA AT) committee and document their experience. This will expedite the process to settle with home grown Active Transportation culture within Ontario.

9.1 Shaw Street, Toronto, Ontario

Shaw Street in Toronto has been one of the most successful active transportation implementations in Canada. The corridor is a residential street, just east of Ossington Avenue, which had often been used as a bypass for vehicle drivers, creating an unpleasant and unsafe atmosphere within the neighborhood. The City of Toronto developed and implemented a strategy to reduce the number of vehicle cut-throughs by adding modal filters, street signage and pavement markings that slowed drivers and prevented them from driving from end-to-end of the street. Meanwhile, cyclists are able to use the entire length of Shaw Street unimpeded. The project has been a rousing success and has seen the mode share shift so far that cyclists outnumber motorists on a daily basis.

<https://www.thestar.com/opinion/contributors/2022/04/21/shaw-street-is-torontos-first-with-more-bikes-than-cars.html>

9.2 Kitchener's Downtown Cycling Grid

Following the input of over 4,000 residents through the city's Strategic Plan and Cycling and Trails Master Plan, Kitchener is installing a continuous and protected cycling network that connects adjacent neighborhoods to the downtown. Just like the region's Light Rail Transit (LRT) system significantly reshaped the downtown, a cycling grid will transform how people move around by making it safe, comfortable, and convenient for people of all ages and abilities to bike.

Separated bike lanes provide a safe space for people riding bikes with a physical barrier separating bicycles and motor vehicles. In this case, the barrier is a poured in place concrete median. This type of median is more dependable and long-lasting than pre-cast curbs or flex stakes, reducing long-term maintenance costs. The width of the separated bike lanes is wide enough to accommodate maintenance vehicles, ensuring the infrastructure can be used by the community year-round.

An important safety measure is to reduce speed limits to 40 km/h on these streets, to ensure drivers can see cyclists and stop on time at intersections or driveways. Green cross rides, advanced stop bars and dedicated bike signals also help improve bicycle safety at intersections.

Street right-of-way space is limited, especially downtown. Cycling can move 4.5 times more people per square metre than motor vehicle lanes, making it an effective strategy to reduce vehicle congestion in downtown cores. The LRT has spurred a development boom in Kitchener's downtown. An estimated 5,000 new residents will soon be living directly in the city's core, many of whom are looking for a lifestyle that is less dependent on a personal automobile. The Downtown Cycling Grid creates a new way for people to access all that downtown has to offer.

9.3 Iron Horse Trail: An active transportation "highway"

Connecting several core neighborhoods with Downtown Kitchener and Uptown Waterloo, the Iron Horse Trail is the busiest trail in Kitchener-Waterloo, with over 250,000 users in all seasons of the year. Guided by the Iron Horse Trail Improvement Strategy (2015), recent investments in the trail have improved the trail's function, safety and comfort, including trail widening, benches, lighting and wayfinding.

Most importantly from a safety perspective, the City of Kitchener installed seven pedestrian crossovers (PXOs) at city-owned street crossings, giving pedestrians priority and requiring motorists to yield to pedestrians. Physical measures, such as raised speed humps or refuge islands, were also included to physically demonstrate that trail users have the right-of-way. Recognizing that driver yield compliance can be a challenge with new crossings, an education campaign on social media helps to spread the message of driver responsibilities' when approaching a PXO. City staff continue to monitor the yield compliance of drivers at the PXOs, to guide future education efforts and physical design cues to improve safety.

The upgrades to the Iron Horse Trail facilitate a range of recreational and transportation trips for a wide variety of users. Its importance to the city's active transportation network is comparable to a highway in the motor vehicle transportation network, by providing safe, direct and comfortable access to neighborhoods and destinations (Darren Kropf, City of Kitchener).

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