

ACTIVE TRANSPORTATION STRATEGY

APRIL 2021



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TABLE OF CONTENTS

EXECUTIVE SUMMARY..... 1

Setting the Stage	3
Benefits of Active Transportation	3
Future Directions	4
Strategies and Actions	5
Implementation and Monitoring	8
Summary	17

INTRODUCTION 19

1.1 Strategy Purpose and Objectives	20
1.2 Strategy Development Process	20
1.3 Public Engagement.....	21
2.1 Why Promote Active Transportation	25

SETTING THE STAGE 25

2.2 The Market for Active Transportation in Dauphin	30
2.3 Community Profile.....	34
2.4 Policy Context.....	40
2.5 Active Transportation in Dauphin Today	46

03

FUTURE DIRECTIONS.....63

- 3.1 Vision.....63
- 3.2 Goals63
- 3.3 Targets64

04

STRATEGIES AND ACTIONS67

- 4.1 Tourism Potential67
- 4.2 Places for People.....73
- 4.3 Culture Shift.....77
- 4.4 Quality of Life.....78
- 4.5 Recommended Network Improvements: Sidewalk and Cycling Networks.....80

05

IMPLEMENTATION AND MONITORING89

- 5.1 Implementation Strategy90
- 5.2 Monitoring Strategy.....117

06

CONCLUSION..... 125

APPENDIX A: Long-Term Sidewalk Network Priorities

APPENDIX B: Long-Term Bicycle Network Priorities

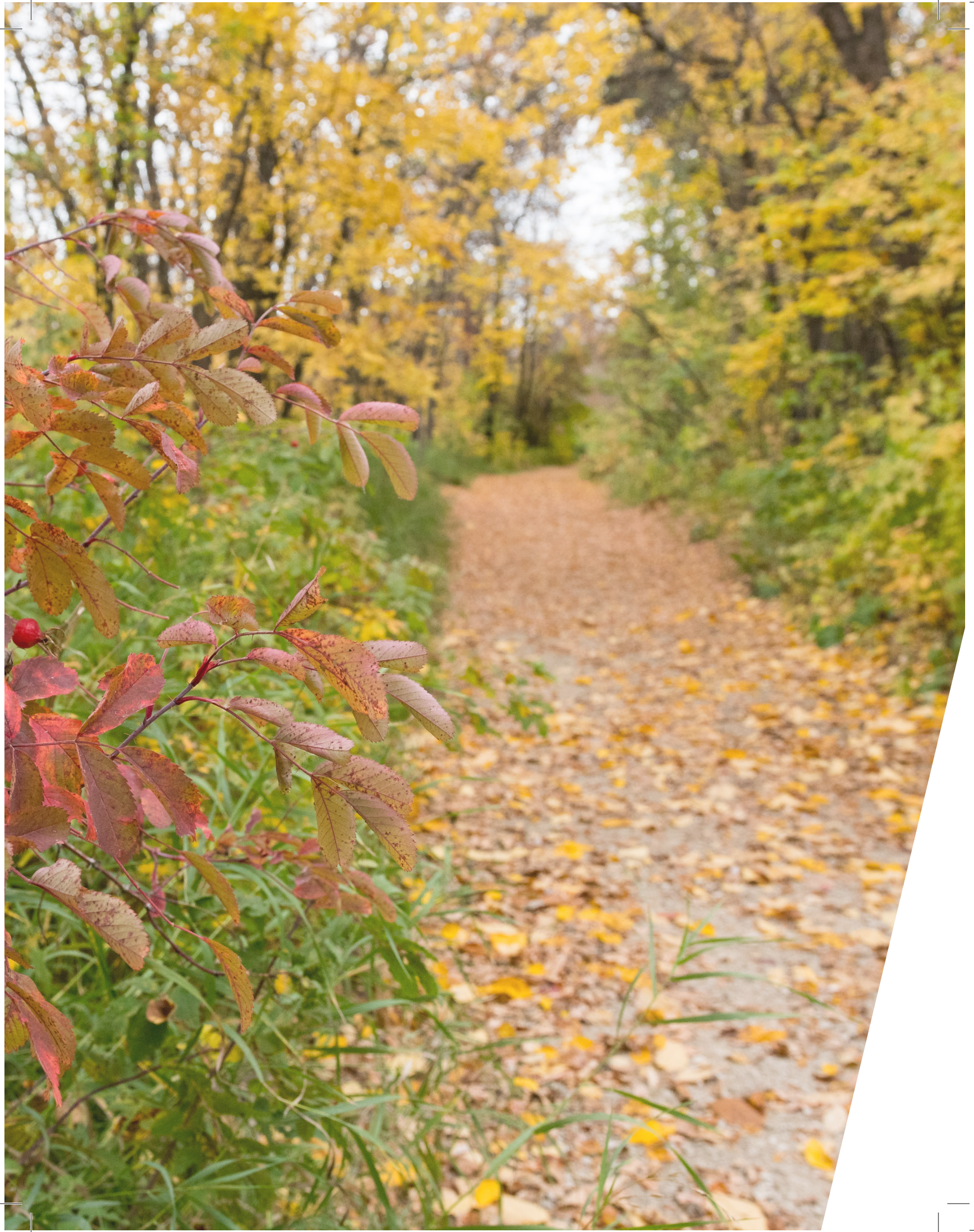
FIGURES

Figure 1: Active Transportation Strategy Framework	2
Figure 2: Benefits of Active Transportation	3
Figure 3: Mode Share in the City of Dauphin (2016)	5
Figure 4: Existing Sidewalk Coverage	9
Figure 5: Existing Active Transportation Facilities.....	11
Figure 6: Existing Pedestrian Facilities.....	13
Figure 7: City-Owned Bike Stands	15
Figure 8: Mode Share Comparison with Other Peer Cities in Manitoba, Saskatchewan, and Alberta	31
Figure 9: Historic Trends in Mode Share of Commute Trips to Work or School (2016)	32
Figure 10: Gender Split for Active Modes of Transportation (2016)	33
Figure 11: Trip Generator Facilities	35
Figure 12: Population Growth (1991 to 2016)	36
Figure 13: Population Growth (1991 to 2016)	37
Figure 14: Period of Immigration to Dauphin	38
Figure 15: Mode Share in the City of Dauphin (2016)	46
Figure 16: Existing Sidewalk Coverage	48
Figure 17: Existing Active Transportation Network.....	49
Figure 18: Continuum of Bicycle Facilities.....	50
Figure 19: Cycling Network Coverage	53
Figure 20: Cycling Network Coverage with Land Uses	55
Figure 21: Suggested improvements for Pedestrians in Dauphin.....	58
Figure 22: Barriers and Gaps to Walking	59

Figure 23: Suggested improvements for Cyclists in Dauphin	60
Figure 24: Barriers and Gaps to Cycling	60
Figure 25: Safesidewalks Program — Sidewalk Assessment (2017)	68
Figure 26: Safesidewalk Program — Sidewalk Repair History	69
Figure 27: Sidewalk Crossing Over a Railway at 2 Street SW	71
Figure 28: Bridge Crossing on Highway 10A Over the Vermillion River	71
Figure 30: Bicycle Repair and Maintenance Stations.....	75
Figure 29: Bicycle Valet Service.....	75
Figure 36: Existing Sidewalk Coverage	80
Figure 31: Vermillion River Bridge Crossing on 2 Avenue W	81
Figure 32: Main Street/Highway 10A, South of Whitmore Avenue.....	82
Figure 33: Sidewalk Network Coverage	84
Figure 34: Pedestrian on Whitmore Avenue Near Assiniboine Community College	85
Figure 35: Pedestrian Facilities on Highway 5A Near the Vermillion River Bridge.....	86

TABLES

Table 1: Total Collision Outcomes by Month: Dauphin, MB	29
Table 2: Existing Bicycle Network.....	49





EXECUTIVE SUMMARY

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The City of Dauphin is situated just North of Riding Mountain National Park in the Parkland region and is Manitoba's 9th largest city. The City is a vibrant and livable community that is home to approximately 8,457 residents. Dauphin is a thriving and diverse community with unique neighbourhoods, as well as several major education and employment centres, including Assiniboine Community College, the under-construction Vermillion growers, and the Dauphin Regional Health Centre.

As set out in its Community Development Strategy, the City of Dauphin is committed to sustainability in all its forms and recognizes the importance of active transportation to enhance both community health and safety, as well as quality of life. The City is also committed to contributing to the reduction of air pollution by increasing opportunities for active modes of transportation including walking and cycling, as well as ensuring the safety of its residents as they move about the community. The City has a history of recognizing the significance that active transportation plays in shaping a sustainable, healthy, and robust community. Through this recognition, the City of Dauphin has prioritized investment in providing safe walking facilities and begun investing in the creation of a network of safe cycling facilities as well.

In the recently completed *Community Energy and Emissions Plan (CEEP)* the City set a bold vision **“to become Manitoba’s most sustainable City by becoming the first Manitoba City to reach Carbon Neutrality and Net Zero Energy Status for Municipal operations.”** The City of Dauphin committed to promoting active transportation as environmentally friendly modes of transportation and also set goals to reduce greenhouse gas emissions in the City of Dauphin. One of the actions in this plan to achieve these goals was to “develop an updated active transportation master plan”.

The Active Transportation Strategy will guide Dauphin's future investments in active transportation. The strategy establishes a vision, goals, and targets to improve active transportation, along with a series of strategies and actions related to four overarching themes:

1. Tourism Potential
2. Places for People
3. Culture Shift
4. Quality of Life

These strategies and actions provide holistic guidance regarding improvements to policies, standards, infrastructure, and programming to ensure that walking and cycling are accessible, comfortable, and convenient transportation choices for people of all ages and abilities.

The Active Transportation Strategy outlines a network that connects key existing trails and pathways. Connecting these high-quality pathways to a developed on-street network will allow commuters, recreational users, and others to have safe, convenient, attractive, and fun options to travel by walking or cycling. The Active Transportation Strategy also includes an implementation and monitoring strategy to prioritize investments and actions over the short-, medium-, and long-term and to monitor progress in achieving the Strategy's goals.

Plan Framework

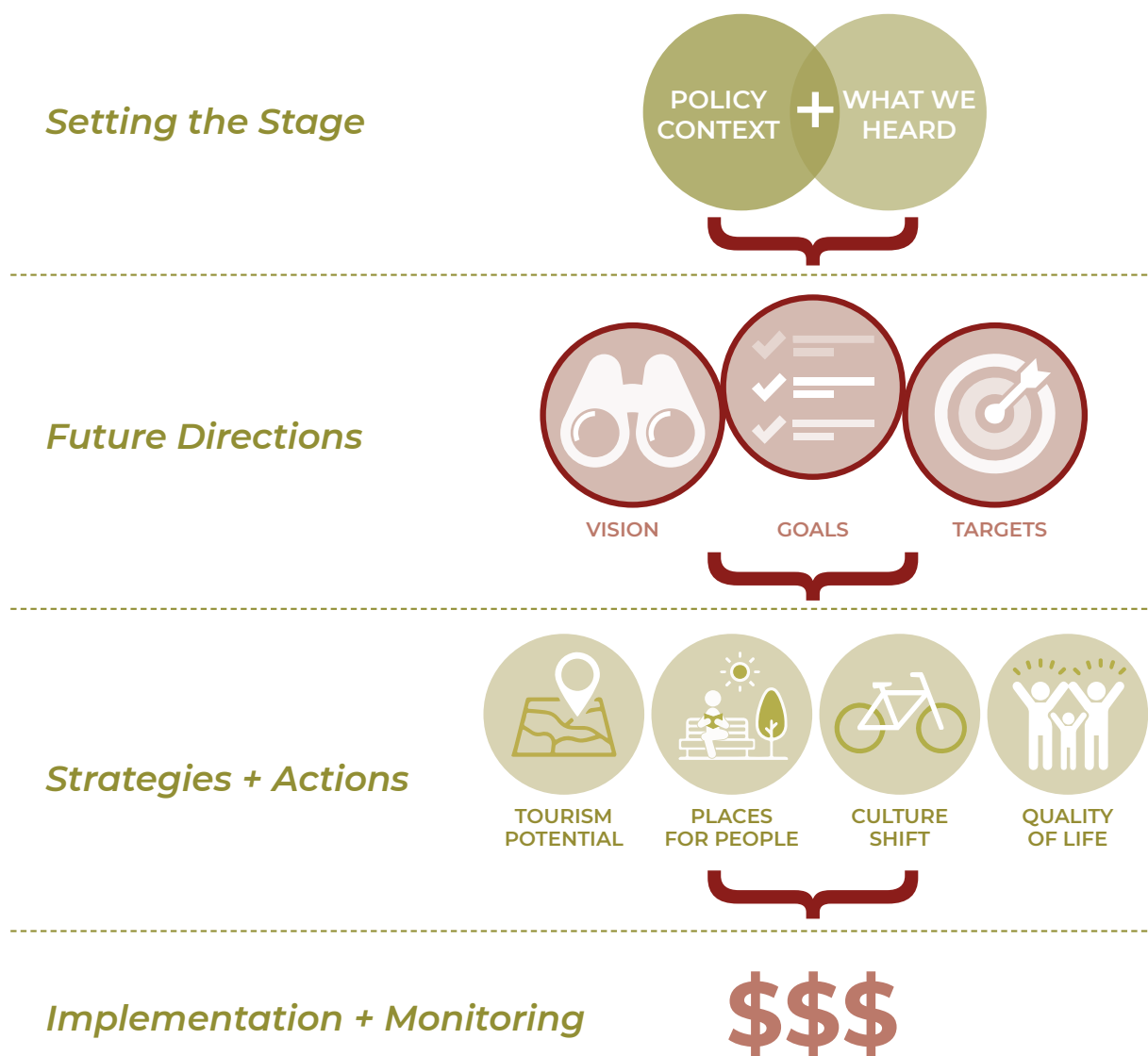


Figure 1: Active Transportation Strategy Framework

SETTING THE STAGE

The Active Transportation Strategy is closely linked to many of Dauphin's and the region's key strategy documents, and it helps to reinforce and further the goals and policies found in those documents. Many of those documents include broader aspirations for growth and transportation, as well as provide specific directions on how walking and cycling can become an integral part of Dauphin's transportation system. Municipal strategies that played a particularly significant role in developing the Active Transportation Master Strategy were the *City of Dauphin Community Development Plan* (2010), *City of Dauphin Bright Ideas Community Consultation Report* (2014), *Age Friendly Dauphin Community* (2015) and the *Community Energy and Emissions Plan* (2020). Many of these documents either directly referenced the need for the creation of an Active Transportation Strategy or identified the challenges of moving about the City of Dauphin on foot or bicycle, especially as a senior citizen or youth. By developing an Active Transportation Strategy, Dauphin can become a leader in promoting walking and cycling while also working towards achieving the community's broader aspirations of a healthier, safer, more sustainable community.

BENEFITS OF ACTIVE TRANSPORTATION

Investments in walking, cycling and other forms of active transportation result in a more balanced transportation system—one that is more accessible, cost-effective, and efficient in terms of infrastructure investments. There are also significant quality of life, health, safety, and economic benefits associated with investing in active transportation.

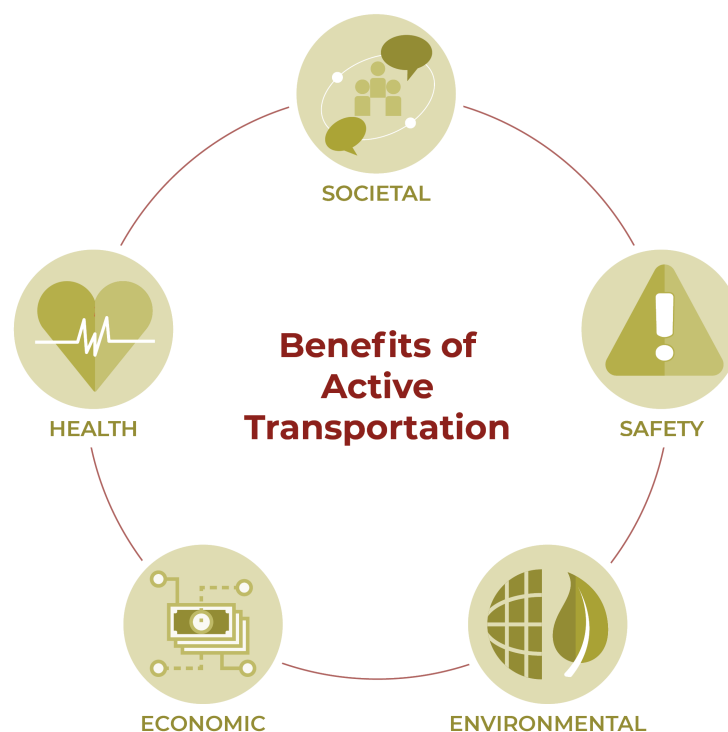


Figure 2: Benefits of Active Transportation

FUTURE DIRECTIONS

As part of the Active Transportation Strategy process, a vision along with supporting goals and targets were developed to shape the overall future direction of the Strategy and serve as a basis from which improvements and investments are identified and prioritized. The vision, goals, and targets were created based on a combination of Dauphin's existing commitments (as described in several previous strategies), input received from the stakeholder committee over several sessions in the spring/summer of 2020, and community input received from the public through the open house and online survey conducted in the summer of 2020.

City of Dauphin – Active Transportation Strategy Vision Statement

"By 2030, Dauphin is a leader in active transportation in Manitoba. Walking and cycling are safe, convenient, and enjoyable mobility options for all residents and visitors, regardless of age, ability, trip purpose, or time of year. Active Transportation connects Dauphin's neighbourhoods and amenities, contributing to a resilient, safe, equitable, and healthy city with a high quality of life for Dauphin residents."

Goals

- ▶ Develop a complete active transportation network that connects all neighbourhoods in the City of Dauphin.
- ▶ Improve the safety and accessibility of vulnerable road users.
- ▶ Support effective land-use planning to build an environment that makes walking and cycling convenient and enjoyable.
- ▶ Ensure that the active transportation network is equitable and accessible for all residents.
- ▶ Foster a culture for active transportation.
- ▶ Establish Dauphin as "Manitoba's Cycling City".

Targets

**"Double the proportion of trips made by walking and cycling by 2031,
with a longer-term target of 40% of all trips in the City of Dauphin
being made using sustainable transportation by 2041."**

Given the existing conditions as of 2016 census data (as represented on the next page in **Figure 3**), this means that walking and cycling mode share would be doubled from the current mode share of almost 16%, to total of 32% of all trips by the year 2031. By the year 2041, 40% of all trips within the City of Dauphin would be made by sustainable modes of transportation.

While these number may sound ambitious, the reality is that a significant proportion of the population of Dauphin already utilizes sustainable modes of travel on a daily basis, with almost 13.5% of residents reporting walking as their main mode of transportation as of 2016, and another 1.7% reporting cycling as their main mode of transportation. This means that as of the 2016 census, the City of Dauphin had a total sustainable mode share of 15.2 %. These are very enviable numbers for any community in Canada — by comparison, the City of Winnipeg had a sustainable mode share of only 6.4% as of the 2016 census. These numbers are something for the City of Dauphin to be proud of and are among the highest rates of active transportation among all Canadian cities and gives the City a solid foundation upon which to further increase the health, safety, and sustainability of its residents.

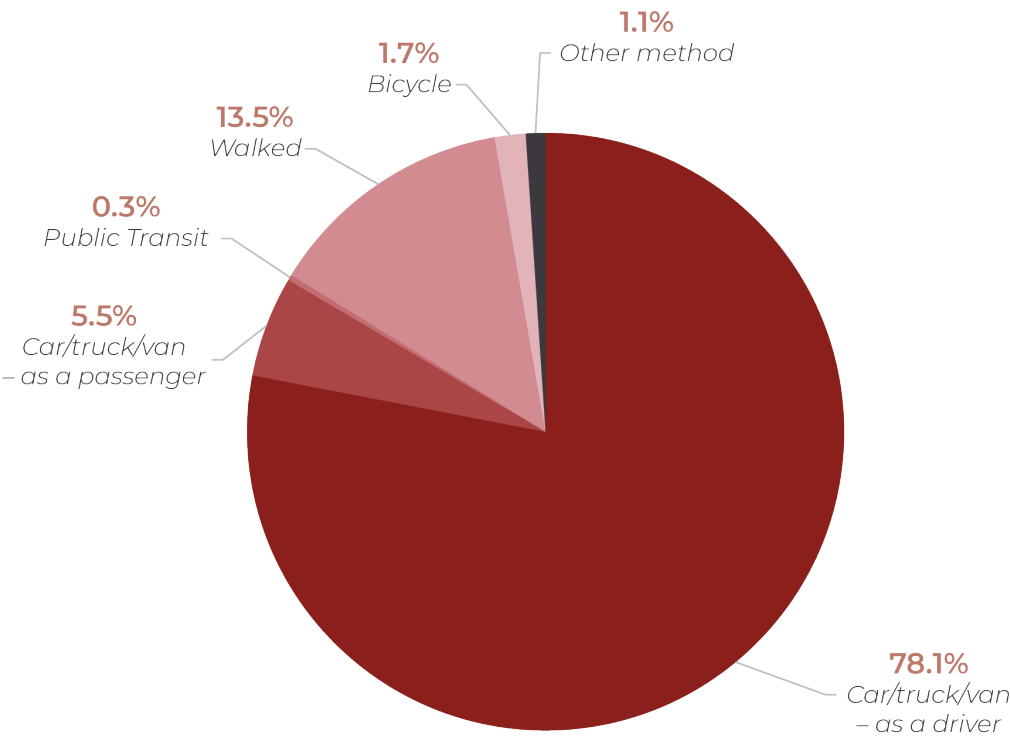


Figure 3: Mode Share in the City of Dauphin (2016)
(Source: Statistics Canada, 2016 Census)

STRATEGIES AND ACTIONS

The Active Transportation Strategy consists of four overarching themes. For each theme, the strategy includes several strategies with more detailed actions to improve active transportation. The implementation of these strategies and actions will help Dauphin work towards achieving the vision, goals, and targets of the Active Transportation Strategy. Each theme and their strategies are described on the following pages.

Tourism Potential

- Strategy 1A:** Enhance the sidewalk network to connect the accommodation district with commercial areas
- Strategy 1B:** Connect the cycling network with community and commercial amenities
- Strategy 1C:** Develop regional connections
- Strategy 1D:** Bicycle and walking tourism
- Strategy 1E:** Wayfinding and promotion



Places for People

- Strategy 2A:** Develop complete streets
- Strategy 2B:** Consider pilot projects
- Strategy 2C:** Improve the pedestrian and cycling user experience
- Strategy 2D:** Land use and site design
- Strategy 2E:** Improve personal safety
- Strategy 2F:** Provide bicycle parking and end-of-trip facilities
- Strategy 2G:** Integrate the off-street pathway and trail network
- Strategy 2H:** Address major barriers



Culture Shift

Strategy 3A: Support business and economic development

Strategy 3B: Active school travel and age-friendly strategies

Strategy 3C: Education and awareness



Quality of Life

Strategy 4A: Improve public health

Strategy 4B: Improve road safety

Strategy 4C: Universal accessibility

Strategy 4D: Equity

Strategy 4E: Celebrate and promote



IMPLEMENTATION AND MONITORING

The strategies and actions developed as part of the Active Transportation Strategy are intended to guide Dauphin's policy, strategy, and capital investment decisions as well as ongoing operations and maintenance activities in support of active transportation in the future. While the strategy has been developed as a long-term strategy, it will require financial investment, staff resources and an effective implementation strategy to prioritize improvements over the short-, medium- and long-term.

An implementation strategy has been developed for each of the actions identified in the broader Active Transportation Strategy. Implementation guidance has been provided for each action in terms of:

- ▶ **Timeframe.** Each action is identified as either a short-term (within 5 years), medium-term (within 5 to 15 years) or long-term (15 years and beyond) initiative.
- ▶ **Method of Implementation.** This identifies how each action will be implemented: as a capital project, through ongoing operations and maintenance, or as a policy or programming initiative.
- ▶ **Responsibility.** This suggests the primary and secondary responsibility for each action. Many actions are the primary responsibility of Dauphin, while other actions should be led by external agencies.
- ▶ **Goals Addressed.** Each action is categorized based on its relative contribution to each of the Active Transportation Strategy's five goals. Although some actions may only work to achieve one goal, many actions can help achieve multiple goals.

The Active Transportation Strategy also identifies priority networks for sidewalks, trails and pathways, and bicycle routes. Existing active transportation facilities are shown in **Figure 4**, **Figure 5**, **Figure 6**, and **Figure 7**.

It will take significant time and financial resources to implement the long-term recommendations of the Active Transportation Strategy. As such, the Strategy highlights several quick build techniques and strategies to consider in the short term. There are several approaches to implementing active transportation infrastructure based on a continuum of implementation timelines.

A monitoring strategy is essential to ensure that the Active Transportation Strategy is implemented as intended, and to determine whether the Strategy is achieving its goals. A monitoring strategy will also enable Dauphin to appropriately allocate monetary and staff resources to implement prioritized initiatives. Monitoring also provides a means of identifying changing conditions which would require changes to the Strategy.

To help with monitoring the Active Transportation Strategy's progress, the Strategy should undergo an internal review annually as part of the Municipality's budget planning processes. A thorough review and update of the Strategy should also be conducted every 5 years from the implementation of this plan in 2021.

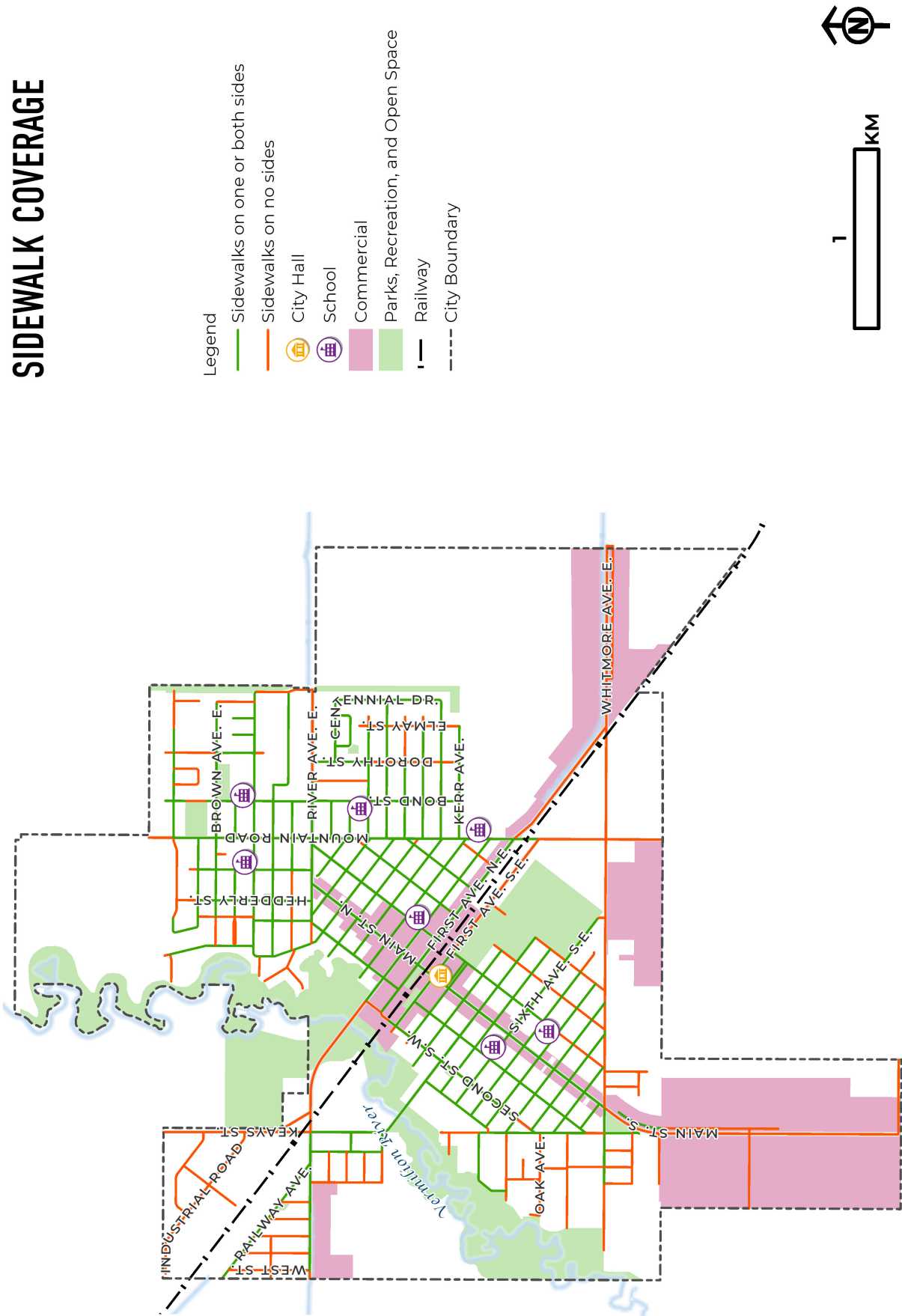


Figure 4: Existing Sidewalk Coverage

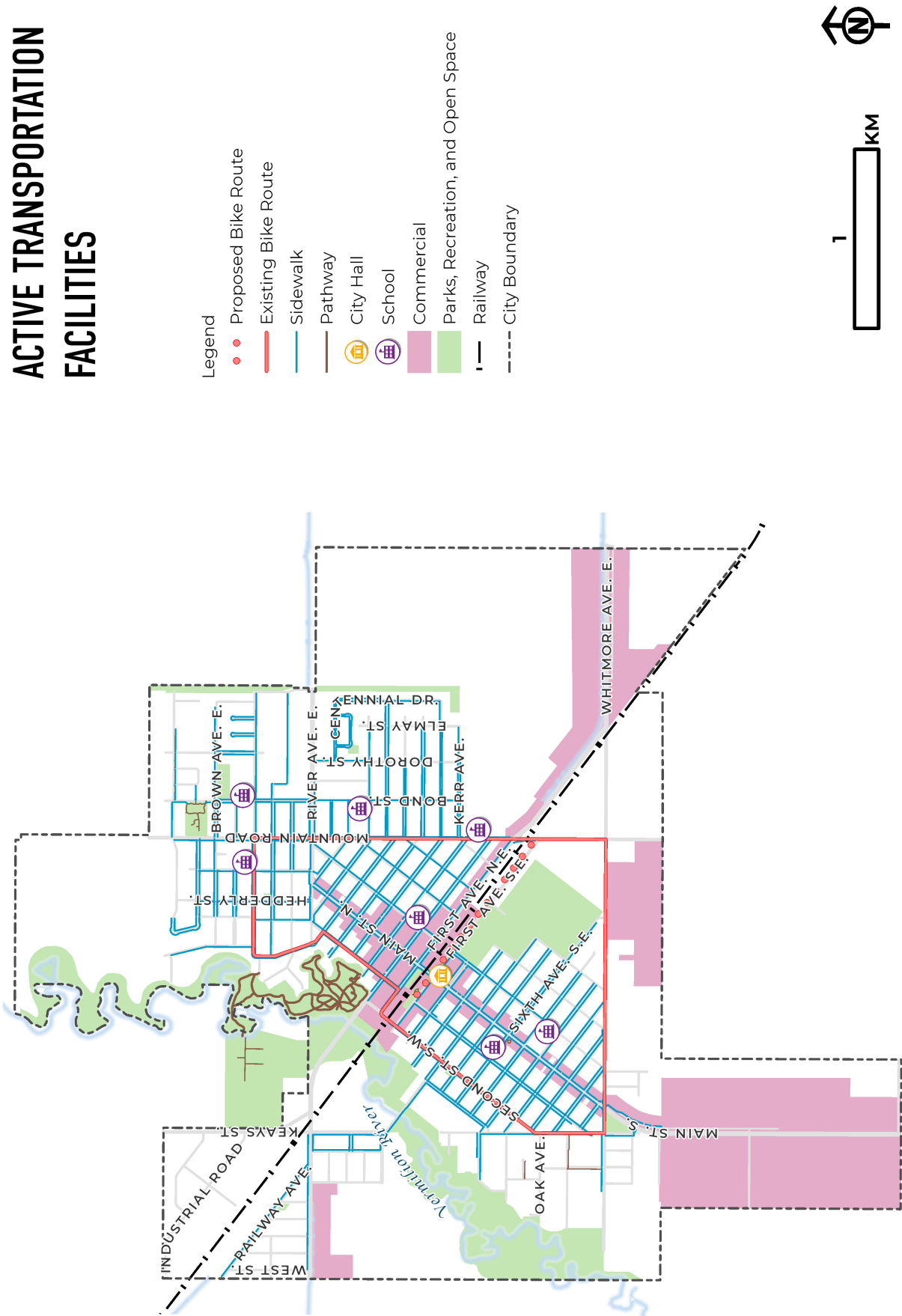


Figure 5: Existing Active Transportation Facilities

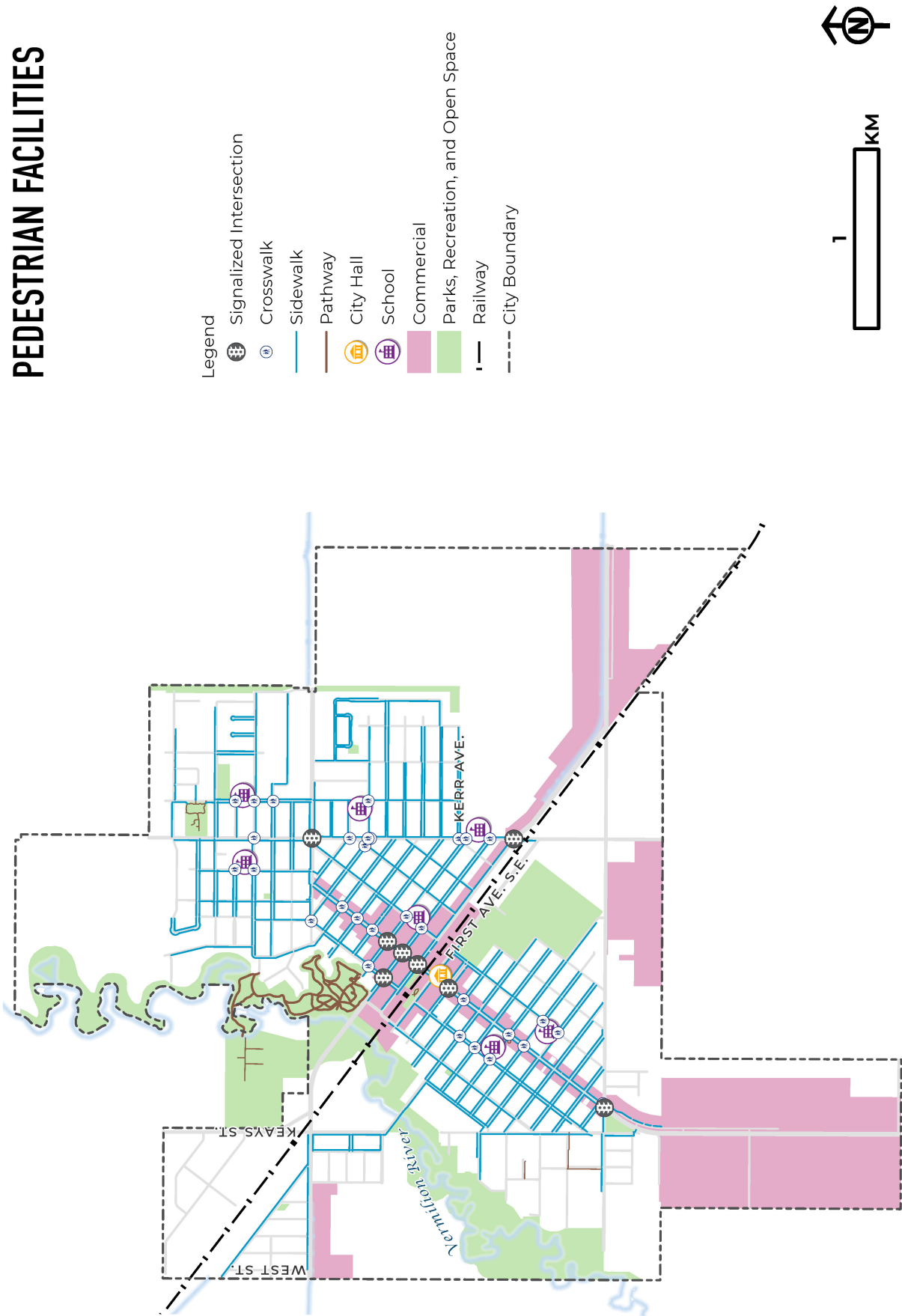


Figure 6: Existing Pedestrian Facilities



SUMMARY

The Active Transportation Strategy provides a comprehensive approach to guide Dauphin's future investments in active transportation. The Strategy includes recommendations for improving active transportation policies, standards, infrastructure, and programs over the long-term, along with priorities over the short- and medium-term. The Active Transportation Strategy will contribute to increased transportation options by improving the accessibility, comfort, convenience, and safety of active transportation in the City of Dauphin.

The Active Transportation Strategy has been developed based on extensive technical work and engagement with the Dauphin community over an 11-month period. Through this public engagement process, dozens of community members provided input into the development strategy at various phases. The City of Dauphin would like to thank all community members for their participation in the process and contributing their valuable input to the development of the Active Transportation Strategy.





01 INTRODUCTION

The City of Dauphin Active Transportation Strategy will guide Dauphin's future investments in active transportation. The strategy establishes a vision, goals, and targets to improve active transportation, along with a series of strategies and actions related to four overarching themes: Tourism Potential; Places for People; Culture Shift; and Quality of Life. These strategies and actions provide holistic guidance regarding improvements to policies, standards, infrastructure, and programming to ensure that walking and cycling are accessible, comfortable, and convenient transportation choices for people of all ages and abilities. The Active Transportation Strategy also includes an implementation and monitoring strategy to prioritize investments and actions over the short-, medium-, and long-term and to monitor progress in achieving the Strategy's goals.

The Active Transportation Strategy has been separated into five parts:

- ▶ **Part 1: Introduction** highlights the overall purpose, process and public engagement activities that have taken place to develop the Active Transportation Strategy.
- ▶ **Part 2: Setting the Stage** outlines the analysis and considerations that shaped the strategy's strategies and actions. This includes understanding the benefits of active transportation, connections to other relevant strategies and policies, land use and demographic trends, and existing conditions for walking and cycling.
- ▶ **Part 3: Future Directions** outlines the strategy's vision, goals, and targets, which build on Dauphin's overarching strategies and policies. The vision and goals will guide active transportation future decision-making and actions in Dauphin, while the targets will be used to measure progress in achieving these goals.
- ▶ **Part 4: Strategies and Actions** describes the long-term strategies and actions under the Active Transportation Strategy's four themes: Tourism Potential, Places for People, Culture Shift, and Quality of Life. This section also identifies future cycling and walking network priorities, including location and design recommendations.
- ▶ **Part 5: Implementation and Monitoring** outlines the implementation and monitoring strategy. The Active Transportation Strategy's strategies and actions have been prioritized over the short-, medium- and long-term, and performance measures have been developed to monitor implementation.

1.1 STRATEGY PURPOSE AND OBJECTIVES

The purpose of this Active Transportation Strategy is to make walking and cycling a safe, affordable, convenient, normal, and fun way to travel for residents and visitors alike. The strategy addresses all aspects of active transportation, including strategy, policies, procedures, best practices, infrastructure, design, initiatives, and programs.

The objectives of the Active Transportation Strategy are to:

- ▶ Develop a safe and integrated active transportation network for Dauphin.
- ▶ Provide a strategy that has been developed through citizen and stakeholder engagement.
- ▶ Review and update the policy framework for active transportation in Dauphin.
- ▶ Improve the quality of active transportation in Dauphin with safe, innovative design principles and a comprehensive set of policies and procedures.
- ▶ Establish an implementation strategy with funding recommendations to meet short, medium, and long-term initiatives and programs to meet the targets and objectives of the Strategy.
- ▶ Set priorities for construction of active transportation infrastructure.

1.2 STRATEGY DEVELOPMENT PROCESS

The Active Transportation Strategy was developed over an 11-month period beginning in the spring of 2020. The creation of the Active Transportation Strategy was an iterative process that involved exploring options, speaking with community members and stakeholders, drafting ideas, sharing initial results, gathering and reviewing further community input, refining the content, and then creating a final strategy.

Throughout the development of the Active Transportation Strategy extensive stakeholder and public engagement took place, engaging dozens of people using a range of tools and tactics, including both in-person and online public consultation and several stakeholder workshops.

The Active Transportation Strategy provides a framework for making walking and cycling safer, more convenient, and increasingly comfortable modes of transportation in Dauphin. This framework includes a series of four Themes, along with Strategies and Actions that together provide a comprehensive package of solutions to enable walking and cycling usage including engineering, programming, and education initiatives.

The Active Transportation Strategy will guide Dauphin's future investments in active transportation. The Strategies and Actions developed as part of the Active Transportation Strategy are intended to guide Dauphin's strategy and capital investment decisions, as well as on-going operations and maintenance activities to encourage and promote safe, comfortable, and convenient walking and cycling usage.

The Strategy establishes a vision, goals, and targets to improve active transportation, along with a series of strategies and actions related to four overarching themes: Tourism Potential, Places for People, Culture Shift, and Quality of Life.

These strategies and actions provide holistic guidance regarding improvements to policies, standards, infrastructure, and programming to ensure that walking and cycling are accessible, comfortable, and convenient transportation choices for people of all ages and abilities. The Active Transportation Strategy also includes an implementation and monitoring strategy to prioritize investments and actions over the short, medium, and long-term, and to monitor progress in achieving the Strategy's goals.

While the Active Transportation Strategy has been developed as a long-term strategy and vision for active transportation in Dauphin, it is important to recognize that to make this vision a reality, significant financial investment will be required.

1.3 PUBLIC ENGAGEMENT

By creating an Active Transportation Strategy, the City is taking concrete steps toward creating safer, healthier, and more dynamic public spaces for its residents. The first step in the creation of any successful community-wide policy is to ensure residents are included in the process from the get-go. As such, input from community members was identified as an essential component of the process, with multiple opportunities for public participation.

What we heard has been used to develop the vision, goals, and targets, as well as strategies and actions for the future of walking and cycling in Dauphin. At the end of this process, we created an action strategy that will guide investments in active transportation infrastructure, and help to support programs that make active mobility options safe, convenient, and attractive transportation choices for residents of all ages and abilities.

The Dauphin Active Transportation Strategy team engaged with residents and stakeholders through the following engagement activities:

1.3.1 Stakeholder Workshops

Personnel represented the following organizations participated in stakeholder workshops:

- ▶ The Dauphin Chamber of Commerce
- ▶ Mountainview School Division
- ▶ Deraillieurs Cycling Club
- ▶ Dauphin Rotary Club
- ▶ Dauphin Recreation Services
- ▶ Parkland Crossing
- ▶ Prairie Mountain Health
- ▶ Manitoba Infrastructure
- ▶ Dauphin Friendship Centre
- ▶ Dauphin Library

The following organizations were invited to participate in the stakeholder engagement process, but no response was received:

- ▶ Assiniboine Community College
- ▶ Dauphin Seniors Center
- ▶ Parkland Residential & Vocational Service Inc

On April 22, 2020, 11 stakeholders representing the above listed interest groups called in to an evening teleconference. The workshop included presentations on the development of the strategy, rotating group discussions on existing barrier and issues, and an opportunity to identify future network options and priorities.

On June 18th, 2020, 9 stakeholders representing community, business and civic organizations called in to the second stakeholder session to discuss existing gaps and potential areas of improvement in the pedestrian and cycling networks, review an outline of the active transportation strategy document, provide feedback on the priorities identified in the draft strategy, and receive an update on conversations and development since the first stakeholder session in late April.

1.3.2 Open House and Online Survey

On July 23, 2020 from 4:00 – 7:00 PM, the City of Dauphin hosted an open house at Credit Union Place. The event was an opportunity for the public to review the progress made to date on the development of the strategy, as well as provide comments on issues and opportunities for active transportation in Dauphin. The event was advertised in both local newspapers, paid ads on the local radio station, posters on community bulletin boards, social media postings, on the City of Dauphin website and an electronic sign, as well as via emails to stakeholders and Council and word of mouth. Approximately 35 people attended the event, with 20 people returning survey forms. From the paper survey forms, 80% of respondents found the open house informative, while 10% did not find the event informative, and an additional 10% skipped answering the question.

Comments received at the event included the following statements:

- ▶ “Lots of detail”
- ▶ “Very informative”
- ▶ “The bigger picture information on safety was excellent”

Regarding pedestrian issues, ideas, and barriers many comments related to maintenance (snow and ice, sidewalk cracks, weeds), crossings (more safe crossings needed on Main St, particularly in the south end), and accessibility concerns (uneven surfaces, trip hazards, lack of benches) were received.

Regarding cycling issues, ideas, and barriers, the following comments were received - calls for more safe/protected cycling facilities, the lack of secure bike parking throughout city, and while attendees liked the safety improvements provided by the protected bike lanes on Mountain Avenue, there were several comments regarding minor adjustments that were needed to enhance protection at intersections and throughout.

The proposed Vision statement for the project was presented, and participants were asked if they agreed with it:

- ▶ 65% of respondents indicated that they either “Agree” or “Strongly Agree” with the Vision statement as written
- ▶ 20% indicated that they were “Neutral”
- ▶ 10% of participants indicated that they “Strongly Disagree” with the Vision statement
- ▶ 5% of participants skipped the question.

We also presented the proposed project goals:

- ▶ 67.5% Agreed or Strongly Agreed with the goals as presented
- ▶ 15% indicated that they were Neutral
- ▶ 7.5% Strongly Disagreed with the goals as presented
- ▶ 10% skipped the question

Here is a selection of some other comments received at the public open house

- ▶ “This is necessary infrastructure for every community”
- ▶ “Great that Dauphin is doing this and leading the way for the Parkland region.”
- ▶ “Thank you for your commitment to making Dauphin a ‘cycling’ city.”
- ▶ “I hope that this will work! I used to walk everywhere and now seems like it is not safe to do that so much. Even during the day. It would be really nice to get out and going again.”

An online survey was also posted to the City of Dauphin website from July 24 – August 9, 2020, along with the information storyboards from the open house. The online survey asked the same questions as the paper survey at the open house, and there were an additional 20 responses to the online survey.

From the total 40 returned surveys, 87.5% of respondents indicated that they walk at least once a week, and 60% of respondents bike at least once a week. Numerous other comments were collected regarding walking and cycling issues, locations for infrastructure, and widespread agreement with the draft Vision and project goals.





SETTING THE STAGE

/02

2.1 WHY PROMOTE ACTIVE TRANSPORTATION

Investments in walking and cycling, can result in a safer and more balanced transportation system that encourages healthy and active living, creates a more livable community, and results in a cost-effective and efficient solution in terms of the community's infrastructure investments. Increased use of active transportation also contributes to several the City's strategic goals, and there are significant quality of life, health, safety, sustainability, and economic benefits associated with investing in active transportation.

2.1.1 *What Is Active Transportation?*

Active Transportation is any active trip you make to get yourself, or others, from one place to another, whether it is to work, school, the store, or to visit with friends and family. Active Transportation includes any form of human powered transportation.

Walking and cycling are the most popular and well-known forms of active transportation. However, the definition extends much further than that — if it is 'active,' you choose the mode: skateboarding, wheeling, pushing a stroller, using a mobility aid, etc.

2.1.2 *Economic Benefits*

Active transportation, as part of an integrated, multi-modal transportation system, is one of the drivers of success for economic diversity and prosperity. When residents can spend less on the costs of car ownership, maintenance, and insurance, they have more disposable income to spend on local services such as groceries, restaurants, and clothing.

Walking and bicycle-supportive communities encourage residents to support local businesses, as these consumers tend to shop near the areas they reside in when using active forms of transportation. Neighbourhoods and destinations that are accessible and attractive for active transportation users attract more visitors, who will in turn be patrons of local services and amenities.

2.1.3 Equity

Active transportation provides mobility choices, which is essential to providing a transportation system that is equitable and accessible for lower income individuals, youth, seniors, people with disabilities, and others who may not have access to, or be able to afford, a motor vehicle. Car ownership rates in lower income communities are often much lower than in the surrounding communities, and these residents often use the least expensive form of transportation to move about. In addition to children and youth who do not have access to their own vehicles, nearly a quarter (22.2%) of the driving-age population in Canada does not own a vehicle. Lastly, the Conference board of Canada recently observed that millennials are purchasing new vehicles at half the rate of those aged 35 to 54, and this trend of lower vehicle ownership looks to continue.

The City of Dauphin acts as an international example of poverty reduction initiatives with its pilot of basic income in the 1970's, as well as the recent completion of a poverty reduction strategy. Part of any poverty reduction program is to ensure that residents can move about without having to incur the heavy costs of car ownership. According to Statistics Canada, transportation costs are the second highest cost for Canadians accounting for 19.9% of average household budgets as of 2017, or an average annual expenditure of \$12,707. A truly equitable City focused on reducing the burden of poverty will strive to build an equitable transportation system to reduce these costs. This includes providing safe and inexpensive infrastructure that supports no cost and low-cost transportation options such as walking and bicycling.

2.1.4 Mental and Physical Health Benefits

Research has found links between local investments in active transportation and increased rates of physical activity, thereby resulting in a healthier population. Regular physical activity reduces the risk of premature death, as well as the risk of developing numerous chronic diseases. Physical activity has been shown to improve psychological well-being and prevents weight gain and obesity.

While the benefits of physical activity have been well documented, low levels of physical activity in children and adults in Canada are still quite high and continue to increase. A recent study published in the British Medical Journal found that cycling to work was associated with a 41% lower risk of dying overall compared to commuting by car or public transportation, and that bicycle commuters had a 52% lower risk of dying from heart disease, and a 40% lower risk of dying from cancer. Cycling commuters also had 46% lower risk of developing heart disease and a 45% lower risk of developing cancer at all.

Increasing rates of walking and cycling by making changes to the built environment are recognized by health professionals across Canada as one of the most broadly impactful and accessible health improvement strategies available.

2.1.5 Improvements in Air Quality

Recent research has measured the levels of fine particulate matter (2.5 microns or below) near major roadways with large numbers of vehicles in the immediate vicinity (including at schools) and found that these levels can often exceed recommended guidelines. Exposure to high levels of particulate matter can result in negative health effects including cardiovascular effects such as cardiac arrhythmias and heart attacks, as well as respiratory effects such as asthma attacks and bronchitis. Exposure to particle pollution can result in increased hospital admissions, emergency room visits, absences from school or work, and restricted activity days, especially for those with pre-existing heart or lung disease, older people, and children. In December of 2020, the coroner for the City of London in the United Kingdom listed air pollution as the cause of death for a 9-year-old girl, largely because she lived and walked to school near a major roadway. This ruling highlights the moral and legal responsibility of governments to take all possible actions to ensure the health and safety of their citizens, including efforts to reduce air pollution from vehicle emissions.

2.1.6 Environmental Benefits

Increasing rates of active transportation have been shown to reduce air pollution as well as greenhouse gas (GHG) emissions. Promoting walking and cycling aids with efforts towards climate change mitigation, while also supporting the protection of the natural environment. The short- and long-term effects of air pollution on climate change are also putting major burdens on cities that are dealing with increased flooding, more extreme heat, and more frequent and higher intensity storms.

In Manitoba, the transportation sector accounts for 39% of total GHG emissions, and in the City of Dauphin the transportation sector accounts for 57.4 % of total community GHG emissions. Any shift towards lower rates of vehicle usage will help with efforts at lowering GHG emissions, thereby reducing the impact of climate change.

Providing safe and connected walking and cycling facilities provides residents with sustainable and green transportation options. If the City of Dauphin is committed to taking action on reducing greenhouse gas emissions and becoming a sustainable community, this must include making every effort to reduce emissions from the largest sector — transportation.

2.1.7 Congestion

Recently, the Canadian Automobile Association examined best practices to ease congestion. One of the specific measures in the report noted that “experience in other countries shows that building segregated bike lanes that makes cycling commuters feel safe and secure can be a relatively low-cost way to reduce urban congestion.” For every person who bicycles to or from work, this often translates into one less vehicle on the road, thereby helping to increase the overall movement of vehicle traffic.

2.1.8 Societal Benefits

Active transportation provides practical, everyday opportunities for residents to be physically active, thereby increasing their mental wellness and increasing positive social interactions. High rates of active transportation in a community are a strong indicator of sustainability and livability. Active transportation facilities also provide affordable and accessible transportation choices for people of all ages and abilities. For youth, this also encourages sustainable travel patterns at an early age that can often continue into adulthood. When residents are able to walk and cycle in their community, studies have shown that community connection and cohesiveness also increase.

2.1.9 Children

Health

Cycling and walking provide a number of physical health benefits from reducing obesity to significantly lowering the risk of cardiovascular disease and cancer that can contribute to lowering healthcare costs for cities. Studies have shown that children who are obese at age 5 often continue to be obese into adolescence and adulthood. Obesity is also on the rise in 2- to 5-year-old children. Part of the problem is inactivity. The World Health Organization estimates that over 80% of adolescents are insufficiently physically active, and this lack of physical activity starts at a young age. Thus, the earlier cities address inactivity in children - by prioritizing cycling and walking for young children and caregivers - the more likely they are to receive the benefits of a healthy and thriving adult population.

Air Quality

Switching from driving to cycling can also have a major impact on the amount of air pollution in a city, which has a significant economic and environmental impact, and is particularly harmful to infants and toddlers. The World Health Organization estimates that each year over 125,000 children under 5 die from outdoor air pollution. The transportation sector is the largest contributor to air pollution in many cities, as is the case in the City of Dauphin. The effect of switching to cycling on air pollution ranges, but studies have shown a total reduction ranging from 11-22% of transportation sector emissions. Making cycling and walking the preferred mobility option for caregivers and young children - who make up a significant portion of the population of Dauphin - will thus have positive economic, environmental, and equity benefits for these groups and city residents in general.

Equity

Many challenges cities face are connected with a widening gap between the rich and poor. Prioritizing cycling and walking for caregivers and young children, especially those with limited financial means, can contribute to shrinking this gap. Low-income caregivers often rely on walking and cycling to make multiple stops at off-peak times. As a result, their travel can be slow, unpredictable, stressful, and exhausting. This results in more time, energy, and money spent for those who have little to spare. When cycling and walking is made safe, easy, comfortable, and fun for caregivers and young children, they become less stressed, happier, and more productive. This results in more frequent, longer, and positive interactions between caregivers and infants and toddlers, which is crucial for cognitive development necessary for long-term success in life.

Additionally, low-income residents often live on or near noisy, polluted, and dangerous streets, and are forced to travel along or cross them without safe infrastructure. As a result, they suffer the most from not prioritizing cycling and walking but have the most to gain.

2.1.10 Safety Benefits

Making active transportation a more visible and viable transportation choice results in less vehicles moving at speed throughout the community, a reduced risk of collisions, and a safer transportation system for all road users. Streets designed for slower vehicle speeds feel safer for vulnerable road users, including people walking, cycling, and using other forms of active transportation. Studies have shown that slower vehicle speeds greatly increase survival rates for vulnerable road users. When active transportation rates increase, rates of collisions between vulnerable road users and motor vehicles decreases at the same time.

Based upon data provided by Manitoba Public Insurance, the City of Dauphin experiences an average of almost 60 collision per month:

Table 1: Total Collision Outcomes by Month: Dauphin, MB

Month	Incidents per Calendar Year												Avg.
	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	Total	
January	83	64	83	63	90	77	57	63	55	73	60	768	70
February	57	45	57	62	60	79	62	49	55	55	47	628	57
March	53	54	85	56	61	72	56	49	63	50	47	646	59
April	39	43	51	42	54	46	45	50	53	64	38	525	48
May	47	54	55	46	41	50	54	49	58	72	48	574	52
June	50	34	51	61	66	69	60	49	73	53	51	617	56
July	62	79	82	60	61	54	43	56	63	64	48	672	61
August	39	56	65	53	42	63	52	61	50	59	45	585	53
September	39	61	59	54	53	38	55	54	59	55	53	580	53
October	73	70	70	52	58	61	65	51	70	68	64	702	64
November	58	67	82	70	65	60	65	77	66	65	66	741	67
December	70	71	69	74	78	75	71	62	77	41	70	758	69
Total	670	698	809	693	729	744	685	670	742	719	637	7,796	709

If the City of Dauphin is able to reduce the number of vehicles on its roadways, this will also reduce the risk of collision, and less injuries and deaths on its roadways.

Lastly, research has shown that Cities with high bicycling rates are safer for ALL road users through the increased prevalence of protected cycling facilities¹. The construction of protected cycling facilities improves road safety for all road users — no matter the mode.

2.2 THE MARKET FOR ACTIVE TRANSPORTATION IN DAUPHIN

2.2.1 *Active Transportation Potential*

A high-level analysis was conducted to identify areas of Dauphin where there is the greatest opportunity to increase the number of walking and cycling trips. Identifying the neighbourhoods with the highest potential was based on several factors including road network connectivity, road network density, land use mix, population and employment density, topography, and permeability.

The analysis found that the neighbourhoods with the highest potential are the northwestern and southern parts of Dauphin. These areas are not presently connected with the cycling network yet contain significant residential areas and commercial centres. The results also found that there were several issues and opportunities for improvements in these areas.

2.2.2 *Equity*

One of the aims of the Active Transportation Strategy was to develop a well-connected network for walking and cycling that provides equitable access and serves all areas of the city. The equity analysis determines neighbourhoods with higher concentrations of under-served populations and with relatively low levels of existing active transportation facilities.

The result of this analysis identified under-served areas in the city where there is opportunity to strategically invest in areas that have high demand today, the greatest potential to increase future use of active transportation, and where there are higher concentrations of people who are more dependent on active transportation for moving around.

The equity analysis also examined the distribution of pedestrian and bicycle facilities in relation to underserved populations and identified areas where limited access to walking or bicycle facilities is compounded by socio-economic challenges. The results were used as one of the factors to help prioritize the proposed active transportation networks. The neighbourhoods with the highest equity need were identified as a higher priority for implementation and provided with the highest quality of recommended facilities.

¹ Wesley E. Marshall, Nicholas N. Ferencsik, "Why cities with high bicycling rates are safer for all road users," *Journal of Transport & Health*, Volume 13, 2019, 100539, ISSN 2214-1405

2.2.3 Comparison with Other Prairie Cities

When compared to other peer cities with a similar population in Manitoba, Saskatchewan, and Alberta, it is notable that Dauphin has a very high walk to work percentage (13.5%). Canmore, AB has a similar amount of people who walk to work (12.1%), while other cities that were sampled range between around 2% to 8.5% (**Figure 8**).

While more people walk to work in Dauphin compared to Canmore, a much higher percentage of people bike to work in Canmore (6.8%) compared to Dauphin (1.7%). When compared to other cities that were sampled, Dauphin is closer to the middle of the pack for biking to work, with values ranging from 2.8% in Morden, MB and 0.4% in Warman, SK. The City of Dauphin is also slightly higher than the provincial average for biking to work (1.4% province wide).

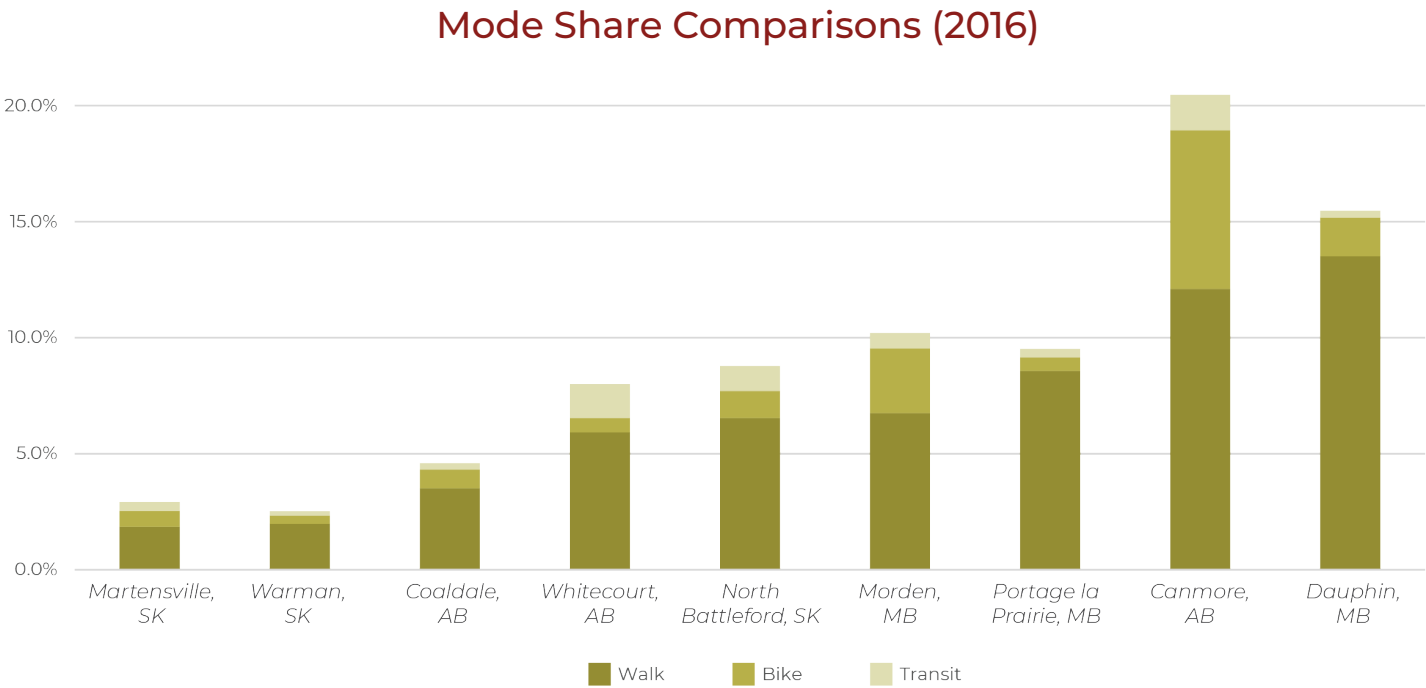


Figure 8: Mode Share Comparison with Other Peer Cities in Manitoba, Saskatchewan, and Alberta
(Source: Statistics Canada, 2016 Census)

2.2.4 Historic Trends

When comparing historical data, there is little change in the numbers walking and cycling to work between 1996 and 2016 (**Figure 9**). While the percentage of people who walked to work has declined by 3%, the numbers walking and cycling to work vary by less than 100 people over that time. The number of people commuting with a vehicle remains consistent around 81%.

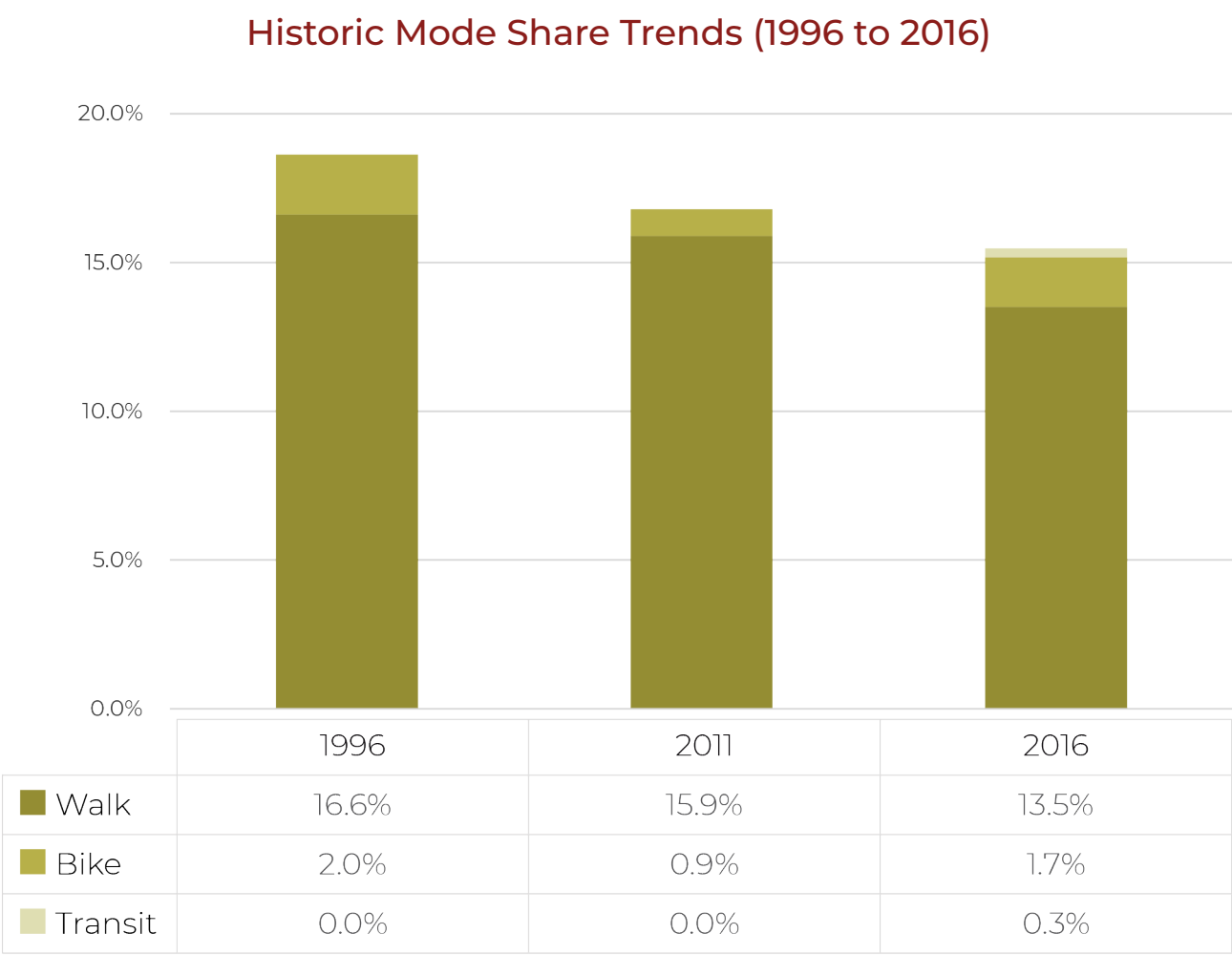
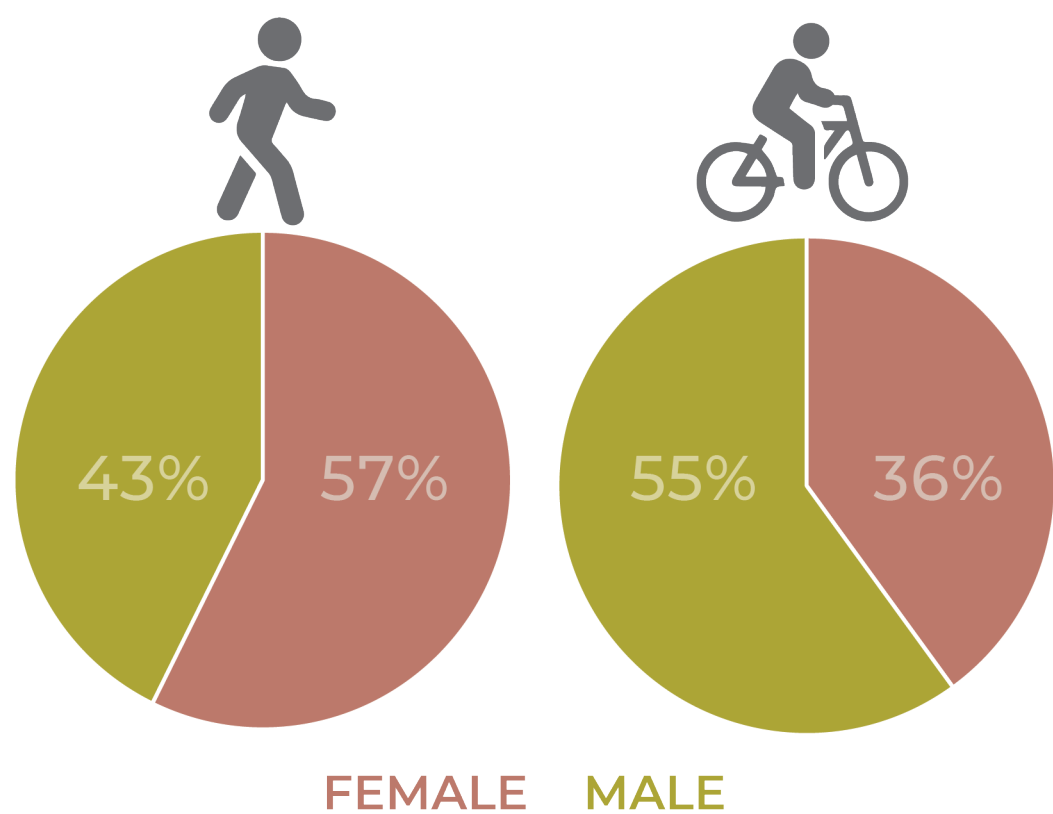


Figure 9: Historic Trends in Mode Share of Commute Trips to Work or School (2016)
(Source: Statistics Canada, 2016 Census)

2.2.5 Gender

While the gender differences across transportation modes in Dauphin are not uncommon, it does set a bar for areas to focus on in terms of working towards transportation equity. Walking is typically an equal split across genders in other cities. However, in the 2016 Census, women in Dauphin have higher numbers for walking to work than men (255 versus 190). Historical data reflects this trend of women walking more than men.

As shown in **Figure 10**, most cyclists in Dauphin are men (55% of riders). A gap like this can indicate difference in types of confidence in riders, as well as perceptions of safety. Cities around the world are finding that female riders prefer higher quality infrastructure, and several Canadian Cities including Calgary and Edmonton are documenting that with the construction of protected bicycle facilities, the proportion of female riders increases. Transportation gender equity is important from economic, accessibility, and health perspectives.



Note: The percentages for biking do not add up to 100% due to rounding numbers in the data. The Census rounds numbers to the nearest 5 in order to protect the confidentiality of individuals.

Figure 10: Gender Split for Active Modes of Transportation (2016)
(Source: Statistics Canada, 2016 Census)

2.3 COMMUNITY PROFILE

2.3.1 Land Use and Destinations

Dauphin's location provides residents with numerous amenities, including beautiful parks and trails, and abundant recreational activities. The community is home to major employment, educational, and regional destinations including the Assiniboine Community College, Kinsmen Aquatic Centre, and Vermillion Park Sportsplex. The City also has many outdoor and local and regional tourism opportunities, including proximity to Dauphin Lake, Duck Mountain Provincial Park, and Riding Mountain National Park.

Growth and Development Patterns

Dauphin has a rich and longstanding history. The current site of the City of Dauphin lies on the traditional territories of the Ojibway people who have been living in the area for hundreds of years before the first European explorers arrived in the mid 1700's.

Settlers began arriving in the area in 1883 and two early settlements, Gartmore and "Old Dauphin" were established. With the coming of the railway in 1896 – the line ran roughly halfway between the two villages – settlement shifted to the present site. This coincided with the beginning of Ukrainian settlement in the area - previously most arrivals had been of British background.

Dauphin was granted a village charter on July 11, 1898, with George Barker as the first mayor. In 1901 Dauphin was incorporated as a town, with George King as mayor. Dauphin became an important centre for the transportation of grain. Farming still plays a central role in the economy of the area, but its role has been greatly reduced over the past few decades.

Today, Dauphin has a total land area of 12.6 square kilometres. The city has largely developed within a 2.5 square kilometres section of land, with the greatest distance between the furthest points in the city being less than 5km. Based on travel distances and elevation alone, the walkability and bikeability for origins and destinations in Dauphin should be very high overall. Most walking and cycling trips within Dauphin would easily be less than 30 minutes.

Neighbourhoods

Dauphin is made up of diverse neighbourhoods that provide a range of living environments. For the most part, Dauphin's neighbourhoods are relatively low-density, comprised predominantly of single detached, semi-detached, and townhouses with densities ranging from 20-35 units per net hectare.

Key Destinations

Figure 11 identifies key destinations which include educational institutions, community centres, commercial districts, and parks. The map shows clusters and patterns in some of the major destination areas throughout the city including high concentrations downtown and in the south end of the City.

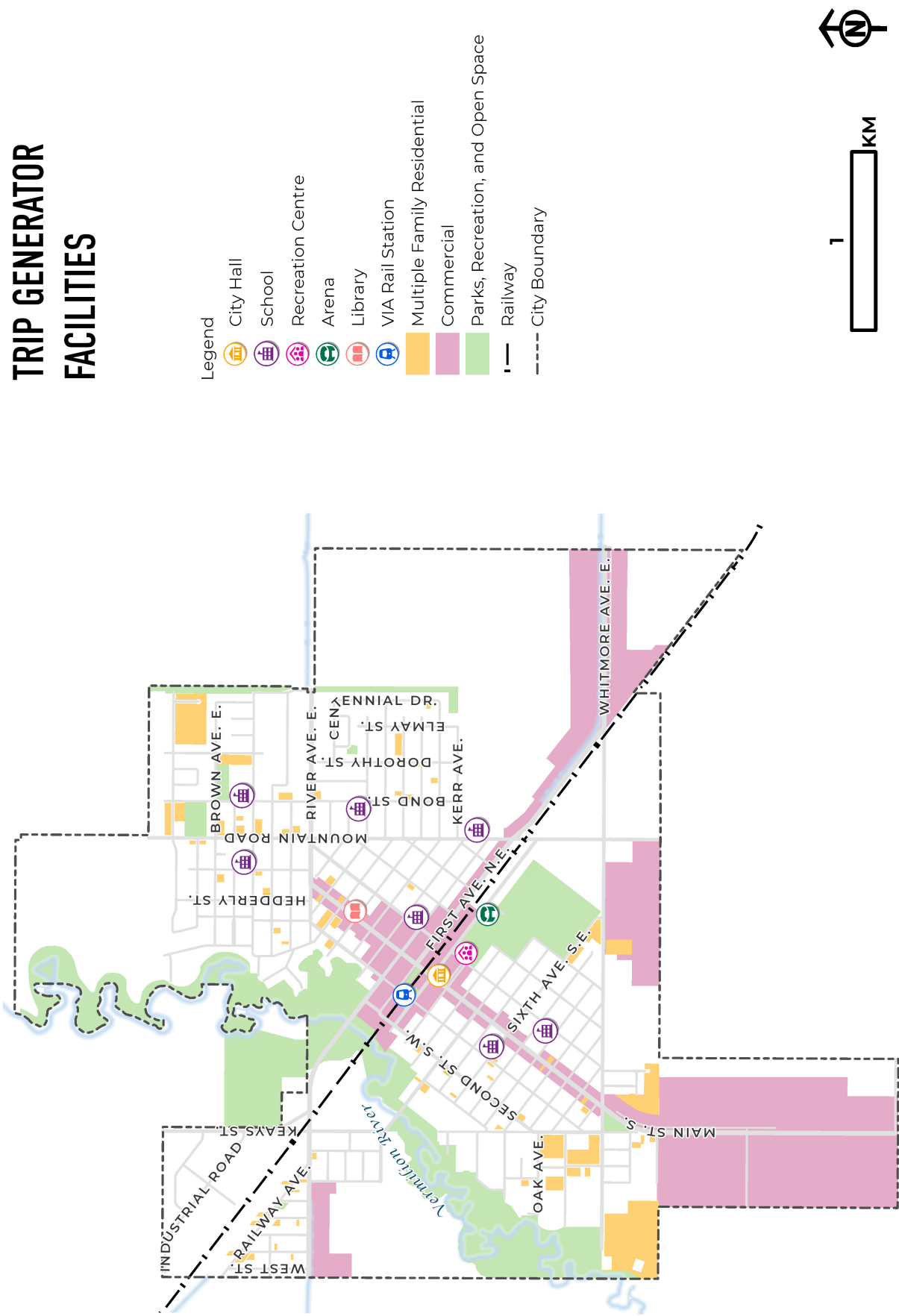


Figure 11: Trip Generator Facilities

2.3.2 Demographics

Demographics play a significant role in influencing transportation choices and travel patterns. This section summarizes key demographic characteristics that will be used as a basis to inform the direction of the Active Transportation Strategy.

A Stable City

Dauphin is home to nearly 9,000 residents. Dauphin's current population size is nearly the same as it was in 1991. Between 1991 and 2006, the City saw regular declines in population of about 2% every five years. Starting in 2006, the population began to rebound with a significant gain of over 4% between 2006 and 2011 and again an increase of 2.5% from 2011 to 2016. **Figure 12** illustrates the population changes in Dauphin between 1991 to 2016.

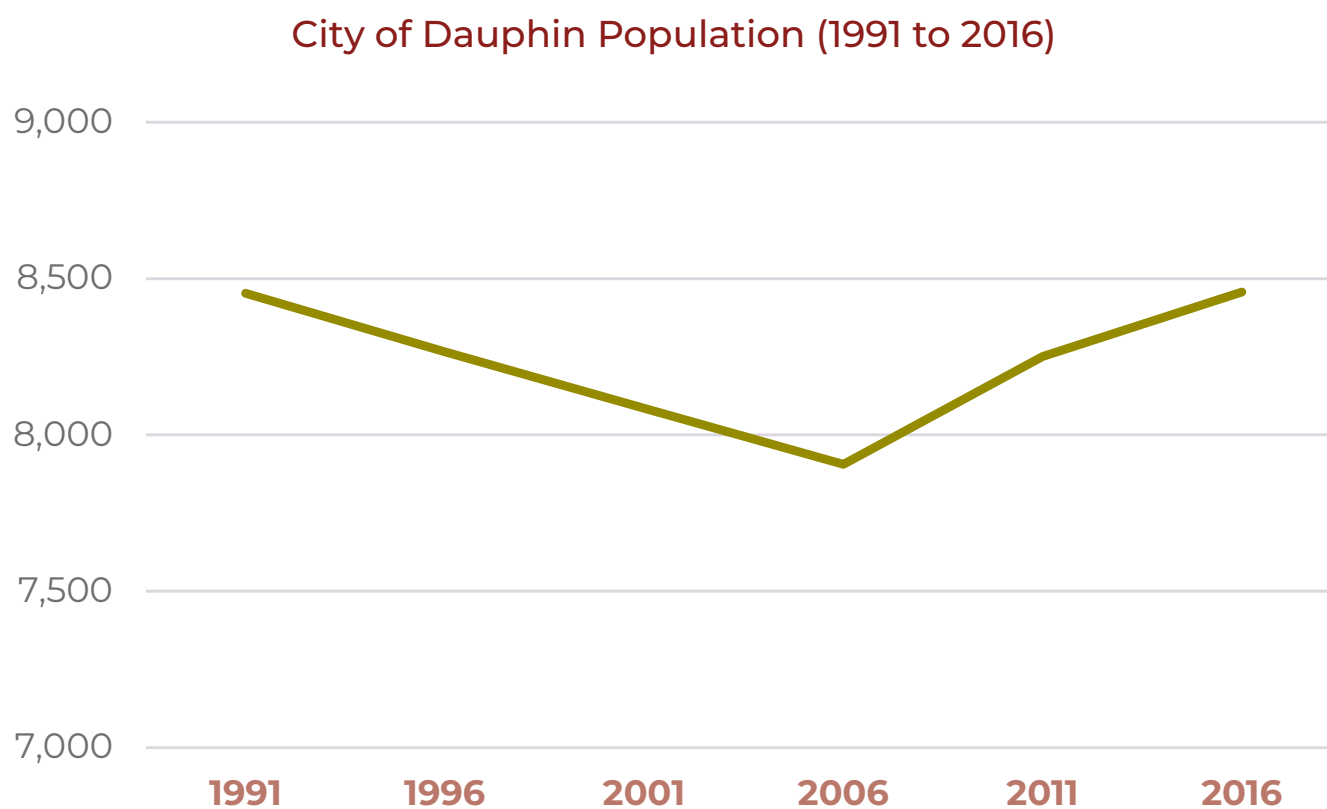


Figure 12: Population Growth (1991 to 2016)
(Source: Statistics Canada, 2016 Census)

Age Distribution

As of 2016, Dauphin’s population was 45.4% male and 54.6% female. As shown in **Figure 13**, the proportion of males to females is similar across age categories until the ages of 45 years and above. Past this point, there are increasingly more women than men for each cohort. Of those who are 85 years of age and above, 72% are female and 28% are male. This can be explained by how generally, women have a longer life expectancy than men.

Children under 15 years of age accounted for 17.4% of the city population compared to 16.6% for the rest of Canada. Persons of age 65 years and over accounted for 26.1% of the population in Dauphin compared to 16.9% for Canada, and the median age in Dauphin is 44.5 years compared to 41.2 years for Canada. The youngest demographic of those 0 to 14 years old represents over 17 % of the population of Dauphin, with another 26% of Dauphinites over 65. This means that **over 43% of the residents of Dauphin are either too young to drive, or are senior citizens**, both groups that utilize walking and cycling on a regular basis.

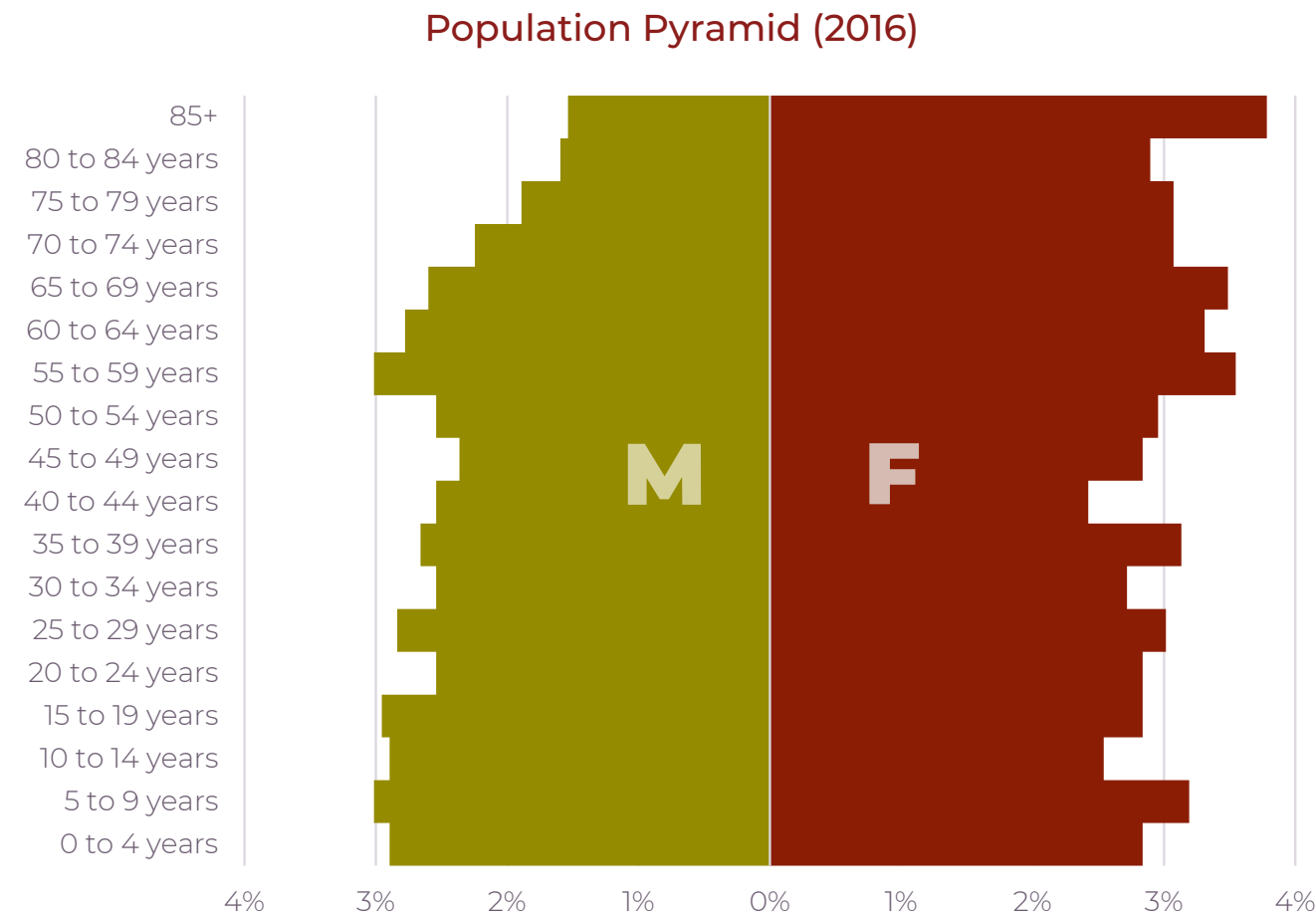


Figure 13: Population Growth (1991 to 2016)
(Source: Statistics Canada, 2016 Census)

Newcomer Population

Dauphin does not have a large newcomer population. According to the 2016 Census, only 4.4% of Dauphin's residents were born outside of Canada. This number is significantly lower than the Canadian average of 21.9% of the total population identifying as an immigrant.

Between 2011 to 2016, the City of Dauphin experienced a significant increase in immigration compared to previous years. 130 people immigrated to Dauphin between 2011 to 2016, compared to 70 people from 2001 to 2010. The majority of people who have immigrated from Dauphin in recent years have come from countries in Asia, while historic waves of immigration have largely come from countries in Europe.

Period of Immigration

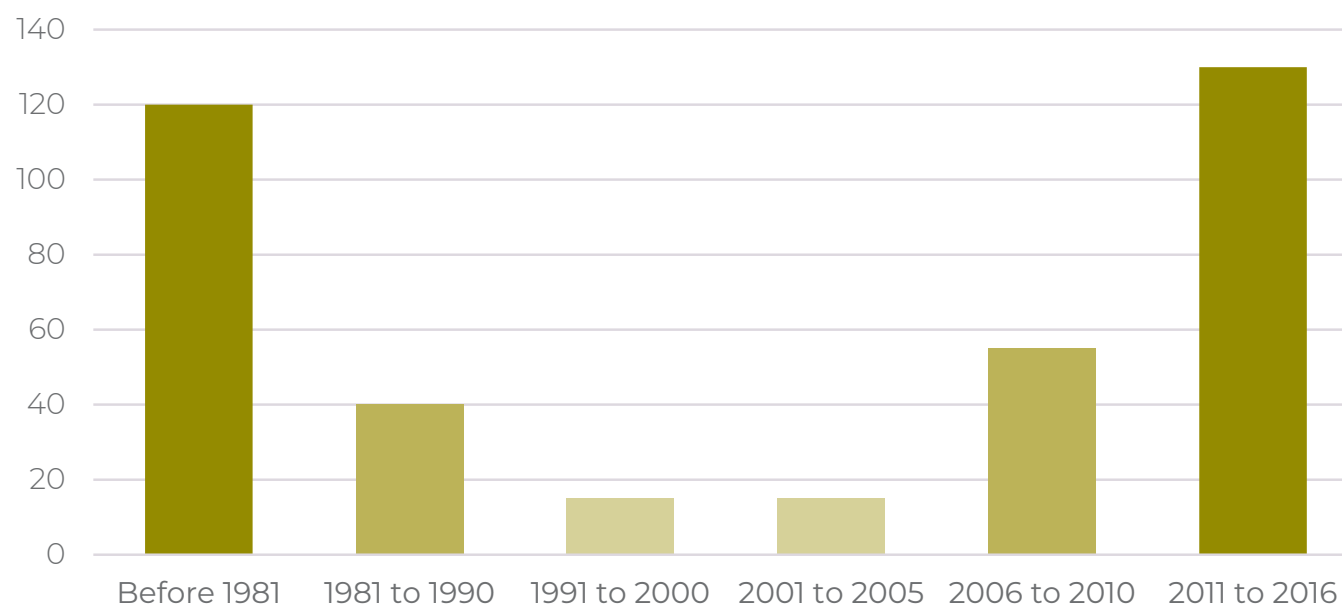


Figure 14: Period of Immigration to Dauphin
(Source: Statistics Canada, 2016 Census)

Income and Transportation

Looking at the 2016 Canadian census data on income, the median total income of Dauphinites is \$31,762, with almost 71.3% of Dauphinites making less than \$50,000 per annum. There is currently no data available on the percentage of people in Dauphin who own their own vehicle. However, given the fact that 78.1% of people in the City of Dauphin commute to work or school as a driver (see **Section 2.5**), we can assume most people in Dauphin's labour market have their own vehicle. With the average Canadian paying \$10,745 per year (*Source: CAA*) to operate and maintain a motor vehicle, this represents a large financial burden for many, resulting in a sizeable portion of the community not being able to afford the significant costs associated with private vehicle ownership. Residents who are not able to afford the costs of vehicle ownership often rely upon the least expensive forms of transportation-walking and cycling.

Employment

The primary employment sectors in the Dauphin Self-contained Labour Area (comprising of the City of Dauphin, The Rural Municipality of Dauphin, the Municipality of Mossey River, and the Municipality of Lakeshore), are in healthcare and social assistance (23% of all jobs), retail trade (18% of all jobs), Agriculture, forestry, fishing and hunting (12%), and Public administration (9%). All other employment sectors represent 7% or less of the workforce in the area, including finance and insurance, educational services, and construction.

Overall, 12% of the jobs in the region are in the primary sector of Agriculture, forestry, fishing and hunting, 6% of the jobs are in the secondary sectors of Construction, Manufacturing and Utilities, 82% of the jobs are in the tertiary sector, and 38% of the jobs are in sectors traditionally funded by government (Education, Healthcare, and Public Administration).

(Source: Province of Manitoba – Dauphin and Region Economic profile)

2.4 POLICY CONTEXT

The Active Transportation Strategy is closely linked to and informed by many of the City's key strategy documents that contain pedestrian and cycling-related policies, strategies, and goals. Many of these documents include broader aspirations for growth and transportation and provide specific directions on how walking and cycling can become an integral part of the City's transportation system. The Active Transportation Strategy reinforces and furthers the goals and policies found in other official documents.

Many municipal strategies and policies played a significant role in informing the development of the Active Transportation Strategy, including:

- ▶ *City of Dauphin Community Development Plan* (2010)
- ▶ *City of Dauphin Bright Ideas Community Consultation Report* (2014)
- ▶ *Age-Friendly Dauphin Community* (2015)
- ▶ *Community Energy Emissions Plan* (2020)

2.4.1 *Community Development Plan (2010)*

A development plan is a future looking planning document that provides guidance and establishes parameters for land use developments in a city. Through consultation and engagement, a community's current and future needs are identified to inform the vision, goals, and objectives of the development plan.

Dauphin's *Community Development Plan* (CDP) provided several overarching goals to balance the environmental, social, and economics needs of the city. Dauphin's vision is to be a City:

... that reflects both pride in its history as well as its potential for growth as a regional service and destination centre. It is a community which promotes commercial growth, strong residential neighbourhoods, cultural diversity and an outstanding quality of life. It is blessed with a scenic natural environment, a solid financial base, and a strong municipal infrastructure. In order to ensure its long term viability, new development will be sought aggressively with the knowledge that well-planned, environmentally sound, and economically sustainable growth will add to Dauphin's strengths, and enable its vision to continue to be achieved.

In terms of the implications on active transportation, the CDP promotes compact neighbourhood development that will make walking, cycling, and potentially transit more viable through a more balanced transportation system. The creation of mixed-use and employment centres will allow businesses and services to be closer to homes, and allow greater opportunities for walking, cycling, and potential transit use in the future.

The *CDP* also calls for new development to accommodate the needs of pedestrians, cyclists, and other recreational activities. According to the *CDP*, new housing and development areas should “facilitate access to places of work, shopping, education, recreation and cultural activities”. The *CDP* recognizes that residents want to be in neighbourhoods that meet their needs to live, shop, and play, and that each neighbourhood should have a central area that provides a focus on these activities within a convenient walking distance.

Part of ensuring residents have access to these places is to establish and maintain good quality pedestrian and cycling infrastructure. The *CDP* has policies to “provide and maintain an efficient and economical sidewalk system” and to encourage active transportation throughout the city, but especially in the central business district. Providing a “safe and convenient pedestrian environment” is recognized as a way to ensure continuous growth and to strengthen Dauphin’s central business district. Strategies to do so include:

- ▶ Maintaining appropriate sidewalk system to ensure accessibility to all users.
- ▶ Development of a lively life including the promotion of street festivals, parades, and other special events.
- ▶ Expansion of the trail system to connect parks to the central business district.

The *CDP* also includes a housing strategy that will see more infill and less sprawl onto agricultural and natural lands. Low and medium density residential infill is encouraged throughout existing neighbourhoods. The *CDP* encourages medium- and high-density developments to be located on the “periphery of low-density dwelling residential areas, along collector or arterial streets, near community facilities, or within or adjacent to commercial areas such as the Central Business District”. A range of housing types will allow residents to age in place and accommodate varying incomes in each neighbourhood. Complete and compact neighbourhoods in turn promote a range of transportation choices for residents.

2.4.2 *City of Dauphin Bright Ideas Community Consultation Report (2014)*

The City conducted a community consultation project in 2014 titled *City of Dauphin Bright Ideas Community Consultation Report*. That project invited feedback from all residents on “What could our community look like in the future?”

Recommended actions included

- ▶ Making an accessible / walkable community through active transportation
- ▶ Putting an emphasis on physical activity such as active transportation.
- ▶ Making the City of Dauphin a “recreational hub: by placing an “emphasis on physical activity such as active transport”
- ▶ Under the vibrant community section: Increasing the number of bike racks in the downtown

- ▶ Under the transportation section: bus service and active transportation
- ▶ Under Tourism: “position Dauphin as destination for access to RMNP” (this is part of the Tourism theme contained within this strategy.
- ▶ Under marketing and promotion: “Architectural Walking Tour”
- ▶ Under recreation: Walkability throughout the community
 - ▷ Promote and develop active living / active transport and establish routes in places like the downtown core.
 - ▷ Safe access to south end of Dauphin (access to area through pedestrian/bike lanes/ sidewalks)
 - ▷ 4-mile square trail development
 - ▷ Community-wide trail PLAN
 - ▷ Pedestrian friendly downtown core

The City response included the following statements:

Spring of 2013 saw the creation of the Active Transport Committee, whose primary goal is to create convenient travel routes for pedestrians and cyclists between key areas and facilities within the city of Dauphin. In June 2014, the City began Phase 1 of this project by creating marked pathways and “sharrows” (share the lane symbols) throughout the community. The City will continue to consult on options for active transport opportunities in the future including potential pathways, gathering areas, signage, and safety issues.

The City of Dauphin continues to consider active transport routes, bicycle racks and safety lighting throughout the community. Along with new pedestrian and bike lanes, lighting was also installed in the new off-leash dog park as well as at the D-Town Skatepark.

City council goals for the 2014–2018 council session identified in the report included:

Partner with neighbouring national and provincial parks and municipalities to attract tourism. (congruent with the tourism theme in this strategy)

2.4.3 Age-Friendly Dauphin Community Report (2015)

In the spring of 2015, the Province of Manitoba conducted an *Age-Friendly Dauphin* Community Consultation. On May 6, 2015, 27 residents from the City of Dauphin, Manitoba came together to talk about age-friendly priorities and issues within their community. Participants also had the opportunity to complete a survey of the age-friendliness of their community.

A summary of these discussions included an identification of the following priorities that are relevant to active transportation:

- ▶ **Priority 2: Affordable Transportation**
- ▶ **Priority 3: Enhance Outdoor Spaces**
 - ▶ Promote Step Safe Program (system of identifying unsafe sidewalks and other related issues) administered by Support Services to Seniors.
 - ▶ In partnership with the City of Dauphin, utilize the Step Safe Program to identify the City's need for safe sidewalks.
 - ▶ In consultation with the City of Dauphin, develop a plan to address the need identified by the Step Safe Program.
 - ▶ In collaboration with the City of Dauphin, discuss safety and security by addressing the need for better lighting, especially around certain apartment blocks and the Park.
- ▶ **Priority 4: Increase Accessibility**
 - ▶ Conduct a community accessibility survey to identify and prioritize community buildings and facilities that need immediate renovations to make them accessible for all ages and abilities.
 - ▶ Consult with City Council, the business community, and partners to address accessibility needs of all residents by encouraging installation of ramps and automatic doors throughout the community.
 - ▶ Promote and raise awareness about the importance of accessibility for all ages and abilities.

As part of the summary of the “Most Age-Friendly and Least Age-Friendly Areas”, the following areas were noted as being “least age-friendly”:

- ▶ Sidewalks in most or all areas of my community are well maintained (even surfaces or paved, not a lot of cracks) (18% of respondents agreed with this statement)
- ▶ The transit service to shopping, senior centres, religious events, cultural events, and so forth is sufficient (0.6% of respondents agreed with this statement).
- ▶ The services that help seniors around the home (e.g., snow removal, lawn care, garbage brought to the street) are sufficient (18% of respondents agreed with this statement).
- ▶ Seniors feel safe when walking alone during the night (12% of respondents agreed with this statement)
- ▶ Streets/Sidewalks (e.g., more sidewalks, sidewalk repair and maintenance, need for crosswalks, poor lighting on the streets), and Access (e.g., curbs are too high, more ramps and automatic doors, need easier access to many buildings) were also identified as key areas of concern for senior citizens.

2.4.4 Community Energy Emissions Plan (2020)

In March 2020, the City of Dauphin finalized its *Community Energy and Emissions Plan (CEEP)*. The *CEEP* contains the City's goals for the reduction of energy consumption and greenhouse gas emissions. The *CEEP* laid out a bold vision for the City "to become Manitoba's most sustainable City by becoming the first MB City to reach Carbon Neutrality and Net Zero Energy Status for Municipal operations".

The *CEEP* began the initial work by conducting a GHG inventory for both municipal operations and the community in general. The community inventory found that the transportation sector was the greatest contributor to GHG emissions, consisting of 33.7% of the total, or approximately 33,748 t of CO₂. The *CEEP* also established goals for GHG emission reductions. The community goals consisted of two possible targets. The first commitment was for a 6% per capita reduction in emissions, which would save approximately 3,615.8 t of CO₂ annually (the equivalent of removing 764 cars from the road). The second more ambitious target was for 6% off unmodified 2018 levels, which would save approximately 5,022.5 t of CO₂ (the equivalent of removing 1,061 cars from the road).

To reach these lofty goals, the *CEEP* included many possible actions for the City to undertake. In the transportation sector the actions included:

Develop an updated active transportation master plan which considers sidewalks and cycling lanes. Stakeholder consultation should be part of the design.

Newly constructed main feeder or arterial roads should incorporate sidewalk and protected cycling lane infrastructure when built according to the AT master plan.

Where feeder and arterial streets reach end of life, replacement should incorporate sidewalk and protected cycle lanes built according to the AT master plan.

The annual City budget should fund the implementation of the AT master plan on an annual basis and appoint staff resources to oversee the implementation.

The active transportation strategy is the first step in all of the transportation actions noted that will be needed for the City to reach its emission reduction goals.

Dauphin City Council Actions

In addition to the *CEEP*, the Mayor and Council established goals for the 2018-2022 session. These goals included developing active transportation facilities in response to developing a sustainable and green community and as part of the *CEEP* to reduce Greenhouse Gas Emissions.

This year, the City of Dauphin also passed a resolution to proclaim June 5, 2020 as World Environment Day. The resolution read:

WHEREAS the foods we eat, the air we breathe, the water we drink, and the climate that makes our planet habitable all come from nature;

AND WHEREAS biodiversity underpins economic prosperity, and biodiverse ecosystems regulate the earth's climate by capturing and storing greenhouse gases; conversely, damaging ecosystems such as wetlands and forests release carbon;

AND WHEREAS putting a price on carbon is a core component of a cost-effective climate plan;

AND WHEREAS World Environment Day is a global platform for raising awareness and taking action on urgent issues such as global warming and sustainable consumption;

Now, therefore, we the Council of the City of Dauphin Do Hereby Proclaim June 5, 2020 as World Environment Day and encourage all Dauphinites to learn more about becoming carbon neutral.

In 2013, the City created an Active Living and Transportation Committee with a purpose of:

To provide a coordinated strategy to develop and maintain active transportation corridors/routes in the City of Dauphin;

To suggest projects, guidelines, policies and/or bylaws to support active living and transportation;

To review active living and transportation related requests made to Mayor and Council.

2.5 ACTIVE TRANSPORTATION IN DAUPHIN TODAY

2.5.1 Travel Patterns

Mode Share

According to Statistics Canada's 2016 Census, approximately 15% of all commute trips to work or school in Dauphin are made by walking, cycling, or transit (**Figure 15**). It should be noted that Census data only includes commute trips, and does not include trips for other purposes, such as exercise, social purposes, or to spend time with family or friends. Due to the framing of the questions in the census ("What is your primary means of traveling to work?") this does not account for secondary modes or recreational trips, nor does it allow for multiple modes of transportation to be selected – only the "primary" mode. This can result in someone who walks or bikes to and from work or school up to 50% of the time not being represented in these numbers whatsoever. Most researchers believe that the Census data underrepresents the actual amount of active transportation trips being made by census respondents due to the framing of this question.

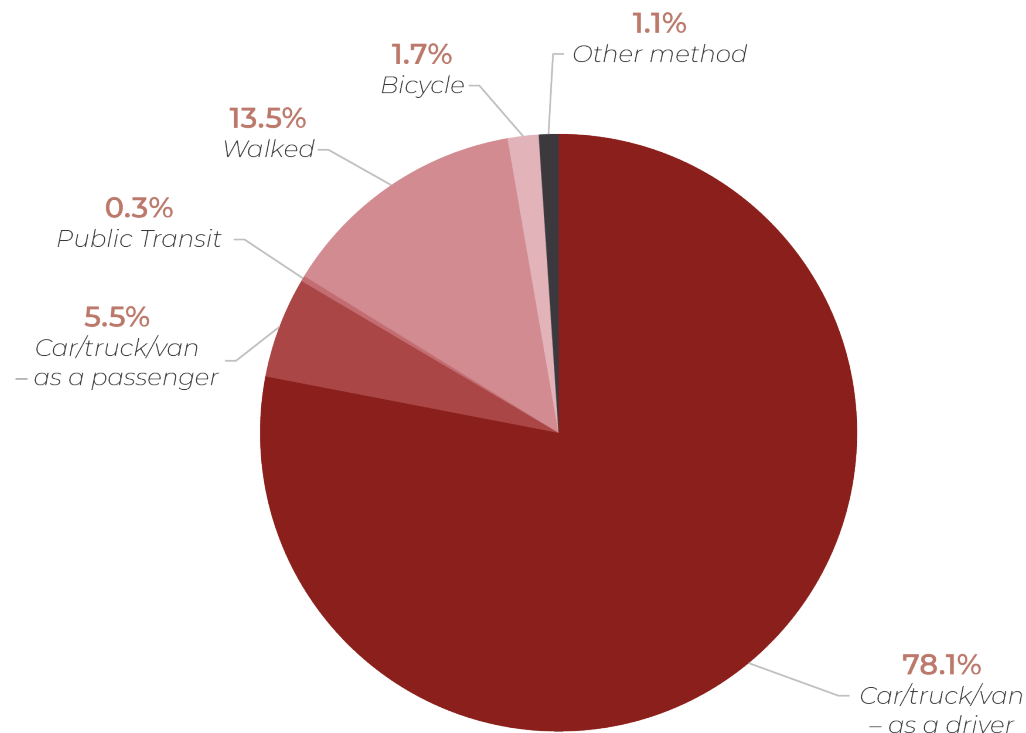


Figure 15: Mode Share in the City of Dauphin (2016)
(Source: Statistics Canada, 2016 Census)

Key Destinations

Stakeholders were asked to identify locations they frequently travel to and from for daily tasks such as grocery shopping or going to work. Mapping the results of this exercise was particularly helpful to understand active transportation patterns within Dauphin (see **“Figure 11: Trip Generator Facilities”** on page 35).

Some of the key findings show that people are:

- ▶ Shopping on Main street and the commercial core at the southern edge of the City
- ▶ Working in Downtown,
- ▶ Going to school at Assiniboine Community College
- ▶ Accessing services in the downtown of the City
- ▶ Accessing recreational facilities in the downtown and north west sections of the city

Interest in Active Transportation

As noted previously, promoting walking and cycling can help reduce automobile dependence and GHG emissions, increase physical activity, improve public health outcomes, increase social connections, and reduce infrastructure demands.

Results from stakeholder and public engagement show that Dauphinites are interested in using active forms of transportation for a variety of reasons, with the most common reason for both walking and cycling being to exercise or to have fun; and to go to shops, restaurants, or services

Walking

- ▶ Exercise or have fun
- ▶ Go to shops, restaurants, or services
- ▶ Spend time with family and friends
- ▶ Travel to work or school

Cycling

- ▶ Exercise or have fun
- ▶ Go to shops, restaurants, or services
- ▶ Travel to work or school
- ▶ Spend time with family and friends

2.5.2 Infrastructure

Existing Sidewalk Network

Sidewalks form the backbone of a well-connected walking network for all users of all ages and abilities. There are approximately 68 km of sidewalks and trails within the City of Dauphin. 48 km of streets have sidewalks (either on one or both sides), while 30 km of streets do not presently (as of June 2020) have sidewalks.

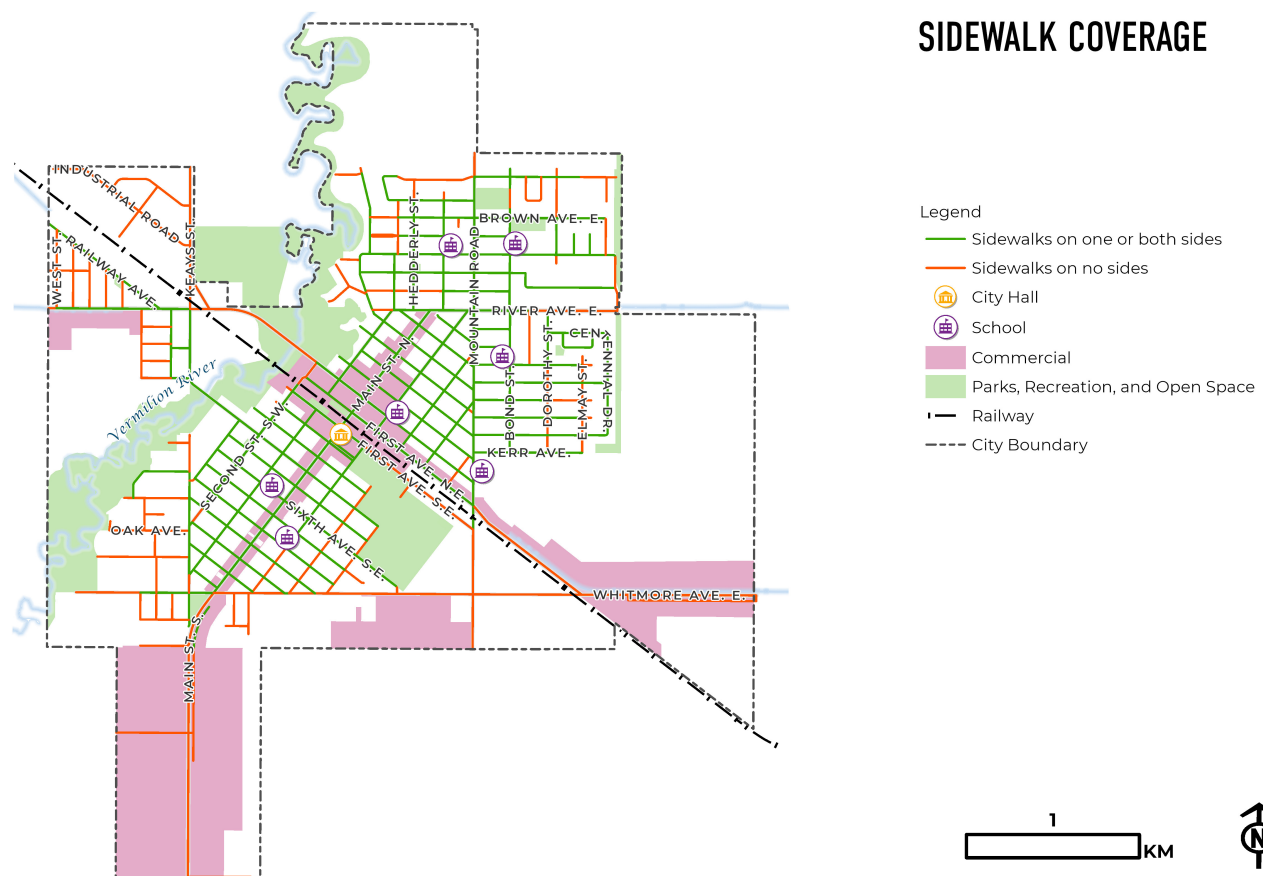


Figure 16: Existing Sidewalk Coverage
A larger version of this map can be viewed on page 9.

Existing Cycling Facilities

Dauphin's bicycle network is made up of a variety of both on-street and off-street facilities including on-street bicycle lanes, paved shoulders, signed bicycle routes, as well as paved and unpaved multi-use pathways. There are approximately 50 km of bicycle lanes and paved shoulders, over 30 km of signed bicycle routes, and over 130 km of multi-use pathways, as shown in **Table 2** and **Figure 17**.

Table 2: Existing Bicycle Network

Bicycle Facilities	KM
Off-street pathways	4.1
Bicycle lanes and paved shoulders	1.9
Signed Route	5.3
Planned Bicycle Lane — 1 st Avenue SE	0.6
Total	11.9

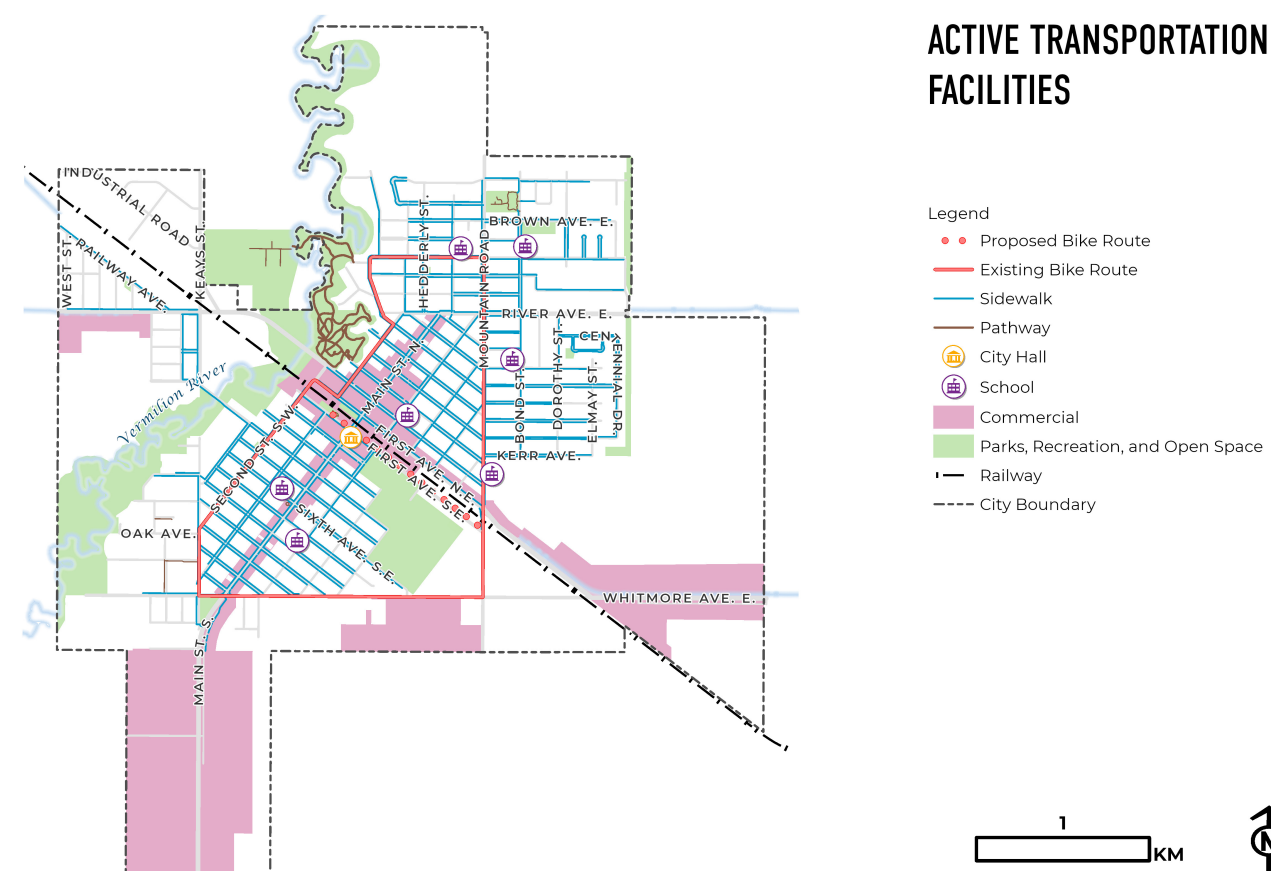


Figure 17: Existing Bicycle Network
A larger version of this map can be viewed on page 11.

There are a range of facilities that be considered as part of Dauphin's bicycle network, including facilities that range from being more comfortable for people of all ages and abilities (such as off-street pathways, separated bicycle lanes, and local street bikeways) to those that are less comfortable (such as bicycle lanes and shared use lanes) (**Figure 18**).



Figure 18: Continuum of Bicycle Facilities

Network Connectivity

A well-connected bicycle network will ensure that users can quickly and safely arrive at their final destinations. Dauphin's street network is generally made up a very strong grid network, which provides excellent opportunities to create a bicycle network using this existing grid system. Dauphin's existing bicycle network provides several north-south and east-west route options, including both on-street and off-street facilities.

Feedback from stakeholders and the general public indicate that gaps in the cycling network are a significant barrier to cycling to and from major destinations. The Sportsplex and the shopping area on south Main street are two of the biggest drivers in pedestrian and bicycle traffic. However, these two areas have been identified through both stakeholder engagement, public survey, and previous plans and studies as the most difficult to access via bicycle or on foot.

On a regional scale, there is also an increasing demand to link the City of Dauphin up with the mountain biking facilities at the Northgate trails. Connecting this significant network of cycling trails with the cycling network in the City of Dauphin would create a major tourist attraction and provide a direct link to the park itself via a hiking and/or biking trail. Creation of this trail would support the Tourism theme contained within this strategy.

Network Coverage

Figure 19 and **Figure 20** illustrates a 200-metre and 400-metre buffer around existing city bicycle routes. These buffers represent network coverage, where any location not within the buffer is more than 400 metres away from a bicycle route.

For a mature, built-out network, ideally these buffers would overlap to cover the entire city, ensuring all residents are within 400-metres of a designated bicycle facility. However, there are several areas of Dauphin where residents and commercial areas are not located within proximity of an existing bicycle route, particularly in the North-West, South-West and North East sections of the City. The lack of cycling connections for residents living in the North-West area of the City was brought up several times in stakeholder and public engagement, as was the lack of cycling connections to the commercial and accommodations districts on the South side of the City.

ACTIVE TRANSPORTATION
FACILITIES

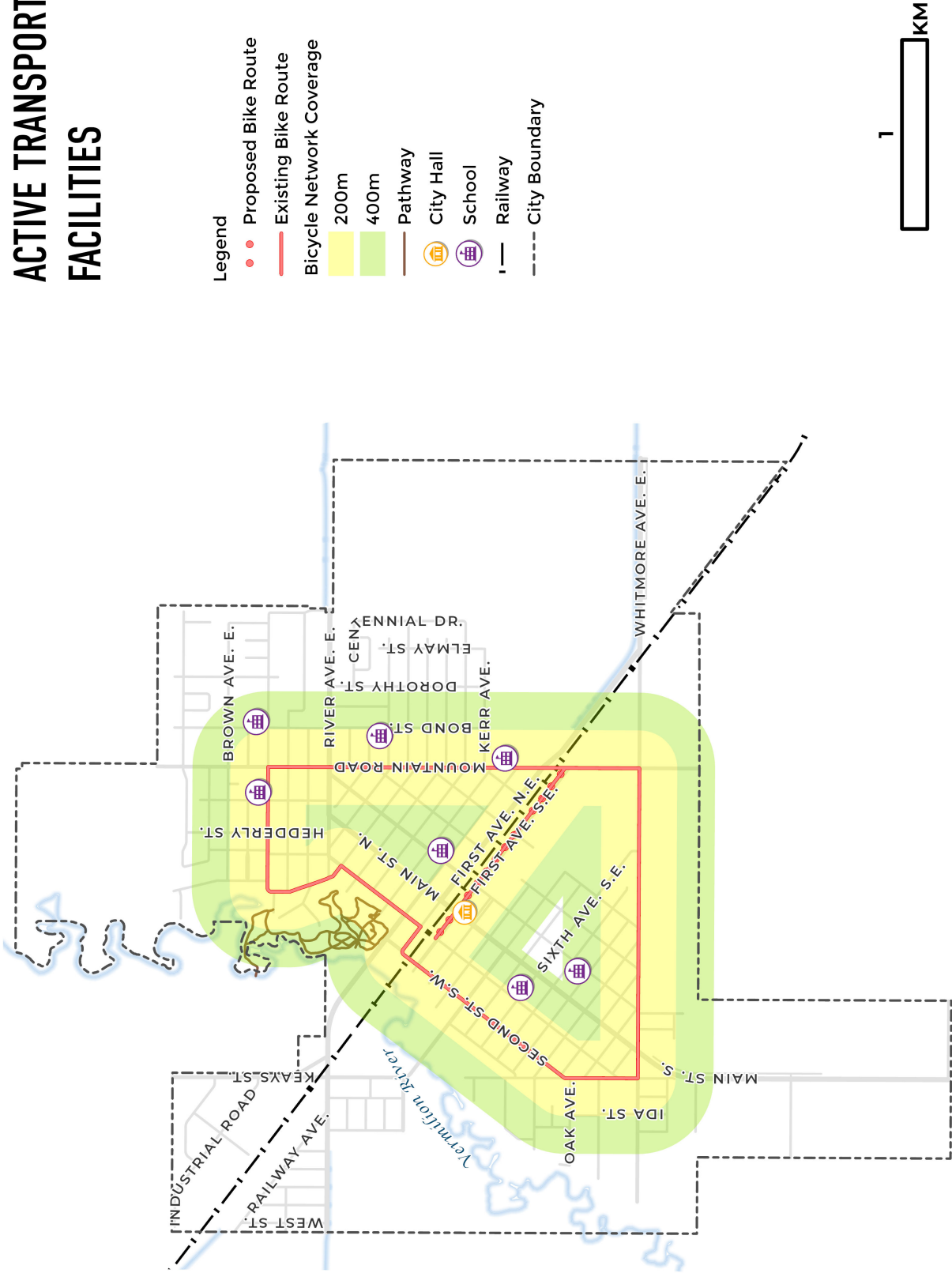
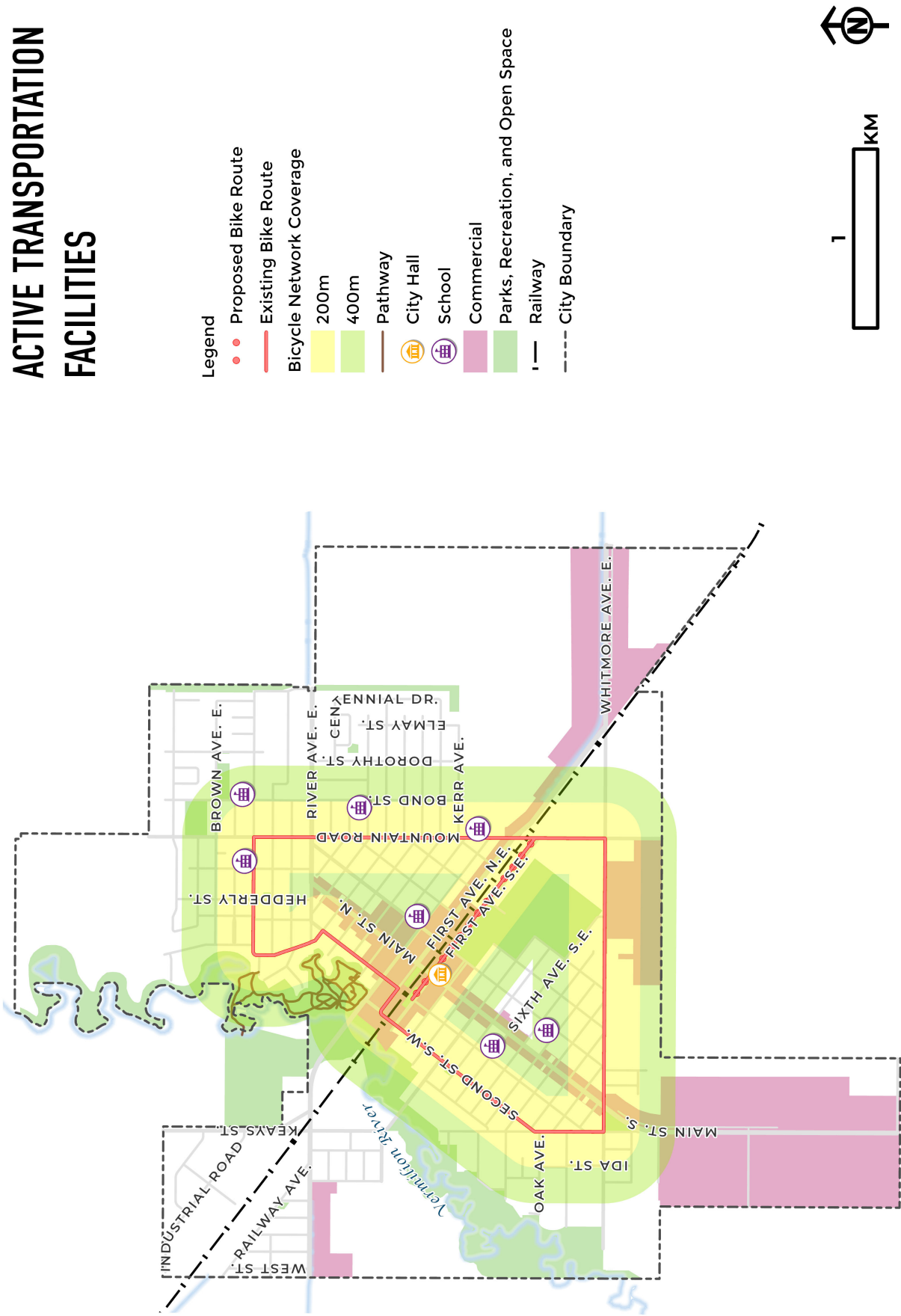


Figure 19: Cycling Network Coverage



2.5.3 Supportive Programs and Policies

Programs and Policies

Programs and policies create an environment that encourages and supports cycling and walking as convenient and attractive modes of transportation. The City of Dauphin is committed to continuing to improve the rates of walking and cycling through policies, programming, and the support of initiatives throughout Dauphin, as described below. The City of Dauphin could consider adopting several programs and policies to educate and inform residents and visitors about walking and cycling in Dauphin, including:

- ▶ **Traffic Calming Policies** are intended to improve the enjoyment and pedestrian friendliness of neighbourhoods throughout the city. Requests are made by residents and reviewed and implemented by the City based on a set of pre-determined criteria.
- ▶ **Pedestrian Generator Policies** provides sidewalks to increase the separation between pedestrians and vehicle traffic, as well as increase the opportunities for active travel. This policy is accomplished through the identification of key areas, including schools, community and recreational centres, key pedestrian areas, and older adult living facilities. With a set budget, sidewalks are distributed to these key areas on a request basis.
- ▶ **Road Renewal Policies** require any road renewal project to consider adding to and/or improving the pedestrian and cycling network in their design and construction. These projects provide an opportunity to reduce the costs associated with building active transportation facilities on a standalone basis through a shared cost approach. This can include both road renewal and infrastructure projects such as sewer and water main replacement.
- ▶ **Active and Safe Routes to School (ASRTS) programs** are often overseen by health units, municipal staff, or school division personnel. These programs aim to support and enhance the implementation of the non-motorized transportation network and have a variety of programs. These programs promote walking and biking to school while also seeking to provide a safe way for students and parents to utilize walking and cycling routes to and from school.
- ▶ **Active Transport Committee** aims to eliminate barriers for persons traveling on foot or bicycle. This includes addressing important gaps in accessible pedestrian infrastructure, advising Council, and making policy recommendations. This committee is comprised of community representatives, as well as a member of Council who chairs the committee.
- ▶ **Open Streets Day** provides free recreation-based programs that temporarily open streets to people and close them to cars. This creates space for activities which are programmed at specific activity hubs, as well as room for people to walk, cycle and play to improve their health. This could be tied into the City's existing Street Fair that is held annually every August as a supporting activity, and consideration should be given to creating more space for active living programming during this event.

- ▶ **Resident Block Party:** In addition to an Open Streets Day and the Dauphin and District Chamber of Commerce Street Fair, the City could also consider adopting a policy to allow residents to host block parties. This policy allows for residents who collect the signatures of 50% or more of local residents to close the street for a day for a block party. These events can include street art, street games, and community presentations by local emergency services.
- ▶ **Bike to Work Day** is a Province-wide event held every June that the City of Dauphin could support to promote cycling as an option for commuting to work. Through this event, free workshops on bicycle handling and maintenance are typically offered, and local businesses set up “pit stops” to welcome active commuters with snacks and other prizes.
- ▶ **Commuter Challenge** is a nation-wide, friendly competition between Canadian cities and workplaces that occurs during Canadian Environment Week in June. Canadians are encouraged to leave their cars at home and are rewarded for using active and sustainable modes of transportation. Dauphin could host the event locally and support workplaces in the city.
- ▶ **Bicycle Recovery Service:** The Project 529 website offers a bicycle tracking and monitoring service through their website. Residents can register the serial number of their bike, and if it is recovered by police it will be returned.
- ▶ **Cycling Education Classes** can be offered to both youth and adults to educate them about the rules of the road when cycling, either through the City of Dauphin, or through supporting cycling groups in the City. The project team has had exploratory discussions with the Mountain View school division about the potential to bring the Bike Education and Skills Training (BEST) program to Dauphin schools. This program is being supported by Manitoba Public Insurance, and provides in-class, on road cycling education as part of physical education classes for grades 4–8.
- ▶ **Bike Repair and Learn to Ride Classes** could be provided through the local cycling advocacy group Dauphin Derailleurs. The group could also lead a variety of “Tour Your City” rides including some Slow Rides, Bike Jams, trips to key destinations, and training for longer rides such as the MS Riding Mountain Ride.
- ▶ **Bicycle and Walking Tours** could be offered to local and regional destinations including local restaurants and breweries. A free bi-weekly “Friday Night Lights” ride has also been implemented in other Canadian cities, and this event brings out hundreds of cyclists to explore various destinations in these locales.

2.5.4 Key Issues and Opportunities

Through input received as part of the stakeholder and public engagement process, several key issues and opportunities for walking and cycling in Dauphin were identified.



Figure 21: Suggested improvements for Pedestrians in Dauphin

87.5% of all respondents stated that they walk to their destination at least weekly. **Figure 21** shows suggestions that respondents had for improving the pedestrian experience in the City of Dauphin. The top suggestions related to better sidewalk maintenance, and providing additional pedestrian facilities (e.g., more stop signs and flashing crosswalks), especially around key connecting areas (e.g., Main Street, on 2nd Ave by the train station and the Watson Arts Centre).

Suggestions also related to behavioural changes, such as encouraging drivers to stop at sidewalks as well as educating pedestrians on safer street crossing were also put forth. Several respondents mentioned feeling unsafe to walk on their own. One respondent suggested having police walking or biking while on patrol would improve perceptions of safety within the City of Dauphin.



Figure 22: Barriers and Gaps to Walking

Figure 22 shows a summary of the main barriers and gaps that respondents said prevented them from walking more. Respondents identified issues related to maintenance (snow and ice, sidewalk cracks, weeds), gaps in the sidewalk network (e.g., sidewalks ending or no sidewalks), a need for more crossings (more safe crossings needed on Main St, particularly in the south end), and accessibility concerns (uneven surfaces, trip hazards, lack of benches).



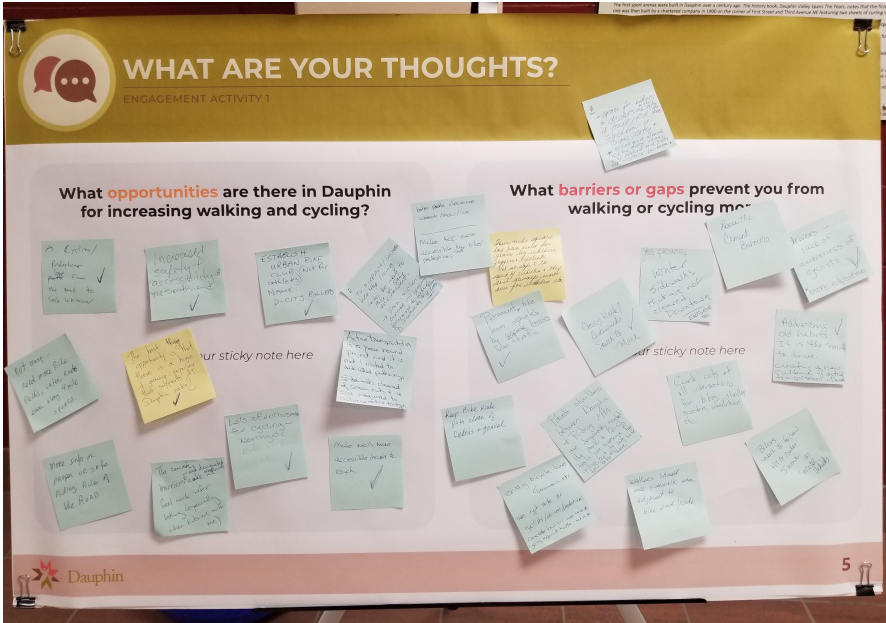
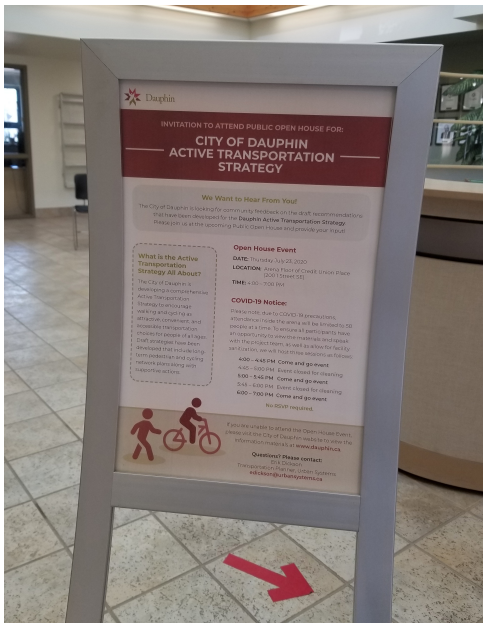
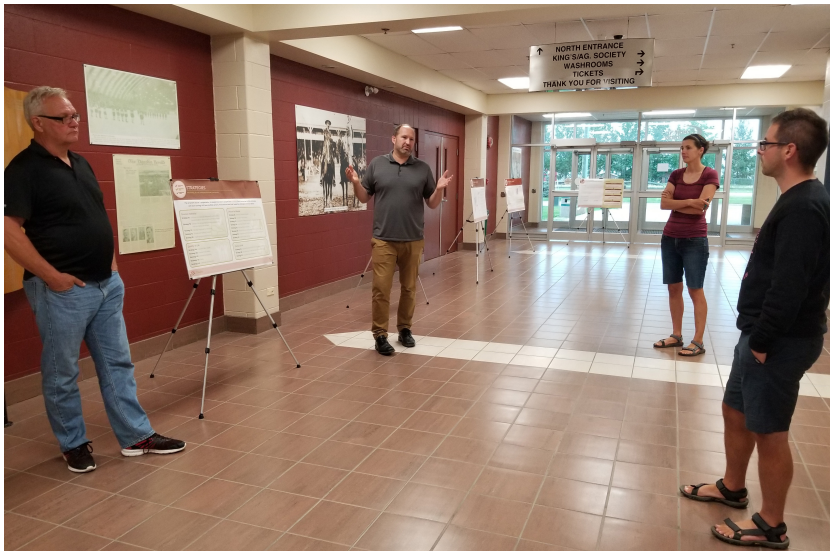
Figure 23: Suggested improvements for Cyclists in Dauphin

60% of all respondents said they bike to their destination at least weekly. **Figure 23** summarizes suggestions respondents had for improving cycling in Dauphin. The top suggestions were around building more bike lanes and having better designed bike lanes (e.g., separated from vehicular traffic, not just a “shared path” sign) more even surfacing, and better community connections. One respondent suggested having road safety education for cyclists and motorists. Another respondent suggested reducing obstructions by back lanes (e.g., trimming trees and shrubs) so cyclists can see exiting motor traffic better.



Figure 24: Barriers and Gaps to Cycling

Figure 24 shows the main barriers and gaps that respondents said prevented them from cycling more. Regarding cycling issues, ideas, and barriers we heard calls for more safe/protected cycling facilities, a lack of secure bike parking throughout city, and minor adjustments to the protected bike lanes on Mountain Road.







FUTURE DIRECTIONS /03

3.1 VISION

A vision statement was developed to describe the broad aspirations for the future of active transportation in Dauphin. As outlined in **Section 2.1**, the vision statement builds on the City's commitments as outlined in several overarching strategies, as well as reflects input received throughout the development of the Active Transportation Strategy. Stakeholder and public feedback highlighted that there was significant support for setting the goal of being a leader in active transportation in Manitoba. The vision statement was revised to reflect this desire:

“By 2030, Dauphin is a leader in active transportation. Walking and cycling are safe, convenient, and enjoyable mobility options for all residents and visitors, regardless of age, ability, trip purpose, or time of year. Active Transportation connects Dauphin’s neighbourhoods, contributing to a resilient, safe, equitable, and healthy city with a high quality of life for Dauphin residents.”

This vision statement for Dauphin sets the overall direction of the Strategy, its goals and targets, as well as the directions and actions that will be developed as part of this process.

3.2 GOALS

Six supporting goals were developed to provide clear direction on how to achieve the vision. These goals were refined based on input received through the public and stakeholder engagement processes and are intended to be both achievable and measurable to ensure that the implementation of the Strategy is successful. Participants felt that six goals were a good amount for the strategy.

Supportive land-use planning practices can ensure the physical environment is made more convenient and enjoyable to travel on foot or bicycle. As such, the goal around increasing the number of walking and cycling trips was broadened to include this understanding of how planning and development practices facilitate this shift.

Developing a culture for active transportation and building an environment of respect amongst all road users is critical to supporting the corresponding shift in travel mode. A great deal of discussion focused on needs for education, outreach, promotion, and celebration. Much of the discussion focused on how to foster this cultural change and recognized its overarching importance as a goal.

The goals are presented below:

1. **Develop a complete active transportation network that connects all neighbourhoods in the City of Dauphin.**
2. **Improve the safety and accessibility of vulnerable road users.**
3. **Support effective land-use planning to build an environment that makes walking and cycling convenient and enjoyable.**
4. **Ensure that the active transportation network is equitable and accessible for all residents.**
5. **Foster a culture for active transportation in the City of Dauphin.**
6. **Establish Dauphin as “Manitoba’s Cycling City”.**

3.3 TARGETS

Targets are a critical component of an Active Transportation Strategy as they provide an effective way to measure progress towards achieving the goals of the Strategy. Targets will help to ensure that the Active Transportation Strategy is implemented as intended and will help to determine whether the strategy is achieving its goals.

To be effective, targets should be:

- ▶ **Meaningful** | Targets can be used to point to success in achieving the goals as well as the broader vision of the Active Transportation Master Strategy.
- ▶ **Measurable** | Targets must be based on criteria that are readily measurable and for which data or information can be readily obtained.
- ▶ **Manageable** | Targets should be based on measures that account for the resource limitations of the City, and be limited to measures where information is accessible, or data is simple to collect. To be manageable, targets should also be limited to areas or policies over which the City has significant influence or control.
- ▶ **Achievable** | Targets should strike a balance between being bold and ambitious, while also ensuring they are achievable and realistic.

One of the most common targets for Active Transportation Strategy is mode share, or the percentage of trips made by each mode of transportation. It implies much more than simply how people are choosing to travel. Among other things, changes in mode share provide an indicator of how attractive the city will be for walking and cycling, how integrated Dauphin's transportation system is with land-use; and how well the transportation system is helping to achieve the City's goals to support a healthy environment and high quality of life for its residents. Mode share is also an indication of how investments in sustainable transportation are changing the amount of people driving to other transportation options and supporting the development a healthier and more vibrant community.

An important consideration when establishing mode share targets is to consider whether the targets should be based on only commute trips to work and school, or whether these should be based on all trips for all purposes. This distinction is typically made based on the source of the data, as the mode share for commute trips is typically based on Statistics Canada data, whereas the mode share for all trips can be based on other surveys such as trip diary surveys. Looking at mode share targets in other Manitoba communities, most have established their targets on commuter trips due to data availability. It is generally preferred to establish mode share targets for all trips, as this is a more complete representation of all travel activity being made within the community, as opposed to focusing on only one trip purpose.

Today, 15.2% of commute trips in Dauphin are made by active modes of transportation (i.e., walking and cycling) as identified from the Census.

The City of Dauphin's *Community Energy and Emissions Plan* indicates that 33.7% of community GHG emissions were from the Transportation sector. The strategy also identifies that walking and cycling targets will be defined through the creation of an Active Transportation Strategy. Considering the existing targets, and those of other Manitoba communities, the project team proposed a recommended mode share target. The proposed target included walking and cycling accounting for 20% of all commute trips by 2041, essentially doubling the existing mode share.

As such, the proposed revised target for the Active Transportation Master Strategy is to **double the proportion of trips made by walking and cycling by 2031, with a longer-term target of 35% of all trips in Dauphin made using sustainable transportation by 2041.**