Medicine Hat

TRANSPORTATION MASTER PLAN 2050

April 2025

Report prepared by Associated Engineering.

Public engagement activities facilitated collaboratively by Associated Engineering, Martinson Golly, and the City of Medicine Hat.

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1 Introduction

The Medicine Hat Transportation Master Plan 2050 (TMP) is an update to the 2013 City of Medicine Hat Roadway System Master Plan (RSMP) and supporting documents related to cycling, parking, and specific functional planning studies. Changing trends in mobility and industry standards, combined with technology advancement, and population growth in Medicine Hat (the City) have shifted the lens of the TMP from the previous RSMP. The TMP aims to meet the needs of Medicine Hat residents, workers, and visitors who rely on all different modes of transport to work, play, and live.

The TMP is a document that analyzes the current transportation system in the City and acts as an overarching policy document that provides guidance and a framework for managing and improving the transportation system. Two strategies derived from the TMP; the Active Transportation Strategy (ATS) and the Transportation Safety Strategy (TSS) were created in conjunction with the TMP development. The Road Network Strategy is contained within the TMP. **Figure 1-1** shows the relationship of the TMP as an overarching policy document.

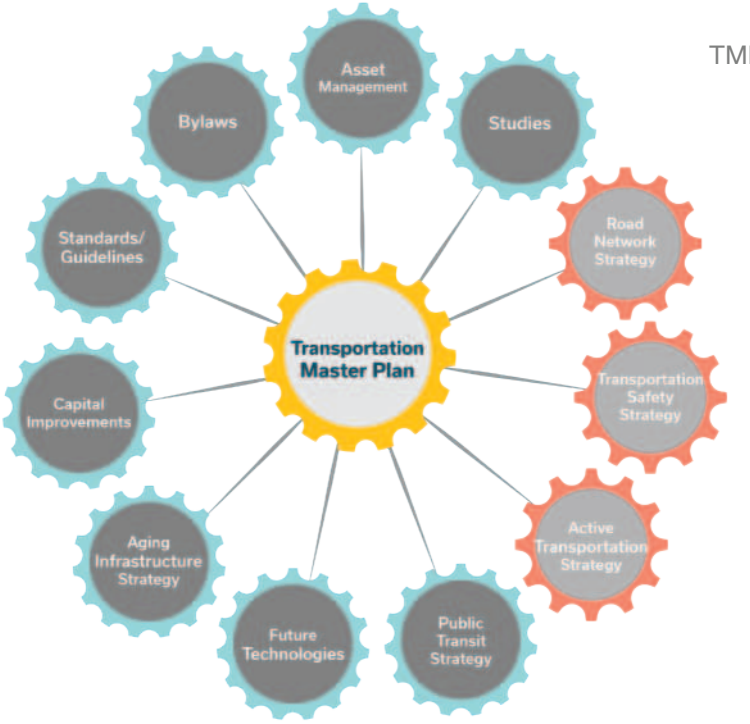

Figure 1-1
TMP as an Overarching Policy Document

WHY a TRANSPORTATION MASTER PLAN?

- **A planning tool for mobility facilities across the City, addressing transportation issues to meet the needs of residents, workers, visitors, and businesses.**
- **Sets a vision for the City's future transportation system, guiding decisions around policies, programs, and funding.**
- **Provides high-level capital and operational costs through action items addressing short-, medium-, and long-term challenges.**
- **Integrates with the myMH Master Plan (MDP) and other key policy documents, such as the Medicine Hat City Council Strategic Plan 2023 – 2026.**
- **MDP priorities were essential pillars in the development of the TMP, serving as lenses to address various issues holistically and its relevant action items are carried forward into the TMP.**

1.1 Plan Development

The TMP was developed through five stages from June 2023 to early 2025 as shown in **Figure 1-2**. Supporting documents prepared throughout the process include:

- **Creating a Vision**: This document provided an initial draft of the TMP's vision, its guiding principles, and relevant background demographic, commuting, and socio-economic information of community members. The vision and principles were updated to incorporate feedback from the public survey.
- **Existing and Future Road Network Conditions**: The document provides an overview of Medicine Hat's current road network including road classifications, traffic patterns, and congestion areas. The document highlights commuting patterns by active modes and summarizes existing transit performance in the City. It also outlines the future road network, describing planned improvements and growth forecasts to guide long-term network planning.
- **Travel Demand Model Update**: The City's travel demand model was updated using a forecast horizon of 80,000 population.

Figure 1-2 Plan Process

The City of Medicine Hat recognizes the value of public participation, and engaged with stakeholders and members of the public throughout the development of the TMP. Public input and engagement provided invaluable local knowledge that was used to tailor the TMP to the unique needs and desires of the local community. Opportunities to provide input to the TMP included special committees, workshops, a public survey, and public open houses.

1.2 How to Read the Plan

The TMP provides an overview of the current conditions, issues, and opportunities for the City's transportation network. The document is structured in seven main sections that provide insight into the foundational elements of the plan, public and stakeholder engagement, and a more detailed description and direction for each transportation mode. The plan is broken down into the following sections:

Section 1: **Introduction** provides an overview of the plan that includes the background, purpose, and structure of the TMP.

Section 2: **Plan Foundations** provides the contextual building blocks upon which the TMP was developed, and includes:

- An analysis of demographic, socio-economic, and commuting patterns of Medicine Hat residents.
- The strategic direction from other City documents is discussed detailing future growth projections and their implications for the transportation system.

Section 3: **Vision and Guiding Principles** outlines Medicine Hat's future mobility system and the guiding principles that will shape City policy, providing direction on how to expand the City's mobility network.

Section 4: **Engagement Overview** provides a summary of public and stakeholder engagement activities, highlighting major topics discussed, issues, opportunities, barriers, and any additional feedback.

Section 5: **Emerging Trends & Technologies** details an overview of trends currently taking place within Medicine Hat, as well as new mobility technologies and trends occurring in Canada and globally, that the City must be aware of and be prepared for.

Section 6: **Existing and Future Conditions** details specific areas and components of the transportation network (Road Network, Transit Network, Goods Movement) and indicates where travel demand is expected to increase when the City grows to a population of 80,000.

Section 7: Directions provides a list of recommended policies and actions for the mobility topics: The Road Network, Transit, Safety, Land Use, and Transportation Culture, Active Transportation, Safety, Land Use, and Transit. These policies and actions support the Vision and Guiding Principles based on *What We Heard* during engagement, a review of emerging trends and technologies, and an analysis of the Medicine Hat transportation system.

Section 8: **Road Network Strategy** provides a description of future road network improvement projects that will support growth in the City.

Section 9: Implementation Plan provides high level cost estimates and prioritization of actions and road network improvement projects.


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753

2 Plan Foundations

2.1 Community Overview

Medicine Hat is a community alive with vibrancy and spirit, and serves as a key regional hub within Cypress County and the South Saskatchewan River Valley in southeastern Alberta. The City's regional connectivity is facilitated by Highway 1 (Trans-Canada Highway), Highway 3, and a Canadian Pacific (CP) Railway line, each of which is a critical corridor for moving people and goods across the region and Canada. **Figure 2-1** shows the geographic context of Medicine Hat.

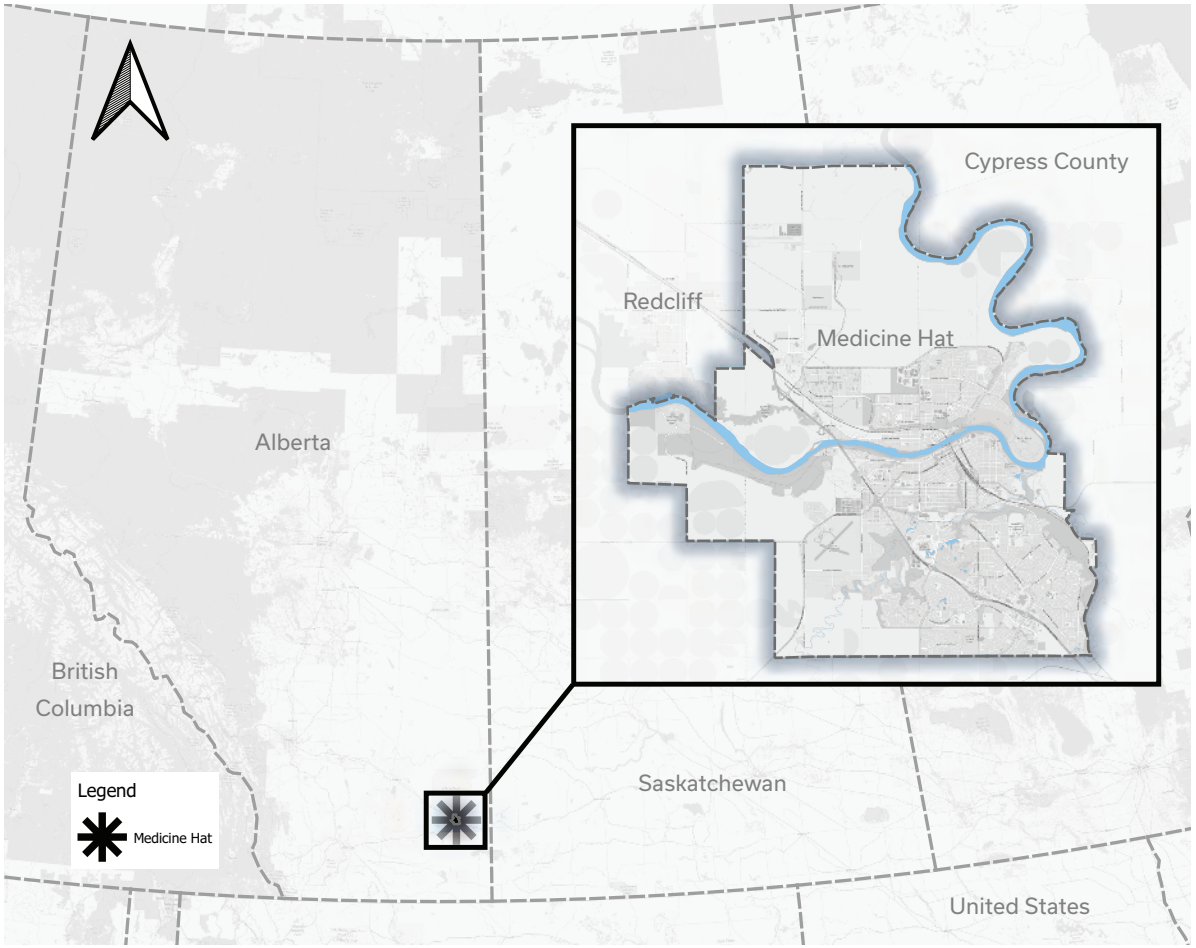


Figure 2-1
Geographic Context of Medicine Hat

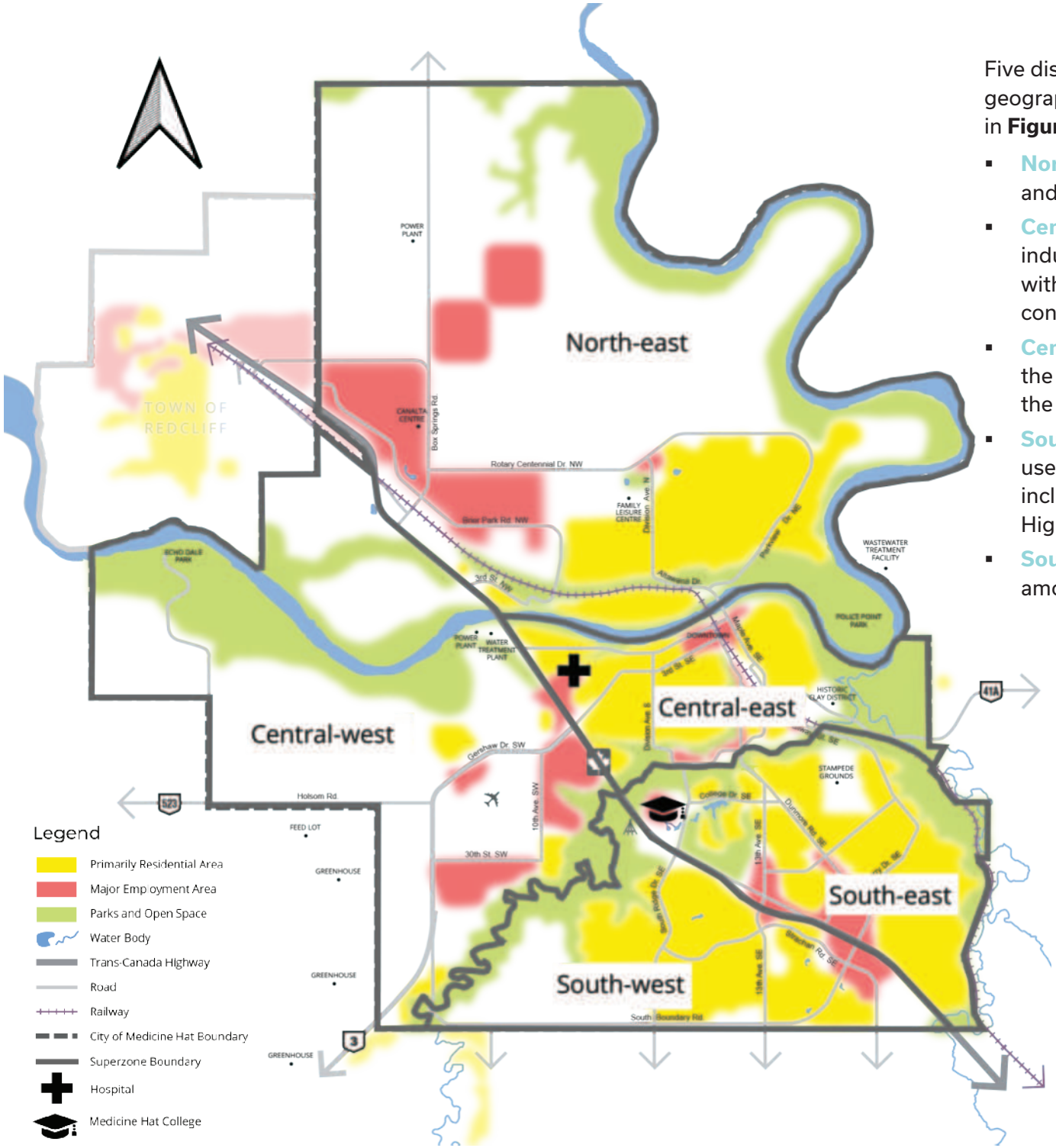


Figure 2-2
Analysis Zones and
Current Land Use

Five distinct zones were used for analysis based on geography and land use characteristics, as shown in **Figure 2-2**:

- **North-east**: Includes industrial, commercial and residential land uses.
- **Central-west**: Includes the airport and other industrial land uses, highway commercial areas with hotels, and a small residential area mainly consisting of mobile homes.
- **Central-east**: Includes key destinations within the City such as downtown, the hospital, and the CP Railway marshalling yard.
- **South-west**: Includes mainly residential land uses and some commercial developments including big box retail and hotels adjacent to Highway 1.
- **South-east**: Includes the college, a larger amount of retail, and residential land uses.

Greenspace separates the Central-east and Central-west zones from the South sectors. The South Saskatchewan River bisects the City acting as a natural boundary between the North and the Central and South parts of the City. Highway 1 separates the West and East analysis zones of the City.

2.2 Community Profile

Demographic and Transportation data available from Statistics Canada provides an understanding of the demographic makeup and commuting behaviours of Medicine Hat residents. This data forms a foundation for planning and implementing strategies to improve the City's transportation network, meeting the needs of current and future residents.

Age Characteristics

Figure 2-3 shows the historic growth in population by age cohort. Medicine Hat's population has been growing year over year from 2001 to 2016. There has been relatively no growth in the City's total population from 2016 (63,260) to 2021 (63,271). The number of people aged 44 and under has been relatively consistent over the last twenty years. All of Medicine Hat's growth has occurred for people aged 45 and over, and this trend is expected to continue until 2050 as indicated in the MDP.

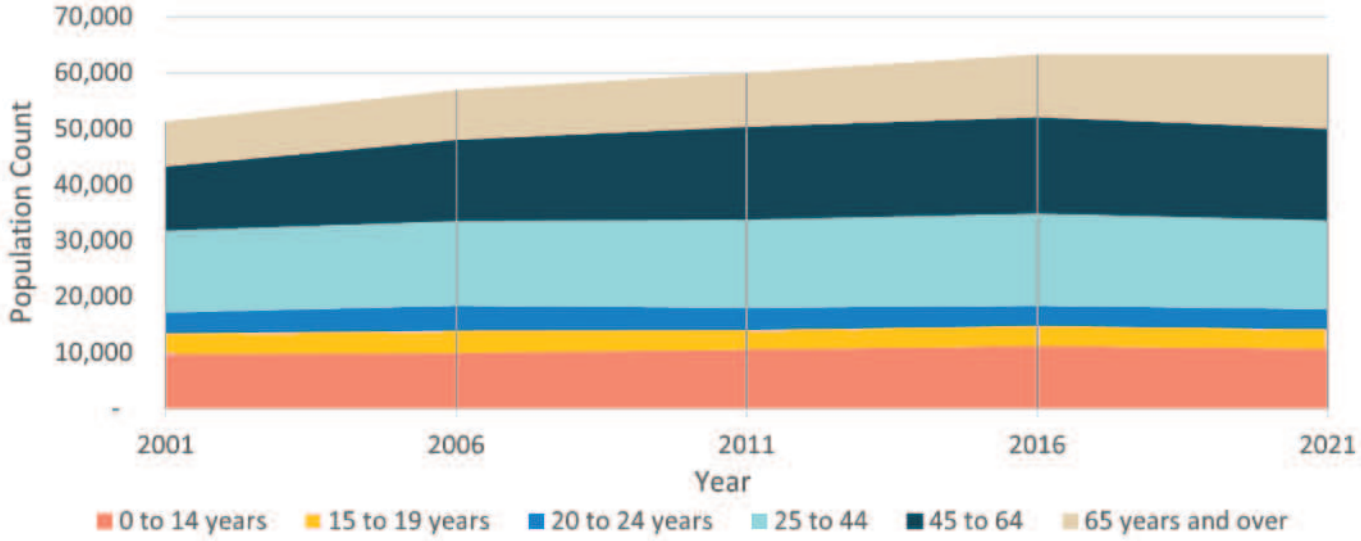


Figure 2-3
Age Cohorts

Families with young children are mostly located in the periphery of the City in the South-west, South-east and North-east zones as indicated in **Figure 2-4**. People aged 65 and over are more likely to be located in the South-east and North-east areas of the City.

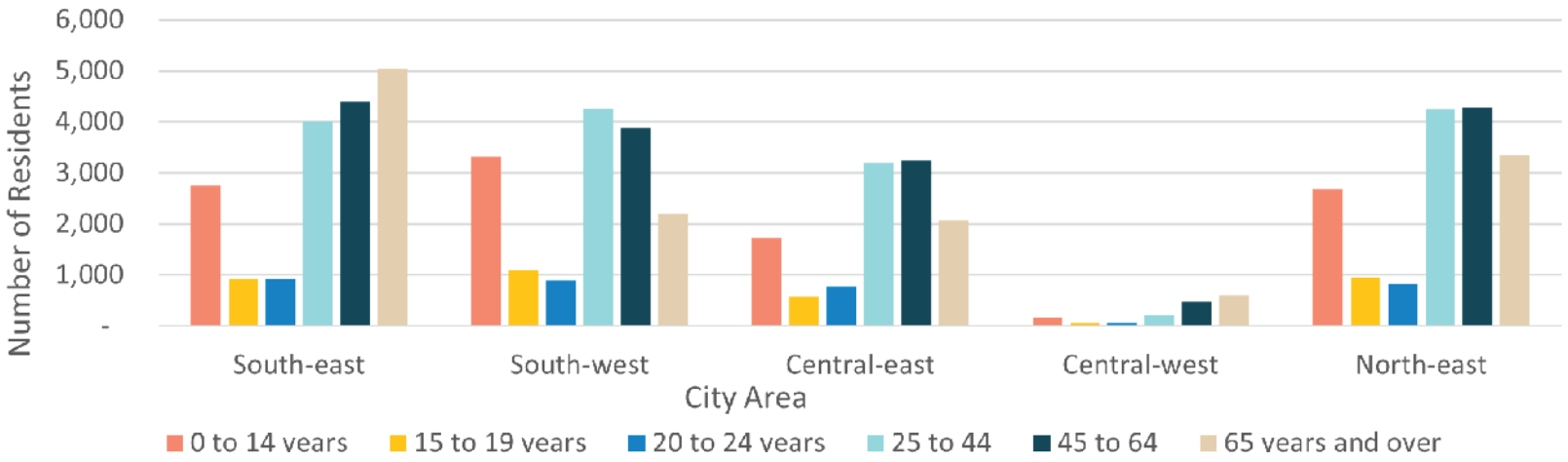


Figure 2-4
Age Characteristics

Housing Type

The majority of housing in the City is single-detached housing, which is the least dense, and most difficult to serve by public transportation. The next most common housing form is apartments less than five storeys which are more concentrated in the South-east, Central-east and North-east zones. The majority of housing in Central-west, which is a low population area, is moveable dwellings. **Table 2-1** shows the number of different housing types and **Figure 2-5** shows the housing distribution throughout the City.

Table 2-1 Total Housing Units

Housing Type	Number
Single-detached house	17,250
Semi-detached house	1,550
Other ground house	2,170
Apartment < five storeys	5,060
Apartment > five storeys	235
Movable dwelling	870
Total	**27,135**

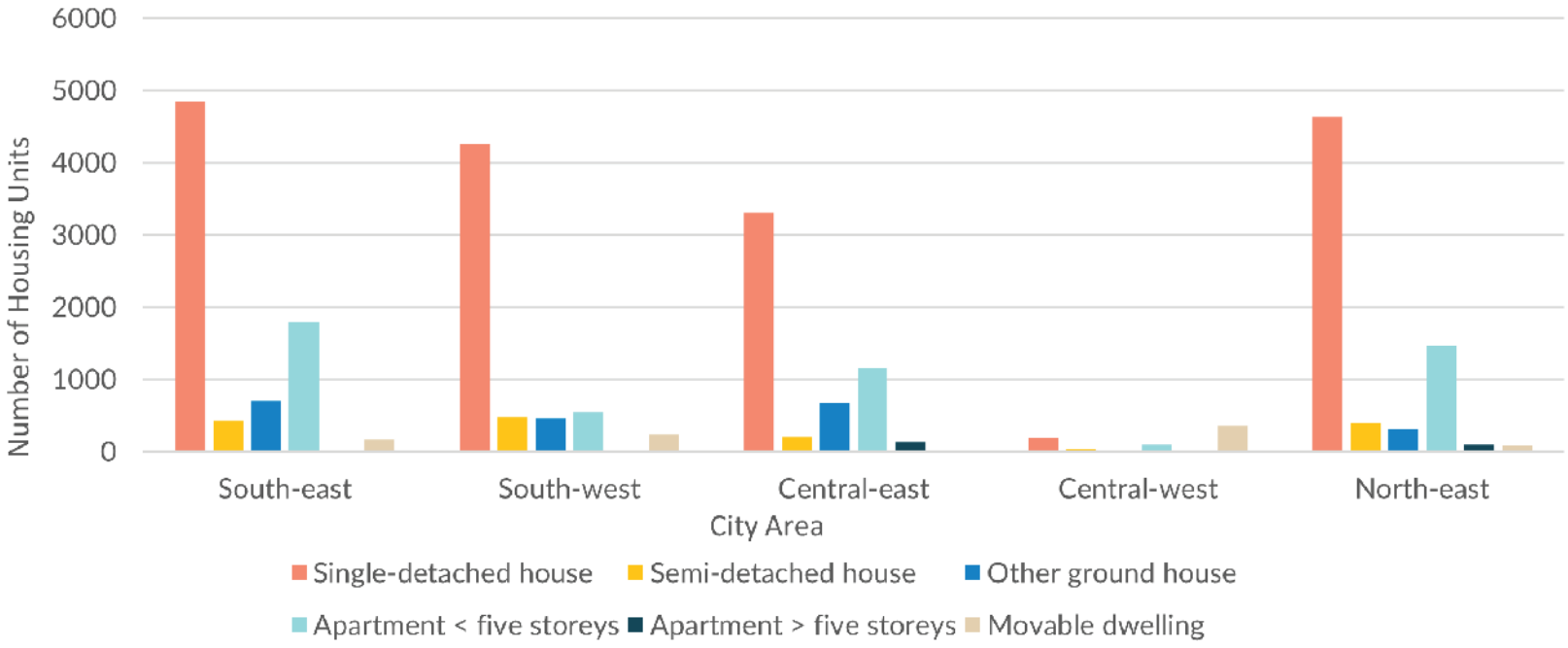


Figure 2-5
Housing Characteristics

Population Density

Population density by dissemination area is shown in **Figure 2-6.** Areas with higher population densities include the North-east zone, just east of the City Centre, and the South-east and South-west zones of the City.

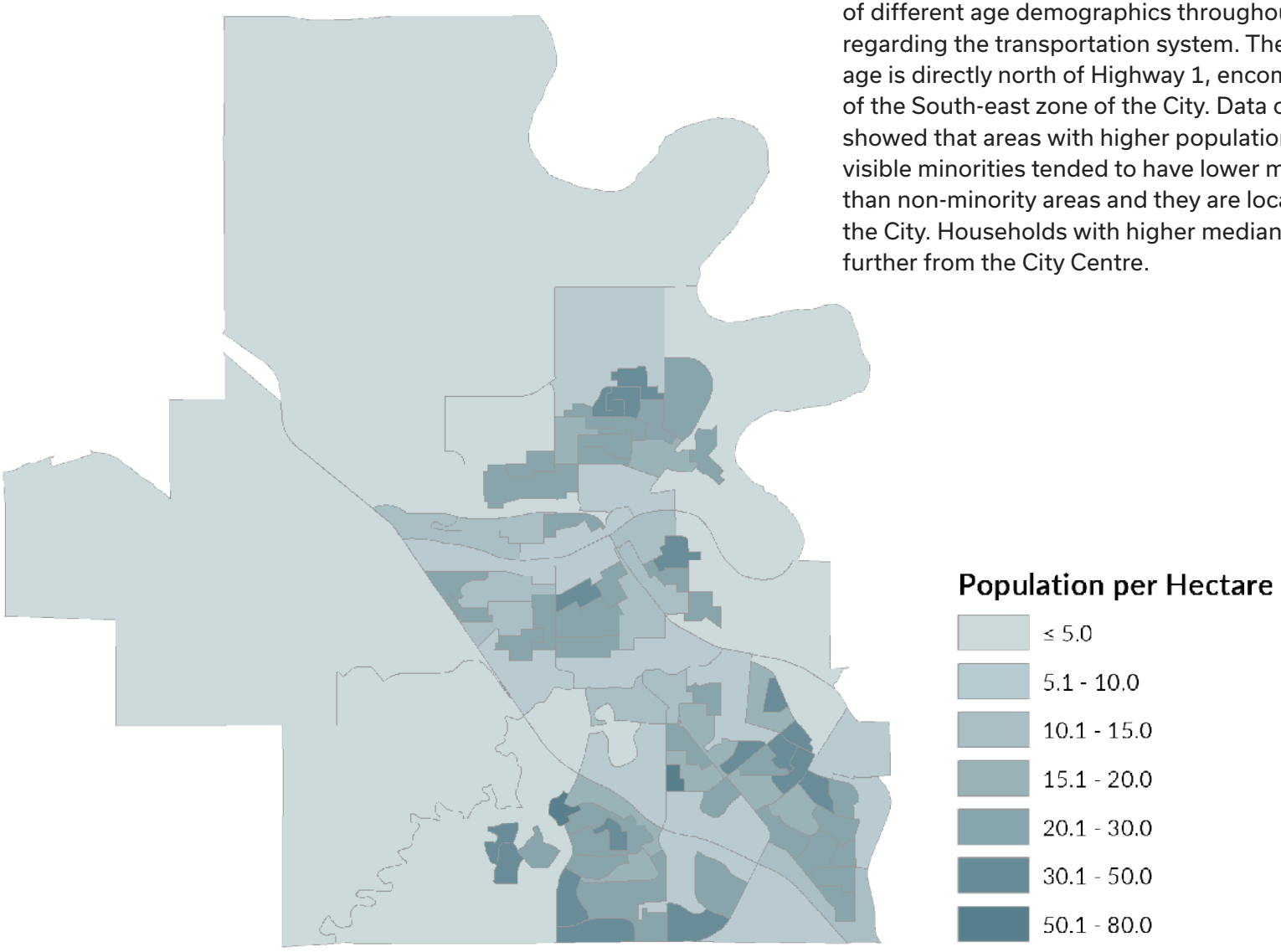
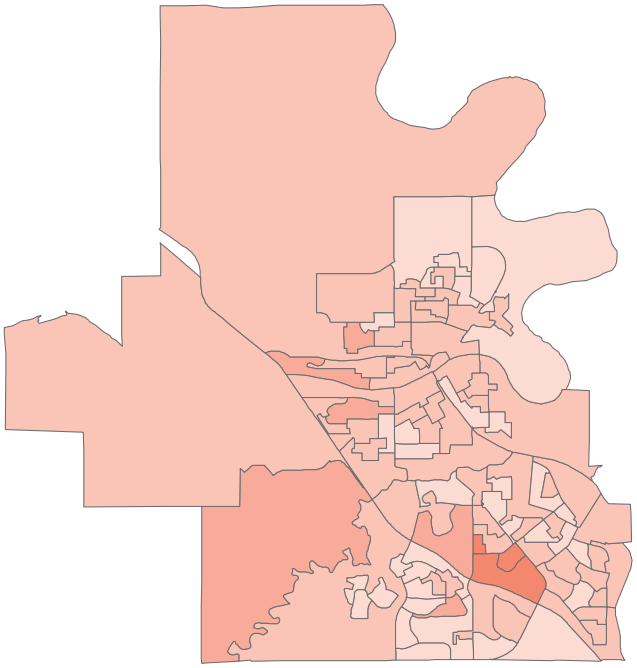


Figure 2-6 Population Density

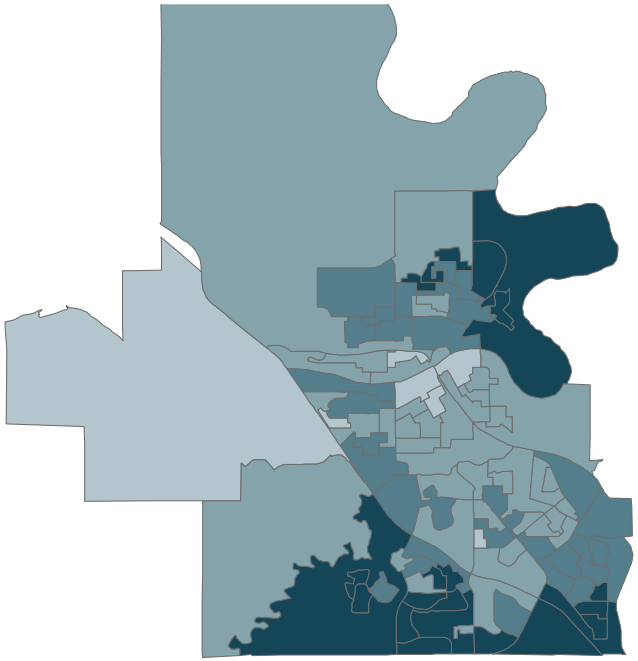
Socio-economic Considerations

The socio-economic analysis considered four factors: average age, median income, visible minority percentage of the population, and indigenous percentage of the population, as shown in **Figure 2-7**. The average age data informs an understanding of the spatial distribution of different age demographics throughout the City and their needs regarding the transportation system. The area with the oldest average age is directly north of Highway 1, encompassing the western section of the South-east zone of the City. Data on the remaining three factors showed that areas with higher populations of Indigenous Peoples and visible minorities tended to have lower median household incomes than non-minority areas and they are located in more central areas of the City. Households with higher median incomes are generally located further from the City Centre.



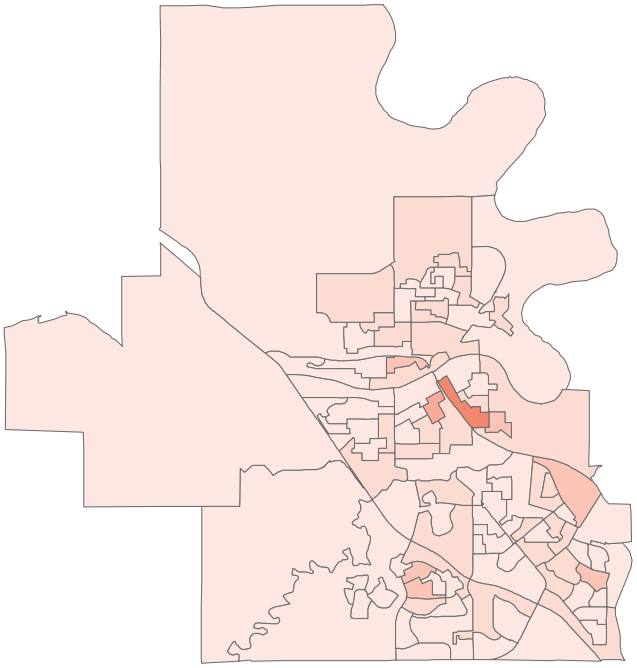
Average Age

- 32 - 40
- 41 - 50
- 51 - 65
- 65+



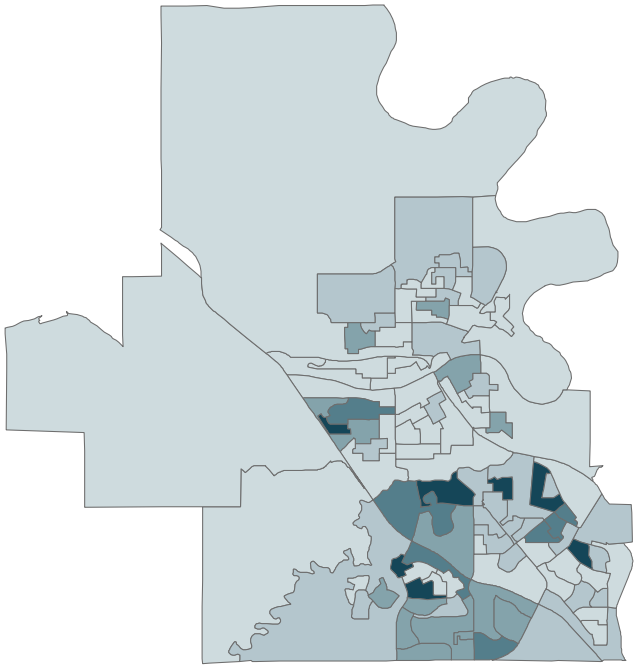
Median Income

- $25k to $50k
- $50k to $75k
- $75k to $100k
- $100k - $150k



Indigenous %

- 0 - 5
- 6 - 10
- 11 - 15
- 16 - 20
- 21 - 26



Visible Minority %

- 0 - 5
- 6 - 10
- 11 - 15
- 16 - 20
- 21 - 30

Figure 2-7 Average Age, Visible Minority %, Indigenous %, and Median Household Incomes

2.3 Commuting Patterns

Statistics Canada publishes data about commuting patterns that can provide insight into travel modes even though the patterns for non-commuting modes may be different. Auto vehicles are the dominant mode of commuting in Medicine Hat, with 93% of commuters using them as their main mode. Active transportation (walking, cycling) decreased slightly from 4.3% in 2016 to 3.9% which may be attributed to the COVID-19 pandemic. Transit usage also dropped from 2.2% to 1.5% during that same period, comparable to similarly sized Canadian cities. **Table 2-2** shows the 2016 and 2021 main mode of commuting counts for Medicine Hat residents. A more detailed analysis of commuting patterns is found in the *Existing and Future Road Network Conditions Report*.

Table 2-2 Historic Main Mode of Commuting

Mode		2016	2016	2021	2021
	Auto - as a driver	24,395	86.8%	21,800	86.9%
	Auto - as a passenger	1,440	5.1%	1,515	6.0%
	Public Transit	615	2.2%	375	1.5%
	Walked	990	3.5%	915	3.6%
	Bicycle	205	0.7%	80	0.3%
	Other Method	470	1.7%	390	1.6%
	Total	**28,115**	**100.0%**	**25,075**	**100.0%**

Commute Duration and Distance

The distribution of travel times for commuting trips by active modes and auto vehicles is roughly the same. Trips by transit take significantly longer than commuting trips by active modes or auto vehicles. **Figure 2-8** shows the commute duration of each mode of transport.

Figure 2-8 Commute Duration by Mode

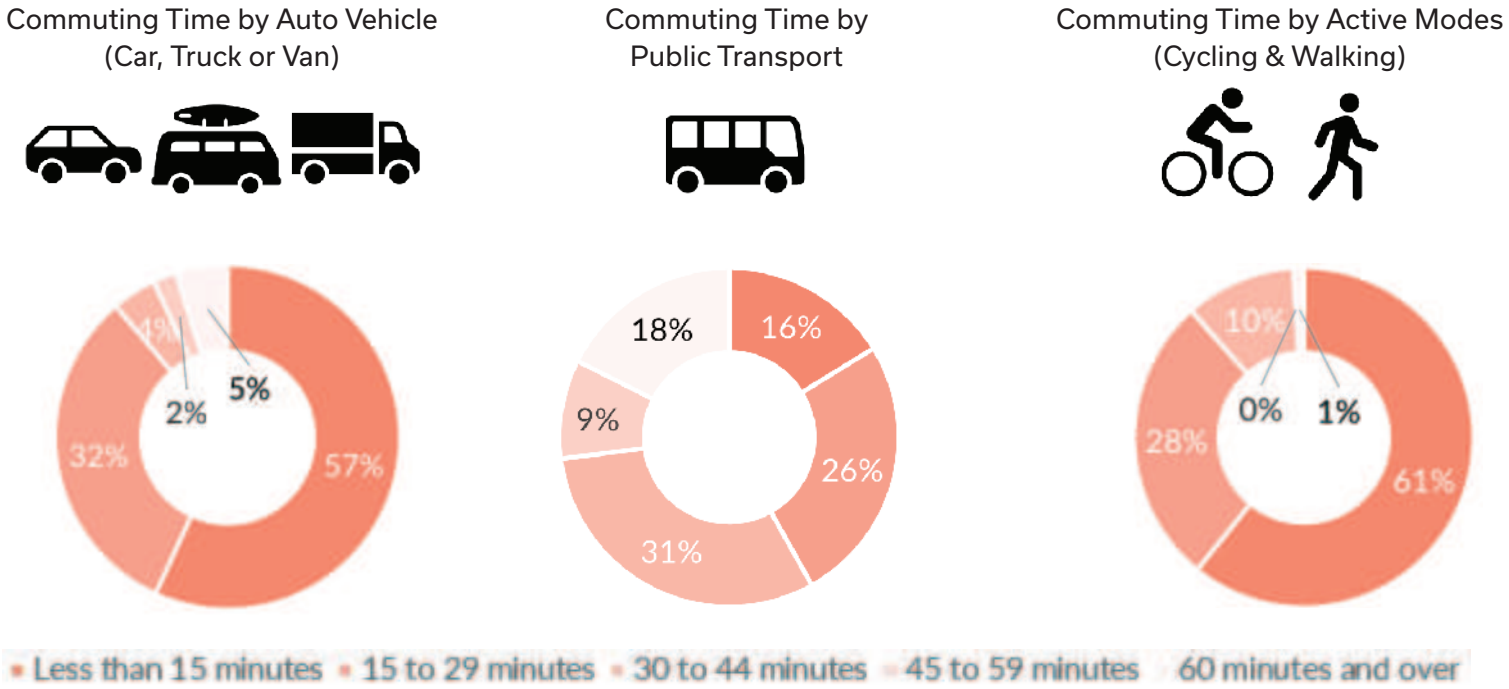


Figure 2-9 shows the commuting distance by mode which indicates that trips by auto vehicle (car, truck or van) are longer distances than transit trips. Most walking and bike trips are less than 3 km long. A significant number of auto vehicle commuting trips are less than 3 km which shows a high potential for active modes replacing these short motor vehicle trips.

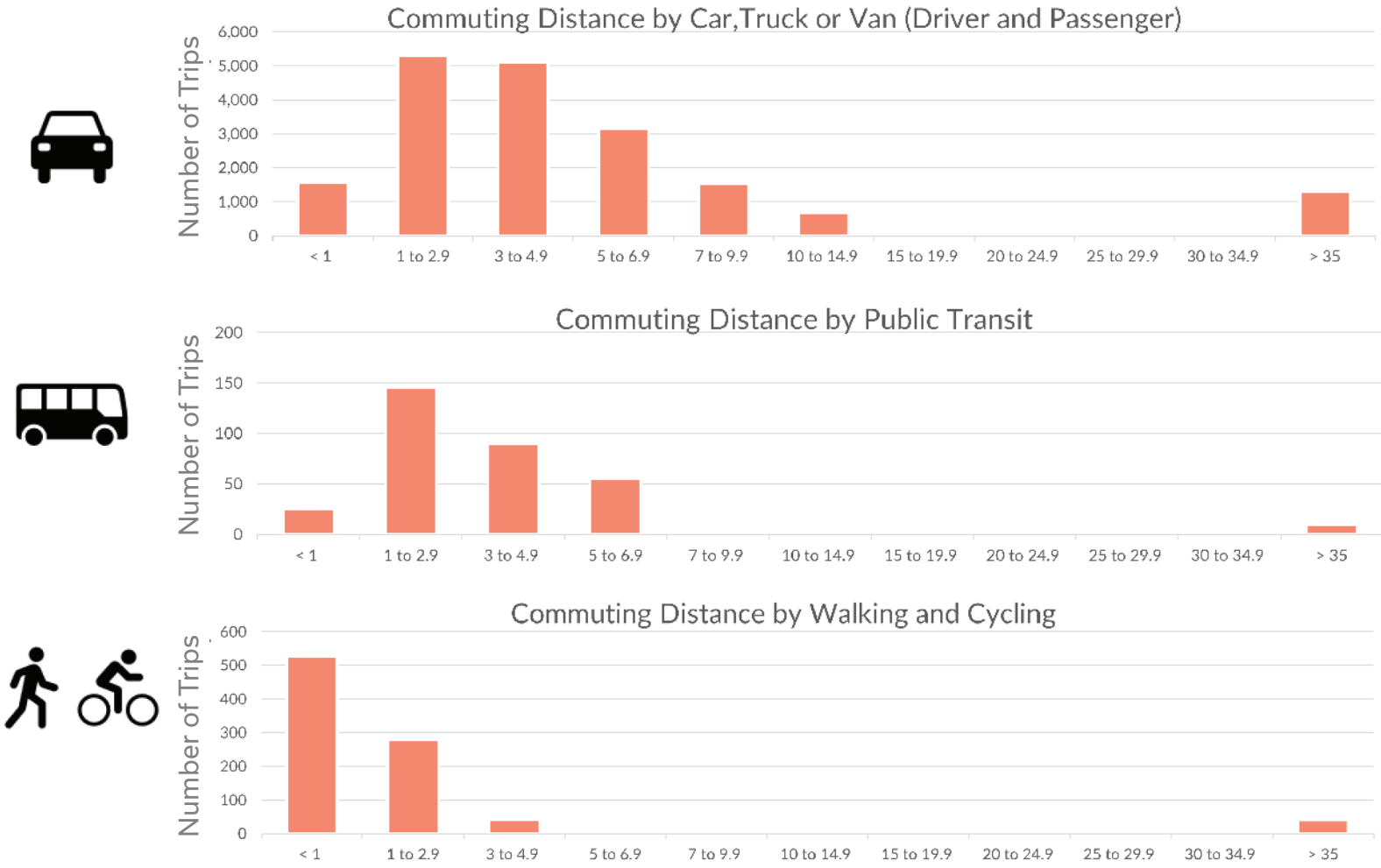


Figure 2-9
Commute Distance
by Mode

Sustainable Commuting Mode

The South-east zone has the highest transit utilization per resident when commuting. Medicine Hat College and the Medicine Hat Mall are both located within this zone, and there are multiple transit routes servicing these destinations. Residents of the City Centre area are also frequent transit users compared to other residents of the City. This is where the transit hub is located, making it an ideal origin for public transit trips. Residents in the periphery of the City commute using transit less frequently. Workers who commute with transit are most likely to be travelling to the South-east area encompassing the Medicine Hat College and the Mall of Medicine Hat.

Walking is approximately three times more common for commuting than public transit and fifteen times more popular than cycling. The Central-east and part of the South-east are the most popular areas for residents to commute with active modes (biking and walking) and are also the most popular destinations for these residents. Active modes of commuting generally become less popular for residents in the peripheral areas of the City. It should be noted this data is for commuting only. Since active transportation tends to be more common for non-commuting trips, this information only provides an understanding of some of the travel patterns in Medicine Hat.

2.4 Plan Directions

The City's three most relevant strategic documents that provide direction for the Transportation Master Plan are the Municipal Development Plan, the Medicine Hat Council Strategic Plan 2023-2026, and the Parks and Recreation Master Plan.

Municipal Development Plan

The Municipal Development Plan (MDP) is a 30-year Citywide plan that puts into place strong and visionary policies to create a more prosperous, livable, and sustainable city. The plan takes a focused, practical approach to resiliency and growth management. It is a high-level plan that provides a conceptual framework that serves as the foundation for more detailed City plans.

Figure 2-10 shows the age cohorts of Medicine Hat in 2016 and the projected age cohort in 2050 with an expected population of 80,000 people. This population growth will need to increasingly rely on a positive migration flow to Medicine Hat. The plan estimates that by 2050, 33% of residents are expected to be 65 years or older from 18% in 2016. From 2016 to 2050, the percentage of residents from 0-19 and 20-64 is expected to decrease from 23% to 17% and 59% to 49% respectively.

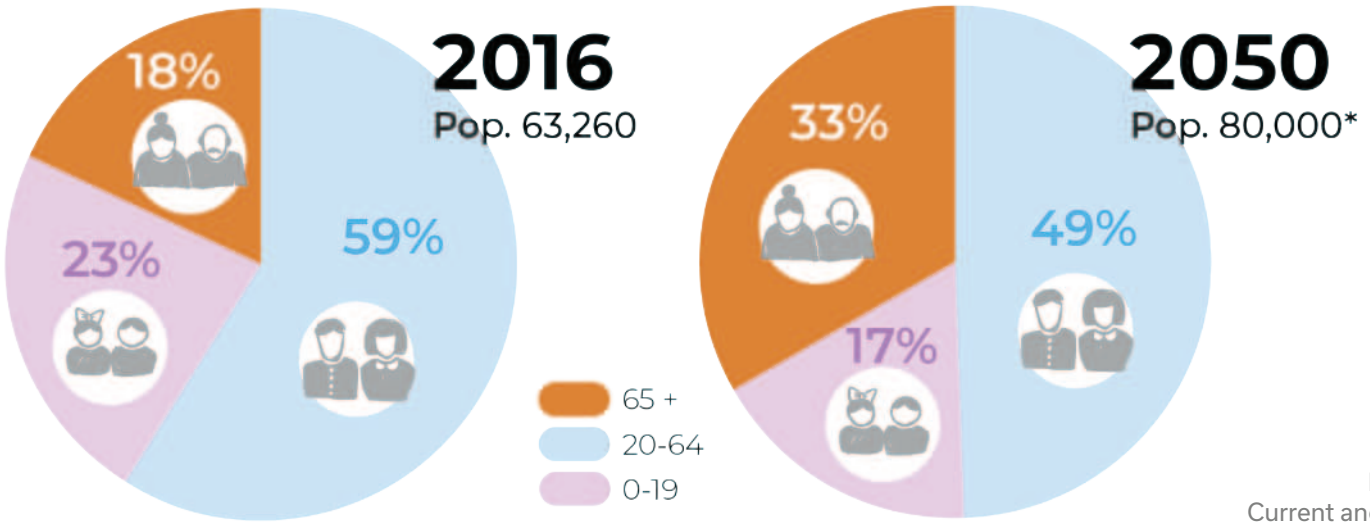


Figure 2-10
Current and Projected
Medicine Hat Age Cohorts

The City's Vision recognizes its roots and embraces a community deeply integrated with technology, diversity, the arts, culture, heritage, and its abundance of natural spaces, while committing to long-term sustainability, focusing on attracting and retaining emerging and innovative industries, more visitors, and encouraging more newcomers. This vision is realized through creative, innovative, and bold decision-making in city planning, structure, and services, and is characterized by making bold choices in striving for ongoing prosperity, appealing neighbourhoods, environmental responsibility, and thriving residents. The MDP has **five strategic goals** that are designed to efficiently bring about a long-term vision for a livable city. The five strategic goals are a **vibrant downtown, livable neighbourhoods, strong economy, efficient public services, and environmental stewardship**.

Medicine Hat Council Strategic Plan 2023-2026

The Medicine Hat Council Strategic Plan is a document that outlines the vision and priorities endorsed by City Council that will help Medicine Hat grow. The vision is centered around the creation of a vibrant, prosperous, and sustainable community. This plan reflects Council's strong desire for innovation, emphasizing the importance of breaking down cultural or structural barriers in the pursuit of this vibrant, prosperous, and sustainable community. The plan is broken down into the following six main priorities:

- **Innovation**: "*The City's organizational culture will encourage and celebrate innovation, creativity, and multidisciplinary collaboration. We will empower individuals in our organization and community to present solutions to problems".*
- **Economic Evolution**: "*We will have a strong, diversified regional economy and an economic ecosystem that encourages entrepreneurship*".
- **Service Orientation**: "*We will be intentional and proactive. We will understand and be responsive to our community and changing circumstances and people will find it easy to deal with the City*".
- **Partnerships and Governance**: "*We will succeed through collaboration with our community and government partners and be a trusted partner in our community and region*".
- **Community Wellness**: "*People will love living and being in our city. Our community will be vibrant and lifelong residents and newcomers alike, from all walks of life, will feel a sense of security and belonging in Medicine Hat*".
- **Resilience and Sustainability**: "*We understand the importance and interdependency of the success of our people, partnerships, environment, economy, and organization to accomplishing our goal of being a vibrant, sustainable, enduring community*".

Each of the main priorities is broken down into several action items to advance their development. Relevant action items include ensuring that it is simple for individuals to travel from one place to another, not just by auto vehicles but also through various other modes of transportation, and building infrastructure based on the best available data concerning healthy built environments and the social and environmental determinants of health. The plan also highlights system thinking and behavioural economics as integral components of practices, planning, and operations. This holistic approach acknowledges the complexity of urban environments and the importance of understanding and influencing behaviour.

Parks and Recreation Master Plan March 2022

The Parks and Recreation Master Plan is meant to provide clarity regarding the provision of future recreation in Medicine Hat, outlining strategies on how to best meet community needs with available resources and informs decision-makers on broad-based community priorities for recreation services. The vision for the Parks and Recreation Master Plan is:

Holding a high-risk tolerance for innovative and sustainable ways of developing, delivering and maintaining recreational facilities and amenities, Medicine Hat strives to continue offering its residents and guests an exceptional network of indoor and outdoor recreational experiences for all ages and abilities for all hours of the day and all days of the year. We strive to celebrate our local history, heritage, diversity and local values through the way we play, celebrate and find relaxation in our public places.

3 VISION & GUIDING PRINCIPLES

A proposed Vision Statement for the Transportation Master Plan that reflects input from stakeholders, considers and emulates similar policies in Medicine Hat, and reflects Best Practices, is as follows:

The vision of the Transportation Master Plan 2050 is to develop a transportation system that is more economically and environmentally sustainable, supports a spectrum of land uses and intensities, and provides more efficient, healthier, and safer ways for Hatters to get around using different modes of transportation. This system, and its associated networks, policies, and programs will be planned, designed, and operated to be more adaptative to change as climate, transportation technology and demographics evolve.

The strategy will be realized by implementing policies and programs (e.g., maintenance and operations), in addition to infrastructure projects. Guiding Principles will be used to help guide decisions around programs and funding that Medicine Hat staff and stakeholders are faced with. **Table 3-1** shows the Guiding Principles.

Table 3-1 Guiding Principles

	Active Transportation: An active transportation system that is safe, connected, accessible, and convenient for people of all ages and abilities and invites them to complete all types of trips, any day of the year.
	Safety: Safe mobility for everyone moving towards zero road transportation deaths and serious injuries.
	Economic Sustainability: Infrastructure investments and facilities that are strategically chosen to provide efficient services to the most people while supporting the financial health of the City, not impeding it.
	Transportation Culture: A culture of safety, healthy living, and sustainability by implementing innovative programs and policies that encourage a shift to sustainable transportation modes and promote safe travel behaviours.
	Land Use: A transportation system that supports a spectrum of adjacent land uses and intensities to enhance community livability and optimize infrastructure investments.
	Public Transit: A transit strategy designed to serve everyone, especially those without other transportation options, by ensuring a safe, reliable, and efficient journey from where they are to where they need to go.
	Environmental Sustainability: A transportation system that encourages environmental and community well-being by promoting transportation modes that have less impact on air, land, and water quality, reduce noise pollution and protect natural resources.
	Technology: A forward-thinking approach in technology by using a framework of realistic and quantitative planning objectives for emerging mobility technologies and business models.
	Climate Resilience: A transportation system with resilient infrastructure that is planned and maintained to mitigate and withstand extreme weather events.

4 ENGAGEMENT OVERVIEW

Public engagement efforts for the TMP were delivered in conjunction with public engagement for the Active Transportation Strategy (ATS) and Transportation Safety Strategy (TSS). This was done for efficiency and to reduce the possibility of public and stakeholder engagement fatigue. Where possible to do so, in-person engagement opportunities were also combined with those of other City projects through city-wide open houses that provided centralized opportunities for members of the public and stakeholders to participate in public engagement.

4.1 Why We Engaged

The City of Medicine Hat recognizes the value and importance of providing opportunities for stakeholders and members of the public to engage with City projects and provide feedback. As per the Public Participation Policy, the City has committed, when appropriate, to provide public participation opportunities.

4.2 How & When We Engaged

In addition to the city-wide open houses, several targeted, project-specific opportunities and resources were made available to members of the public and stakeholders. These included:

- **Shape Your City** – Updated Regularly Over the Course of the Project

  A dedicated project webpage was set up through the City's public engagement platform, Shape Your City. This webpage included information on the purpose of each plan and strategy, why work on these documents was required, project timelines, upcoming engagement opportunities, and other important background information. This resource was managed by the City and updated regularly over the course of project delivery.

- **In-person Days of Learning** – October 2023

  Engaged with stakeholders and internal City staff in October 2023, this consisted of two internal workshops, an in-person tour of the transportation system with City staff, and an external stakeholder workshop. The first internal workshop and the stakeholder workshop included the same questions and activities.

- **An Online Public Survey** – February / March 2024

  Three online surveys were made available to stakeholders and members of the public. Surveys were available for several weeks across February and March 2024, and were hosted on each project's respective Shape Your City webpage. Surveys were promoted at the city-wide Open House in February 2024, through social media advertisements, and by directly informing stakeholders who participated in the Days of Learning activities.

- **Online Workshop with Internal Staff** – August 2024

  Engaged with internal City staff in August 2024 to review draft policies and action plans with an aim to align with the TMP Vision and Guiding Principle, City Council's Strategic Plan and the Municipal Development Plan.

- **Public Open House** – Timing TBD

4.3 Who We Engaged

- **Shape Your City**

  As a publicly available resource, Shape Your City was available to anyone interested in learning more about the project. As of July 2024, the project webpage had been visited approximately 1800 times.

- **City-Wide Open Houses**

  As public events, the city-wide open houses held in November 2023 and February 2024 were open to anyone interested in participating and were facilitated by City staff.

Table 4-1 Days of Learning Invitees

October 11, 2023		October 12, 2023
First Internal Workshop & Transportation Tour	**External Stakeholder Workshop**	**Second Internal Workshop**
6 representatives from the following departments attended:	14 stakeholders from the following organizations	5 representatives from the following departments attended:
▪ Medicine Hat Police Service ▪ Communications ▪ Parks and Recreation ▪ Planning ▪ Transit	▪ AHS/SEATS ▪ Veiner Centre ▪ Ever Active Schools ▪ Medicine Hat Public School Division ▪ Medicine Hat Catholic Board of Education ▪ Saamis Immigration Services ▪ Bike Medicine Hat ▪ Tourism Medicine Hat ▪ Medicine Hat Chamber of Commerce ▪ Miywasin Friendship Centre ▪ REDI Enterprises ▪ Next Step Residential	▪ Medicine Hat Police Service ▪ Parks and Recreation ▪ Planning ▪ Transit ▪ Land Development

- **In-person Days of Learning**

  The Consulting Team worked directly with City staff to identify a list of invitees from both internal departments and external organizations. **Table 4-1** shows the invitees for the Days of Learning Workshop.

- **Online Public Survey**

A set of demographic questions were included at the beginning of each survey. These questions were the same across surveys, and participants had an option to skip them if they did not wish to provide demographic information. These questions were asked for each survey as factors such as gender, age, and household income all play an important role in influencing how people interact with the City's transportation network. The following shows the number of participants for each Public Survey.

Number of Respondents for online Public Surveys

382	Transportation Master Plan
225	Active Transportation Strategy
145	Transportation Safety Strategy

Across all three surveys, the following demographic trends emerged, with the majority of respondents indicating that they:

- Identified as male (51%), while the remainder identified as female, other, or preferred not to say.
- Fell within the 25 – 44-year age cohort.
- Had an approximate pre-tax household income of at least $100,000 / year.
- Lived in a household with at least two vehicles.
- Never utilized public transportation.

4.4 High Level Feedback

The following is a summary of the high-level feedback provided in the surveys. This information guided the refinement of the Guiding Principles and the development of the policies and action items in the TMP.

CULTURE OF DRIVING

- **Inability To Drive**

  People who are unable to drive due to age constraints, disabilities, or financial limitations are disproportionately impacted by the culture of driving in Medicine Hat.

- **Parking**

  It will be important to consider the potential unintended implications of putting parking restrictions in place and ensure that something that intended to fix one issue doesn't cause another issue somewhere else.

SAFETY

- **Weather**

  Weather conditions can discourage people from choosing active modes of transportation. Summers can be hot with little shade and winter temperatures / conditions can present safety challenges. Adverse conditions can deter people from choosing to walk or bike.

- **Vulnerable Demographics**

  Seniors and children are the most vulnerable to safety issues, however, addressing safety concerns at the design level can help to improve safety for everyone. Improving maintenance, lighting, and accessibility can improve safety.

- **Speeding**

  Traffic calming is needed in many areas of the City as people tend to travel above posted speed limits, especially if the roadway is wider.

- **Visibility**

  Visibility is a factor that has a significant impact on safety as accidents are more likely to happen if drivers cannot see pedestrians and vice versa.

- **Infrastructure Maintenance**

  General maintenance of infrastructure plays an important role in safety. Regular maintenance of infrastructure and vegetation adjacent to infrastructure is important.

- **Infrastructure Design**

  The general design of infrastructure impacts safety. Wider roads make it easier to speed, blind corners create risks, and some intersections may be confusing if you do not drive through them frequently.

TRAFFIC FLOW

- **Accessibility & Congestion**

  While the Trans-Canada Highway provides good access to different areas across the City, there are some issues with traffic flow due to the existing design of interchanges and access/egress locations that can cause backup at peak times. Road construction and the general design of infrastructure both contribute to backups and congestion.

- **Traffic Signals**

  While overall traffic volumes are low, roadway design and challenges with signal timing can lead to delays and congestion. Consider adjusting signal timings and upgrading infrastructure to route traffic more efficiently (roundabouts, bypass routes).

ACTIVE TRANSPORTATION

- **Walking**

  Weather conditions, time constraints, accessibility and safety concerns all impact whether people choose to walk and contribute to a culture that discourages walking.

  Pedestrian safety is a significant concern, especially around schools. Education is required to encourage drivers to interact more safely with pedestrians, increase pedestrian awareness, and encourage walking.

- **Cycling and Micro Mobility**

  Existing infrastructure can be limiting for those who would otherwise make the personal choice to rely on cycling instead of driving.

  Bike lanes should be constructed with a physical separation from the roadway. In many areas, cyclists compete with auto vehicles and current infrastructure in many areas doesn't encourage active transportation. People may opt to choose longer routes if it means feeling safer.

- **Accessibility**

  Individuals with disabilities, mobility challenges and/or devices, or who have young children in strollers all face similar issues in safely navigating that often aren't recognized by those who don't experience these issues. Municipalities are often aware of these issues; however, they are contending with limited budgets and maintenance concerns.

- **Existing Infrastructure**

  The existing transportation network has gaps in active transportation as insufficient infrastructure, or a lack of infrastructure can lead to people feeling unsafe. Consider making incremental changes to improve active transportation.

- **Asset Management Resources**

  The requirements of properly maintaining infrastructure can be a barrier to making changes, however, making changes incrementally can help to manage costs associated with asset management.

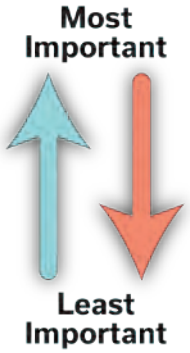
  Increasing service levels can be difficult if upgrades are complex or there are budget constraints.

- **Feasibility of Recreational Vs. Commuter Use**

  It will be important to promote and improve active transportation routes to bridge the gap between those who use these routes functionally, and those who only use them for recreational purposes.

4.5 What We Heard, Preferred Outcomes

Online public survey participants were asked questions specific to the **preferred outcomes of the TMP**. Below, is a list of potential outcomes that participants were asked to rank.



- Enhancing active transportation network
- Reducing travel times & congestion
- Improving how traffic is managed around school zones
- Improving traffic safety
- Improving on-street parking & parking for business access
- Reducing speeding in certain areas of the City
- Increasing transit service levels
- Reducing transportation costs
- Improving safety & pollution impacts of goods movement

The **top three preferred outcomes** identified by survey participants were: **enhancing the active transportation network, reducing travel times and congestion**, and **improving how traffic is managed around school zones**. The three least important preferred outcomes were: increasing transit service levels, reducing transportation costs, and improving safety and pollution impacts of goods movements.

4.6 What We Heard, Transit

The online public survey also asked questions related to **public transit** as part of the TMP process. The following summarizes the results and comments of the transit-related survey questions.

- Improve access to key destinations
- Make transit routes more direct
- Improve the frequency of transit service
- Improve reliability of transit service
- Make it easier to walk to bus stops
- Improve personal safety when taking transit
- Improve reliability of special transit service
- Provide more amenities at bus stops

The **top three preferred transit outcomes** identified by residents were: **improving access to key destinations, making transit more direct,** and **improving the frequency of service**. The least three important preferred transit outcomes were: providing more amenities and bus stops, improving reliability of special transit service, and improving personal safety when taking transit.

The following provides an overview of transit-related comments received from the public survey:

- **Reliance on Transit by Lower Income & Older Demographics**

  Those with financial and age-related factors, are not able to have a driver's licence, or have limited access to personal vehicles are more reliant on transit. Those who have a choice are less likely to use transit because of service gaps like route timing and schedule restraints.

  Older demographics may also find it challenging to utilize new technology.

  Those who are reliant on transit are inequitably affected by the challenges of using transit related to route frequency, schedule limitations, general safety, travel time, and inclement weather.

- **Availability & Efficiency**

  If available transit options are significantly less efficient than driving it will disadvantage those who are reliant on the system while discouraging those who have other options from utilizing it.

Schedule limitations create challenges for those who are reliant on transit while discouraging others from self-selecting to utilize these services.

- **Accessibility**

  Many areas of the City are not accessible by transit.

  Many people who take transit have physical and cognitive disabilities, and it is important that the transit system and its associated infrastructure are accessible to these groups. Accessibility and service levels are barriers to increasing transit ridership. Those who are reliant on transit face accessibility, timing, and service challenges.

- **Safety**

  Safety concerns can prevent those who are not reliant on transit from choosing to utilize it.

  There are some concerns regarding the safety of transit, particularly at transit exchanges and downtown that discourage people from utilizing it.

- **Infrastructure**

  Infrastructure associated with transit should be adequately maintained and support accessibility.

  Bus stops should be accessible by sidewalks and crosswalks that support the safety of users and are maintained as needed (i.e., snow and ice removal, appropriate maintenance of adjacent landscaping, etc.).

- **Special Transit**

  Special events can cause significant congestion and backups, providing special transit / shuttle buses for events has worked well.

  The existing special transit service is often unreliable and could be enhanced to better serve its users.

- **Servicing**

  Travel times, scheduling, and level of service can all present challenges for those who rely on transit and may discourage others from choosing to take transit over other modes of transportation.

  Lack of digital access and/or literacy may also be a barrier to some of the demographics who may need to use the existing transit app.

  Schedules and accessibility are barriers that prevent transit from being a viable option for many. On-demand options or partnerships with supplemental programs may help to fill service gaps.


BMO
BMO Bank of Montreal
BMO Nesbitt Burns
BIRD
MXL
T30
Y62
U4Z
47V
Mainstreet
INNER-CITY APARTMENTS
Ride. Reward. Repeat. neo

5 EMERGING TRENDS & TECHNOLOGIES

The transportation sector is undergoing changes driven by emerging trends and innovative technologies, which are reshaping how cities like Medicine Hat manage their transportation systems. Being aware of these developments allows Medicine Hat to adapt and implement forward-looking strategies that enhance mobility, address evolving commuter needs, and create a more resilient transportation network for the future.

TRENDS IN MEDICINE HAT

- **Aging Demographics**

  Medicine Hat's average age is increasing, and as seniors continue to work and stay active, their mobility needs will evolve. Transit services will need to be adapted to include more accessible, specialized options like door-to-door services for medical appointments to maintain senior's independence.

- **Aging in Place**

  The province of Alberta is preparing for more seniors aging in place, which will require health, social services, and accessible transportation. Medicine Hat can play a role in supporting this by improving accessibility and ensuring affordable transit options, with guidance from programs like Healthy Aging Alberta.

- **Transportation Mode**

  Between 2016 and 2021, commuting trips in Medicine Hat decreased due to reduced employment and more people working from home. While the percentage of commuting trips by auto vehicle rose, transit ridership declined.

- **Electrification of Vehicle Fleet**

  There has been a significant rise in electric and hybrid vehicle registrations from 2019 to 2023, increasing the demand for charging infrastructure. Medicine Hat will need to assess its ability to meet the growing electricity demand as more electric vehicles are adopted.

- **Housing Needs**

  The Medicine Hat Housing Strategy highlighted the need to increase the supply of affordable rental housing, provide appropriate housing with support for people who need help to live with dignity and as independently as possible, optimize existing rental stock, and encourage a broad range of dwelling types and tenures. This demographic may also be transit reliant and their needs should be considered when choosing the location of affordable and appropriate housing, and when improving the transit system. Proximity to key destinations and housing density are factors that can encourage travel by walking, cycling, and transit.

TRENDS IN POLICIES AND STANDARDS

- **Active Transportation**

  Active transportation is growing in popularity in Canadian cities due to health and wellness, affordability, and an interest in reducing carbon emissions. In response, municipalities are increasingly prioritizing investments in active transportation planning and infrastructure.

- **Changing Design Standards**

  The transportation industry has been developing numerous new transportation design guidelines especially in the topics of active transportation, complete streets, protected intersections, transit priority facilities, and roundabouts. In addition to Transportation Association of Canada other common guidelines are being produced by National Association of City Transportation Officials (NACTO), Federal Highway Administration, and many of the larger provinces and cities in Canada and elsewhere. This is relevant to the City of Medicine Hat because it has its own municipal design standards manual to guide design in Medicine Hat. While some local guidance helps to plan consistent roadways, it need not limit innovation and the application of new standards. Change is occurring so quickly it is not practical to update the Municipal Servicing Standards Manual (MSSM) when a new guideline is published. Instead the City should include language in the manual to encourage use of new guidelines as they become available.

- **Safe Systems Approach**

  Transportation safety is receiving more attention from all levels of government worldwide. Canada's Road Safety Strategy 2025 adopts the Safe System Approach to deal with the high number of fatalities nationally. The Safe Systems Approach is an integrated and comprehensive process to improve the safety and performance of the transportation system that makes allowance for errors and eliminates predictable and preventable serious injuries and fatalities.

- **Planning for Equity in Transportation**

  There is a growing awareness that persons with physical disabilities, visual impairments, lower incomes, and language barriers are more vulnerable and can experience challenges accessing transportation systems. Equity in transportation is essential to ensure all demographics, including vulnerable groups, have fair access to transportation.

- **New Curbside Management Considerations**

  Historically curbside management focused solely on parking, travel, and freight access.[1] However, micromobility options, ride sharing companies, and an increase of home deliveries have changed how municipalities utilize their curb space, encouraging the allocation of new parking areas for alternative modes of travel and new delivery space in areas where it was not previously considered.

- **Criteria for Adding Road Capacity**

  Different communities have different criteria for adding road capacity. For example, the criteria for widening a road to four lanes is 12,000 vehicles per day in the City of Edmonton and 20,000 vehicles per day in the City of Toronto. For intersections, the criteria ranges between Level of Service D and Level of Service E with there being a higher tolerance for Level of Service F, especially if intersection delays occur for short time periods.

- **Integrated Planning**

  Integrated land use and transport planning aims to create cohesive, sustainable communities by aligning strategic transportation infrastructure investments with urban development. This integrated planning approach increases accessibility, reduces reliance on private vehicles, and promotes the use of other modes of transportation.

- **Climate Resiliency**

  Communities in Canada are increasingly experiencing the impacts of extreme climate events. Recognizing the changing climate in Canada, the Federal Government has created the National Adaptation Strategy to support communities in planning for and building more resilient roads, bridges, water treatment facilities, telecommunication networks, evacuation routes, and more by topping up the Disaster Mitigation and Adaptation Fund by $489 million over 10 years.

1 Federal Highway Administration. Curbside Inventory Report. U.S. Department of Transportation, Feb. 2021

NEW TECHNOLOGIES AND SERVICE DELIVERY

Technologies and new methods of service delivery can make a significant impact on mobility systems. Topics that the City must be aware of are:

- **First/Last Mile Integration**

  One of the barriers to taking transit is the travel time and accessibility between transit and the trip origin or destination which is known as the first/last mile. Mobility options to facilitate the movement of first/last miles are becoming a greater focus for improvement and being integrated into the transit system. This includes micro-mobility expansion at transit stops, such as increasing the availability of rental scooters and bikes, and adding additional infrastructure to support people in getting to/from transit stops.

- **Crowdsourcing Deliveries**

  People can act as non-professional couriers to deliver small items for a fee. The concept is that these non-professional couriers would deliver packages on routes they are already travelling on.

- **Ride Sharing Companies**

  Private ride sharing companies have been increasingly supplementing transit services during off-peak hours. This helps reduce system costs by realizing the real-time current demand for transit usage off-peak. The City of Medicine Hat provides on-demand door to door service in select areas and during certain times, however, this is slowly becoming replaced with regular transit service.

- **Off-peak Delivery**

  Many cities have an inefficient usage of road infrastructure that is congested and at capacity during the peak daytime hours and underutilized during the evening and night. Off-peak delivery policy hours implemented by local authorities would mandate/incentivize delivery of goods at off-peak hours to alleviate congestion and pollution while increasing efficiency and reliability.

- **Mobility As a Service**

  Mobility as a service is a platform that integrates multiple modes of transport and transportation related services into a single on-demand mobility service which allows users to access these multiple modes of transportation more easily and through a single payment channel. This also provides a convenient and attractive alternative to private vehicles as it aims to make the mobility experience as direct and easy as possible.

- **Automated Delivery Vehicles**

  This is an integrated system where delivery trucks would carry small delivery robots to a point in the city, drop them off, and then complete a final delivery leg before returning to the delivery truck then to the warehouse. The last leg of delivery may also use cargo bicycles in place of delivery trucks. As this technology evolves, the City will need to determine whether they are willing to allow delivery robots on municipal sidewalks and whether to limit that to specific locations.

- **Autonomous Vehicles**

  The adoption of autonomous vehicles globally and locally within Alberta is gaining momentum through various pilot programs, regulatory supports, and technological advancements. The adoption of this technology will require changes to roadway design elements and traffic laws. Curbside management and appropriate pickup-drop off spaces will have to be considered to accommodate autonomous vehicles.

6 EXISTING & FUTURE CONDITIONS

6.1 Existing Transportation Network

Medicine Hat has an extensive road network with a hierarchy of streets that are classified based on varying levels of traffic flow and access to adjacent properties. **Figure 6-1** shows the existing street classifications within Medicine Hat.

Medicine Hat's Transportation Network

- **950 lane km** of Roadways
- **61** Traffic Signals
- **25** Enhanced Pedestrian Crosswalks
- **516 km** Sidewalks
- **+117 km** Off-Street Pathways

- **Arterial Roads**

  Arterial roads in Medicine Hat carry high volumes of traffic over longer distances and at higher speeds. They connect major points within the City, such as downtown, commercial centers, and industrial areas, to highways and other regional routes. These roads prioritize mobility over access and place making. Examples of arterial roads include Dunmore Road SE and Trans-Canada Way SE.

- **Collector Roads**

  Collector roads serve as a link between arterial roads and local streets, balancing mobility and access requirements. They gather traffic from local roads and funnel it to arterials, supporting moderate traffic volumes and speeds. Collectors often run through residential and commercial areas, providing access to neighbourhoods, schools, and shopping centers. Examples of collector roads include 13th Avenue SE and Southview Drive SE.

- **Local Roads**

  Local roads provide direct access to residential properties, businesses, parks, and other local destinations. These roads support low-speed, low-volume traffic, emphasizing accessibility, safety, and place making over mobility. Local roads are essential for neighbourhood connectivity and typically accommodate pedestrian and bicycle traffic. Examples of local roads include Somerset Lane SE and Crescent Heights.

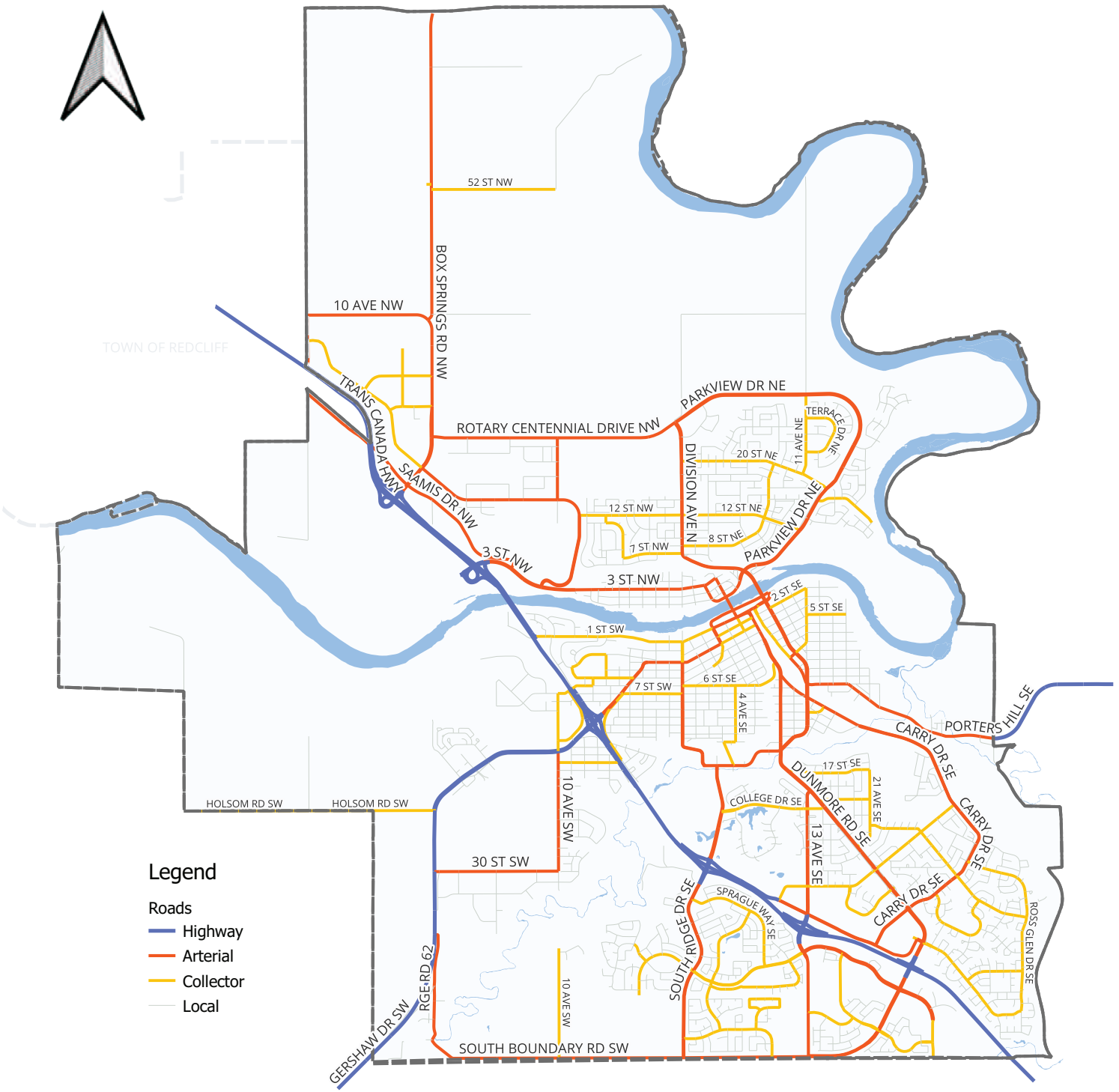
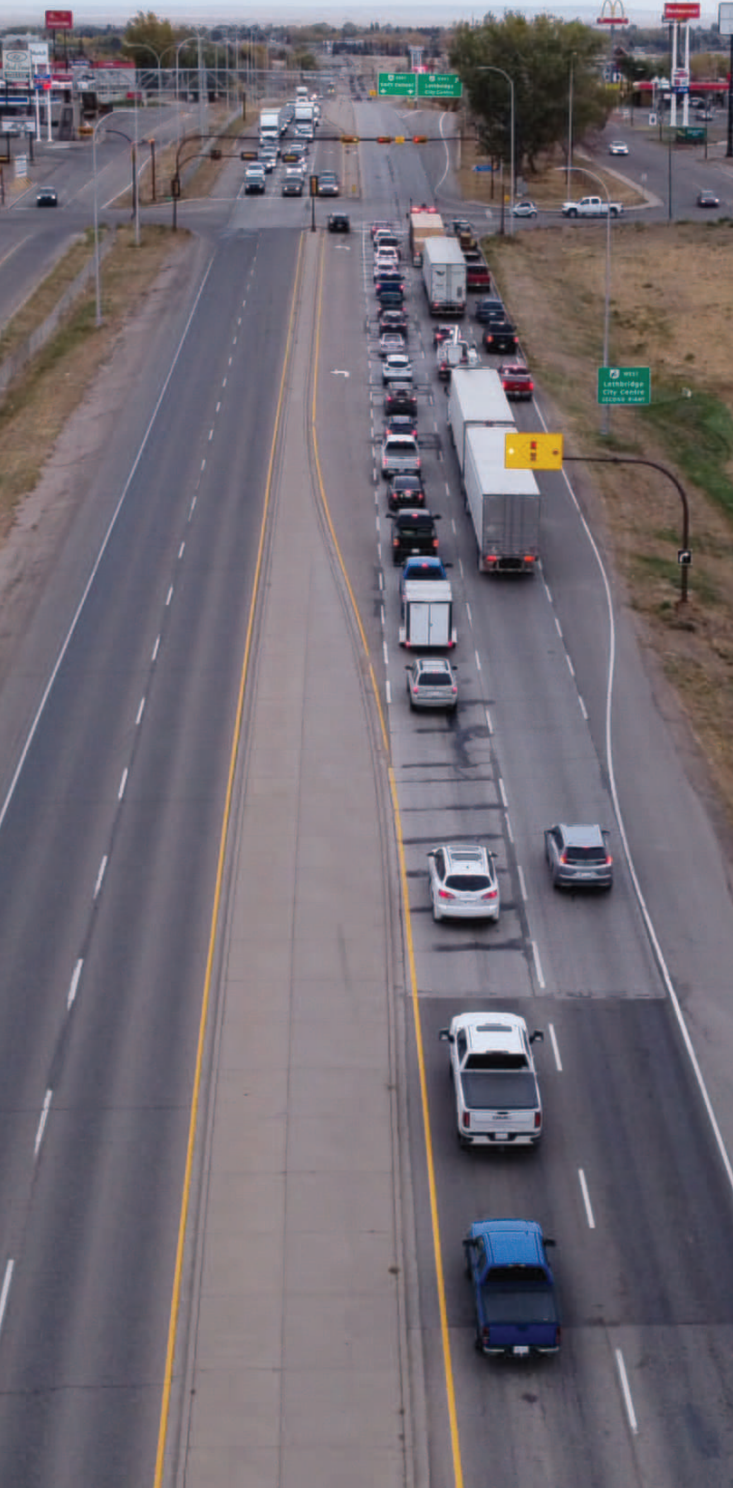


Figure 6-1
Medicine Hat
Road Classifications



- **Provincial Highways**

  Highway 1 and Highway 3 run through Medicine Hat. These higher-speed and higher-capacity facilities are meant to carry a high volume of people and goods regionally, provincially and across Canada. Generally, these highways have limited access to minimize disruption on traffic flow. These highways are owned and operated by Alberta Transportation and Economic Corridors, and the City should continue to work collaboratively with them to make changes as needed to the intersection/interchanges along the corridor to reduce congestion and travel time delays.

6.2 Goods Movement

The movement of goods within and through Medicine Hat is paramount to the economic development of the City and the wellbeing of its residents. Medicine Hat is connected regionally to other communities throughout south-eastern Alberta and nationally given its location at the junction of Highway 1 / Highway 3, and along the Canadian Pacific Kansas City Railway. The movement of urban goods, which are usually deliveries to/from businesses and consumers, has seen significant growth since the pandemic. The increase of these urban goods can bring about additional congestion, pollution, and safety considerations. The urban leg of shipments is the most expensive segment of the supply chain due to inherent inefficiencies, individual shipments to unreliable destinations, congestion, lack of parking, etc.

Goods movement in Medicine Hat primarily involves transport via trucks. Trucks with a gross weight of 6,500 kg or length greater than 11 m are considered heavy trucks and are regulated by Bylaw No.4346. This bylaw requires heavy trucks to operate using designated heavy truck routes unless accessing the most direct route to these routes. These truck routes are seen in the following **Figure 6-2**. The restricted heavy truck route contains additional roadways that allow heavy trucks, but only from 7 a.m. to 11 p.m.

The main trucking routes are generally located on the City's main arterials and highways and include the following roads:

- Highway 1
- Highway 3
- College Avenue SE and Southridge Drive SE
- Dunmore Road SE
- 13th Avenue SE
- Maple Avenue SE and Division Avenue N
- Rotary Centennial Drive NW

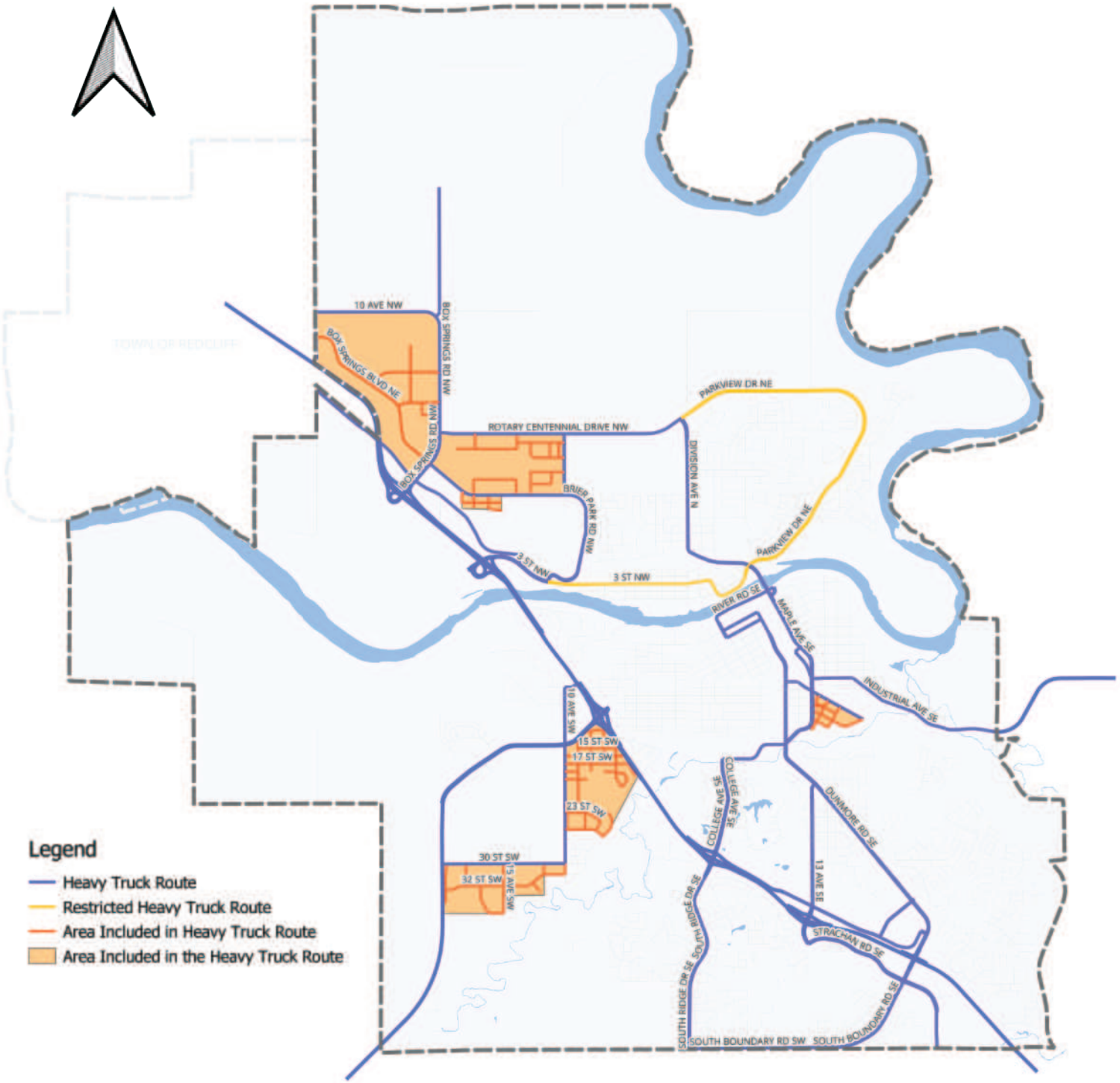


Figure 6-2
Heavy Truck Routes

The City of Medicine Hat also restricts the movement of dangerous goods throughout the City with Bylaw 2759 which was updated in 2024 by extending where they are allowed in its north industrial area. The transport of these dangerous materials is limited to dangerous goods/restricted routes.

6.3 Transit System

After the COVID-19 pandemic, Medicine Hat Transit focused on providing access to, and connection between, higher-density residential areas, key businesses, and recreational destinations within the City. This approach aligns well with the MDP's direction regarding density "nodes", focusing available access on areas of the City that are more economically dependent on transit for daily transportation needs. The City provides conventional fixed route service and paratransit during off peak times and Saturdays. Routes are primarily unidirectional "loop routes" which are less attractive to frequent users. Providing more direct and/or bi-directional routes would decrease travel time and attract additional riders. Additional service has been added where supported by actual use, however, on-demand service has decreased post COVID-19, being replaced by fixed-route service as demand has returned. Retaining a limited amount of on-demand service has allowed flexibility in providing service to outlying areas without requiring dedicated routes with limited use.

Ridership and fare revenues reached and exceeded pre-pandemic levels in 2023. The cost per trip in 2023 has decreased to below pre-pandemic 2019 levels, indicating greater utilization and efficiency of the transit system compared to previous years. Special transit usage in 2023 also saw a decrease in cost per trip from 2022, reaching 2019 levels also indicating greater efficiency and usage of that system. Special transit trips are more expensive than conventional bus trips. Special transit service can be re-evaluated to determine where new service models can be incorporated to save overall costs while maintaining high-quality standards for users.

There is an opportunity to intentionally align future transit planning with other municipal planning documents, and to establish a formal connection between service levels and usage patterns through the development of service standards.

6.4 Future Travel Demand

The City is planning to reach a population of 80,000 by the year 2050. **Figure 6-3** shows the future average daily traffic along the road network resulting from population growth. The total forecasted average daily traffic helped develop policy, action items, and future road network improvements. The majority of growth will occur in peripheral areas of the City which will present further challenges for transit service. Residential growth areas are expected in the North-east and South-west of the City. Any opportunities encouraging compact urban growth in infill areas will improve the ability to provide better transit service and increase sustainable transportation modes. Increases in traffic are expected on Dunmore Road, South Boundary Road SW, Highway 3, and Rotary Centennial Drive NW. Of particular note is the increase in traffic on Altawana Bridge and Maple and 1st Avenue which was analysed as part of the *2021 Downtown Waterfront District Transportation Study* conducted by Associated Engineering, December 2021.

The future growth will increase capacity demands on Highway 1 and the Dunmore Road interchange and some intersections that may need spot improvements. The intersection at College Avenue and Kipling and the Highway 1 off-ramp at 3rd Street NW is expected to reach close to capacity. Since these are stop-controlled intersections, they should be monitored for traffic signal warrants as population increases. Similarly, the South Boundary Road intersection will involve a traffic control review at time of construction.

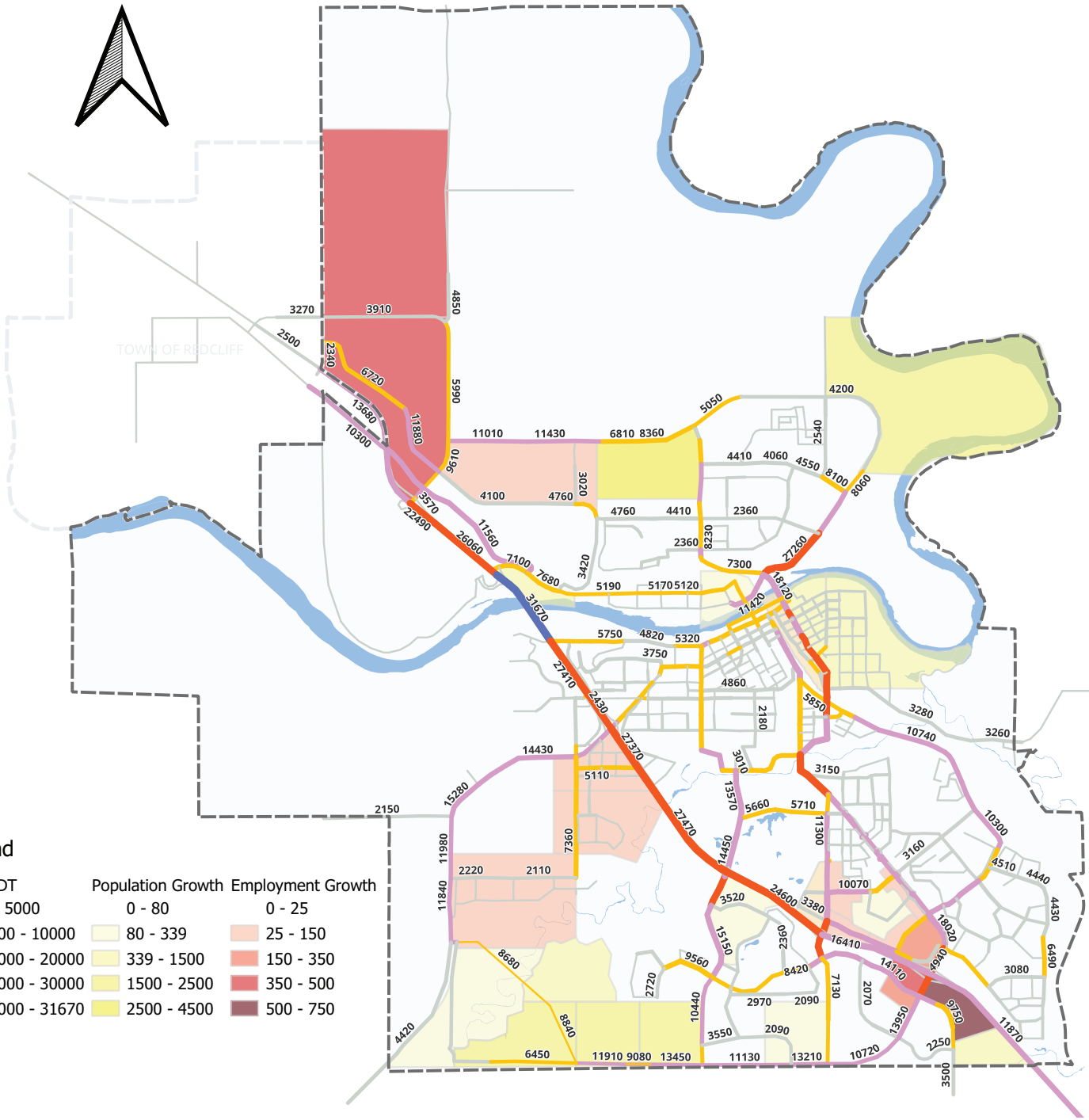


Figure 6-3
Forecast Average Daily Traffic – 80,000 Population Horizon

7 DIRECTIONS

This section of the TMP provides a list of policies with accompanying action items that have been grouped into the following mobility topics : Road Network, Transit, Active Transportation, Safety, Land Use, and Transportation Culture. Given the multi-modal nature of the City's mobility systems, the policies may span different topics, and at times may be interchangeable. The policies are shaped through public and stakeholder engagement to address gaps in the mobility network while aligning with emerging trends and technologies. These policies support the overarching vision of the TMP and are guided by the City's nine (9) guiding principles.

7.1 Road Network

The road network is the backbone of Medicine Hat's Mobility System not only for personal motor vehicles but also for public transit, and active transportation. The system needs to evolve to support the changing land use and demographics and consider emerging trends that will shape the future of mobility. Extreme climate events will become more and more common requiring Medicine Hat to plan for resilient and robust infrastructure. The use of roadways, curb spaces, and parking will change as these will be viewed as public assets that can have many functions to better serve the needs of residents.

The use of vehicles to get around the City is the most popular mode of transportation. There is a predominant driving culture in Medicine Hat that may be disproportionately impacting those who use other transportation modes to get around the City whether by choice or necessity. The percentage of commuting trips by auto vehicles has been steadily increasing from 2006 to 2021. Despite the high auto usage by residents, the current utilization of the road network is relatively low. Longer than expected travel times by residents in certain key areas of the City may not always be due to high traffic volumes but be exacerbated by a combination of signal timing, access management, and the nature of adjacent land uses and densities. With the relatively low utilization of existing road capacity, it is important for the City to prioritize maintenance, upgrading, and repurposing existing infrastructure when applicable to maximize City investments and increase the quality of life of residents.

Residents are getting older and when the population reaches 80,000, the percentage of those aged 65+ is expected to be 33%, up from 18% in 2016. This increase will have a significant impact on the type of housing needed and how the future mobility system should be planned for and operated. The housing form may change as seniors may choose to downsize their homes,

and the ability to drive may change. The mobility system will need to be planned through the lens of equity and should support residents of all ages and abilities irrespective of what mode they choose to get around the City. By planning the changing needs of housing and the expanding need for more transit and active transportation together, there is an opportunity to target specific areas of the City to be more multi-modal near health-care facilities and services to support the aging population. Linking land use and transportation planning will help Medicine Hat develop a multi-modal mobility system that is safer with greater network connectivity.

ROAD NETWORK POLICIES AND ACTIONS

1 Create a multi-modal mobility system that is universally designed and accessible regardless of age, ability, income, background, or mode

Transportation planning should focus on moving people rather than focusing solely on road capacity. Equitable and efficient travel options should be provided for residents who travel by all modes, not just personal motor vehicles. Active transportation and transit need to be considered in all transportation planning and maintenance projects.

Rationale:

1. Equity in transportation planning is becoming increasingly adopted by all levels of Canadian government. Medicine Hat will embrace this to make the City a more attractive place to live and move to.
2. The City is home to a diverse population representing various ethnic and cultural backgrounds, along with a growing elderly demographic. The proportion of residents aged 65 and older is expected to increase from 21% in 2021 to 33% by 2050. Residents regardless of their background or physical ability will more easily and efficiently move around the City by having a more universally accessible transportation system.

A.1.1 Before planning each road surfacing or other significant road works project, evaluate the opportunity to improve the walking and/or cycling environment as part of the project.

Build back better is the most cost-effective way to enhance infrastructure and should be considered for active facilities when other road works projects are being considered. Low-cost active transportation improvement items should be considered, such as reconfiguring lanes with paint using delineators to separate cyclists from traffic or constructing curb ramps to provide accessibility at intersections. More significant investment may be needed such as adding bicycle lanes, constructing new sidewalks, or widening existing ones. Property acquisition or building setbacks will be considered when improvements to the walking and/or cycling environments are needed but the ability to reallocate road space is limited.

A.1.2 Revise current maintenance policies, standards, programs, and operational practices to better support active transportation, transit, and transportation safety.

Current maintenance practices such as snow clearing and street sweeping have a significant impact on cycling. The space where cyclists ride, which is commonly the outside edges of the roadway, needs to be kept as clean as the travel path for motor vehicles. The existing snow clearing program will be reviewed for multi-use trails and a priority system for snow clearing on multi-use trails and around key walkways to reach bus stops will be developed. Increased funding for snow clearing on active transportation facilities will be considered .

A.1.3 Complete Comprehensive Corridor Studies.

Comprehensive corridor studies will evaluate many aspects of mobility including safety, accessibility, land use, and efficiency. Studies should focus on balancing the needs for traffic flow and the need to develop and enhance active transportation connections to the adjacent network. Safety assessments may also be included on corridors with known safety issues and focus on ways to mitigate potential hazards for all road users, along with implementing measures to improve safety. Potential study corridors are listed in the Road Network Strategy in Section 8.1.3.

A.1.4 Update the Municipal Servicing Standards Manual sections related to active transportation, transit facilities, access management, and speed management.

A Safe Systems Approach, traffic calming and elements that encourage transit usage, cycling, and walking are to be included in an update to the Municipal Servicing Standards Manual (MSSM). The manual will be structured in such a way that designers have the flexibility to use Standards from other manuals to keep up with emerging practices while fitting design solutions that are appropriate to Medicine Hat. Some examples where the manual will be updated are:

- **Active Transportation**: Section 8 to include considerations for bike design elements such as separated bike lanes and on-street multi-use paths and safe intersection design. Section 8 also may include but is not limited to pedestrian design elements such as suburban/rural considerations, street furnishings and ancillary zones.
- **Transit**: Section 8.14 Transit Requirement in the Municipal Standards Servicing Manual to include requirements for dedicated safe pedestrian and cyclist facilities from residences to the nearest bus stop.
- **Access Management**: The MSSM references TAC regarding access management standards. The current TAC standards for access management do not include consideration of intersectional functional area, access spacing by classification and context, and strategies to reduce or consolidate accesses. An update to Section 8 can include these missing elements or refer to other available resources such as the Niagara Region Access Management Guidelines, and the TRB Access Management Manual.
- **Speed Management**: Update Section 8.7.5.9 Traffic Calming to include speed management considerations on non-neighbourhood roadways. Available resource includes TAC's Canadian Road Safety Engineering Handbook: Speed Management Guide.

Generally, encourage the use of new and innovative design guidelines that have been developed by others including TAC, ITE, NACTO, FHWA, and other municipal jurisdictions.

2 Roadway projects will prioritize active transportation, and road safety improvements over road expansion

Capital works projects that address active transportation, transit, and road safety will be prioritized over projects that focus solely on capacity expansion for vehicles. This will create safer options for those who travel with modes other than vehicles.

Rationale:

1. The Transportation Master Plan public engagement survey revealed that active transportation is the most important outcome of the TMP and managing traffic around school zones and traffic safety are the third and fourth most important outcomes.

2. There is a growing trend in Canadian municipalities to prioritize investments in mobility modes other than for vehicles, this helps create communities that are healthier and more connected. Increased investment in active transportation plays an important role in making communities more vibrant and enduring.

A.2.1 Continue to invest in Active Transportation projects including but not limited to curb ramps, sidewalks, bike lanes, and multi-use paths.

Ways to increase budgets for each of the priority areas in the Active Transportation Strategy should be explored.

A.2.2 Expand the Road Safety Project Fund.

Expand the road safety project fund as described in the Transportation Safety Strategy Action 9.

A.2.3 Establish an Intersection Improvement Study Budget.

Develop and allocate a dedicated budget for conducting intersection improvement studies. This budget will support the evaluation of existing intersections on an as needed basis on issues such as safety, multi modal accommodation, and traffic flow.

3 Invest in optimization and efficiency of existing infrastructure prior to investing in roadway expansion

Investments in new infrastructure are expensive and time-consuming. Maximizing the usage and capacity of existing infrastructure before investing significant amounts of money in new infrastructure is economically sustainable in the near and long term. Proper maintenance of facilities will increase the longevity of the City's assets increasing time between significant capital investments and allowing money to be used elsewhere.

Rationale:

1. The analysis of the existing and future road network shows that the current and future road network will function efficiently with few areas of significant congestion other than Highway 1.
2. New construction and facilities bring with them significant long-term costs. Maximizing the efficiency of existing infrastructure makes economic sense.
3. The Transportation Master Plan public engagement survey revealed that approximately 72% of respondents agreed or strongly agreed with the guiding principle of economic sustainability.

A.3.1 Continue to Develop a Transportation Asset Management Strategy.

The City has a number of transportation related assets including signs, traffic signals, sidewalks, pavement, pavement markings, bridges, and maintenance equipment, all of which need to be maintained and managed. Continuing to develop the Strategy will include practices, procedures, and tools to maintain and enhance these transportation-related assets. The Strategy will include practices and procedures, future demand and service enhancement, lifecycle management and risk, financial planning, and the creation of a lifecycle cost assessment database. The Strategy will also integrate climate change considerations into the management of assets. The purpose of the strategy is to maintain the longevity, reliability, and efficiency of mobility infrastructure and support sustainable development.

A.3.2 Update the Infrastructure Optimization Strategy.

The Strategy will focus on all ways to maximize value out of existing transportation infrastructure before heavily investing in new or expensive upgrades. An example is conducting signal optimization and coordination studies before constructing new roadways or increasing the number of lanes. Service level thresholds will be established that defer capacity improvements for roadways where congestion occurs for shorter periods of time.

A.3.3 Create a Traffic Signal Upgrade Strategy.

The City has a variety of traffic signal controllers of different ages and capabilities with many of them reaching the end of their life cycle. The program will start with the development of a traffic signal replacement plan that inventories the traffic signal assets, develops specifications, prioritizes locations, and establishes schedule and budget for the program. A more detailed description of the traffic signal upgrade program is provided in the Road Network Strategy Section 8.1.3.

A.3.4 Create an Annual Traffic Signal Replacement Budget.

An annual traffic signal replacement program will be established with a capital budget to replace the signals upon completion of the Traffic Signal Upgrade Strategy. The implementation schedule will be monitored and updated throughout the program.

A.3.5 Traffic Signal Timing Coordination Project.

Med Hatters often commented that there are too many traffic signals and too much time spent waiting at signals when there are no vehicles using the green light. A city-wide traffic signal coordination project would improve traffic flow and reduce emissions from unnecessary idling and is described in the Road Network Strategy in Section 8.1.3.

4 Continually monitor, evaluate, and implement new and innovative technologies that support enhanced mobility

Mobility is changing and people and businesses are searching for ways to get around faster, cheaper, cleaner, safer, and more efficiently. New businesses can be attracted to the City and people will move around more efficiently by implementing new mobility technologies. This includes ways to support residents and businesses who wish to travel with lower emissions vehicles.

Rationale:

1. There are always new, innovate and disruptive technologies in the mobility landscape. The continual evaluation of technology trends and leveraging practical affordable technology will make the City an attractive and competitive place for business.
2. As outlined in the Medicine Hat Council's Strategic Plan 2023-2026, innovation is a main priority, and the City plans to make innovative mobility solutions available for the residents and businesses of Medicine Hat.
3. The Transportation Master Plan's public engagement survey revealed that improving travel times and congestion is the second most important outcome. By continually monitoring and evaluating new technologies the City will be able to develop solutions that improve the travel time for residents.

A.4.1 Develop a Smart Mobility Strategy.

The Smart Mobility Strategy will provide direction on how to integrate future and digital technologies into the transportation system, providing a cohesive, user-centered transportation ecosystem. This strategy will focus on unifying conventional and future transportation modes into a digitally connected real-time system, leveraging artificial intelligence to create a safe, responsive, adaptive, and efficient multi-modal transportation system. It will identify short, medium, and long-term targets and action plans, review current intelligent transportation infrastructure, and explore emerging technologies and trends such as smart traffic signal controllers. Additionally, the strategy will aim to integrate transportation data from various sources, including manual and automatic count stations and crowd-sourced data, to establish functional requirements and usage parameters for a comprehensive traffic management system.

A.4.2 Prepare for the increased demand in electricity for the increasing number of electric vehicles that will be sold on the market by completing an evaluation of the City's power supply system.

A study will be completed to determine the impact of forecasted electric vehicle charging demand on the City's power grid because of the federal government's commitment to achieve 100% zero-emissions vehicle sales by 2035. The electrification of the vehicle fleets is increasing, and this takes a proactive approach to support residents who wish to travel with lower emissions vehicles.

A.4.3 Evaluate the need to increase the number of EV charging locations throughout the City.

The number of EVs in Medicine Hat is expected to grow. Engagement with appropriate stakeholders including private EV charging companies, businesses, and the public will help determine current and future supply and demand of EV charging in Medicine Hat. Important topics to discuss with stakeholders include:

- EV-ready residential parking for all new development permit applications.
- A curbside EV charging program for installing EV charging stations in front of an applicant's home where homeowners don't have the ability to install them on their own property.
- Discount business licence fees for gas stations and commercial parking lots who install EV charging stations.
- Grant an EV cord cover licence to allow charging for vehicles parked on the street.
- Grants for installing EV chargers in existing multi-unit rental buildings.
- Business case development for the installation of EV charging stations at city facilities.

This will inform policy development and ultimately help plan new charging stations throughout the City. Some steps the City can take if more EV charging is required throughout the City include:

- Electric charging availability will increase in demand at home, in commercial areas, and at service stations serving long-distance travellers. Several actions to help increase the supply of EV charging locations may be initiated.
- Require that 100% of residential parking stalls must be EV-ready for all new development permit applications.
- Develop a curbside EV charging program for installing EV charging stations in front of an applicant's home where homeowners don't have the ability to install them on their own property.
- Discount business licence fees for gas stations and commercial parking lots who install EV charging stations.
- Grant an EV cord cover licence to allow charging for vehicles parked on the street.
- Provide grants for installing EV chargers in existing multi-unit rental buildings.
- Develop a business case to install EV charging stations at city facilities.

A.4.4 Focus traffic modelling efforts on Microscopic models rather than Macroscopic Models.

Micro-simulation analysis provides more detail and more accurate estimates on parameters such as delay, queue lengths, and intersection performance than macro models. Using micro-simulation analysis in conjunction with the traffic forecasts from the recent update will allow for the construction of more efficient and correctly designed infrastructure.

The algorithms used in the current travel demand model are nearly fifteen years old and technology changes. The recent update to the model's data provides sufficient confidence for predicting the incremental traffic growth related to the 80,000 population to support the analysis in microscopic models. In a few years, crowd-sourcing data is expected to produce more accurate origin destination surveys which are currently costly to collect. Once a more affordable origin destination survey with a high level of reliability can be acquired, new model algorithms should be developed for the macro model and/or a new model should be developed. The software choices for models will have evolved by this time, making it more affordable to develop a new model.

5 Form partnerships and programs to advance initiatives that increase mobility, safety, and healthy living for residents, and encourage travel by sustainable modes

Integrated planning requires collaboration between different interested parties including governments and partner organizations to achieve shared mobility goals and efficient use of infrastructure.

Rationale:

1. As the emerging trend of integrated planning becomes more common, the City will need to be at the forefront of forming and maintaining strong partnerships with various organizations.
2. As outlined in the Medicine Hat Council Strategic Plan 2023-2026, Community Wellness as well as Partnerships and Governance are two main priorities this policy aligns with.

A.5.1 Continue to work collaboratively with the Province to strategically plan enhancements roadways within provincial jurisdiction.

Improving traffic flow along provincial jurisdiction roadways and better integration with the City's transportation system can be achieved by continuing to collaboratively with the Province on planned strategic enhancements within their right-of-way.

A.5.2 Continue to support the coordination of planning between neighbouring municipalities as described in the Inter Municipal Development Plan.

The City will continue to collaborate on projects that are located on shared boundaries between the neighbouring municipalities.

A.5.3 Advocate for higher orders of government to invest in all modes.

Studies, initiatives, and capital investments that support comprehensive transportation solutions, including public transit, active transportation, and roadway improvements can be funded through advocation to the provincial and federal government programs.

A.5.4 Create a Downtown Parking Study.

A downtown parking study should be completed to address issues and solutions related to:

- Available on street and off-street parking supply.
- Incentive programs to encourage employees to use off-street parking options.
- Business parking requirements.
- Demand management (parking duration, and paid parking).
- Parking Enforcement.
- Ways to increase usage of the parkade downtown.

Engagement will be a key component of the study to gain feedback that will help develop changes to the City's downtown parking. Appropriate stakeholders to engage include downtown business owners, the City Centre Development Agency, and the public.

6 Enable the safe and efficient movement of goods and services

Goods delivery is changing with increased door-to-door service as E-commerce and crowd-sourcing delivery methods increase in popularity. Deliveries will be easier, safer, more efficient, balance public welfare, and be aware of different road space uses.

Rationale:

1. Delivery methods and technologies are changing with the emergence of delivery robots, and drones. Curbside requirements and uses are also evolving and we will accommodate and manage this change.

2. This policy aims to provide more opportunities for employment and innovation to strengthen local businesses as outlined in the five strategic goals of the MDP.

A.6.1 Complete a Goods Movement Strategy.

A Goods Movement Strategy should be developed and include but not be limited to:

- Identify areas and corridors where connectivity and accessibility can be enhanced.
- Identify where transportation infrastructure upgrades should be made to support the movement of goods vehicles.
- Identify ways to get/receive goods to markets.
- Support the City and the Region's economic development goals.
- Monitor the local truck network within the City and identify opportunities to improve reliability.
- Evaluate ways to enhance freight movement for goods.
- Work with delivery companies to obtain available data.
- Consider limited expansion of the truck network by designating additional streets as "limited use" routes for small and mid-sized trucks, in consultation with local residents, businesses, and the trucking industry.

A.6.2 Prepare for new delivery technologies.

Develop a bylaw to define whether and under what conditions anticipated robotic delivery devices will be permitted to use sidewalks, off-street multi-use paths, bike lanes, and roadways.

A.6.3 Complete a Curbside Management Strategy.

A Curbside Management Strategy should be developed and focus on but not be limited to:

- Make parking easier to find.
- Evaluate the use of the curbside lane for transit priority.
- Treat the curbside street space as a public asset which includes identifying opportunities to allow outdoor patios or other uses within the curbside.
- Review placement of on street drop off/loading areas for goods vehicles.
- Allocate space for bicycle parking, e-scooter and shared-mobility devices.

7 Each area of the city will be able to efficiently evacuate and be reached by emergency response vehicles during extreme weather events or other emergencies in a timely manner

The different neighbourhoods of Medicine Hat will be serviced with efficient evacuation routes and accessible pathways for emergency response vehicles. Public safety will be enhanced by enabling timely evacuations and rapid emergency response, reducing potential risks and impacts during extreme weather events and other major events that may trigger the need for evacuation.

Rationale:

1. As extreme weather events become more common, all levels of government in Canada are planning, designing, and maintaining communities to become more resilient to climate, Medicine Hat is no exception.
2. Creating communities that can be easily reached by emergency responders in all scenarios will give residents a sense of security.

A.7.1 Continue to Support Emergency Management Plans.

Ways to support and update the City's Emergency Management Plans include how to:

- Efficiently use the transportation network to evacuate residents in extreme events prioritizing seniors and marginalized groups.
- Keep routes clear for emergency vehicles to respond to incidents, possibly using signal pre-emption.
- Leverage real-time monitoring systems to quickly identify efficient routes and efficiently communicate transportation system data to the public.

7.2 Transit

The Medicine Hat transit service is a critical service for those who do not have access to a private vehicle or are unable to drive due to an array of reasons, such as financial and physical ability. As the population of Medicine Hat increases and concurrently ages, there will be more demand placed on the transit system.

Travel time by transit is significantly longer than travel by other modes of travel, making it inequitable for those who are reliant on transit and unattractive to use for those who have access to a motor vehicle. Approximately 58% of commuting trips by transit take more than 30 minutes, 27% of all transit commuting trips take over 45 minutes whereas 89% of motor vehicle trips take less than 30 minutes. The long single-loop routes meant to provide a basic level of connectivity for all residents are inefficient and require lengthy travel time for transit users. Respondents of the engagement survey indicated that they would like to see improved access to key destinations throughout the City and more direct and frequent transit routes.

Mobility in the public transit sphere is always evolving. Private ride-share services do not need to be seen as a competitor to transit service as ride sharing has been used to support paratransit service for transit agencies, integrate with first / last mile of trips, and supplementing service in off-peak low demand times. Ride-sharing can be a complimentary service that can enhance transit for Med Hatters.

TRANSIT POLICIES AND ACTIONS

8 Support programs, projects, and initiatives that improve transit

Transit is an important service for those in the City who do not have access to a motor vehicle. Every level of the Medicine Hat organization should seek ways to improve transit service.

Rationale:

1. Planning for equity is an increasing trend at all levels of government in Canada. Medicine Hat will expand equitable mobility by improving transit throughout the City giving those without access to a private vehicle more mobility options.
2. The Transportation Master Plan public engagement survey revealed that the guiding principle of public transit was agreed or strongly agreed upon by 73% of respondents and the four most important outcomes related to transit were improving access to key destinations, making transit routes more direct, improving frequency of transit service and improving the reliability of transit service.

A.8.1 Complete a Transit Master Plan.

There have been incremental changes to the transit network recently. The next noticeable changes to the transit system will require more significant investment. A Transit Master Plan will act as a summary document of all the transit studies completed and help provide strategic guidance before making a new significant investment in the transit system. The Transit Master Plan may:

- Combine all available studies and reports into one document.
- Evaluate different sources and opportunities to increase transit ridership. This includes route preferences, demographics, and purpose of travel for both regular and special transit usage.
- Determine ways to enhance the transit system by making routes more direct.
- Explore opportunities to increase the frequency and reliability of transit routes, to reducing travel times.

- Explore service delivery options that result in reasonable travel times for those who are reliant on transit.
- Explore ride share/taxi integration for first/last mile accessibility and to service off-peak hours.
- Encourage community discussion and analysis on how to increase access to routes and provide greater frequency of service.

A.8.2 Develop a transit-specific communications and engagement strategy to support education, awareness, and public participation in Transit Operations.

This approach will create an efficient way to gather public feedback on specific service and existing and planned infrastructure. it will also emphasize education, awareness, and public participation in transit operations.

A.8.3 Review age of bus fleet and potential for electric vehicle fleet conversion and automation of transit vehicles.

The bus fleet will be reviewed which includes a benefit-cost analysis of adopting electric transit vehicles, feasibility assessment for required infrastructure, and public engagement.

7.3 Active Transportation

The City recognizes the need to provide equitable transportation options for residents who are unable to drive or those who wish to use healthier and cleaner modes. More and more municipalities in North America are investing in infrastructure that supports those who wish to walk or roll to their destinations by creating safer, more direct and accessible environments for all.

Residents have expressed their interest in enhancing active transportation facilities. Active Transportation policies have been created that align with the Vision and Guiding Principles . The detailed action items of each policy are found in the Active Transportation Strategy.

ACTIVE TRANSPORTATION POLICIES

9 Plan and design an active transportation network that is universally designed and accessible regardless of age, ability, income, or background

Design standards are changing, requiring better separation between bicycles, motor vehicles and trucks and new mobility devices are changing how Hatters get around. The Active Transportation Strategy will be regularly updated to keep up with current standards and guidelines.

Rationale:

1. Med Hatters are diverse, and health regions are anticipating aging in-place models that will increase the number of non-drivers with mobility needs. Designing an active mobility system that is universal and accessible will give everyone the same opportunity to use the facilities and allow them to be used by the greatest number of people.

A.9.1 Develop an Active Transportation Strategy and support the policies and action items in the Strategy.

The Active Transportation Strategy was developed in conjunction with the TMP and is available as a separate document.

10 Maximize the benefits of investments through enhanced maintenance and renewal of existing active transportation facilities

Every time a new piece of infrastructure is constructed, more facilities need to be maintained but the maintenance budgets do not automatically increase when new infrastructure is constructed. There is a need to increase budgets to support the maintenance of active transportation facilities and update maintenance practices, being careful not to let debris from road maintenance activities land in the path where cyclists typically ride.

Rationale:

1. Infrastructure assets are treated as liabilities that have ongoing operational and maintenance costs as described in the MDP.
2. The comments from the Transportation Master Plan public engagement survey revealed that weather conditions can discourage people from choosing active modes of transportation. The City wants to make it as easy as possible for residents to walk and roll around.

A.10.1 As part of every active transportation project, consider maintenance / operational budget adjustments to support implementation of the project.

Maintenance budgets must be considered as part of the planning and implementation of new active transportation infrastructure projects. This allows for more accurate life cycle cost analysis and to allocate sufficient maintenance and budget resources. Collaboration with City maintenance teams is an important aspect in determining accurate maintenance/budgets.

11 Active Transportation is always included in new development

There are currently well-established development levies related to the construction of arterial roads and specific requirements to the provision of local roads. Active transportation facilities will be considered in all aspects of development planning from the provision of active transportation facilities within the development and the inclusion of development levies for the major active transportation connections and facilities.

Rationale:

1. Requiring new developments to include active transportation facilities by the means of levies similar for the construction of arterial roads, and the provision of local roads underscores the desire to expand mobility choices for residents aligning with the policy of prioritizing active transportation and safety projects over roadway expansion projects.
2. Constructing active transportation facilities during adjacent construction or collecting levies reduces the financial burden of the City allowing for more efficient services and lower costs.

A.11.1 Adopt Multi-Modal Level of Service Analysis in Traffic Impact Studies.

Adopting a Multi-Modal Level of Service (MMLOS) analysis as part of the development permit application will align better with the TMP vision. Traditional Level of Service (LOS) analysis places significant emphasis on intersection operation for vehicles and focuses on delay and congestion of vehicles but fails to consider how other intersection users such as cyclists and pedestrians experience the intersection. Placing emphasis solely on vehicle performance does not align with the vision of this TMP. A MMLOS analysis approach to reviewing developments will address the impact on the connectivity and performance on other modes such as pedestrians, cyclists, and transit users. An available guideline that can be referenced is the Ontario Traffic Council - Multi-Modal Level of Service Guidelines.

7.4 Safety

The City understands the significant role it plays in road safety but also understands the need for collaboration with other levels of government and partnerships with other organizations such as the Medicine Hat Public School Division, local law enforcement, emergency response services, and community groups. The detailed action items of each policy are found in the Transportation Safety Strategy.

SAFETY POLICIES

12 Use the Safe System approach to road safety, which involves safe roads, safe speed, safe road users and safe vehicles

The safe systems approach will help the City construct infrastructure that minimizes the risk and severity of crashes to prevent fatal and serious injuries.

Rationale:

1. Adopting the Safe System approach aligns with national efforts to improve transportation safety.
2. By implementing this approach, the City will create a more inclusive and safer mobility environment for all residents, regardless of age or ability. It also requires collaboration with other levels of government and stakeholders, acknowledging that safety improvements are a shared responsibility.

A.12.1 Develop a Transportation Safety Strategy and support the policies and action items in the Strategy.

The strategy (concurrently with the TMP) will look to identify ways on how to create a mobility system that moves towards zero road transportation fatalities and serious injuries.

A.12.2 Develop a Traffic Calming Policy to proactively and consistently manage traffic concerns from the public in neighbourhoods.

The purpose of the Traffic Calming Policy is to prioritize and identify which requested traffic calming measures requested by the public to be considered for implementing. The policy will outline:

- Requirements to receive a request.
- Where traffic calming measures will be considered.
- Types of traffic calming measures considered.
- Approval requirements.
- Implementation timeline.

This policy will not only help establish criteria for traffic calming, it will also provide guidance for the handling of public inquiries, helping to determine which requests should turn into a change to the road network.

7.5 Land Use

Land use and transportation are interconnected with each having a direct impact on one another. An integrated approach that treats the built environment as a whole system will maximize economic prosperity, sustainable growth and improved access for residents. People make fewer trips by vehicles, streets are safer, air quality is improved, and residents are physically active in communities that are planned with compact and mixed land uses.

LAND USE POLICIES

13 Transportation planning to support land use planning as described in the MDP

Transportation planning practices will complement best land use planning practices as described in the MDP.

Rationale:

1. The best transportation plan is a good land use plan. Land use and the mobility system are interconnected and cannot be viewed in a silo, but in a greater context as a whole system with land uses.

A.13.1 Apply sustainable transportation design elements to proposed site developments and include factors that align with the Safe Systems Approach and encourage sustainable transportation modes.

Sustainable site design guidelines to be adopted from Promoting Sustainable Transportation Through Site Design: An ITE Proposed Recommended Practice. This will promote the use of sustainable modes of transport and align with a Safe Systems Approach for land development process of non-residential development. The design of sites, proximity to other land uses, streetscape features, connections to other transportation facilities, and on-site parking all impact one's choice of travel mode. The goal is to increase safety and to encourage people entering/leaving the newly developed site to use more sustainable transportation modes by strategic design of off-street elements. The City will take into consideration design elements that include building and entrance placement, pickup-drop-off areas, connections to existing active transportation facilities, bicycle parking, site amenities, internal roads and active facilities, and on-site furniture and landscaping.

A.13.2 Review development projects to identify opportunities to modernize the plan with active transportation and neighbourhood traffic management practice.

The review process will focus on previously submitted and approved projects and upcoming development projects to incorporate elements such as bike lanes, pedestrian pathways, and appropriate traffic calming measures. It is important to identify inefficient projects that are adding more travel lanes than is needed by current and future traffic. For example, there may be more value in leaving 13th Avenue south of Strachan Road as a two-lane roadway with separated multi-use pathway rather than widening to a four-lane cross section which will not be needed until after the population of the City grows to 80,0000.

14 Infrastructure projects to match the demand generated by adjacent land use and intensities

Plan and design facilities that will efficiently service demand generated by adjacent development. This will facilitate the development of economically sustainable infrastructure.

Rationale:

1. There is no one-size-fits-all for infrastructure planning. To construct cost effective and efficiently utilized facilities they must match the demand generated by the adjacent land uses.

A.14.1 Update development requirements for roadway construction that's driven by development.

Some of the roads in new development areas are four lane roadways with low traffic volumes. These roads invite speeding, are expensive to maintain, and encourage automobile dependency. Ways to avoid this practice may be related to the development levies bylaw or in the adoption of new standards. As part of this review, a traffic volume criterion for triggering the construction of two and four lane roadways should be established that aligns with the vision and guiding principles of this TMP.

7.6 Transportation Culture

15 Grow a culture of safety, healthy living, and sustainability within the City of Medicine by implementing innovative programs and policies that encourage a shift to transportation modes other than single occupancy vehicles and promote safe travel behaviours

Culture can be defined as the shared values, actions, and behaviours that demonstrate a commitment to safety, healthy living, and sustainability over competing goals and demands. A safety culture means that safety is front of mind, and everyone places safety as a priority with their own behaviours, the work they do, and the ways they contribute to community. Healthy living and sustainability include active transportation and an understanding that those who don't have the ability to drive also need equitable transportation options that are safe, efficient, and affordable. A change in culture exists in different forms with the two most prevalent being an organizational safety culture and a public safety culture.

Rationale:

1. As outlined in the Medicine Hat Council Strategic Plan 2023-2026 community wellness is one of the six main priorities. By helping develop a culture of safety and active modes through innovative programming, fundamental shifts towards healthier modes of transportation will persist and permeate through the community.
2. A culture of safety and using other modes of transportation will help create a community that is enduring vibrant and sustainable.
3. Creating this culture will require partnerships with other organizations and possibly other forms of government. This collaborative spirit is something the City embraces and is highlighted as one of the main priorities in the Medicine Hat Council Strategic Plan 2023-2026.

A.15.1 Grow a culture of safety, healthy living, and sustainability within the City of Medicine Hat.

The extent to which safety, healthy living, and sustainability are valued and pursued by an organization indicates the strength of that organization's culture. The organization proactively elevates road safety, healthy living, and sustainability as a priority for its employees. It embraces these values and makes a commitment to integrate safety, healthy living and sustainability in all aspects of transportation programs and projects. Employees have this in mind when planning, scoping, designing, and constructing a road. Employees regularly communicate the importance of road safety, healthy living, and sustainability with colleagues, customers, and contractors. Executive leaders are vocal supporters of safety and empower employees to seek innovative approaches to improving safety even if safety is not explicitly part of everyone's job title.

Communities with a safety culture have citizens who understand the risks associated with transportation and choose to make safe choices when using the transportation system. Road users in a community with a strong safety culture are likely to use their safety devices (e.g., seat belts, child safety seats, helmets, etc.) voluntarily, obey traffic laws, limit distractions, refrain from using the roads when impaired, and clear their sidewalks in front of their home. Engagement with partners of other organizations to grow a culture of public safety can be achieved with developing and disseminating educational and marketing materials, providing traffic safety grants, delivering presentations and other related activities, and engaging with under-engaged groups.

A.15.2 Provide dedicated staffing and resources to implement the TMP, TSS, and ATS and develop travel demand management programming.

The execution of the TMP, ATS, and TSS should be assigned to dedicated personnel who will oversee the implementation of all three plans. These staff members will be responsible for coordinating projects that align with the vision and guiding principles of the plans. The City will initially complete a business case to determine existing staffing capacity and required full time equivalent hours to determine required staffing resources.

A.15.3 Develop a Wayfinding/Tourist Transportation Management Strategy.

The Strategy will focus on ways to:

- Improve awareness to key destinations throughout the City.
- Leverage the existing trail network and South Saskatchewan river to promote eco-tourism.
- Improve transit information for visitors.
- Improve gateways into the City.
- Make it easier for those to plan their trip online.
- Expand roadside signage.

8 ROAD NETWORK STRATEGY

The road network strategy includes location-specific improvements that are both development and non-development related that will be constructed in the future to accommodate expected growth in the City while balancing the needs of all road users.

8.1 Planned Road Improvements

At the start of the TMP project the City provided a list of planned road improvements which was used to update the 80,000 population and to comment on the impacts of these changes. This section discusses the planned improvements related to development separate from the other planned improvements because the process for selecting projects is different for these two topics.

Planned Improvements Related to Development

Developers are responsible for the construction of all collector and local roadways within a development. The construction of arterial roadways is the City's responsibility because they serve more than one development. The timing for when development-driven roads need to be constructed is dependent on the timing for when the development occurs. This section describes planned development-driven roads even if they are currently forecast to occur beyond the 80,000-population horizon. This is because the planning for some of these roads is already complete and the timing of development can change quickly, necessitating the City to be ready should the need arise.

South Boundary Road - 13th Avenue SE to South Ridge Drive

South Boundary Road between South Ridge Drive and 13th Avenue has the first two lanes of a four-lane roadway urban cross section. It is expected to serve as a major east-west arterial in southwest Medicine Hat in support of future land development. The forecast daily volume for this road varies between 11,100 and 13,200 vehicles per day for the 80,000 population horizon which is on the cusp of needing to be four lanes depending on the preferences of the community. From a road capacity perspective, this volume of traffic can be accommodated on a two-lane roadway with turn lanes at the intersections. The implication is that the average travel speed on the road may be lower because there would be fewer passing opportunities. With four lanes, it's more likely to attract speeding as there is nothing impeding the flow of traffic. The increased speeds can be both a safety concern and a nuisance concern for adjacent residents.

South Boundary Road – South Ridge Drive to 10th Avenue SW

South Boundary Road between 10th Avenue SW and South Ridge Drive is currently a two-lane roadway with a rural cross section. This roadway geometry is expected to serve as a major east-west arterial in southwest Medicine Hat to serve future development in the Cimarron area in the long term. Cimarron development will progress from east to west starting at South Ridge Drive. The forecast daily volume for this road is 13,500 vehicles per day for the 80,000 population horizon which is on the cusp of needing to be four lanes. This will result in the need to upgrade South Boundary Road west of South Ridge Drive subject to the Cimarron development. Similar to the rationale for South Boundary Road between 13th Avenue SE to South Ridge Drive, the four lane roadway is not needed from a capacity perspective, but it may be desired for other reasons.

Southwest Medicine Hat Connector (previously described as the 10th Avenue Connector)

South Boundary Road currently connects into Range Road 62 and Cactus Coulee Road, which is a rural road through the Seven Persons Creek Valley that ultimately connects with Highway 3 to the northwest. A Southwest Connection will be needed from the perspective of travel demand, proper spacing of arterial roadways, and emergency service access. The forecast volume for the Southwest Connector is 8,800 vehicles per day which means it can function as a two-lane roadway for the 80,000 population horizon and ultimately four lanes when Cimarron is fully built out.

13th Avenue SE - Strachan Road to South Boundary Road

Thirteenth Avenue SE between Strachan Road and South Boundary Road is currently a two-lane rural cross section that has been planned to have a four-lane cross section to serve future development in the Hamptons and Southlands for the long term. For the 80,000 population horizon, the forecast volume is 7,100 vpd between Strachan Road and Southlands Boulevard and 5,400 vpd between Southlands Boulevard and South Boundary Road. Interim designs with single lane travel lane, turning lanes and active transportation facilities will be considered since four traffic lanes may not be needed to support these traffic volumes.

Burnside Drive

This roadway will serve the Burnside Estates residential development, which is expected to develop beyond the 80,000 population horizon. The south connection, which will likely be constructed first, will be at the 3rd Street intersection, with Highway 1 and the north connection will be at 23rd Street. The alignment will be determined as part of a future area structure plan. Burnside Drive will be planned as a two-lane facility initially until a four-lane divided roadway is required to handle capacity or for emergency services. The upgrade to four lanes is not required until area development intensifies.

11th Avenue SW - 7th Street SW North toward Power House Road

The only access to the City's Water Treatment Plant is a restricted turns intersection from Power House Road to Highway 1. The existing 11th Avenue SW to be redesigned and extended to provide a second connection to Power House Road and also provide access to commercial development to the south. 11th Avenue SW will also need to accommodate future traffic volumes that will be generated from the future Suntec Area and it is unlikely that it is on the correct alignment to service all the needs of the area. When developing a new alignment, it will be important to address dangerous goods route needs for access to the City's Water Treatment Plant. It is envisaged that the new alignment will be determined as part of a future area structure plan for the area.

This new alignment will also help with access to the businesses that are affected by the planned removal of 7th Street access to Highway 1. Developing the alignment through consultation with businesses and the Province, so issues like guide signage and access can be addressed to the satisfaction of businesses in the area.

Box Springs Road NW

This section of roadway currently has a two-lane rural cross section. The road is ultimately planned to have a four-lane urban cross section with an upgraded pavement structure. The forecast daily volume is 6,000 vehicles per day between 23rd Street and Broadway Avenue NW which is low enough that it can remain as two lanes until additional land development beyond the 80,000 planning horizon occurs.

Broadway Avenue – Box Springs to West Boundary Road

This section of roadway currently has a two-lane rural cross section and is ultimately planned to have a four-lane urban cross section with an upgraded pavement structure. The forecast daily volume is 3,900 vehicles per day. Improvements are planned to be staged starting with the first two lanes of a four-lane urban cross section. The traffic forecast is low enough that it can remain as two lanes until additional land development beyond the 80,000 planning horizon occurs.

Brier Park Road – Brier Park Road to Rotary Centennial Dr. NW

The MDP identifies a potential future road connection to support light industrial growth in the area. The functional plan to establish alignment and cross section has not been developed. Re-classification of 10th Avenue between Brier Park Road and Rotary Centennial Way may need to be reviewed as part of the future Brier Park Road extension.

Parkview Drive – Altawana Drive to 12th Street NE

Parkview Drive currently has a four-lane urban cross section from Altawana Drive to Division Avenue except for a section between the approach to Altawana Drive and the approach to 12th Street NE. The road has two lanes going up a steep grade and one lane going down. The forecast daily volume is 27,600 vehicles per day which typically requires two lanes in each direction. Because of the geography of this location, it will be more costly to add the additional southbound lane. It's likely that this can be deferred because traffic delays at Altawana may negate the benefit of the additional lane.

Rotary Centennial Drive - Division Avenue N to Box Springs Road

The roadway currently has a two-lane rural cross section and carries 6,000 vehicles per day east of Box Springs Road and 7,650 west of Division Ave N. These volumes are expected to increase to 11,000 vehicles per day and 8,360 vehicles per day, respectively. Interim designs with single lane travel lane, turning lanes and active transportation facilities will be considered since four traffic lanes may not be needed to support these traffic volumes.

52nd Street Connection – Box Springs Road to Division Avenue

The MDP identifies a future connection between Box Springs Road and Division Avenue to provide more connectivity between the future North Employment Sector and the North Residential Sector. The intention of this connection is to provide relief of traffic through the Box Springs Road corridor. The functional plan to establish alignment and cross section has not been developed.

Planned Improvements Not Related to Development

The additional projects the City is planning are as follows:

Kingsway Avenue – Spencer Street to South Railway Street

While rehabilitating this section of road network to address poor pavement surface condition, explore the potential to introduce active transportation infrastructure, improve access management and optimize the corridor cross section to accommodate present and projected traffic volumes.

3rd Street NW – 2nd Avenue NE to 7th Avenue NW

A multi-use path is planned to be added to this road in 2026 which will be achieved by reducing the width of the driving lanes. The existing volume on the collector road is currently 4,000 vehicles per day and is expected to go up to 5,200 vehicles per day. This corridor is classified as an arterial road even though it is functioning like a collector street in terms of traffic volume. The adjacent land use is a single-family dwelling neighbourhood which also makes it seem more like a collector street than an arterial street.

South Boundary Road and Southlands Drive Intersection

Traffic signals are planned to be installed at this intersection in 2025 due to safety concerns and complex geometry with a long crossing. The intersection currently has a stop sign on Southlands Drive. Each of the approaching legs are two lanes. The roads are attractive for speeding during off-peak hours because of the width of the road and there's no frontage on the road. Southlands Drive has 4,700 vehicles per day on the west side of the intersection and 2,200 east of the intersection. These volumes are expected to remain the same for the forecast scenario. South Boundary Road is expected to increase by 6,000 vehicles per day, ending up at nearly 11,000 vehicles per day in the forecast horizon. Southlands Drive is classified as a collector street and South Boundary Road is classified as an arterial street, both of which are appropriate based on traffic volume.

Potential Improvements Based On TMP Outcomes

Potential improvements to Medicine Hat's Transportation system were identified based on a review of the existing and future conditions, emerging trends and technologies, public engagement, and the Municipal Development Plan. The following lists additional potential improvements that are not already in the road network plan.

Traffic Signal Upgrade Program

The program will start with a Traffic Signal Upgrade Strategy to:

- Create an inventory of all the city-owned traffic signals which will include:
  - Hardware type, age and expected remaining service life
  - Technology of existing equipment indicating their capability of multiple signal timing plans, connectivity with other signals, communications, and other appropriate functional capabilities
- Identify replacement need or removal of signals based on criteria such as age, condition, traffic volumes (declining in the case of signal removal consideration), criticality as part of greater coordinated corridors, frequency of maintenance, and impact on safety and congestion
- Create specifications for replacements signals with considerations for new and emerging technologies, affordability, and multi-modal detection and integration.
- Develop replacement cost estimates and replacement implementation schedule.

An annual traffic signal replacement program will be established with a capital budget to replace the signals upon completion of the Traffic Signal Upgrade Strategy. The implementation schedule will be monitored and updated throughout the program.

Traffic Signal Coordination Project

Several comments were made in the public survey about waiting at traffic signals when there was no traffic using the light that was green. This appears to be especially true during off peak hours. The concerns with unused green time are unnecessary idling, driver frustration, diverting to unsignalized corridors, speeding, and wasted time in the transportation network.

A city-wide traffic signal re-timing project will improve traffic flow and reduce vehicle delays, start and stops, and fuel consumption on major arterials through coordination of traffic signals. A well-timed system uses the downtown core to serve as the reference location for coordination and establishing timing plans for the rest of the network. While the downtown also has many traffic signals, the progression should best account for traffic slowing down to park and the pedestrian activity and accommodating sufficient walk time for people of all ages and abilities. Updated traffic counts will be collected at the signalized intersections appropriate for coordination and site visits will be conducted to confirm travel behaviours and key traffic generators and destinations prior to creating updated signal timing plans. Once the comprehensive timing is complete, a city-wide review will be done every three to five years to refine and adapt signal timing based on changes in traffic patterns and changes within the transportation system.

Comprehensive Corridor Studies

Comprehensive corridor studies will evaluate many aspects of mobility, when context appropriate, including safety, accessibility, land use, and efficiency as identified in Action A.1.3. Each of the corridor studies will focus on the existing conditions of the corridor to create a problem definition statement focusing on mobility, safety, and accessibility for all road users. Conceptual design options for the corridors should also be created that align with the vision and guiding principles of the Transportation Master Plan, Active Transportation Strategy, and Transportation Safety Strategy. As the City moves forward with the implementation of the three plans, new corridors might be identified and similar study objectives can be applied to additional corridors. Potential study corridors currently identified during the creation of the three plans is listed below and are selected due to a higher number of signals, proposed active transportation facilities, and from consultations:

- 13th Avenue SE (Dunmore Rd SE to Strachan Road SE) – This corridor functions as an arterial and has been identified as a proposed major link in the Active Transportation Strategy. It provides a major connection between Highway 1 and Dunmore. Four intersections in the corridor are listed in the 20 highest collision frequency locations at signalized intersections.

- College Avenue SE (College Drive SE to Sierra Boulevard SW) – This corridor has been identified for a major crossing improvement at Highway 1 to improve accessibility and safety of active road users.
- Dunmore Road (13th Street SE to just south of Strachan Road SE) – This major arterial has a high number of signals (municipal and provincial) and is identified as a proposed major active transportation link. This corridor received a significant number of comments in the public engagement survey regarding vehicle delays. The three intersections with the most severe collisions are located in the corridor.
- Division Avenue North/Altawana Drive NE (to Parkview Drive NE) – This corridor is identified as a proposed major cycling route and from 12th Street to 20th Street was identified for a painted bike lane upgrade.
- Kingsway Road (Spencer Street SE to 1st Street SE) – This corridor is identified as a proposed major cycling route.
- Maple Avenue/Allowance Avenue SE (1st Street SE to Kingsway Avenue SE) – A major crossing improvement was identified at the Allowance Avenue SE at Kingsway Avenue SE. Part of this corridor was identified as a major proposed active transportation link. In the public survey, signal timing along sections of this corridor was noted as an issue.
- Rotary Centennial Drive (Box Springs Road NW to Division Avenue N) - This corridor is identified as a proposed major cycling route.
- 3rd Street NW (west of Garden Place NW to Finlay Bridge) - This corridor is identified as a proposed major cycling route.

All of these corridors are transit routes and truck routes where active transportation routes are desired which necessitates separation between motor vehicles and bicycles.

ACTIVE TRANSPORTATION AND ROAD SAFETY PROJECTS

Active Transportation and road safety projects are being developed as part of the Active Transportation Strategy and the Transportation Safety Strategy. These projects will form part of the TMP.

8.2 Road Network Plan

The expansion of the road network will accommodate population and employment growth while enhancing the active transportation network, transit operations, and overall safety. Many of the new roads that are planned are driven by development and these are shown on the Future Road Network in **Figure 8-1.** The map shows the long term road network beyond an 80,000 population.

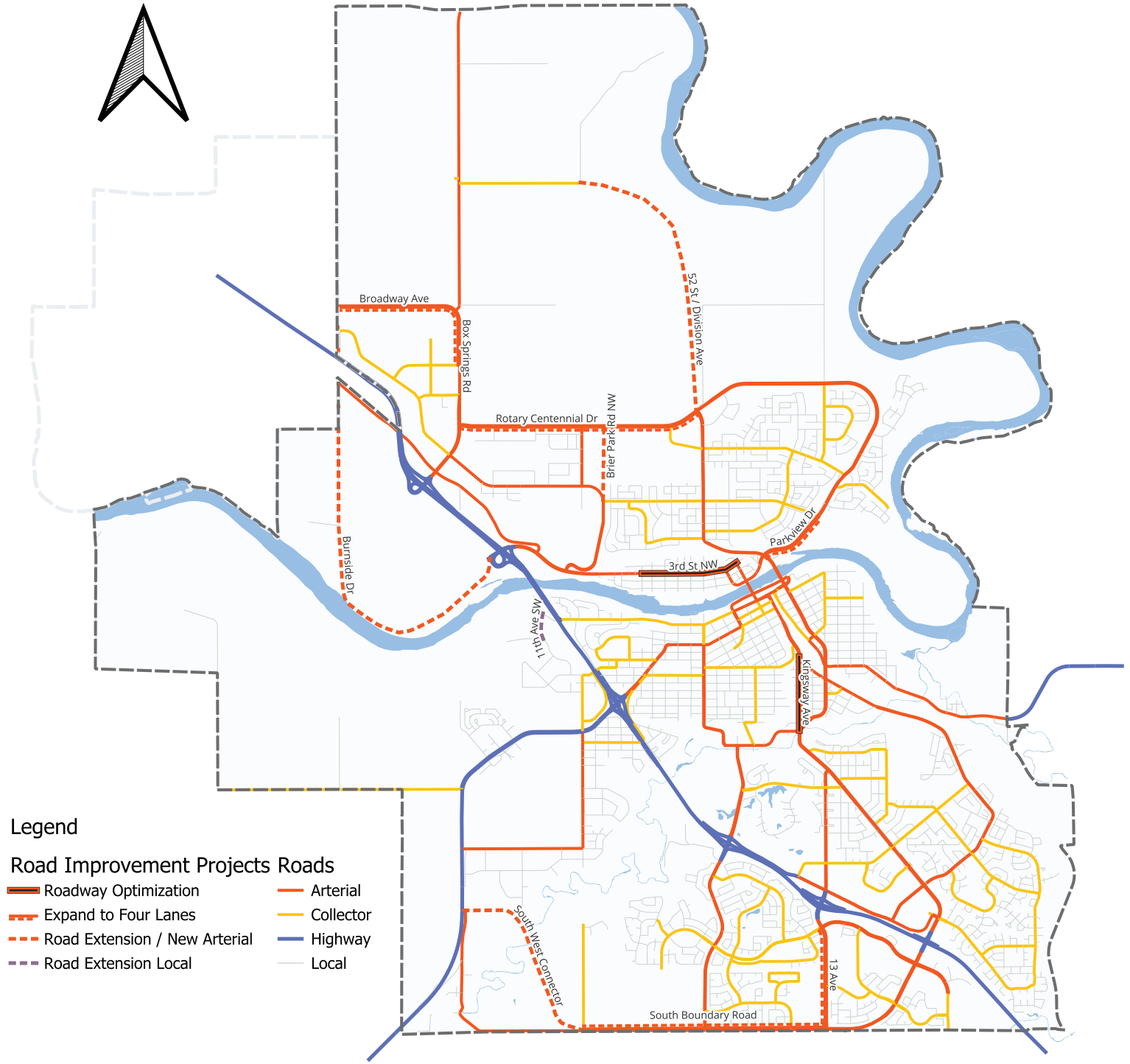


Figure 8-1
Future
Road Network

9 IMPLEMENTATION PLAN

The TMP is designed to guide the City's priorities, actions and investments in the transportation network over the next 10 years. As the plan progresses, priorities for the City may evolve over time. The TMP establishes policy directions with , but continual monitoring of the plan and implementation priorities are need to be constantly evaluated as input from the public and available data evolves.

9.1 How We Prioritized Actions

The policies developed as part of the TMP and their associated actions will help drive city investment in projects and programs.

Evaluation criteria was used in determining the priority of all the action items identified. The criteria are measures of the guiding principles discussed in Section 3 of this TMP. The evaluation criteria and their alignment with the guiding principles is shown in the following **Table 9-1**. In addition to prioritizing each action item, further prioritization of Action A.1.3 Complete Comprehensive Corridor Studies was completed to determine the priority of the corridors identified. In consultation with City staff and alignment with the TMP, ATS and TSS visions, the weights were applied to the evaluation criteria. The weightings used are shown below each evaluation criteria.

9.2 Prioritized Actions

The action items in Section 7 of the TMP were categorized into two groups, Program/Process/Practice which refers to an ongoing or recurring initiative that involves establishment of frameworks and operational procedures to support transportation initiatives, and Project/Study/Strategy which is a more specific goal-oriented task requiring planning funding and usually execution within a defined timeframe. The **Table 9-2** shows the priority of Program/Process/Practice actions and **Table 9-3** shows the priority of Project/Study/Strategy.

Table 9-1 Action Item Prioritization Evaluation Criteria

Guiding Principle	Improves Safety (8)	Improves Accessibility (8)	Improves Equity (5)	Improves Financial Health (3)	Addresses Transportation System Gaps (4)	Optimizes Traffic Flow (7)
Active Transportation	✔	✔	✔		✔	
Safety	✔		✔			
Economic Sustainability		✔		✔		✔
Transportation Culture	✔		✔			
Land Use		✔		✔		
Public Transit	✔	✔	✔			
Environmental Sustainability		✔			✔	
Technology		✔		✔		
Climate Resilience	✔			✔		

Timeframe: Timelines are included for the execution of the action items; generally higher priority action items will have a shorter implementation timeframe. There are some action items that may be lower priority and a shorter implementation timeframe due to ease of execution or vice-versa. The timelines reflect duration of resources are allocated and the action is initiated. The time periods are broken down as the following: Ongoing, <5 years, 5 to 10 years, and > 10 years.

Responsibilities: The tables also show who is primarily and secondarily responsible for execution of the action item. Some action items span multiple departments in the City and with external organizations highlight the collaborative effort needed to achieve the Vision of this TMP. A detailed breakdown of the action item prioritization scoring is found in **Appendix A**.

Cost: High level cost estimates are available for project related action items only as its difficult to quantify the financial resources needed to execute programs and practices. The costs are high level at this stage. As implementation of the TMP progresses, more detail of the scope of projects will be known and more refined cost estimates can be determined. The cost groupings are broken down as the following:

- $: less than $100,000
- $$: $100,000 to $500,000
- $$$: more than $500,000

Table 9-2 Prioritized Actions - Programs / Process / Practice

Action Item Number	Action Item	Primary Responsibility	Secondary Responsiblity	Timeframe
A.2.1	Continue to invest in Active Transportation projects including but not limited to curb ramps, sidewalks, protected bike lanes, and multi-use paths.	Municipal Works	Planning and Development Services	Ongoing
A.10.1	As part of every active transportation project, consider maintenance / operational budget adjustments to support implementation of the project.	Municipal Works		Ongoing
A.1.2	Review current maintenance policies, standards, programs, and operational practices to better support active transportation, transit, and transportation safety.	Municipal Works		< 5 Years
A.13.1	Apply sustainable transportation design elements to proposed site developments and include factors that align with the Safe Systems Approach and encourage sustainable transportation modes.	Planning and Development Services	Municipal Works	Ongoing
A.1.1	Before planning each road surfacing or other significant road works project, evaluate the opportunity to improve the walking and/or cycling environment as part of the project.	Municipal Works	Planning and Development Services	Ongoing
A.2.3	Establish an Intersection Improvement Study Budget.	Municipal Works		5 to 10 Years
A.5.1	Continue to work collaboratively with the Province on strategically plan enhancements roadways within provincial jurisdiction.	Municipal Works	Planning and Development Services	Ongoing
A.15.2	Provide dedicated staff to implement the TMP, TSS, Active Transportation Strategy and develop travel demand management programming.	Planning and Development Services		< 5 Years
A.12.2	Develop a Traffic Calming Policy to proactively and consistently manage traffic concerns from the public in neighbourhoods.	Municipal Works		5 to 10 Years

Table 9-2 Prioritized Actions - Programs / Process / Practice (Cont'd)

Action Item Number	Action Item	Primary Responsibility	Secondary Responsiblity	Timeframe
A.14.1	Update development requirements for roadway construction that's driven by development.	Planning and Development Services	Municipal Works	5 - 10 Years
A.5.3	Advocate for higher orders of government to invest in all modes.	Planning and Development Services		Ongoing
A.5.2	Continue to support the coordination of planning between neighbouring municipalities as described in the Inter Municipal Development Plan.	Planning and Development Services	Municipal Works	Ongoing
A.3.2	Update the Infrastructure Optimization Strategy.	Municipal Works		5 - 10 Years
A.15.1	Grow a culture of safety, healthy living, and sustainability within the City of Medicine Hat.	Communications, Engagement and Marketing		> 10 Years
A.4.4	Focus traffic modelling efforts on Microscopic models rather than Macroscopic Models.	Municipal Works		Ongoing

Table 9-3 Prioritized Actions - Projects

Action Item Number	Action Item	Primary Responsibility	Secondary Responsiblity	Timeframe	Cost
A.3.3	Create a Traffic Signal Upgrade Strategy.	Municipal Works		5 to 10 Years	$$
A.1.3	Complete Comprehensive Corridor Studies.	Municipal Works		< 5 Years	$$$
A.9.1	Develop an Active Transportation Strategy and support the policies and action items in the Strategy.	Municipal Works	Municipal Works	< 5 Years	$$
A.12.1	Develop a Transportation Safety Strategy and support the policies and action items in the Strategy.	Municipal Works	Municipal Works	< 5 Years	$$
A.11.1	Adopt Multi-Modal Level of Service Analysis in Traffic Impact Studies.	Planning and Development Services	Municipal Works	< 5 Years	n/a
A.13.2	Review development projects to identify opportunities to modernize the plan with active transportation and neighbourhood traffic management practice.	Municipal Works	Planning and Development Services	Ongoing	n/a
A.7.1	Continue to support Emergency Management Plans.	Municipal Works	Fire and Emergency Services	< 5 Years	n/a
A.1.4	Update the Municipal Servicing Standards Manual sections related to active transportation, transit facilities, access management, and speed management.	Municipal Works	Transit	< 5 Years	n/a

Table 9-3 **Prioritized Actions - Projects** (cont'd)

Action Item Number	Action Item	Primary Responsibility	Secondary Responsiblity	Timeframe	Cost
A.5.4	Complete a Downtown Parking Study	Municipal Works	Municipal Works	< 5 Years	$$
A.8.1	Complete a Transit Master Plan	Transit	Municipal Works	5 - 10 Years	$$
A.2.2	Expand the Road Safety Project Fund	Municipal Works	Finance	Ongoing	n/a
A.4.1	Develop a Smart Mobility Strategy	Municipal Works	Information Technology	5 - 10 Years	$$
A.6.3	Complete a Curbside Management Strategy	Municipal Works	Municipal Works	5 - 10 Years	$$
A.4.3	Evaluate the need to increase the number of EV charging locations throughout the City	Utility Distribution Systems	Planning and Development Services	Ongoing	n/a
A.3.4	Create an Annual Traffic Signal Replacement Budget	Municipal Works		< 5 - 10 Years	$$$
A.8.2	Develop a transit-specific communications and engagement strategy to support education, awareness, and public participation in Transit Operations	Communications, Engagement and Marketing		5 - 10 Years	$
A.15.3	Develop Wayfinding/Tourist Transportation Management Strategy	Communications, Engagement and Marketing	Planning and Development Services	5 - 10 Years	$$
A.4.2	Prepare for the increased demand in electricity for the increasing number of electric vehicles that will be sold on the market by completing an evaluation of the City's power supply system.	Utility Distribution Systems		> 10 years	$$

Table 9-3 Prioritized Actions - Projects (cont'd)

Action Item Number	Action Item	Primary Responsibility	Secondary Responsiblity	Timeframe	Cost
A.6.1	Complete a Goods Movement Strategy.	Municipal Works		Ongoing	n/a
A.6.2	Prepare for new delivery technologies.	Municipal Works		> 10 Years	$
A.3.1	Continue to develop a Transportation System Asset Management Strategy.	Municipal Works		> 10 Years	$$
A.3.5	Traffic Signal Timing Coordination Project.	Municipal Works	Planning and Development Services	> 10 Years	$$
A.8.3	Review age of bus fleet and potential for electric vehicle fleet conversion and automation of transit vehicles.	Fleet, Facilities, and Asset Management		> 10 Years	$

Generally, the higher priority actions are related to active transportation and safety management planning. These items will have the most significant impact in achieving the vision of the TMP. The highest priority project is completing the comprehensive corridor studies. A breakdown of which corridors should be studied first is also available in **Appendix A.**

9.3 Road Infrastructure Cost Estimates

Future road network capital costs are summarized in the following **Table 9-4**. The table mainly includes developer driven projects and their associated costs. Costs are estimated costs that have been escalated from the time of original cost estimate and are subject to change as the timing to construct these works progresses or by calculating cost by using a unit cost. City driven road projects are also included. Estimated timeframes of implementing these road network projects are also included. As many of these projects are developer driven, it is difficult to give an accurate estimate. Variability in funding sources and approval timelines for private development projects are factors affecting the schedule of these projects. Many are estimated to occur beyond 10 years. City driven projects are expected to have a shorter implementation timeframe of less than 10 years.

Table 9-4 Road Network Upgrades Cost Estimates

Corridor	Limits	Projects	Funding Contribution	Cost	Timeframe
South Boundary Road	13th Avenue SE to South Ridge Drive	4 Laning	Development	$6,880,000	>10 years
	South Ridge Drive to 10th Avenue SW	4 Laning	Development	$10,320,000	>10 years
SW Medicine Hat Connector	Range Road 62 and Cactus Coulee Road	New Road Construction	Development	$32,000,000	>10 years
13th Avenue SE	Strachan Road to South Boundary Road	4 Laning	Development	$9,000,000	>10 years
Burnside Drive	Hwy 1 at 3rd Street to 23rd Street	New Road Construction	Development	$23,330,000	>10 years
11th Avenue SE	7th Street SW North toward Power House Road	New Road Construction	Development	$1,570,000	>10 years
Box Spring Road NW	Box Spring Street SW and Broadway Avenue NW	4 Laning	Development	$4,225,000	>10 years
Broadway Avenue	Box Springs Rd NW to Boundary NW	4 Laning	Development	$6,880,000	>10 years
Brier Park Road	Brier Park Road to Rotary Centennial Drive NW	New Road Construction	Development	$16,840,000	>10 years
Parkview Drive	Altawana Drive to 12th Street NE	4 Laning	Development	$5,400,000	>10 years
Rotary Centennial Drive	Division Ave N to Box Springs Road	4 Laning	Development	$13,975,000	5 to 10* years
52nd Street Connection	Box Springs Road to Division Avenue	New Road Construction	Development	$16,840,000	> 10 years
Kingsway Avenue	Spencer Street to South Railway Street	Roadway Optimization	City	To be determined	5 to 10 years
3rd Street NW	2nd Avenue NE to 7th Avenue NW	Roadway Optimization	City	$7,450,000	<5 years
South Boundary Road and Southlands Drive Intersection	Southlands Drive Intersection	Traffic Signal Installation	City	$310,000	<5 years

** The work to construct the first two lanes is expected to commence in 2028*

9.4 Funding Sources

The City's two primary sources of funding are offsite levies and property taxes. In addition to this, external funding sources are available from the provincial and federal levels of government. At the provincial level the Local Government Fiscal Framework – Capital Funding and Operating Funding is available which replaces the Municipal Sustainability Initiative. The expected outcomes of the program align with the vision and guiding principles of the TMP and include increased economic activity in Alberta municipalities and Metis Settlements, increased livability of Alberta municipalities and Metis Settlements, and increased resilience of municipalities and Metis Settlements in response and adaptation to the effects of disasters extreme weather events and changing local conditions. Capital project funds available in 2025 to municipalities other than Edmonton and Calgary will be $386 million.[2] Available funds for operating budgets is a smaller pot for all municipalities to split at $60 million per year. Eligible capital projects relevant to the TMP include roads and bridges and public transit vehicles or transit facilities.

At the federal level many programs are available. Some programs include:

- **Canada Public Transit Fund**: A fund announced in 2024 that will provide $3 billion per year to communities of all sized in Canada for public transit and active transportation beginning in 2026-2027. The goals of the fund align with the vision and guiding principles of this TMP and are to increase the use of public transit and active transportation relative to car travel, increase the housing supply and affordability as part of complete, transit-oriented communities, help mitigate climate change and improve climate resilience, improve public transit and active transportation options for all, especially Indigenous People and equity-deserving groups.[3]
- **Canada Community-Building Fund**: This federal fund is distributed to the provinces who in turn provide the fundings to local communities. The fund is used to support infrastructure projects that foster economic growth, a clean environment, and community development. Eligible projects may include roads, bridges, and recreational infrastructure.[4]

2 https://www.alberta.ca/local-government-fiscal-framework-capital-funding
3 https://housing-infrastructure.canada.ca/cptf-ftcc/index-eng.html
4 Canada Community-Building Fund Program Guidelines | Municipal Affairs, August 27, 2024

Appendix A

Direction	Policy	Action #	Action	Action Type	Improves Safety	Improves Accessibility	Improves Equity	Improves Financial Health	Addresses Transportation System Gaps	Optimizes Traffic Flow	Total Score	Primary Responsibility	Secondary Responsibility	Cost ($.$$.$$$)	Timeframe
Road Network	Create a multi-modal mobility system that is universally designed and accessible regardless of age, ability, income, background, or mode	A.1.1	Before planning each road surfacing or other significant road works project, evaluate the opportunity to improve the walking and/or cycling environment as part of the project:	Program/Process/Practice	2	2	2	2	2	0	52	Municipal Works	Planning and Development Services	N/A	ongoing
		A.1.2	Review current maintenance policies, standards, programs, and operational practices to better support active transportation, transit, and transportation safety	Program/Process/Practice	3	3	3	0	0	0	57	Municipal Works		N/A	< 5 years
		A.1.3	Complete Comprehensive Corridor Studies	Project/Study/Strategy	3	3	3	1	2	2	68	Municipal Works		$$$	<5 years
		A.1.4	Update the Municipal Servicing Standards Manual sections related to active transportation, transit facilities, access management, and speed management	Project/Study/Strategy	3	2	2	0	1	1	50	Municipal Works		N/A	<5 years
	Roadway projects will prioritize active transportation, and road safety improvements over road expansion	A.2.1	Continue to invest in Active Transportation projects including but not limited to curb ramps, sidewalks, protected bike lanes, and multi-use paths.	Program/Process/Practice	3	3	3	0	3	0	69	Municipal Works	Planning and Development Services	N/A	ongoing
		A.2.2	Expand the Road Safety Project Fund	Project/Study/Strategy	3	1	2	0	2	1	48	Municipal Works	Finance	N/A	ongoing
		A.2.3	Establish an Intersection Improvement Study Budget	Program/Process/Practice	3	3	2	0	0	0	52	Municipal Works		N/A	5 to 10 years
	Invest in optimization and efficiency of existing infrastructure prior to investing in roadway expansion	A.3.1	Continue to develop an Transportation System Asset Management Strategy	Project/Study/Strategy	1	0	0	3	0	0	17	Municipal Works		$$	> 10 years
		A.3.2	Update the Infrastructure Optimization Strategy	Program/Process/Practice	1	1	0	3	0	2	23	Municipal Works		$$	5 to 10 years
		A.3.3	Create a Traffic Signal Upgrade Strategy	Project/Study/Strategy	2	2	2	0	0	3	38	Municipal Works		$$	5 to 10 years
		A.3.4	Create an Annual Traffic Signal Replacement Budget	Project/Study/Strategy	1	2	2	0	0	3	30	Municipal Works		$$$	> 10 years
		A.3.3	Traffic Signal Timing Coordination Project	Project/Study/Strategy	2	0	0	0	0	3	16	Municipal Works	Planning and Development Services	$$	> 10 years
	Continually monitor, evaluate, and implement new and innovative technologies that support enhanced mobility	A.4.1	Develop a Smart Mobility Strategy	Project/Study/Strategy	2	2	0	2	2	2	42	Municipal Works	Information Technology	$$	5 to 10 years
		A.4.2	Prepare for the increased demand in electricity for the increasing number of electric vehicles that will be sold on the market by completing an evaluation of the City's power supply system.	Project/Study/Strategy	0	0	1	3	2	0	22	Utility Distribution Systems		$$	> 10 years
		A.4.3	Evaluate the need to increase the number of EV charging locations throughout the City	Project/Study/Strategy	0	2	1	1	3	0	32	Utility Distribution Systems	Planning and Development Services	N/A	ongoing
		A.4.4	Focus traffic modelling efforts on Microscopic models rather than Macroscopic Models	Program/Process/Practice	0	0	0	2	0	3	6	Municipal Works		N/A	ongoing
	Form partnerships and programs to advance initiatives that increases mobility, safety, and healthy living for residents, and encourages travel by sustainable modes.	A.5.1	Continue to work collaboratively with the Province on strategically plan enhancements roadways within provincial jurisdiction	Program/Process/Practice	3	3	1	0	0	3	47	Municipal Works	Planning and Development Services	N/A	ongoing
		A.5.2	Continue to support the coordination of planning between neighbouring municipalities as described in the Inter Municipal Development Plan.	Program/Process/Practice	1	2	1	0	1	2	29	Municipal Works	Municipal Works	N/A	ongoing
		A.5.3	Advocate for higher orders of government to invest in all modes:	Program/Process/Practice	1	1	1	3	2	0	36	Municipal Works		N/A	ongoing
		A.5.4	Complete a Downtown Parking Study	Project/Study/Strategy	3	3	0	1	1	3	49	Municipal Works		$$	<5 years
	Enable the safe and efficient movement of goods and services	A.6.1	Complete a Goods Movement Strategy	Project/Study/Strategy	1	1	0	1	1	2	21	Municipal Works	Municipal Works	$$	ongoing
		A.6.2	Prepare for new delivery technologies	Project/Study/Strategy	1	1	0	1	1	1	21	Municipal Works		N/A	> 10 years
		A.6.3	Complete a Curbside Management Strategy	Project/Study/Strategy	2	2	1	0	2	2	41	Municipal Works	Municipal Works	$$	5 to 10 years
	Each area of the City should efficiently evacuate and be reached by emergency response vehicles during extreme weather events in a timely manner	A.7.1	Continue to support Emergency Management Plans	Project/Study/Strategy	3	1	3	0	2	2	53	Municipal Works	Fire and Emergency Services	$$	<5 years
Transit	Support programs, projects, and initiatives that improve transit	A.8.1	Complete a Transit Master Plan	Project/Study/Strategy	2	2	2	1	2	1	49	Transit	Municipal Works	$$	5 to 10 years
		A.8.2	Develop a transit-specific communications and engagement strategy to support education, awareness, and public participation in Transit Operations	Project/Study/Strategy	1	1	1	0	2	1	27	Communications, Engagement and Marketing		N/A	5 to 10 years
		A.8.3	Review age of bus fleet and potential for electric vehicle fleet conversion and automation of transit vehicles	Project/Study/Strategy	0	0	0	1	0	0	3	Fleet, Facilities, and Asset Management		$	> 10 years
Active Transportation	Plan and design an active transportation network that is universally designed and accessible regardless of age, ability, income, or background	A.9.1	Develop an active transportation strategy and support the policies and action items in the Strategy	Project/Study/Strategy	3	3	3	0	2	1	65	Municipal Works	Municipal Works	$$	<5 years
	Maximize the benefits of investments through enhanced maintenance and renewal of existing active transportation facilities	A.10.1	As part of every active transportation project, consider maintenance / operational budget adjustments to support implementation of the project	Program/Process/Practice	3	2	2	3	1	0	59	Municipal Works		N/A	ongoing
	Active Transportation is always included in new development	A.11.1	Adopt Multi-Modal Level of Service Analysis in Traffic Impact Studies:	Project/Study/Strategy	2	2	3	3	2	0	60	Planning and Development Services	Municipal Works	N/A	<5 years
Safety	Use the Safe System approach to road safety, which involves safe roads, safe speed, safe road users and safe vehicle	A.12.1	Develop a Transportation Safety Strategy and support the policies and action items in the Strategy	Project/Study/Strategy	3	2	3	1	2	3	62	Municipal Works		$$	<5 years
		A.12.2	Develop a Traffic Calming Policy to proactively and consistently manage traffic concerns from the public in neighbourhoods	Program/Process/Practice	3	1	1	0	1	0	39	Municipal Works		N/A	5 to 10 years
Land Use	Transportation planning to support land use planning as described in the MDP	A.13.1	Apply sustainable transportation design elements to proposed site developments and include factors that align with the Safe Systems Approach and encourage sustainable transportation modes	Program/Process/Practice	3	3	2	0	1	0	56	Planning and Development Services	Municipal Works	N/A	ongoing
		A.13.2	Review development projects to identify opportunities to modernize the plan with active transportation and neighbourhood traffic management practice	Project/Study/Strategy	3	3	2	0	2	0	60	Municipal Works	Municipal Works	N/A	ongoing
	Infrastructure projects to match the demand generated by adjacent land use and intensities	A.14.1	Update development requirements for roadway construction that's driven by development.	Program/Process/Practice	2	1	1	2	1	1	37	Municipal Works	Municipal Works	N/A	5 to 10 years
Culture	Grow a culture of safety, healthy living, and sustainability within the City of Medicine by implementing innovative programs and policies that encourage a shift to transportation modes other than single occupancy vehicles and promote safe travel behaviours	A.15.1	Grow a culture of safety, healthy living, and sustainability within the City of Medicine Hat	Program/Process/Practice	2	0	0	0	1	0	20	Communications, Engagement and Marketing		N/A	> 10 years
		A.15.2	Provide dedicated staff to implement the TMP, TSS, Active Transportation Strategy and develop travel demand management programming	Program/Process/Practice	2	2	2	0	2	0	46	Municipal Works		N/A	< 5 years
		A.15.2	Develop Wayfinding/Tourist Transportation Management Strategy	Project/Study/Strategy	1	2	0	0	1	1	24	Communications, Engagement and Marketing	Planning and Development Services	$$	5 to 10 years

Prioritization Evaluation Criteria Weighting

Improves Safety	Improves Accessibility	Improves Equity	Improves Financial Health	Addresses Transportation System Gaps	Optimizes Traffic Flow
8	6	5	3	4	7

Prioritization Evaluation Criteria Scoring

0	No Change
1	Minor Improvement
2	Moderate Improvement
3	Significant Improvement

Cost

$	less than $100,000
$$	$100,000 to $500,000
$$$	more than $500,000

Comprehensive Corridor Studies Ranked

Corridor	Improves Safety	Improves Accessibility	Improves Equity	Improves Financial Health	Addresses Transportation System Gaps	Optimizes Traffic Flow	Total Score	Priority
Dunmore Road (Spencer Street to just south of Strachan Road SE)	2	2	3	1	2	3	75	1
13th Avenue SE (Dunmore Road SE to Strachan Road SE)	2	2	3	1	2	2	68	2
Division Avenue North/Altawana Drive (Parkview Drive NE to Parkview Drive NE)	2	2	3	1	2	2	68	2
Kingsway Road (Spencer Street SE to 1st Street SE)	2	2	3	1	2	2	68	2
Maple Avenue/Allowance Avenue SE (1st Street SE to Kingsway Avenue SE)	2	2	2	1	2	2	63	3
College Avenue SE (College Drive SE to Sierra Boulevard SW)	2	2	1	1	2	2	58	4
3rd Street NW (west of Garden Street NW to Finaly Bridge)	2	2	1	1	2	0	44	5
Rotary Centennial Drive (Box Springs Road NW to Division Avenue N)	1	2	1	1	2	0	36	6

Prioritization Evaluation Criteria Weighting	
0	No Change
1	Minor Improvement
2	Moderate Improvement
3	Significant Improvement

Weighting					
Improves Safety	Improves Accessibility	Improves Equity	Improves Financial Health	Addresses Transportation System Gaps	Optimizes Traffic Flow
8	6	5	3	4	7