



GOLDEN TRANSPORTATION PLAN – FINAL DRAFT

TOWN OF GOLDEN

August 9, 2022



PREPARED FOR:

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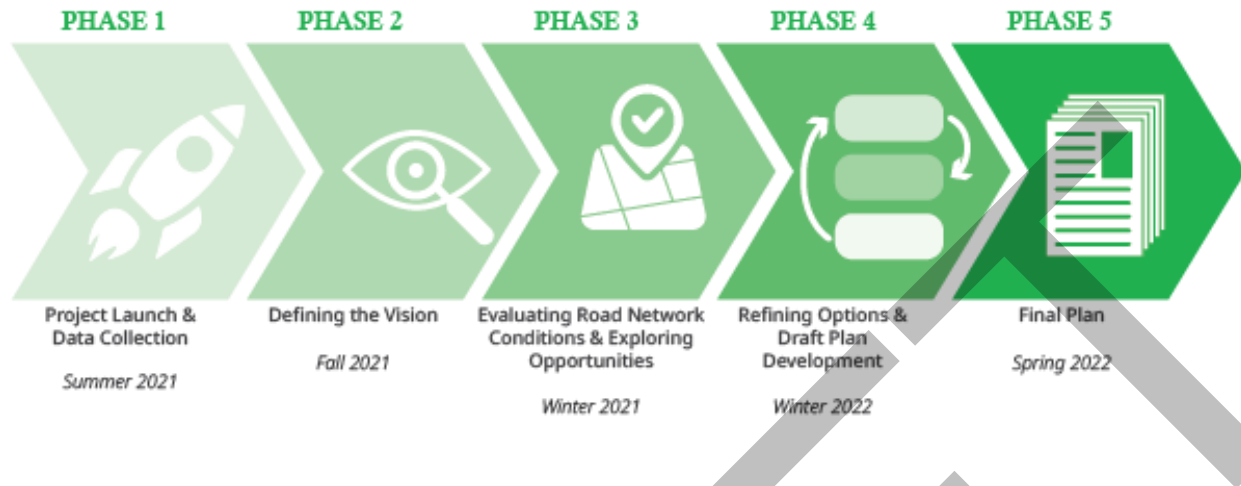
EXECUTIVE SUMMARY

PURPOSE OF THE PLAN

The Town is committed to making the transportation network safer and more connected for all ages and abilities. The Golden Transportation Plan (GTP) was developed in combination with the Golden Active Transportation Network Plan (ATNP) to help establish an integrated transportation system. Both documents will assist in connecting residents and visitors of all ages and abilities to community destinations, downtown businesses, Kicking Horse Mountain Resort, resort amenities, and year-round attractions. The GTP and ATNP will guide Golden's investments in transportation over the next 20 years to accommodate projected growth and anticipated developments in the Town.

The Town developed the GTP over a 10-month period starting in July 2021. The Plan is based on Canadian best practices, local expertise, and public input. The GTP process includes five phases:

- **Phase 1: Project Launch and Data Collection (Summer 2021)** involves collecting relevant background information and data and conducting traffic counts,
- **Phase 2: Defining the Vision (Fall 2021)** involves defining a direction or vision for the future of Golden's transportation network through the development of a vision statement and corresponding goals and objectives to help achieve the Vision.
- **Phase 3: Evaluating Road Network Conditions and Exploring Opportunities (Winter 2021)** involves
 - reviewing the collected data, establishing projected growth, and developing the base transportation demand model.
 - Exploring possibilities for improvements and strategies to enhance the transportation network before developing an integrated plan that reflects the aspirations and directions of the community.
- **Phase 4: Refining Options and Draft Plan Development (Winter 2022)** involves
 - Incorporating public input and refining potential solutions to ensure they are in line with the Plan goals and objectives,
 - Prioritizing projects and developing an implementation and funding strategy that will ensure that the Plan is affordable and practical.
- **Phase 5: Final Plan (Spring 2022)** involves gathering and incorporating final input to ensure the Final Plan meets the needs of the community.



COMMUNITY CONTEXT

The Town of Golden, British Columbia (BC) has a permanent population of approximately 3,708 (at the time of the 2016 census) while the surrounding area has an additional 3,155 residents. The community is an approximately 2.5-hours drive west of Calgary, AB; 90-minutes drive east of Revelstoke, BC; and one hour north of Radium Hot Springs, BC. The community’s desirable location makes it a great place for a vacation, a recreational home, and is a retirement option for many. With a “resort municipality” designation, Golden’s population can fluctuate as tourists, seasonal workers, and short-stay recreationalists travel in and out of the Town.

At only 11.41 square kilometres, Golden is a relatively compact community despite being composed of primarily single-family residential neighbourhoods. Most of Golden’s residents live south of the Kicking Horse River on a peninsula that is surrounded by the Columbia River, forests, and mountains. North of the river, there is low density residential development northwest of downtown Golden and south of Highway 1, the railway, and the industrial area. There are also areas of low-density residential developments north of Highway 1; including, behind the highway commercial near Hospital Creek, and areas off of Golden Donald Upper Road and Lafontaine Road.

Golden provides both residents and visitors with numerous amenities, including trails and parks, such as the Spirit Square and the river paths/Rotary Trails, and abundant recreational activities as the Town is nestled between the Rockies and the Purcells.

The Town’s existing community plans and bylaws helped to set the foundation of the Golden Transportation Plan (GTP) by highlighting the Town’s values and priorities were used to gain an understanding of projects and initiatives that are already underway. The following documents were reviewed to help inform the development of the Transportation Plan:

- Official Community Plan (2008)
- Housing Needs Assessment (2021)

- Affordable Housing Strategy (2021)
- Subdivision and Development Servicing Bylaw (Bylaw 1223, 2008)
- Zoning Bylaw (Bylaw 1294, 2011)
- Age Friendly Community Plan (2014)
- Resort Development Plan (2019-2022)
- Surface Condition Report (2018)
- Infrastructure Replacement Priority Plan (2018)

Throughout the process of creating the GTP, there was a strong desire by the community for the GTP to incorporate policies, actions and plans related to active transportation, where possible. The Active Transportation Network Plan (ATNP), attached in **Appendix H**, was created concurrently with the GTP to ensure this alignment.

THE VISION

A transportation vision is created to provide a picture or an idea of the Town in the future. A clear vision sets the stage to identify goals, objectives and targets that help make the vision a reality.

The ATNP and GTP have developed a shared vision and set of goals and objectives for Golden's transportation networks. The vision was based on a combination of the Town's existing commitments and plans and feedback from Town staff.

Golden's vision of its transportation network is as follows:

*"Residents and visitors of the Town of Golden enjoy an **active lifestyle** situated between the Rockies and the Purcells.*

*The **integrated and accessible multi-modal** transportation network enhances this lifestyle, fostering a **vibrant and sustainable** community."*

The goals of the GTP were developed using themes presented in the Town's Official Community Plan (OCP). They are intended to direct the Town to realize the vision, and are as follow.



Health and Safety:

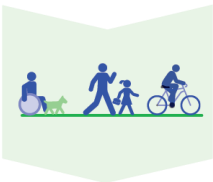
Provide a safe network for all road users.

Support the health of both people and the environment by encouraging active transportation and reductions in vehicle emissions.



Integrated

Provide an integrated network with various options for moving within and beyond the Town.



Accessible

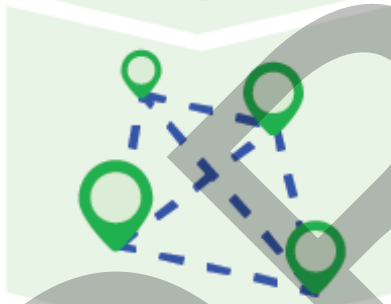
Provide an accessible network that allows people to move throughout the community regardless of age, ability, and income.

Objectives are specific actions and measurable steps that help reach the goal. The following objectives were developed for each of the goal theme identified above.



Health and Safety

- Review and update transportation planning policies and design standards to align with latest research and best practices
- Implement intersection improvement recommendations to improve safety and efficiency, considering all road users



Integrated

- Close identified gaps in transportation network
- Revise road classifications to better suit the desired road operation and adjacent land uses
- Support efforts to explore implementing local or on-demand transit service (ex. Shuttle service to kicking horse)¹
- Collaborate with BC transit to explore potential future transit initiatives¹



Accessible

- Collaborate with community groups and businesses to understand how to improve accessibility of the community

¹ Based on a recent review, it was determined that providing transit service in Golden is currently not viable. Transit improvements would be considered only once significant growth in the community is experienced.

THE FUTURE OF TRANSPORTATION IN GOLDEN

To evaluate the future traffic operating conditions and develop a base-case for recommending future improvements, a transportation demand model was developed. The model includes the 2031 (10-year) and 2041 (20-year) horizons and was developed for the weekday afternoon (PM) period.

As part of the evaluation, the capacities of the study intersections were reviewed and a roadway corridor review, and network safety review was conducted. This resulted in several recommendations for Golden’s transportation network.

Intersection Capacity Review

Traffic analysis was performed for the study intersections. The overall intersection Level of Service (LOS) for all studied intersections is expected to be LOS C or better. However, some concerns are expected to arise at the individual turning movement level for several of the study intersections by 2031 and 2041 (for background on LOS, refer to **Section 4.2.2**). **Table E.1** highlights these intersections and provides potential improvement measures to mitigate the expected delays. Further discussion on each intersection is provided in **Section 5.1.3**.

Table E.1 2031 and 2041 Intersection Operational Performance and Improvements

Intersection	Overall Intersection LOS		Improvements (Timeline)
	2031 Horizon	2041 Horizon	
Trans Canada Hwy & Hwy 95	<ul style="list-style-type: none"> AM Peak Hour LOS A (EBL LOS F) PM Peak Hour LOS A (EBL LOS F) 	<ul style="list-style-type: none"> AM Peak Hour LOS C (EBL LOS F) PM Peak Hour LOS C (EBL LOS F) 	Signalize (by 2031)
Hwy 95 (10 Ave N) & 6 St N	<ul style="list-style-type: none"> AM Peak Hour LOS A PM Peak Hour LOS A (EBL/R LOS E) 	<ul style="list-style-type: none"> AM Peak Hour LOS B (EBL/R LOS F) PM Peak Hour LOS B (EBL/R LOS F) 	Signalize or restrict turns (by 2041). Temporary traffic signals currently in place due to highway work can be made permanent.
Hwy 95 (10 Ave N) & 7 St N	<ul style="list-style-type: none"> AM Peak Hour LOS A PM Peak Hour LOS A 	<ul style="list-style-type: none"> AM Peak Hour LOS A (EBL/R LOS F) PM Peak Hour LOS A (EBL/R LOS F) 	Signalize or restrict turns (by 2041)

Note: LOS = Level of Service; EBTL = eastbound through shared left turn lane; EBL/R = Shared eastbound left-turn and right-turn lane

It should be noted that these intersections identified for operational improvements are under BC MOTI’s jurisdiction.

Roadway Corridor and Network Safety Review

In addition to the intersection capacity analysis, the roadway corridors were reviewed to identify potential safety concerns and to incorporate feedback received during the public engagement process. Table E.2 provides a summary of this review.

Table E.2 Corridor and Safety Review Summary

LOCATION	DISCUSSION
Golden Donald Upper Road	With the opening of the Skybridge north of Golden and other development, this roadway has been experiencing increases in traffic volumes. Improvements at intersections and accesses, and improvements for pedestrian and cyclists' accessibility along the corridor, should be considered to mitigate the increased congestion.
Dogtooth (Kicking Horse Drive) Bridge (<i>access to Kicking Horse Mountain Resort, golf course, CBT/ Moonrackers bike trails</i>)	This bridge is very narrow and only allows passage of one direction of traffic at a time. This can cause delays. As this is outside of the Town's boundaries, it is recommended that the Town advocate to BC MoTI to improve traffic operations over the bridge.
Selkirk Hill	The steep grade and tight turns on Selkirk Hill create difficult driving conditions. Additionally, data collected along the hill indicates that downhill speeds typically exceed the posted speed limit. Measures should be implemented on the hill to create a safer environment for all road users.
Bowle-Evans Drive	Improving roadway conditions on Bowle-Evans Drive will help to accommodate all road users on Selkirk Hill. Bowle-Evans Drive is a more direct connection from Highway 95 to the Selkirk Hill/Bear's Paw Height community and the Mount 7 recreational area, so improving the road conditions along it will draw traffic volumes from Selkirk Hill to Bowle-Evans Drive.
9 Street S and 14 Avenue S Signage	Confusing signage along these roads has led to driver infractions. A previous study conducted for the Town identified various mitigation measures to improve drivers' compliancy. Measures along 9 Street S have been implemented. However, changes along 14 Avenue S should be considered. Confusion around speed limit changes could be mitigated if a reduction in the town-wide speed limit is enforced,
Highway 95 Bridge over Kicking Horse River	This bridge is scheduled to be replaced by BC MoTI in the near future. The alignment is expected to modify the intersection of Highway 95 with Park Drive and reduce confusion in this area.
Highway 95 (10 Avenue) and 9 Street S	The north and southbound modified pavement markings and lack of signage at this intersection have been contributing to driver confusion, as well, the reduced width of the northbound receiving lane on Highway 95 has been a concern for vehicles turning into it

LOCATION	DISCUSSION
	from 9 Street S. Also identified during the first round of engagement, the signal timings do not provide eastbound and westbound vehicles with sufficient green time to proceed through the intersection within a reasonable timeframe. It is recommended that the Town work with BC MoTI to ensure these issues are mitigated with the planned improvements to the bridge.
Highway 95 (10 Avenue) and 11 Street S	Safety for pedestrians crossing Highway 95 at this location was identified as a concern. Some vehicles traveling northbound on Highway 95, coming into town, have not yet reduced their speeds to a point where pedestrians are comfortable crossing the roadway. Additional measures should be implemented to ensure vehicles slow down to the posted speed limit and that pedestrians are more visible crossing at this intersection.
Highway 95 south of 15 Street	Speeding was identified as a concern in this area. Additional measures should be implemented to ensure that northbound vehicles on Highway 95 reduce their speeds prior to reaching 15 Street S.
Highway 95 (10 Avenue) and Reflection Lake Road	If roadway conditions along Bowle-Evans Drive are improved, more traffic is expected to make the southbound to eastbound left turn at Highway 95 onto Reflection Lake Road to continue up the hill. To reduce delays to southbound through traffic and to improve safety for left-turning vehicles, it is recommended that the intersection be widened to create a dedicated southbound to eastbound left turn lane to reduce impact to the southbound through traffic.

Road Network Improvements

Based on the intersection and corridor review, road network improvements were identified for the Town’s transportation network. Through public engagement, these improvements were shown to have a high level of support from the community. They have also been coordinated with the improvements recommended in the Active Transportation Network Plan.

The improvement projects are described in **Table E.3** and illustrated in **Figure E.1**. The reference number provided in the table corresponds with the reference number included on the figure. Improvement projects 3 to 11 all require coordination with the BC Ministry of Transportation and Infrastructure (MoTI) since they involve changes to provincial infrastructure. Implementation of these projects will be based on available funding and priority of BC MoTI, as well as technical support for when improvements are required.

Table E.3 List of Improvement Projects

#	IMPROVEMENT PROJECTS
1	Improve traffic conditions on Selkirk Hill (ex. reduce speeds, improve safety for all modes).
2	Improve traffic conditions on Golden Donald Upper Road (ex. turning lanes at intersections and accesses, multi-use pathway or bicycle accessible shoulders; improve facility for all modes).
3	Improvements to the intersection control at 10 Avenue N and 7 Street N (ex. signal or restrict turns) – would require some discussion with BC Ministry of Transportation and Infrastructure.
4	Advocate to BC Ministry of Forests to improve roadway conditions on Bowle-Evans Drive.
5	Advocate to BC Ministry of Transportation and Infrastructure to improve traffic operations on a new Dogtooth Bridge (Kicking Horse Drive Bridge - access to Kicking Horse Mountain Resort, golf course, CBT/Moonrackers bike trails).
6	Advocate to BC Ministry of Transportation and Infrastructure (MoTI) to implement a new Highway 95 bridge across the Kicking Horse River (project design currently underway). Town to work with BC MoTI to ensure design improve safety for all modes.
7	Advocate to BC Ministry of Transportation and Infrastructure to improve traffic control and pedestrian area at Highway 95 (10 Avenue S) and 11 Street S intersection.
8	Advocate to BC Ministry of Transportation and Infrastructure to improve signage and lane markings along Highway 95 (10 Avenue S) at 9 Street S to provide more clarity on through lanes and turning lanes, as well as confirm vehicle turning movement paths.
9	Advocate to BC Ministry of Transportation and Infrastructure to improve signal timing for cross streets along Highway 95 (10 Avenue S) during the morning and afternoon school hours.
10	Advocate to BC Ministry of Transportation and Infrastructure to re-evaluate the Highway 95 (10 Avenue S) cross section from where project #6 ends to 15 Street S and consider implementing a Road Diet to reallocate and balance the space for pedestrians, cyclists and motor vehicles. Bicycle infrastructure can be installed initially as painted bicycle lanes and transition over time to include protected barriers in the buffer space. Aligning implementation with other road works and/or lifecycle replacements.
11	Advocate to BC Ministry of Transportation and Infrastructure to implement permanent measures on Highway 95 (10 Avenue S) south of 15 Street S that would encourage drivers to slow down as they enter the Town (ex. speed feedback sign, additional features to indicate that you have entered a community, reduce roadway width, etc.)
12	Advocate to BC Ministry of Transportation and Infrastructure to improve traffic flow for southbound vehicles at the Highway 95 (10 Avenue S) and Reflection Lake Road intersection by widening the intersection to provide for a southbound to eastbound left turn lane.

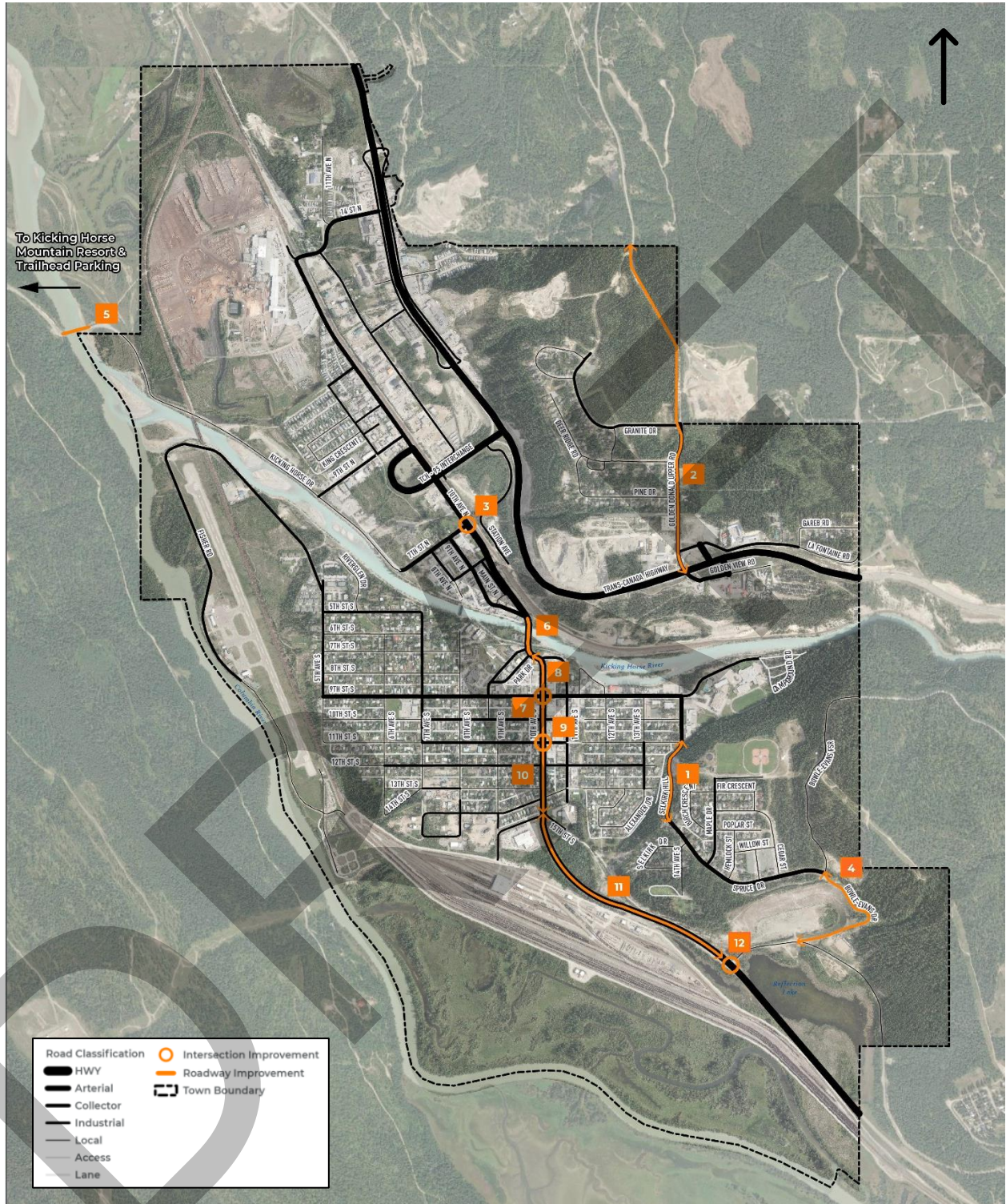


Figure E.1 Potential Transportation Network Improvements

BUILDING THE NETWORK

Road Network: The long-term road network map was updated to reflect the recommended intersection and corridor improvements and to accommodate the forecast traffic volumes due to the projected growth in Golden. The recommended future road classifications are shown in **Figure E.2**.

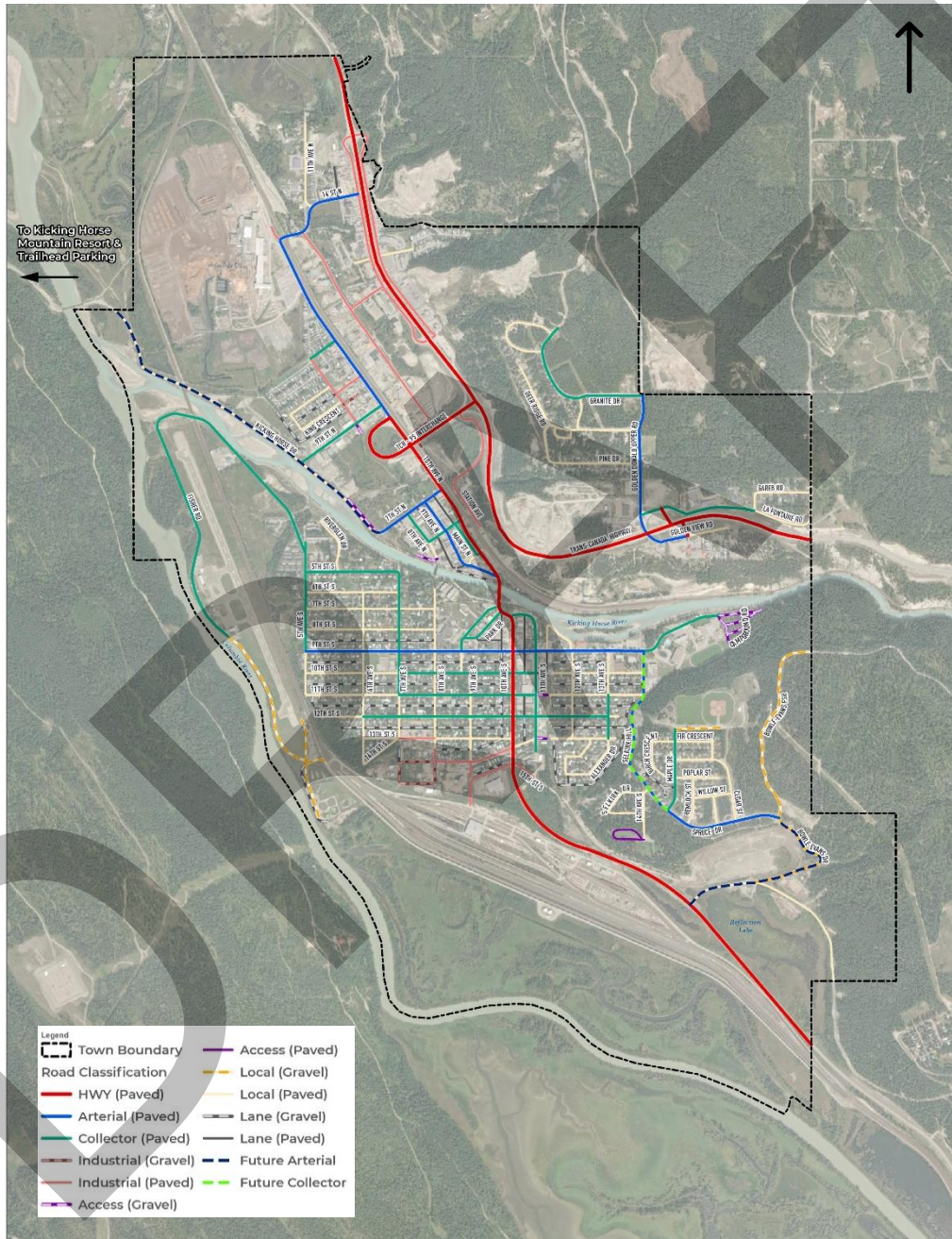


Figure E.2 Recommended Future Road Classification

The current Subdivision and Development Servicing Bylaw (Bylaw Number 1223, 2008) should be referenced for future development. However, the Town should ensure that new development consider cross sections that include multi-modal considerations. The Town should also consider updating the current Bylaw to include cross sections with multi-modal considerations, in particular for the arterial, collector and local roadway cross sections.

Active Transportation Network: The proposed long-term active transportation network was developed through discussion with Town staff and consultation with the public. Further, network segments were added or modified through a review of the overall network connectivity.

The network development began with identification of the desired facility types that are appropriate and specific to the Town of Golden. **Figure E.3** outlines the five proposed All Ages and Abilities (AAA) active transportation facility types for the network. For more details, refer to **Section 5.2.1**.



Figure E.3 Proposed Active Transportation Facility Types

The proposed active transportation network developed in the Active Transportation Network Plan (ANTP) is illustrated in **Figure E.4**.

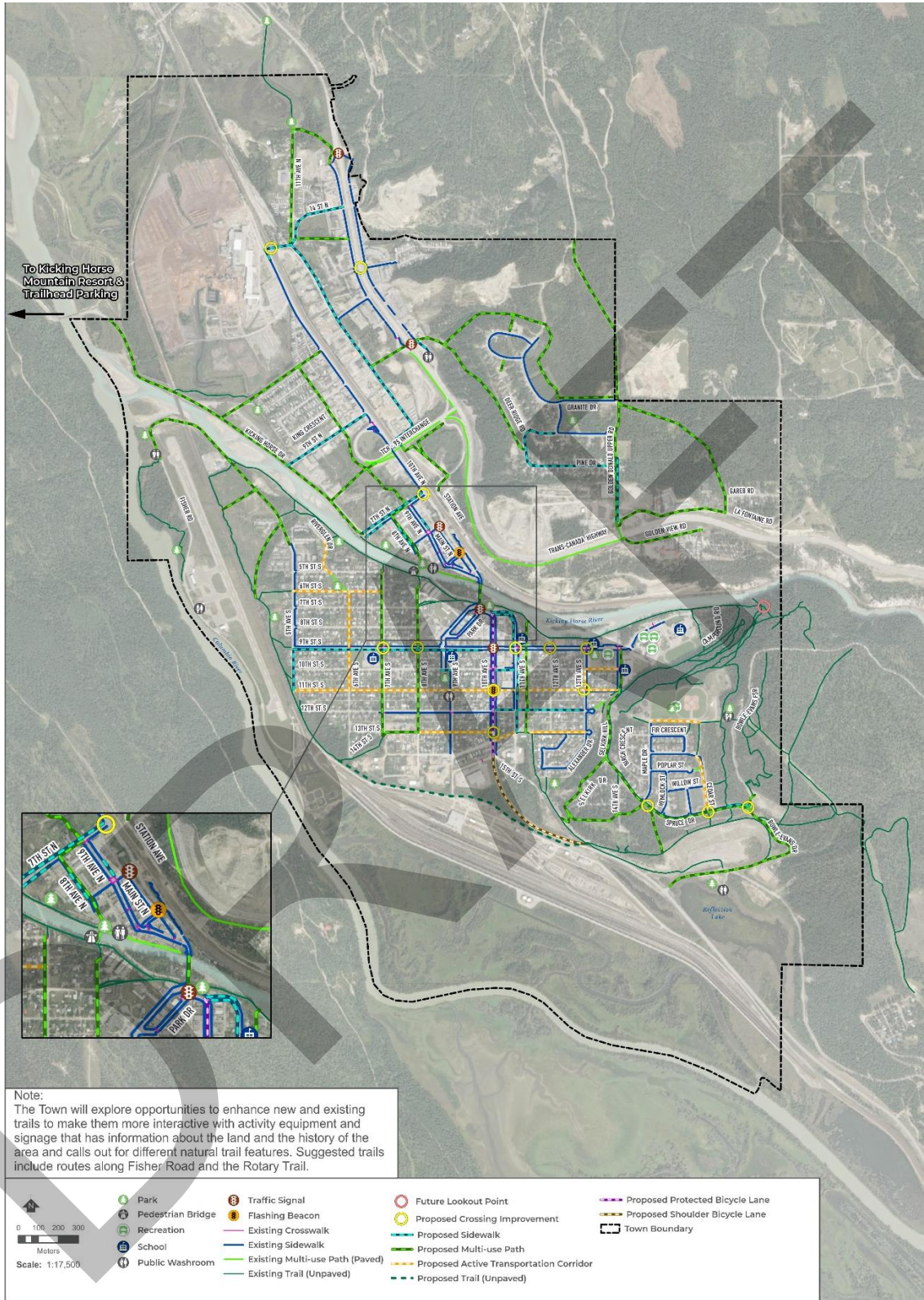


Figure E.4 Proposed Active Transportation Network

In addition to the road and active transportation network improvements recommendations regarding traffic calming, maintenance, parking, transit and emerging technologies are provided in the GTP. For more information on these recommendations, refer to **Section 5.2**.

IMPLEMENTATION FRAMEWORK

The Town of Golden Transportation Plan provides long-term recommendations for capital improvement projects and for strategies to improve Golden’s transportation network. Recognizing that the long-term plan will require significant investments, an Implementation Framework is required to help prioritize improvements. The Implementation Framework outlines the priorities and costs for recommended strategies and capital improvements. The Implementation Framework identifies project priorities for the short-term (within 8 years), medium-term (8 to 20 years) and long-term (20 years and beyond).

DRAFT

GOLDEN TRANSPORTATION PLAN IMPLEMENTATION FRAMEWORK

#	STRATEGIES	TIMEFRAME			METHOD OF IMPLEMENTATION			WHO IS INVOLVED
		Short-Term 0-8 yr	Medium-Term 8 -20 yr	Long-Term 20+ yr	Capital	Operations & Maintenance	Policy & Programming	
ROAD NETWORK								
1	Improve traffic conditions on Selkirk Hill (ex. reduce speeds, improve safety for all modes).	✓	✓		✓			Town of Golden <ul style="list-style-type: none"> • Planning and Development • Public Works
2	Improve traffic conditions on Golden Donald Upper Road (ex. turning lanes at intersections and accesses, multi-use pathway or bicycle accessible shoulders; improve facility for all modes).		✓		✓			Town of Golden <ul style="list-style-type: none"> • Planning and Development • Public Works Ministry of Transportation and Infrastructure
3	Improvements to the intersection control at 10 Avenue N and 7 Street N (ex. signal or restrict turns) – would require some discussion with BC Ministry of Transportation and Infrastructure.			✓	✓			Town of Golden <ul style="list-style-type: none"> • Planning and Development • Public Works
4	Advocate to BC Ministry of Forests to improve roadway conditions on Bowle-Evans Drive.	✓	✓		✓			Town of Golden <ul style="list-style-type: none"> • Planning and Development • Public Works Ministry of Forests
5	Advocate to BC Ministry of Transportation and Infrastructure to improve traffic operations on the Dogtooth Bridge (Kicking Horse Drive Bridge - access to Kicking Horse Mountain Resort, golf course, CBT/Moonrackers bike trails).		✓	✓	✓			Town of Golden <ul style="list-style-type: none"> • Planning and Development • Public Works Ministry of Transportation and Infrastructure
6	Advocate to BC Ministry of Transportation and Infrastructure (MoTI) to implement a new Highway 95 bridge across the Kicking Horse River (project design currently underway). Town to work with BC MoTI to ensure design improve safety for all modes.						Ongoing	Town of Golden <ul style="list-style-type: none"> • Planning and Development • Public Works Ministry of Transportation and Infrastructure
7	Advocate to BC Ministry of Transportation and Infrastructure to improve traffic control and pedestrian area at Highway 95 (10 Avenue S) and 11 Street S intersection.			✓	✓			Town of Golden <ul style="list-style-type: none"> • Planning and Development • Public Works Ministry of Transportation and Infrastructure
8	Advocate to BC Ministry of Transportation and Infrastructure to improve signage and lane markings along Highway 95 (10 Avenue S) at 9 Street S to provide more clarity on through lanes and turning lanes, as well as confirm vehicle turning movement paths.	✓			✓			Town of Golden <ul style="list-style-type: none"> • Planning and Development • Public Works Ministry of Transportation and Infrastructure

#	STRATEGIES	TIMEFRAME			METHOD OF IMPLEMENTATION			WHO IS INVOLVED
		Short-Term 0-8 yr	Medium-Term 8 -20 yr	Long-Term 20+ yr	Capital	Operations & Maintenance	Policy & Programming	
9	Advocate to BC Ministry of Transportation and Infrastructure to improve signal timing for cross streets along Highway 95 (10 Avenue S) during the morning and afternoon school hours.		Ongoing		✓			Town of Golden <ul style="list-style-type: none"> • Planning and Development • Public Works Ministry of Transportation and Infrastructure
10	Advocate to BC Ministry of Transportation and Infrastructure to re-evaluate the Highway 95 (10 Avenue S) cross section from where project #6 ends to 15 Street S and consider implementing a Road Diet to reallocate and balance the space for pedestrians, cyclists and motor vehicles. Bicycle infrastructure can be installed initially as painted bicycle lanes and transition over time to include protected barriers in the buffer space. Aligning implementation with other road works and/or lifecycle replacements.		✓	✓	✓			Town of Golden <ul style="list-style-type: none"> • Planning and Development • Public Works Ministry of Transportation and Infrastructure
11	Advocate to BC Ministry of Transportation and Infrastructure to implement permanent measures on Highway 95 (10 Avenue S) south of 15 Street S that would encourage drivers to slow down as they enter the Town (ex. speed feedback sign, additional features to indicate that you have entered a community, reduce roadway width, etc.)		✓		✓			Town of Golden <ul style="list-style-type: none"> • Planning and Development • Public Works Ministry of Transportation and Infrastructure
12	Advocate to BC Ministry of Transportation and Infrastructure to improve traffic flow for southbound vehicles at the Highway 95 (10 Avenue S) and Reflection Lake Road intersection by widening the intersection to provide for a southbound to eastbound left turn lane.	✓	✓		✓			Town of Golden <ul style="list-style-type: none"> • Planning and Development • Public Works Ministry of Transportation and Infrastructure
HEALTH AND SAFETY								
13	Review and update transportation planning policies and design standards to align with latest research and best practices. <ul style="list-style-type: none"> • Review and update the Golden Subdivision and Development Servicing Bylaw to include cross-sections and design best practices from the B.C. Active Transportation Design Guide. • Review existing sidewalk, multi-use trails, and on-street bicycling facility requirements on roadways (based on classification) and update to reflect best practices in the B.C. Active Transportation Design Guide. 	✓					✓	Town of Golden <ul style="list-style-type: none"> • Planning and Development • Public Works • Recreation Services • Corporate Services & Communications
14	Explore the opportunity to reduce speed limits as per Section 146 of the Motor Vehicle Act, in conjunction with traffic calming and traffic diversion. <ul style="list-style-type: none"> • Consider pilot programs such as school streets that limits motor vehicles near school sites during school hours • Identify opportunities for installing traffic calming infrastructure features as listed in the Transportation Plan's Traffic Calming Toolkit to help reduce motor vehicle speeds and volumes. Focusing first on Active Transportation Corridors as identified in Figure 9 of the Golden Active Transportation Network Plan. 		✓		✓		✓	Town of Golden <ul style="list-style-type: none"> • Planning and Development • Public Works RCMP ICBC

#	STRATEGIES	TIMEFRAME			METHOD OF IMPLEMENTATION			WHO IS INVOLVED
		Short-Term 0-8 yr	Medium-Term 8 -20 yr	Long-Term 20+ yr	Capital	Operations & Maintenance	Policy & Programming	
	<ul style="list-style-type: none"> Explore the feasibility of reducing speed limits town-wide or in areas where traffic calming is not possible or has not been effective. 							
15	<p>Improve safety along active transportation routes by considering visibility, sightlines, and access where appropriate.</p> <ul style="list-style-type: none"> Continue to review corridors, intersections, and crossings where ICBC collisions, near misses and community members have voiced concerns about safety and accessibility, and make improvements as required. Work with MoTI to review and update signal phasing and pedestrian crossing times at intersections to ensure adequate time is provided for all road users. Review existing pedestrian crossing locations and look for opportunities to reduce crossing distances by providing narrower roads and lanes and considering curb extensions where feasible. Review crossing recommendations in Figure 10 and implement where warranted and develop a prioritization plan for enhancing existing crossing locations. Improve crossing treatments where multi-use trails intersect with a roadway in accordance with current best practices. Inventory the location of curb ramps and accessibility features at intersections. <p>Provide curb ramps or a continuous paved surface to access the road at all intersections and consider accessibility for all.</p>	Ongoing			✓	✓	✓	<p>Town of Golden</p> <ul style="list-style-type: none"> Planning and Development Public Works <p>RCMP</p> <p>ICBC</p> <p>Ministry of Transportation and Infrastructure</p>
MAINTENANCE								
16	<p>Review and update the Town's transportation assets (including active transportation facilities) at regularly scheduled intervals to inventory, review and maintain the transportation network in a state of good repair.</p>	Ongoing				✓	✓	<p>Town of Golden</p> <ul style="list-style-type: none"> Public Works Planning and Development Finance & Administrative Services Recreation Services
17	<p>Review and update current maintenance and operating policies and procedures for transportation infrastructure (including active transportation facilities). (Snow Clearing and Sanding Policy).</p> <ul style="list-style-type: none"> Review existing debris, sand, gravel, ice, and snow removal requirements for walking and bicycling infrastructure, including multi-use trails, and provide additional guidance specific to on-street active transportation facilities (active transportation corridors). This includes requirements for property owners, Town departments, employed contractors, and the existing fleet of machinery. Consider adding an active transportation prioritization list to the policy and outlining the order in which roads and active transportation facilities are cleared. 		✓			✓	✓	<p>Town of Golden</p> <ul style="list-style-type: none"> Public Works Planning and Development Corporate Services & Communications Finance & Administrative Services Bylaw Enforcement

#	STRATEGIES	TIMEFRAME			METHOD OF IMPLEMENTATION			WHO IS INVOLVED
		Short-Term 0-8 yr	Medium-Term 8 -20 yr	Long-Term 20+ yr	Capital	Operations & Maintenance	Policy & Programming	
18	<p>As new infrastructure is implemented, ensure the Town has appropriately sized equipment, staffing resources, and operating funding to maintain existing and future transportation infrastructure.</p> <ul style="list-style-type: none"> Review current maintenance funding and equipment levels required to maintain all planned and existing types of transportation infrastructure. As more walking and bicycling facilities are installed, ensure the amount of funding available grows in accordance with the amount of infrastructure being added to the network. 	✓				✓		<p>Town of Golden</p> <ul style="list-style-type: none"> Public Works Finance & Administrative Services Planning and Development Recreation Services
PARKING								
19	<p>Review and update the 2010 Parking Study regularly.</p> <ul style="list-style-type: none"> Educate visitors and workers in the downtown core on long term parking locations. Enforce time restricted parking in the downtown core. Improve wayfinding signage to long term parking areas. 		Ongoing		✓	✓	✓	<p>Town of Golden</p> <ul style="list-style-type: none"> Planning and Development Public Works Corporate Services & Communications Bylaw Enforcement <p><i>With support from partners & stakeholders</i></p>
20	<p>Support the installation of more short- and long-term bicycle parking and end-of-trip facilities throughout the community. <i>(Refer to the Active Transportation Network Plan for more details).</i></p>	✓	✓		✓	✓	✓	<p>Town of Golden</p> <ul style="list-style-type: none"> Planning and Development Public Works Recreation Services Finance & Administrative Services <p><i>With support from partners & stakeholders</i></p>
21	<p>Consider opportunities to expand dynamic curb-space management to create streets that accommodate a variety of uses. <i>(Refer to the Active Transportation Network Plan for more details).</i></p>						✓	<p>Town of Golden</p> <ul style="list-style-type: none"> Planning and Development Public Works Corporate Services & Communications <p><i>With support from partners & stakeholders</i></p>

#	STRATEGIES	TIMEFRAME			METHOD OF IMPLEMENTATION			WHO IS INVOLVED
		Short-Term 0-8 yr	Medium-Term 8 -20 yr	Long-Term 20+ yr	Capital	Operations & Maintenance	Policy & Programming	
TRANSIT SERVICES								
22	<p>Consider opportunities for reintroducing transit service. Options to consider include:</p> <ul style="list-style-type: none"> • A private shuttle service to and from Kicking Horse Mountain Resort • On-demand transit • Regional transit in Golden and Area A 		Ongoing			✓		<p>Town of Golden</p> <ul style="list-style-type: none"> • Planning and Development • Public Works • Corporate Services & Communications <p><i>With support from partners & stakeholders</i></p> <p>BC Transit</p>
EMERGING TECHNOLOGIES								
23	<p>Consider the impact of new mobility technologies on the transportation network and infrastructure design.</p> <ul style="list-style-type: none"> • Provide infrastructure to support the use of electric vehicles including e-bicycles and e-scooters (ex. E-bike share or e-scooter share; charging stations, etc.). • Ensure new road improvements and active transportation facilities are designed for all intended users, recognizing that the operating envelopes and speeds of new mobility technologies may impact facility design (e.g., facility width and the need for users to be separated). • Proactively regulate e-bikes and other micro mobility devices in the Town and on trails. • Explore the feasibility of creating a bikeshare or scooter share program with a private operator in Golden, with convenient connections to Kicking Horse Mountain Resort for tourists. 	✓					✓	<p>Town of Golden</p> <ul style="list-style-type: none"> • Planning and Development • Public Works • Recreation Services • Finance & Administrative Services <p><i>With support from partners & stakeholders</i></p>

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COST ESTIMATES

TO BE CONFIRMED ALONG WITH ACTIVE TRANSPORTATION NETWORK

FUNDING STRATEGIES

Implementation of the recommendations within the GTP will require significant funding over the next 20 years and beyond. Some of these costs can be shared by pursuing external funding from other levels of governments, partnerships with other organizations and the development industry, and integration of improvements with other plans and projects. This can help to reduce the Town's share of project costs.

A list of several strategies has been compiled that the Town may consider to help leverage its investments and to maximize its ability to implement transportation improvements. For further details, refer to **Section 7.3**.

- **Capital Planning** – incorporate GTP recommendations into the Town's capital planning process.
- **Developers** – leverage transportation investments during the planning for new development projects.
- **Development Cost Charges** – the Town has a DCC bylaw that does not include a transportation DCC. The bylaw should be regularly updated to include projects identified in the GTP and future plans.
- **Federal Funding:**
 - The National Active Transportation Fund (ATF)
 - Rail Safety Improvement Program – Infrastructure, Technology and Research (RSIP-ITR) Funding
- **Provincial Programs and Initiatives** –
 - The CleanBC Communities Fund (CCF)
 - BC Vision Zero in Road Safety Grant Program
 - Active Transportation Infrastructure Grant Program
- **Green Municipal Funds:** This fund is intended to support local government efforts to reduce pollution, reduce greenhouse gas emissions, and improve quality of life.
- **Carbon Tax Rebate**
- **ICBC** – ICBC provides funding for road safety improvements, including pedestrian and bicycle infrastructure, particularly where these have the potential to reduce crashes, improve safety, and reduce claims costs to ICBC.

- **Private Sector:** Many corporations wish to be good corporate neighbours— to be active in the community and to promote environmentally-beneficial causes. Bicycle and pedestrian routes and facilities are well-suited to corporate sponsorship and have attracted significant sponsorship both at the local level and throughout North America.

Note that the specific programs identified were the sources available at the time of writing. Funding sources change frequently and should be monitored to ensure deadlines are not missed and/or new funding sources are being taken advantage of.

The Town should pursue various available sources of funding for transportation facilities and programs. However, it is recognized that the external funding sources do not provide a consistent and stable funding stream, and that in order to ensure completion of projects identified in the Transportation Plan, consistent funding sources should be identified as much as possible. This will help ensure staff can logically plan and coordinate these improvements with other capital works to provide economies of scale for construction activities providing best value for capital expenditures.

MONITORING AND BENCHMARKING

Developing a benchmarking program for the Town would be beneficial to help establish baselines for updates to the Golden Transportation Plan (GTP) in the future, and for assessing changes in growth and travel patterns behaviours over different seasons and years. It can also be used to help build long-term support for walking and cycling infrastructure improvements, maintenance programs, and future planning studies.

The baseline data can be evaluated each year or every five years to measure if there's been a shift towards achieving the target. The targets identified in **Section 3.2.3** are as follows:

- Decrease in number of collisions that result in injury or fatality.
- Increase in number of new kilometres and/or projects implemented of accessible facilities (ie. sidewalk, pathway, etc.).
- Increase in percentage of commuting trips to work and/or school using active transportation.

Other metrics the Town can also monitor is tracking the resources and budget allocation to operations and maintenance of sidewalks, trails, and roadways. This would include the infrastructure itself as well as the signage and pavement markings. This metric would need to be benchmarked to understand the current resources and what scale of operations and maintenance it currently covers in order to determine an increase level of service on the infrastructure.

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1.0 INTRODUCTION

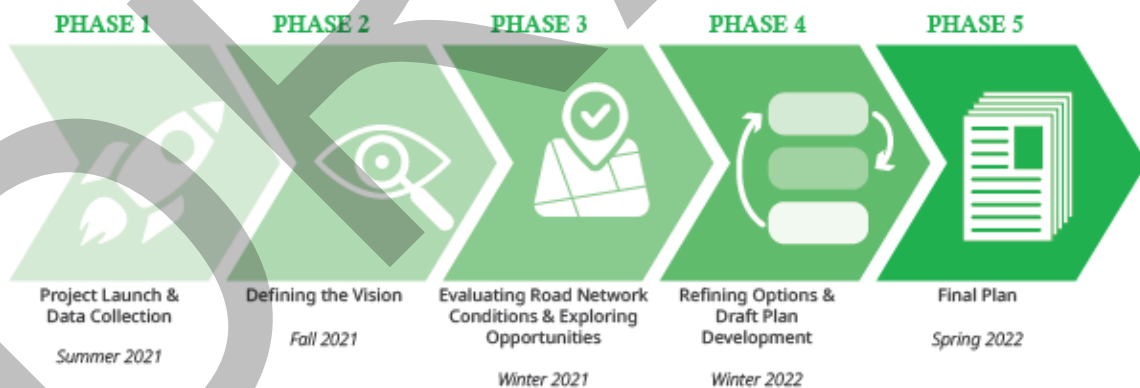
The Town of Golden (Town) is a small community of 3,708 residents, and 3,155 residents in the surrounding rural area. Golden is located on the traditional and ancestral territory of the Ktunaxa and Secwepemc Nations. The Métis Nation Columbia River Society also calls Golden home. As a resort community, the Town of Golden is a major tourist destination in British Columbia, attracting a broad range of residents and visitors.

The Town is committed to making the transportation network safer and more connected for all ages and abilities. The Golden Transportation Plan (GTP) was developed in combination with the Golden Active Transportation Network Plan (ATNP) to help establish an integrated transportation system. Both documents will assist in connecting visitors and residents of all ages and abilities to Golden's year-round attractions, and community destinations. The GTP and ATNP will guide Golden's investments in transportation over the next 20 years.

1.1 PLAN PROCESS

The Town developed the GTP over a 10-month period starting in July 2021. The Plan is based on Canadian best practices, local expertise, and public input. The GTP process includes five phases:

- **Phase 1: Project Launch and Data Collection (Summer 2021)** involves collecting relevant background information and data and conducting traffic counts,
- **Phase 2: Defining the Vision (Fall 2021)** involves defining a direction or vision for the future of Golden's transportation network through the development of a vision statement and corresponding goals and objectives to help achieve the Vision.
- **Phase 3: Evaluating Road Network Conditions and Exploring Opportunities (Winter 2021)** involves
 - reviewing the collected data, establishing projected growth, and developing the base transportation demand model.
 - Exploring possibilities for improvements and strategies to enhance the transportation network before developing an integrated plan that reflects the aspirations and directions of the community.
- **Phase 4: Refining Options and Draft Plan Development (winter 2022)** involves
 - Incorporating public input and refining potential solutions to ensure they are in line with the Plan goals and objectives,
 - Prioritizing projects and developing an implementation and funding strategy that will ensure that the Plan is affordable and practical.
- **Phase 5: Final Plan (spring 2022)** involves gathering and incorporating final input to ensure the Final Plan meets the needs of the community.



1.2 COMMUNITY ENGAGEMENT

Golden residents and visitors were given the opportunity to shape the development of the GTP. Three rounds of engagement took place.

Round 1: Understanding Concerns (September 13-26, 2021)

The first round of engagement involved a survey with 29 questions and an interactive map to gather feedback from residents and visitors on what the GTP should focus on and collect input on existing issues and opportunities of the transportation network.

There were 296 responses to the survey and 497 points placed on the interactive map. The detailed results and summary are provided in the What We Heard Report dated October 19, 2021 in **Appendix A**.

Round 2: Level of Support (January 26-February 11, 2021)

The second round of engagement included two virtual public sessions and one online survey. The first session was held on January 26, 2022, to provide an overview of the preliminary content of the GTP and ATNP including a draft vision statement, goals and recommended road and active transportation network improvements. A survey was launched after the presentation that included 31 questions on the content presented in the January 2022 session. The survey was available from January 27 to February 13, 2022. One of the main purposes of the survey was to gain an understanding of what the priority projects and actions were for the community prior to compiling the draft plans. The second public information session was held on February 7, 2022 as a follow up to the first with an open discussion forum. It included two breakout rooms, one to discuss road network improvements and one to discuss active transportation network improvements.

The first public information session in January had 40 participants, the second public information session had 32 participants and the online survey had 266 responses. The detailed results and summary of the two sessions and online survey are provided in the What We Heard Report dated April 12, 2022 in **Appendix A**.

The input that was gathered during these public engagement events helped to shape the development of the GTP and ATNP.

1.3 GOLDEN TRANSPORTATION PLAN STRUCTURE

The GTP report summarizes the study process outlined in **Section 1.1**. Following this introductory section, the GTP includes a review of the Town's current conditions, issues, and opportunities and offers insights into how these, along with the overarching policy context, influence Golden's transportation network. The GTP provides strategies and actions to build a transportation network that meets the vision and goals of the plan, and is organized into the following six sections:

- **Section 1: Introduction** provides an overview and purpose of the GTP, the study process, and the structure of this report.
- **Section 2: Community Context** summarizes the local and regional elements that shape transportation in Golden, including land use and demographic patterns, the policy context, and travel patterns trends.

- **Section 3: Vision, Goals and Objective** investigates what is important to the Town of Golden and apply this to the development of the plan's vision, goals and objectives.
- **Section 4: Existing Conditions** summarizes the existing transportation network and conditions in Golden and identifies if, and where, improvements are required.
- **Section 5: The Future of Transportation in Golden** outlines the expected population and employment growth in Golden. Then it evaluates the impact of the expected growth on the transportation network and provides recommendations to mitigate the impact and help achieve the vision of the GTP. These recommendations include both infrastructure improvements and policy implementation.
- **Section 6: Implementation Framework** provides an approach to the implementation of the policy and infrastructure improvements, and a plan to measure the progress.

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2.0 COMMUNITY CONTEXT

Golden is an active and healthy community with a deep appreciation for the outdoors and maintaining its natural environment. Because of Golden's beautiful natural surroundings and proximity to Calgary, Revelstoke, and the Trans Canada Highway, many tourists and recreationalists visit the Town year-round for mountain biking, hiking, skiing, and many more outdoor activities. Golden has a deep history as an industrial logging and railway town. With the development of the Kicking Horse Mountain Resort and a growing tourism sector, Golden is entering a new era with more of its residents employed in the service industry than any other industry.

A review of the Town's existing demographics, land uses, and transportation infrastructure is part of the first step in understanding the Town's existing travel behaviour. Reviewing the relevant studies and statutory plans, such as the Official Community Plan, the Housing Needs Assessment, and the Zoning Bylaw is also key in understanding the future direction of development and growth in the Town.

2.1 DEMOGRAPHICS

The Town of Golden, British Columbia (BC) has a permanent population of approximately 3,708 people (at the time of the 2016 Census) while the surrounding area has an additional 3,155 residents. The community is an approximately 2.5-hours drive west of Calgary, AB; 90-minutes east of Revelstoke, BC; and one hour north of Radium Hot Springs, BC. The community's desirable location makes it a great place for a vacation, a recreational home, and is a retirement option for many. With a "resort municipality" designation, Golden's population can fluctuate as tourists, seasonal workers, and short-stay recreationalists travel in and out of the Town.

The 2016 Census indicates the average age of the population of Golden is slightly less than the provincial average of 42.3 years at 41.0 years. The majority (69%) of the population is between 15 and 65 years of age while Golden's seniors make up approximately 16% of the population. Figure 2.1 provides a summary of the age distribution.

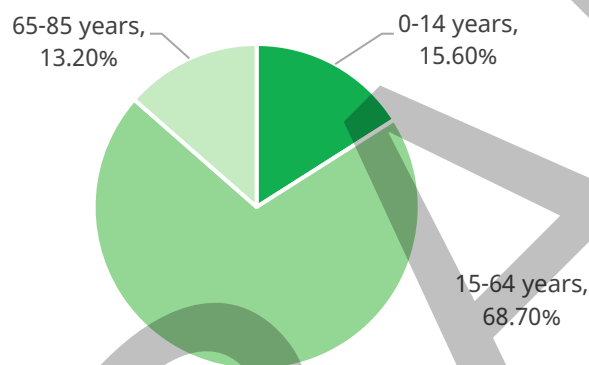


Figure 2.1 Golden's Population (Source: 2016 Census)

Initial results from the 2021 Census¹ released in early 2022, indicated that the Town of Golden's has a population of approximately 4,000 people (3,986 people), an increase of 7.5 percent (approximately 1.5 percent per year) from the 2016 Census information. The detailed demographics and travel pattern information for the 2021 Census data has not yet been released, and so the travel behaviours and trends for the GTP are based on the 2016 Census data.

2.2 LAND USE

At less than 12 square kilometres, Golden is a relatively compact community despite being composed of primarily single-family residential neighbourhoods. Most of Golden's residents live south of the Kicking Horse River on a peninsula that is surrounded by the Columbia River, forests,

¹ Statistics Canada. 2022. (table). *Census Profile*. 2021 Census of Population. Statistics Canada Catalogue no. 98-316-X2021001. Ottawa. Released April 27, 2022.

and mountains. North of the river, there is low density residential development northwest of downtown Golden and south of Highway 1, the railway, and the industrial area. There are also areas of low density residential developments north of Highway 1; including, behind the highway commercial near Hospital Creek, and areas off of Golden Donald Upper Road and Lafontaine Road.

Golden provides both residents and visitors with numerous amenities, including trails and parks, including the Spirit Square and the river paths/Rotary Trails, and abundant recreational activities as the Town is nestled between the Rockies and the Purcells. **Figure 2.2** displays the key community destinations in Golden.

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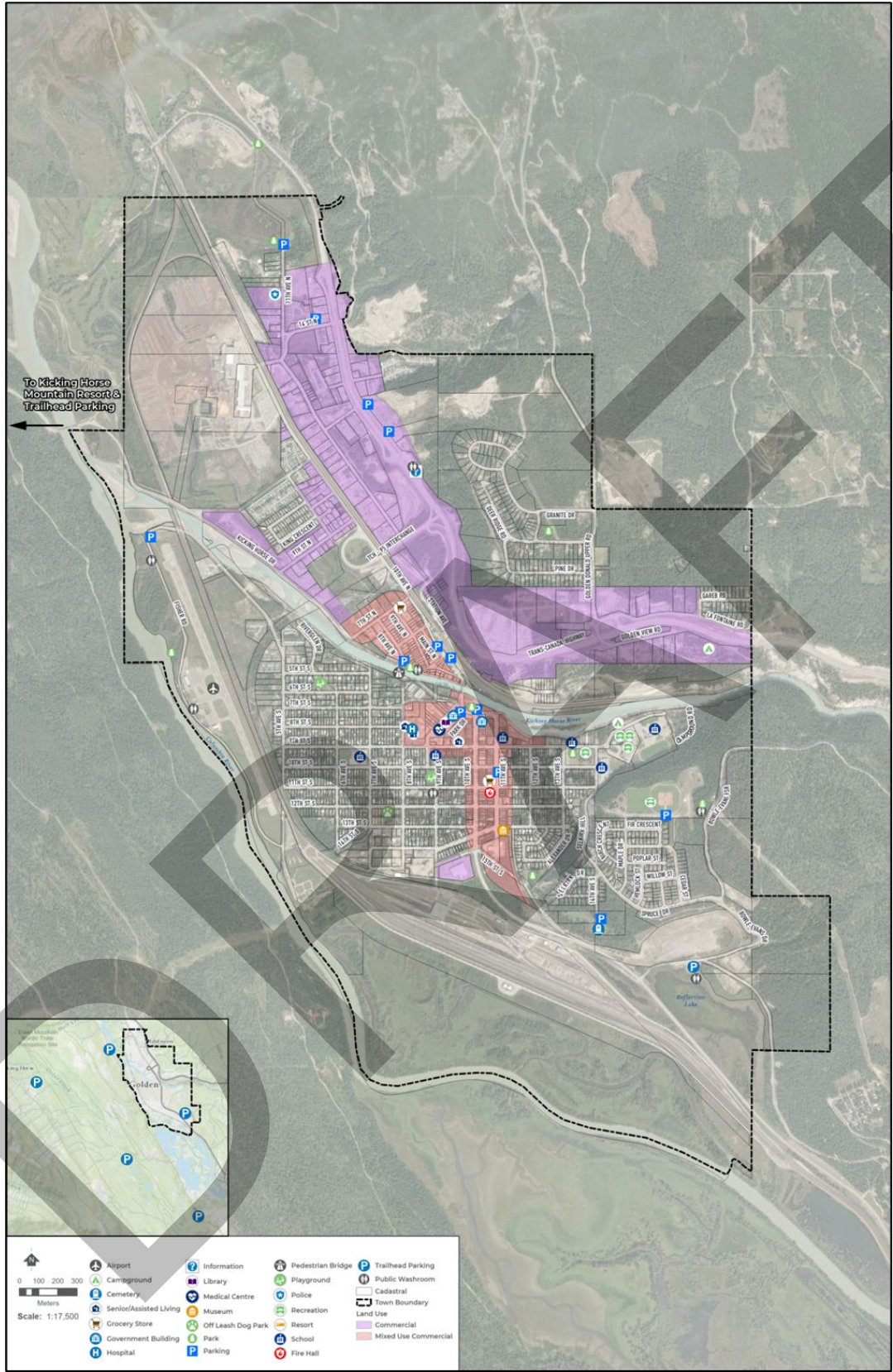


Figure 2.2 Community Destinations

2.3 POLICY CONTEXT

The Town's existing community plans, policies and bylaws were reviewed prior to the development of the GTP. These plans and bylaws helped to set the foundation of the GTP by highlighting the Town's values and priorities, and were used to gain an understanding of projects and initiatives that are already underway. The following documents were reviewed to help inform the development of the transportation plan:

- Official Community Plan (2008)
- Housing Needs Assessment (2021)
- Affordable Housing Strategy (2021)
- Subdivision and Development Servicing Bylaw (Bylaw 1223, 2008)
- Zoning Bylaw (Bylaw 1294, 2011)
- Age Friendly Community Plan (2014)
- Resort Development Plan (2019-2022)
- Surface Condition Report (2018)
- Infrastructure Replacement Priority Plan(2018)

Summaries of each of these documents along with details on how they were used to help shape the development of the GTP is provided in **Appendix B**.

It should be noted that public engagement identified a strong desire by the community for the GTP to incorporate policies, actions and plans related to active transportation, where possible. The ATNP attached in **Appendix H** outlines a recommended network and supporting policies and programs to improve and encourage active transportation in Golden.

2.4 TRANSPORTATION PATTERNS

Mode Share

The 2016 Census provides travel patterns within Golden to give an idea of what the current trends may be in Town. Based on this data in 2016, 74% of commuter trips made by Golden residents are by motor vehicle (driver 69%, passenger 5%). Active and sustainable transportation make up approximately 24% of daily trips made by Golden residents, including walking (14%) and cycling (10%). See **Figure 2.3**, for the 2016 mode share for commuting travel in Golden.

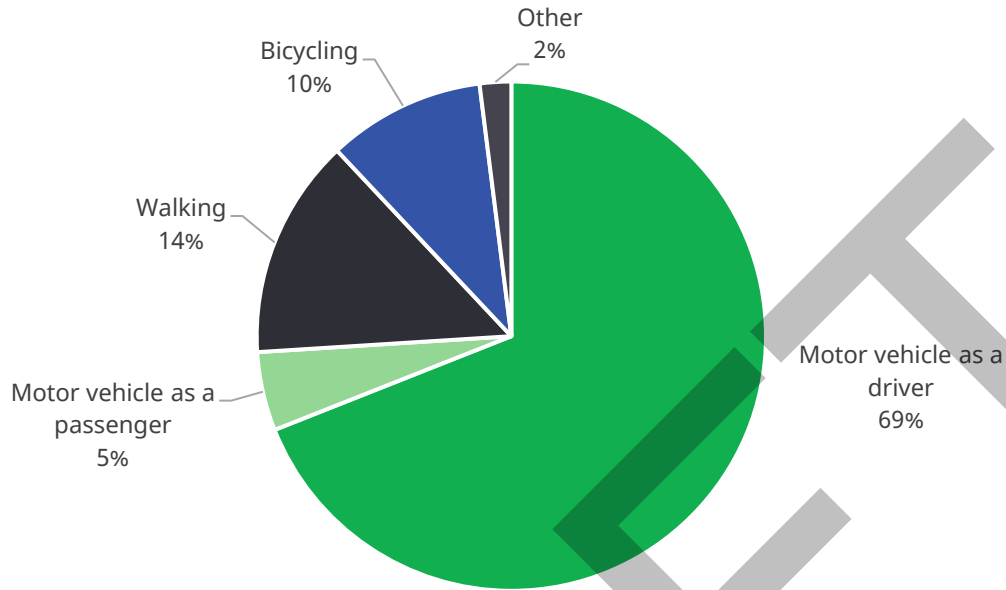


Figure 2.3 Golden's Journey to Work – Mode Choice (Source: 2016 Census)

Commuting Destinations

Although 74% of Golden residents commute to work in a motor vehicle, 88% of the working population of Golden commutes within the Golden (the census subdivision). This implies that a large portion of the population is traveling short distances (less than 10 minutes) to get to work. Shorter commutes are more viable for travel using active modes. **Figure 2.4** summarizes the commuting destinations within Golden.

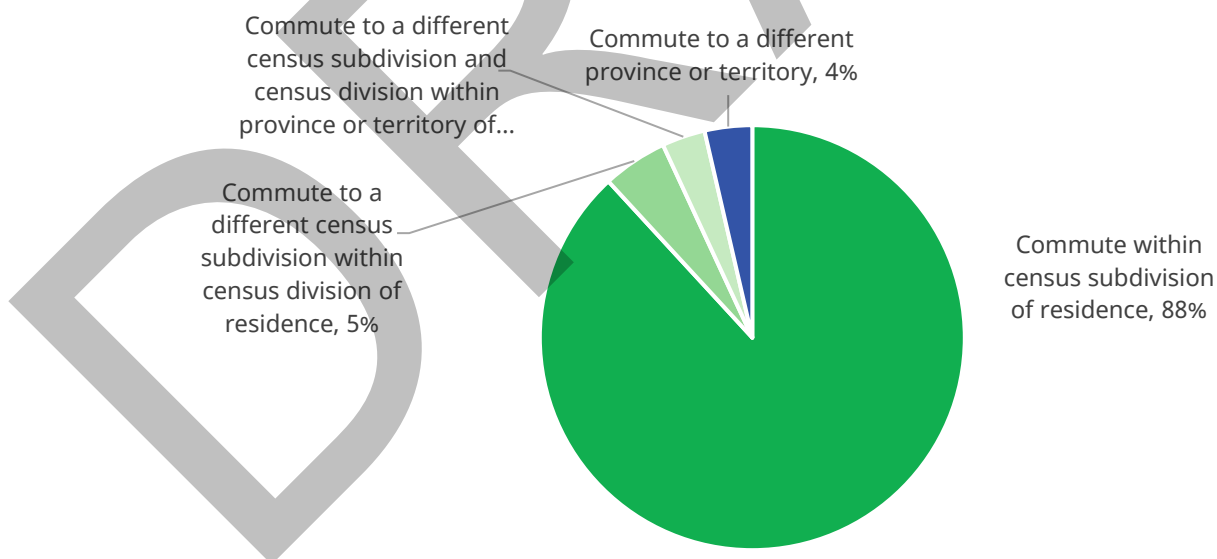


Figure 2.4 Golden's Journey to Work – Location (Source: 2016 Census)

The census division indicated in the above chart represents the Columbia-Shuswap Regional District, which includes Revelstoke, Salmon Arm, Sicamous, first nation bands, and rural areas. As shown, travel to areas outside of Golden but within the census division represents another 5% of commuters.

According to the first online engagement survey, respondents also indicated they have short commute to work or school; with almost 60% of commutes being less than 10 minutes, and another 20% being between 10 and 20 minutes. It should be noted that respondents to the survey included 25% living outside of Golden but within the census division.

Travel Challenges

Respondents of the first online survey provided input on some of the challenges for the different mode shares, the following are the top three concerns noted for each mode:

- Walking
 - Lack of sidewalks/pathways
 - Condition of sidewalks/pathways
 - Personal safety
- Wheelchair/motorized scooter
 - Lack of accessible ramps to/from sidewalks/pathways
 - Lack of accessible sidewalks/pathways
 - Condition of sidewalks/pathways
- Bicycling
 - Lack of trails, bicycle lanes, and bicycle routes
 - Lack of bicycle parking
 - Volume, speed, size and/or noise of traffic
- Driving/Carpooling
 - Difficult to find parking
 - Too much congestion during rush hour
 - Roads are not well-maintained

In the past, between 2008 and 2011, there was a transit system in Town that was a partnership between the Town, Columbia Shuswap Regional District, and BC Transit. The bus service completed a morning and afternoon trip to/from the Town to Donald, Blaeberry, and Parson. However, the service was canceled due to very low ridership and costs. Most respondents to the survey (78%) indicated that they would like the following transit services re-explored:

- On-demand transit
- Private shuttle services to/from Kicking Horse Mountain Resort
- Regional transit in Golden and Area A

The key themes of transportation barriers or challenges that were raised by respondents for the open-ended questions from the first survey included:

- **Lack of regional transit.** Respondents found it difficult to travel to and from work and/or medical appointments without a vehicle if they were coming from locations outside of Golden.
- **Lack of accessibility.** Respondents shared that there are not enough accessible pathways for those with disabilities or small children in strollers.
- **Safety concerns.** Respondents highlighted their concerns regarding carpooling, cycling on the road, and moving through the community at night.

Some top priorities for the GTP will be to improve road safety for all road users, reduce environmental impacts and improve accessibility.

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3.0 VISION, GOALS AND OBJECTIVES

The Golden Transportation Plan (GTP) and Active Transportation Network Plan (ATNP) have developed a shared vision and set of goals and objectives for Golden’s transportation networks. The vision was based on a combination of the Town’s existing commitments and plans, and feedback from Town staff.

3.1 VISION

A transportation vision is created to provide a picture or an idea of the Town in the future. A clear vision sets the stage to identify goals, objectives and targets that help make the vision a reality.

Golden’s vision of its transportation network is as follows:

“Residents and visitors of the Town of Golden enjoy an **active lifestyle** situated between the Rockies and the Purcells.

The **integrated** and **accessible multi-modal** transportation network enhances this lifestyle, fostering a **vibrant** and **sustainable community**.”

3.2 GOALS AND OBJECTIVES

3.2.1 GOALS

The goals of the GTP were developed using themes presented in the Town’s Official Community Plan (OCP). They are intended to direct the Town to realize their vision.



Health and Safety:

Provide a safe network for all road users.

Support the health of both people and the environment by encouraging active transportation and reductions in vehicle emissions.



Integrated

Provide an integrated network with various options for moving within and beyond the Town.

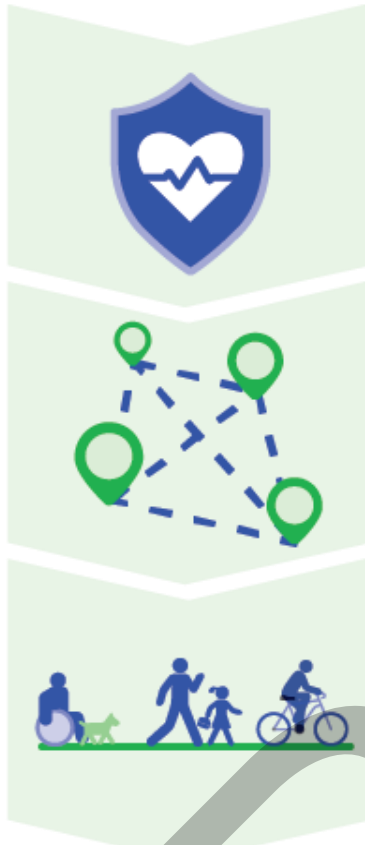


Accessible

Provide an accessible network that allows people to move throughout the community regardless of age, ability, and income.

3.2.2 OBJECTIVES

Objectives are specific actions and measurable steps that help reach the goal. The following objectives were developed to work towards achieving each of the identified goals:



Health and Safety

- Review and update transportation planning policies and design standards to align with latest research and best practices
- Implement intersection improvement recommendations to improve safety and efficiency, considering all road users

Integrated

- Close identified gaps in transportation network
- Revise road classifications to better suit the desired road operation and adjacent land uses
- Support efforts to explore implementing local or on-demand transit service (ex. Shuttle service to kicking horse)¹
- Collaborate with BC transit to explore potential future transit initiatives¹

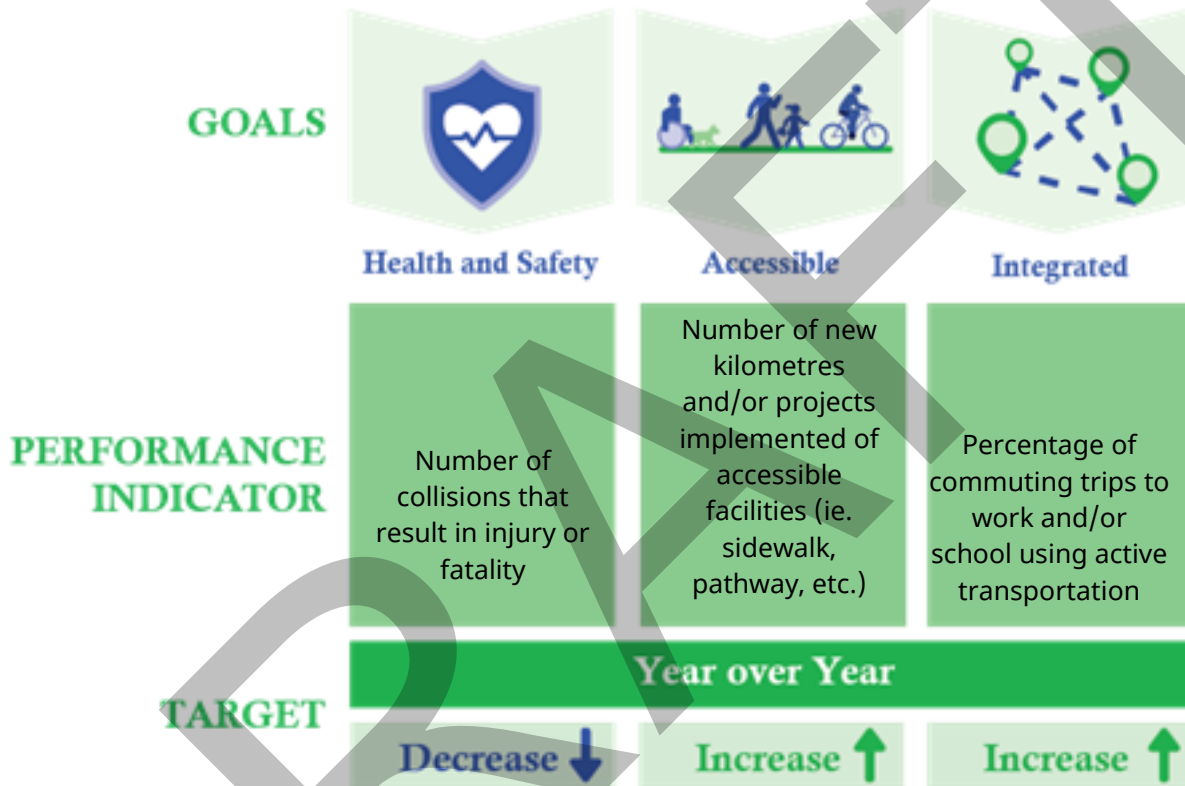
Accessible

- Collaborate with community groups and businesses to understand how to improve accessibility of the community

¹ Based on a recent review, it was determined that providing transit service in Golden is currently not viable. Transit improvements would be considered only once significant growth in the community is experienced.

3.2.3 TARGETS

The Town has developed measurable targets that align with the GTP’s objectives and other municipal objectives. These targets are a great way to ensure the Town is on track to achieving the GTP’s vision. The established targets centre around the goals three themes and are detailed below with corresponding performance indicators that will help the Town measure how well they are achieving their targets.





4.0 EXISTING CONDITIONS

A review of Golden's existing transportation network and traffic volume patterns was completed to understand and evaluate what, if any, improvements are currently required, and to set the baseline for the future direction of the transportation network. As part of the existing conditions review, traffic counts were collected at key intersections, and the intersection operations were evaluated. A high-level review of the available Insurance Corporation of British Columbia (ICBC) historical collision information was also completed.

4.1 TRANSPORTATION NETWORK

4.1.1 ROAD NETWORK

The Town of Golden's existing transportation network is comprised of expressways, arterial roads, collector roads, local roads, lanes, sidewalks, multi-use trails and pathways. The roadways focus on the movement of people in motor vehicles, and sidewalks, multi-use trails and pathways focus on the movement of people walking and cycling. More information on these facilities can be found in Golden's Active Transportation Network Plan (**Appendix H**).

A classification system is used to separate the roads comprising the motor vehicle network, based on traffic service and land access. These road classes are identified in the Town's Subdivision and Development Servicing Bylaw (1223-2008) and generally defined as follows²:

Expressway/Highway	Traffic movement is the primary consideration with no land access, preventing traffic from slowing or stopping on the roadway. Average Daily Traffic (ADT) volumes are greater than 10,000 vehicles per day (vpd). Design speeds are typically between 80 km/h to 110 km/h. Parking is not permitted on expressways/highways.
Arterial Street:	Traffic movement is the primary consideration with rigid access control, reducing the need for traffic to stop. Average Daily Traffic (ADT) volumes range from 5,000 to 20,000 vpd for minor arterials and 10,000 to 30,000 vpd for major arterials. Major arterial roadways typically have a four-lane cross section when the daily traffic volumes are at the higher end of the range. Design speeds are typically between 50 km/h to 100 km/h. Parking is usually restricted on arterial roads.
Collector Street:	Traffic movement and land access are of equal importance on a collector road. Motor vehicle flows are frequently interrupted due to more closely spaced intersections. ADTs typically range from greater than 1,000 to 8,000 vpd for residential collectors and greater than 1,000 to 12,000 vpd for commercial or industrial collectors. At the higher daily traffic volume range, the roadway will typically have four-lane cross sections and/or dedicated turn lanes. Design speeds are between 50 km/h to 80 km/h. Parking is usually permitted on collector roads.

² Transportation Association of Canada (TAC), *Geometric Design Guide, 2017: Chapter 2, Table 2.6.5*

Local Street:	Traffic movement is a secondary consideration on a local roadway, with a focus on land access. Driveways and intersections frequently interrupt traffic flow. ADTs are less than 1,000 vpd. Design speeds are 30 km/h to 50 km/h.
Lane:	Land access is the only function of lanes. Lanes can facilitate access to residential or commercial development. For residential development ADTs are less than 500 vpd, for commercial development ADTs are less than 1,000 vpd. Design speed is 30 km/h to 40 km/h.

For more information on the recommended design parameters and cross-sections for each of these road classes, refer to the Town’s Subdivision and Development Servicing Bylaw 1223-2008. The existing road network is illustrated in **Figure 4.1**.

The Town of Golden’s key roadways in the transportation network are described as follows:

6 Street N	A local road that runs northeast southwest starting at 10 Avenue N/Highway 95 and extends through downtown. It is a well used entrance to and exit from downtown.
7 Street N	This roadway is a collector road on the north edge of downtown. It extends from 10 Avenue N/Highway 95 to Kicking Horse Drive. Several developments are either under construction or recently approved to be constructed along the corridor.
9 Street S	This collector is the main east-west connection across Town. It provides connections to six different schools, a recreation centre and a hospital. The road extends from 5 Avenue S in the west to beyond 14 Avenue S in the east, ending Street parking is permitted on both sides of the roadway.
13 Street N/11 Avenue N/ 14 Street N	An arterial roadway located in the industrial area that transitions to 10 Avenue N at its west end and connects to the Trans-Canada Highway at its east end.
9 Avenue N	This collector roadway is the main north-south connection through downtown Golden. It extends from 7 Street N to 10 Avenue N/Highway 95. Many stores front onto this roadway which includes angled parking on the west side and parallel parking on the east side.
10 Avenue/Highway 95	An arterial road that extends north to south across Town. The northern portion of the roadway is a collector roadway that begins at 13 Street N, next to the at-grade CP rail crossing in the industrial

	<p>area, stretching to the Highway 95 ramp where it transitions to an arterial roadway. The road stretches past the south end of Town, providing a connection to various other communities including Nicholson, Parson, Radium, Invermere and beyond. The roadway south of the Highway 95 ramp is under the province’s jurisdiction. It also includes the Kicking Horse Bridge which is planned to be replaced within the next 2-3 years (pending funding approvals). This bridge replacement will be combined with several road improvements in the area including intersection control improvements and signage.</p>
11 Avenue N	<p>A north-south industrial roadway that provides access to several industrial businesses, accommodating large trucks. Connects to 13 Street N/11 Avenue N at the north extent and dead ends in the industrial area to the south, just north of Highway 95.</p>
14 Avenue S	<p>A north-south arterial roadway that provides access to an elementary school and daycare. It extends from 9 Avenue S to the south where it transitions to Selkirk Hill/Spruce Drive.</p>
Highway 1/Trans-Canada Highway	<p>Generally, this highway runs in an east-west direction across the country. In Golden the roadway curves toward the north just before it intersects with Highway 95. It is the main route taken by tourists/travelers to get into/out of Golden. It is also used by many motorists passing through.</p>
Frontage Road East/West	<p>These roads are industrial service roads that parallel the Trans-Canada Highway and provide access to the businesses along it. They are located north of Highway 95 on either side of the Trans-Canada.</p>
Golden Donald Upper Road	<p>An arterial road that extends north-south between Highway 1 and north past the Town’s boundary. Past the Town’s boundary, the road connects to Golden Landfill, rural residential, the Golden Skybridge and the rural areas north of Golden.</p>
Granite Drive	<p>A collector road that extends east-west from Golden Donald Upper Road to provide access to the residential area north of Highway 1.</p>
Kicking Horse Drive	<p>A local road on the north side of the Kicking Horse River that extends from the west edge of town to 7 Avenue N, at the north end of downtown. At the west end, it also provides the only motor vehicle crossing of the Columbia River in Golden. The crossing</p>

	provides access to the Kicking Horse Mountain Resort, Golden Golf Club and mountain bike trails on the south side of Columbia River.
Selkirk Hill	Designated as an arterial road, Selkirk Hill extends north-south starting from 14 Avenue S to Spruce Drive. It is the main access to the Selkirk Hill/Bear’s Paw Height community at the top of Mount 7. The grades and curve of this road create limitations for accommodating all road users. A separate study was recently completed that provides recommendations for the roadway.
Spruce Drive	Designated as an arterial road, this road extends from west (Selkirk Hill) to east (Bowler-Evans Dr), servicing the Bear’s Paw Height community. Current traffic volumes are minimal on this road but are expected to increase as development continues.
Maple Drive	A collector roadway that extends north-south connecting Spruce Drive to Keith King Memorial Sports Field.
Bowler-Evans Drive (Forestry Service Road)	An unpaved local roadway that provides a secondary connection to the communities on Mount 7. Its surface condition, grades and curves limit its use.
Reflection Lake Road	A local roadway that connects Bowler Evans Drive to 10 Avenue S /Highway 95 at the south end of Town and extends south to the Town boundary.

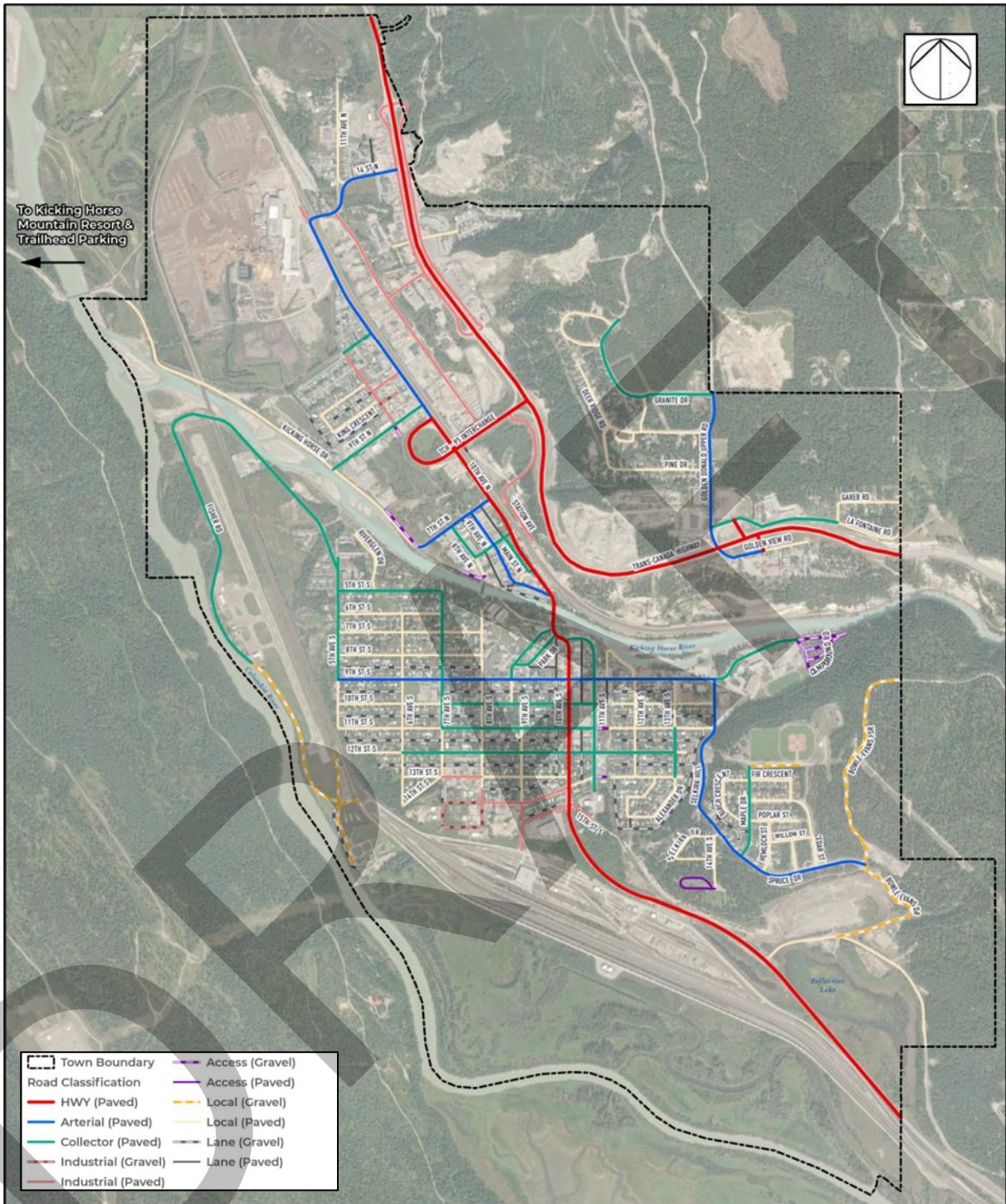


Figure 4.1 Existing Road Network

The Town of Golden has designated roadways for trucks, but are currently reviewing the routes as part of the MOTI Highway 95 Kicking Horse River Bridges 1 and 2 project. These roadways allow trucks to complete turning maneuvers without encroaching onto the curb or sidewalk. The existing truck route network map is shown in **Figure 4.2**. While trucks should generally stay on these roadways, they are permitted to use other roads for deliveries and services to residents and businesses unless otherwise signed.

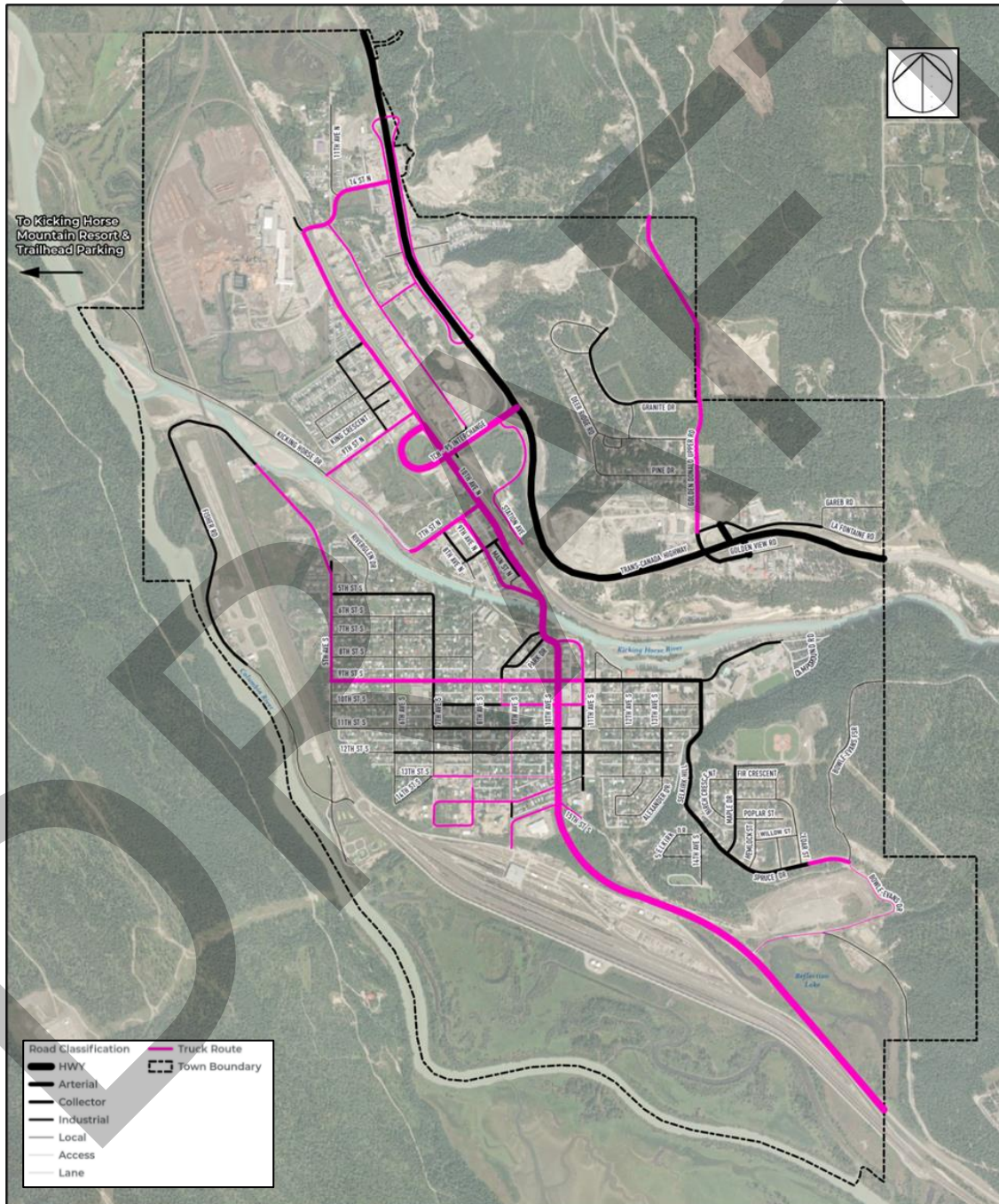


Figure 4.2 Truck Route

4.1.2 ACTIVE TRANSPORTATION NETWORK

Golden's existing active transportation network consists of sidewalks, multi-use paths, walking paths, and trails (**Figure 4.3**). Golden has over 24 kilometres of unpaved trails and 21 kilometres of sidewalks, as well as 1.7 kilometres of paved multi-use trails.

The bulk of the sidewalks in Golden are situated in the mixed-use commercial areas such as downtown and along 10 Avenue South, where there are sidewalks on both sides of the street for much of the corridor. There are also sidewalks on both sides of the street along 9 Street South connecting to three of Golden's four schools. The Kicking Horse Pedestrian Bridge at 8 Avenue North intersects with the walking trail that circles the Town and provides an active transportation connection over the Kicking Horse River to downtown Golden.

While Golden has some of the best mountain biking trails in the province, there is limited on-street cycling bicycle facilities within the Town. There are currently no marked or designated on-street bicycle facilities in Golden, with cyclists having to share the lane with motor vehicles or use the limited network of multi-use trails and unpaved trails. The quality of the trail networks and the gap within Town has residents expressing a desire for better connections beyond and within Golden, especially between residential and commercial areas. For more details, refer to the Active Transportation Network Plan in **Appendix H**.

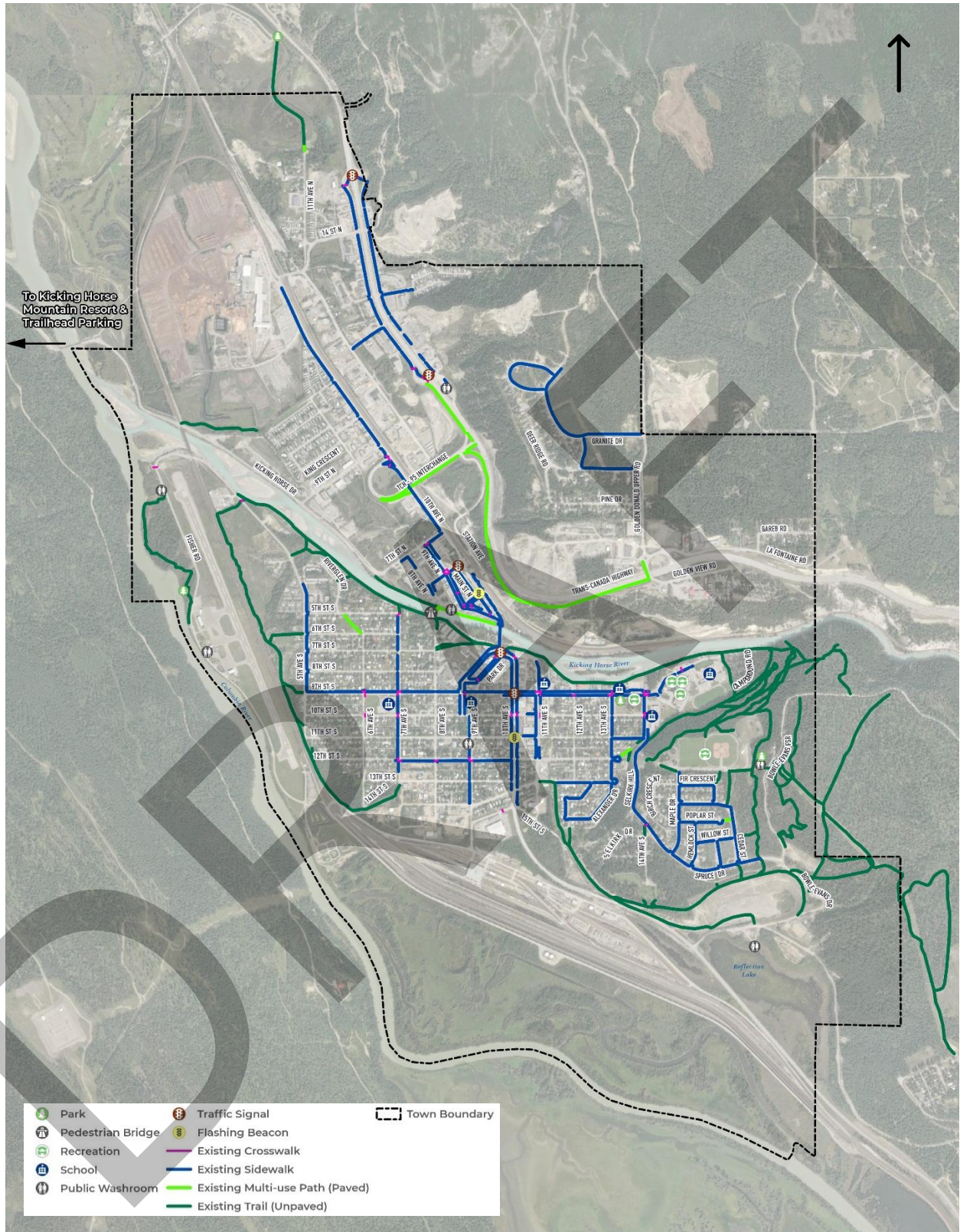


Figure 4.3 Existing Active Transportation Network

4.2 TRAFFIC CONDITIONS

The following section provides baseline conditions for traffic operations on the existing vehicle network. The conditions were used to determine the impact of the expected growth within Golden on the transportation network.

4.2.1 VOLUMES

The following intersections were identified as the key study intersections to be reviewed for the development of the GTP. Focus was placed on locations where arterial and collector roadways intersected. The study intersections are shown in **Figure 4.4**.

1. 9 Street S and 5 Avenue S	10. Maple Drive and Spruce Drive
2. 9 Street S and 8 Avenue S	11. Golden Donald Upper Road and Granite Drive
3. 9 Street S and 14 Avenue S	12. Kicking Horse Drive and 9 Street N
4. 9 Street S and 10 Avenue S	13. Highway 95 and Reflection Lake Road
5. 6 Street N and 10 Avenue N	14. Highway 95 and 10 Avenue N
6. 6 Street N and 9 Avenue N	15. Highway 1 and Frontage Road East
7. 7 Street N and 10 Avenue N	16. Highway 1 and Frontage Road West
8. 12 Street S and 10 Avenue S	17. Highway 1 and Highway 95
9. 13 Street N and 11 Avenue N	

Turning movement counts (TMC) were collected at all study intersections in August, 2021. TMCs were adjusted to account for the impacts of COVID-19 and for increases in traffic due to tourists to achieve typical Fall, weekday traffic volumes. The resulting study intersection traffic volumes for the Fall weekday AM and PM peak hours are illustrated in **Figure 4.5** and **Figure 4.6**, respectively.

Further, 24-hour two-way roadway volumes were collected continuously over five days at five locations (the location of these counts are also detailed in **Figure 4.4**). These 24-hour counts help in understanding the daily fluctuations in traffic volumes throughout Golden. Where two-way roadway volumes were not available, existing average daily traffic (ADT) volumes along the study corridors were estimated by applying a factor of 10 to the Fall PM peak hour two-way volumes to achieve the ADTs. This factor was confirmed to be appropriate based on the 24-hour two-way roadway traffic volume data that was collected in August. The ADT volumes along the study corridors are summarized in **Figure 4.7**. Additional information on how the existing traffic counts were adjusted, and the 24-hour traffic count data are provided in **Appendix C**.

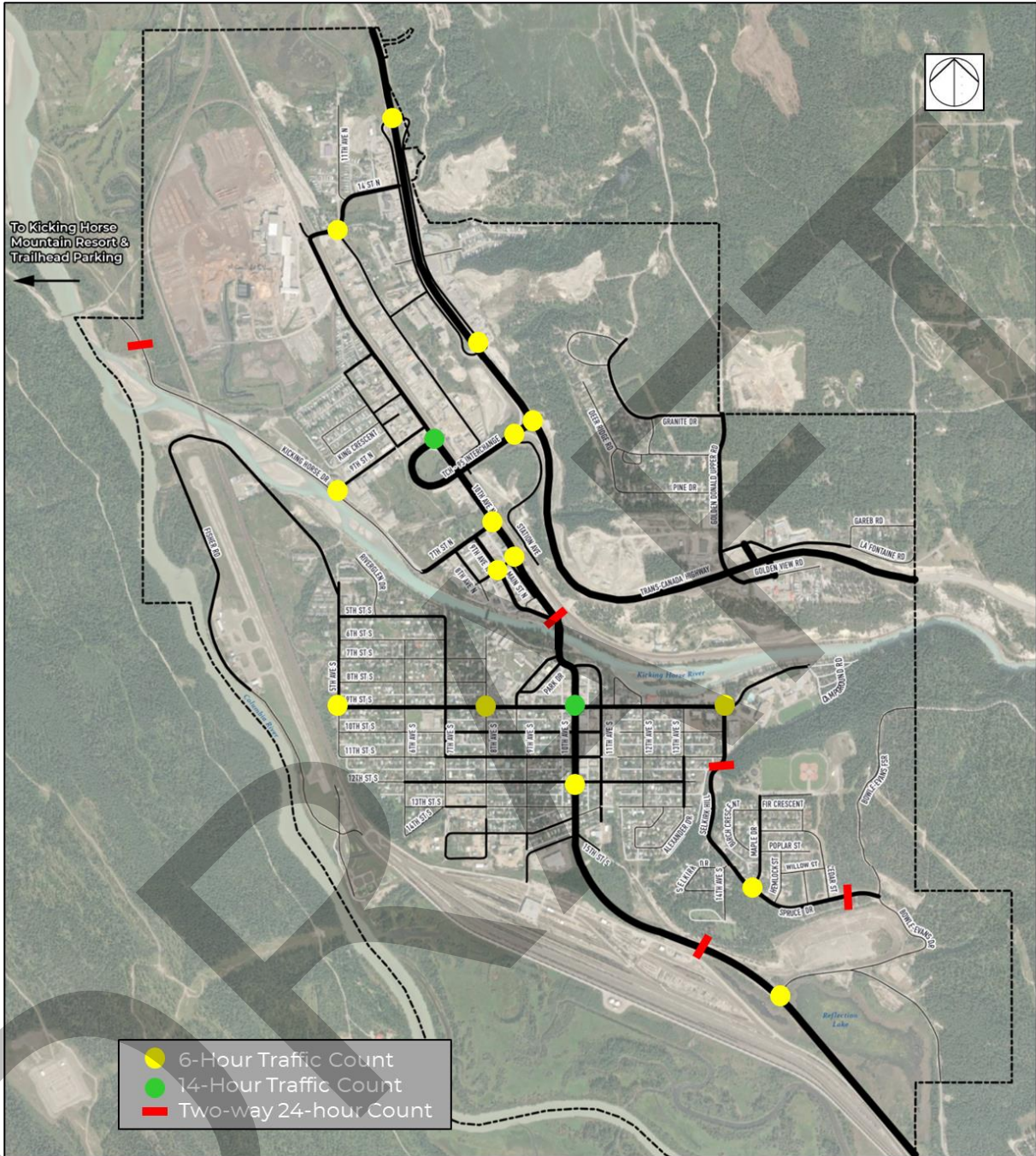


Figure 4.4 Study Intersections

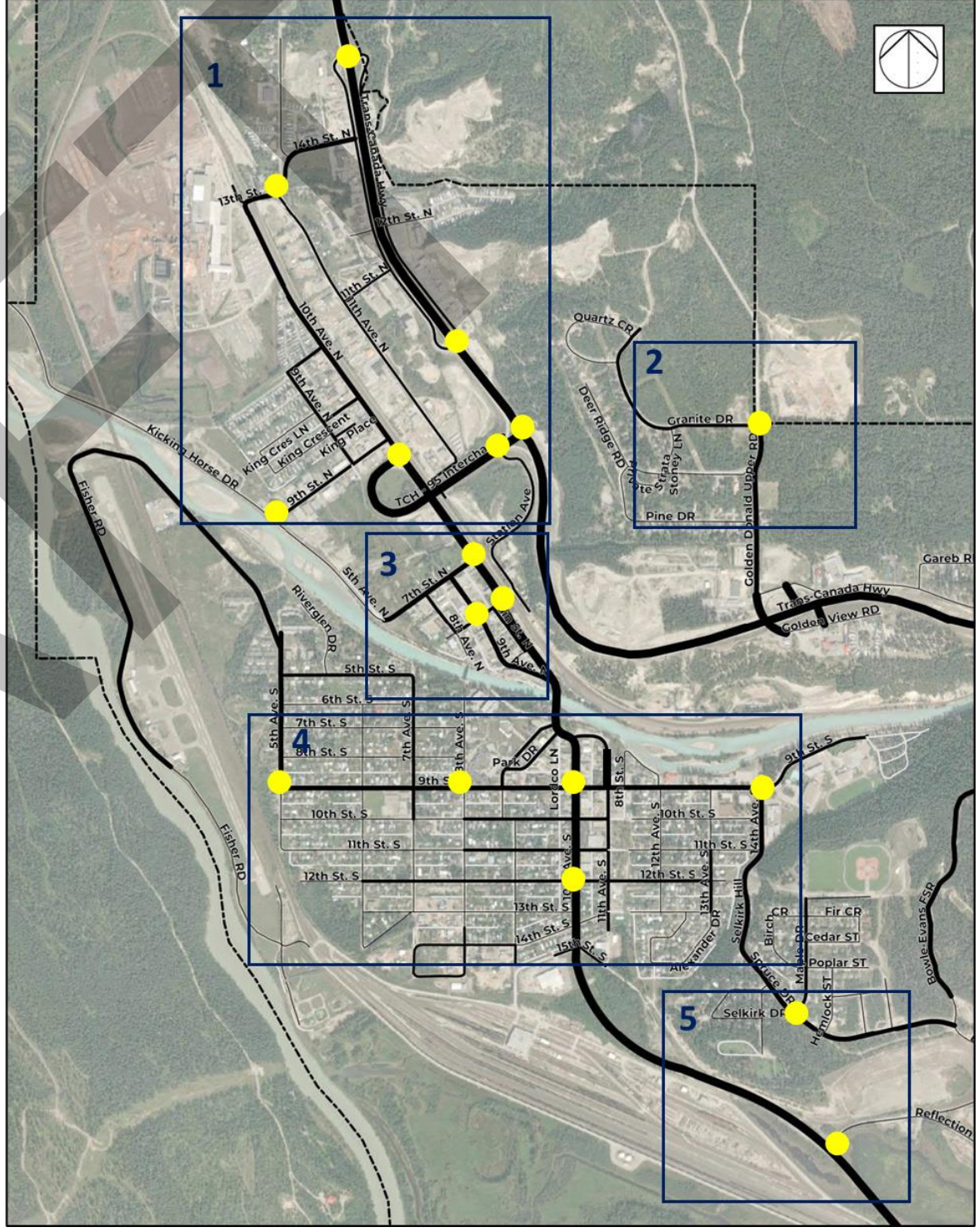
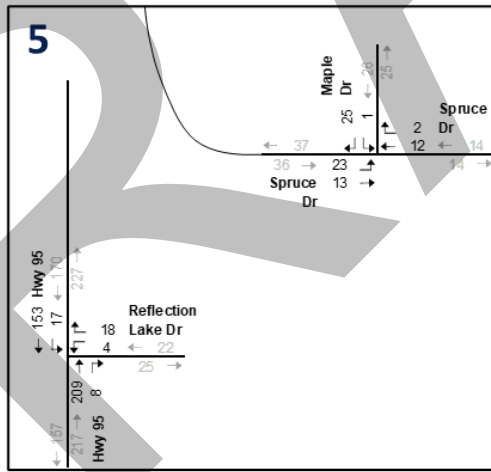
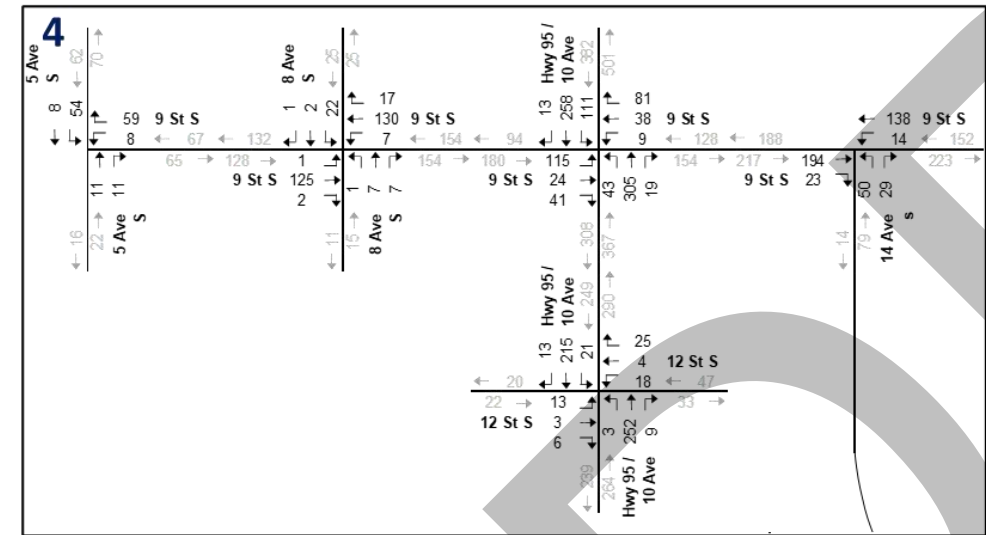
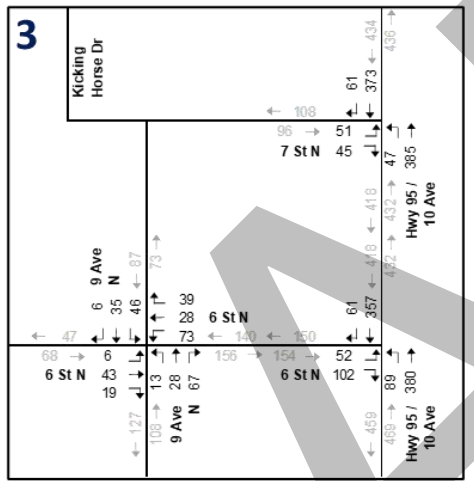
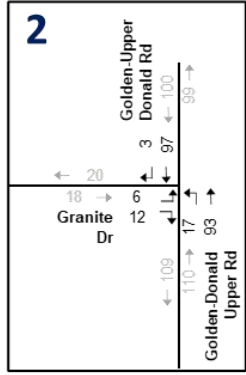
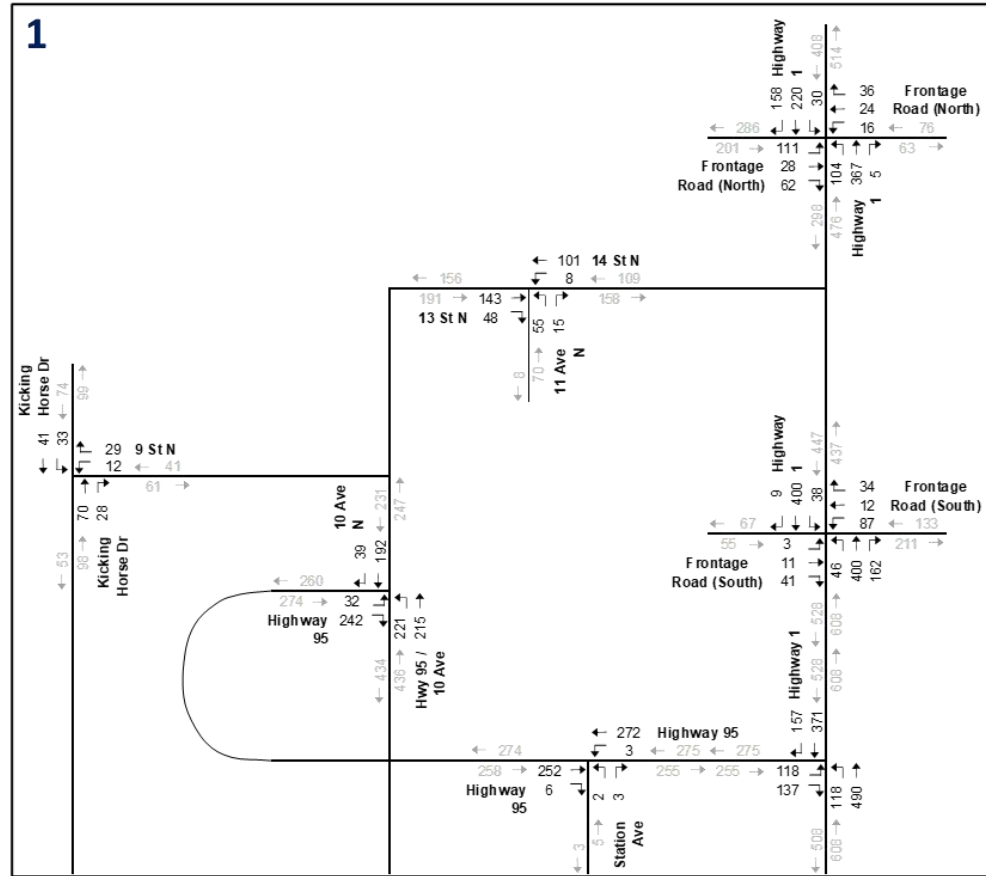


Figure 4.5 Fall Weekday AM Peak Hour Traffic Counts

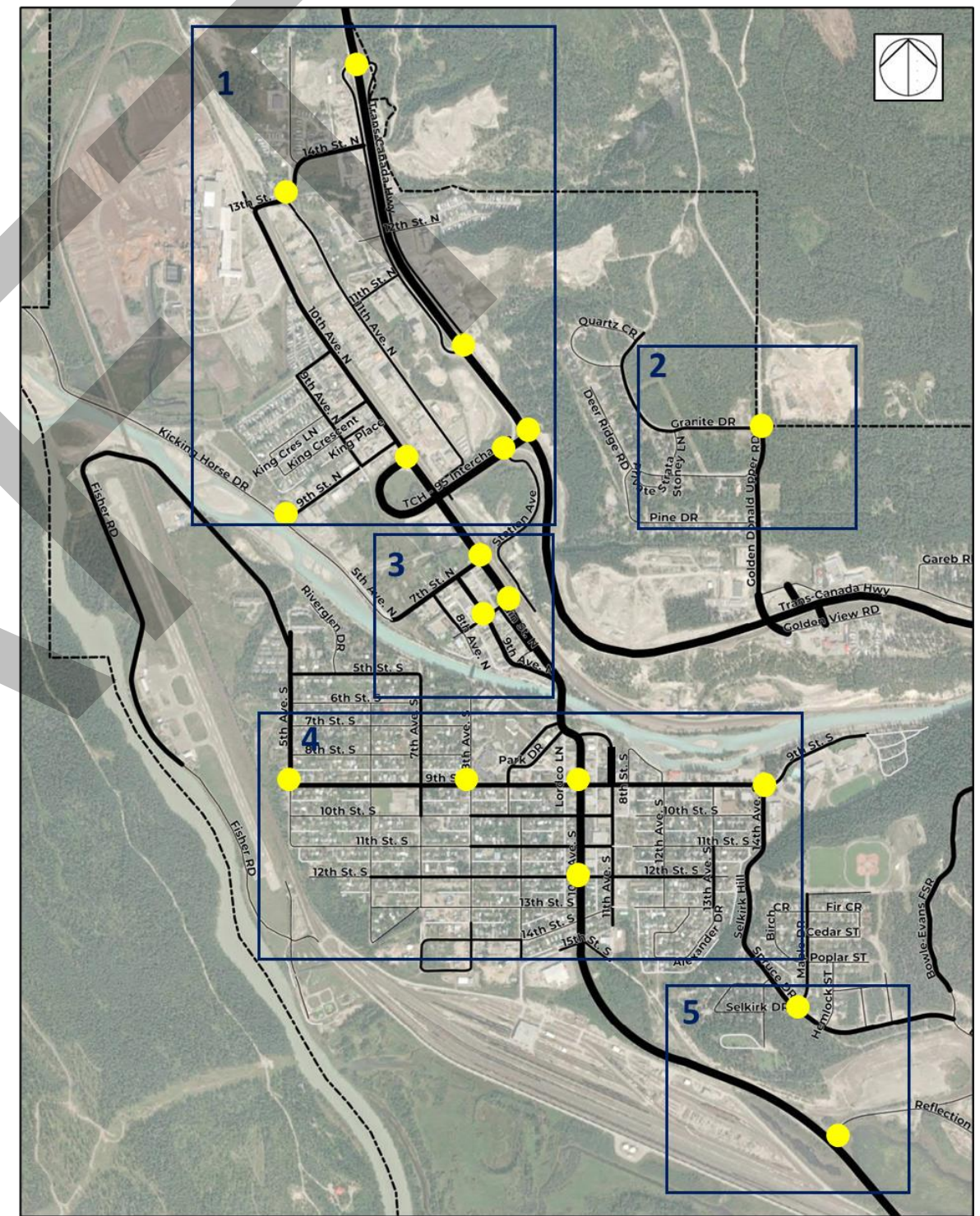
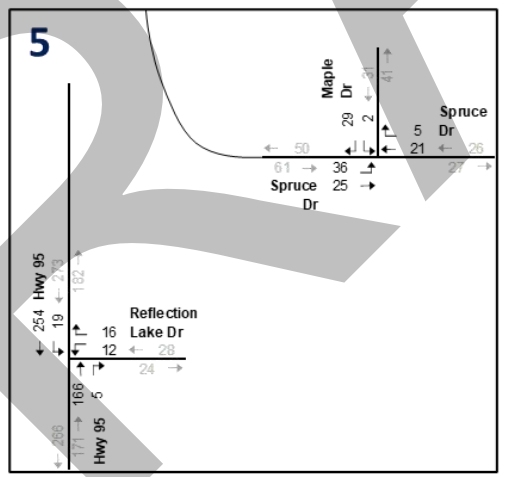
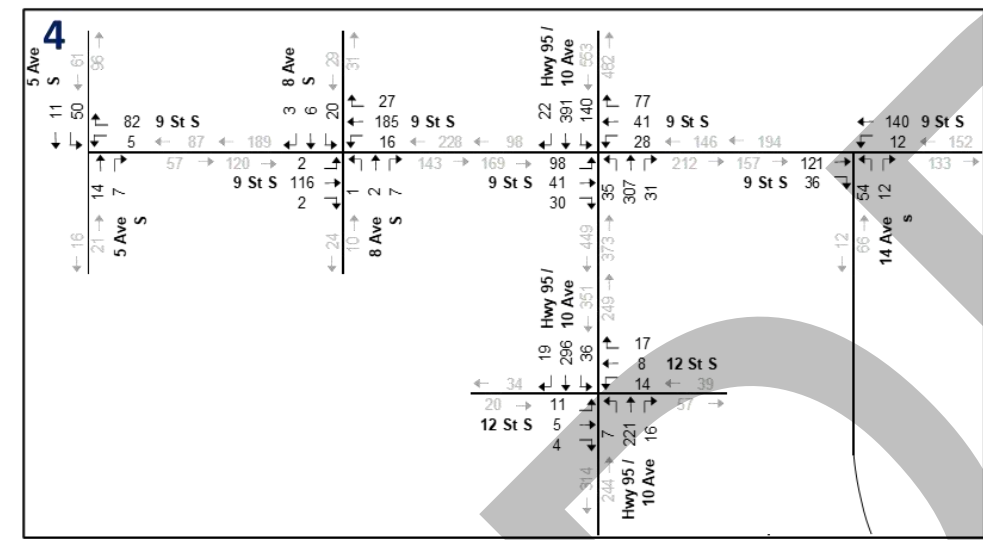
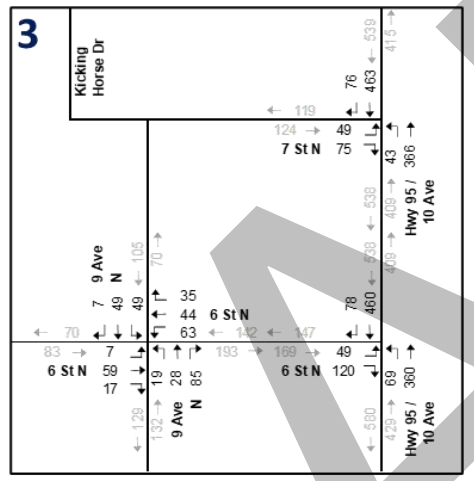
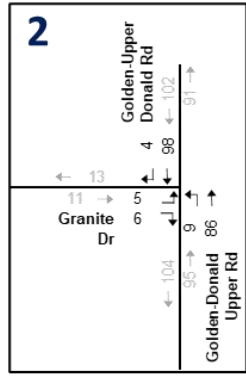
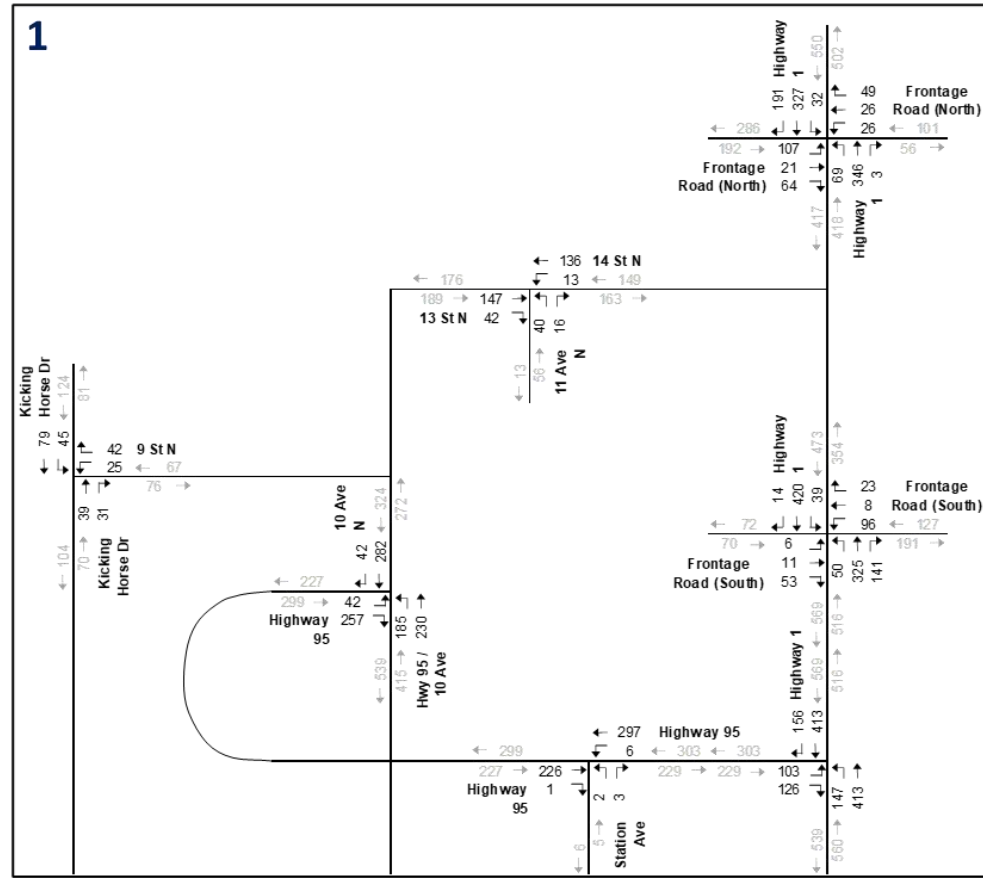


Figure 4.6 Fall Weekday PM Peak Hour Traffic Counts

4.2.2 ANALYSIS

Intersections

The resulting traffic volumes (**Figure 4.5** and **Figure 4.6**) representing existing conditions were used to analyze the study intersections. The operations of intersections are measured by the average delay experienced at intersections and for each movement, commonly referred to as Level of Service (LOS). The LOS assigned to a signalized intersection or movement can range between A and F. LOS A through C generally indicate that the intersection experiences a low level of delay during the analysis hour and operate well, whereas LOS F suggests the average delay is significant (greater than 60 seconds per vehicle) and that the intersection or movements operate at the lowest level of service. Poor level of service can contribute to drivers taking risks and proceeding unsafely into an intersection. For unsignalized intersections, the level of service is measured for the critical movements that cross free-flow traffic, such as from minor streets or left turns onto the main street. LOS E or better is generally acceptable for these critical movements at unsignalized intersections.

All the study area intersections operate at an overall Level of Service (LOS) of B or better during the AM and PM peak hours. All individual movements operate at LOS B or better except for the intersection of Highway 1 and Highway 95, where the northeast to westbound left turn movement experiences higher delays. Despite these delays, the queues for this movement are reasonable (less than 60 metres).

The existing operating performance of the study intersections are illustrated in **Figure 4.8**. A detailed summary of the analysis for each of these movements and resulting intersection operations is provided in **Appendix D**.

Roadway Capacity Review

The estimated roadway volumes, as shown in **Figure 4.7**, were compared to the assigned road classifications from **Figure 4.1**. This comparison showed that several roads have volumes that do not correspond to their classification. However, it is expected that future development will increase volumes on some of these roads. A detailed summary of the comparison of assigned road classification and operating classification is provided in **Appendix D**.

Further comment on reclassification of existing roads is provided in **Section 5.1.3** with the review of the estimated future traffic volumes.

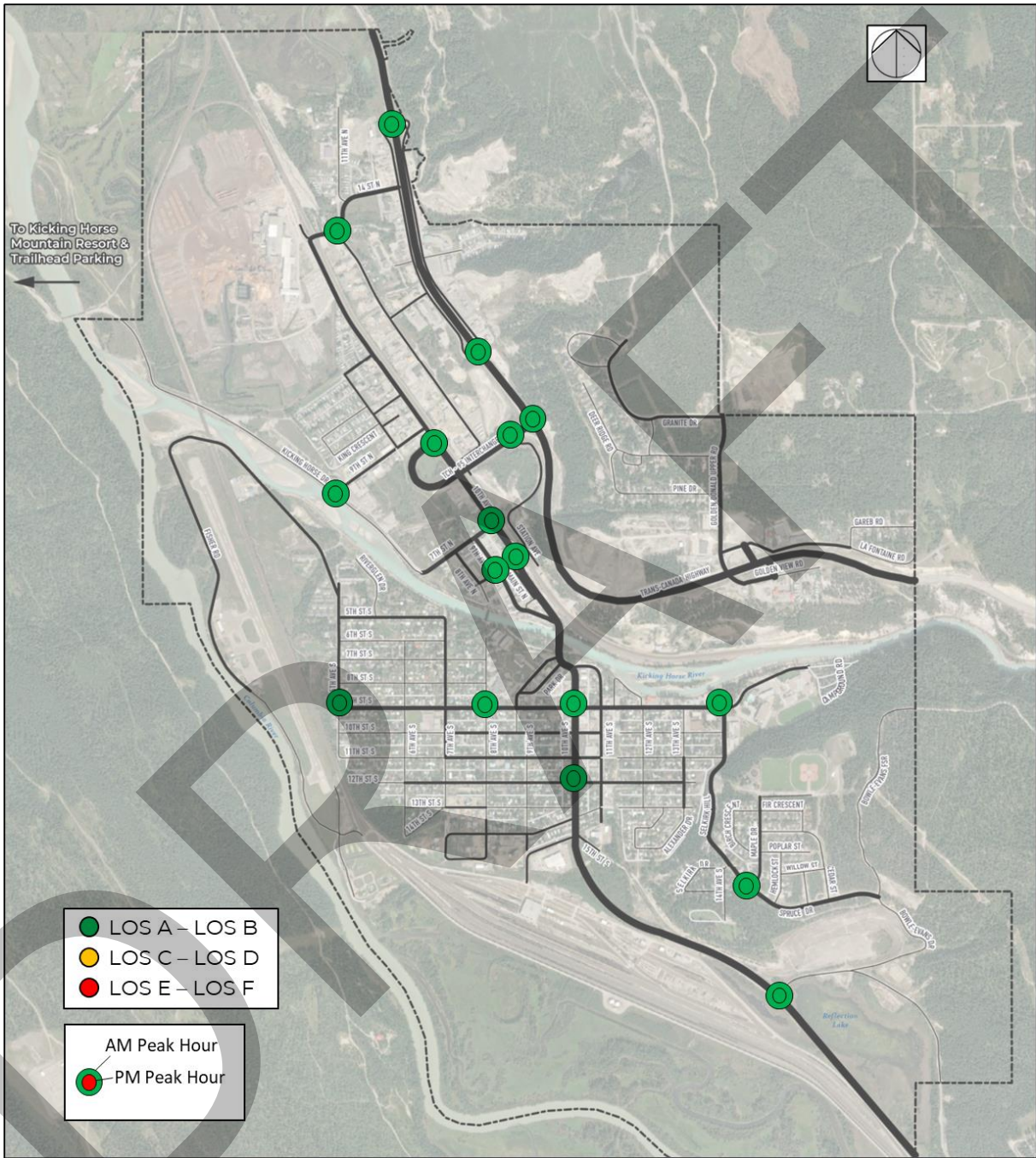


Figure 4.8 Existing Intersection Operations

4.2.3 COLLISIONS

The number of motor vehicle collisions within Golden’s municipal boundaries was investigated using data obtained from the Insurance Corporation of British Columbia (ICBC). The data included collisions from 2011 to 2020. During this time, there were 2,473 collisions reported to ICBC, of which 15 were fatal, 450 collisions involved an injury and 2,008 collisions resulted in property damage. The 15 fatal collisions were primarily on Highway 1 (11 collisions) and Highway 95 (3 collisions), with one unknown location and one on a residential road. **Figure 4.9** summarizes this data. Note that parking lot collisions were excluded from the data review.

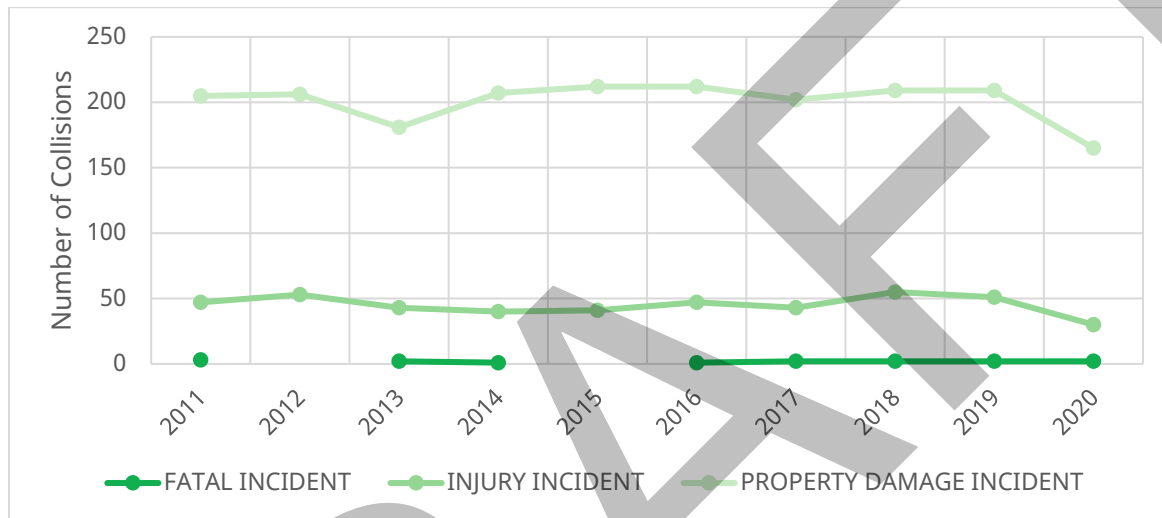


Figure 4.9 Number of ICBC Reported Collisions from 2011-2020

ICBC also provides online information for intersection collisions. The data included collisions from 2016 to 2020. During this time, there were 209 collisions reported to ICBC, of which 52 involved casualties (which are defined by ICBC as collisions resulting in injury or fatality), and 157 involved property damage only or PDO (which are collisions resulting in material damage only).

The ICBC data also provided general location information on the collisions. The following intersections were identified as the locations where the top four number of collisions from 2016 to 2020:

- Highway 1 and Highway 1 Frontage Road intersection (northwest Town limit) – 17 collisions (4 casualties; 13 PDOs)
- 10 Avenue S and 9 Street S – 14 collisions (6 casualties; 8 PDOs)
- Highway 1 and Highway 95 – 9 collisions (5 casualties; 4 PDOs)
- 10 Avenue N and 9 Avenue N – 8 collisions (3 casualties; 5 PDOs)

As noted above ‘casualty’ is defined by ICBC as collisions resulting in injury or fatality.

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5.0 THE FUTURE OF TRANSPORTATION IN GOLDEN

The future requirements of the transportation network in Golden will need to consider the anticipated future growth and development in the Town. The rate of growth and location of the developments will provide direction on where the potential impacts are to the existing transportation network, and where improvements will be required.

5.1 PROJECTED GROWTH

5.1.1 TRANSPORTATION DEMAND MODEL

To evaluate the future traffic operating conditions and develop a base-case for recommending future improvements, a transportation demand model was developed. The model includes the 2031 (10-year) and 2041 (20-year) horizons and was developed for the weekday afternoon (PM) period.

For the model, estimated population and employment needed to be developed for each future horizon. To obtain the population and employment for each future analysis horizon, a review of the Housing Needs Report for the Golden area was completed. According to the Housing Needs Report, the annual linear growth rate for region is projected to be approximately 1.5% and was based on BC Statistics (for the Town of Golden and Electoral Area A).

This growth rate was applied to the number of people living in Golden and the number of people working in Golden based on the 2016 Census data. The forecasted populations were then cross-referenced with the anticipated development areas to confirm their validity. When taking this into consideration, the resulting annual growth rate was slightly higher for the short term at approximately 2% and approximately 1.8% for the 10- and 20- year horizons.

The transportation demand model was developed prior to the initial release of the 2021 Census information (released in February 2022). The information released thus far in the 2021 Census data indicates a similar annual growth rate of 1.5% used in the analysis. The COVID-19 pandemic has created an atypical trend due to more people working from home, creating fewer commuting trips and the ability for individuals to move to more desirable municipalities (like Golden) but is not anticipated to continue at the same rate. As such, the resulting annual linear growth rates for the future population growth that was developed for the transportation demand model is deemed appropriate and considered slightly conservative. The employment growth is projected from maintaining a similar labour force to participation ratio as indicated by the 2016 Census data.

The location and area for the population and employment growth were based on discussions with the Town on active developments and known interests in redevelopments. The transportation demand model forecasted the future traffic volumes on the roadway network using the projected land use for each future horizon year. The assumptions for the transportation demand model and the land use for the 10- and 20-year horizons are included in **Appendix E**.

5.1.2 FUTURE TRAFFIC VOLUMES

It was determined that traffic volume growth from the existing condition was dependent on location and ranged from 1.5% to 2%. In several areas of the Town, where existing traffic volumes are low, and significant development is expected in the future, there may be higher traffic growth. Further, other areas are expected to experience marginal densification on brownfield development

sites. The resulting growth locations, illustrated in **Figure 5.1**, were assigned the following linear annual growth rates (note that the numbers in the list correspond with the numbers in the figure):

1. Along Trans-Canada Highway and Highway 95: 1.5% to 2%
2. Downtown: 1.5% to 2%
3. 9 Street S west of Highway 95: 5%
4. 9 Street S east of Highway 95: 1% to 1.5%
5. 5 Avenue S, north of 9 Street S currently has very low traffic volumes. However, development is planned in this area which will result in a growth rate of up to 10% per year, tripling the existing traffic volumes.
6. (not pictured) Remaining network: 0.5% to 1%

The resulting traffic volumes for the 2031 and 2041 horizon years are illustrated in **Figures 5.2 to 5.5**.

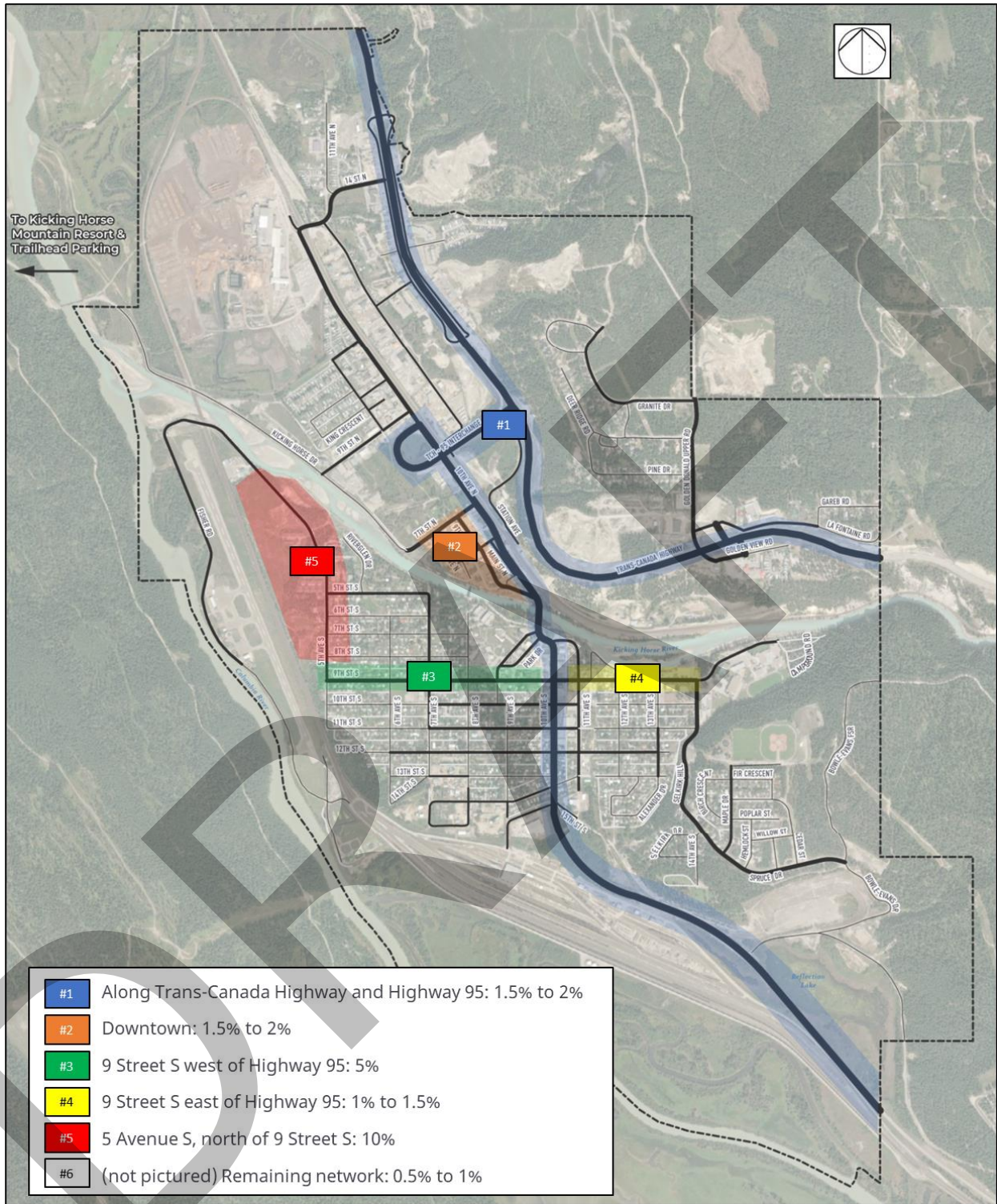


Figure 5.1 Growth Areas

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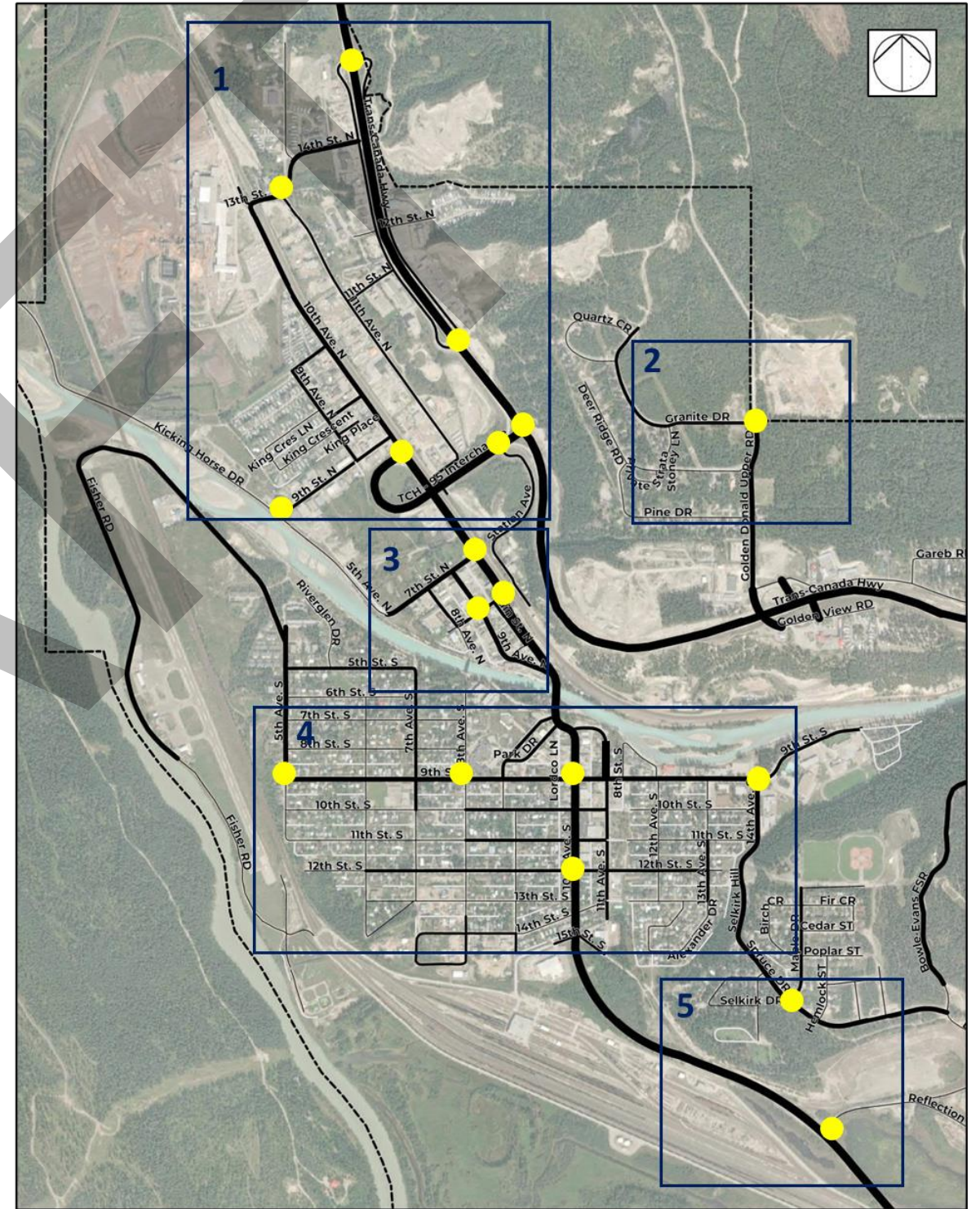
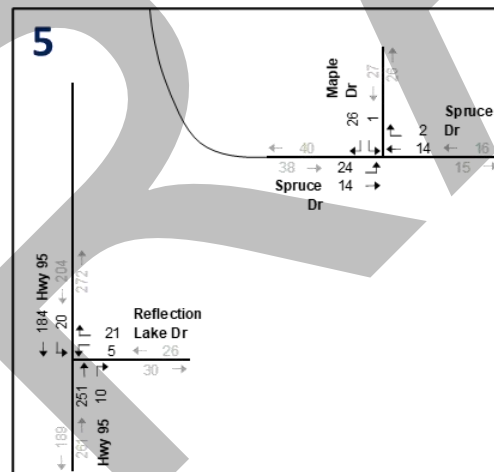
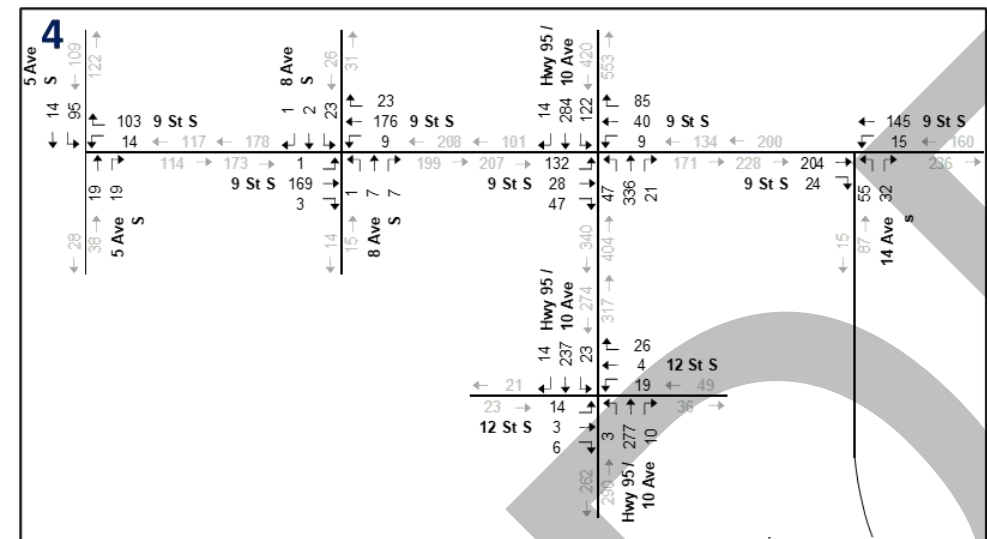
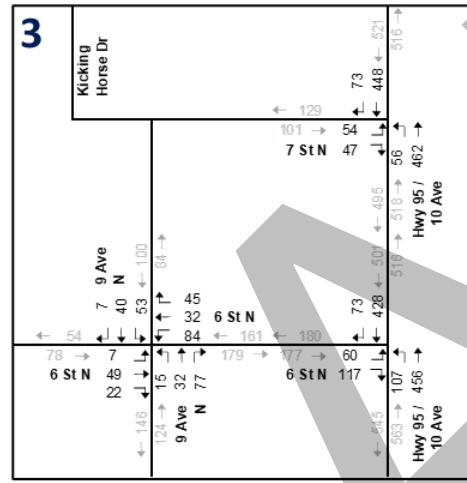
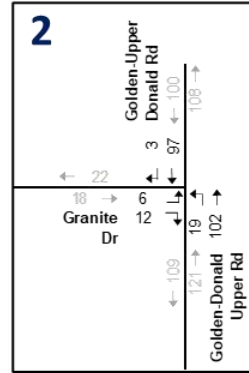
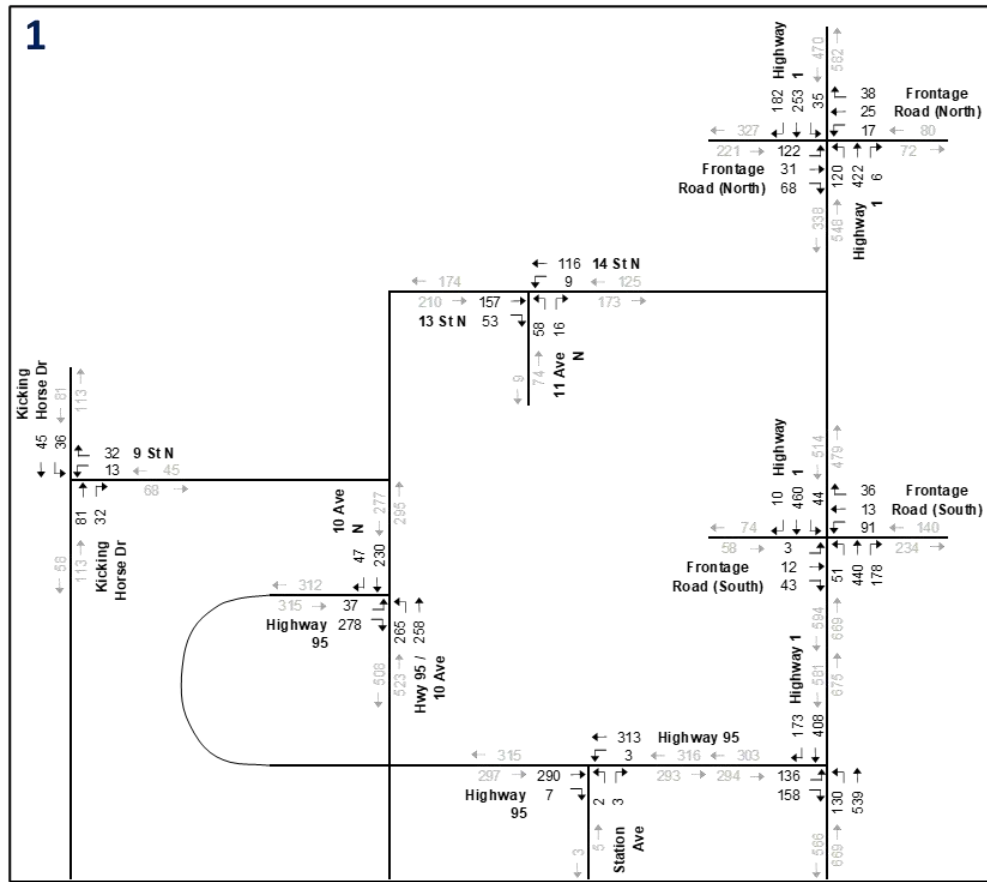


Figure 5.2 2031 (10-years) Traffic Volumes – Weekday AM Peak Hour

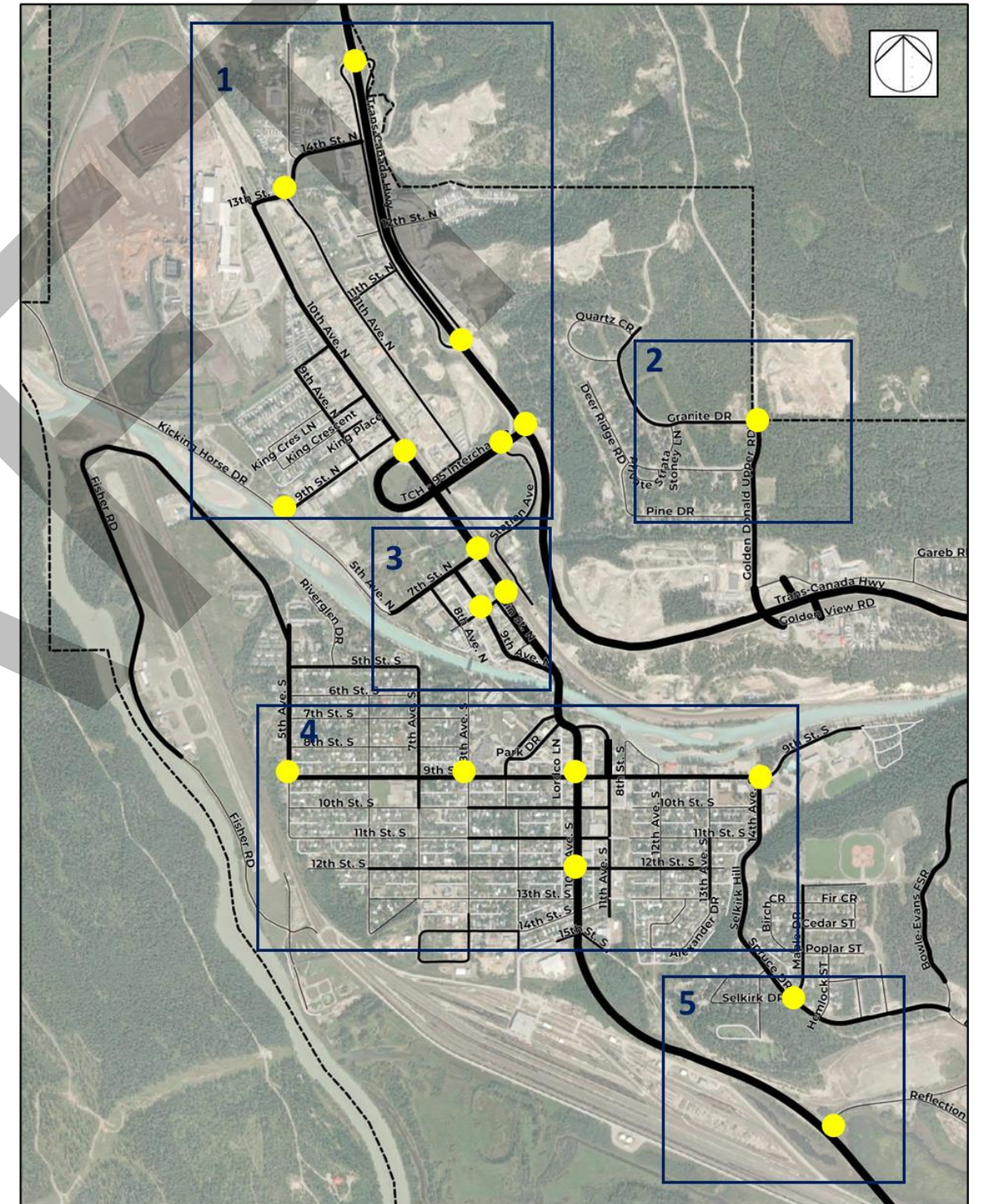
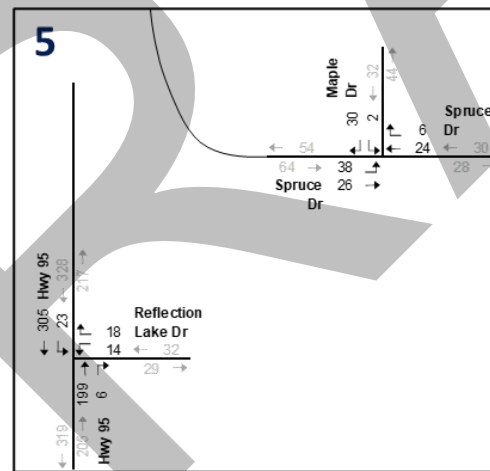
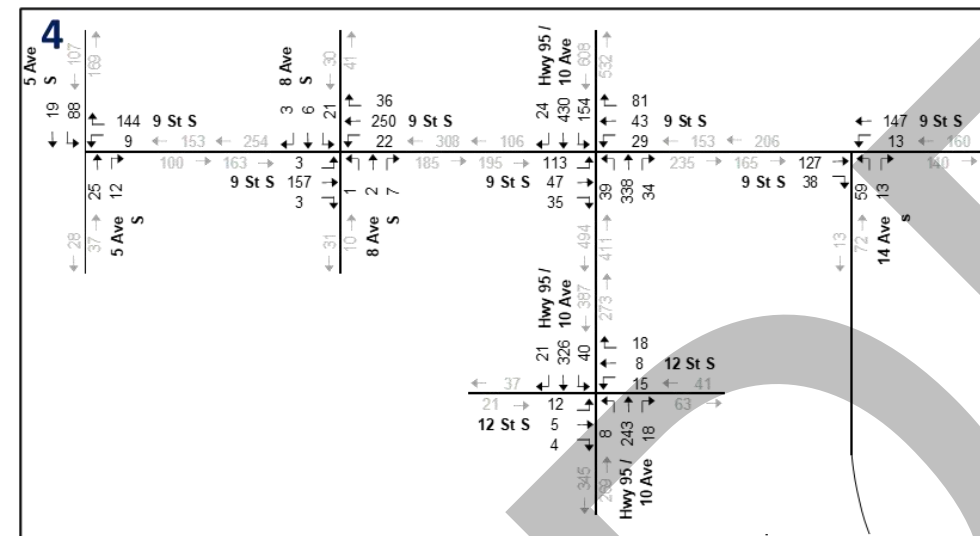
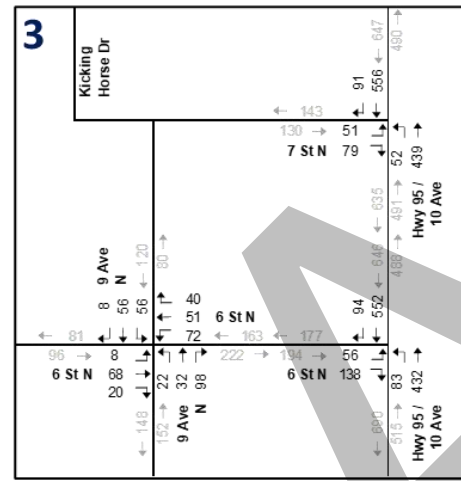
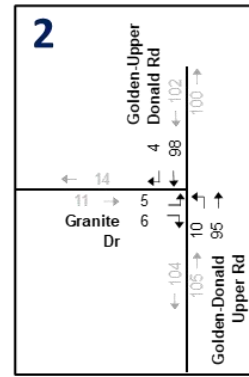
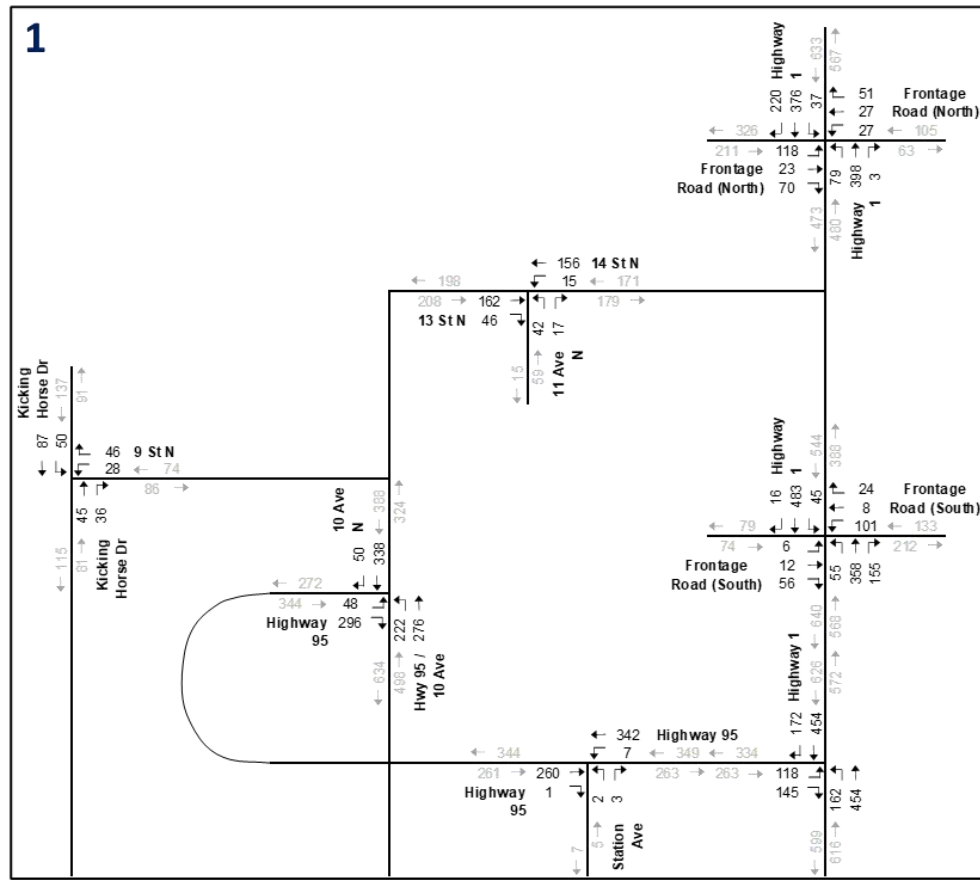


Figure 5.3 2031 (10-years) Traffic Volumes – Weekday PM Peak Hour

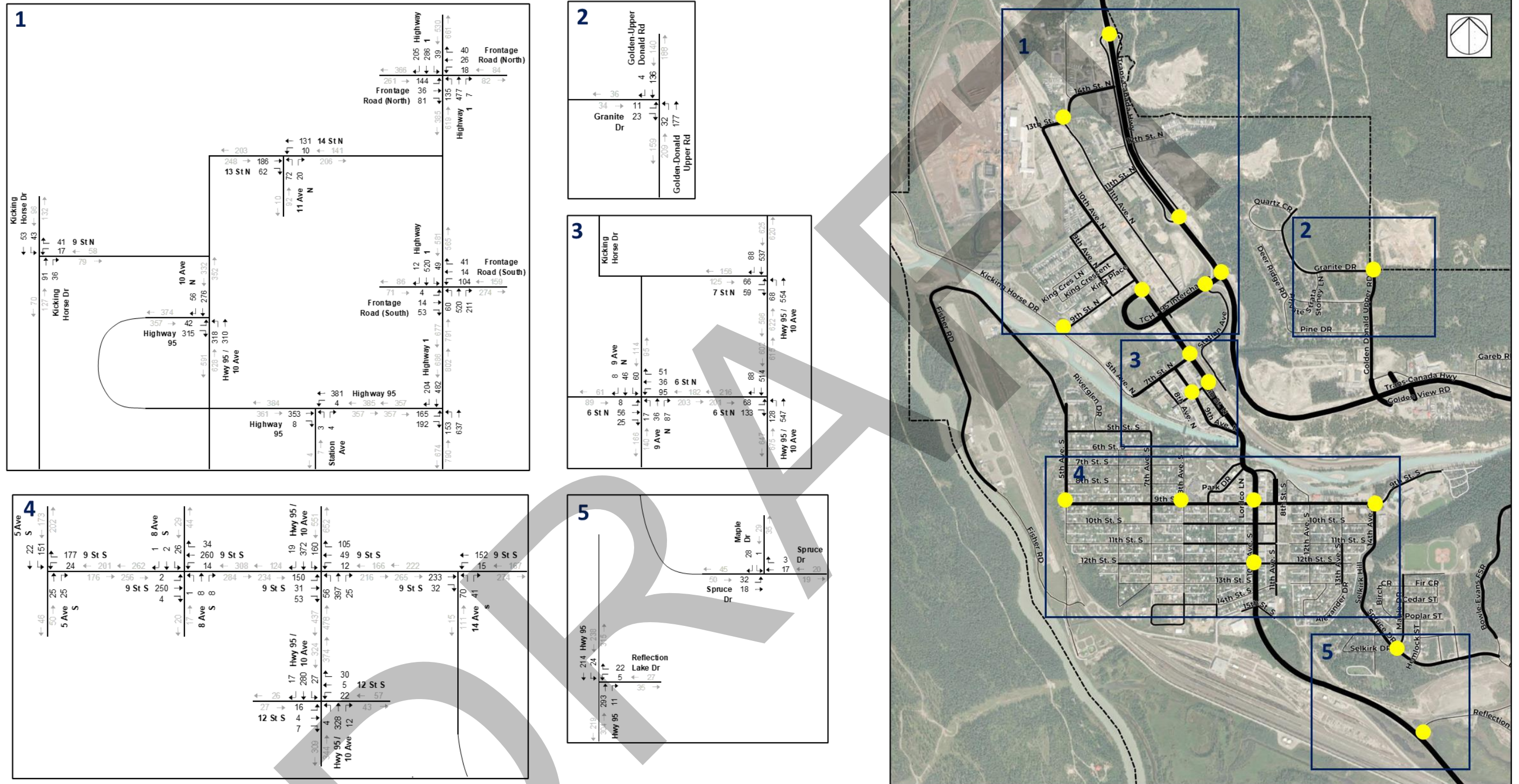


Figure 5.4 2041 (20-years) Traffic Volumes – Weekday AM Peak Hour

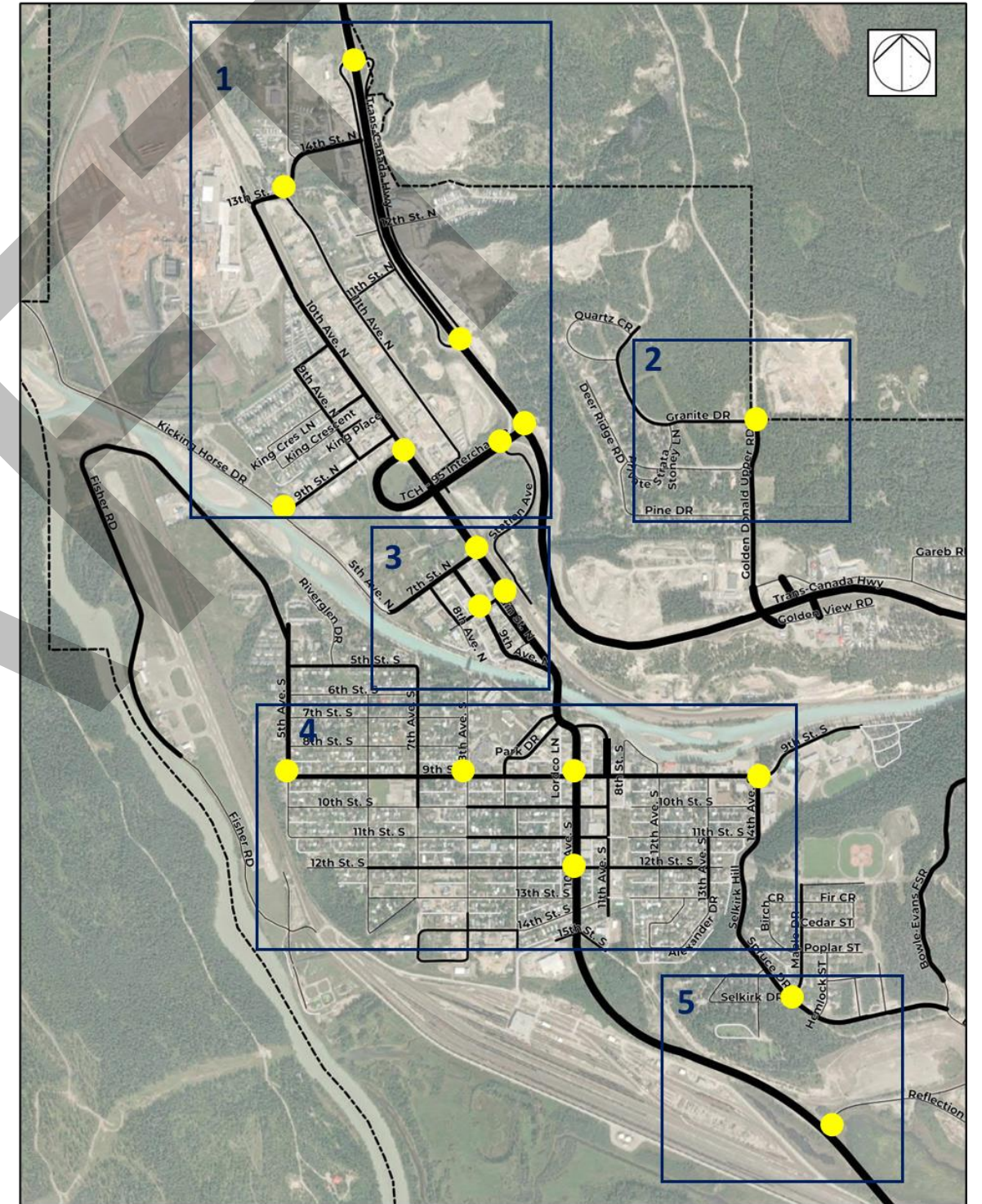
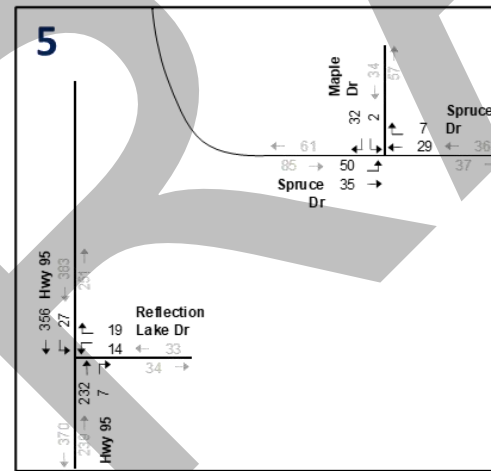
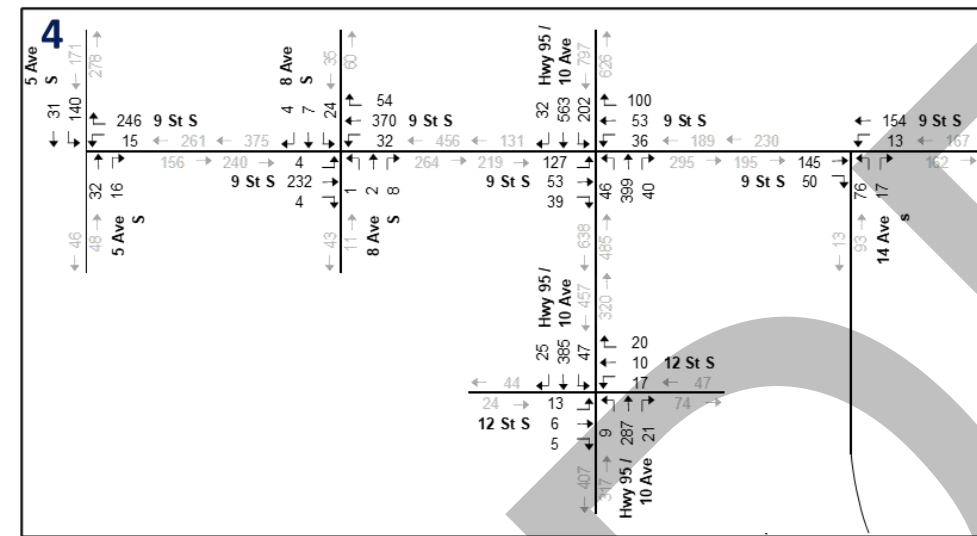
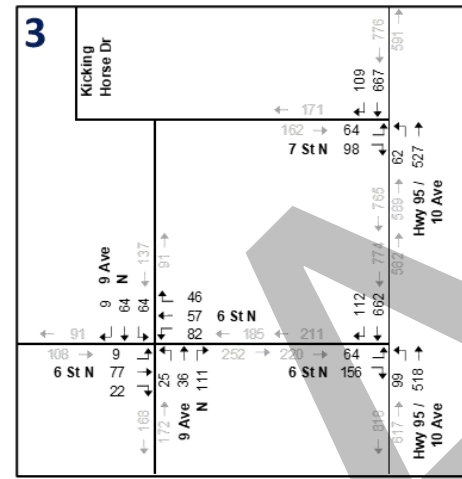
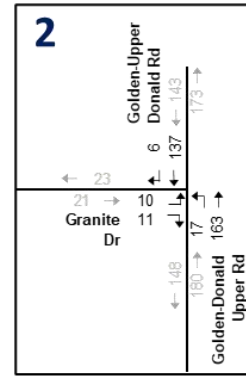
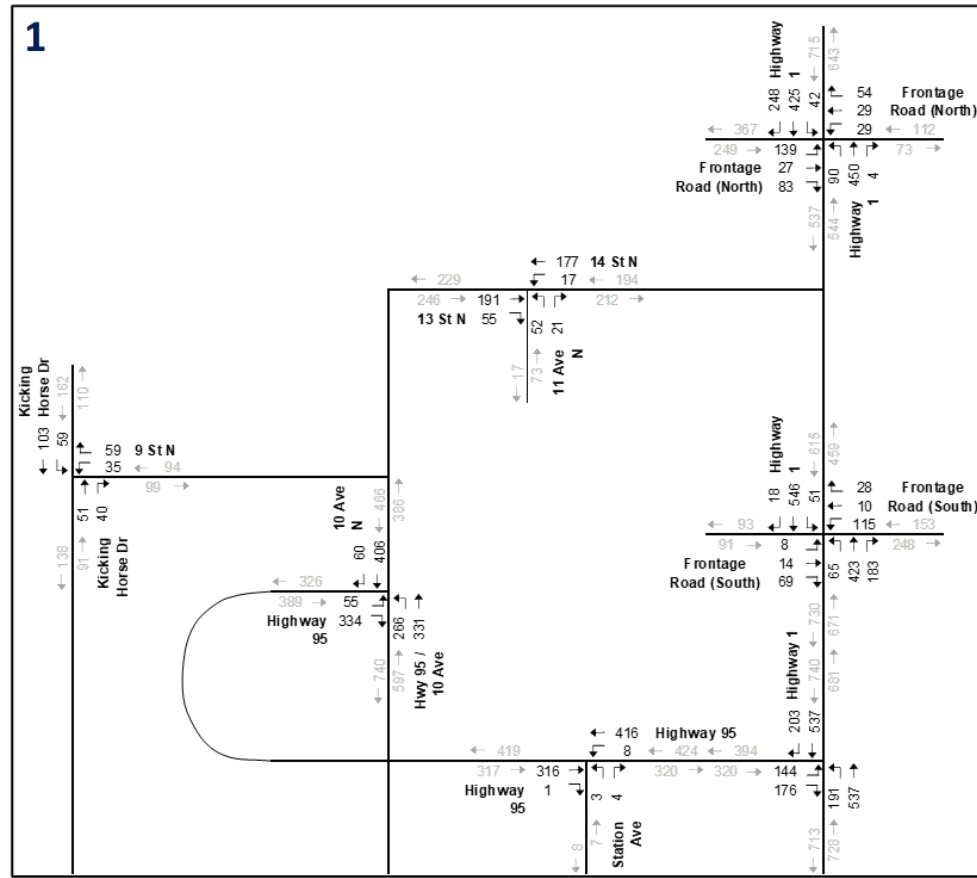


Figure 5.5 2041 (20-years) Traffic Volumes – Weekday PM Peak Hour

5.1.3 FUTURE (2031 AND 2041) TRAFFIC CONDITIONS

Intersection Capacity Review

Traffic analysis was performed for the study intersections. The overall intersection LOS for all studied intersections is expected to be LOS C or better. However, some concerns are expected to arise at the individual turning movement level for several of the study intersections by 2031 and 2041. **Figure 5.2** (2031 horizon) and **Figure 5.3** (2041 horizon) illustrate what the future LOS operating conditions will be at the study intersections for the weekday AM and PM peak hours. For background on what LOS means, refer to **Section 4.2.2**. **Table 5.1** highlights these intersections and provides potential improvement measures to mitigate the expected delays. Further discussion on each intersection follows. Detailed summary reports of the study intersections operations for the future horizons are provided in **Appendix F**.

Table 5.1 2031 and 2041 Intersection Operational Performance and Improvements

Intersection	Overall Intersection LOS		Improvements (Timeline)
	2031 Horizon	2041 Horizon	
Trans Canada Hwy & Hwy 95	<ul style="list-style-type: none"> AM Peak Hour LOS A (EBL LOS F) PM Peak Hour LOS A (EBL LOS F) 	<ul style="list-style-type: none"> AM Peak Hour LOS C (EBL LOS F) PM Peak Hour LOS C (EBL LOS F) 	Signalize (by 2031)
Hwy 95 (10 Ave N) & 6 St N	<ul style="list-style-type: none"> AM Peak Hour LOS A PM Peak Hour LOS A (EBL/R LOS E) 	<ul style="list-style-type: none"> AM Peak Hour LOS B (EBL/R LOS F) PM Peak Hour LOS B (EBL/R LOS F) 	Signalize or restrict turns (by 2041)
Hwy 95 (10 Ave N) & 7 St N	<ul style="list-style-type: none"> AM Peak Hour LOS A PM Peak Hour LOS A 	<ul style="list-style-type: none"> AM Peak Hour LOS A (EBL/R LOS F) PM Peak Hour LOS A (EBL/R LOS F) 	Signalize or restrict turns (by 2041)

Note: LOS = Level of Service; EBTL = eastbound through shared left turn lane; EBL/R = Shared eastbound left-turn and right-turn lane

It should be noted that these intersections identified for operational improvements are under BC MOTI's jurisdiction.

Trans Canada Highway and Highway 95

The existing delay for vehicles turning northwest to westbound left onto the Trans Canada from Highway 95 are long and result in LOS E during both the AM and PM peak hours. With the expected growth in traffic volumes on both roadways, this delay is expected to increase, pushing operating conditions to LOS F during the 2031 AM and PM peak hours.

Highway 95 (10 Avenue N) and 6 Street N

There are currently temporary traffic signals installed at this intersection as part of the detour requirements for the work along the Trans Canada Highway. As a result, the intersection was analyzed in the 2031 and 2041 horizons with stop control to understand the impacts on the intersection if the signals were to be removed and replaced with a stop sign on 6 Street N.

At the 20-year horizon (2041), with stop control on 6 Street N and the expected increase in traffic volumes on Highway 95 (10 Avenue N), it is anticipated that there will be long delays for vehicles on 6 Street N turning onto Highway 95 (10 Avenue N). To minimize delays in the future, the temporary signals at this intersection should be made permanent.

Highway 95 (10 Avenue N) and 7 Street N

It is anticipated that volumes on Highway 95 (10 Avenue N) will increase by 2041 to the point where vehicles turning onto Highway 95 (10 Avenue N) from 7 Street N will experience long delays. Because of this, improvements to the intersection control at 10 Avenue and 7th Street N are recommended. Signals could be provided or turning movements could be restricted to allow right-in movements from 10 Avenue N and right-out movements from 7 Street N only.

If the temporary signals at 6 Street N and Highway 95 (10 Avenue N) are made permanent, signals may not be required at this intersection as motorists will tend to use the signalized intersection to avoid the longer delays at the unsignalized one. However, if signals are still warranted in the future at Highway 95 and 7 Street N, then the signal timings should be coordinated with the ones at 6 Street N to ensure efficient flow of traffic along Highway 95.

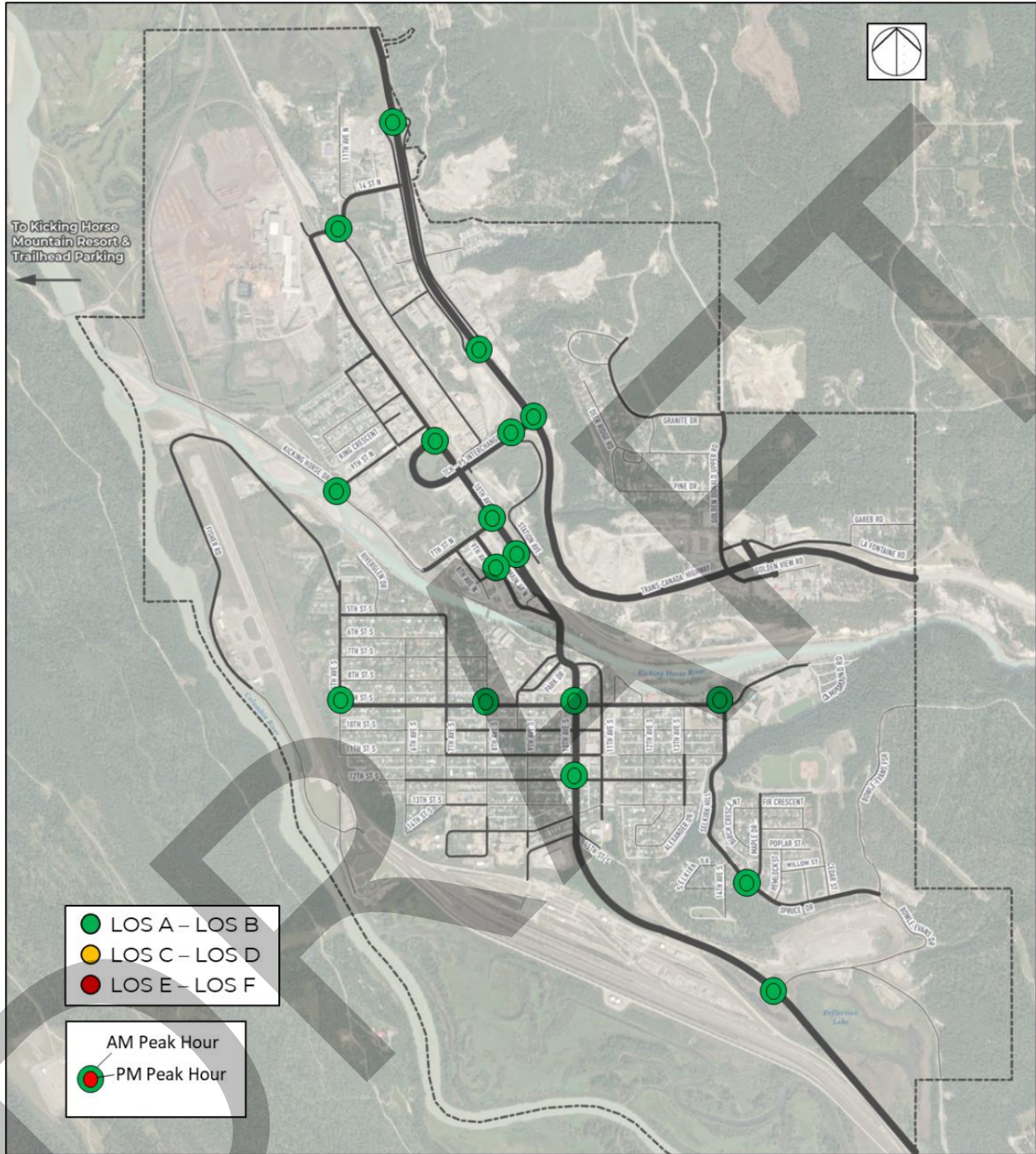


Figure 5.6 2031 Intersection Operations

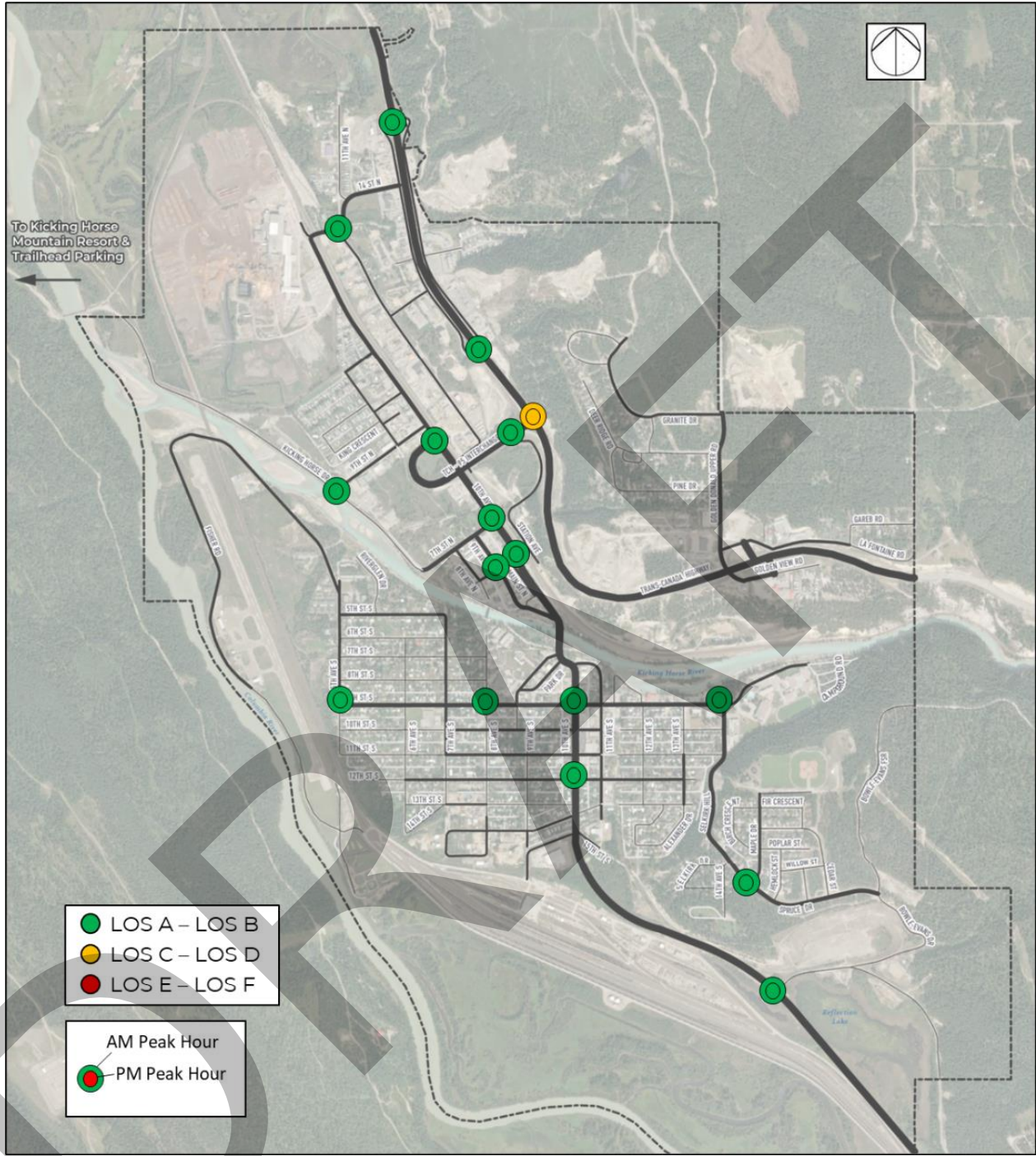


Figure 5.7 2041 Intersection Operations

5.1.4 ROADWAY CORRIDOR AND NETWORK SAFETY REVIEW

In addition to the intersection capacity analysis, the roadway corridors were reviewed to identify potential safety concerns and to incorporate feedback received during the public engagement process. **Table 5.2** provides a summary of this review.

Table 5.2: Corridor and Safety Review Summary

LOCATION	DISCUSSION
Golden Donald Upper Road	With the opening of the Skybridge north of Golden and other development, this roadway has been experiencing increases in traffic volumes. Improvements at intersections and accesses, and improvements for pedestrian and cyclists' accessibility along the corridor, should be considered to mitigate the increased congestion.
Dogtooth (Kicking Horse Drive) Bridge (<i>access to Kicking Horse Mountain Resort, golf course, CBT/ Moonrackers bike trails</i>)	This bridge is very narrow and only allows passage of one direction of traffic at a time. This can cause delays. As this is outside of the Town's boundaries, it is recommended that the Town advocate to BC MoTI to improve traffic operations over the bridge.
Selkirk Hill	The steep grade and tight turns on Selkirk Hill create difficult driving conditions. Additionally, data collected along the hill indicates that downhill speeds typically exceed the posted speed limit. Measures should be implemented on the hill to create a safer environment for all road users.
Bowle-Evans Drive	Improving roadway conditions on Bowle-Evans Drive will help to accommodate all road users on Selkirk Hill. Bowle-Evans Drive is a more direct connection from Highway 95 to the Selkirk Hill/Bear's Paw Height community and the Mount 7 recreational area, so improving the road conditions along it will draw traffic volumes from Selkirk Hill to Bowle-Evans Drive.
9 Street S and 14 Avenue S Signage	Confusing signage along these roads has led to driver infractions. A previous study conducted for the Town identified various mitigation measures to improve drivers' compliancy. Measures along 9 Street S have been implemented. However, changes along 14 Avenue S should be considered. Confusion around speed limit changes could be mitigated if a reduction in the town-wide speed limit is enforced,
Highway 95 Bridge over Kicking Horse River	This bridge is scheduled to be replaced by BC MoTI in the near future. The alignment is expected to modify the intersection of Highway 95 with Park Drive and reduce confusion in this area.
Highway 95 (10 Avenue) and 9 Street S	The north and southbound modified pavement markings and lack of signage at this intersection have been contributing to driver confusion, as well, the reduced width of the northbound receiving lane on Highway 95 has been a concern for vehicles turning into it from 9 Street S. Also identified during the first round of engagement,

LOCATION	DISCUSSION
	the signal timings do not provide eastbound and westbound vehicles with sufficient green time to proceed through the intersection within a reasonable timeframe. It is recommended that the Town work with BC MoTI to ensure these issues are mitigated with the planned improvements to the bridge.
Highway 95 (10 Avenue) and 11 Street S	Safety for pedestrians crossing Highway 95 at this location was identified as a concern. Some vehicles traveling northbound on Highway 95, coming into town, have not yet reduced their speeds to a point where pedestrians are comfortable crossing the roadway. Additional measures should be implemented to ensure vehicles slow down to the posted speed limit and that pedestrians are more visible crossing at this intersection.
Highway 95 south of 15 Street	Speeding was identified as a concern in this area. Additional measures should be implemented to ensure that northbound vehicles on Highway 95 reduce their speeds prior to reaching 15 Street S.
Highway 95 (10 Avenue) and Reflection Lake Road	If roadway conditions along Bowle-Evans Drive are improved, more traffic is expected to make the southbound to eastbound left turn at Highway 95 onto Reflection Lake Road to continue up the hill. To reduce delays to southbound through traffic and to improve safety for left-turning vehicles, it is recommended that the intersection be widened to create a dedicated southbound to eastbound left turn lane to reduce impact to the southbound through traffic.

5.1.5 ROAD NETWORK IMPROVEMENTS

Based on the intersection and corridor review, road network improvements were identified for the Town’s transportation network. Through public engagement, these improvements were shown to have a high level of support from the community. They have also been coordinated with the improvements recommended in the Active Transportation Network Plan.

The improvement projects are described in **Table 5.3** and illustrated in **Figure 5.4**. The reference number provided in the table corresponds with the reference number included on the figure. Improvement projects 3 to 11 all require coordination with the BC Ministry of Transportation and Infrastructure (MoTI) since they involve changes to provincial infrastructure. Implementation of these projects will be based on available funding and priority of BC MoTI, as well as technical support for when improvements are required.

Table 5.3 List of Improvement Projects

#	IMPROVEMENT PROJECTS
1	Improve traffic conditions on Selkirk Hill (ex. reduce speeds, improve safety for all modes).
2	Improve traffic conditions on Golden Donald Upper Road (ex. turning lanes at intersections and accesses, multi-use pathway or bicycle accessible shoulders; improve facility for all modes).
3	Improvements to the intersection control at 10 Avenue N and 7 Street N (ex. signal or restrict turns) – would require some discussion with BC Ministry of Transportation and Infrastructure.
4	Advocate to BC Ministry of Forests to improve roadway conditions on Bowle-Evans Drive.
5	Advocate to BC Ministry of Transportation and Infrastructure to improve traffic operations on a new Dogtooth Bridge (Kicking Horse Drive Bridge - access to Kicking Horse Mountain Resort, golf course, CBT/Moonrackers bike trails).
6	Advocate to BC Ministry of Transportation and Infrastructure (MoTI) to implement a new Highway 95 bridge across the Kicking Horse River (project design currently underway). Town to work with BC MoTI to ensure design improve safety for all modes.
7	Advocate to BC Ministry of Transportation and Infrastructure to improve traffic control and pedestrian area at Highway 95 (10 Avenue S) and 11 Street S intersection.
8	Advocate to BC Ministry of Transportation and Infrastructure to improve signage and lane markings along Highway 95 (10 Avenue S) at 9 Street S to provide more clarity on through lanes and turning lanes, as well as confirm vehicle turning movement paths.
9	Advocate to BC Ministry of Transportation and Infrastructure to improve signal timing for cross streets along Highway 95 (10 Avenue S) during the morning and afternoon school hours.
10	Advocate to BC Ministry of Transportation and Infrastructure to re-evaluate the Highway 95 (10 Avenue S) cross section from where project #6 ends to 15 Street S and consider implementing a Road Diet to reallocate and balance the space for pedestrians, cyclists and motor vehicles. Bicycle infrastructure can be installed initially as painted bicycle lanes and transition over time to include protected barriers in the buffer space. Aligning implementation with other road works and/or lifecycle replacements.
11	Advocate to BC Ministry of Transportation and Infrastructure to implement permanent measures on Highway 95 (10 Avenue S) south of 15 Street S that would encourage drivers to slow down as they enter the Town (ex. speed feedback sign, additional features to indicate that you have entered a community, reduce roadway width, etc.)
12	Advocate to BC Ministry of Transportation and Infrastructure to improve traffic flow for southbound vehicles at the Highway 95 (10 Avenue S) and Reflection Lake Road intersection by widening the intersection to provide for a southbound to eastbound left turn lane.

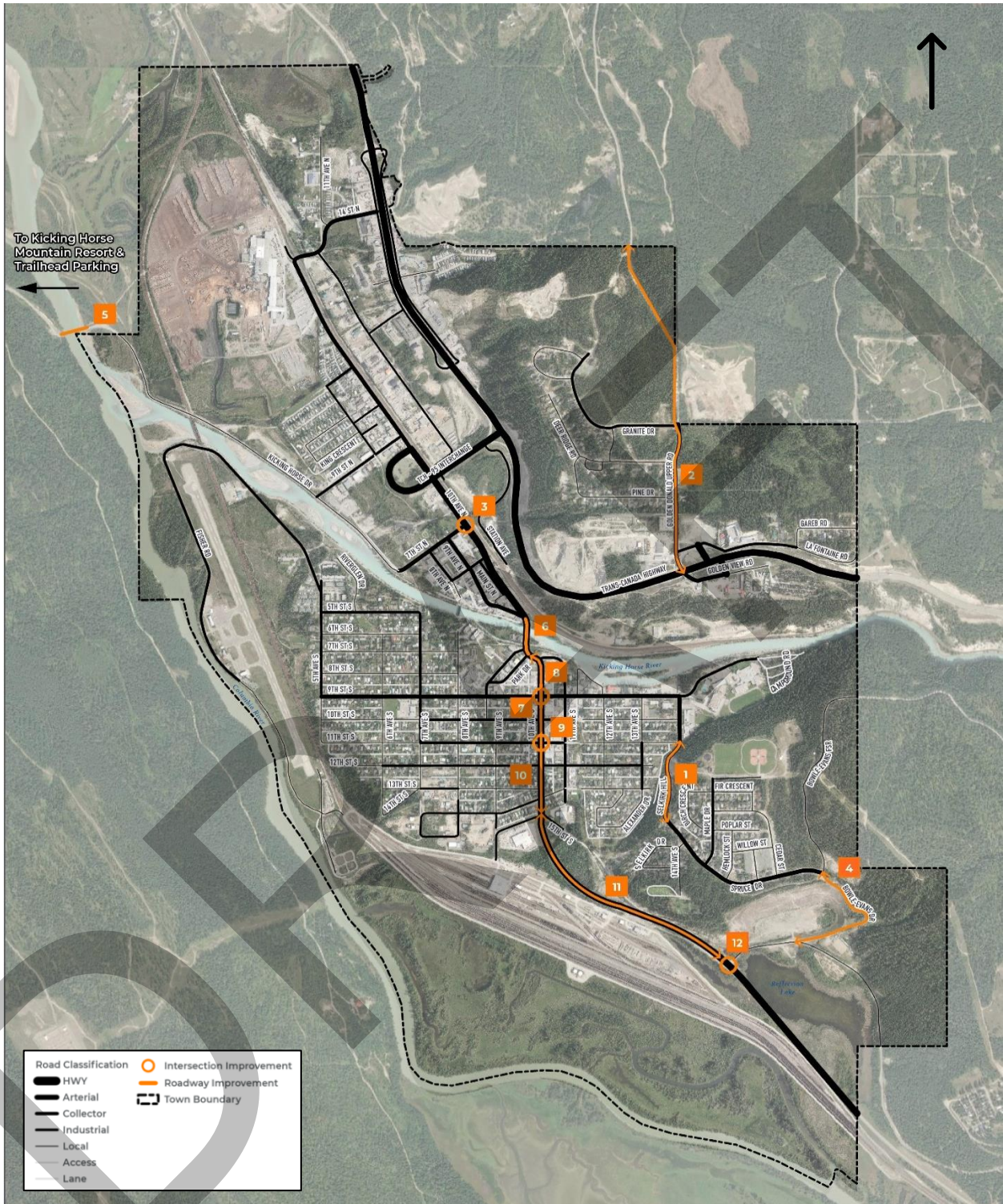


Figure 5.8 Potential Transportation Network Improvements

5.2 BUILDING THE NETWORK

5.2.1 LONG-TERM NETWORK

Road Network

The long-term road network map was updated to reflect the recommended intersection and corridor improvements detailed in **Section 5.1.5.** and to accommodate the forecast traffic volumes due to the projected growth in Golden. The recommended future road classifications are shown in **Figure 5.5.**

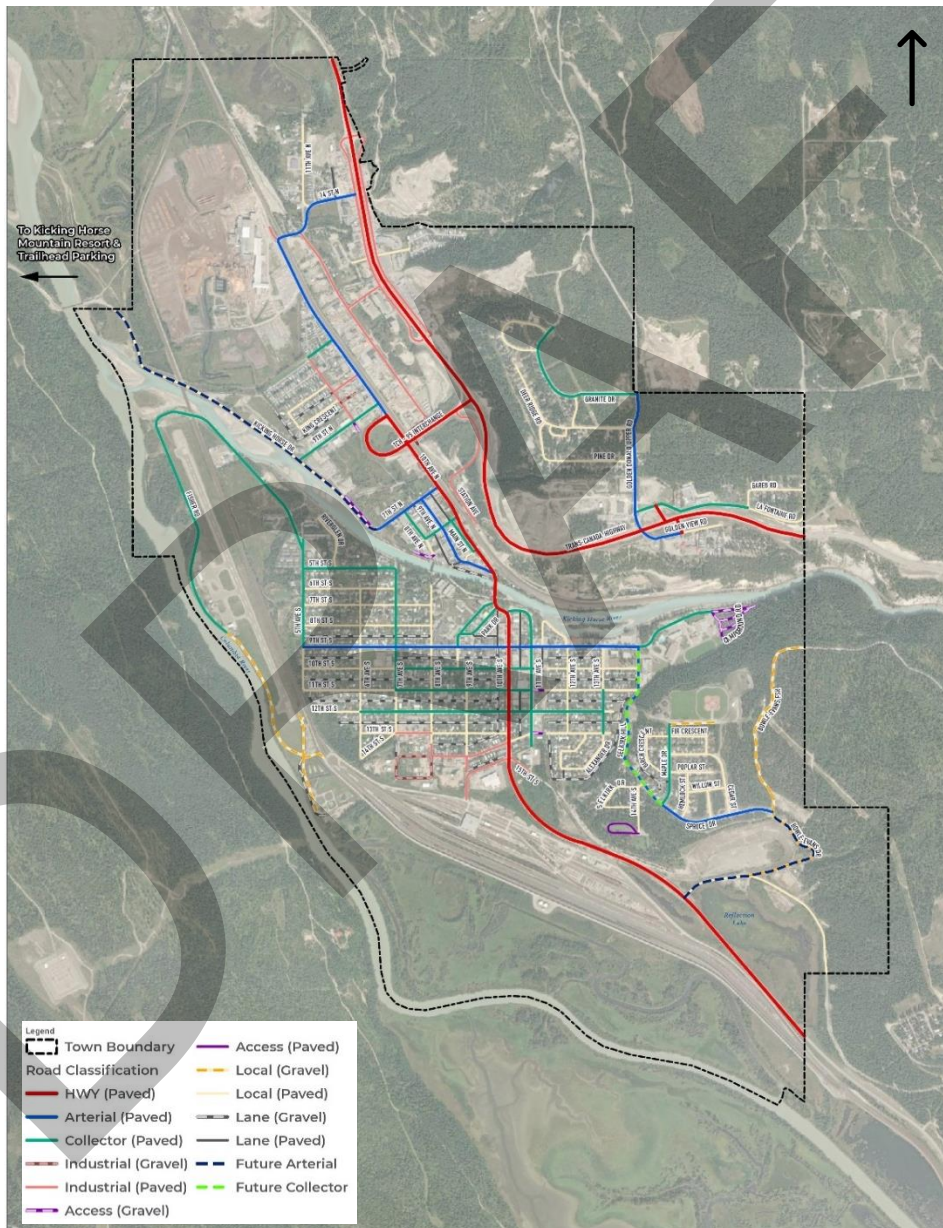


Figure 5.9 Recommended Future Road Classification

The Town's current Subdivision and Development Servicing Bylaw (Bylaw Number 1223, 2008) provides guidance on both urban and rural roadway cross-sections for arterial, collector, industrial, local roads, and lanes. The current roadway cross-sections outlined in the Bylaw include guidance on sidewalks along urban roadways but does not include any guidance for sidewalks along rural roadways. Further, there is no guidance on dedicated space for bicycle facilities in either the current urban or rural roadway cross sections.

The current Bylaw should be referenced for future development; however, the Town will also need to ensure new development consider cross sections that include multi-modal considerations. The Town should also consider updating the current Bylaw to include cross sections with multi-modal considerations, in particular for the arterial, collector and local roadway cross sections, and provide guidance on when multi-use pathways are to be considered.

Active Transportation Network

The proposed long-term active transportation network was developed through discussion with Town staff and consultation with the public. Further, network segments were added or modified through a review of the overall network connectivity.

The network development began with identification of the desired facility types that are appropriate and specific to the Town of Golden. **Figure 5.10** outlines the five proposed All Ages and Abilities (AAA) active transportation facility types for the network, followed by a description of each.



Figure 5.10 Proposed Active Transportation Facility Types

- **Sidewalks** – Proposed sidewalks are continuous, concrete sidewalks that support pedestrians (including people that use mobility aids) to walk comfortably and safely throughout Golden's sidewalk network. They can be unbuffered, located directly adjacent to the roadway or separated, where the sidewalk is buffered from the roadway by a grassy boulevard and/or swale.

- **Multi-use Pathways** – Proposed multi-use pathways are shared use facilities for bicycles and pedestrians. Multi-use pathways will likely be paved when adjacent to a roadway and can remain unpaved when located within parks and green space.
- **Trails** – Proposed trails are unpaved shared use facilities for bicycles and pedestrians. Trails connect greenspace and key destinations within the Town.
- **Active Transportation Corridor** - Proposed active transportation corridors will accommodate people walking, rolling, and bicycling. People walking and bicycling can share the road with vehicles on low volume and low speed streets. Some traffic calming may be implemented to ensure slower vehicle speeds and the Town may considering sidewalks for pedestrians. Additionally, a multi-use pathway, painted bicycle lanes, or protected bicycle lanes could also be considered if traffic speeds, and volumes are too high for a shared use facility with bicyclists.
- **Crossing Improvements** – Proposed crossing improvements are intended to enhance the safety, access, and comfort for pedestrians and cyclists at intersections as more active transportation infrastructure is installed. Crossing improvements could include marked crosswalks, curb extensions, and/or push buttons to activate rectangular rapid flashing beacons (RRFBs) or traffic signals. Additional study will be required to identify the appropriate treatment at the locations identified as crossing improvements.

It is important to note that the ATNP is intended to be a guiding document. For the proposed active transportation network there is some level of flexibility regarding the specific corridors and the facility types that are recommended, and the Town will use their judgement and technical understanding to determine the preferred routes and facility types.

In addition to providing facilities that are considered safer and more comfortable for people of all ages and abilities, the proposed active transportation network is intended to provide connections to key destinations in the community, including schools and parks. By providing direct connections, active transportation can become a more convenient transportation choice. The proposed active transportation network developed in the Active Transportation Network Plan (ANTP) is illustrated in Figure 5.11.

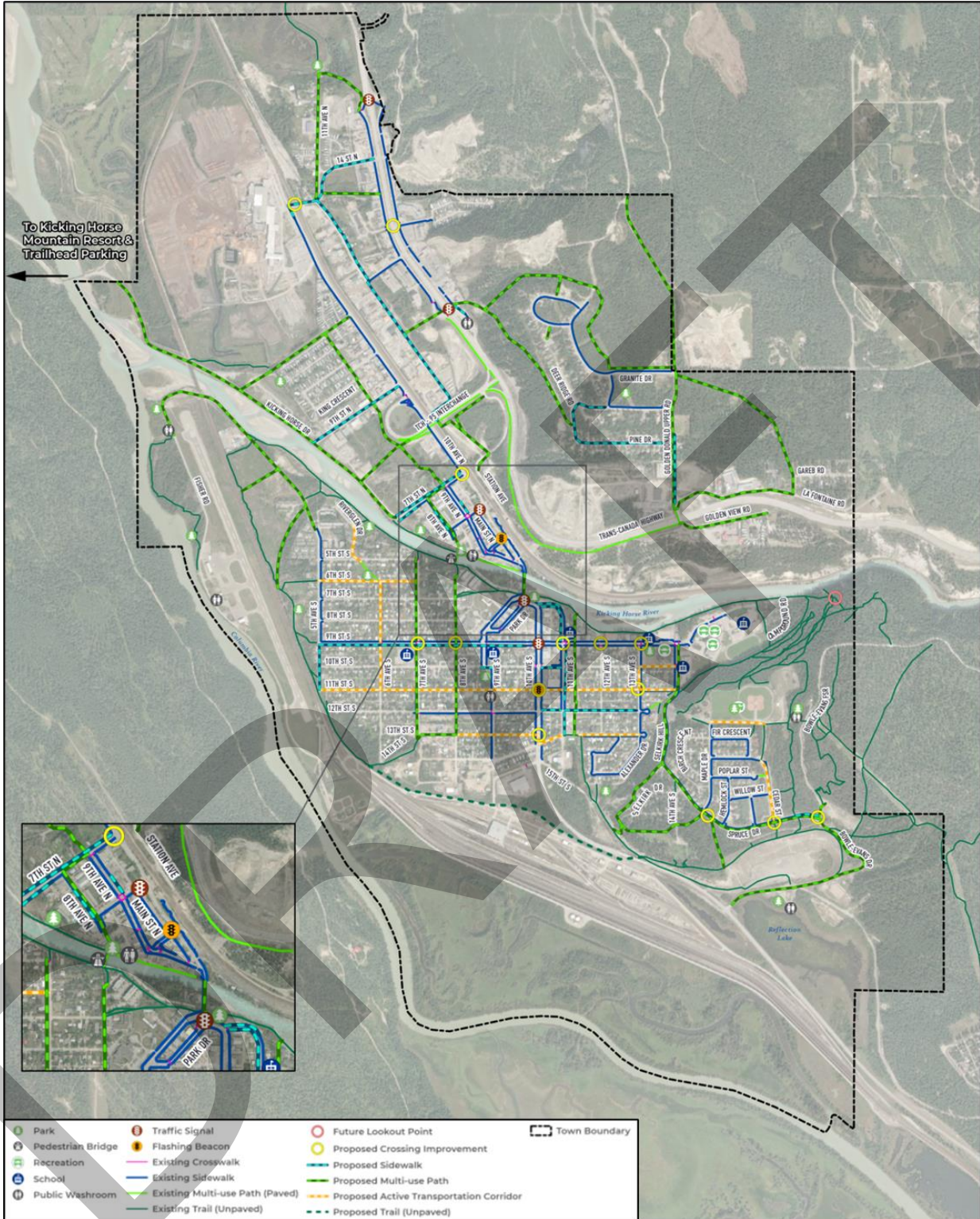


Figure 5.11 Proposed Active Transportation Network

5.2.2 TRAFFIC CALMING TOOLBOX

According to the Transportation Association of Canada (TAC) and the Canadian Institute of Transportation Engineers (ITE) (2017) the term “Traffic Calming” describes the process of changing driver behaviour to more closely align with the expectations of adjacent residents and road users. Traffic Calming is used to help restore streets to their desired function. For example, if a local street becomes regularly used by motorists as a short-cut or through road, traffic calming measures may be used to slow motor vehicles and/or reduce traffic volumes such that the road is no longer used as a short-cut. Examples of permanent and temporary traffic calming measures are shown in Images 5.1 to 5.4.



Images 5.1 to 5.4: Example of Permanent and Temporary Traffic Calming Measures

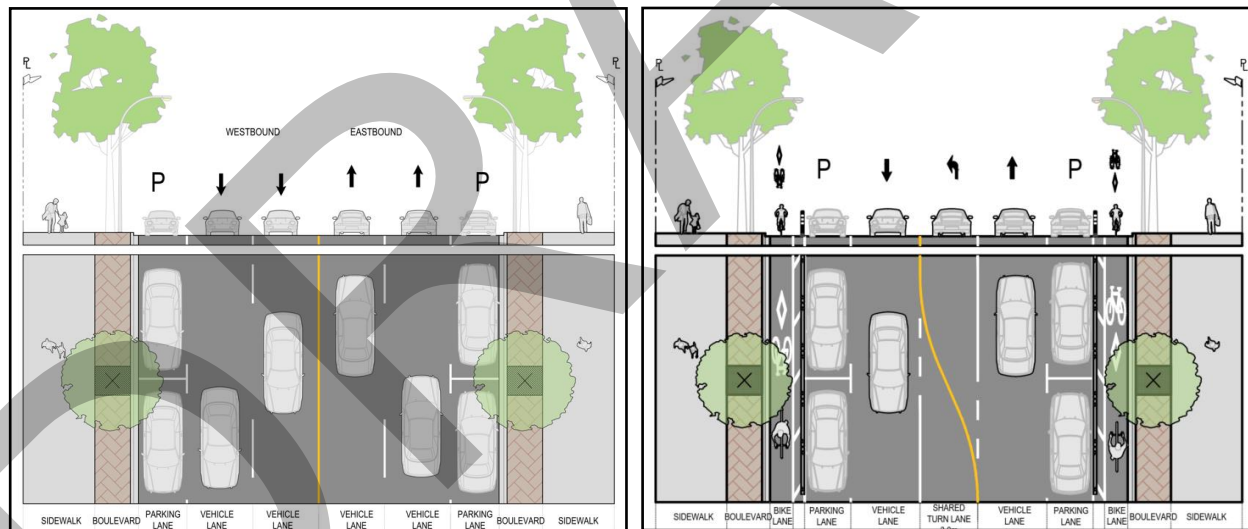
Generally, traffic calming measures on local and collector roads are used to achieve one or more of the following:

- Reduce vehicular speeds – measures are used to make it physically uncomfortable or difficult for motorists to travel along a street without reducing speed.
- Discourage shortcutting – measures are used to make the perceived short-cut route take longer, redirecting traffic back to the intended arterial road.

- Minimize conflicts between street users – measures are used to reduce conflicts on a street, could include physical separation or measures that improve the roadway function (such as improving sight lines).
- Improve the neighbourhood environment – measures used to improve the liveability of a neighbourhood that could include opportunities to aesthetically enhance the environment through murals or landscaping features.

As part of the GTP a Traffic Calming Toolbox has been developed to assist with implementing context specific traffic calming measures for the Town. The Toolbox includes a list of appropriate measures for the Town, when to use them and what impacts they should anticipate after implementing the measures. The Toolbox also provides general guidance on temporary and permanent application. The Toolbox is attached in **Appendix G**.

Another method of traffic calming can also include a Road Diet, which reduces the number of through lanes and overall cross sections to make the roadway safer for pedestrians crossing and can lower motor vehicle speeds. The extra width can then be used for bicycle lanes and/or extra space in the pedestrian realm. The most common application is to turn a four-lane road into a two-lane road with left turn lanes where needed. **Image 5.5** shows a before and after application of a Road Diet on a four-lane road with on-street parking.



Images 5.5: Road Diet Sample Cross Section (Four-lanes to Two-lanes with middle turn lane)

Engagement with the community is a key step in considering and implementing any traffic calming measures. The process outlined in *Figure 2.1* of the *Guide to Canadian Traffic Calming (TAC/ITE, 2017)* should be used to better understand what concerns residents may have and how best to address them.

5.2.3 MAINTENANCE

While capital projects are often seen as the top priority for improving transportation, ongoing rehabilitation and maintenance of existing and new infrastructure needs to be an equally important focus. Maintenance needs to be considered at all stages of the planning and the design process.

The Town current Snow Clearing and Sanding Policy provides direction for the Town on how streets are maintained on a priority basis following a snow event. The Town also sweeps and washes the streets every Spring as part of their regular maintenance program. The Town needs to ensure they have the necessary staffing and budgetary resources to maintain acceptable operation and maintenance levels of existing and future transportation infrastructure.

The Town also recently completed an Infrastructure Replacement Priority Plan. The plan is intended to assist the Town with long-term capital infrastructure planning that will see the replacement of infrastructure over a 20-year horizon. The plan reviewed previous conditions assessment reports to understand the existing condition of the Town's surface and underground assets. This included a review of the Roads Condition Assessment and Upgrade Plan, which identified high priority roads for overlay and replacement.

The ATNP details several actions for the Town to keep active transportation facilities functional and usable throughout all seasons, which ensures that facilities are accessible for all throughout the year. These actions are as follows:

- Review and update active transportation assets at regularly scheduled intervals to update inventory, review and maintain the active transportation network in a state of good repair (Sidewalk and Pathway Inspection and Maintenance Policy).
- Design active transportation facilities to provide adequate drainage, snow storage and removal, and sand and gravel removal.
- Review and update current maintenance and operating policies and procedures for active transportation infrastructure, including sidewalks, multi-use trails, and active transportation corridors (Snow Clearing and Sanding Policy).
- As new infrastructure is implemented, ensure the Town has appropriately sized equipment, staffing resources, and operating funding to maintain existing and future active transportation infrastructure.

5.2.4 PARKING

Parking demand in downtown Golden increases significantly during the summer months with an influx of tourists. Many of which are not familiar with the Town and do not know the best location to park to enjoy the downtown amenities. This may lead to many vehicles, including recreational vehicles, circling the downtown area looking for a parking spot, causing delays for others with added traffic and slower speeds.

The Town completed a downtown parking study in 2010 that identified the following parking concerns:

- Underutilized parking spaces, both street and in designated parking areas;
- Insufficient signage to available parking;
- Limited opportunities for current and/or future by-law parking spaces to be developed on-site and/or at a specified public parking facility;
- Double parking behind buildings;
- Lack of long-term employee parking – employees parking in front of establishments
- Loading constraints;
- Traffic congestion – vehicles circulating in preferred parking areas;
- Traffic safety issues – pedestrian/vehicle related conflicts;
- High parking demand in preferred parking areas;
- Lack of large vehicle parking; and,
- Lack of enforcement.

Since this study was completed, the Town has developed a map of the available parking area, and where parking is time restricted. The Town also provide this information on their website.

Despite these efforts, parking remains a concern for many residents, as identified during the online survey in the first round of public engagement. The second round of engagement identified that one of the main issues around parking downtown is related to employee parking: there is a perceived lack of employees/business owner parking, as such, employees/business owners tend to take up the parking spaces closest to their shops, requiring customers to park further away.

It is recommended that the Town increase education and enforcement efforts during peak tourism times. Increase education can include meeting with businesses and providing them with parking maps and webpage link to the maps for long term parking areas for visitors and employees. Additional wayfinding signs for long term parking may also be beneficial when entering the peripheral downtown area. The Town is also in the process of increasing enforcement officers, the downtown parking enforcement can be considered one of the top priorities. Once these steps have been taken, the Town should re-evaluate parking concerns to see if the issues remain and if there is a parking supply issue.

There are a few existing bicycle racks in the downtown; however, further enhancing bicycle infrastructure and increasing the amount of bicycle parking within the downtown will help to reduce motor vehicle parking demand. Several actions are outlined in the ATNP that will assist the Town with making walking, rolling and bicycling a more pleasant experience:

- Support the installation of more short- and long-term bicycle parking and end-of-trip facilities throughout the community.
- Develop a central hub for active transportation with a network map and information kiosk, protected bicycle parking, and other amenities in the downtown.

- Consider opportunities to expand dynamic curb-space management to create streets that accommodate a variety of uses.

Bicycle parking should also be safe, secure, and easy to access to encourage the most use.

5.2.5 TRANSIT SERVICE

Previously the Town of Golden provided a bus transit service in partnership with the Columbia Shuswap Regional District (Area A), and BC Transit. The service offered one morning and one afternoon route to and from Golden, Donald, Blaeberry, and Parson. The service was cancelled due to low ridership.

Currently, BC Transit offers a Health Connections route in partnership with Kootenay East Regional Hospital District and the Regional District of East Kootenay. This service is typically used by those traveling to medical appointments that cannot drive themselves, although anyone is eligible to use the service. The route leaves Golden at 8:00 a.m. and returns at 6:30 p.m. on Tuesdays and Thursdays. The service requires booking 24 hours in advance. There are no other public transit services offered in Golden.

During the GTP engagement process, the community was asked if the Town should consider reintroducing transit service. Options presented during the engagement included:

- A private shuttle service to and from Kicking Horse Mountain Resort;
- On-demand transit;
- Regional transit in Golden and Area A; and,
- Do not re-explore transit service.

An overwhelming majority of survey respondents (78%) indicated that they would support one of the first three options. There was particular interest for a shuttle service to Kicking Horse Mountain Resort and an on-demand transit service. It is recommended that the Town look into the viability of both options including the required population to support them.

If transit is implemented, ensure all bus stops are accessible, and that amenities such as benches and/or shelter are provided for people waiting.

5.2.6 EMERGING TECHNOLOGIES

New transportation modes have emerged from changing technologies, such as the electrification of transportation (electric cars and e-bikes), autonomous vehicle technology, and mobility-as-a-service (MAAS) platforms which include ride hailing, carshare, bike share, scooter share, and micro-transit. The Town will need to anticipate these new technologies and modes and plan for how to accommodate them. The Town can facilitate the use of more sustainable modes through the installation of charging stations for electric vehicles (including electric cars, e-bikes, and e-scooters).



6.0 IMPLEMENTATION FRAMEWORK

An implementation strategy is necessary to provide a framework for how to move forward with improvements in transportation planning and capital investments over the next five years and beyond. This section outlines the recommended implementation framework for the Golden Transportation Plan.

6.1 PHASING STRATEGY

The Town of Golden Transportation Plan provides long-term recommendations for capital improvement projects and for strategies to improve Golden’s transportation network. Recognizing that the long-term plan will require significant investments, an Implementation Framework is required to help prioritize improvements. The Implementation Framework outlines the priorities and costs for recommended strategies and capital improvements. The Implementation Framework identifies project priorities for the short-term (within 8 years), medium-term (8 to 20 years) and long-term (20 years and beyond).

DRAFT

GOLDEN TRANSPORTATION PLAN IMPLEMENTATION FRAMEWORK

#	STRATEGIES	TIMEFRAME ³			METHOD OF IMPLEMENTATION			WHO IS INVOLVED
		Short-Term 0-8 yr	Medium-Term 8 -20 yr	Long-Term 20+ yr	Capital	Operations & Maintenance	Policy & Programming	
ROAD NETWORK								
1	Improve traffic conditions on Selkirk Hill (ex. reduce speeds, improve safety for all modes).	✓	✓		✓			Town of Golden <ul style="list-style-type: none"> • Planning and Development • Public Works
2	Improve traffic conditions on Golden Donald Upper Road (ex. turning lanes at intersections and accesses, multi-use pathway or bicycle accessible shoulders; improve facility for all modes).		✓		✓			Town of Golden <ul style="list-style-type: none"> • Planning and Development • Public Works Ministry of Transportation and Infrastructure
3	Improvements to the intersection control at 10 Avenue N and 7 Street N (ex. signal or restrict turns) – would require some discussion with BC Ministry of Transportation and Infrastructure.			✓	✓			Town of Golden <ul style="list-style-type: none"> • Planning and Development • Public Works
4	Advocate to BC Ministry of Forests to improve roadway conditions on Bowle-Evans Drive.	✓	✓		✓			Town of Golden <ul style="list-style-type: none"> • Planning and Development • Public Works Ministry of Forests
5	Advocate to BC Ministry of Transportation and Infrastructure to improve traffic operations on the Dogtooth Bridge (Kicking Horse Drive Bridge - access to Kicking Horse Mountain Resort, golf course, CBT/Moonrackers bike trails).		✓	✓	✓			Town of Golden <ul style="list-style-type: none"> • Planning and Development • Public Works Ministry of Transportation and Infrastructure
6	Advocate to BC Ministry of Transportation and Infrastructure (MoTI) to implement a new Highway 95 bridge across the Kicking Horse River (project design currently underway). Town to work with BC MoTI to ensure design improve safety for all modes.	Ongoing			✓			Town of Golden <ul style="list-style-type: none"> • Planning and Development • Public Works Ministry of Transportation and Infrastructure

³ 'Ongoing' - starting in the short-term but will either take multiple years to implement or should be a key consideration through the implementation of the action

#	STRATEGIES	TIMEFRAME ³			METHOD OF IMPLEMENTATION			WHO IS INVOLVED
		Short-Term 0-8 yr	Medium-Term 8 -20 yr	Long-Term 20+ yr	Capital	Operations & Maintenance	Policy & Programming	
7	Advocate to BC Ministry of Transportation and Infrastructure to improve traffic control and pedestrian area at Highway 95 (10 Avenue S) and 11 Street S intersection.			✓	✓			Town of Golden <ul style="list-style-type: none"> • Planning and Development • Public Works Ministry of Transportation and Infrastructure
8	Advocate to BC Ministry of Transportation and Infrastructure to improve signage and lane markings along Highway 95 (10 Avenue S) at 9 Street S to provide more clarity on through lanes and turning lanes, as well as confirm vehicle turning movement paths.	✓			✓			Town of Golden <ul style="list-style-type: none"> • Planning and Development • Public Works Ministry of Transportation and Infrastructure
9	Advocate to BC Ministry of Transportation and Infrastructure to improve signal timing for cross streets along Highway 95 (10 Avenue S) during the morning and afternoon school hours.			Ongoing	✓			Town of Golden <ul style="list-style-type: none"> • Planning and Development • Public Works Ministry of Transportation and Infrastructure
10	Advocate to BC Ministry of Transportation and Infrastructure to re-evaluate the Highway 95 (10 Avenue S) cross section from where project #6 ends to 15 Street S and consider implementing a Road Diet to reallocate and balance the space for pedestrians, cyclists and motor vehicles. Bicycle infrastructure can be installed initially as painted bicycle lanes and transition over time to include protected barriers in the buffer space. Aligning implementation with other road works and/or lifecycle replacements.		✓	✓	✓			Town of Golden <ul style="list-style-type: none"> • Planning and Development • Public Works Ministry of Transportation and Infrastructure
11	Advocate to BC Ministry of Transportation and Infrastructure to implement permanent measures on Highway 95 (10 Avenue S) south of 15 Street S that would encourage drivers to slow down as they enter the Town (ex. speed feedback sign, additional features to indicate that you have entered a community, reduce roadway width, etc.)		✓		✓			Town of Golden <ul style="list-style-type: none"> • Planning and Development • Public Works Ministry of Transportation and Infrastructure
12	Advocate to BC Ministry of Transportation and Infrastructure to improve traffic flow for southbound vehicles at the Highway 95 (10 Avenue S) and Reflection Lake Road intersection by widening the intersection to provide for a southbound to eastbound left turn lane.	✓	✓		✓			Town of Golden <ul style="list-style-type: none"> • Planning and Development • Public Works Ministry of Transportation and Infrastructure
HEALTH AND SAFETY								
13	Review and update transportation planning policies and design standards to align with latest research and best practices.	✓					✓	Town of Golden <ul style="list-style-type: none"> • Planning and Development • Public Works

#	STRATEGIES	TIMEFRAME ³			METHOD OF IMPLEMENTATION			WHO IS INVOLVED
		Short-Term 0-8 yr	Medium-Term 8 -20 yr	Long-Term 20+ yr	Capital	Operations & Maintenance	Policy & Programming	
	<ul style="list-style-type: none"> Review and update the Golden Subdivision and Development Servicing Bylaw to include cross-sections and design best practices from the B.C. Active Transportation Design Guide. Review existing sidewalk, multi-use trails, and on-street bicycling facility requirements on roadways (based on classification) and update to reflect best practices in the B.C. Active Transportation Design Guide. 							<ul style="list-style-type: none"> Recreation Services Corporate Services & Communications
14	<p>Explore the opportunity to reduce speed limits as per Section 146 of the Motor Vehicle Act, in conjunction with traffic calming and traffic diversion.</p> <ul style="list-style-type: none"> Consider pilot programs such as school streets that limits motor vehicles near school sites during school hours Identify opportunities for installing traffic calming infrastructure features as listed in the Transportation Plan's Traffic Calming Toolkit to help reduce motor vehicle speeds and volumes. Focusing first on Active Transportation Corridors as identified in Figure 9 of the Golden Active Transportation Network Plan. Explore the feasibility of reducing speed limits town-wide or in areas where traffic calming is not possible or has not been effective. 		✓		✓		✓	<p>Town of Golden</p> <ul style="list-style-type: none"> Planning and Development Public Works <p>RCMP</p> <p>ICBC</p>
15	<p>Improve safety along active transportation routes by considering visibility, sightlines, and access where appropriate.</p> <ul style="list-style-type: none"> Continue to review corridors, intersections, and crossings where ICBC collisions, near misses and community members have voiced concerns about safety and accessibility, and make improvements as required. Work with MoTI to review and update signal phasing and pedestrian crossing times at intersections to ensure adequate time is provided for all road users. Review existing pedestrian crossing locations and look for opportunities to reduce crossing distances by providing narrower roads and lanes and considering curb extensions where feasible. Review crossing recommendations in Figure 10 and implement where warranted and develop a prioritization plan for enhancing existing crossing locations. Improve crossing treatments where multi-use trails intersect with a roadway in accordance with current best practices. Inventory the location of curb ramps and accessibility features at intersections. <p>Provide curb ramps or a continuous paved surface to access the road at all intersections and consider accessibility for all.</p>		Ongoing		✓	✓	✓	<p>Town of Golden</p> <ul style="list-style-type: none"> Planning and Development Public Works <p>RCMP</p> <p>ICBC</p> <p>Ministry of Transportation and Infrastructure</p>

#	STRATEGIES	TIMEFRAME ³			METHOD OF IMPLEMENTATION			WHO IS INVOLVED	
		Short-Term 0-8 yr	Medium-Term 8 -20 yr	Long-Term 20+ yr	Capital	Operations & Maintenance	Policy & Programming		
MAINTENANCE									
16	Review and update the Town's transportation assets (including active transportation facilities) at regularly scheduled intervals to inventory, review and maintain the transportation network in a state of good repair.		Ongoing			✓	✓	Town of Golden <ul style="list-style-type: none"> Public Works Planning and Development Finance & Administrative Services Recreation Services 	
17	Review and update current maintenance and operating policies and procedures for transportation infrastructure (including active transportation facilities). (Snow Clearing and Sanding Policy). <ul style="list-style-type: none"> Review existing debris, sand, gravel, ice, and snow removal requirements for walking and bicycling infrastructure, including multi-use trails, and provide additional guidance specific to on-street active transportation facilities (active transportation corridors). This includes requirements for property owners, Town departments, employed contractors, and the existing fleet of machinery. Consider adding an active transportation prioritization list to the policy and outlining the order in which roads and active transportation facilities are cleared. 		✓			✓	✓	Town of Golden <ul style="list-style-type: none"> Public Works Planning and Development Corporate Services & Communications Finance & Administrative Services Bylaw Enforcement 	
18	As new infrastructure is implemented, ensure the Town has appropriately sized equipment, staffing resources, and operating funding to maintain existing and future transportation infrastructure. <ul style="list-style-type: none"> Review current maintenance funding and equipment levels required to maintain all planned and existing types of transportation infrastructure. As more walking and bicycling facilities are installed, ensure the amount of funding available grows in accordance with the amount of infrastructure being added to the network. 	✓				✓		Town of Golden <ul style="list-style-type: none"> Public Works Finance & Administrative Services Planning and Development Recreation Services 	
PARKING									
19	Review and update the 2010 Parking Study regularly. <ul style="list-style-type: none"> Educate visitors and workers in the downtown core on long term parking locations. Enforce time restricted parking in the downtown core. Improve wayfinding signage to long term parking areas. 		Ongoing			✓	✓	✓	Town of Golden <ul style="list-style-type: none"> Planning and Development Public Works Corporate Services & Communications Bylaw Enforcement <p><i>With support from partners & stakeholders</i></p>

#	STRATEGIES	TIMEFRAME ³			METHOD OF IMPLEMENTATION			WHO IS INVOLVED
		Short-Term 0-8 yr	Medium-Term 8 -20 yr	Long-Term 20+ yr	Capital	Operations & Maintenance	Policy & Programming	
20	Support the installation of more short- and long-term bicycle parking and end-of-trip facilities throughout the community. <i>(Refer to the Active Transportation Network Plan for more details).</i>	✓	✓		✓	✓	✓	Town of Golden <ul style="list-style-type: none"> • Planning and Development • Public Works • Recreation Services • Finance & Administrative Services <i>With support from partners & stakeholders</i>
21	Consider opportunities to expand dynamic curb-space management to create streets that accommodate a variety of uses. <i>(Refer to the Active Transportation Network Plan for more details).</i>			✓			✓	Town of Golden <ul style="list-style-type: none"> • Planning and Development • Public Works • Corporate Services & Communications <i>With support from partners & stakeholders</i>
TRANSIT SERVICES								
22	Consider opportunities for reintroducing transit service. Options to consider include: <ul style="list-style-type: none"> • A private shuttle service to and from Kicking Horse Mountain Resort • On-demand transit • Regional transit in Golden and Area A 		Ongoing			✓		Town of Golden <ul style="list-style-type: none"> • Planning and Development • Public Works • Corporate Services & Communications <i>With support from partners & stakeholders</i> BC Transit
EMERGING TECHNOLOGIES								
23	Consider the impact of new mobility technologies on the transportation network and infrastructure design. <ul style="list-style-type: none"> • Provide infrastructure to support the use of electric vehicles including e-bicycles and e-scooters (ex. E-bike share or e-scooter share; charging stations, etc.). • Ensure new road improvements and active transportation facilities are designed for all intended users, recognizing that the operating envelopes and speeds of new mobility technologies may impact facility design (e.g., facility width and the need for users to be separated). • Proactively regulate e-bikes and other micro mobility devices in the Town and on trails. • Explore the feasibility of creating a bikeshare or scooter share program with a private operator in Golden, with convenient connections to Kicking Horse Mountain Resort for tourists. 	✓					✓	Town of Golden <ul style="list-style-type: none"> • Planning and Development • Public Works • Recreation Services • Finance & Administrative Services <i>With support from partners & stakeholders</i>

6.2 COST ESTIMATE

TO BE CONFIRMED ALONG WITH ACTIVE TRANSPORTATION NETWORK.

6.3 FUNDING STRATEGIES

Implementation of the recommendations within the GTP will require significant funding over the next 20 years and beyond. Some of these costs can be shared by pursuing external funding from other levels of governments, partnerships with other organizations and the development industry, and integration of improvements with other plans and projects. This can help to reduce the Town's share of project costs.

A list of several strategies has been compiled that the Town may consider to help leverage its investments and to maximize its ability to implement transportation improvements.

- **Capital Planning** – incorporate recommendations from the GTP into the Town's short-, medium-, and long-term budgeting plans to ensure that the projects are accounted for in the Town's capital planning process. This will help to coordinate GTP project with other capital projects, such as utility projects, and/or streetscape improvement projects.
- **Developers** – leverage transportation investments during the planning for new development projects. For example:
 - Public realm improvements (e.g. sidewalk, pathways, enhanced connections to transit, etc.)
 - Bicycle parking
 - Payment-in-lieu of parking
 - Community amenity contributions (e.g. non-frontage sidewalks/multi-modal pathways, charging stations, bicycle repair station, etc.)
- **Development Cost Charges** – the Town has a DCC bylaw that does not include a transportation DCC. The bylaw should be regularly updated to include projects identified in the GTP and future plans. It should be emphasized that DCC eligible projects should not only include street network projects but can also include active transportation and transit projects that benefit new growth in the community.
- **Federal Funding:** There are several programs that provide funding for environmental and local transportation infrastructure projects in municipalities across Canada. Typically, the federal government contributes one third of the cost of municipal infrastructure projects. Provincial and municipal governments contribute the remaining funds, and in some instances, there may be private sector investment as well. Some examples include:
 - The National Active Transportation Fund (ATF) (award amount - \$50,000 for planning projects and \$50 million for capital projects) - will provide \$400 million over five years to help build new and expanded active transportation facilities

across the country. The Spring 2022 intake period has passed, but a second round of intakes is expected.

- Rail Safety Improvement Program – Infrastructure, Technology and Research (RSIP-ITR) Funding (award amount – up to 80% of total eligible expenditures, maximum amount - \$10,000,000) - funds rail safety improvements that support measures to improve public safety at rail property and rail lines. The deadline for applications is **August 1, 2022**.
- **Provincial Programs and Initiatives** – the Province administers numerous grants to help promote active transportation infrastructure and sustainable transportation projects to help reduce climate change impacts. Some current grants include:
 - The CleanBC Communities Fund (CCF) (award amount – unspecified but asked to keep below \$13.4M) – provides provincial and federal funding for community infrastructure projects that reduce reliance on fossil fuels. The first intake was in 2019, with additional intakes offered every year since then. Projects that have been funded in the past include installation of Level 2 electric vehicle charging stations and upgrades to buildings to reduce their GHG emissions. The deadline for this year’s intake is **May 25, 2022**.
 - BC Vision Zero in Road Safety Grant Program (award amount - \$5,000 to \$20,000) – supports local governments (and others) to advance evidence-informed road safety improvements resulting in reduced vulnerable road user injuries and reductions in the severity of these injuries. The grant focuses on underserved communities, Indigenous communities, and small and remote communities. The grant deadline has passed, but an additional intake period could be available in the fall.
 - Active Transportation Infrastructure Grant Program - provides funding for infrastructure which forms part of an active transportation network plan adopted by a BC local government. To ensure maximum success at obtaining grant funding, the Town should have grant-ready concepts pre-developed for application.
- **Green Municipal Funds:** The Federation of Canadian Municipalities manages the Green Municipal Fund, with a total allocation of \$550 million. This fund is intended to support local government efforts to reduce pollution, reduce greenhouse gas emissions, and improve quality of life. The expectation is that knowledge and experience gained in best practices and innovative environmental projects will be applied to national infrastructure projects.
- **Carbon Tax Rebate:** Each municipality that has signed the Climate Action Charter receives an annual rebate based on completion of the CARIP form. The Town could choose to direct this funding towards sustainable transportation projects, such as funding bicycle, pedestrian, and transit infrastructure.

- **ICBC** – ICBC provides funding for road safety improvements, including pedestrian and bicycle infrastructure, particularly where these have the potential to reduce crashes, improve safety, and reduce claims costs to ICBC. Funding is available through ICBC’s Road Improvement Program, and other ICBC programs include the Speed Watch Program (through the Community Policing Centres), Speed and Intersection Safety Program, Counter Attack, Operation Red Nose, and Road Sense Speaker Program for Schools.
- **Private Sector:** Many corporations wish to be good corporate neighbours— to be active in the community and to promote environmentally-beneficial causes. Bicycle and pedestrian routes and facilities are well-suited to corporate sponsorship and have attracted significant sponsorship both at the local level and throughout North America. Examples in BC include Construction Aggregates in Sechelt, which constructed an overpass over a gravel conveyor to provide a link for pedestrians and cyclists, and 7-Eleven and Molson Breweries, which have sponsored multi-use pathways in Metro Vancouver.

Note that the specific programs identified were the sources available at the time of writing. Funding sources change frequently and should be monitored to ensure deadlines are not missed and/or new funding sources are being taken advantage of.

The Town should pursue various available sources of funding for transportation facilities and programs. However, it is recognized that the external funding sources do not provide a consistent and stable funding stream, and that in order to ensure completion of projects identified in the Transportation Plan, consistent funding sources should be identified as much as possible. This will help ensure staff can logically plan and coordinate these improvements with other capital works to provide economies of scale for construction activities providing best value for capital expenditures.

6.4 MONITORING AND BENCHMARKING

Developing a benchmarking program for the Town would be beneficial to help establish baselines for updates to the Golden Transportation Plan (GTP) in the future, and for assessing changes in growth and travel patterns behaviours over different seasons and years. It can also be used to help build long-term support for walking and cycling infrastructure improvements, maintenance programs, and future planning studies.

The baseline data can be evaluated each year or every five years to measure if there’s been a shift towards achieving the target. The targets identified in **Section 3.2.3** are as follows:

- Decrease in number of collisions that result in injury or fatality.
- Increase in number of new kilometres and/or projects implemented of accessible facilities (ie. sidewalk, pathway, etc.).
- Increase in percentage of commuting trips to work and/or school using active transportation.

To monitor these transportation targets, some baseline data were already established from the data used in the development of the GTP. ICBC provides annual collision information to all municipalities in the province. The Town maintains an inventory on their transportation infrastructure, including the number of existing kilometres of sidewalks, pathways, and trails.

The traffic data that was collected throughout the Town in 2021 for this study can also be used as a baseline for motor vehicle traffic patterns. To align with the traffic data horizon, the travel modal share data from the 2021 Census information should be used as a baseline once the information is released.

Other metrics the Town can also monitor is tracking the resources and budget allocation to operations and maintenance of sidewalks, trails, and roadways. This would include the infrastructure itself as well as the signage and pavement markings. This metric would need to be benchmarked to understand the current resources and what scale of operations and maintenance it currently covers in order to determine an increase level of service on the infrastructure.



7.0 CLOSING

This report entitled “Golden Transportation Plan”, was prepared for the Town of Golden, by Urban Systems Ltd.. The material in this report reflects the best judgement of Urban Systems Ltd. based on the information available at the time of preparation. Any use that a third party makes of this report, or reliance on or decisions made based on it is the responsibility of the third party. Urban Systems Ltd. accepts no responsibility for damages, if any, suffered by a third party as a result of decisions made or actions taken based on this report.



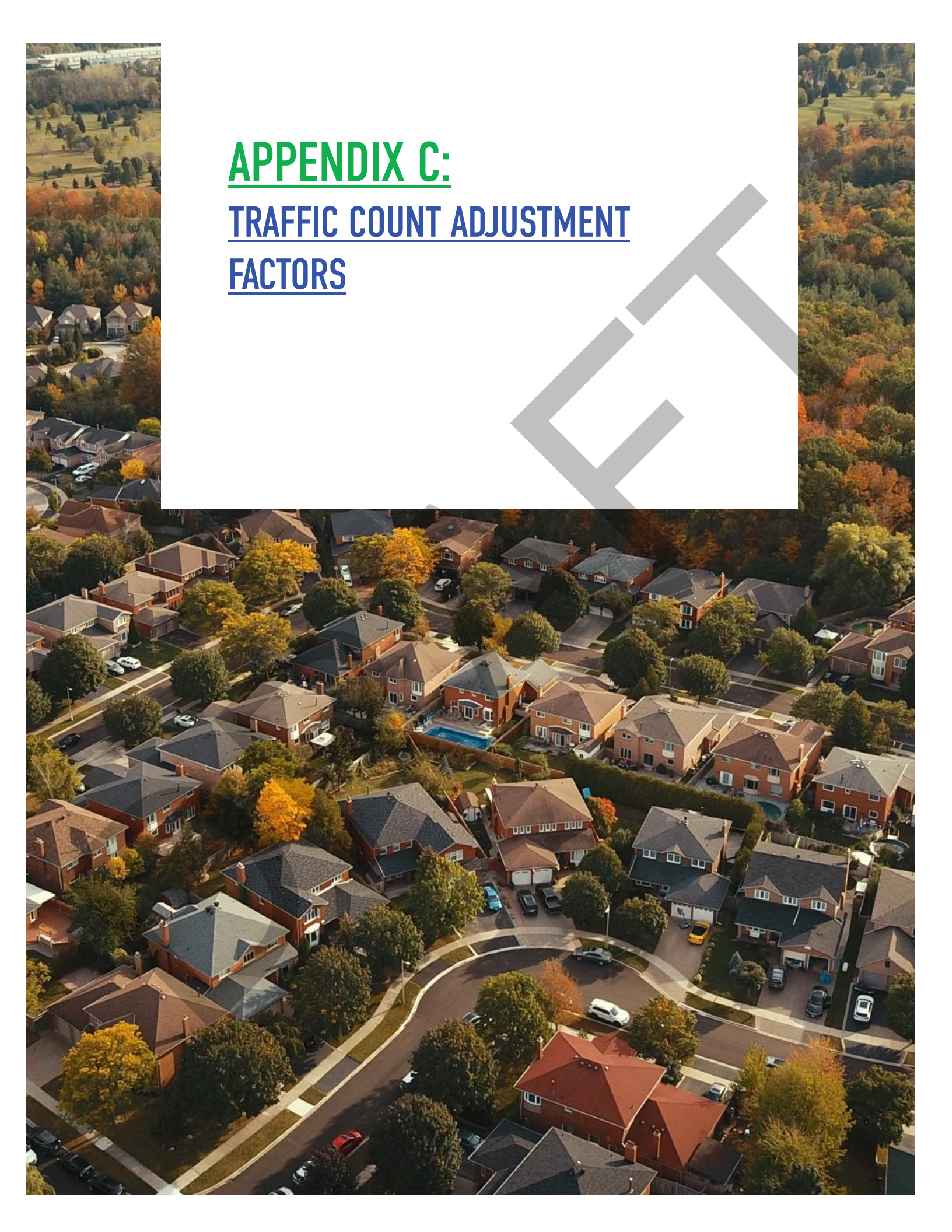
APPENDIX A:
ENGAGEMENT MATERIAL AND
SUMMARY

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APPENDIX B:
BACKGROUND PLANNING AND POLICY
REVIEW OVERVIEW

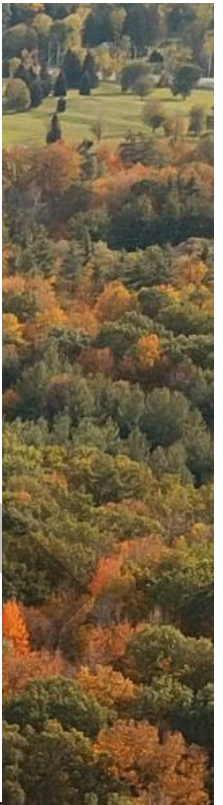
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APPENDIX C:
TRAFFIC COUNT ADJUSTMENT
FACTORS

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APPENDIX D:
EXISTING INTERSECTION
OPERATIONAL ANALYSIS



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APPENDIX E:
TRANSPORTATION DEMAND MODEL
AND LAND USE ASSUMPTIONS

DRAFT



APPENDIX F:
FUTURE HORIZON INTERSECTION
OPERATIONAL ANALYSIS



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APPENDIX G: TRAFFIC CALMING TOOLBOX



DRAFT

VERTICAL DEFLECTION

Raised Crosswalk

Description: Marked pedestrian crossing that is elevated to the sidewalk grade, to give pedestrians prominence when crossing the street.

EXAMPLE - TEMPORARY MEASURE



Source: <https://rosehillhighways.com/products/raised-tables/>

EXAMPLE - PERMANENT MEASURE



Potential Benefits:

- Increase visibility of pedestrians and crossing
- Reduction in 85th percentile speed from 5 km/h to 13 km/h
- Reduction in traffic volume of up to 26% and increase of up to 7% on neighbouring streets
- Increase in drivers yielding to pedestrians, 53% compared to 13% before treatment

Approximate Cost:

- Capital: \$8,000 to \$15,000 (depending on type of finishing)
- Operational Considerations:
 - Potential impacts to street maintenance
 - Potential impacts to drainage
 - Pavement marking and signage maintenance
 - Minor impact to bicycle and emergency vehicles

Speed Cushions/Speed Hump/Table

Description: Vertical structure that spans across roadway to reduce vehicle speeds.

EXAMPLE - TEMPORARY MEASURE



SOURCE: <https://translineinc.com/products/traffic-calming-solutions/modular-rubber-products/rubber-speed-humps/#&qid=null&pid=3>



EXAMPLE - PERMANENT MEASURE



Potential Benefits:

- Reduction in 85th percentile speed from 6 km/h to 13 km/h
- Traffic Volume reduction between 15% and 27%

Approximate Cost:

- Capital: \$5,000 to 8,000
- Operational Considerations:
 - Potential impacts to street maintenance
 - Pavement marking and signage maintenance

HORIZONTAL DEFLECTION & NARROWING

Traffic Circle / Traffic Button / Mini Roundabout

Description: Raised islands located in the centre of an intersection that channelizes traffic to move in a counterclockwise direction.

EXAMPLE - TEMPORARY MEASURE



Source: <https://rubberform.com/product/mini-roundabouts/>

Potential Benefits:

- Reduction in 85th percentile speed up to 14 km/h
- Reduction in traffic volumes of up to 20%
- Reduction in collision rate of approximately 30% compared to signalized intersections
- Reduction in traffic noise of 3 dBA

EXAMPLE - PERMANENT MEASURE



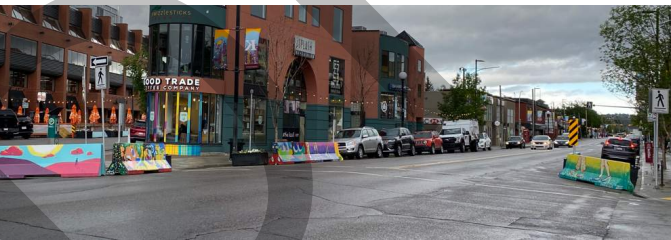
Approximate Cost:

- Capital: \$25,000 to \$60,000 (depends on type of finishing and landscaping)
- Operational Considerations:
 - Potential impacts to street maintenance
 - Potential signage and landscaping maintenance

Curb Extension / Neckdown / Choker / Curb Bulb

Description: Narrowing of roadway either at the intersection or mid-block, to reduce vehicle speed and crossing distances for pedestrians.

EXAMPLE - TEMPORARY MEASURE



Potential Benefits:

- Increase visibility of pedestrians and crossing
- Reduction in through vehicle speeds between 2 and 8 km/h
- Reduction in turning vehicle speeds

EXAMPLE - PERMANENT MEASURE



Approximate Cost:

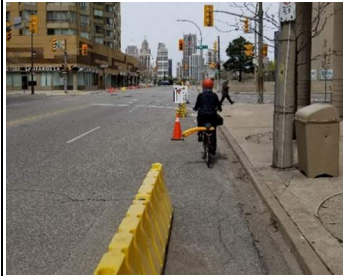
- Capital: \$15,000 to \$50,000 per bulb (depending on impact to drainage, finishing and landscaping treatment)
- Operational Considerations:
 - Potential impacts to street maintenance
 - Potential impacts to drainage
 - Pavement marking, signage and landscaping maintenance
 - Potential impact to parking

HORIZONTAL DEFLECTION & NARROWING

Lane Narrowing

Description: Reduction in vehicle lane width using painted lines or physical delineations to reduce vehicle speed and add space for medians, bike paths, and sidewalk.

EXAMPLE - TEMPORARY MEASURE



EXAMPLE - PERMANENT MEASURE



Source: Google StreetView

Potential Benefits:

- Reduction in 85th percentile speed up to 10 km/h
- Protected space for bicyclists and/or pedestrians

Approximate Cost:

- Capital: \$50 to \$1,000 per linear meter (depending on type of treatment)
- Operational Considerations:
 - Potential impacts to street maintenance
 - Pavement marking, signage and landscaping maintenance
 - Potential impact to parking

Raised Median Island

Description: A raised island located in the middle of the road, narrowing the roadway. This can reduce vehicle speed and can provide refuge for pedestrians crossing.

EXAMPLE - TEMPORARY MEASURE



Potential Benefits:

- Reduction in vehicle speeds between 3 and 8 km/h
- Pedestrian refuge for crossing wider roadways

EXAMPLE - PERMANENT MEASURE



Approximate Cost:

- Capital: \$1,500 to \$2,500 per linear metre (depending on width and finishing)
- Operational Considerations:
 - Potential impacts to street maintenance
 - Pavement marking, signage and landscaping maintenance
 - Potential impact to parking

HORIZONTAL DEFLECTION & NARROWING

Vertical Centreline Treatment

Description: Vertical flexible delineators or raised pavement markers in the centre of the roadway creating a perceived lane narrowing.

EXAMPLE



Source: City of Ottawa

Potential Benefits:

- Reduction in 85th percentile speed up to 5 km/h
- Reduction of 25% in the number of collisions per kilometre (collision density) and of 18% in the collision rate (controlled for volume)

Approximate Cost:

- Capital: \$2,000
- Operational Considerations:
 - Potential impacts to street maintenance
 - Pavement marking and signage maintenance

SURFACE TREATMENT

Sidewalk Extension / Textured Crosswalk

Description: Crosswalk that has a different colour or surface texture than the roadway to indicate a pedestrian crossing.

EXAMPLE - TEMPORARY MEASURE



EXAMPLE - PERMANENT MEASURE



Potential Benefits:

- No quantitative data available
- Increase visibility of crossing, but may also be seen as a distraction for motorists

Approximate Cost:

- Capital: varies
- Operational Considerations:
 - Pavement marking maintenance
 - Additional lifecycle costs

Textured/Coloured Pavement

Description: Roadway pavement that has different texture or pattern than surrounding roadway to alert drivers of the potential to reduce vehicle speeds.

EXAMPLE - TEMPORARY MEASURE



EXAMPLE - PERMANENT MEASURE



Potential Benefits:

- No quantitative data available
- Increase visibility of crossings and intersection, but may also be seen as a distraction for motorists

Approximate Cost:

- Capital: varies
- Operational Considerations:
 - Pavement marking maintenance
 - Additional lifecycle costs
 - Shorter lifecycle

PAVEMENT MARKINGS

Converging Chevrons

Description: V-shaped pavement markings that are pointed in the direction of travel. The spacing of the chevrons is continually reduced to give the illusion that vehicle speed is increasing.

EXAMPLE



Source: <https://www.fhwa.dot.gov/publications/research/safety/15030/009.cfm> - Iowa State University

Potential Benefits:

- Reduction in vehicle speeds between 5 and 11 km/h

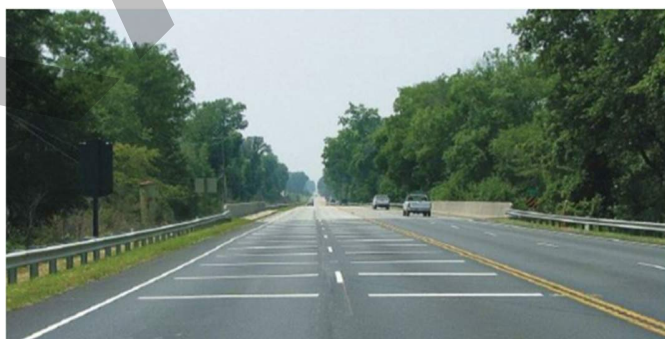
Approximate Cost:

- Capital: \$500 per chevron
- Operational Considerations:
 - Pavement marking maintenance

Peripheral Transverse / Full Lane Transverse Bars

Description: Series of parallel pavement markings along the edge of the travel lane (peripheral transverse) or markings that extend across the full lane (full lane transverse bars). The spacing of the markings are reduced to give the illusion that vehicle speed is increasing.

EXAMPLE



Source: <https://www.fhwa.dot.gov/publications/research/safety/15030/009.cfm> - Virginia Centre for Transportation Innovation and Research

Potential Benefits:

- Reduction in 85th percentile speed up to 8km/h (Peripheral Transverse Bars)
- Reduction in 85th percentile speed between 5 and 15 km/h (Full Lane Transverse Bars)

Approximate Cost:

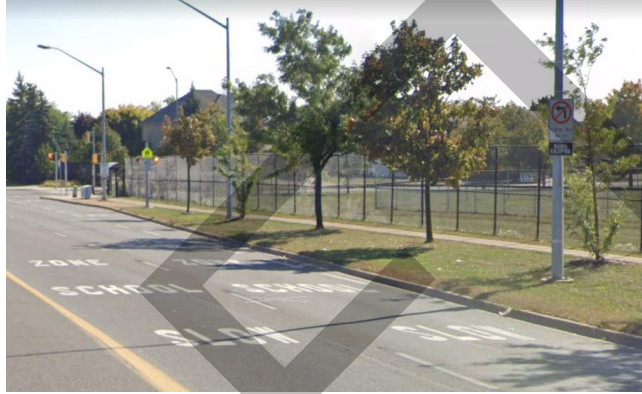
- Capital: \$40 to \$150 per marking
- Operational Considerations:
 - Pavement marking maintenance

PAVEMENT MARKINGS

On-Road 'Sign' Pavement Markings

Description: Pavement markings that provide information that is usually on signage, is painted on the roadway to provide a larger image directly in the driver's line of sight.

EXAMPLE



Potential Benefits:

- Reduction in vehicle speeds of 6 to 14km/h

Approximate Cost:

- Capital: varies
- Operational Considerations:
 - Pavement marking maintenance

ACCESS RESTRICTION

Directional Closure

Description: Curb extension or physical barrier that extends to the centreline of the roadway to prohibit one direction of traffic.

EXAMPLE - TEMPORARY MEASURE



EXAMPLE - PERMANENT MEASURE



Potential Benefits:

- Reduction in 85th percentile speed up to 11 km/h
- Reduction in vehicle volumes of 60% to 100% in the closure direction

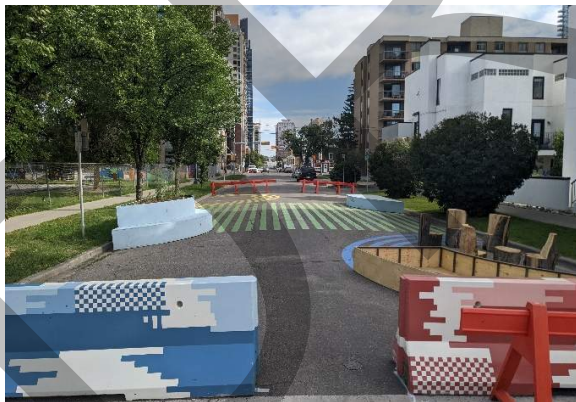
Approximate Cost:

- Capital: \$20,000 to \$50,000
- Operational Considerations:
 - Potential impacts to street maintenance
 - Pavement marking and signage maintenance
 - Potential impact to emergency vehicles

Full Closure

Description: Curb extension or physical barrier that extends to the entire length of the roadway to prohibit motor vehicle movements.

EXAMPLE - TEMPORARY MEASURE



EXAMPLE - PERMANENT MEASURE



Potential Benefits:

- No quantitative data available

Approximate Cost:

- Capital: \$15,000 to \$40,000
- Operational Considerations:
 - Potential impacts to street maintenance
 - Pavement marking and signage maintenance
 - Potential impact to emergency vehicles

ACCESS RESTRICTION

Raised Median Through Intersection

Description: An island or physical barrier located on the centerline of a two-way roadway through an intersection to prohibit left turns and through movements on intersecting roadway.

EXAMPLE - TEMPORARY MEASURE



Source: Google StreetView

EXAMPLE - PERMANENT MEASURE



Potential Benefits:

- Reduction in vehicle volumes of 35%

Approximate Cost:

- Capital: Varies depending on treatment type
- Operational Considerations:
 - Potential impacts to street maintenance
 - Pavement marking and signage maintenance
 - Potential impact to emergency vehicles
 - Barrier maintenance and lifecycle costs

Right-in / Right-out Island

Description: Raised triangular median that prohibits left turns movements and through movements on intersecting roadway.

EXAMPLE - TEMPORARY MEASURE



Source: <https://abaat.org/traffic/forced-turn-barriers/>

EXAMPLE - PERMANENT MEASURE



Potential Benefits:

- Reduction in vehicle volumes of 35%

Approximate Cost:

- Capital: \$10,000 to \$25,000
- Operational Considerations:
 - Potential impacts to street maintenance
 - Pavement marking and signage maintenance
 - Potential impact to emergency vehicles

SUPPLEMENTAL MEASURES

Active and Safe Routes to School Program

Description: Program to establish active transport modes and safe routing for school children to get to and from school.

EXAMPLE



Potential Benefits:

- No quantitative data available
- Increase awareness on where safe routes are and school zone areas

Approximate Cost:

- Capital: Varies
- Operational Considerations:
 - Coordination with school programming
 - Potential pavement marking maintenance

SUPPLEMENTAL MEASURES

Targeted Education Campaign

Description: Event, programs, and media campaigns to raise awareness of road safety issues (ie. traffic safety, distracted driving, speeding, impaired driving, aggressive driving, share the road, etc.).

EXAMPLE

Distracted driving in B.C.

On average 76 people die every year in crashes where distracted driving is a contributing factor.

Distracted driving is responsible for more than **one quarter** (27 per cent) of all car crash fatalities in B.C.

When you're distracted, you react slower.

Most rear-end crashes resulting in injury involve distracted drivers.

82 On average, 82 people die every year in speed-related crashes.

66 fatal crashes

Speed continues to be a leading factor contributing to 66 fatal crashes in 2020.

In 2020, more than 1 in 4 car crash fatalities were speed related.

Source: ICBC.com

Potential Benefits:

- Varies depending on campaign

Approximate Cost:

- Capital: Varies
- Operational Considerations:
 - Potential coordination with school programming
 - Potential coordination with ICBC and/or Ministry of Transportation

Speed Display Devices or Vehicle Activated Signs (VAS)

Description: Pole-mounted device that is equipped with radar speed detectors to display speed of approaching vehicles, or sign that displays electronic messages or warnings when activated by speeds of approaching vehicles surpassing programmed threshold.

EXAMPLE



Potential Benefits:

- Reduction in 85th percentile speed between 3 and 14 km/h
- Reduction in collision of up to 35%

Approximate Cost:

- Capital: \$8,000 to \$15,000
- Operational Considerations:
 - Signage maintenance

SUPPLEMENTAL MEASURES

Shared Street

Description: Roadways that have free movement of cyclists and pedestrians, without any barriers, pavement markers, traffic signals or signs.

EXAMPLE - TEMPORARY MEASURE



Source: <https://transforming.edmonton.ca/watch-this-space-for-developments/>

EXAMPLE - PERMANENT MEASURE



Source: <https://banff.ca/969/Bear-Street-Shared-Street>

Potential Benefits:

- Reduction in mean and 85th percentile speed up to 13 km/h¹
- Reduction of up to 49% in fatal collisions

Approximate Cost:

- Capital: Varies, permanent measure can be higher costs depending on surface finishing
- Operational Considerations:
 - Potential impacts to street maintenance
 - Potential impacts to drainage
 - Pavement marking and signage maintenance
 - Additional lifecycle costs

¹Reductions may be exaggerated due to many roads having posted speed limit reductions in combination with the shared space implementation



APPENDIX H: ACTIVE TRANSPORTATION NETWORK PLAN



DRAFT

ACTIVE TRANSPORTATION NETWORK PLAN - DRAFT

TOWN OF GOLDEN

August 1, 2022



PREPARED FOR:

Town of Golden
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BC V0A 1H0

Suite 101, 134 - 11 Avenue SE, Calgary, AB T2G 0X5 | T: 403.291.1193

File: 0404.0236.01

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APPENDICES

APPENDIX A: POLICY AND PLANNING REVIEW

APPENDIX B: IMPLEMENTATION PLAN

APPENDIX C: PROPOSED PROJECT DESCRIPTION



1.0 INTRODUCTION

The Town of Golden (Town) is a small community of 3,708 residents, with an additional 3,155 residents in the surrounding rural area. Golden is located on the traditional and ancestral territory of the Ktunaxa and Secwepemc Nations. As a resort community, the Town of Golden is a major tourist destination in British Columbia, attracting a broad range of residents and visitors.

The Town is committed to making it safer, easier, and more enjoyable to walk, bicycle, and use other forms of active transportation. Golden is an active and healthy community with a deep appreciation for the outdoors and maintaining our natural environment. While there is considerable potential to increase mode share to more sustainable and active modes, an Active Transportation Network Plan (ATNP) is the first step in achieving these goals.

The ATNP will assist in connecting visitors and residents of all ages and abilities to year-round attractions and community destinations. The ATNP will guide Golden's investments in active transportation over the next 20 years.

WHAT IS ACTIVE TRANSPORTATION?

Active transportation includes any form of human-powered transportation, such as walking, cycling, or rolling using a skateboard, in-line skates, scooter, mobility aids such as a wheelchair, and other modes. It may also include winter-based active modes (e.g., cross-country skiing and snowshoeing), water-based active modes (e.g., canoe, kayak, and stand-up paddle boarding), and even horseback riding. There are also several new and emerging transportation modes that can fit in this category and may use the same trails and pathways, such as e-scooters, electric skateboards, and other small, one-person electric vehicles.

Planning and designing active transportation facilities for people of All Ages and Abilities (AAA) is a national and international best practice that should be aspired to for all active transportation facilities in Golden.

The focus of the Town of Golden's ATNP is on people of all ages and abilities walking, bicycling, and rolling. This means that the ATNP considers people using a variety of mobility devices (e.g., walkers, wheelchairs, and mobility scooters) and bicycle types (e.g., bicycles with trailers, e-bikes, bicycles built for people with mobility challenges, and others) to ensure that active transportation is feasible, comfortable, and enjoyable for all the Town's residents and visitors.

1.1 Plan Process

The ATNP is being developed over a five-month period and includes four phases, as described below and in parallel with the Town of Golden's Transportation Plan.

The Project was completed over four phases from Fall 2021-Spring 2022:



- **Phase 1: Project Launch (October to November)** This phase involved the project kick-off meeting between Town staff and the consulting team, collecting and reviewing background information and data, and conducting a community tour to explore existing conditions. This phase also included preparing a communications and engagement strategy for future phases and aligning all activities with the Transportation Plan.
- **Phase 2: Understanding Existing Conditions (November to December)** This phase focused on understanding the existing state of active transportation in the Town, including a review of existing related policy documents and facilities, as well as engaging with the public to better understand existing issues and opportunities related to active transportation.
- **Phase 3: Setting Future Direction (December to January)** This phase focused on exploring possibilities for the future of active transportation in Golden. This included confirming the ATNP's vision and goals. A draft active transportation network was developed, and policies and programs were identified to enhance active transportation for all. A second round of community and stakeholder engagement took place to seek input on the draft recommendations of the ATNP.
- **Phase 4: Implementation and Reporting (January to March)** This phase involved refining and prioritizing the draft content presented in Phase 3 and developing an implementation plan, including identifying project costs, and funding strategies. The final ATNP document was documented and presented to Town Council for approval.

COMMUNITY ENGAGEMENT

The ATNP undertook a significant amount of engagement with community members and stakeholders. Throughout the development of the Plan, Golden residents and visitors were given the opportunity to shape the development of the Plan. Three rounds of engagement took place.

Round 1: Understanding Concerns (September 13-26, 2021) used a 29-question survey to gather feedback from residents and visitors on what the Plan should focus on and collect input on existing issues and opportunities for active transportation within the community. Respondents were able to identify barriers and opportunities for active transportation on an interactive map, what they think could be done to encourage more walking and bicycling, and what type of infrastructure they would like to see. There were 296 responses to the survey and 497 points placed on the interactive map (Figure 1).

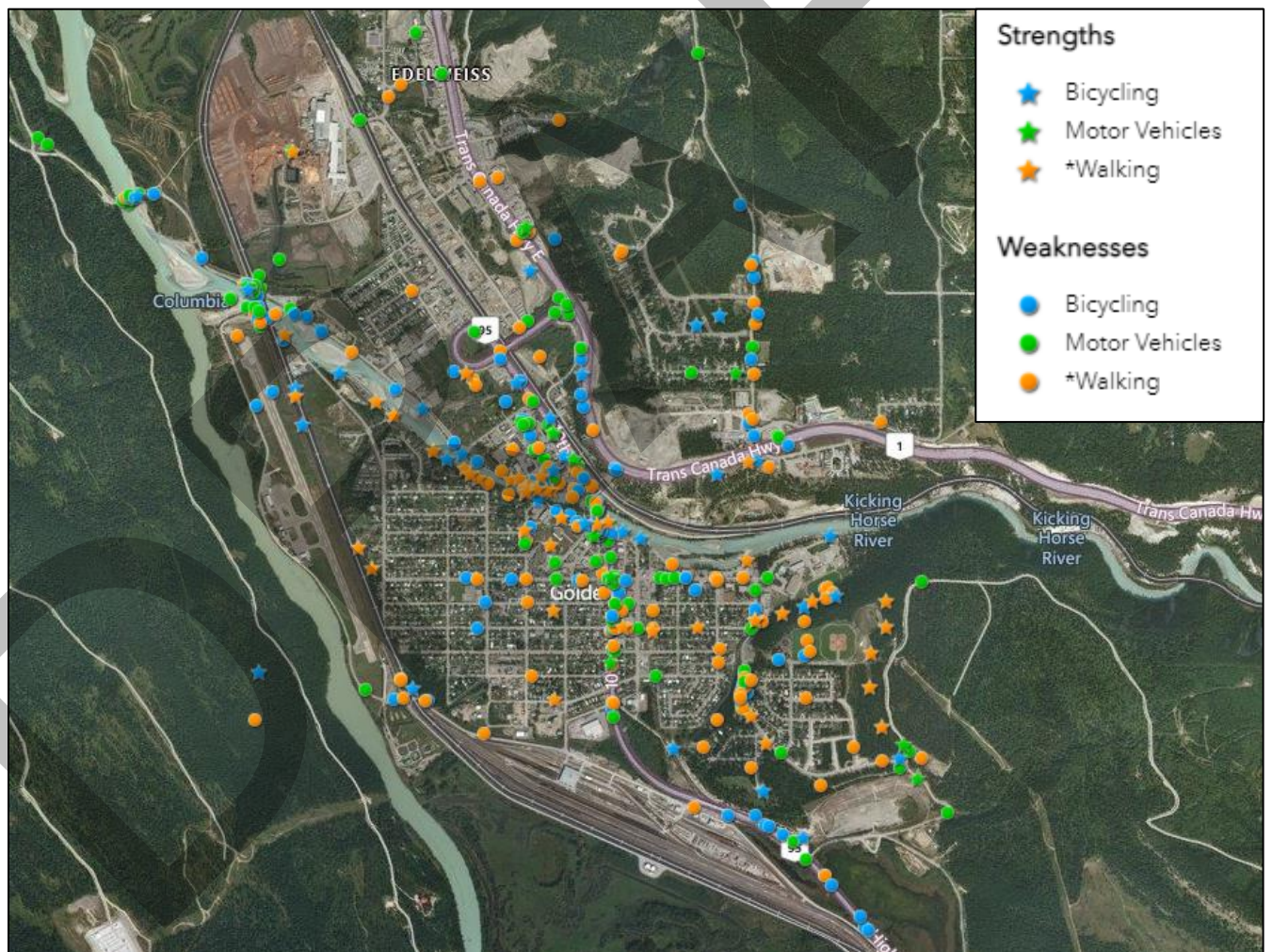


Figure 1: Round 1 Survey Interactive Mapping Results

Round 2: Level of Support (January 26-February 11, 2021) included two virtual sessions and one survey. The first session was held on January 26, 2022, to provide preliminary content of the GTP and ATNP including a draft vision statement, goals and recommended road and active transportation network improvements. There were 40 participants that attended the session.

A survey was launched after the presentation that included 31 questions on the content presented in this session. The survey was available from January 27 to February 13, 2022. The main purposes of the second survey was to gain an understanding of what the priority projects and actions were for the community prior to compiling the draft Plan. There were 266 participants that completed the survey.

The second virtual community session was held on February 7, 2022, as a follow up open discussion. It included two breakout rooms, one to discuss road network improvements and one to discuss active transportation network improvements. There were 32 participants that attended the session.

The detailed results from the first and second round of engagement are provided in the What We Heard Reports included as **Appendix H** of the Golden Transportation Plan. The feedback from the community and stakeholder engagement has been incorporated into the ATNP and is reflected in the strategies, actions, and priorities identified throughout.

1.2 Plan Vision and goals

The ATNP and Golden Transportation Plan have developed a shared vision and set of goals for Golden's transportation networks. The vision is as follows:

"Residents and visitors of the Town of Golden enjoy an **active lifestyle** situated between the Rockies and the Purcells. The **integrated** and **accessible multi-modal** transportation network enhances this lifestyle, fostering a **vibrant and sustainable** community."

The following goals are intended to support the Town to realize the vision.

- 1. Health and Safety:**
 - Provide a safe network for all road users
 - Support the health of both people and the environment by encouraging active transportation and reductions in vehicle emissions
- 2. Integrated**
 - Provide an integrated network with various options for moving within and beyond the Town
- 3. Accessible**
 - Provide an accessible network that allows people to move throughout the community regardless of age, ability, and income



Benefits of Active Transportation

Golden has unique needs when it comes to active transportation due to its designation as a resort municipality, but the benefits remain the same across communities of all sizes. By building safe connections for residents and visitors, the Town will see the benefits of active transportation in a variety of ways, including:

- **Health Benefits:** As Golden is only 11.41 square kilometres and takes approximately 30 minutes to walk across town, walking and bicycling can be the easiest and most affordable ways for people in Golden to add exercise to their daily routines. However, there are limited formal bicycling and walking facilities within the Town. Investing in active transportation has been shown to create more physically active communities, which can in turn improve psychological well-being and reduce the risk of numerous chronic diseases. With Golden's growing senior population, active transportation infrastructure will support ageing in place. 
- **Safety Benefits:** Properly designed active transportation facilities that provide dedicated spaces for active transportation users and make people more visible within the roadway have the potential to reduce the risk of collisions, creating a safer transportation system for all road users. Roads designed for slower motor vehicle speeds have been shown to decrease the probability of serious injury and death for active transportation users, and they are much more comfortable for people walking, rolling, and bicycling. 
- **Economic Benefits:** Neighbourhoods and destinations that are attractive and accessible for people walking and bicycling can attract more visitors, who will in turn be patrons of local services and amenities. Investing in active transportation can result in a more balanced transportation system that is cost-effective and more equitable. With tourism seasonality in Golden, an active transportation network can decrease traffic volumes during peak season, support attracting seasonal workers, and grow tourism in a sustainable way. 

- **Environmental Benefits:** Transportation is one of the largest contributors to greenhouse gas emissions in the province, with motor vehicles the main culprit. With Highway 1 and Highway 95 bisecting the community, air quality can be poor in Golden. Active transportation can help to lower emissions while also reducing air pollution and motor vehicle congestion. As an active and nature-loving community, Golden's residents and visitors are well-positioned to contribute to a carbon-free future with more active transportation infrastructure.
- **Societal Benefits:** Active transportation encourages social interaction, which helps to build trust, respect, understanding, and a sense of co-operation amongst community members. Studies have shown that these important social interactions diminish when motor vehicle volumes increase and walking infrastructure decreases.¹² These interactions are vital for people of all ages and abilities. In addition, providing more active transportation infrastructure can benefit some of the equity-seeking groups in Golden such as women, black, Indigenous and people of colour (BIPOC), as well as mobility and cognitively impaired individuals by creating safer spaces, lowering transportation costs, and improving access.



DRAFT

¹ City of Vancouver. Walking and Cycling in Vancouver: 2016 Report Card. [Online] 2017. <http://vancouver.ca/files/cov/walking-cycling-in-vancouver-2016-report-card.pdf>.

² Lucas, Karen & Peter Jones. Social Impacts and Equity Issues in Transport: An Introduction (guest editorial). *Journal of Transport Geography*. 2012, Vol 21. doi:10.1016/j.jtrangeo.2012.01.032.

Active Transportation in Small Towns

While some planning and infrastructure that supports active transportation is not always feasible in small towns because of community resistance, a small tax base, and limited resources. Small towns can also benefit from often having lower traffic levels, higher levels of community trust, connections and closer relationships between citizens and local leaders.³

There is precedent however, a recent report found, “in the face of persistent, tough challenges, small communities in BC have made great strides in active transportation,” using active transportation as a way to accomplish goals around sustainability, climate action, health, safety and economic development simultaneously. Golden can ‘right-size’ active transportation infrastructure to ensure that it serves the interests of the community and stays true to its roots.



³ BC Healthy Living. Small Towns Big Steps in Active Transport. 2022. <https://www.bchealthyliving.ca/wp-content/uploads/2022/01/22-01-25-STBS-Report-FINAL.pdf>

There are several smaller communities in British Columbia that have been successful in implementing active transportation projects through various approaches and strategies. Some examples include Burns Lake, Nelson, Powell River, and Gibsons.

Some of the key lessons learned from the study of British Columbia communities include:

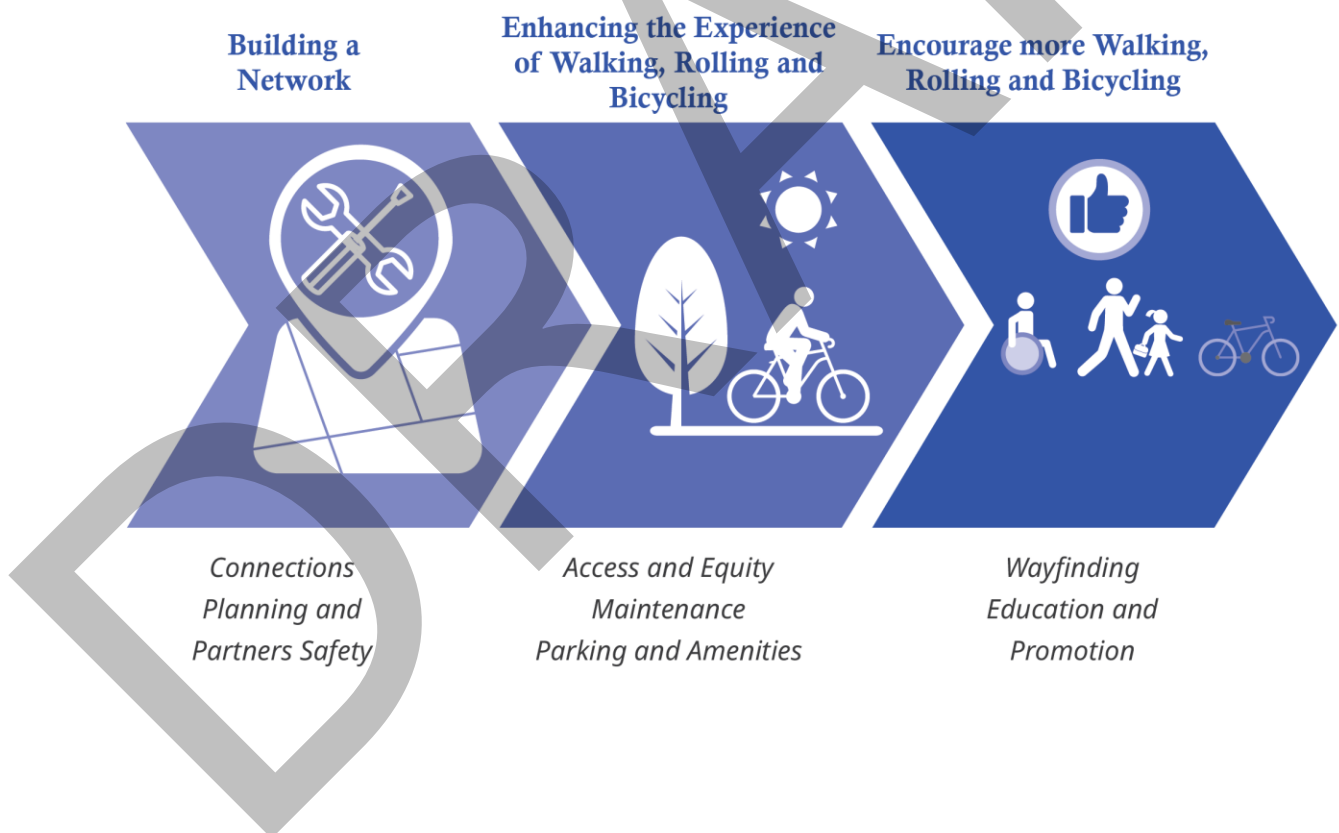
- Collaborating on the planning, design, and implementation of active transportation infrastructure across the community is key indicator of success in small towns.
 - Champions may exist within community organizations or interdepartmentally.
 - Look for opportunities to partner with other organizations or groups within the Town to make projects possible.
 - Look for regional partnerships to create regional connections, including Indigenous communities.
 - Integrate active transportation improvements into other projects to reduce costs.
 - A relationship with MoTI is critical to provide facilities on roads within their jurisdiction.
- Small towns need to ‘start somewhere’ and prioritize progress over perfection
 - Pilot programs are helpful to understand what impacts changes will have.
 - Get Grant Ready: strategies and plans in place to ensure quick action for upcoming funding opportunities.
 - Use existing right-of-way to link trails with roadways.
 - Placemaking creates places people want to cycle and walk in and to.
 - Right-size projects for the Town’s context.
- Equity is an important consideration in small towns and disparities can be greater.
 - There is an opportunity to address some of the issues around accessibility/equity and active transportation in one plan.
 - Increasing access to electric (e-bikes) means that biking can be an option in towns with steep topography and for seniors and for people with mobility challenges.

Pedestrian and bicyclist skills safety is even more important where active transportation infrastructure has not been implemented yet.

1.3 Plan Framework

The ATNP has been divided into three key themes – building a network, enhancing the experience of active transportation, and encouraging more active transportation – and each theme includes key strategies and actions that will support the Town in reaching its vision.

- Building a network
 - Connections
 - Planning and Partners
 - Safety
- Enhancing the experience of walking, rolling, and bicycling
 - Access and Equity
 - Maintenance
 - Parking and Amenities
- Encouraging more walking, rolling, and bicycling
 - Wayfinding
 - Education and Promotion





2.0 ACTIVE TRANSPORTATION IN GOLDEN

Golden is an active and healthy community with a deep appreciation for the outdoors and maintaining its natural environment. Because of Golden's beautiful natural surroundings and proximity to Calgary, Revelstoke, and the Trans Canada Highway, many tourists and recreationalists visit the Town year-round for mountain biking, hiking, skiing, and many more outdoor activities.

Golden has a deep history as an industrial logging and railway town. With the development of the Kicking Horse Mountain Resort and a growing tourism sector, Golden is entering a new era with more of its residents employed in the service industry than any other industry. As Golden continues to attract new visitors and residents, it must grow its active transportation network to accommodate its unique and diverse population in a sustainable way.

2.1 Community Context

Demographics

According to the 2016 census, Golden is a generally young community with 69% of the population between the ages of 15-64, 15.6% of the population over the age of 65, and 15.6% of the population under the age of 14. The median age in Golden is 40.2. However, Golden is also a major tourist and retirement destination for those in British Columbia, Alberta and beyond, creating the need for infrastructure that can also support the youngest and oldest in the community.

Land Use

At only 11.41 square kilometres, Golden is a relatively compact community despite being composed of primarily single-family residential neighbourhoods. Most of Golden's residents live south of the Kicking Horse River on a peninsula that is surrounded by the Columbia River, forests, and mountains. There is another single-family residential development northeast of downtown Golden, separating Golden with Highway 1. Topography, including river crossings, and the spread-out nature of some of Golden's neighbourhoods does create some challenges for walking, but is generally quite reasonable for cycling due to its size.

Golden provides both residents and visitors with numerous amenities, including trails and parks, including the Spirit Square and the river paths/Rotary Trails, and abundant recreational activities as the Town is nestled between the Rockies and the Purcells. There are four schools in Golden, all of which are south of the Kicking Horse River, with three located in the northeast corner of the peninsula. There are ten parks throughout Golden, with six south of the Kicking Horse River and in proximity to schools. **Figure 2** displays the community destinations in Golden.

Policy Context

The ATNP is closely linked to many of the Town of Golden's key guiding policies and plans as well as the Transportation Plan. The ATNP will also consider regional policies and strategies. A summary of the Town's existing policy documents is included in **Appendix A**.

Local Policy

The following local plans and policies shape the direction of the ATNP:

- Council's Strategic Priorities (2019-2022)
- Resort Development Strategy (2019-2022)
- Snow Clearing and Sanding Policy (2017)
- Sidewalk and Pathway Inspection and Maintenance Policy (2016)

- Age Friendly Community Plan (2014)
- Zoning Bylaw (2011)
- Community Active Transportation Workshop (2008)
- Official Community Plan (2008)
- Subdivision and Development Servicing Bylaw (2008)

Regional, Provincial and Federal Policy

The following regional, provincial, and federal plans and policies shape the direction of the ATNP:

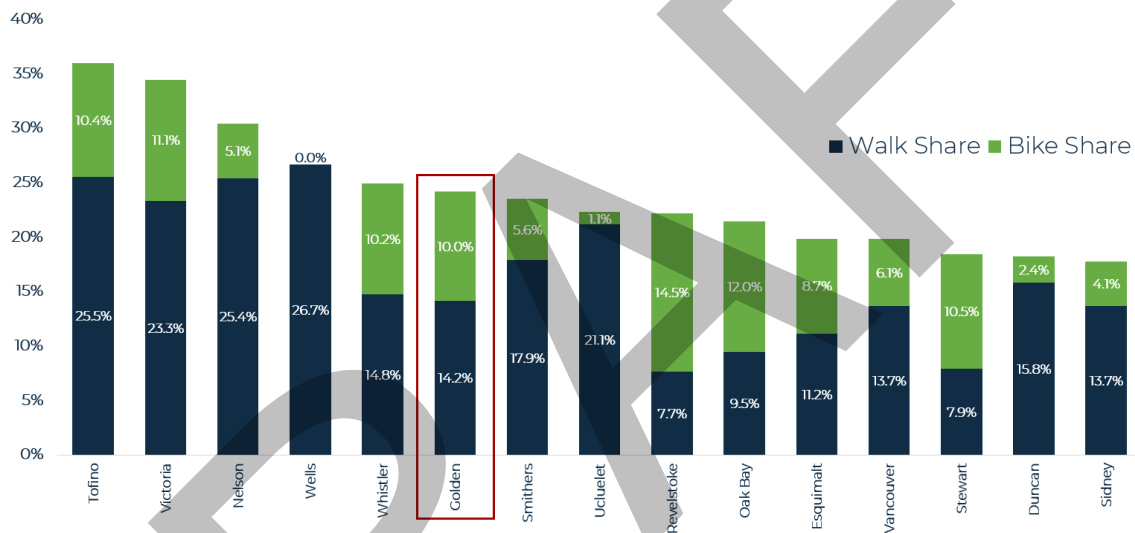
- Columbia Shuswap Regional District's Regional Trails Strategy (2018)
- Province of BC's Move. Commute. Connect.: BC's Active Transportation Strategy (2019)
- Government of Canada's National Active Transportation Strategy (2021)

2.2 Active Transportation Network

Current Travel Patterns

Active transportation mode share in Golden is relatively high, but given the young and active population, could grow significantly with an increase in safe and comfortable infrastructure. According to the 2016 census, 24% of Golden residents travel to work by active transportation with nearly 10% traveling by bicycle and 14% by walking (Figure 3). The remaining 76% commute by car.

Figure 3: BC Active Transportation Mode Share by Municipality (Source: Statistics Canada 2016 Census)



Existing Network

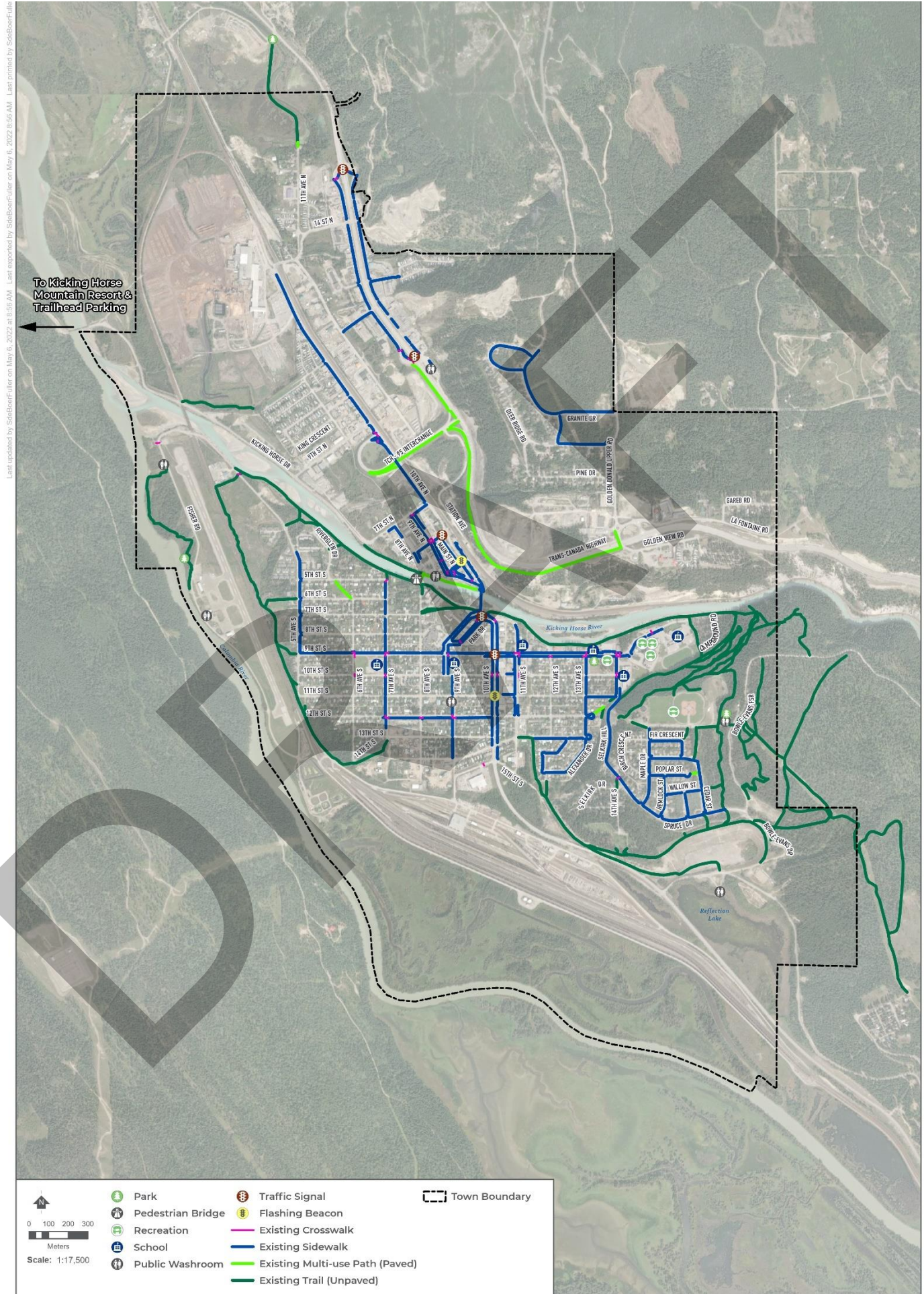
Golden's existing active transportation network consists of sidewalks, multi-use paths, walking paths, and trails (Figure 4). Golden has over 24 kilometres of unpaved trails and 21 kilometres of sidewalks, as well as 1.7 kilometres of paved multi-use trails.

The bulk of the sidewalks in Golden are situated in the mixed-use commercial areas such as downtown and along 10th Avenue South, where there are sidewalks on both sides of the street for much of the corridor. There are also sidewalks on one or both sides of the street along 9th Street South, which connects to five of Golden's schools. The Kicking Horse Pedestrian Bridge at 8th Avenue North intersects with the walking trail that circles the Town and provides an active transportation connection over the Kicking Horse River to downtown Golden.

While Golden has some of the best mountain biking trails in the province, there is limited on-street bicycle facilities within the Town. There are currently no on-street bicycle facilities in Golden, with cyclists having to share the lane with motor vehicles or use the limited network of multi-use trails and unpaved trails. The quality of the trail networks and the gap within Town has residents expressing a desire for better connections beyond and within Golden, especially between residential and commercial areas.



Figure 4: Existing Active Transportation Network



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Safety

There were 98 ICBC reported collisions in the Town of Golden from 2016-2020. The top safety concerns in the Town of Golden are the Highway 1 Frontage Road turning lane at the Trans-Canada Highway and 10th Ave S and 9th St S. During this same period, two collisions involving pedestrians and three crashes involving cyclists took place

Key Issues and Opportunities

- The top two priorities for residents were around accessibility and walking. When asked about what type of walking and biking infrastructure residents would like to see more of, respondents indicated more multi-use paths, trails, sidewalks, and more bicycle lanes. With an ageing population, the Town
- The Town of Golden does not have an extensive on-street active transportation network for pedestrians or cyclists and community survey results indicate that a low percentage of respondents feel safe when using active modes within the Town.
- Respondents to the survey noted that the lack of active transportation infrastructure is a key reason why they feel unsafe using active transportation. The Town of Golden has many opportunities to enhance and increase active transportation, including building sidewalks, establishing connections, and creating separation between vehicles and cyclists.
- Commute times in Golden are quite short, and almost half of respondents noted that their commute time is less than ten minutes, but more than half of respondents still drive to work or school during warm and dry months. However, residents did note that they would be interested in using active transportation or transit to commute if it were safer and more accessible.
- Golden's relationship with the surrounding community and land is integral to maintaining its healthy lifestyle. However, much of the recreational opportunities are just outside the Town's limits, meaning many people drive to trailheads and Kicking Horse Mountain Resort. The ATNP can help to alleviate parking pressure at community trailheads encouraging residents to ride safely and comfortably to and from trailheads rather than driving to trail destinations.
- Golden experiences seasonal tourism and does not have an active transportation network that connects key destinations for tourists and residents. Regionally, Highway 1's Kicking Horse Canyon has been upgraded to improve safety, and better accommodate cyclists, setting the stage to establish stronger regional connections, and highway crossings to the Town of Golden.

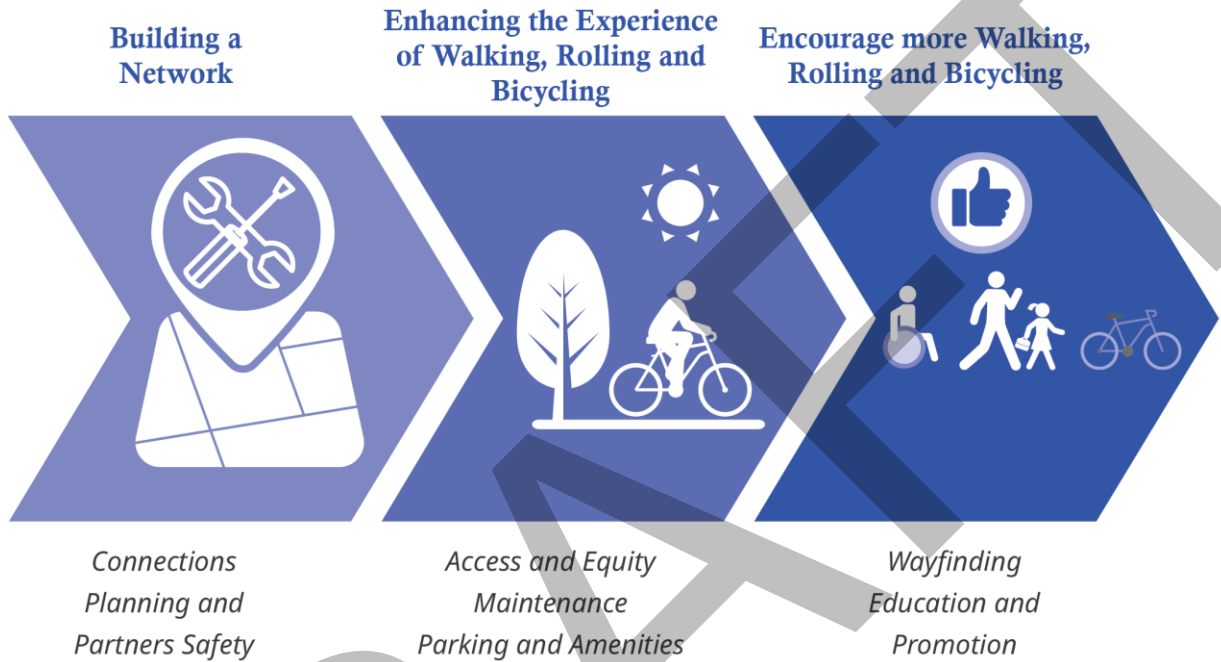


3.0 THE FUTURE OF ACTIVE TRANSPORTATION IN GOLDEN

The future of active transportation in Golden depends on investments in an active transportation network, making active transportation an effortless and enjoyable experience, and working with Golden's residents and businesses to encourage people to walk, bicycle and roll more often.

As such, the framework of the ATNP consists of three overarching themes: **Building a Network**, **Enhancing the Experience of Walking, Rolling, and Bicycling**, and **Encouraging More Walking, Rolling, and Bicycling**. Each theme contains several core strategic areas and several individual actions that provide a detailed roadmap to enhancing active transportation in Golden over the next several years.

The sections below introduce the themes, strategies and actions that will guide investments in Golden's active transportation network. The following section, **Section 4.0** provides an implementation strategy that identifies next steps for implementing the listed actions, prioritizes actions and investment, and outlines costs and funding strategies for each action.



Theme 1: Building a Network

The theme **Building a Network** focusses on providing more walking and bicycling routes (in the form of infrastructure) and enhancements to existing routes that will make it safe and comfortable for pedestrians and cyclists to travel by walking, rolling in town. There are three focus areas under building a network including – creating connections, looking for opportunities to plan and partner with others, and safety.

Connections

Connections is a core strategic area that aims to establish a network of active transportation facilities that are safe, comfortable, and connected to key destinations in the Town of Golden for people of all ages and abilities. There are four action areas under the Connections strategic area that aim to build out an active transportation network, ensuring its design is inclusive and accessible, forward-thinking, and strategically implemented.

Action 1: Implement a connected All Ages and Abilities (AAA) active transportation network within Golden through a phased implementation approach

Implementing the infrastructure projects identified in **Figure 8** through a phased approach is a key component to provide a connected All Ages and Abilities (AAA) active transportation network within Golden. This includes formalizing connections to and from the Highway 95 bridge replacement project and other Ministry of Transportation and Infrastructure projects. Additionally, ensuring that existing infrastructure is in a state of good repair and well-maintained will ensure that routes can be used by all community members and visitors.

AAA active transportation infrastructure can help make walking, rolling, and bicycling more comfortable, safe, and attractive for everyone, regardless of age or ability. Planning and designing for people of all ages and abilities is a national and international best practice that should be aspired to for all active transportation facilities in Golden.

AAA bicycle facilities are typically physically separated from other motor vehicles and include protected or separated bicycle lanes or multi-use pathways. A designated active transportation corridor (a street where people bicycling, and walking, share the road with motor vehicles) that has low motor vehicle volumes and speeds can also be considered AAA and are often referred to as a local street bikeway or neighbourhood bikeway. Active Transportation Corridors may include treatments such as signage, pavement markings, traffic calming, and traffic diversion to prioritize bicycles and make the facility comfortable for people of all ages and abilities. **Figure 5** displays bicycle facility types, noting which are considered AAA.

Figure 5: Bicycle Facility Types



Walking is the most universal mode of transportation as every trip starts and ends with walking. AAA sidewalk facilities can help make walking a safe, convenient, and comfortable experience for people of all ages and abilities. AAA sidewalk facilities are typically physically separated, have a clear width to allow for more than one person walking to pass one another, firm, smooth and even surfaces, and provide a continuous and direct route between destinations. **Figure 6** illustrates that AAA sidewalk facilities include off-street pathways, enhanced separated sidewalks and separated sidewalks. Non-separated sidewalks and walkable shoulders can make up the supporting walking facilities to the AAA network, supporting more people in walking to and from their destinations.

Figure 6: AAA Sidewalk Facilities
(Source: BC Active Transportation Design Guide)



In line with best practices, the ATNP proposed a variety of AAA active transportation facilities. **Figure 7** outlines the five proposed facility types in the proposed active transportation network.

Figure 7: Proposed Facility Types



- **Sidewalks** – proposed sidewalks are continuous, concrete sidewalks that support pedestrians (including people that use mobility aids) to walk comfortably and safely throughout Golden’s sidewalk network. They can be unbuffered, located directly adjacent to the roadway or separated, where the sidewalk is buffered from the roadway by a grassy boulevard and/or swale.
 - Sidewalk Width: 1.8 metre (desirable) | 1.5 metre (minimum)
 - Buffer width can range depending on desired use
- **Multi-use Path** – proposed multi-use pathways are shared facilities for bicycles and pedestrians. Multi-use pathways will likely be paved when adjacent to a roadway and can remain unpaved when located within parks and green space.
 - Multi-use Path Width: 3.0 metre (desirable) | 2.7 metre (minimum) | 2.4 metre (absolute minimum for short segments at pinch points)
- **Trails** – proposed trails are unpaved shared facilities for bicycles and pedestrians. Trails connect greenspace and key destinations within the Town.
 - Trail Width: 2.7 metres (desirable) | 2.4 metres (minimum) | 1.8 metres (constrained absolute minimum)
- **Active Transportation Corridor** - Proposed active transportation corridors will accommodate people walking, rolling, and bicycling. People walking and bicycling can share the road with vehicles on low volume and low speed streets. Some traffic calming may be implemented to ensure slower vehicle speeds and the Town may consider installing sidewalks for pedestrians. Additionally, a multi-use pathway, painted bicycle lanes, or protected bicycle lanes could also be considered if traffic speeds, and volumes are too high for a shared facility.

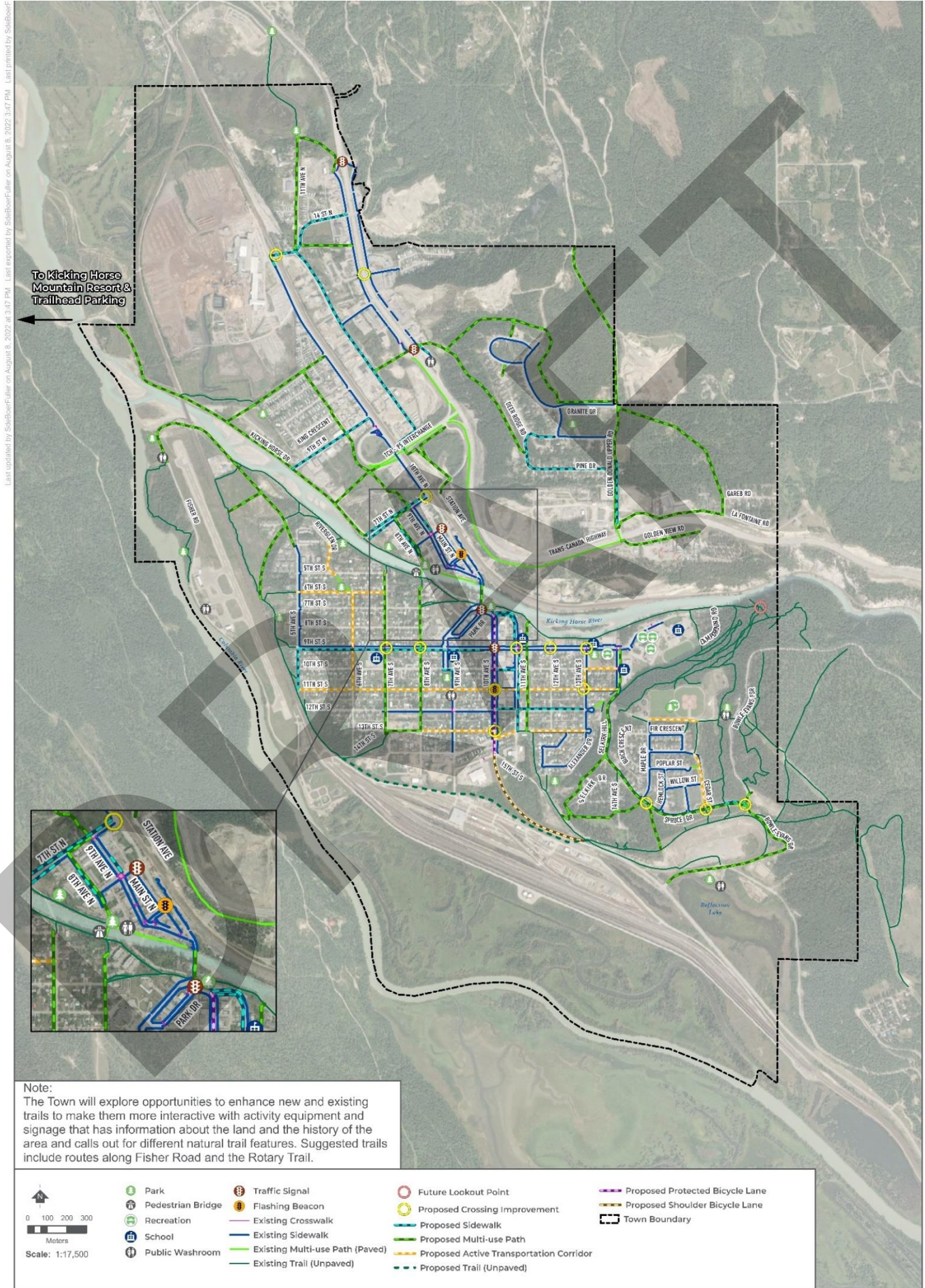
- **Crossing Improvements** – Proposed crossing improvements are intended to enhance the safety, access, and comfort for pedestrians and cyclists at intersections as more active transportation infrastructure is installed. Crossing improvements could include crosswalks, curb extensions, or push buttons to activate rapid flashing beacons or signals. Additional study will be required to identify the appropriate treatment at the locations identified as crossing improvements.

Additionally, active transportation facilities are proposed on 10th Avenue S. While this corridor is under the Ministry of Transportation of Infrastructure’s jurisdiction, there is a desire to provide a continuous connection to the bridge crossing and the cycling facilities being implemented as part of the bridge replacement project. Between the bridge and 15th Street S, the recommended facility type would be uni-directional **protected bicycle lanes**. The bicycle lanes could be introduced first as painted lanes and transition to protected bicycle lanes over time. South of 15th Street S a painted **bicycle lane or bicycle accessible shoulders** would likely be appropriate based on motor vehicle volumes.

It is important to note that the ATNP is intended to be a guiding document. For the proposed active transportation network there is some level of flexibility regarding the specific corridors and the facility types that are recommended, and the Town will use their judgement and technical understanding to determine the preferred routes and facility types. More information about the approach out implementation is outlined in **Section 4.0**.

In addition to providing facilities that are considered safer and more comfortable for people of all ages and abilities, the proposed active transportation network is intended to provide connections to key destinations in the community, including schools, parks, by providing direct connections active transportation can become a more convenient transportation choice.

Figure 8: Proposed Active Transportation Network



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Action 2: Consider the impact of new mobility technologies on the active transportation network and facility design

New mobility technologies are evolving at a rapid pace, and uptake is changing the way residents and visitors interface with the transportation network. Technologies such as electric bikes and scooters can change the way people travel within in their community and opens active transportation to those who may not have felt bicycling or active transportation was a viable travel option. There are important design and regulatory considerations as new mobility technologies become more common. For example, recognizing that the operating envelopes and speeds of new mobility technologies may impact facility design and use (e.g., facility width and the need for users to be separated) are important considerations.

The Town can proactively consider the impacts of new devices and modes on its active transportation network, integrating and accommodating supporting facilities such as charging stations and end-of-trip facilities, and exploring new and innovative ways of introducing shared mobility to Golden. This action also recognizes the importance of prioritizing users with accessibility needs and ensure designs address the operating space required and speed of users with mobility aids.

Action 3: Incorporate design best practices from the B.C. Active Transportation Design Guide into the Town's Subdivision and Development Servicing Bylaw

Identifying opportunities to integrate active transportation into existing municipal bylaws, policies, plans, and projects will ensure effective application of the ATNP, and efficient use of the Town's financial resources. At a time when future growth is projected, the Town can align AAA designs and best practices with future development, ensuring that new growth facilitates active transportation.

This can be done by review and updating the Golden Subdivision and Development Servicing Bylaw to include cross sections and incorporating design best practices where possible and appropriate to the local context and ensuring that projects that implement new, or upgrade existing, active transportation infrastructure aim to meet current best practice in design.

Action 4: Look to complete network connections through property acquisitions

To create connections outlined in the long-term network, some property will need to be acquired by the Town. Some of these connections are already used by residents and visitors of the Town and formalizing them allows the Town to upgrade these facilities to reflect design best practices. Property acquisition also allows the Town to build wider facilities or create new connections for the network.

Planning and Partners

Planning and Partners is a core strategic area that recognizes that the Town can deepen and broaden its active transportation network with the support of local, regional, and provincial partners. By working strategically, the Town can implement aspects of the ATNP simultaneously with other plans, policies, and strategies, as well as work towards facilitating active transportation outside of Town limits. Linking active transportation to other initiatives and developing supporting policy and funding mechanisms will support the Town in realizing its goals and making active transportation a comfortable, easy experience for everyone.

Action 5: Ensure all new community plans, projects, and developments integrate with the active transportation network.

Identifying opportunities to streamline the implementation of active transportation through development and tying active transportation improvements to other plans and projects will support the Town in stretching its financial resources, creating a bigger impact with less budget. The Town can create ways, such as check lists and criteria, that can support staff in reviewing development applications.

Action 6: Work with the Province of British Columbia's Resort Municipality Initiative (RMI) program and funds to implement active transportation infrastructure that meet the goals of the Resort Development Strategy (RDS).

The Town of Golden has unique needs and opportunities as a resort municipality. The Town has an opportunity to advance active transportation infrastructure that supports the goals of the RDS, while also accessing funds through the RMI to do so. While the current RDS does seek to encourage more walking and exploring of the community on foot through the Pedestrian Project, future iterations of the strategy could include projects that incorporate bicycling infrastructure and encourage the use of bicycles by tourists.

The **Pedestrian Project**, identified in the Resort Development Strategy 2019-2022, is focused on encouraging more walking and exploring of the community on foot by improving safety through installation of pathway lighting bollards and improving wayfinding.

Action 7: Create a Future Alternative Transportation Infrastructure Reserve Fund

The Town can continue to levy funds from developers through a variety of means such as Development Cost Charges, density bonuses, or parking. By designating this funding to be spent on active transportation infrastructure, the Town can raise funds to provide transportation infrastructure that supports walking, bicycling, public transit, or other alternative forms of transportation. Municipalities across the province have had great success in raising funds for projects desired by the community that would not otherwise be implemented through development.

Action 8: Work with regional partners to provide well-integrated active transportation connections to nearby communities and regional trails.

Golden and its surrounding natural landscapes are a key destination for both residents and visitors. Creating active transportation connections to nearby communities and regional destinations is important to facilitate more active transportation. The Town should work with local First Nation communities and regional partners to ensure that all users can experience a seamless connection to their destinations, regardless of it being outside of Town boundaries. Additionally, continuing to strengthen the relationship with the Ministry of Transportation and Infrastructure to ensure active transportation infrastructure is considered as part of all new projects and upgrades.

Safety

Safety is a core strategic area that is integral to a thriving active transportation network. To ensure the Town's active transportation network is safe, there are several steps that can be taken, including safety reviews, pilot programs, and traffic calming infrastructure. Community input is also important to understanding where issues and opportunities exist and allows the Town to focus its efforts on locations of concern. The following actions aim to build and maintain an active transportation network that is safe, comfortable and supports users of all ages and abilities.

Action 9: Improve safety along active transportation routes by considering visibility, sightlines, and access where appropriate.

Both real and perceived safety are important factors that influence whether people choose to use active transportation. Active transportation users are considered 'vulnerable road users', as they are subject to higher risk of injury from traffic collisions than people driving or riding transit. Personal safety concerns arising from insufficient lighting, visibility or poor design of public spaces can also deter people from using active transportation. The Town can develop processes to review the transportation network at regular intervals to understand issues and opportunities, and improve the experience of walking, rolling, and bicycling. These processes include (but are not limited to) conducting safety reviews at hot spot locations or along corridors and implementing the

recommendations, reviewing, and upgrading crossing treatments, and reviewing signal timing and pedestrian crossing times.

Action 10: Explore the opportunity to reduce speed limits as per Section 146 of the Motor Vehicle Act, in conjunction with traffic calming and traffic diversion.

The provincial government recently granted municipalities the ability to reduce posted speed limits on municipal roads under the Motor Vehicle Act (MVA) as they deem appropriate. There is a default 50 km/h speed limit unless there is a bylaw or signs directing the rate of speed is otherwise. As lower traffic speeds are associated with more comfortable and safe active transportation, the Town can explore the reduction of speeds and traffic calming where appropriate. This can be done through implementing temporary or permanent traffic calming treatments, as identified in the Traffic Calming Toolkit (**Appendix G**) from the Golden Transportation Plan (GTP). Or considering locations that might be appropriate locations to reduce speed limits, this could also include a community-wide reduction in the posted speed limit.

Theme 2: Enhancing the Experience of Walking, Rolling, and Bicycling

The **Enhancing the Experience of Walking, Rolling, and Bicycling** theme considers all potential users and designing the network with them in mind to make the active transportation network in Golden convenient and accessible for everyone. There are three focus areas under enhancing the experience including access and equity, maintenance, and parking and amenities.

Access and equity

Access and equity are important to consider in all contexts to ensure that all members of the community can meet their everyday needs. It is critical to ensure that community infrastructure is built or improved to follow best practices in accessibility aiming to remove barriers to walking, bicycling, and rolling. To understand barriers and the unique needs of all community members, it's important that extra effort is made to engage equity-seeking groups as part of the planning and design process. The following actions aim to make Golden's active transportation network more inclusive and accessible for all.

Action 11: Apply an intersectional, equity-focused lens to the planning, design, and implementation of all active transportation facilities, amenities, and programs to support equity-seeking groups.

The Town of Golden is a diverse community with a wide range of needs. The Town can take an intersectional, equity-focused lens to ensure that the needs of all community members are met. This means being inclusive of – and prioritizing – people of all ages, abilities, backgrounds, and identities, especially equity-seeking populations. This can be done in several ways including, conducting targeted communication and engagement regarding active transportation projects

with equity-seeking groups to understand their unique needs and issues. Working to ensure new and improved infrastructure incorporates universal design principles to create a built environment that is accessible to people of all ages and abilities, regardless of any type of physical or cognitive impairment (ex. impairments to mobility, vision, hearing, comprehension, and strength and dexterity).

Additionally, after a project is implemented, the Town can monitor and check-in with equity-seeking groups to make sure the project is having the desired effect and that the design has not created unintended negative consequences for any group.

Action 12: Create opportunities to work with the Ktunaxa and Secwepemc Nations as well as the Columbia Valley Métis on the design and implementation of the active transportation network to continue to advance reconciliation and listen to the voices of Indigenous People in our community.

Golden sits on the traditional unceded territory of the Ktunaxa and Secwépemc People and is home to the Métis Nation Columbia River Society. The Town recognizes the importance of learning about these communities, as well as their perspective. The Town can work with Indigenous communities on the design and implementation of the active transportation network to ensure it meets their needs and fosters a relationship between the communities. This can be done by creating opportunities for input into the connections to First Nations communities, destinations, and sites of cultural significance.

Maintenance

While the installation of new infrastructure to promote and encourage active transportation is often seen as a top priority, ongoing rehabilitation and maintenance of existing and new infrastructure needs to be an equally important focus. For people walking, rolling, and cycling poorly maintained infrastructure, the presence of snow and ice, and inaccessible infrastructure can make it more difficult and less desirable to walk or cycle. Maintenance needs to be considered at all stages of the planning and the design process. The Town has existing policies and procedures for winter maintenance and sidewalk and pathway inspection and repairs that is currently working well, though maintenance continues to be identified as an important priority by community members and survey respondents. The following actions aim to keep active transportation facilities functional and usable throughout all seasons, which ensures that facilities are accessible for all throughout the year.

Action 13: Complete an Active Transportation Asset Management Plan and update the Plan at regularly scheduled intervals.

As part of the Town's larger asset management planning program, conducting an Asset Management Plan to taking stock of the Town's infrastructure is important for planning for capital

investments and maintenance requirements. Including active transportation infrastructure in that plan will help to ensure that the active transportation network remains in a state of good

Action 14: Design active transportation facilities to provide adequate drainage, snow storage and removal, and sand and gravel removal.

To ensure the active transportation network can be used year-round, it is critical design and plan for drainage and snow removal/storage, ensuring that active transportation infrastructure can be accessed by maintenance vehicles. This can be done by following guidance provided in the B.C. Active Transportation Design Guide specific to maintenance considerations including facility width and appropriate maintenance techniques for conditions in a winter community.

Action 15: Review and update current maintenance and operating policies and procedures for active transportation infrastructure, including sidewalks, multi-use trails, and active transportation corridors as needed (Snow Clearing and Sanding Policy and the Sidewalk and Pathway Inspection and Maintenance Policy).

Prioritizing active transportation infrastructure for snow clearing and sanding can support active transportation in winter months, making travel safe and convenient for those who would prefer or need to walk, roll, or bicycle. As more active transportation infrastructure is implemented the Town may consider updating its procedures to ensure on-street and off-street active transportation infrastructure is cleared and maintained year-round in a timely manner. This can be done by adding an active transportation route priority list to the policy and outlining the order in which roads and active transportation facilities are cleared.

Action 16: As new infrastructure is implemented, ensure the Town has appropriately sized equipment, Personnel, and operating funding to maintain existing and future active transportation infrastructure.

With the planned growth of the active transportation network, the Town needs to ensure that it has the correct equipment, personnel resources, and that funding is allocated within the budget to maintain the existing and proposed active transportation infrastructure. The Town will review current maintenance funding and equipment levels required to maintain all planned and existing types of active transportation infrastructure. As more walking and bicycling facilities are installed, ensure the amount of funding available and personnel resources grows in accordance with the amount of infrastructure being added to the network.

Parking and amenities

In addition to building infrastructure, it is also important to provide supporting amenities that make walking, cycling, and other forms of active transportation more viable and enjoyable as a transportation option. Features that can increase the ease and appeal of active transportation include secure and convenient bicycle parking, end-of-trip facilities, ebike charging stations,

pedestrian amenities at bus stops and streetscape enhancements. The following actions ensure that the active transportation network has amenities that make walking, rolling, and bicycling a more pleasant and enjoyable experience.

Action 17: Support the installation of public amenities such as seating, landscaping, and public art to enhance how people experience walking, rolling, and cycling in Golden

Public spaces that are welcoming and interesting invite residents and visitors to enjoy their environment by foot instead of car. With places to rest and interesting destinations to visit, walking, rolling, and bicycling can become a more accessible and enjoyable experience for all. The Town can develop guidelines for the installation of public amenities and public art through capital projects and development. This will help ensure that a plan is in place to implement and maintain amenities rather than using a piecemeal, case by case approach. The guide can include suggestions for partnering with local artists and celebrating Indigenous Peoples. Designated an annual budget for installation and maintenance of public amenities will also help support this action.

Action 18: Support the installation of more short- and long-term bicycle parking and end-of-trip facilities throughout the community.

Ensuring quality and secure bicycle parking is provided at key destinations and as part of new developments is critical to make cycling a practical option. Updates to the Town's Zoning Bylaw will help to ensure that secure bicycle parking is provided based on best practices and can accommodate various types of bicycles, including unconventionally sized bikes and charging locations for ebikes etc. Additionally, the Town can conduct a detailed review of existing bicycle parking facilities to assess existing inventory (supply and location) and demand. Building on this inventory the Town, with support from businesses and other partners, can develop a program to install permanent and seasonal bicycle parking options within the downtown and at other high activity locations as need grows.

Action 19: Develop a central hub for active transportation with a network map and information kiosk, protected bicycle parking, and other amenities in the downtown.

Downtown Golden is a destination where residents and tourists gather and travel through. Providing information, maps, protected parking, and other amenities can signal to active transportation users that they are welcome and invited in the Town, as well as provide a central location where active transportation users can start, finish, or stop over on their trip. The Town can identify a location for a central hub for active transportation. Install an information kiosk that could provide amenities such as, covered bicycle parking, a bicycle repair station, an ebike charging station, maps, and information about the on-street and off-street bicycling network, as well as other destinations within the Town and region, including mountain bike trails. There may also be opportunities to implement other amenities at other high demand locations.

Action 20: Consider opportunities to expand dynamic curb-space management to create streets that accommodate a variety of uses.

Forward-looking streets consider new mobilities and technologies as well as prioritizing people over cars. The Town is currently supportive of sidewalk patios and designated food truck areas, and can build on this to create opportunities for people-first areas through road space reallocation for wider sidewalks, future modes, and bicycle parking. This can be done by consulting with downtown businesses and stakeholders to understand the needs and desired use of curb space. Additionally, the Town can continue to explore opportunities for reallocating road space and consider flexible and dynamic use of the street on streets like 9 Avenue N, 8 Avenue N, etc.

Theme 3: Encouraging More Walking, Rolling, and Bicycling

The **Encouraging more Walking, Rolling, and Bicycling** theme includes other measures that can help to promote, encourage, and incentivize active transportation trips beyond infrastructure. Actions under this theme focus on making it easier to navigate the Town by foot and bicycle through the installation of signage to key destinations / trails, supporting events that promote active transportation, and education opportunities.

Wayfinding

While most residents know how to travel through the Town by car, it may not be obvious which routes are the best for people walking or cycling. For both experienced and inexperienced active transportation users, signage and pavement markings can help users find the best routes that match their abilities and comfort levels. They can also help people find new routes as they become more confident. Signage and pavement markings can also highlight to drivers and other road users where they should expect to see greater concentrations of bicyclists and pedestrians, which can help to educate drivers and other road users to improve safety. The following actions create an active transportation system that is intuitive, direct, and easy to navigate.

Action 21: Conduct a Wayfinding Signage Review and look for opportunities to add signage on new and existing facilities (directional, informational, and regulatory signage).

The Town can review its current signage and trail wayfinding and add new signs that support pedestrians and cyclists in navigating the active transportation network. Signage can also help to warn drivers of active transportation routes or give direction to share the road. This can be done by documenting areas where signage is inconsistent, redundant, or needed and prioritize the addition of necessary signage.

Using this information, the Town can develop and implement a Wayfinding Signage Strategy to be implemented on existing routes and as new active transportation infrastructure is built. The Town will also explore opportunities to enhance new and existing trails



to make them more interactive with activity equipment and signage that has information about the land and the history of the area and calls out for different natural trail features. Suggested trails include routes along Fisher Road and the Rotary Trail, to name a few.

The Town can also consider working with partners to develop a regional approach to signage and wayfinding.

Action 22: Work with Tourism Golden and Golden Cycling Club to update the Bike Trail Map to include new facilities and infrastructure.

The Town can work with Tourism Golden and the Golden Cycling Club to update its maps to ensure that the organizations work together to realize its goals and share information as appropriate.

Education and Promotion

Supplementary to infrastructure, Education and Promotion initiatives are important and cost-effective measures to enable Golden residents and visitors to feel safer and more comfortable using active transportation. Education initiatives can include developing materials and tools that educate all road users on how to use cycling routes as well as supporting programs that teach skills and awareness of road safety for all road users. Promotion initiatives can include sharing news about new infrastructure, the benefits of active transportation and hosting events to promote active transportation. The following actions are intended to build awareness about active transportation in Golden, as well as create a culture through encouragement.

Action 23: Support the development of a regional bicycle tourism initiative.

Promoting bicycling from a tourism perspective can provide a variety of benefits to Golden's local economy. Bicycle tourism is also an important part of *Move. Commute. Connect.: B.C.'s Active Transportation Strategy*. Many communities have developed regional bicycle tourism initiatives, and with the improvements to the Trans Canada Highway and Golden's reputation as a recreational destination, the Town is well-positioned to explore partnerships to create a regional bicycle tourism initiative.

The Town can work with Tourism Golden, the Regional District, neighbouring municipalities, and First Nation communities to develop a regional bicycling tourism initiative, promoting hiking, bicycling and other forms of active transportation in Golden.

Action 24: Work with partners to provide bicycle education and skills training for children, youth, adults, and seniors, promoting active travel to work, school, and play.

School travel planning, bicycling education or road safety skills training are important for ensuring community members know how to safely navigate the Town's transportation network. These

initiatives provide information for all road users and may contribute to increased safety and respect among all parties. The Town can support initiatives that encourage safe and active travel for a variety of ages and stages of life, as well as incentivizing people to continue to use active transportation past their training.

This can be done by supporting programs such as active and safe routes to school, bicycle education and skills training for students in elementary school, and targeted community outreach programs for older adults. Additionally, the Town can partner with organizations in the development of road safety awareness and education campaigns for all road users.

Action 25: Develop an active transportation data collection and monitoring program, including a network of counters on bicycling routes and trails to monitor activity.

As the Town begins implementing the strategies and actions of the ATNP, a data collection and monitoring program should be developed to measure and communicate progress towards achieving the vision and goals. Bicycle and pedestrian counters, as well as in-person counts, are ways in which the Town can track active transportation users throughout the year and report back to community members and stakeholders.

Action 26 Work with Tourism Golden to promote the use of active transportation for tourism and seasonal employees.

In addition to attracting tourists to visit Golden, the Town can work with Tourism Golden to encourage local businesses to provide more sustainable transportation options for their customers and employees. This can be done by providing incentives and campaigns to encourage active transportation to and from work such as contests, giveaways, discounts, or street closure events. Additionally, supporting businesses that provide walking and cycling tours or offer discounts to those that travel by active modes can help encourage more trips made by active transportation.

4.0 IMPLEMENTATION FRAMEWORK

The ATNP outlines several short- and long-term projects and policies to enhance and encourage walking, rolling, and bicycling in Golden. These actions will require significant investment and coordination between municipal departments, other levels of government, and external agencies and stakeholders. An Implementation Framework has been created to facilitate this process by identifying priorities, timeframes, and order-of-magnitude cost estimates for each capital project. The sections below provide more information on project prioritization, costs, and funding strategies.

There are a few key considerations for the implementation of the ATNP:

- **The strategies and actions outlined in the Plan lay the groundwork for implementation, but ongoing commitment is required.** To see the strategies and actions achieved, additional capital and operational investments and resources (including labour and personnel) will be required. This includes investments in new infrastructure, upgrades to existing infrastructure, ongoing maintenance of existing and new facilities, resources for development of new standards and policies, funding for new programming and public education, and staff resources. Achieving the vision and goals will require the ongoing support of Golden and its partners, working with developers, and looking for external grant and funding opportunities.
- **The ATNP is intended to be a flexible document to help guide what comes next.** There is some level of flexibility in the proposed active transportation network, particularly regarding the specific corridors and facility types that are recommended. The Plan presents recommendations and suggestions based on the engagement process and technical analysis; however, the Town may determine that a different facility type or route is more appropriate based on planned development, land use, or upcoming infrastructure projects.
- **Additional work may be required.** Many of the initiatives in the ATNP require more detailed input and technical work. Golden will need to work closely with partners, residents, and stakeholder groups to move forward with priorities in the ATNP.

4.1 Priority Actions

Strategies for implementing each action identified in the ATNP are outlined in **Appendix B**. The implementation plan outlines the following:

- **Priority and Timeframe:** Each action is identified as either short term/high priority (within 8 years), medium term (8-20 years), or long term (20 years and beyond). Many actions will be implemented on an ongoing basis. As noted above, these priorities may change over time and should be adaptable to maximize efficiencies and funding opportunities as they arise.
- **Method of Implementation:** This column identifies how each action will be implemented: as a capital project, through ongoing operations and maintenance, or as a policy or programming initiative.
- **Who is Involved:** Each action has been assigned one or more leaders to act as ‘champions’ responsible for implementation. Many actions have identified the Town and a specific department as primarily responsible for these efforts, while some can be supported by external agencies or partners.

4.2 Network Prioritization

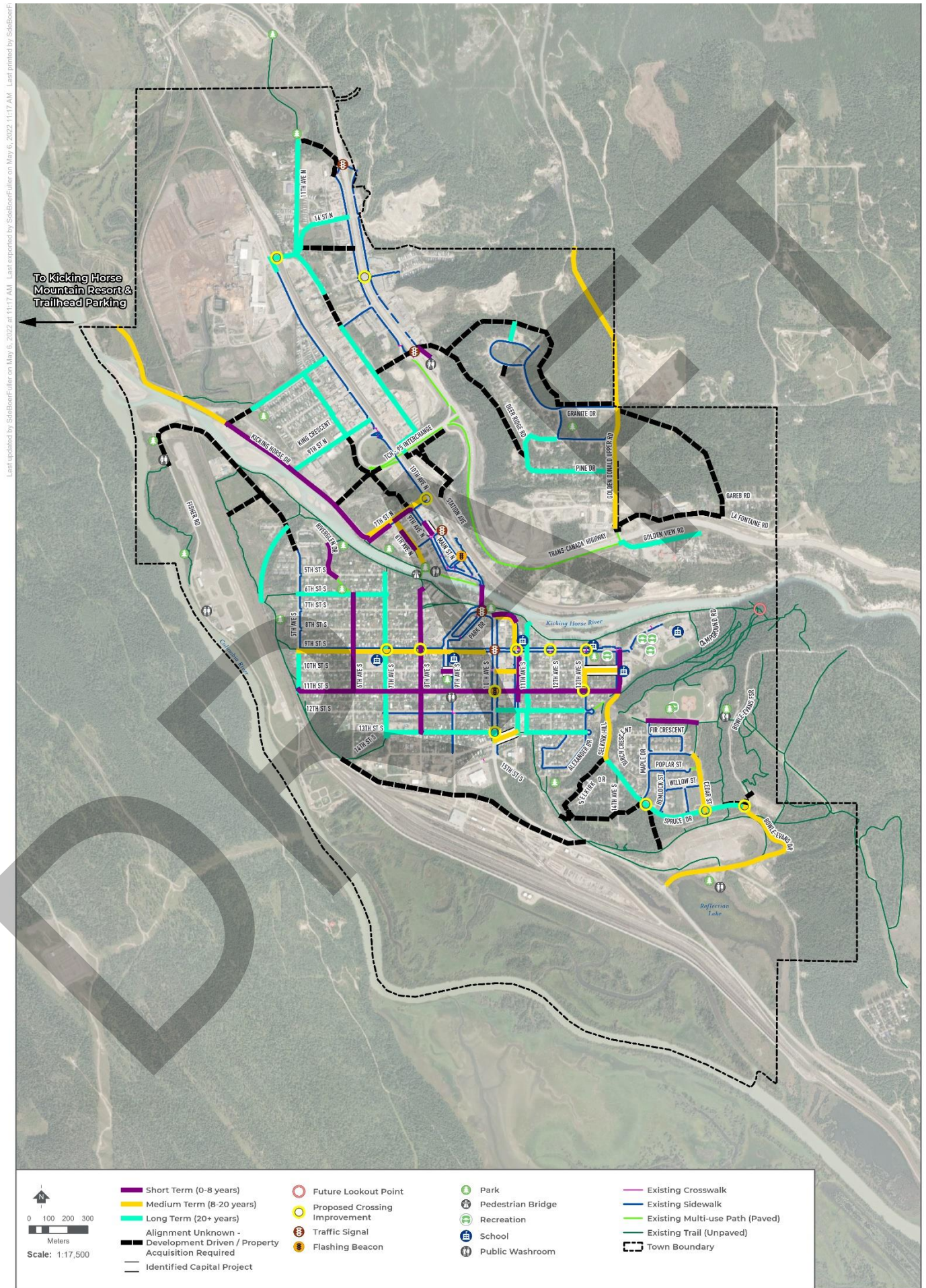
Priorities were identified for the active transportation network based on several factors, including:

- Building on the existing network of sidewalks and paths to fill in gaps in the network and provide continuous facilities.
- Connecting key destinations, including schools, parks, community facilities, and the Town Centre
- Applying input received through community engagement.
- Looking for opportunities to implement lower-cost ‘quick wins’ for rapid implementation.

Figure 9 shows the active transportation network priorities and **Figure 10** shows the intersection improvement priorities. Network segments and intersection improvements have been identified as short-term (implementation within 0-8 years), medium-term (8-20 years), and long-term (20 years and beyond). Certain segments have been highlighted as being implemented through development and/or will require land acquisition, as a result their alignment and timeline for implementation is less certain. A description of each proposed improvement projects are included in **Appendix C**. This information was provided during the phase two engagement for the project.

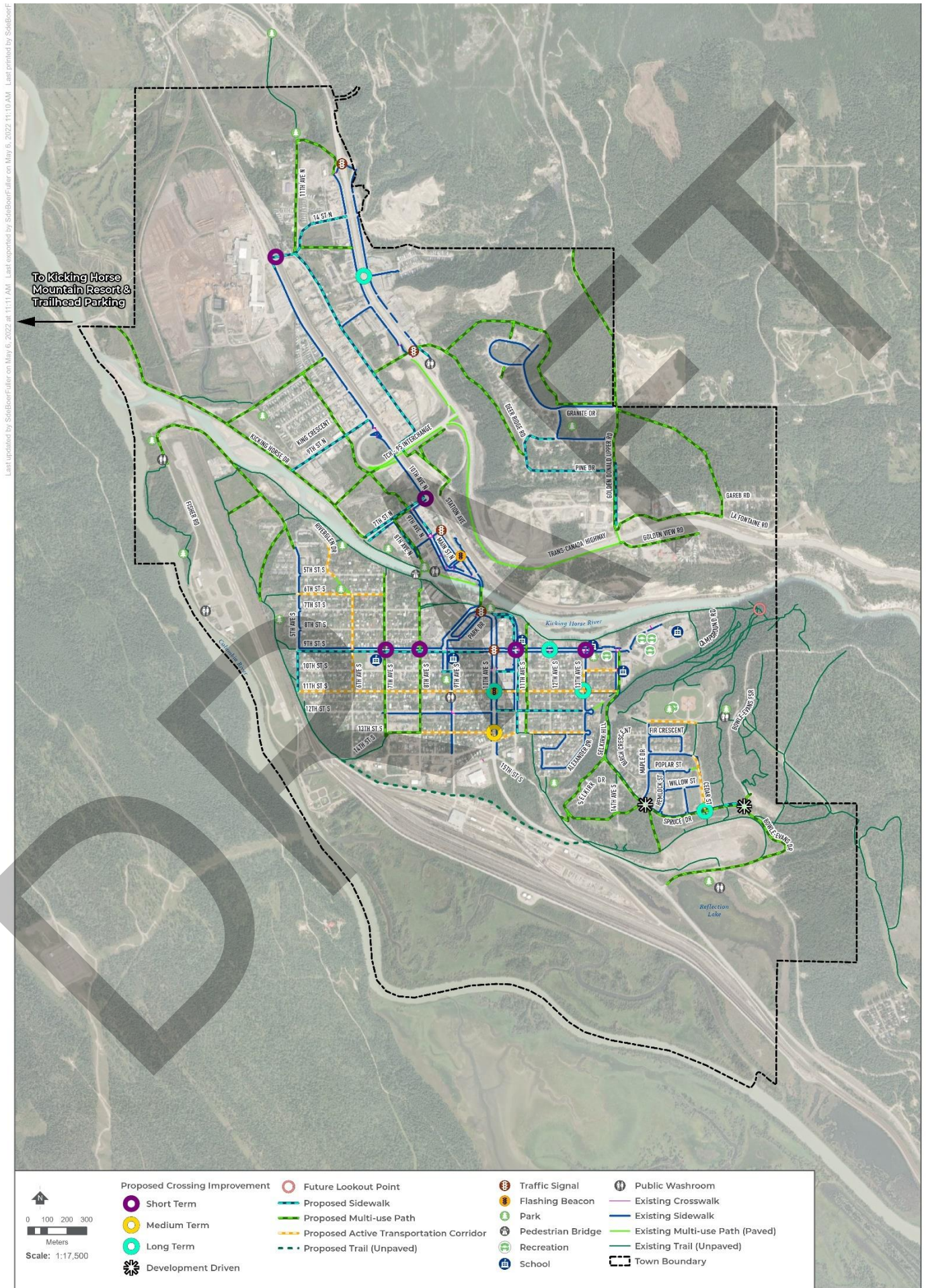
It is important to note that the ATNP is a flexible, working document. As noted above, the specific corridor, facility type, and level of priority may change over time as the Town grows and develops. For example, if an opportunity arises to implement an action or infrastructure project identified as a longer-term priority, such as through a redevelopment opportunity or other capital project, the Town should seek to maximize that opportunity. The Town will continually review the feasibility and desirability of each infrastructure project regarding changes to the overall transportation network and will adapt the network as required.

Figure 9: Network Improvement Priorities



Last updated by SiedboerFuller on May 6, 2022 at 11:17 AM. Last exported by SiedboerFuller on May 6, 2022 at 11:17 AM. Last printed by SiedboerFuller.

Figure 10: Intersection Improvement Priorities



Last updated by SotBoerfeller on May 6, 2022 at 11:11 AM. Last exported by SotBoerfeller on May 6, 2022 at 11:10 AM. Last printed by SotBoerfeller

4.3 Implementation Techniques and Strategies

As communities throughout North America and internationally implement their active transportation networks, they often face significant challenges technically, politically, and financially. Some of the challenges and questions that arise when implementing pedestrian networks include:

- Funding limitations (including operational) and capital resources can make implementing new infrastructure a challenge.
- Some residents and stakeholders may not be supportive of implementing new infrastructure.
- Standard active transportation infrastructure may not always be feasible, appropriate, or desirable in all contexts.



As a result, it can be important and helpful to find flexible alternative designs that still provide adequate user comfort, accessibility, and safety. These common challenges have resulted in communities looking for ways to implement facilities in a timely and cost-effective manner through innovative techniques and strategies. This includes:

- **Demonstration Projects** are typically considered short term (one or multi-day) temporary installations that help to show new opportunities to enhance a street for active transportation. They are a great way to engage with the public and illustrate the impacts of a potential project. They may include but are not limited to demonstrations of protected pathways adjacent to a roadway, improved crossings, plazas and woonerf or shared streets.
- **Pilot Projects** often refer to a project that is used as a test case to evaluate factors such as feasibility, cost, safety and improve upon the design before implementing the full-scale project or making it a permanent feature.
- **Interim Designs** are permanent features that have been implemented quickly usually with low-cost materials that can be adjusted and/or replaced easily. This allows for design flexibility and opportunities to adjust as needed. An interim design can be used to build more infrastructure at a lower cost.
- **Permanent Installations** require more time for planning, public engagement, and construction time. They include higher cost materials that are less flexible and intended for long-term durability.

Pilot projects and interim designs offer ways to make significant strides in network implementation while respecting financial constraints. These strategies include the use of low-cost materials such as adjustable curbs, ongoing monitoring of project success and the understanding that the project can be changed if it is failing to meet the intended needs. Some of the benefits of interim design options include:

- Faster implementation and more flexible design;
- Ability to make design changes based on feedback received from users and other stakeholders;
- If the project is introduced as a pilot project, it can ease tensions of those with opposition as they know the project is not being forced upon them; and
- Relatively low financial risk if the facility does not perform well or reverted to its previous design.

4.4 Cost Estimates

The unit cost assumptions for implementing active transportation infrastructure are shown in **Table 1**, which represents typical unit costs and recent construction pricing in other similar sized communities in British Columbia. The cost estimates are based on retrofitting an existing right-of-way with an active transportation facility or crossing improvement or installing a new multi-use

pathway on an existing City-owned property, with minimal additional surface preparation and grading required. The unit costs recognize that sidewalk and pathway installation may require curb, gutter, and drainage in some contexts. Any required land acquisition, structures, traffic control devices, burying hydro lines, and further engineering studies have not been included in the cost.

Projects such as intersection upgrades and grade separated crossings require a more detailed review to determine the cost for construction. As a result, the cost estimates for these projects have not been included.

Table 1: Unit Costs (based on 2021 construction costs)

TO BE CONFIRMED ALONG WITH GOLDEN TRANSPORTATION PLAN

4.5 Funding Strategies

In order to maximize value and benefit, the ATNP identifies potential funding strategies and sources that the Town may consider implementing the active transportation network, amenities, and policy and development improvements. The Town should regularly check with all levels of government to keep up to date on current funding opportunities and should actively pursue all available sources of funding.

Note: as funding opportunities change regularly, the information in this section is subject to change.

Local

The Town should incorporate the recommendations from the ATNP into its short-, medium-, and long-term budgeting plans to ensure that the active transportation network is accounted for in the capital planning process. To accommodate this, the Town may seek changes to its capital budget to fund the implementation over the medium- and long-term. The Town should also seek to integrate transportation improvements with other capital projects, such as road renewals and utility projects.

The Town has a Development Cost Charges (DCC) bylaw that should be updated to include projects identified in the ATNP. It should be emphasized that DCC eligible projects should not only include street network projects but can also include active transportation and transit projects that benefit new growth in the community.

An important component of the implementation of the ATNP will be the Town's ability to leverage transportation investments during planning of new development projects. Some ways in which transportation investments can be leveraged through developers include:

- Voluntary public realm improvements;
- Community amenity contributions;
- Density bonusing contributions;
- Funding in lieu of parking; and
- Providing high quality bicycle parking facilities.

Provincial

The Provincial Government administers the **Active Transportation Infrastructure Grant** program (previously known as BikeBC) which promotes new, safe, and high-quality active transportation infrastructure through cost-sharing with local governments. Funded projects promote active transportation to work, school, or errands. Funded projects can also generate tourism-related traffic based on their proximity to amenities and points of interest for tourists and through linkages to other communities. To ensure maximum success at obtaining grant funding, the Town should have grant-ready concepts pre-developed for application.

The Province provides cost-share funding of up to \$500,000 per project. Funding is offered based on applicant's community profile. Indigenous governments or partnership between local government(s) and an Indigenous government may apply for up to 80% of total projects. Municipal or regional governments may apply up to 70% of total eligible project costs depending on the community's population size.

Union of BC Municipalities' **Community Works Fund** is one of three funding streams of the Renewed Gas Tax Agreement between Canada, British Columbia, and the Union of BC Municipalities. The fund provides predictable, long-term, and stable funding to local governments for investment in infrastructure and capacity building projects. Project examples include public transit, active transportation, parks, trails, bicycle facilities, cultural infrastructure, and long-term infrastructure plans. Funding is delivered twice annually to local governments, with the amount of funding determined by a per capital formula.

ICBC provides funding for road improvements, including pedestrian and bicycle infrastructure, particularly where these have the potential to reduce crashes, improve safety, and reduce claims costs to ICBC. Funding is available through ICBC's Road Improvement Program. Other ICBC programs include the Speed Watch Program (through the Community Policing Centres), Speed and Intersection Safety Program, Counter Attack, Operation Red Nose and Road Sense Speaker Program for Schools. Funding is available annually, with the application deadline typically in February.

Federal

Green Municipal Funds are managed by the Federation of Canadian Municipalities, with a total allocation of \$550 million. This fund is intended to support municipal government efforts to reduce pollution, reduce greenhouse gas emissions and improve quality of life. The expectation is that knowledge and experience gained in best practices and innovative environmental projects will be applied to national infrastructure projects.

Infrastructure Canada manages several programs that provide funding for environmental and local transportation infrastructure projects in municipalities across Canada. Typically, the federal government contributes one-third of the cost of municipal infrastructure projects. Provincial and municipal governments contribute the remaining funds, and in some instances, there may be private sector investment as well. In 2022, the Federal Government announced and the **National Active Transportation Grant** program, which will fund \$400 million in active transportation across Canada over the next five years.

APPENDIX A:
POLICY AND PLANNING
REVIEW



POLICY AND PLANNING REVIEW

TOWN OF GOLDEN

Council's Strategic Priorities (2019-2022)

The Town's Council established strategic priorities outlining the current Council's priorities which include taking inventory of existing land through a Land Strategy Assessment, securing property for the Highway 95 Bridge Project, mitigate impacts from the Highway 1 Canyon Project, determine the future viability of the airport, and establish an Asset Management System.

Council's priorities are important to the Active Transportation Network Plan in understanding how interconnected Golden is with Highway 1, and construction on the corridor influences the ability of people – especially tourists – to travel to and from Golden. The Highway 95 Bridge Project priority demonstrates the importance of the river crossing and that it is a core component of Golden's local transportation network.

Resort Development Strategy (2019-2022)

The Province of British Columbia launched the Resort Municipality Initiative to help develop greener, healthier, more sustainable resort municipalities that attract more visitors to British Columbia's resort communities and entice them to stay longer. The Town of Golden signed a new strategy in 2019 to strive for the following goals:

1. Improve and enhance the built environment
2. Enhance cultural vibrancy and identity
3. Enhance key existing tourism product infrastructure
4. Diversify municipal tax revenue
5. Increase visitation and length of stay
6. Foster environmental responsibility and sustainability

The Active Transportation Network Plan will consider the importance of connections to and from tourist destinations and amenities to promote more sustainable transportation opportunities and use from visitors to Golden. Active transportation infrastructure is a key way to entice more tourists to Golden, as enjoying Golden's natural amenities is a complementary itinerary item for recreationalists.

Snow Clearing and Sanding Policy (2017)

Golden has a significant amount of annual snowfall with approximately 184 cm, serving as a catalyst for policy surrounding winter road, trail, and sidewalk maintenance. The policy aims to create an effective, efficient, and affordable way to clear snow, providing prioritization to hills, major streets, school routes, emergency routes and some public parking lots are cleared first to ensure public safety. Once the main routes are cleared, snow removal continues with Town owned parking areas, remaining residential streets, the airport, and remaining sidewalks and trails. There are special provisions to support the mobility of seniors and those who are mobility impaired. Intersections, pedestrian crossings, hills, and sidewalks get sanded first to ensure public safety.

The Active Transportation Network Plan will consider winter maintenance and snow clearing in recommending facility types, as well as considering how to best facilitate winter active transportation.

Sidewalk and Pathway Inspection and Maintenance Policy and Procedures (2016)

Coming into effect in 2016, the Sidewalk and Pathway Inspection and Maintenance Policy is intended to provide “inspection and priority-based repairs of pedestrian walkways through effective, efficient, and affordable operations within the context of available municipal resources to ensure all walkway assets are safe for use by the public”. The sidewalk and pathways in the Town are grouped into three categories:

- Type A: Commercial, Institutional and Stairs – inspected once annually in the spring after ground frost has ended.
- Type B: Residential - inspected once annually either in the spring after ground frost has ended or in the fall prior to the end of the local construction season and the onset of frost.
- Type C: As-developed Recreational Walkways and Trails - inspected once annually in the spring after ground frost has ended.

In addition to this planned annual inspection, if a defect, hazard is reported at any time by the public or staff, the location shall be inspected within three business days.

During the inspection, the inspector will identify the “Walkway Defect Classification and Response”. Defect classification includes:

- Level 1: Minor Defect, No Effect on Service – defect will be documented and reviewed again during the next regularly scheduled inspection.
- Level 2: Moderate Defect, Serviceable – defect shall be placed on a repair list and scheduled for repair according to available staffing and budgetary resources.
- Level 3: Major Defect, Not Serviceable, Priority Repair Required - defects classified as Level 3 shall be marked for public safety or cordoned off at the time of inspection to prevent

further use, and repaired within 7 regular business days following the inspection, weather permitting.

The Level associated with the defect is based on the type and size of the defect. Guidance is provided to the inspector as part of the procedure documentation.

Age Friendly Community Plan (2014)

The Town's Age Friendly Community Plan (AFCP) provides guidance on creating a community where older people can live active, socially engaged lives through policies, services and structures designed to support them. Age friendly communities do all of the following:

- Recognize the wide range of capacities and resources among older people
- Anticipate and respond flexibly to aging-related needs and preferences
- Respect decisions and lifestyle choices
- Protect those who are most vulnerable
- Promote inclusion and contribution in all areas of community life

Gaps and opportunities are detailed for each Dimension with concluding recommendations and priorities. There are several priorities that relate directly to the Transportation Plan:

- Prioritize improving sidewalk condition and availability
- Prioritize sidewalk snow and ice clearing
- Explore the potential for reintroducing a local transit service to the Town
- Support age-friendly active transportation facilities

The Active Transportation Network Plan will follow national and international best practices to create an AAA network that will align with the Age Friendly Community Plan.

Zoning Bylaw (2011)

The purpose of the Zoning Bylaw is to provide an effective system of land use regulation for the orderly, economic, and sustainable development and redevelopment within the Town of Golden. The bylaw is important for active transportation as it guides the overall direction of the Town and its specific neighbourhoods.

The Historic Downtown Commercial land use is intended to be small-scale commercial development that is pedestrian oriented and preserves the historic downtown. This is the only mention of pedestrian in the Zoning Bylaw.

The Zoning Bylaw does outline minimum bicycle parking requirements for certain land use types. The bylaw also provides requirements on the type of parking that is to be provided, including the type of racks, preferred location, and level of surveillance.

Community Active Transportation Workshop (2008)

In 2008, Golden held two active transportation workshops for Town staff and the public where participants rated Golden's walkability as being either "poor" or "very poor" and bikeability as "very poor." Participants praised the quality of the trail networks but expressed desire for better connections beyond and within Golden, especially between residential and commercial areas.

Official Community Plan (2008)

The vision of the Official Community Plan (OCP) is, "Golden provides the opportunity for all to live in a healthy, vibrant community." The OCP's goals centre around preserving and enhancing Golden's unique character, regional collaboration, social sustainability, economic sustainability, and environmental sustainability. The OCP notes that the Town and surrounding areas require additional tourism-related infrastructure to be able to meet the needs of the expected tourists. The OCP has specific chapters on transportation and sustainability that are relevant to the development of the Active Transportation Network Plan.

It is also important to note that through the OCP engagement process, active transportation was mentioned frequently. Many users cycled as their main mode of transportation, and residents desired bicycle paths, and preferred adding pedestrian walkways/underpasses over road improvements.

Golden's goal is to provide adequate transportation infrastructure and services that promote pleasant, safe pedestrian travel and other forms of alternative transportation methods as a primary means of movement and an important quality of life attribute.

The OCP notes that Golden has expressed commitment to ensuring that safety considerations hold paramount importance in land use and transportation planning by adopting of Safety Conscious Planning, which includes the following:

- separating travel modes such as bicycle, bus, and other vehicles;
- reducing the exposure of a crash by minimizing the need to travel by car;
- reducing operating speeds using techniques such as traffic calming;
- achieving compatibility between a road's use, and its form and function;
- providing for local access and mobility of through traffic; and

- accommodating pedestrians, cyclists and public transit on the transportation network and desired crossings.

To achieve this goal, Golden has outlined several objectives and policies. Those related to active transportation are listed below.

Objectives

- To promote downtown parking and safe and efficient pedestrian and vehicle movement to ensure that the downtown remains a vibrant commercial district while promoting Smart Growth planning principles by integrating transportation and land use decision making, including the exploration and adoption of alternative road standards, bicycle lanes, pedestrian movement and mixed-use, so that residents can work and shop close to home.
- To promote Golden as a transportation hub for rail, road, air and trail infrastructure.
- To develop supportive land use and transit policies, including pedestrian friendly streets, identification of appropriate transit routes and bus stops and transit friendly land use patterns.
- To encourage neighbourhood-scale mixed-use commercial nodes.
- To promote multi-modal transportation systems.
- To develop connectivity between existing sidewalks and trail systems to schools, parks and commercial areas including along the river, rail, and highway crossings.
- To create human scale development that encourages walking.
- To continue to promote the downtown as pedestrian friendly.
- To promote safe, efficient, and economical operation for all users of the existing and future road networks, including regional transportation links.

Policies

- Golden will establish criteria for identifying improvements to existing transportation links.
- The Town will ensure that appropriate transportation planning and design standards are met, including the exploration of Alternative Development Standards for colder climates.
- Future accessibility issues in and to the downtown will be studied to ensure that the downtown remains a vibrant commercial district.
- The Town will continue to promote Safety Conscious Planning Principles, including all modes of transportation such as vehicle, transit, pedestrian, and bike travel.

- The Town will explore the potential for, and location of, a transportation focal point or hub for rail, road, transit, cycle, and pedestrian movement.
- The Town will encourage VIA Rail to reinitiate a passenger friendly train station and stop in Golden.
- The Town will continue to promote Golden as a pedestrian friendly community in which pedestrian facilities are established and integrated with planning for transit service.
- Street lighting will be required to ensure that lighting is sufficient to not only illuminate an area, but also promote a feeling of safety without being polluting or intrusive.

As it relates to sustainability, Golden has developed two policies that support LEED applications which encourage and promote pedestrian and bicycle friendly transportation in terms of sidewalks and trails, provide sufficient green space and encourage higher densities to minimize urban sprawl.

Subdivision and Development Servicing Bylaw (2008)

The Subdivision and Development Servicing Bylaw's purpose is to establish standards for works and services which must be constructed and installed to service any subdivision or development of lands in the area within the municipal boundaries of the Town of Golden for the benefit of the community as a whole. The bylaw is particularly important for the future of active transportation infrastructure in Golden as the bylaw can require new developments to include AAA infrastructure that facilitates walking, rolling, and bicycling without having to retroactively construct these facilities.

The Subdivision and Development Servicing Bylaw does not include reference to bicycle lanes or on-street bicycle infrastructure.

The bylaw does require that in subdivisions where highways are provided, sidewalks and curbs and gutters will be provided. Sidewalk widths are noted as 2000mm (2.0 metres) for arterial roads and 1500mm (1.5 metres) for local and collector roads, and 1350 mm (1.35 metres) for cul-de-sacs and industrial roads. It is important to note that 1.8 metres is considered the desirable sidewalk width as recommended in the BC Active Transportation Design Guide. Sidewalk and shoulder width requirements are noted in **Table 1**.

Table A: Golden Subdivision and Development Servicing Bylaw

	Sidewalk Requirements	Shoulder Width	Sidewalk Requirements	Shoulder Width
Roadway Classification	Highway Standard 1 – These highway standards are required in new subdivisions and developments in all Service Level 1 areas delineated in Schedule A.		Highway Standard 2 – These highway standards are required in new subdivisions and developments in all Service Level 2 areas delineated in Schedule A.	
Arterial (4 lane undivided)	2.0 m both sides	Not req'd	Not req'd	2 m
Collector (2 lane)	1.5 m both sides	Not req'd	Not req'd	1.5 m
Local (2 lane)	1.5 m one side*	Not req'd	Not req'd	1.0 m
Cul-de-sac entrance	1.35 m one side*	Not req'd	Not req'd	1.0 m
Cul-de-sac terminus	1.35 m one side* (halfway around bulb)	-	Not req'd	-
Industrial (2 lane)	1.35 m one side	Not req'd	Not req'd	1.5 m
Lanes	Not req'd	Not req'd	Not req'd	1.5 m

** Developments in High Density Residential Zones shall be required to provide sidewalks on both sides of the street unless otherwise approved by the Approving Officer.*

REGIONAL, PROVINCIAL AND FEDERAL

Columbia Shuswap Regional District's Regional Trails Strategy (2018)

The Regional Trails Strategy is a comprehensive plan to guide the development and management of a sustainable recreation network within the region for both motorized and non-motorized trail users. The Regional Trails Strategy is community and stakeholder-driven, developed through a series of working group and stakeholder workshops, community consultation open houses, GIS inventory mapping, and SWOT analyses. The strategy makes an extensive list of recommended trail projects, land acquisitions and future opportunities, and in general, found that increased connections are needed across the region.

The Vision of the strategy is, “Golden and Electoral Area A will be an internationally recognized outdoor recreation destination with a recreation network that is environmentally responsible, intelligently connected, and a model of sustainability. The community will work collaboratively and constructively to provide four season support and funding. The trail network throughout Golden and Area A will be authentic, diverse, designed and constructed to meet trail standards, and considered a valuable asset to the community.”

The guiding principles of the Trails Strategy are that the plan will be informed by the community; align with the Golden Backcountry Recreation Access Plan (GBRAP) land use designations; environmental sustainability; collaboration and cooperation; stewardship – community, trails, environment; cultural values and heritage; inclusive; equity – (all come to the same level, not equality); respectful communication; equity of assets – to ourselves and others; healthy community; safety and awareness; recognize intrinsic values of environment, natural areas, wilderness, wildlife; maintain value to community while recognizing the significant biodiversity of the area; trails are well signed and well maintained; and innovation.

While the Trails Strategy does not touch on active transportation in town, it does establish a strong framework that the active transportation network can connect to in order to facilitate the best connections to popular recreational trails and destinations. The priorities of the plan is to complete the following studies/projects:

- Complete a phased feasibility study for a multi-modal trail within the Highway 95 ROW from Golden to Nicholson (Phase 1)
- Complete trail surfacing and guardrail improvements for the Rotary Trail to Keith King Memorial Sportsfield
- Construct a new bike skills park utilizing terrain based principles
- Complete Rotary Trail widening potential paving, lighting in strategic locations
- Develop interpretive trails/signage at the Old Mill Heritage Site
- Formalize trails and signage improvements at the Confluence Park
- Establish bush party trailhead/potential staging area
- Ensure multi-modal pedestrian access across the Columbia River when bridge updates are planned
- Provide trail improvements to Anderson Road/Edelweiss Slough and explore opportunities for interpretive/nature information signage
- Strategic Initiative: Proceed with skatepark expansion Phase 2

- Complete signage improvements of Hospital Falls Trail
- Create a multi-modal trail along the Highway Bypass from 6th Street to Reflection Lake
- Create a pedestrian cycling crossing of the Kicking Horse River at the CP Bridge near Confluence Park
- Create a multi-modal pathway along Fisher Road
- Create a community trail connection from the Golden Visitor Centre to Canyon Ridge
- Create a multi-modal pathway along Kicking Horse Drive

Province of British Columbia – Move. Commute. Connect.: B.C.’s Active Transportation Strategy

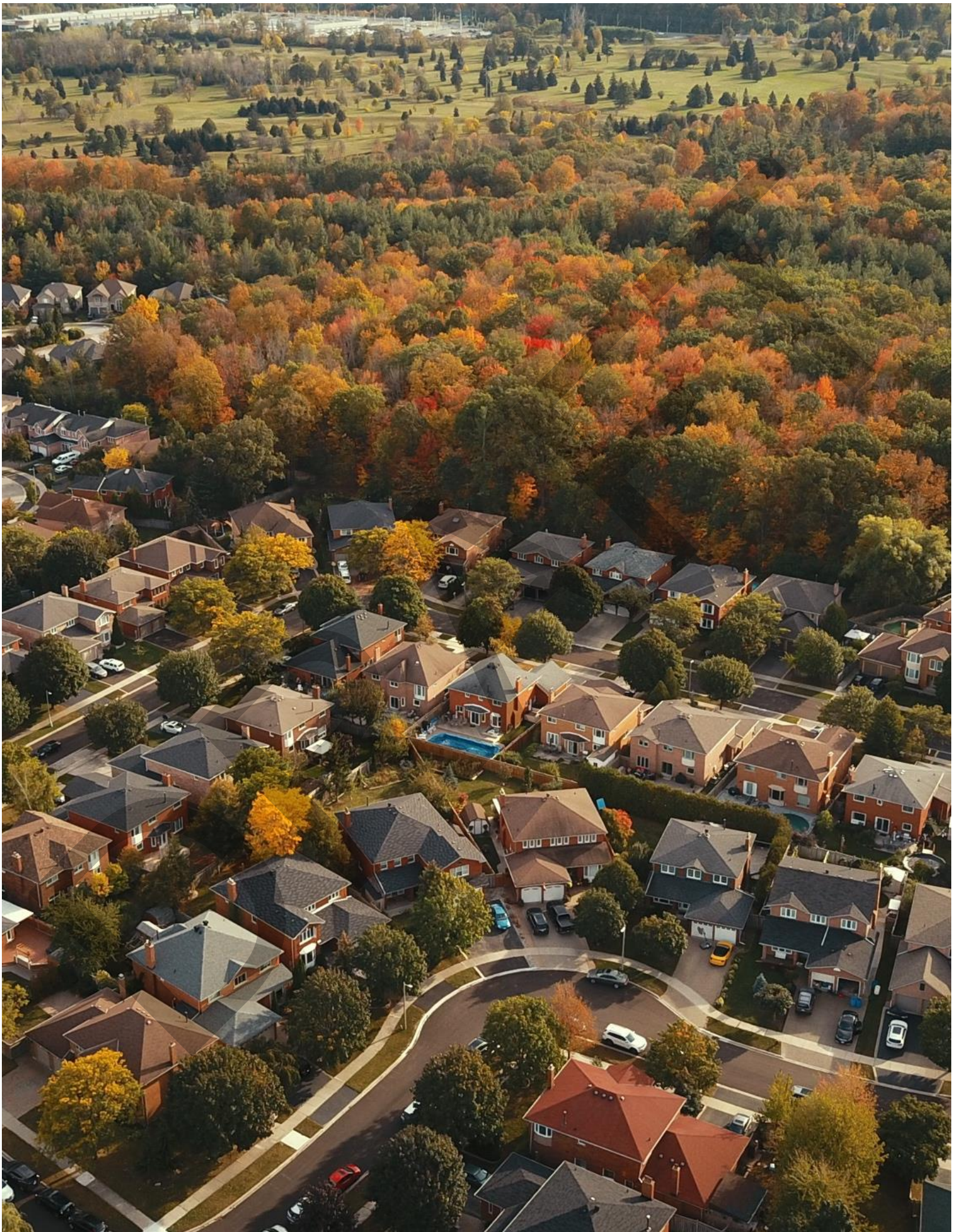
Through CleanBC, the provincial government established bold targets to reduce greenhouse gas (GHG) emissions to 40% below 2007 levels by 2030, 60% by 2040, and 80% by 2050. As part of this strategy, the Province released Move. Commute. Connect.: B.C.’s Active Transportation Strategy in 2019. The strategy sets bold targets to double the percentage of trips taken with active transportation by 2030 as a way to help the Province meet its GHG emissions targets. To support the implementation of active transportation infrastructure, the Province released the British Columbia Active Transportation Design Guide to ensure consistent active transportation facility design across the Province. The Province also administers the Active Transportation Infrastructure Grant to support active transportation investments across British Columbia.

Government of Canada – National Active Transportation Strategy

Canada has set a target to cut its GHG emissions by 40-45% below 2005 levels by 2030. To support this effort, Canada has recently established a federal National Active Transportation Strategy and National Active Transportation Fund to encourage and support investments in pathways and trails for cycling, walking, wheelchairs, e-bikes and scooters, to give everyone the opportunity to be active and access public transportation. The strategy ensures that communities of all sizes can look to incorporate more active transportation in their everyday lives through new partnership opportunities to help finance transformational active transportation infrastructure programs for communities with shovel-ready projects that meet the goals of making active transportation safe, comfortable, and connected.

APPENDIX B:
IMPLEMENTATION PLAN





#	THEMES AND ACTIONS	TIMEFRAME			METHOD OF IMPLEMENTATION			WHO IS INVOLVED
		Short-Term 0-8 yr	Medium-Term 8- 20 yr	Long-Term 20+ yr	Capital	Operations & Maintenance	Policy & Programming	
THEME 1: BUILDING A NETWORK								
CONNECTIONS								
1	<p>Implement a connected All Ages and Abilities (AAA) active transportation network within Golden through a phased implementation approach.</p> <ul style="list-style-type: none"> Advance the proposed active transportation implementation plan as outlined in Figure 8 of the Active Transportation Network Plan, prioritizing community, and tourist destinations in Town, as well as connections at municipal boundaries to local trailheads and Kicking Horse Mountain Resort. Formalize connections to and from the Highway 95 Bridge Replacement Project. Continue to monitor the quality of existing active transportation infrastructure and inventory infrastructure locations where upgrades are needed. Prioritize based on demand, connectivity, and need. 		Ongoing		✓	✓		<p>Town of Golden</p> <ul style="list-style-type: none"> Planning and Development Public Works Recreation Services Corporate Services & Communications
2	<p>Consider the impact of new mobility technologies on the active transportation network and facility design.</p> <ul style="list-style-type: none"> Ensure new active transportation facilities are designed for all intended users, recognizing that the operating envelopes and speeds of new mobility technologies may impact facility design (e.g., facility width and the need for users to be separated). Proactively regulate e-bikes and other micromobility devices in the Town and on trails. Explore the feasibility of creating a bikeshare or scooter share program with a private operator in Golden, with convenient connections to Kicking Horse Mountain Resort for tourists. 	✓					✓	<p>Town of Golden</p> <ul style="list-style-type: none"> Planning and Development Public Works Recreation Services Finance & Administrative Services Corporate Services & Communications Town Council <p><i>With support from partners & stakeholders (ex. Kicking Horse Mountain Resort, Tourism Golden, Regional District(s) etc.)</i></p>
3	<p>Incorporate design best practices from the B.C. Active Transportation Design Guide into the Town's Subdivision and Development Servicing Bylaw.</p> <ul style="list-style-type: none"> Review and update the Golden Subdivision and Development Servicing Bylaw to include cross-sections incorporating design best practices where possible and appropriate to the local context. Review existing sidewalk, multi-use trails, and on-street bicycling facility requirements on roadways (based on classification) and update to reflect best practices in the B.C. Active Transportation Design Guide. 	✓					✓	<p>Town of Golden</p> <ul style="list-style-type: none"> Planning and Development Public Works Recreation Services Town Council

#	THEMES AND ACTIONS	TIMEFRAME			METHOD OF IMPLEMENTATION			WHO IS INVOLVED
		Short-Term 0-8 yr	Medium-Term 8- 20 yr	Long-Term 20+ yr	Capital	Operations & Maintenance	Policy & Programming	
4	<p>Look to complete network connections through property acquisitions.</p> <ul style="list-style-type: none"> Formalize existing and new trail connections by acquiring (rezoning, subdivision, or property purchase) right-of-way and enhancing infrastructure. 		Ongoing		✓	✓	✓	<p>Town of Golden</p> <ul style="list-style-type: none"> Planning and Development Finance & Administrative Services Corporate Services & Communications Town Council
PLANNING AND PARTNERS								
5	<p>Ensure all new community plans, projects, and developments integrate with the active transportation network.</p> <ul style="list-style-type: none"> Seek opportunities to implement new pedestrian and bicycling facilities in conjunction with other projects, plans, and developments. Ensure future development projects include active transportation infrastructure (including new sidewalks, bicycle facilities, multi-use trails, and amenities) and are connected to the network outlined in Figure 8 of the Active Transportation Network Plan. Develop a list of reference criteria for reviewing new plans, developments, and infrastructure projects, ensuring bylaws are followed and there is integration with the active transportation network such as bicycle parking, cut-throughs, and sidewalk connections. 		Ongoing				✓	<p>Town of Golden</p> <ul style="list-style-type: none"> Planning and Development Public Works Town Council
6	<p>Work with the Province of British Columbia’s Resort Municipality Initiative (RMI) program and funds to implement active transportation infrastructure that meet the goals of the Resort Development Strategy (RDS).</p> <ul style="list-style-type: none"> Implement and enhance the RDS’s Pedestrian project to encourage more walking and exploring of the community by any type of active transportation through All Ages and Abilities (AAA) facilities. In the next RDS, develop a project to encourage more bicycling and exploring of the community by bicycle with AAA facilities 	✓	✓				✓	<p>Town of Golden</p> <ul style="list-style-type: none"> Planning and Development Corporate Services & Communications Town Council Administrative (CAO)
7	<p>Create a Future Alternative Transportation Infrastructure Reserve Fund.</p> <ul style="list-style-type: none"> The Town can continue to levy funds from developers through a variety of means such as Development Cost Charges, density bonuses, or parking cash in lieu funds can be utilized for “transportation infrastructure that supports walking, bicycling, public transit or other alternative forms of transportation.” 		Ongoing				✓	<p>Town of Golden</p> <ul style="list-style-type: none"> Planning and Development Finance & Administrative Services Town Council Public Works

#	THEMES AND ACTIONS	TIMEFRAME			METHOD OF IMPLEMENTATION			WHO IS INVOLVED
		Short-Term 0-8 yr	Medium-Term 8- 20 yr	Long-Term 20+ yr	Capital	Operations & Maintenance	Policy & Programming	
8	<p>Work with regional partners to provide well-integrated active transportation connections to nearby communities and regional trails.</p> <ul style="list-style-type: none"> When implementing the Active Transportation Network Plan, conduct ongoing stakeholder meetings with First Nation communities, neighbouring municipalities, and the Regional District(s). Meet regularly with the Ministry of Transportation and Infrastructure to request they provide high quality walking and bicycling infrastructure on roads under their jurisdiction, including the Highway 95 bridge replacement project. Explore additional Columbia River and Kicking Horse River crossings that can facilitate active transportation 		Ongoing				✓	<p>Town of Golden</p> <ul style="list-style-type: none"> Planning and Development Public Works Corporate Services & Communications Town Council <p>Ministry of Transportation and Infrastructure</p> <p><i>With support from partners & stakeholders (ex. Indigenous Communities, Regional District(s), etc.)</i></p>
SAFETY								
9	<p>Improve safety along active transportation routes by considering visibility, sightlines, and access where appropriate.</p> <ul style="list-style-type: none"> Continue to review corridors, intersections, and crossings where ICBC collisions, near misses and community members have voiced concerns about safety and accessibility, and make improvements as required. Work with MoTI to review and update signal phasing and pedestrian crossing times at intersections to ensure adequate time is provided for all road users. Review existing pedestrian crossing locations and look for opportunities to reduce crossing distances by providing narrower roads and lanes and considering curb extensions where feasible. Review crossing recommendations in Figure 8 and implement where warranted and develop a prioritization plan for enhancing existing crossing locations. Improve crossing treatments where multi-use trails intersect with a roadway in accordance with current best practices. Inventory the location of curb ramps and accessibility features at intersections. Provide curb ramps or a continuous paved surface to access the road at all intersections and consider accessibility for all. 		Ongoing		✓	✓	✓	<p>Town of Golden</p> <ul style="list-style-type: none"> Planning and Development Public Works Town Council <p>RCMP</p> <p>ICBC</p> <p>Ministry of Transportation and Infrastructure</p>
10	<p>Explore the opportunity to reduce speed limits as per Section 146 of the Motor Vehicle Act, in conjunction with traffic calming and traffic diversion.</p> <ul style="list-style-type: none"> Identify opportunities for installing traffic calming infrastructure features as listed in the Transportation Plan's Traffic Calming Toolkit to help reduce motor vehicle speeds and volumes. Focusing first on routes to schools and Active Transportation Corridors as identified in Figure 8. Explore the feasibility of reducing speed limits in appropriate areas where traffic calming is not possible or has not been effective. 	✓	✓		✓	✓	✓	<p>Town of Golden</p> <ul style="list-style-type: none"> Planning and Development Public Works Town Council <p>RCMP</p>

#	THEMES AND ACTIONS	TIMEFRAME			METHOD OF IMPLEMENTATION			WHO IS INVOLVED
		Short-Term 0-8 yr	Medium-Term 8- 20 yr	Long-Term 20+ yr	Capital	Operations & Maintenance	Policy & Programming	
THEME 2: ENHANCING THE EXPERIENCE OF WALKING, ROLLING, AND BICYCLING								
ACCESS AND EQUITY								
11	<p>Apply an intersectional, equity-focused lens to the planning, design, and implementation of all active transportation facilities, amenities, and programs to support equity-seeking groups.</p> <ul style="list-style-type: none"> Identify and work with stakeholders, including marginalized and under-represented groups, to develop a checklist of the different lenses and factors that should be considered during the design and implementation of all active transportation facilities, amenities, and programs. Consider the development of a Council adopted Accessibility Policy that ensures new and improved infrastructure incorporates universal design principles ensures that the built environment is accessible to people of all ages and abilities, regardless of any type of physical or cognitive impairment. Working to ensure it considers various types of accessibility challenges (ex. impairments to mobility, vision, hearing, comprehension, and strength and dexterity). Conduct targeted communication and engagement regarding active transportation projects with equity-seeking groups to understand their unique needs and issues. After project implementation, monitor and check-in with equity-seeking groups to make sure the project is having the desired effect and that the design has not created unintended negative consequences for any group. 	Ongoing					✓	<p>Town of Golden</p> <ul style="list-style-type: none"> Planning and Development Public Works Corporate Services & Communications Finance & Administrative Services Town Council
12	<p>Create opportunities to work with the Ktunaxa and Secwepemc Nations as well as the Columbia Valley Métis on the design and implementation of the active transportation network to continue to advance reconciliation and listen to the voices of Indigenous People in our community.</p> <ul style="list-style-type: none"> Offer opportunities to provide input into the connections to First Nations communities, destinations, and sites of cultural significance. 	✓					✓	<p>Town of Golden</p> <ul style="list-style-type: none"> Planning and Development Public Works Corporate Services & Communications Town Council <p><i>With support from partners & stakeholders ex. (Indigenous Communities)</i></p>

#	THEMES AND ACTIONS	TIMEFRAME			METHOD OF IMPLEMENTATION			WHO IS INVOLVED
		Short-Term 0-8 yr	Medium-Term 8- 20 yr	Long-Term 20+ yr	Capital	Operations & Maintenance	Policy & Programming	
MAINTENANCE								
13	<p>Complete an Active Transportation Asset Management Plan and update the Plan at regularly scheduled intervals.</p> <ul style="list-style-type: none"> Complete an Asset Management Plan and an inventory of the Town's existing infrastructure including active transportation facilities Continue to conduct regularly scheduled reviews (every year) of the condition of active transportation infrastructure. Infrastructure would include sidewalks, signage, bicycle lanes, curb ramps, and crosswalks. The intent is to ensure that they are well maintained, marked (where appropriate), and ensure sightlines are unobstructed. Create a system to track and prioritize maintenance required on active transportation infrastructure. 		✓			✓	✓	<p>Town of Golden</p> <ul style="list-style-type: none"> Public Works Planning and Development Corporate Services & Communications Finance & Administrative Services Recreation Services Town Council
14	<p>Design active transportation facilities to provide adequate drainage, snow storage and removal, and sand and gravel removal.</p> <ul style="list-style-type: none"> Follow guidance provided in the B.C. Active Transportation Design Guide specific to maintenance considerations including facility width and appropriate maintenance techniques for conditions in a winter community. 	Ongoing				✓		<p>Town of Golden</p> <ul style="list-style-type: none"> Public Works Planning and Development Corporate Services & Communications Finance & Administrative Services
15	<p>As new infrastructure is installed, review and update current maintenance and operating policies and procedures for active transportation infrastructure, including sidewalks, multi-use trails, and active transportation corridors as needed (Snow Clearing and Sanding Policy and Sidewalk and Pathway Inspection Policy and Procedures Policy and the Sidewalk and Pathway Inspection and Maintenance Policy).</p> <ul style="list-style-type: none"> As more active transportation infrastructure is implemented, review existing debris, sand, gravel, ice, and snow removal requirements for walking and bicycling infrastructure, including multi-use trails, and provide additional guidance specific to on-street active transportation facilities (active transportation corridors). This includes requirements for property owners, Town departments, employed contractors, and the existing fleet of machinery. Consider adding an active transportation prioritization list to the policy and outlining the order in which roads and active transportation facilities are cleared. 		✓	✓		✓	✓	<p>Town of Golden</p> <ul style="list-style-type: none"> Public Works Development Services Corporate Services & Communications Finance & Administrative Services Bylaw Enforcement Town Council
16	<p>As new infrastructure is implemented, ensure the Town has appropriately sized equipment, personnel, and operating funding to maintain existing and future active transportation infrastructure.</p> <ul style="list-style-type: none"> Review current maintenance funding, personnel resources, and equipment levels required to maintain all planned and existing types of active transportation infrastructure. As more walking and bicycling facilities are installed, ensure the amount of funding available grows in accordance with the amount of infrastructure being added to the network. 	Ongoing				✓	✓	<p>Town of Golden</p> <ul style="list-style-type: none"> Public Works Finance & Administrative Services Planning and Development Recreation Services

#	THEMES AND ACTIONS	TIMEFRAME			METHOD OF IMPLEMENTATION			WHO IS INVOLVED
		Short-Term 0-8 yr	Medium-Term 8- 20 yr	Long-Term 20+ yr	Capital	Operations & Maintenance	Policy & Programming	
PARKING AND AMENITIES								
17	<p>Support the installation of public amenities such as seating, landscaping, and public art to enhance how people experience walking, rolling, and cycling in Golden.</p> <ul style="list-style-type: none"> Develop guidance for the installation of public amenities through capital projects and developments. Develop a public art program that includes guidelines for partnering with local artists, provides opportunities for equity-seeking groups, and seeks opportunities for partnering with and celebrating the area's Indigenous Peoples. Identify an annual budget for the installation and maintenance of public amenities. 		✓		✓	✓	✓	<p>Town of Golden</p> <ul style="list-style-type: none"> Planning and Development Public Works Recreation Services Finance & Administrative Services Corporate Services & Communications Town Council <p><i>With support from partners & stakeholders (ex. Indigenous Communities, etc.)</i></p>
18	<p>Support the installation of more short- and long-term bicycle parking and end-of-trip facilities throughout the community.</p> <ul style="list-style-type: none"> Review and update the Town's Zoning Bylaw to ensure that ample secure parking is being provided based on best practices in similar communities, guidance from the B.C. Active Transportation Design Guide, and a review of existing bicycle parking utilization, including accounting for the space requirements for 'non-standard' bicycles (e.g., e-bikes (i.e., charging), cargo bikes, etc.) Conduct a detailed review of existing bicycle parking facilities to assess existing inventory (supply and location) and demand. (Includes identifying the number of spaces, quality, age, security level, and supporting destination) to identify gaps within the downtown and at other high activity locations. Develop a program to install bicycle parking within the downtown and at other high activity locations as need grows. Ensure the program is also designed to support businesses and other partners in implementing more bicycle parking as desired. Identify an annual budget for the installation of bicycle parking facilities, considering seasonal offerings such as bike lockers and partnerships with local employers. 	✓	✓		✓	✓	✓	<p>Town of Golden</p> <ul style="list-style-type: none"> Planning and Development Public Works Recreation Services Finance & Administrative Services Town Council <p><i>With support from partners & stakeholders (ex. Local Businesses, etc.)</i></p>

#	THEMES AND ACTIONS	TIMEFRAME			METHOD OF IMPLEMENTATION			WHO IS INVOLVED
		Short-Term 0-8 yr	Medium-Term 8- 20 yr	Long-Term 20+ yr	Capital	Operations & Maintenance	Policy & Programming	
19	<p>Develop a central hub for active transportation with a network map and information kiosk, protected bicycle parking, and other amenities in the downtown.</p> <ul style="list-style-type: none"> Identify a location for a central hub for active transportation. Install an information kiosk that provides covered bicycle parking, a bike repair station, maps, and information on the on-street and off-street bicycling network, as well as other destinations within the town and region, including mountain bike trails. Identify locations in high demand locations and as new infrastructure is installed for the installation of bicycle repair stations. 		✓		✓	✓		<p>Town of Golden</p> <ul style="list-style-type: none"> Planning and Development Public Works Recreation Services <p><i>With support from partners & stakeholders (ex. Tourism Golden, Golden Cycling Club, Trails Alliance etc.)</i></p>
20	<p>Consider opportunities to expand dynamic curb-space management to create streets that accommodate a variety of uses.</p> <ul style="list-style-type: none"> Consult with downtown businesses and stakeholders to understand the needs and desired use of curb space. The Town can continue to explore opportunities for reallocating road space and consider flexible and dynamic use of the street on streets like, 9 Avenue N, 8 Avenue N, etc. 			✓			✓	<p>Town of Golden</p> <ul style="list-style-type: none"> Planning and Development Public Works Corporate Services & Communications Town Council <p><i>With support from partners & stakeholders (ex. Local Businesses, etc.)</i></p>
THEME 3: ENCOURAGING MORE WALKING, ROLLING, AND BICYCLING								
WAYFINDING								
21	<p>Conduct a Wayfinding Signage Review and look for opportunities to add signage on new and existing facilities (directional, informational, and regulatory signage).</p> <ul style="list-style-type: none"> Document areas where signage is inconsistent, redundant, or needed and prioritize the addition of necessary signage. Develop a Wayfinding Signage Strategy that includes best practice guidance on pedestrian and cycling wayfinding. Consider working with partners to develop a regional approach to signage and wayfinding. Identify trails where it is appropriate to add interactive signage that provides information about the land and history of the area and calls out different natural trail features. This can include the Rotary Trail on the south side of the river and new trails as they are formalized. Follow the direction of the Wayfinding Signage Strategy and add signage as new active transportation infrastructure is implemented. 		✓	✓	✓	✓	✓	<p>Town of Golden</p> <ul style="list-style-type: none"> Planning and Development Recreation Services Public Works Corporate Services & Communications <p><i>With support from partners & stakeholders (ex. Indigenous Communities, Trails Alliance, Regional District etc.)</i></p>



#	THEMES AND ACTIONS	TIMEFRAME			METHOD OF IMPLEMENTATION			WHO IS INVOLVED
		Short-Term 0-8 yr	Medium-Term 8- 20 yr	Long-Term 20+ yr	Capital	Operations & Maintenance	Policy & Programming	
22	<p>Work with Tourism Golden and Golden Cycling Club to update the Bike Trail Map to include new facilities and infrastructure.</p> <ul style="list-style-type: none"> Work with Tourism Golden and Golden Cycling Club to update the Bike Trail map as new facilities and infrastructure are implemented Develop route recommendations for tourists and residents based on sites and skill level 		✓				✓	<p>Town of Golden</p> <ul style="list-style-type: none"> Planning and Development Public Works Corporate Services & Communications <p><i>With support from partners & stakeholders (ex. Golden Cycling Club etc.)</i></p>
EDUCATION AND PROMOTION								
23	<p>Support the development of a regional bicycle tourism initiative.</p> <ul style="list-style-type: none"> Work with Tourism Golden, the Regional District, neighbouring municipalities, and First Nation communities to develop a regional bicycling tourism initiative. Work with Tourism Golden to promote hiking, bicycling and other forms of active transportation in Golden 		✓	✓			✓	<p>Town of Golden</p> <ul style="list-style-type: none"> Planning and Development Recreation Services Corporate Services & Communications Town Council <p><i>With support from partners & stakeholders (ex. Tourism Golden, Neighbouring Municipalities, Indigenous Communities etc.)</i></p>
24	<p>Work with partners to provide bicycle education and skills training for children, youth, adults, and seniors and promote active travel to work, school, and play.</p> <ul style="list-style-type: none"> Support active and safe routes to school programming and initiatives. Work with partners to provide bicycle education and skills training for students in elementary school. Support and encourage targeted community outreach programs for older adults. Partner with organizations in the development of road safety awareness and education campaigns for all road users. Work with local associations such as the Golden Cycling Club to promote year-round active transportation to and from trails, as well as around the Town. Promote and educate on how to safely and comfortably walk and cycle in the winter months Educate and incentivize walking and bicycling to grocery shop, eat out, and do errands and appointments through various campaigns such as Bike or Walk to Work/School Week. 	✓					✓	<p>Town of Golden</p> <ul style="list-style-type: none"> Planning and Development Recreation Services Corporate Services & Communications <p><i>With support from partners & stakeholders (ex. Golden Cycling Club, School District, Local Businesses)</i></p>

#	THEMES AND ACTIONS	TIMEFRAME			METHOD OF IMPLEMENTATION			WHO IS INVOLVED
		Short-Term 0-8 yr	Medium-Term 8- 20 yr	Long-Term 20+ yr	Capital	Operations & Maintenance	Policy & Programming	
25	Develop an active transportation data collection and monitoring program, including a network of counters on bicycling routes and trails to monitor activity. <ul style="list-style-type: none"> • Develop an Active Transportation Data Collection Strategy. • Install automatic bicycle and/or pedestrian counters as part of all new infrastructure projects. • Implement a reporting program to communicate results of the monitoring program on an annual basis. 			✓	✓	✓	✓	Town of Golden <ul style="list-style-type: none"> • Development Services • Public Works • Recreation Services • Corporate Services & Communications
26	Work with Tourism Golden to promote the use of active transportation for tourism and seasonal employees <ul style="list-style-type: none"> • Provide incentives and campaigns to encourage active transportation to and from work such as contests, giveaways, discounts, or street closure events. • Support businesses that provide walking and cycling tours or offer discounts to those that travel by active modes can help encourage more trips made by active transportation. 		✓				✓	Town of Golden <ul style="list-style-type: none"> • Development Services • Recreation Services • Corporate Services & Communications <i>With support from partners & stakeholders (ex. Tourism Golden etc.)</i>

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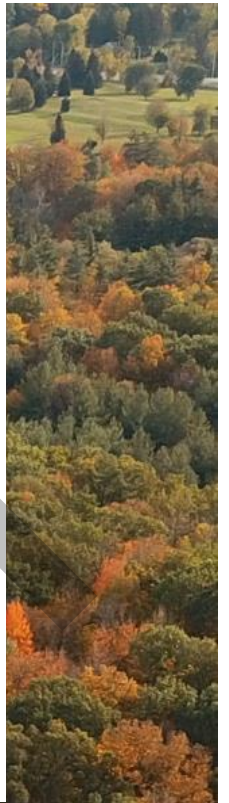


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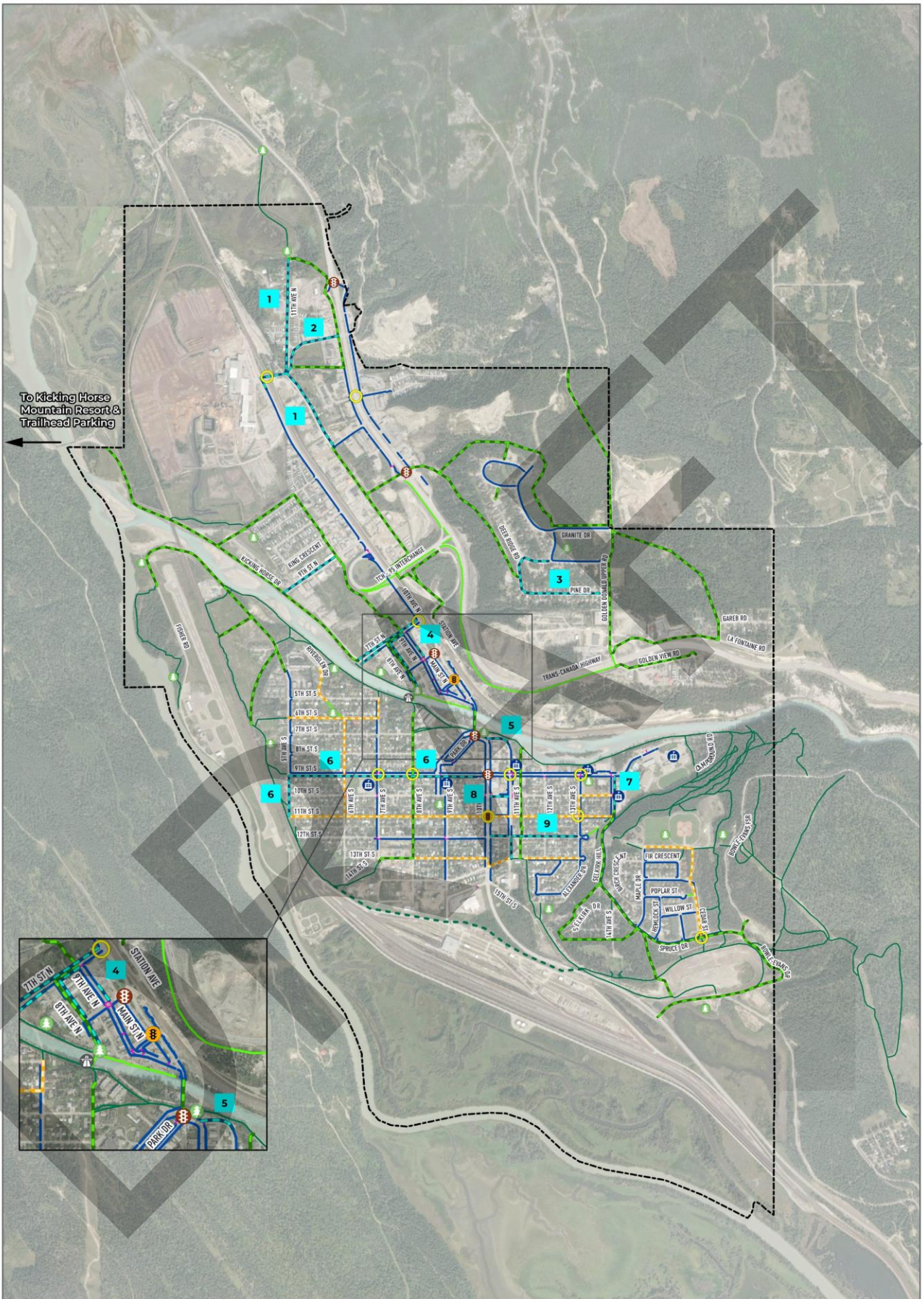


APPENDIX C:
PROPOSED PROJECT
DESCRIPTION



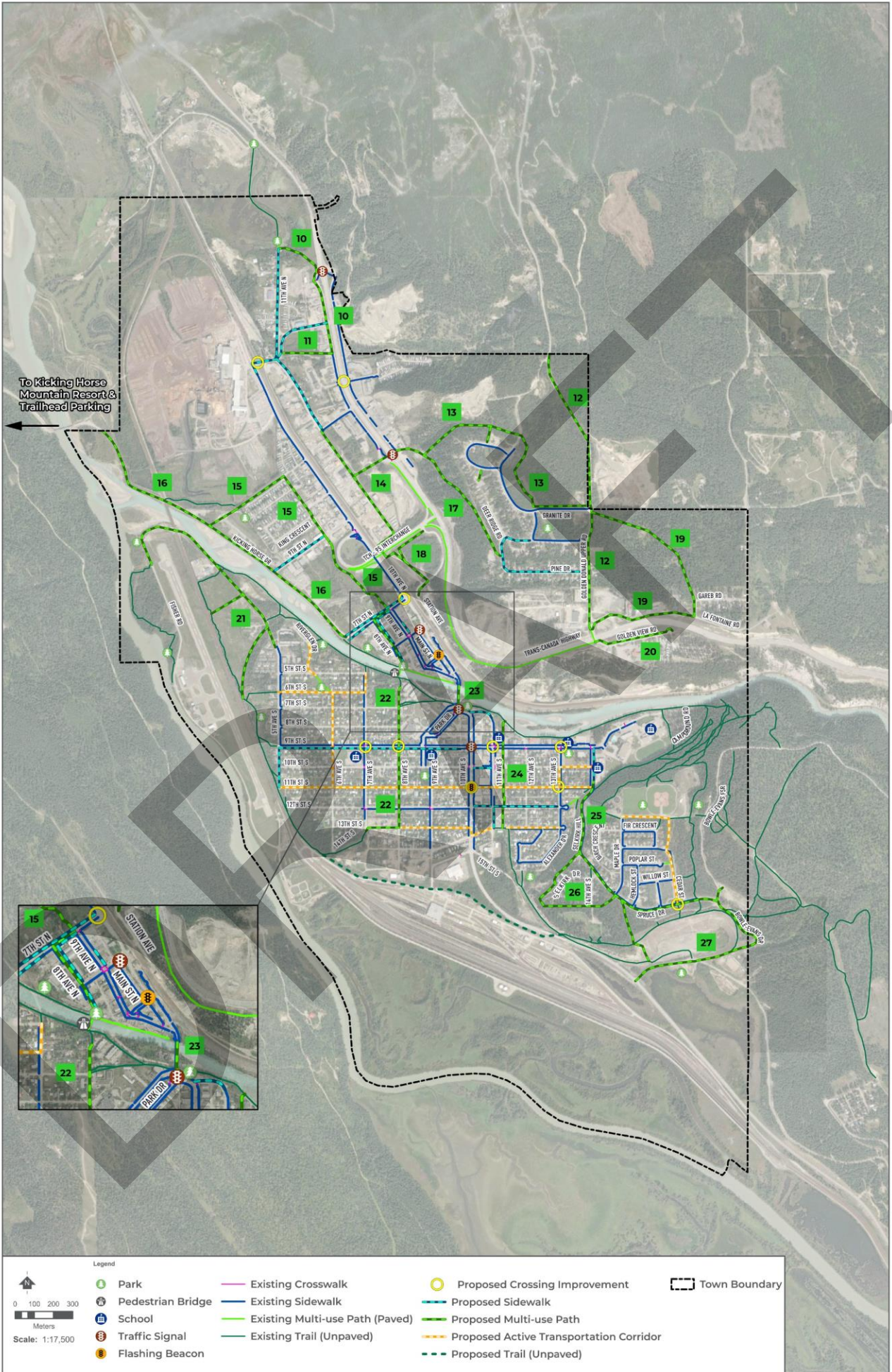
#	Route Name	Streets
Proposed Sidewalks		
<i>Proposed sidewalks are continuous, concrete sidewalks that support pedestrians (including people using mobility aids) to walk comfortably and safely throughout Golden's sidewalk network.</i>		
1	11 th Avenue North	New sidewalks on one side of the street on 11 th Ave N from Edelweiss Slough to 11 th St N
2	Highway 1 to Rail Crossing at 10 th Avenue North/13 th Street North	New sidewalks on one side of the street on 14 th St N, 11 th Ave N, 13 th St N, 10 th Ave N
3	Pine Drive	New sidewalks on one side of the street on Pine Dr
4	Downtown Network	New sidewalks to fill in the gaps in the downtown sidewalk network on 7 th St N, 9 th Ave N and 8 th Ave N
5	11 th Avenue South	New sidewalks on the north side of 11 th Ave S at 10 th Ave S
6	9 th Street South	New sidewalks on the south side of 9 th St S between 5 th Ave S to 10 th Ave S, new sidewalks on 5 th Ave S
7	Alexander Park Elementary	New sidewalks on the east side of 14 th Ave S
8	10 th Street South	New sidewalks on the south side of 10 th St S between 10 th Ave S and 11 th Ave S
9	12 th Street South	New sidewalks on one side of the street on 12 th St S between 10 th Ave S and 13 th Ave S, 11 th Ave S
Proposed Multi-use Paths		
<i>Proposed multi-use trails are shared facilities for bicycles and pedestrians. Multi-use trails will likely be paved when adjacent to a roadway and can remain unpaved when located within parks and green space.</i>		
10	Edelweiss Slough	Connect Edelweiss Slough to Highway 1 and south to the Highway 1 Connector. Implement through development – alignment to be determined.
11	Highway 1 Connector	Connect 11 th Ave N to Highway 1 Frontage Rd. Implement through development – alignment to be determined.
12	Golden Donald Upper Road	Connect Highway 1 to Golden Skybridge via Golden Donald Upper Rd
13	Quartz Crescent	Connect Highway 1 to Golden Donald Upper Rd. Implement through development – alignment to be determined. Property acquisition required.
14	11 th Avenue North	Connect 11 th Ave N to Highway 1 interchange
15	11 th Street North/9 th Avenue North	Connect Kicking Horse Pedestrian Bridge with downtown and Kicking Horse Drive. Implement through development – alignment to be determined. Property acquisition required.
16	Downtown-Kicking Horse Drive	Connect downtown to Columbia River Crossing via Kicking Horse Drive
17	Deer Ridge Connector	Connect Highway 1 to Pine Dr. Property acquisition required.
18	Station Avenue Connector	Connect to Highway 1 via Station Avenue
19	La Fontaine Road	Connect Gareb Rd via La Fontaine Rd to create loop to Golden Donald Upper Rd. Implement through development – alignment to be determined.
20	Golden View Road	Connect Golden Hill Path to Whispering Spruce Campground via Golden View Rd.
21	Fisher Road	Connect Confluence Park to 5 th Ave S via Fisher Rd. Implement through development – alignment to be determined. Property acquisition required.
22	Kicking Horse River Pedestrian Bridge Connector	Connect the Kicking Horse River Pedestrian Bridge to 7 th Ave S and 13 th St S via 8 th Ave S
23	Highway 95 Bridge Replacement Project	Connect north and south Golden with the Highway 95 Bridge Replacement Project
24	11 th Avenue South	Connect the Rotary Trail along the Kicking Horse River to 13 th St S via old railway corridor between 11 th Ave S and 12 th Ave S
25	Selkirk Hill	Connect 11 th St S to Bowle-Evans Dr via Selkirk Hill and Spruce Dr
26	Selkirk Escarpment Trail	Loop around Selkirk Dr to Spruce Dr
27	Bowle-Evans/Reflection Road	Connect Bowle-Evans Dr and Reflection Rd to Highway 95
Proposed Active Transportation Corridors		
<i>Proposed active transportation corridors will accommodate people walking and cycling. Bicyclists will share the road with vehicles on low volume and low speed streets. Some traffic calming may be implemented to ensure slower vehicle speeds.</i>		
28	Riverglen Connector	Connect the Rotary Trail along the Kicking Horse River to 6 th St S
29	6 th Street South	Connect 5 th Ave S to the Rotary Trail along the Kicking Horse River at 7 th Ave S via 6 th St S
30	6 th Avenue South	Connect 11 th St S to 6 th St S via 6 th Avenue S
31	11 th Street South	Connect 5 th Ave S to 14 th Ave S via 11 th St S
32	Alexander Park Elementary Connector	Connect to Alexander Park Elementary from 11 th St S via 13 th Ave S and 10 th St S
33	13 th Street South	Connect 8 th Ave S to 13 th Ave S via 13 th St S
34	Cedar Street Connector	Connect Spruce Dr and Maple Cres via Fir Cres and Cedar St
Proposed Crossing Improvements		
<i>Proposed crossing improvements are intended to enhance safety, access, and comfort for pedestrians and cyclists at intersections. Crossing improvements could include crosswalks, curb extensions, push buttons to activate rapid flashing beacons or signals.</i>		
35	13 th Street North Railway Crossing	13 St N at 10 th Ave N
36	Highway 1 / 12 th Street North Crossing	12 St N at Highway 1
37	10 th Avenue North / 7 th Street North Crossing	10 th Ave N at 7 th St N
38	Lady Grey Elementary School Crossing	7 th Ave S at 9 th St S
39	Golden & District Hospital Crossing	8 th Ave S at 9 th St S
40	École La Confluence Crossing	11 th Ave S at 9 th St S
41	College of the Rockies Crossing	13 th Ave S at 9 th St S
42	Highway 95 / 11 th Street South Crossing	10 th Ave S at 11 th St S
43	13 th Avenue South at 11 th Street South	13 th Ave S at 11 th St S
44	Spruce Drive Crossing	Cedar St at Spruce Dr

To Kicking Horse Mountain Resort & Trailhead Parking



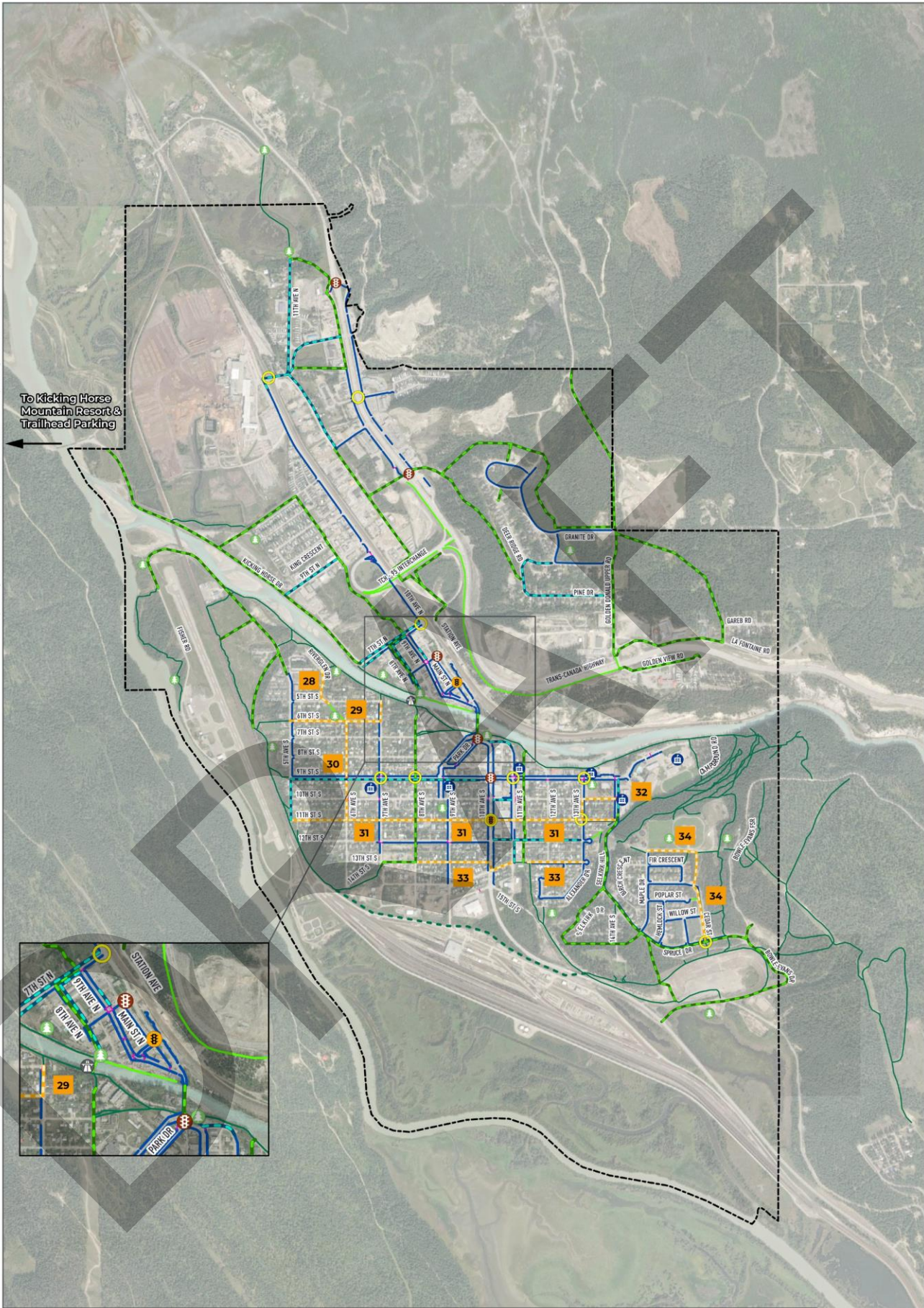
<p>Legend</p> <p>0 100 200 300 Meters Scale: 1:17,500</p>	<ul style="list-style-type: none"> Park Pedestrian Bridge School Traffic Signal Flashing Beacon 	<ul style="list-style-type: none"> Existing Crosswalk Existing Sidewalk Existing Multi-use Path (Paved) Existing Trail (Unpaved) 	<ul style="list-style-type: none"> Proposed Crossing Improvement Proposed Sidewalk Proposed Multi-use Path Proposed Active Transportation Corridor Proposed Trail (Unpaved) 	<ul style="list-style-type: none"> Town Boundary
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To Kicking Horse Mountain Resort & Trailhead Parking



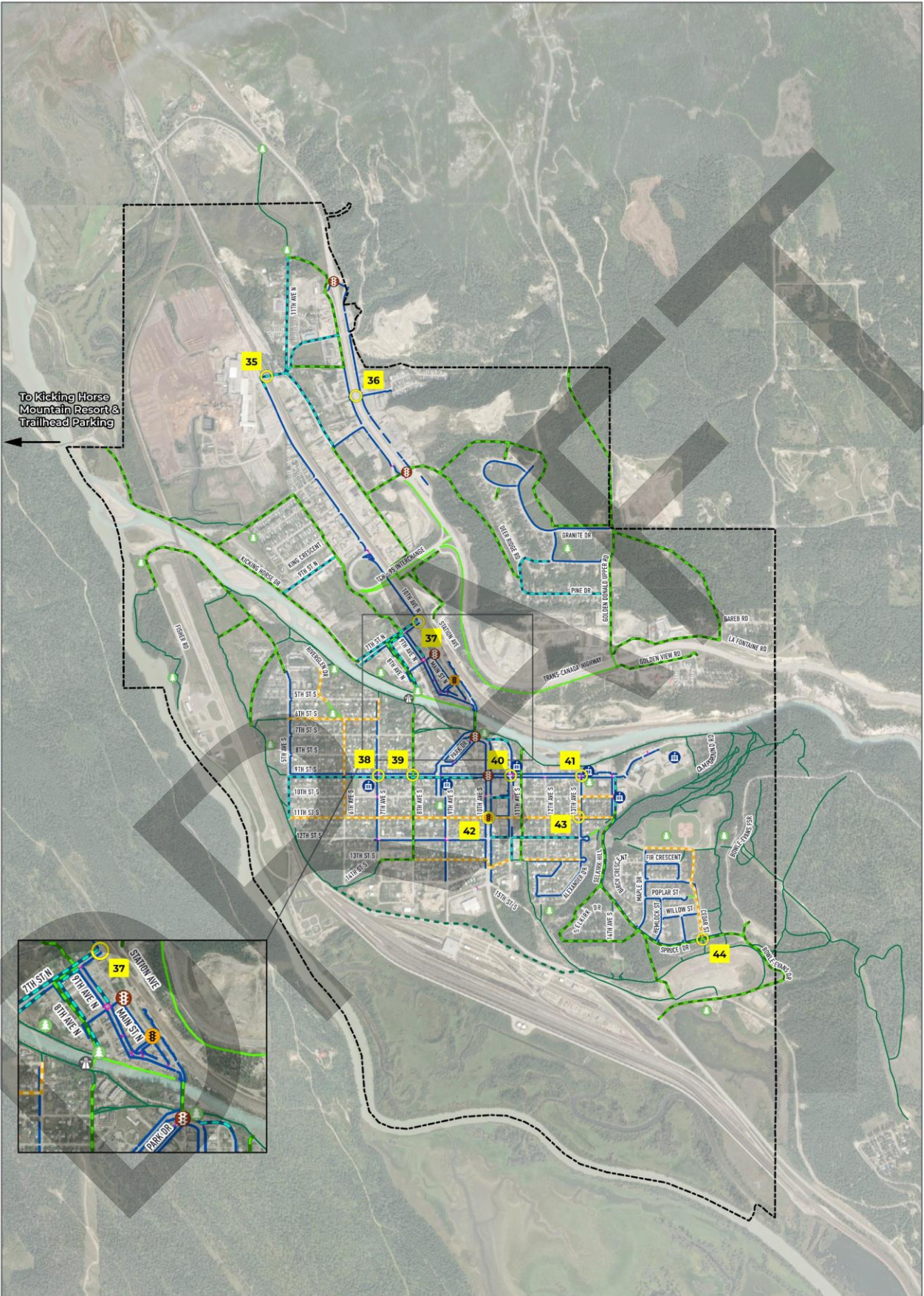
Legend			
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To Kicking Horse Mountain Resort & Trailhead Parking



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To Kicking Horse Mountain Resort & Trailhead Parking



Legend			
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