



4 TMP IMPLEMENTATION

Implementation of the TMP will be carried out through several measures and actions that help achieve the Plan's vision and goals. Some TMP strategic directions relate to higher level planning documents and bylaws, including the OCP, Subdivision and Development Control Bylaw, Traffic Bylaw, and Zoning Bylaw. The TMP's objectives and strategic directions will be considered when new developments are planned and capital projects are proposed and implemented.

Critical to the TMP is the formation of a capital improvement plan that details projects and funding requirements to successfully achieve the TMP's vision and goals. This includes the identification of individual project segments, their attributes, and planning level cost estimates. A list of anticipated pedestrian, bicycle, transit, and road improvement projects are included throughout this document and an extensive list is included in **Appendix H**.

Some of these projects may require the involvement of stakeholders or partners, including the City, BC Transit, Ministry of Transportation and Infrastructure (MOTI), Tk'emlúps te Secwépemc, School District No. 73, TRU, and other organizations. In addition to partnerships, financing and funding sources to help implement projects will need to be identified.

Implementation of the TMP's road improvement projects is part of a broader City capital planning and annual budget approval process. Growth and development rates play a role in project prioritization and detailed project planning. The transportation improvement projects identified will be reviewed and integrated where possible within the City's Five-year Financial Plan. Other capital infrastructure investments, such as rehabilitation and replacement of existing roads and other utilities, will also influence the City's long-term capital plans and priorities for investment in transportation.

4.1 PROJECTS AND COST ESTIMATES

Preliminary planning-level cost estimates are prepared for each transportation project identified below and detailed in **Appendix G**. Generalized cost estimating procedures were used and do not include allowances for right-of-way, property acquisition, and utility relocations. Contingency allowances are included in each project estimate to account for engineering costs and costs for unknown constructability constraints. These estimates are high-level Class D estimates that provide an order of magnitude for the long term and will allow the City to evaluate its allocation of resources and to begin funding discussions with other partner organizations. These estimates are not intended for short-term capital planning. As the timeline for implementation of specific projects approach, the scope of work and estimates will be refined to provide more accurate budget numbers.

An overall summary of the TMP projects, phasing, and preliminary cost estimates for pedestrian, bicycle, transit, and road improvements is provided in **Table 4.1**. A detailed list of the projects and each



one’s conceptual planning-level Class D cost estimate, organized by improvement type and by the TMP assessed score, is provided in **Appendix H**.

Table 4.1: Overall Summary of TMP Projects by Phase

Mode of Improvement	Sum of Project Costs by Priority and Phase (Conceptual Planning Level Cost Estimates)			
	First Priority			Secondary Priority
	Short-Term	Medium-Term	Long-Term	
Walking	\$ 6,590,100	\$ 15,521,600	\$ 7,104,300	\$31,259,700
Cycling	\$ 6,318,000	\$ 8,807,000	\$ 1,492,525	\$7,942,400
Transit	TBD	TBD	TBD	TBD
	Major Road Projects (non-phased)			
Roads	\$194,072,000 +			

Within the detailed lists of TMP projects, a TMP assessed score was provided for each project according to how positively or negatively it would impact the City’s ability to achieve each of the TMP’s goals. A simple five scale scoring system was used that would allow a maximum score of 12 if a project had a high positive effect for each goal. A guideline defining the value of each possible score is summarized in **Table 4.2**.

Table 4.2: Scoring System Applied to Assess TMP Projects

Score	Definition of Score Value with Respect to Each TMP Goal
2	▶ Project has significant benefits, is in a high-need location, and directly helps with achieving the identified goal.
1	▶ Project has benefits, is in a desirable location, and directly or indirectly helps with achieving the identified goal.
0	▶ Project has neutral benefits, is in an average-need location, and does not help or hinder achieving the identified goal.
-1	▶ Project has drawbacks, is in a less-desirable location, and directly or indirectly hinders achieving the identified goal.
-2	▶ Project has significant drawbacks and directly hinders achieving the identified goal.



4.2 FURTHER STUDIES

The TMP strategic directions necessitate future studies to further investigate complex transportation issues and develop solutions. A summary of these recommended studies is provided in **Table 4.3** below.

Table 4.3 Summary of Recommended Studies

Study	Initiate by	Study Purpose / Scope
Transportation Demand Management	2018	Review Downtown TDM policies and transportation plans, including bylaws and regulations, enforcement, and technology to support the goals of the TMP. Identify transportation demand management strategies for the Downtown that will directly support the objectives of the 2005 City Centre Plan (or its successor).
Future Thompson River Crossing Identification	2019	The Singh Street Bridge has been assessed in this TMP to align poorly with the stated Vision, Goals, and Objectives of the TMP, and it does not appear to be required within the horizon of KAMPLAN. However, a future Thompson River crossing for the long term is crucial, and this study should identify the preferred future crossing location to permit the City to plan for and secure this future corridor.
Transit Future Action Plan	2019	The last update to the Transit Future Plan was completed in 2012, and many of the short- and medium-term actions have been completed. The plan envisions the transit network long term and describes the services, infrastructure and investments needed to get there.
Design Criteria Manual Updates	2020	Update the City's road design standards to ensure standards support the goals of the TMP.
Vision Zero Road Safety Strategy	2021	Develop an overarching vision and strategy for improving the safety of all road users and reducing road-based fatalities to zero by identifying and implementing tools, projects, and partnership measures.
Truck Route Network Study	2023	Review and evaluate the truck route network to improve the movement of goods and emergency services while minimizing impacts to mixed-use and neighbourhood centres.



4.3 KEY PERFORMANCE INDICATORS

The long-term success of the TMP will be monitored by evaluating key performance indicators (KPIs) which have been developed for all of the Goals and Objectives described in this TMP. City staff can report on these measurements to City Council and the public to evaluate the level of progress that is being made to achieve the Vision and Goals of the TMP. It is important to note that a KPI does not necessarily provide the complete picture or measurable for a specific goal, nor does a KPI have to be a perfect measurement. What is important is that the data used for the KPI is reliable and repeatable, so it paints a clear picture of changes in performance. There must also be a clear and logical correlation between the KPI and the Goal or Objective it is an indicator for.

Each KPI has been assigned a Target that has been established to indicate meaningful progress in a positive direction. Targets that are defined as 'Baseline Targets' represent the existing baseline condition from which the City is working to improve. Some Targets have been set as 'Aspirational Targets', which means that they may not be realistically achievable within the life of the plan. The purpose of aspirational targets is to encourage creativity and innovation, which are of the core values of the City of Kamloops.

The following **Table 4.4** describes the KPIs, their relevance to the TMP Goals and Objectives, the current measured value of the KPI, and the Target set for each. Note that many of the KPIs chosen are also KPIs, which will be used to track the implementation success of KAMPLAN.

The methodology for how each KPI and Target was measured and calculated is provided in **Appendix I** and should be used for future periodic progress reviews of the TMP Goals and Objectives.



Table 4.4: Summary of Key Performance Indicators – Kamloops Transportation Master Plan

KPI	Target	Goal
<ul style="list-style-type: none"> ▶ KPI 1 – Percent share of employed labour force who walk, cycle, take public transit, carpool, or use other forms of sustainable transportation for commuting to work, as measured by Statistics Canada Census data (only provided every 5 years). 	<ul style="list-style-type: none"> ▶ Target 1 – Increase share of travel to work by sustainable modes to 30% by a population of 120,000 (2039), ▶ Target 1 Baseline: 20% (2016 Census Profile) 	<ul style="list-style-type: none"> ▶ Sustainable Transportation ▶ Walking ▶ Cycling ▶ Transit ▶ Integrated Transportation System
<ul style="list-style-type: none"> ▶ KPI 2 – Transit Ridership, as measured annually by BC Transit. 	<ul style="list-style-type: none"> ▶ Target 2 – Achieve annual ridership of 8 million at a population of 120,000 (2039), representing 5% mode share at 3.4 trips per day per person. ▶ Target 2 Baseline: 3.5 million (2016/17) 	<ul style="list-style-type: none"> ▶ Sustainable Transportation ▶ Transit ▶ Integrated Transportation System
<ul style="list-style-type: none"> ▶ KPI 3 – Percent of active transportation infrastructure length compared to total network length. Active mode infrastructure (sidewalks, multi-use paths, pedestrian shoulders, marked curb lanes, bike lanes, signed bike routes) divided by total transportation infrastructure length (active infrastructure length plus lane-km distance of asphalt roads). 	<ul style="list-style-type: none"> ▶ Target 3 – Increase the percent share of active transportation infrastructure to 33% by 2039 ▶ Target 3 Baseline: <ul style="list-style-type: none"> ▶ 414 km of active mode infrastructure ▶ 1,168 lane km of asphalt roads ▶ 1,582 km total infrastructure ▶ 26% active transportation infrastructure (April 2018). 	<ul style="list-style-type: none"> ▶ Sustainable Transportation ▶ Walking ▶ Cycling ▶ Transit ▶ Integrated Transportation System



KPI	Target	Goal
<ul style="list-style-type: none"> ▶ KPI 4 – Municipal GHG emissions, as measured by the City’s corporate emissions inventory 	<ul style="list-style-type: none"> ▶ Target 4 – Reduce to 4,600 tonnes of carbon dioxide equivalents per year (tCO₂e/year) by 2020 with continued reduction in GHG emissions to 2039. (<i>Note: Target under review through corporate emissions strategy</i>) ▶ Target 4 Baseline: Total 2016 tCO₂e (excluding contracted emissions): 7665. Total 2016 tCO₂e (including contracted emissions): 7955. 	<ul style="list-style-type: none"> ▶ Sustainable Transportation
<ul style="list-style-type: none"> ▶ KPI 5 – Number of annual traffic collisions on Kamloops roads causing fatalities as per available ICBC collision data 	<ul style="list-style-type: none"> ▶ Target 5 – Zero traffic collisions resulting in fatalities by 2039. ▶ Target 5 Aspirational – Reduce traffic collisions resulting in serious injuries or fatalities to zero by 2039. ▶ Target 5 Baseline: Five traffic collisions resulted in fatalities in 2016. 	<ul style="list-style-type: none"> ▶ Sustainable Transportation <ul style="list-style-type: none"> ▶ Walking ▶ Cycling ▶ Transit ▶ Goods and Emergency Services ▶ Integrated Transportation System
<ul style="list-style-type: none"> ▶ KPI 6 – Number of annual traffic collisions on Kamloops roads (as per available ICBC collision data) per 1,000 population 	<ul style="list-style-type: none"> ▶ Target 6 – Maintain or reduce number of traffic collisions per 1,000 population. ▶ Target 6 Baseline: 2,793 traffic collisions were reported on Kamloops roads in 2016. For a population of 90,280 people (2016 Census), this equals 31 collisions/1,000 people. 	<ul style="list-style-type: none"> ▶ Sustainable Transportation <ul style="list-style-type: none"> ▶ Walking ▶ Cycling ▶ Transit ▶ Integrated Transportation System



KPI	Target	Goal
<ul style="list-style-type: none"> ▶ KPI 7 – Residential Growth: Percent of new housing units in each sector of the City based on building permits issued 	<ul style="list-style-type: none"> ▶ Target 7 – 20% Core, 18% Northwest, 0% Northeast, 19% Southeast, 43% Southwest at 2039 ▶ Target 7 Baseline: ▶ 2016: 8% Core, 18% North West, 0% North East, 30% South East, 44% South West. ▶ Historical (2005 to 2016): 13% Core, 30% North West, 0% North East, 19% South East, 37% South West. 	<ul style="list-style-type: none"> ▶ Sustainable Transportation
<ul style="list-style-type: none"> ▶ KPI 8 – Weighted average pavement quality index (PQI) per lane km of roadway on arterial and collector roads. PQI is a factor of surveyed asphalt road conditions that considers surface distress conditions, rideability, and structural durability with a maximum score being 100. 	<ul style="list-style-type: none"> ▶ Target 8 – Maintain or exceed an average PQI of 75 ▶ Target 8 Baseline: ▶ 550 lane kms surveyed (arterials and collectors only). ▶ 2012 survey PQI 80.1 ▶ 2015 survey PQI 77.3 	<ul style="list-style-type: none"> ▶ Sustainable Transportation ▶ Transit ▶ Goods and Emergency Services ▶ Integrated Transportation System
<ul style="list-style-type: none"> ▶ KPI 9 – Percentage of urban residential properties connected within 400m or less walking distance to a public transit stop. 	<ul style="list-style-type: none"> ▶ Target 9 Aspirational – 100% of urban residential properties connected within 400m or less walking distance to a public transit stop. ▶ Target 9 – By 2039, 95% of urban residential properties connected within 400m or less walking distance to a public transit stop. ▶ Target 9 Baseline: In 2018, 85% of urban residential properties in Kamloops are connected 	<ul style="list-style-type: none"> ▶ Sustainable Transportation ▶ Walking ▶ Transit ▶ Integrated Transportation System



KPI	Target	Goal
<ul style="list-style-type: none"> ▶ KPI 10 – Annual crime rate, which is the number of criminal code offenses in the City per 1,000 people, as measured by the RCMP (2017 CSCS departmental annual report data, pg. 22). 	<p>within 400m or less walking distance to a public transit stop.</p> <ul style="list-style-type: none"> ▶ Target 10 – Decrease annual crime rate per 1,000 people. ▶ Target 10 Baseline: Crimes vs person (1526), crimes vs property (7497) and other criminal code violations (3159) estimate 90,000 population. = 135 crimes per 1,000 people (2017). 	<ul style="list-style-type: none"> ▶ Sustainable Transportation ▶ Walking ▶ Cycling ▶ Transit ▶ Goods and Emergency Services ▶ Integrated Transportation System
<ul style="list-style-type: none"> ▶ KPI 11 – Percentage of marked crosswalks with sidewalk letdowns for wheelchair user accessibility. 	<ul style="list-style-type: none"> ▶ Target 11 – 100% of intersections with marked crosswalks to have letdowns for wheelchair access by 2039. ▶ Target 11 Baseline: 89% (817 out of 915) of marked crosswalks have letdowns or do not require a letdown for wheelchair access (April 2018) 	<ul style="list-style-type: none"> ▶ Sustainable Transportation ▶ Walking ▶ Integrated Transportation
<ul style="list-style-type: none"> ▶ KPI 12 – Annual pedestrian and bicycle counts along routes that provide key connectivity 	<ul style="list-style-type: none"> ▶ Target 12 – Annual increase in both bicycle and pedestrian usage ▶ Target 12 Baseline: 335 pedestrians and cyclists per day crossing Valleyview Pedestrian Bridge (Summer 2013). Counts for additional major cycling or walking routes may be added in future. 	<ul style="list-style-type: none"> ▶ Sustainable Transportation ▶ Walking ▶ Cycling ▶ Integrated Transportation System



KPI	Target	Goal
<ul style="list-style-type: none"> ▶ KPI 13 – Number of routes where SmartBus technology is implemented 	<ul style="list-style-type: none"> ▶ Target 13 – SmartBus technology is implemented on all transit routes by 2020 ▶ Target 13 Baseline: Zero routes with SmartBus technology out of 13 routes total (2017) 	<ul style="list-style-type: none"> ▶ Sustainable Transportation ▶ Transit ▶ Integrated Transportation System
<ul style="list-style-type: none"> ▶ KPI 14 – Percentage of wheelchair accessible bus stops in the city 	<ul style="list-style-type: none"> ▶ Target 14 Aspirational – 100% of bus stops in urban areas are wheelchair accessible ▶ Target 14 – Increase the percentage of wheelchair accessible bus stops in the City annually ▶ Target 14 Baseline: 70% (394 out of 561) are wheelchair accessible bus stops (April 2018) 	<ul style="list-style-type: none"> ▶ Sustainable Transportation ▶ Transit ▶ Integrated Transportation System
<ul style="list-style-type: none"> ▶ KPI 15 – Level of Service (LOS) on truck routes, as measured by vehicle delay at intersections along truck routes during peak hour periods. 	<ul style="list-style-type: none"> ▶ Target 15 – Provide a LOS D¹ or better on identified truck routes ▶ Target 15 Baseline: Truck routes currently have a LOS C 	<ul style="list-style-type: none"> ▶ Sustainable Transportation ▶ Goods and Emergency Services ▶ Integrated Transportation System
<ul style="list-style-type: none"> ▶ KPI 16 – Percentage of building structures in the city that are within the Kamloops Fire and Rescue (KFR) 10-minute response time 	<ul style="list-style-type: none"> ▶ Target 16 – Maintain the percentage of building structures in the city that are within the KFR 10-minute response time ▶ Target 16 Aspirational – 100% ▶ Target 16 Baseline: 77.6% (April 2018) 	<ul style="list-style-type: none"> ▶ Sustainable Transportation ▶ Goods and Emergency Services ▶ Integrated Transportation System

¹ Level of Service is a measure of traffic delay (in seconds) and ranges on a scale from A to F, with A providing drivers with an average delay of 10 seconds or lower and F providing drivers with an average delay of 80 seconds or more



KPI	Target	Goal
<ul style="list-style-type: none"> ▶ KPI 17 – Average time duration of commute to work per person, as measured by Census data 	<ul style="list-style-type: none"> ▶ Target 17 – Maintain average duration of commute time in Kamloops within 10% of the existing 19.9-minute commute time by the 2021 Household Survey ▶ Target 17 Baseline: 19.9 minutes (Average of 2016 Census Household Survey Travel Time to Work) 	<ul style="list-style-type: none"> ▶ Sustainable Transportation ▶ Walking ▶ Cycling ▶ Transit ▶ Integrated Transportation System
<ul style="list-style-type: none"> ▶ KPI 18 – Traffic Level of Service (LOS) as measured by vehicle delay at intersections 	<ul style="list-style-type: none"> ▶ Target 18 – Maintain overall LOS D or better at all intersections and all major approaches are LOS D or better. Minor approaches level of service E or better. (note exception for truck routes) ▶ Target 18 baseline: Overall LOS C or better at all intersections and all major approaches are LOS D or better. 	<ul style="list-style-type: none"> ▶ Sustainable Transportation ▶ Transit ▶ Goods and Emergency Services ▶ Integrated Transportation System
<ul style="list-style-type: none"> ▶ KPI 19-Transit System Cost Recovery (percentage of operating cost recovered through fares) Reported by BC Transit Annual Performance Summary (APS) 	<ul style="list-style-type: none"> ▶ Target 19: Be the top Tier 1 system in the province (excluding Whistler) ▶ Target 19 Baseline: 37.3% as per 2016/17 APS was top Tier 1 system in the province (excluding Whistler) 	<ul style="list-style-type: none"> ▶ Sustainable Transportation ▶ Transit ▶ Integrated Transportation System
<ul style="list-style-type: none"> ▶ KPI 20-Transit Productivity (Riders per Revenue Hour). Reported by BC Transit APS 	<ul style="list-style-type: none"> ▶ Target 20: Be the top Tier 1 system in the province (excluding Whistler) ▶ Target 20 Baseline: 34.6 as per 2016/17 annual performance summary 	<ul style="list-style-type: none"> ▶ Sustainable Transportation ▶ Transit ▶ Integrated Transportation System



4.4 CLOSING

The TMP is intended to be a high-level transportation planning tool. Many of the ideas outlined build on and reinforce transportation planning goals from other City plans and policy documents. Moving forward with implementing the TMP is important for several reasons:

- ▶ To inform and support staff and City Council's decisions on transportation and land use matters for existing areas and new developments.
- ▶ To promote a healthy and active community.
- ▶ To help the City to work in partnership with local businesses, institutions, and government partners in making informed future transportation decisions.
- ▶ To assist the City with preparing annual budgets and developing capital plans.

As previously mentioned, the TMP helps inform other plans and documents such as KAMPLAN, and it can also be informed by new direction provided by future City plans, policies, and decisions. The TMP is a living document and should be reviewed and updated every 10-15 years so that it can remain relevant to changing transportation and land use conditions.