

**To:** Chief Administrative Officer **Date:** June 6, 2022  
**From:** Arthur Kastelein, Senior Infrastructure Planning Engineer  
**Subject:** **Transportation Master Plan**

---

### **Recommendation(s)**

It is recommended that Council endorse the Transportation Master Plan.

### **Executive Summary**

The final [Transportation Master Plan](#) was delivered by the engineering consultant. The earlier report on existing conditions, the vision for the future, the exploration of possibilities, and the results of community engagement are combined into a number of directions and actions. Those to be implemented via “Policy and Programming” methods will inform upcoming department work plans, and those implemented via “Capital” are used to create future network plans for roads, active transportation (sidewalks and cycling), transit, and goods movement.

The future network plans generated a list of projects, complete with cost estimates and identification of eligibility for inclusion in a Development Cost Charge (DCC) Bylaw. The projects are prioritized and this results in implementation plans for short-term, medium-term, and long-term periods. The financial implications are large, and will be presented for consideration as part of the 2023 financial planning process and in the next update of the DCC bylaw.

### **Purpose**

This report seeks Council endorsement of the [Transportation Master Plan](#) “Mission Mobility 2050”. Endorsement indicates Council’s support of the general direction of the plan and moves consideration of the cost implications to the upcoming financial plan discussions.

### **Background**

Transportation Master Plans (TMPs) are an essential component of local government planning. The City of Mission updates it’s TMP on a regular basis, with the most recent version completed in 2016. A budget item for an update was included in the 2020 Financial Plan.

A request-for-proposals for an updated TMP was publicly posted in 2020, and Urban Systems Ltd, an engineering consulting firm with considerable expertise in transportation planning, was retained in October 2020. It has, after approximately 20 months, completed the plan.

The process for creating this TMP included an on-line questionnaire/survey, numerous meetings with City staff, presentations to several committees, two workshops with City Council and senior staff, a virtual Open House presentation, and posting draft documents and a video on the community communications platform “Engage Mission”.

Considerable input from stakeholders has been received and has influenced the plan. The result is a comprehensive master plan for transportation which calls for significant investment in Mission’s infrastructure over the next decades.

## **Discussion and Analysis**

Similar to the Utility Master Plan, the TMP combines capacity and growth needs with some asset management analysis. The capacity and growth needs are to ensure that future developments have the supporting transportation facilities to move residents, employees, customers, and suppliers to and from the development areas. The asset management section looks at pavement, which has a limited service life, and recommends funding levels to maintain the driving surface of roads. The TMP does not include details of new roads inside the SCPA of Waterfront lands – those are included in separate studies underway at the same time as the master plan.

There are a number of complementary studies, most of which feed into the final TMP. They include:

### **Task 1. Transportation Network Plan Update**

“Mission Mobility 2050”, the term coined for this part of the study, includes a comprehensive review of the existing pedestrian, cycling, transit, goods movement, and vehicle traffic networks, a vision for the future, and explorations of what is possible. This generated a recommended transportation network for 2050, along with a short-term implementation plan.

### **Task 2. Cross-Sections**

Cross-sections show the required features to be provided in new and upgraded roadways. Mission currently has a number of different cross-sections, based on roadway classifications, and these have been reviewed in considerable detail.

New standards and cross sections were developed using internal and external expertise. They are considered best practice for the development of streets today. These new standards and cross sections align with the BC Active Transportation Design Guideline, are considered multi-modal, and support the OCP policies that encourage the use of public transit, bicycles, and walking.

The revised cross-sections are in the process of being included in the Development and Subdivision Control Bylaw, and the revised bylaw is posted on [engage.mission.ca](https://engage.mission.ca) for public consultation.

### **Task 3. Traffic Safety Strategy Implementation Plan**

The Traffic Safety Strategy (TSS) approved in 2019 (RC 19/480) included five crosswalk upgrades for the 1<sup>st</sup> year plus a to-be-determined set of safety improvements for the following years, funded at \$250,000 per year.

The consultant developed a multi-year implementation plan for the TSS to determine where the funds will have the most benefit. The consultant has analysed accident data, existing crosswalks, and requests for traffic calming projects.

There are a number of sites recommended for safety improvements.

### **Task 4. Feasibility Study – Port Terminal**

This high-level review of the feasibility of developing a Mission port terminal was a request of the Economic Development Select Committee. It suggests Mission has some potential in the long-term as a short sea shipping port. As road and rail congestion to the west of Mission increase, existing or new operators in the region might consider incorporating short sea shipping in their logistics strategies. However, road/rail goods movement are not currently constrained to the point to entice operators to do so.

## **Task 5. Pavement Condition & Assets**

The consultant assessed the condition of the pavement on all Mission's roads. At the same time, it collected spatial data on the location of sidewalks, curbs, and signs which are added to the City's Geographic Information System (GIS) mapping. The assessment concludes the overall condition of pavements on City roads has deteriorated slightly since the previous assessment done in 2016.

The pavement assessment was followed by a recommended strategy for pavement rehabilitation, a recommended annual funding level of \$2.4M per year, and a 10-year pavement maintenance strategy.

### **Analysis - Implementation Plan**

The guidance for the TMP is provided by 6 goals which lead into 6 pillars:

Pillar 1: Safe Mobility

Pillar 2: Land Use Integration

Pillar 3: Streets for People

Pillar 4: Changing Technologies

Pillar 5: Asset Management

Pillar 6: Equity and Accessibility

The pillars each have a number of "Directions" which are broken down by timeframe, method of implementation, responsibility, and financial impacts. These will be forwarded to the applicable departments for possible inclusion in their workplans.

Similarly, there are 4 themes:

Theme 1: Active Transportation

Theme 2: Transit

Theme 3: Goods Movement

Theme 4: Driving

Each theme has "Actions" which are broken down by timeframe, method of implementation, responsibility, and financial impacts. As well, there are 10 "Bold Moves" Some actions are already underway, others will form part of future financial plans.

The actions related to capital improvements result in a very large number of projects which are recommended over the next 30 years, with estimates of total costs ranging from \$335M to \$425M (plus land acquisition):

Improvement Type	Level of Investment
<b>Road Network</b>	
- Corridors	\$101 – \$146 million
- Intersections	\$9 - 19 million
- Rehabilitation	\$72 million
- Safety Improvements	\$7.5 million
<b>Pedestrian Network</b>	
- Sidewalks	\$86 – 106 million
- Crossings	\$1 million
<b>Bicycle Network</b>	
- Bicycle Facilities and Multi-Use Pathways	\$44 – 59 million
<b>Transit Network Management</b>	
- Bus Stop Improvements	\$3.7 million
- Transit Exchanges	\$10 million
<b>Total</b>	<b>\$335 – 425 million</b>

The range in total costs from \$325M to \$415M is dependant on the pace of development in the Cedar Valley area. If that area is expected to develop fully in the next 30 years, all \$415M worth of projects are recommended. If develop activity is projected to reduce as a result of other development areas being available, some of the projects will not be necessary in the next 30 years, and a lower total cost is likely.

Development Cost Charges (DCCs) and development funded works will fund approximately 1/3 of the total costs but the remaining 2/3 will need to be funded from tax revenue, grants, or other sources. The DCC eligible works are those which are required because of growth, and typically include arterial roads, and about 50% of the cost of “active transportation – cycling”, as it increases road capacity. Sidewalks on local roads, which make up virtually all of the projects included in “active transportation – sidewalks”, are not eligible. Nor are transit stop improvements or pavement rehabilitation works. The DCC/Developer funded projects will be reviewed as part of the proposed update to that bylaw but significant levels of funding are required from other sources.

The table below focuses on the short and medium-term (2022-2031) recommendations, as these are the most relevant to preparation of the next financial plan. It is assumed the non-DCC funded portion of “corridor” and “intersection” improvements are or will be matched by the 10-year financial plan, but the other types of improvements require additional investment if they are to be achieved.

<b>2022-2031</b>	<b>Total Estimated Cost</b>	<b>DCC or Developer Funded</b>	<b>Non-DCC Funded</b>	<b>Current 10-year Financial Plan</b>	<b>Annual Increase in Funding Required</b>
<b>Corridor and Intersection Improvements</b>	\$52,938,000	\$50,459,000	\$2,479,000	\$2,479,000	\$0
<b>Active Transportation - Sidewalks</b>	\$19,479,000	\$829,000	\$18,650,000	\$5,566,000	\$1,308,000
<b>Active Transportation - Cycle &amp; Multi-Use Paths</b>	\$19,216,000	\$9,490,000	\$9,726,000	\$5,857,000	\$387,000
<b>Traffic Safety Strategies</b>	\$2,500,000	\$0	\$2,500,000	\$1,115,000	\$138,000
<b>Transit Stop Improvements</b>	\$1,600,000	\$0	\$1,600,000	\$1,462,000	\$14,000
<b>Pavement Rehabilitation</b>	\$24,000,000	\$0	\$24,000,000	\$13,531,000	\$1,047,000
<b>Totals</b>	<b>\$119,733,000</b>	<b>\$60,778,000</b>	<b>\$58,955,000</b>	<b>\$30,010,000</b>	<b>\$2,894,000</b>

### **Implementation Plan Discussion**

Most of the improvements in the plan are assigned to a time period, not to a specific year, with the exception of Pavement Rehabilitation. It is an annual expenditure, and is preventive maintenance – funds spent on pavement rehabilitation now minimize the cost of vastly more expensive road reconstruction later.

The largest increase in funding is identified for Active Transportation – Sidewalks. This reflects the lack of sidewalk on many roads constructed before they were made a requirement in the Development and Subdivision Control Bylaw. The TMP applied a sophisticated analysis of a number of factors - including proximity to schools, parks, and transit stops, overall network connectivity, equity - to generate a prioritized list of projects. It appears some of the projects can be funded by development through frontage works, and staff will be adjusting the list of recommended projects to account for this. Another potential source of sidewalk funding is Local Area Service projects, where the City contributes 25% towards a sidewalk project requested by a group of property owners. It is more equitable than using tax revenue which results in property owners who have already paid for sidewalks on their street also paying for sidewalks on other streets.

### **Next Steps**

Staff will review the financial implications of the TMP to develop a proposed affordable and phased financial strategy for the list of projects as part of the 2023 financial plan process.

The projects which are necessary for growth will be added to the proposed Development Cost Charge bylaw update, where applicable.

Other areas which staff will pursue include:

- a) A comprehensive review of options for crossing Silverdale Creek, linking the Cedar Valley neighbourhood with the Silverdale Comprehensive Planning Area. The 2016 TMP and the current OCP shows different alignments, and these will be reviewed along with other routes to determine an optimal route.
- b) Distributing the Bold Moves to appropriate City departments for inclusion in department work plans.

### **Council Goals/Objectives**

The Transportation Master Plan aligns with the Strategic Plan in the areas of:

- a) A Safe Community and Priority Action 1.1 Develop and implement a Traffic Safety Strategy.
- b) Secure Finances, Assets, and Infrastructure. Although it is not specifically stated in the Strategic Plan, the TMP complements Priority Action 2.3 Develop engineering master plans for long term infrastructure planning (water, sewer, drainage).
- c) Bold Economic Development. The Port Terminal component of the study aligns with this.

### **Financial Implications**

There are no immediate financial implications associated with this report. Staff will develop financial strategy for the Transportation Master Plan as part of the 2023 financial planning process.

### **Communication**

If the recommendation for endorsement is approved, the Transportation Master Plan will be posted on the City's website. As well, City communications staff will prepare a press release and post the recommendation on social media.

<b>Report Prepared by:</b>	Arthur Kastelein, Senior Infrastructure Planning Engineer
<b>Reviewed by:</b>	Tracy Kyle, Director of Engineering and Public Works
<b>Approved for Inclusion:</b>	Mike Younie, Chief Administrative Officer