
MEETING TYPE: Regular Council Meeting
MEETING DATE: Tuesday, September 06, 2022
AUTHOR: Matthew Salmon, Director of Engineering and Environmental Services
DEPARTMENT: Engineering and Environmental Services
ITEM TITLE: Mobility Improvement Program Adoption
DESCRIPTION: The Mobility Improvement Program is being presented to Council for adoption.

QUESTION

Does the Mobility Improvement Program as presented, provide a sustainable road infrastructure renewal and improvements program that meets the mobility needs of the community for the next 20 years?

OPTIONS

- A. THAT the Mobility Improvement Program, prepared by Align Engineering, dated August 25, 2022 File No. A21-026 Revision 9, attached to and forming part of this report, be adopted;
AND THAT the Transportation for Tomorrow (T4T), prepared by Strategic Infrastructure Management Inc., dated December 2014 and adopted by Council on March 17, 2015, be rescinded.
- B. THAT the Mobility Improvement Program, prepared by Align Engineering, dated August 25, 2022 File No. A21-026 Revision 9, be referred back to staff for amendments as identified by Council.

EXECUTIVE SUMMARY

The Mobility Improvement Program provides an updated 20-Year Road Improvement and Renewal Program (hereinafter referred to as the "20-year Program") aligning the goals and objectives of the Official Community Plan and the Mobility Master Plan. The Mobility Improvement Program was developed by assessing current road conditions, reviewing the progress of the Transportation for Tomorrow capital plan, the creation of functional cross-section road components and establishing funding requirements.

The Mobility Master Plan was adopted in Feb 2021 and together with the Mobility Improvement Program, will form the new suite of mobility/transportation plans to replace the Transportation for Tomorrow Plan. The Mobility Master Plan's focus is the strategic elements, whereas the Mobility Improvement Program focus is on the operational aspects of the mobility needs of the community. Both these documents redefine the District's transportation network as the mobility network and focus on addressing inequity and ensuring mobility for all. Equity in mobility speaks to providing safe, efficient, and affordable travel options for all ages and abilities.



The District currently allocates just over \$2 million a year to the 20-year Program, with Development Cost Charges (DCC's) contributing approximately \$1 million. The revised 20-year program costs \$3.48 million per year in 2022 dollars (\$69.6 million total). Costs associated with roadway construction in the Okanagan region have risen somewhere between 95%-115% since 2014. District staff have been reporting since 2017 of a funding deficit (unfunded liability) in the District's the 20-year Program, increasing the program backlog year-on-year. The majority of the funding deficit is attributable to DCC's and will be addressed by the DCC Bylaw update in 2023. Staff will provide Council with options to address any taxation portion of the funding deficit through future annual budget deliberations.

In addition to addressing the funding deficit, for the 20-year program to be sustainable, there is a recommended \$140,000 per year increase for land acquisition and \$65,000 a year for crack sealing which is based on 2022 figures without allowing for annual inflation or adjusting for future parcel growth.

KEY INFORMATION

The District of Lake Country operates and maintains 208 lineal kilometres of roadway combined with sidewalks, bike lanes, and transit infrastructure supported by signage, streetlights, landscaping, street furniture, and drainage systems to form the District's mobility network. This network is essential for connecting the community, providing access to lands, and supporting business within the District.

The goal of the Mobility Improvement Program is to provide long-term sustainability of the mobility networks. To achieve this, the aims are:

- 1) Maintain safe and functional conditions; and
- 2) Advance the Master Mobility Plan objectives.

A crack sealing program has been included in the Mobility Improvement Program. The establishment of a crack sealing program was recommended in the Transportation for Tomorrow Plan, however specific funding never allocated. Crack sealing is an operational preventative regime that is highly cost effective if utilised correctly. Filling cracks in the asphalt extends the life of the road surface substantially by reducing water penetration which causes potholes to form leading to pavement failure. In the suite of pavement maintenance options, crack sealing fits in between the Interim Pavement Renewal Program and routine pothole repair.



The Proposed 20-Year Road Improvement and Renewal Program shown in Table 4 of the Mobility Improvement Program has been extended as much as possible to schedule renewal works with anticipated pavement life expectancy. Although much work has been undertaken to forecast renewal timing, it is not an exact science and a

safety margin has to be maintained to account for premature failure or accelerated wear. Extending the renewal timing beyond those proposed in the 20-year Program could result in roads failing and being classified as unsafe.

DESIRED BENEFIT

The overarching aim of the Mobility Improvement Program is to provide a sustainable long-term renewal and improvement program that meets the mobility needs of the community.

STRATEGIC RELEVANCE AND COMMUNITY SUSTAINABILITY

1. **Official Community Plan (OCP)** - The OCP and the Mobility Master Plan's core objectives are to **create a safe and efficient multi-modal transportation network**. The Mobility Improvement Program continues and builds upon these objectives and priorities for the District's transportation network.
2. **Councils Mission Statement** - The Mobility Improvement Program is aligned with Councils Mission Statement and 5 supporting Pillars to **provide sustainable infrastructure** that meet community needs.
3. **Council's Strategic Priorities 2022 Action Plan** – Under the Strategic Priority to “**Create Infrastructure That Meets Community Needs**” is to Support Mobility Implementation Program.

BACKGROUND/HISTORY

Council adopted the Mobility Master Plan on 16th Feb 2021 with the accompanying next steps:

- Start work on the Mobility Master Plan Implementation Plan (Twelve Recommendations)
- Road Condition Assessment and Renewal Program Review
- Create the Mobility Improvement Program

The full chronology showing the evolution of the Districts road improvement and renewal plans and other interrelated work from 2002 to 2020 was included in the Mobility Master Plan Adoption report to Council (Attachment A), since then the following has occurred:

- **Feb 2021:** Mobility Master Plan adopted
- **Aug 2021:** Mobility Improvement Program (Road Condition Assessment) Strategy Session (presentation attached - Attachment B)
- **Aug 2021:** Mobility Master Plan update on implementation
- **Dec 2021:** Mobility Improvement Program Strategy Session (presentation attached - Attachment C)
- **Sep 2022:** Mobility Improvement Program presented for adoption (DRAFT Mobility Improvement Program attached - Attachment D)

The Transportation for Tomorrow plan gave the District its first sustainable road improvement and renewal program and achieved the following objectives:

1. Provided a funded implementation plan and established taxation levels required to achieve the District's transportation vision of “**Getting around Lake Country in safe and enjoyable ways.**”
2. Established the Levels of Service (LoS) for maintaining, operating, and improving the District's mobility network.

Since the implementation of the Transportation For Tomorrow plan, the District has seen large increases in construction costs, first in 2017 and again from 2020 onwards.

DISCUSSION/ANALYSIS

The funding deficit for the 20-year Program was first identified and discussed in 2017 with Council and then again in 2021. The future economic environment is uncertain and hard to predict, but staff can state with confidence that the unfunded liability will remain at some level if unaddressed, history has demonstrated that infrastructure costs will always increase over time. Further delay in addressing the funding deficit will cause the condition of the communities' roads to worsen. As roads deteriorate beyond the point of economical repair the maintenance burden becomes unmanageable impacting public safety and user experience.

IMPACT ON INFRASTRUCTURE OR MUNICIPAL SERVICES

At present there is no dedicated Project Manager to the road improvement and renewal program. Currently one District staff member oversees the management of these projects with support from the broader team as required. There is no immediate proposed change to the capital infrastructure projects delivery model as the projects are not increasing in volume only cost. In certain instances, project complexity is also increasing driven mainly by current market forces and increasing regulation. It is anticipated that there are no additional staff members required to deliver the revised 20-year program in the short term, this will be closely monitored however as it is likely that a threshold will be reached in the future whereby additional staff members will be required to ensure project delivery remains consistent with the 20-year Program.

IMPACT ON STAFF CAPACITY AND FINANCIAL RESOURCES

The renewal and reconstruction (replacing existing road structure and pavement surface) and operational (snow clearance, sweeping, mowing, line painting etc.) elements of the 20-Year Program are mainly funded through taxation, with the operational elements, except crack sealing, being mostly fully funded. The improvement elements (curb & gutter, sidewalks and bike lanes) are predominately funded through Development Cost Charges (DCC's) and grants, these elements make up the majority of the funding deficit.

Staff will continue to actively seek grant support to supplement future infrastructure upgrades. The DCC update was initially targeted for completion during 2022, due to various prerequisite tasks not being complete and a host of competing interests taking priority such as the Liquid Waste Management Plan, the DCC update will be complete in 2023. For the 20-Year Program to be sustainable it requires additional funding, largely through DCC's. The current funding ratio for DCC roads is 53% is funded through taxation and 47% through DCC's.

Consultation, Public Feedback, and Communication to and from the Public. Community engagement conducted in 2019 on Pedestrian, Bicycle, and Recreational Trails travel, identified how residents wished to travel. Also, during 2019 an inventory of pedestrian, bike, and recreational trails networks in the District was created. The Mobility Improvement Program incorporates past planning, programming, and public engagement initiatives such as that conducted for development of the Transportation for Tomorrow plan and the OCP update in 2017. Council and Staff continue to hear from the community across all platforms about how important it is to have safe places to walk and cycle and the condition of the road surfaces. Once adopted the public will be informed of the Mobility Improvement Program through a coordinated communications release.

ANALYSIS OF OPTIONS FOR CONSIDERATION

- **Adopt the Mobility Improvement Program.** The version of the Mobility Improvement Program presented for adoption is the culmination of nearly three years work by staff and selected specialist partners. The Mobility Improvement Program has evolved and refined over the course of the project through input from many stakeholders such as the District of Lake Country Council, staff, consultants, and regional partners. The 20-Year Program presented provides a sustainable infrastructure plan that meets the needs of a growing community, is complementary to the Mobility Master Plan and continues to build upon the philosophy and guiding principles created by the Transportation for Tomorrow Plan.
- **Amend the Mobility Master Plan.** Council may elect to change elements of the plan as proposed. The feedback obtained from the two strategy sessions with Council has been incorporated into the final version of the Mobility Improvement Program. Any subsequent changes may further delay the adoption and delay the opportunity for Council to consider addressing the funding deficit during the 2023 budget deliberations. Depending on the scope and scale of further amendments requested by

Council, additional funding may be required as the project budget has been exhausted. In addition, staff would have to manage the additional workload further amendments would create possibly delaying the implementation further.

Respectfully Submitted,
Matthew Salmon, P.Eng.
Director of Engineering and Environmental Services

This report has been prepared in collaboration with: *(author to list names and titles of collaborators)*

This report has been prepared on consultation with the following:
(author to request inclusion of initials to show concurrence)

Tanya Garost, Chief Administrative Officer	
Reyna Seabrook, Acting Chief Administrative Officer	RS
Trevor James, Chief Financial Officer	TJ
Reyna Seabrook, Director of Corporate Services	RS
Greg Buchholz, Director of Utilities	GB

Attachments

A.	RFCD - Mobility Master Plan Adoption (for reference)
B.	Aug 2021 Mobility Improvement Program Strategy Session Presentation
C.	Dec 2021 Mobility Improvement Program Strategy Session Presentation
D.	DRAFT Mobility Improvement Program

MEETING TYPE AND DATE: REGULAR MEETING – FEBRUARY 16, 2021
AUTHOR: MATTHEW SALMON
SUBJECT: **MOBILITY MASTER PLAN ADOPTION**

ESSENTIAL QUESTION

Does the Mobility Master Plan as presented, provide the vision and guiding principles required to shape, inform and deliver the mobility needs of the Lake Country community for the next 20 years?

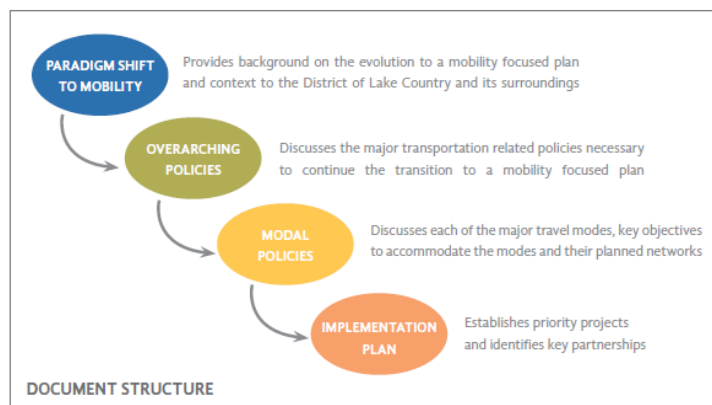
OPTIONS

- A. THAT the Mobility Master Plan be adopted.
- B. THAT the Mobility Master Plan be referred back to staff for amendments as provided by Council.

EXECUTIVE SUMMARY

Mobility is the defining term to provide transportation infrastructure and services to users. It has evolved from a desire to create more sustainable travel options and provide a higher quality of life in communities. Mobility refers to the ease of travel where transportation refers to the act of travel. The greater the mobility, the fewer barriers there are to travel and the greater quality of options available to users. Mobility puts more emphasis on the user and treating transportation policy and infrastructure as a means to provide options to users. The paradigm shift to mobility comes at a time where there is increased demand for greater accessibility and more inclusive and sustainable mobility options and solutions.

The Mobility Master Plan provides related policy for the District of Lake Country to prioritize infrastructure projects and allocate funds to enhance mobility in Lake Country while meeting the District's vision, aims, and guiding principles for mobility. This Plan builds upon past District initiatives that focus on improving how people travel in Lake Country, such as the Transportation for Tomorrow plan and the Official Community Plan (OCP). It incorporates past planning, programming, and public engagement initiatives related to the plans and is to be used to guide and identify the policies, actions, and priorities to improve upon mobility in the District of Lake Country with a consistent approach. The Mobility Master Plan document is organized into the following sections:



The Mobility Master Plan focuses on the strategic level mobility aims of the community and incorporates an Implementation Plan that focuses on the immediate recommendations and partnerships that will move the Mobility Master Plan forward for the next 5-year period. The Mobility Master Plan should be regarded as a living document and therefore the Implementation Plan section should be revisited every five years to reflect on progress and changes to the environment to effectively reassess, identify and prioritize the projects and initiatives to be accomplished in each subsequent 5-year period. Subsequent to the adoption of the Mobility Master Plan a Mobility Improvement Program will be produced to guide the operational level aspects. Both these documents will replace the Transportation for Tomorrow plan.



The Mobility Improvement Program will revise the existing Capital and Operational Programs currently contained within the Transportation for Tomorrow Plan, including the financial strategy to ensure the existing mobility plans are adequately funded and financially sustainable. A Capital Budget Request was submitted to Council as part of the 2021 Budget to undertake a Road Condition Assessment and Renewal Program Review which will form the main component of the Mobility Improvement Program. It is anticipated that the Mobility Improvement Program will be complete and presented to Council by September 2021.

The key strategic question is: Does the Mobility Master Plan meet the District's vision, aims, and guiding principles for mobility?

The Mobility Master Plan has been created to align, compliment and advance the mobility strategies within the OCP, in particular the Goals, Objectives and Policies focused on providing a safe, healthy and sustainable network that also addresses the mobility inequities within our community. To ensure the needs of all users are considered an equitable balance is required. The Mobility Master Plan was set as a Council Strategic Priority at the end of 2019 and marks the next evolutionary step for the District's mobility vision whilst also capturing the paradigm shift philosophies discussed at a number of Council Strategy Sessions. The paradigm shift principles contained within the Mobility Master Plan pave the way for future updates to other District policies such as the Official Community Plan (OCP), the Zoning Bylaw, the Subdivision and Development Servicing Bylaw and neighborhood plans. The capital and operational programs, including the financial strategy are currently contained within the Transportation for Tomorrow plan and will need to be updated and transferred to the Mobility Improvement Program.

The Mobility Master Plan will enable the District will move forward with a clear vision for mobility that will shape the community for generations to come. Without clear policy direction guiding the District's mobility strategies, there is a risk that the community develops in an uncoordinated manner that fails to meet visions and needs of the community. Once the path has been set, investments made and infrastructure provided, it is hard to change this

course or reverse the decisions of the past. Therefore, it is important that forward looking plans such as this are implemented proactively and set the course for the future. The Mobility Master Plan will also provide valuable direction and focus for future iterations of other District Policies, especially those integral to guiding future development that shape our community such as the Official Community Plan, Zoning Bylaw and Subdivision and Development Servicing Bylaw.

Creating sustainable and coherent mobility strategies is key to meeting the growing needs of the community and ensuring the vision of “**getting around Lake Country in safe and enjoyable ways**” is met. To achieve this the following actions need to be completed:

- The Mobility Master Plan needs to be adopted so staff can start work immediately on the recommendations within the Implementation Plan.
- The Road Condition Assessment and Renewal Program Review Budget Request requires approval to allow the Mobility Improvement Program to be produced.

The preferred strategy is to adopt the Mobility Master Plan so staff can immediately start work on the recommendations within the Implementation Plan.

CAO COMMENTS

BACKGROUND/HISTORY

Over the years there has been much work undertaken to shape and improve movement and mobility within our community, all with the common objectives of improving the following areas:

- Safety
- Active transportation
- Transit
- HWY 97 Corridor
- Development of Main St
- Continuous monitoring and development of the related mobility policies and programs

The list below summarizes the key events and achievements that have shaped mobility within the community since incorporation:

- **Sep 2002 – Jan 2003: Transportation Plan Phase 1-Review Existing Conditions** ([link](#)). To prepare a report on the existing operational conditions of the District's transportation network (i.e. Phase 1).
- **Apr 2003 – Mar 2007: Transportation Plan Phase 2 – Develop Updated Transportation Plan** ([link](#)). The study was initiated by the District of Lake Country to develop a future (20 year) transportation plan that will accommodate the future development as outlined in the District Official Community Plan (OCP). Development pressures in the District have advanced the need for an updated comprehensive District transportation plan.
- **May 2010: Transportation Action Plan Discussion Paper** ([link](#)). This document provides a general discussion opener on transportation issues in the District of Lake Country and provides recommendations on what the District could achieve with the creation of an effective and efficient transportation system.
- **Sep 2010: Integrated Asset Management Capital Plan** ([link](#)). This 20 year plan was Lake Country's first long term multi-asset investment plan that provided community decision-makers with the information needed to better understand the level of expenditure required to maintain Lake Country's infrastructure at a sustainable level.
- **Apr 2012: Integrated Transportation Framework** ([link](#)). The Integrated Transportation Framework (ITF) was scoped to identify levels of service, condition and risk for all of the District's road segments and calculate the corresponding improvement, renewal, and maintenance costs based upon the level of functionality each segment needed to provide. The ITF tool was also designed to enable the District to run a wide variety of service, condition and risk scenarios by promoting and demoting road segments in the hierarchy while maintaining a set affordability limit. This allows the District to calculate how much it would cost for their preferred and sustainable roadway vision.
- **Oct 2013: Transportation for Tomorrow plan update** ([link](#)). Report to Council providing an update on the development of the Transportation for Tomorrow plan.
- **Feb – Mar 2015: Transportation for Tomorrow adoption.** Report to Council for adoption of the Transportation for Tomorrow plan ([link](#)) and the adopted version of the plan ([link](#)).
- **Aug 2019: Lake Country Pedestrian, Bike and Recreation Trails Plans - WHAT WE HEARD REPORT** ([link](#)). This report outlines how the community of Lake Country was engaged (i.e. "What Was Done") and summarizes key themes and directions that resulted from community feedback (i.e. "What We Heard").
- **Dec 2019:** The Mobility Master Plan was set as a Council Strategic Priority ([link](#)) in Jan 2020.

- **Feb 2020:** Paradigm Shift Strategy Session ([link](#))
- **Oct 2020:** Mobility Master Plan Strategy Session ([link](#))
- **Nov 2020:** Mobility Master Plan Strategy Session ([link](#))

DISCUSSION/ANALYSIS

Legislation & Applicable Policies. The Mobility Master Plan is informed by several District of Lake Country Planning documents. The relation of these plans to the Mobility Master Plan is shown in the graphic below and summarized in the following section:



- **Official Community Plan** - The Official Community Plan (OCP) update contains four unique transportation goals and ten objectives, each with their own policies, to guide the future transportation network. The modal hierarchy established in the OCP sets the foundation of Mobility Master Plan with the following descending order of priority: walking, transit, cycling, high-occupancy vehicles, goods movement and single occupancy vehicles.
- **Transportation for Tomorrow Plan** - The Transportation for Tomorrow Plan was paramount to beginning the evolution of fulfilling people's mobility needs versus transportation needs. It introduced aspects of road safety and active transportation as it set a new vision for transportation in the District. The Plan developed programming to address the road network's unfunded liability for operations and maintenance, renewals, and roadway improvements. The Mobility Master Plan continues and builds upon the vision and priorities for the District's transportation network.

- **Parks & Recreation Master Plan** – Council adopted the Parks and Recreation Master Plan in December 2019, which is the subsequent plan related to the trail network in Lake Country. The plan sets out the vision to maintain and improve the existing trails as well as provides a high level overview of the future of the recreational trails network. The plan promotes safe places to walk and ride bicycles, a major mobility outcome of the stakeholder engagement.
- **Pedestrian, Bike & Recreational Trails** - In 2019, the District collected an inventory of pedestrian, bike, and recreational trails networks in the District. This information was used to present District progress and anticipated future progress for the networks through a community engagement process.
- **External Plans** - There are other planning initiatives in the region including the Regional Transportation Plan provides a unified vision and direction for the regional transportation system in the Central Okanagan.
 - **Highway 97** - The Ministry of Transportation and Infrastructure (MoTI) Highway 97 Lake Country Planning Study is investigating future transportation needs of Highway 97 between Duck Lake and Lodge Road in Lake Country. A major aspect of the study includes the Highway 97 & Glenmore Road /Beaver Lake Road intersection to produce alternatives for interim and long-term improvements including grade separation. In addition, a connection from the Kelowna Industrial Park to Highway 97 and Glenmore Road could shift this traffic away from District town centre streets. Long-term plans to transition Highway 97 into an 80 km/h controlled access arterial are counter to the objectives of this plan to improve mobility and safety across Highway 97. The District seeks to improve existing opportunities to cross Highway 97 rather than provide fewer crossing locations. The District has considered the increasing traffic volume along Highway 97 resulting in the planning for better connected parallel routes to reduce the demand on the Highway for internal trips. Working together with the Ministry will be key to continue to address the needs of the District and the Ministry with regards to Highway 97.
 - **Transit** - The 2018 Central Okanagan Transit Future Action Plan provides an update to the 2012 Plan and identifies five year transit service and infrastructure priorities based on existing transit services, changing land use patterns and plans, and public and stakeholder feedback.

Technical Considerations. The technical work behind the Mobility Master Plan has been captured in a Road Network Plan which formed the engineering foundation required to provide a clear understanding of current and anticipated capacity, functionality, classification, and the road safety improvement needs over a 20-year period based of anticipated growth. As part of this technical analysis a network traffic model was also produced which identifies the areas where capacity improvements will be needed based on future land use projections. As improvements are made to the network, the District should evaluate the effectiveness of the improvements on mobility network safety and operations.

- **Impact on Infrastructure and Other Municipal Services.** There are no immediate impacts associated with the adoption the Mobility Master Plan as it is strategic in nature.

- **Impact on Staff Capacity and Financial Resources (Cost/Benefit Analysis).** Upon adoption of the Mobility Master Plan, staff will start work on the recommendations. Of particular note is the Road Condition Assessment and Renewal Program Review which requires funding approval by Council and is integral to creating the Mobility Improvement Program. Staff will be bringing forward the results of the Road Condition Assessment and Renewal Program Review to discuss the findings and any potential changes to the current program and Levels of Service.

Consultation, Public Feedback, and Communication to and from the Public. Community engagement conducted in 2019 on Pedestrian, Bicycle, and Recreational Trails travel identified how residents wished to travel, a link to the report can be found under the BACKGROUND/HISTORY section. Also during 2019, the District collected an inventory of pedestrian, bike, and recreational trails networks in the District. This information was used to present District progress and anticipated future progress for the networks through a community engagement process. The Mobility Master Plan incorporates past planning, programming, and public engagement initiatives such as that conducted for Transportation for Tomorrow and the OCP update in 2017. Council and Staff continue to hear from the community across all platforms about how important it is to have safe places to walk. Once adopted the public will be informed of the Mobility Master Plan through a coordinated communications release.

ALIGNMENT TO COUNCIL'S VISION

The guiding principles in the Mobility Master Plan are also reflective of Council's Vision and Mission Statement, specifically within the statements around nurturing a healthy natural environment, providing sustainable infrastructure and creating an inclusive community. These elements are also echoed in the Pillars of the Vision and Mission Statement by providing *"well maintained infrastructure and facilities that meet community needs and allow growth and development for prosperity."*

ANALYSIS OF OPTIONS FOR CONSIDERATION

Three main options exist for guiding the future mobility strategies:

- **Status Quo.** If Council elects not to adopt the Mobility Master Plan, the Transportation for Tomorrow plan would continue to be utilised to guide the active transportation and road renewal aspects of the mobility strategy and serve as both master plan and implementation plan. Although the guiding principles and the renewal and improvement program are still valid, the Transportation for Tomorrow plan lacks the holistic view of mobility that is provided in the Mobility Master Plan and also doesn't benefit from the latest technical analyses as provided for by the Road Network Plan. It also lacks the broader mobility vision with inclusion of recreational trails into the plan. Transportation for Tomorrow does not consider the community engagement conducted in 2019 on Pedestrian, Bicycle, and Recreational Trails. The Road Condition Assessment and Renewal Program Review would still need to take place if the Mobility Master Plan wasn't adopted.
- **Adopt the Mobility Master Plan.** The version of the Mobility Master Plan presented for adoption is the culmination of nearly two years work by staff and selected specialist partners. The plan has evolved and been refined over the course of the project through input from many stakeholders such as District of Lake Country Council, Lake Country community, staff, consultants, and regional partners. Therefore, the author believes that this plan is the best version it can be and clearly sets the visions and objectives to guide mobility within the community for next 20 years.
- **Amend the Mobility Master Plan.** Council may elect to change elements of the plan as proposed. The feedback obtained from the two strategy sessions with Council have been incorporated into this plan

and therefore any subsequent changes may further delay the adoption the subsequent implementation plan from moving forward and the benefits being realized. Depending on the scope and scale of further amendments, additional funding may be required as the project budget has been exhausted. In addition, staff would have to manage the additional workload further amendments would create according to current capacity and competing priorities possibly delaying the Implementation Plan.

Respectfully Submitted,

Matthew Salmon
Director of Engineering and Environmental Services

This report has been prepared with the collaboration of the following individuals:

COLLABORATORS	
TITLE	NAME
Director of Infrastructure Services	Greg Buchholz
Landscape Design Technician	Steve Petryshyn

This report has been prepared in consultation with the following departments:

CONCURRENCES	
DEPARTMENT	NAME
Chief Administrative Officer	
Deputy CAO/CFO	Tanya Garost

ATTACHMENT:

- A. Mobility Master Plan

Road Condition Assessment

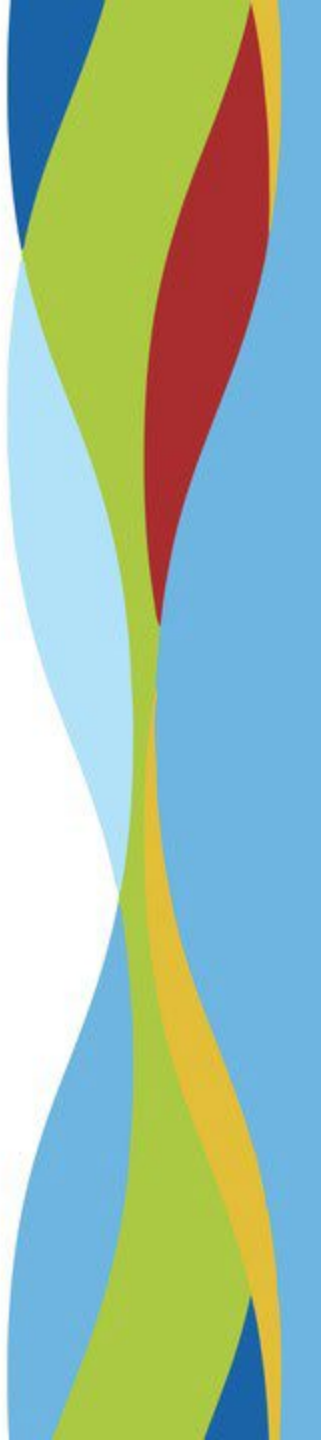
Strategy Session Aim:

Present Findings of Condition Assessment & Discuss Cross-Section
Approach



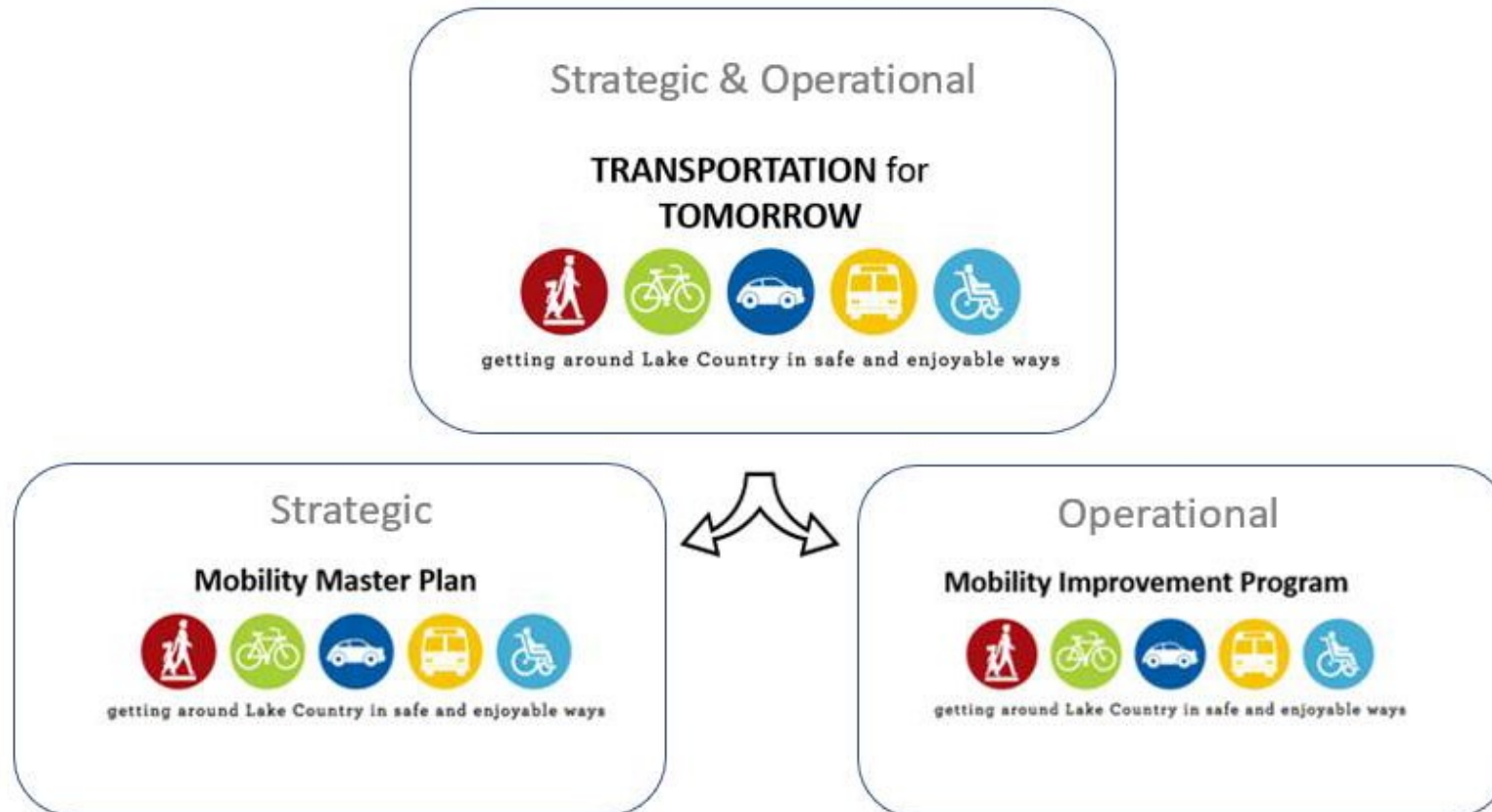
Outline

- Background
- Progress & Findings
- Cross-Section Components
- Direction



Background

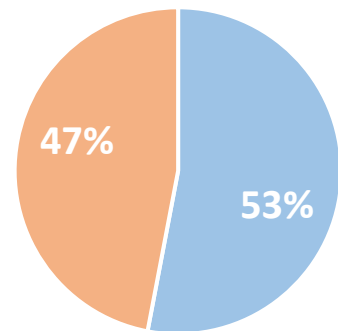
- Mobility Improvement Program
 - Provides Condition Assessment, Direction on Cross-Sections & Financial Plan



Progress & Findings

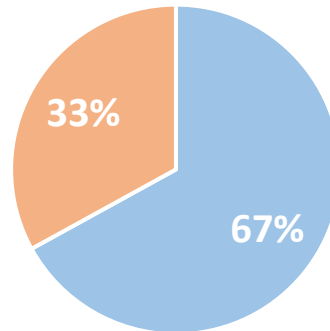
- Network has Grown from 200 km (2010) to 208 km (2021)
- Completed 12 of 81 km (14%) of T4T Program
- T4T Started 2016 and goes until 2036 (25% of Time)
- Network Conditions have Improved

2010 Condition



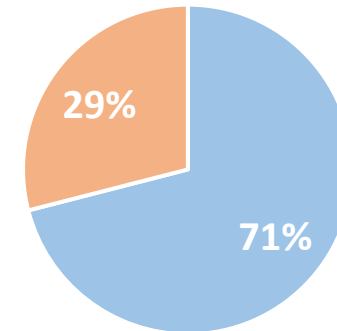
■ Good / Fair ■ Poor

2021 Condition

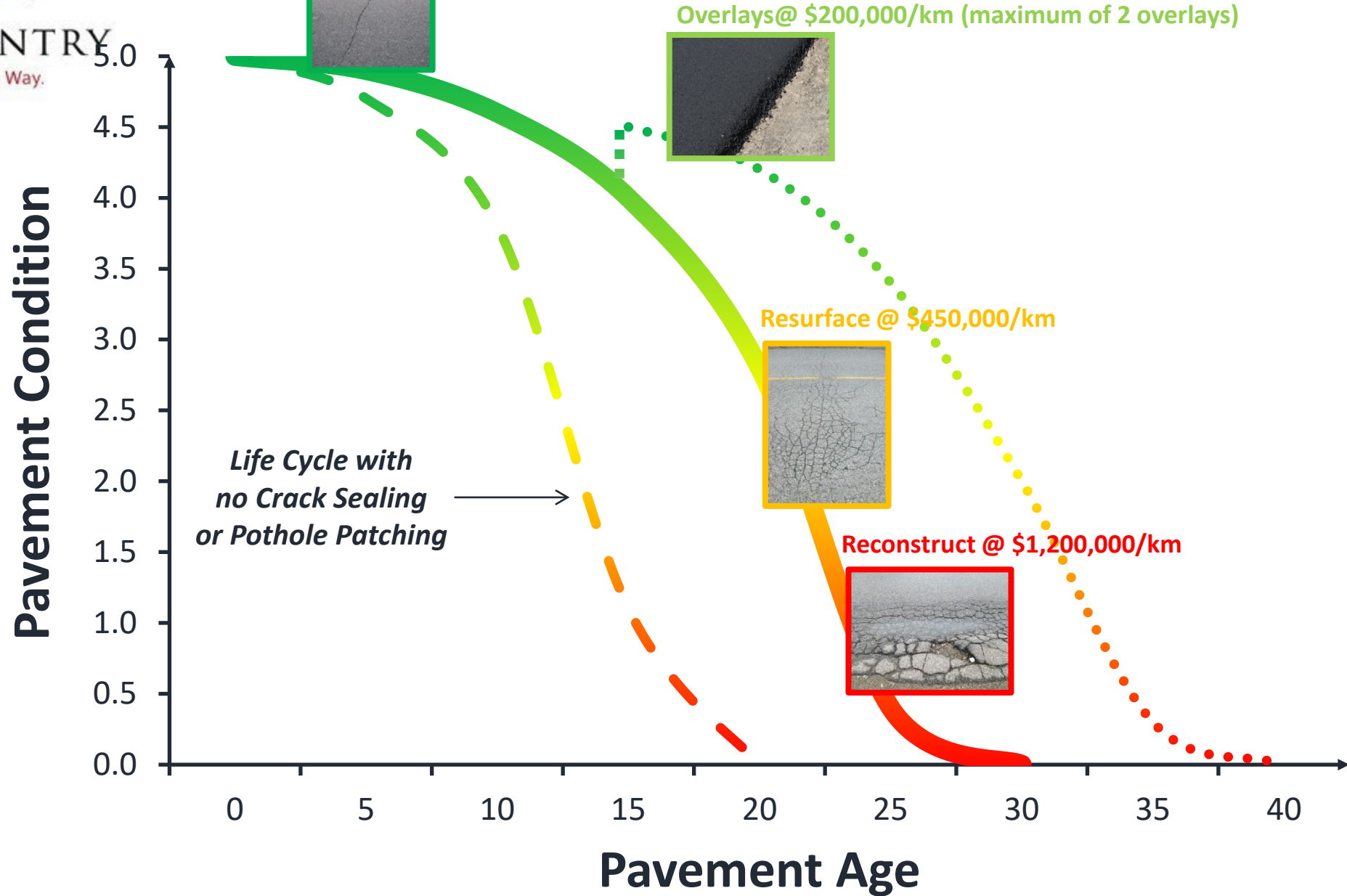


■ Good / Fair ■ Poor

Target Condition



■ Good / Fair ■ Poor



Progress & Findings

- Rising Construction Costs Increase Renewal
 - Spike in 2017 35% Increase
 - Increase to 2021 of 20%
- T4T 20-Yr Program: \$40.3 M (2014)
- Remaining Valued at \$48.3M (today)
- Deficit: \$17.1 M → +\$1.22M/Yr

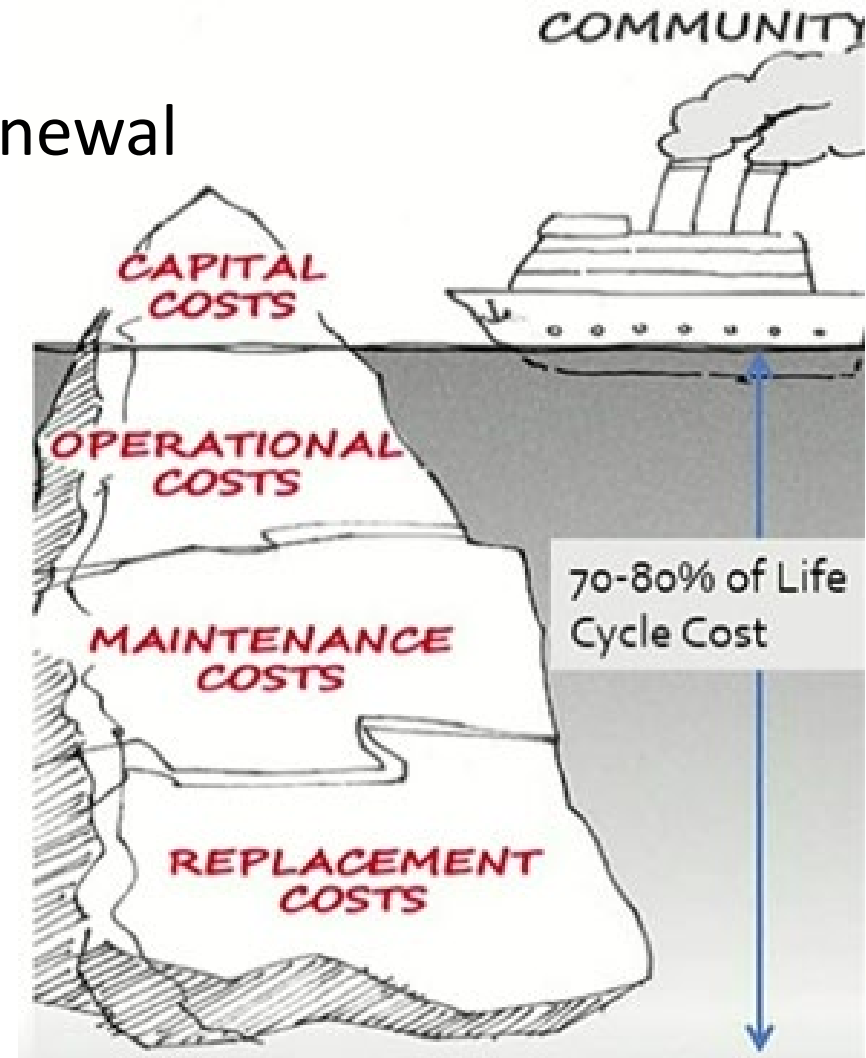
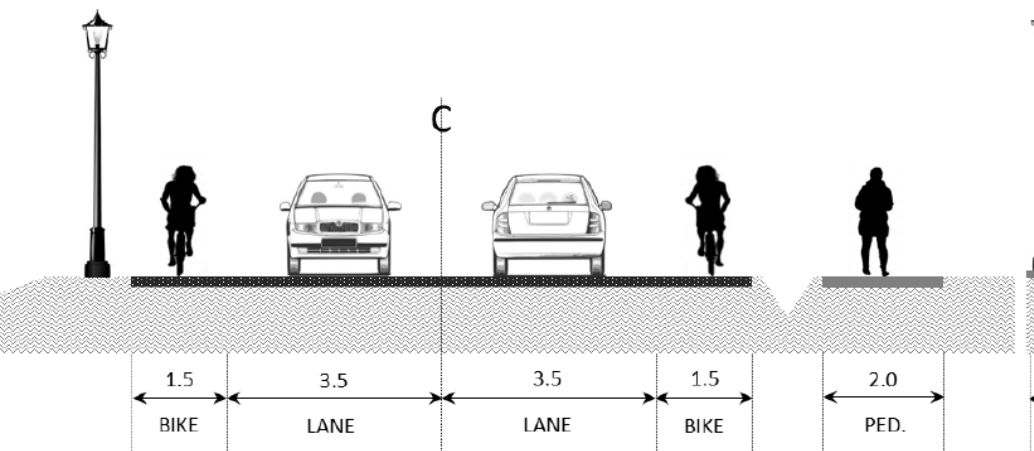
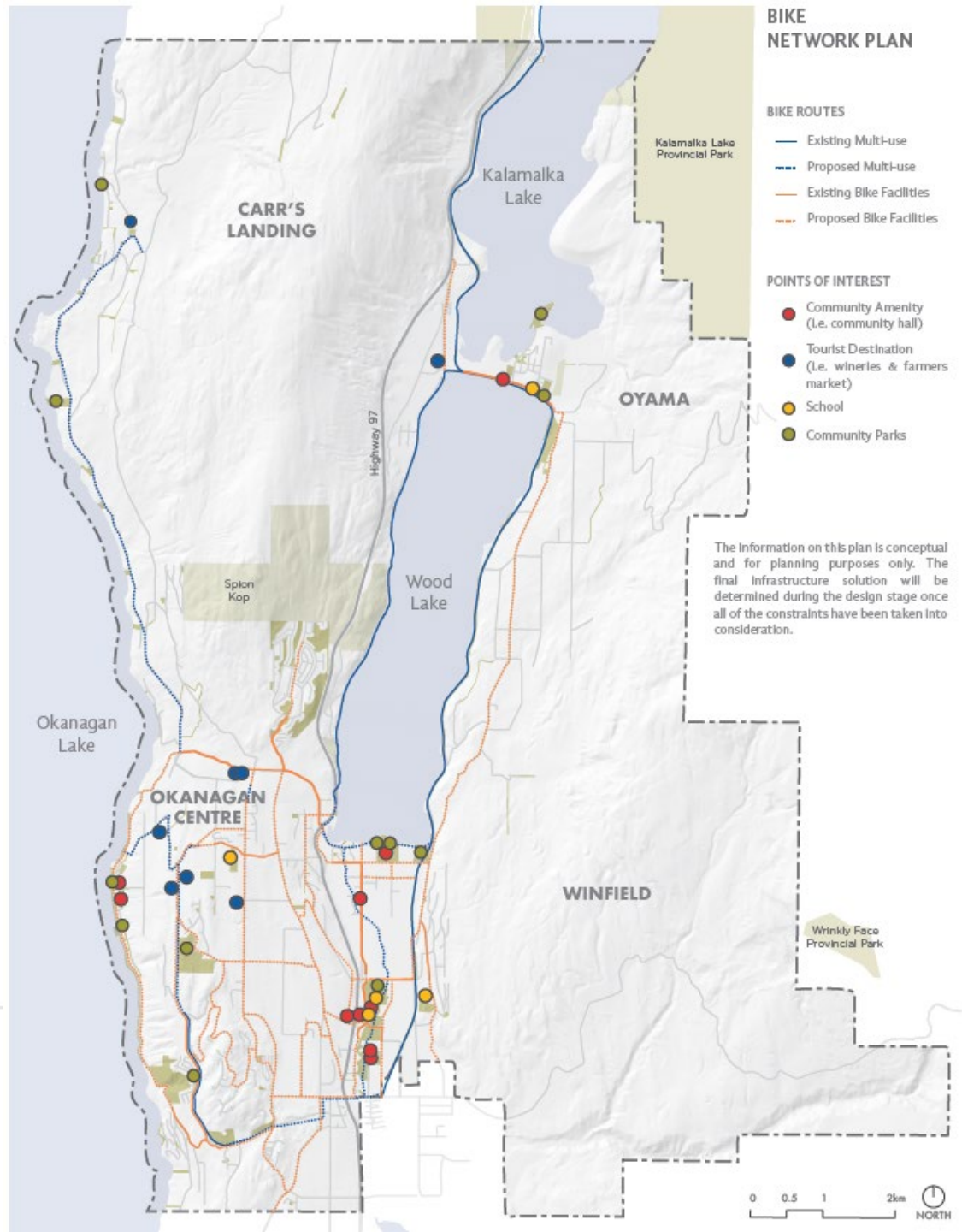
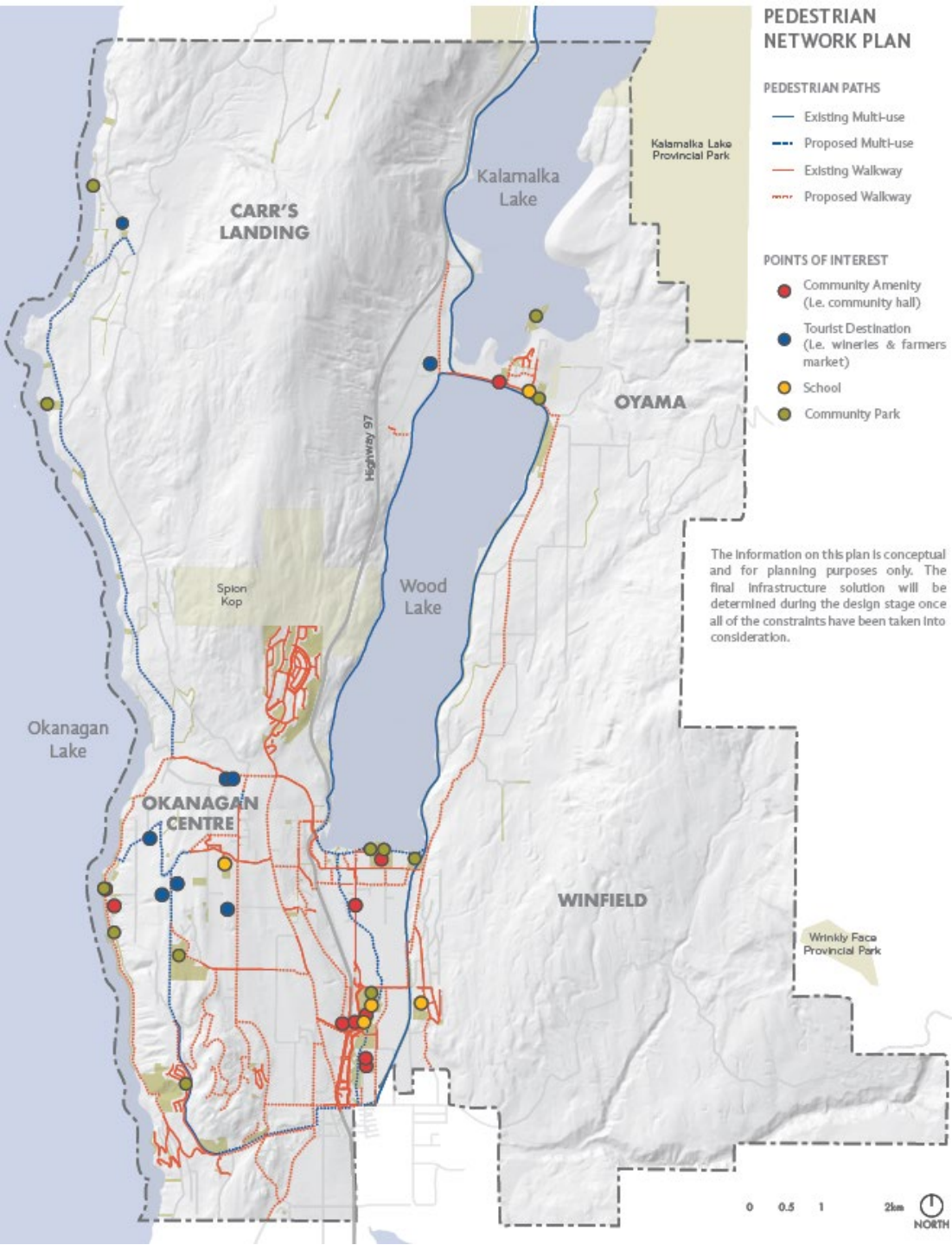


Image source: City of Kelowna

Planning Cross-Sections

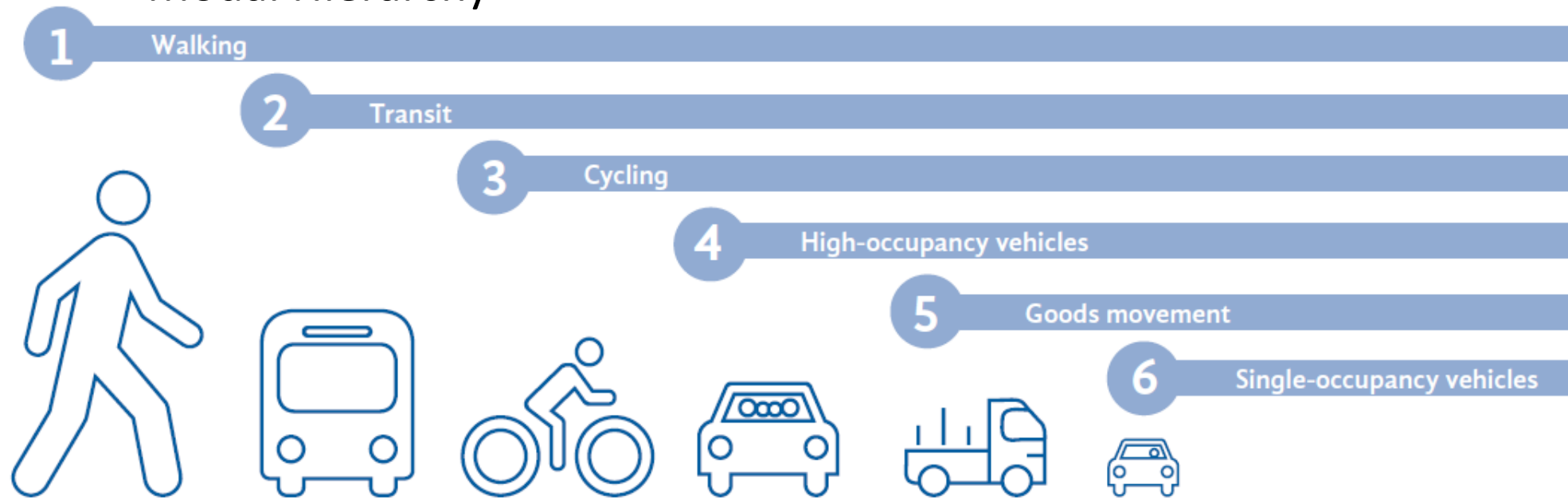
- Rethink How We Approach Cross-sections
- Difficulty Applying Road Cross-Section Standards
 - Terrain
 - Property
 - Rising Construction Costs
 - Sensitivity to Context
 - Expectation Management





Planning Cross-Sections

- Performance Criteria – How do we want streets to function?
- Trying to achieve **Balance**
 - Needs of All Users
 - Addressing Inequities
 - Modal Hierarchy



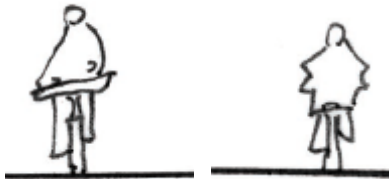
Functional Components



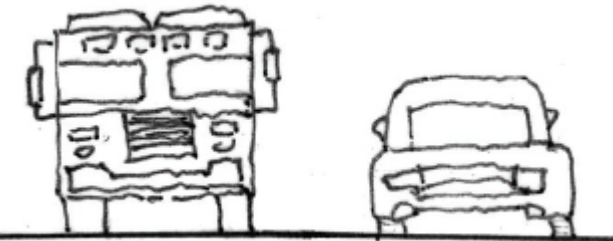
Pedestrian Walkway
1.5m wide
\$80/m/side (asphalt)
\$380/m/side (concrete)



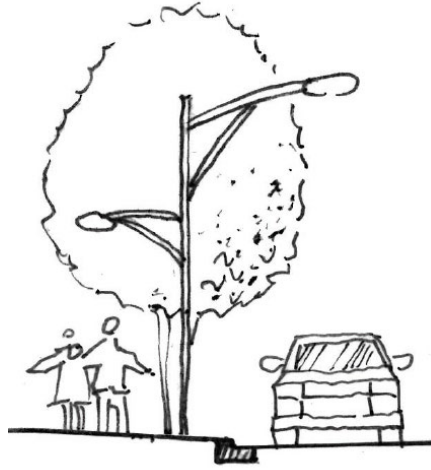
Multi-Use Pathway
3.0 m wide
\$160/m (asphalt)



Bike Lane
1.8 m wide
\$230/m/lane



Vehicle Lane
3.5 m wide
\$440/m/lane



Street Lighting
40-m Spacing
\$240/m/side

Curb
\$160/m/side (Curb & Gutter)

Parking
\$300/m/side

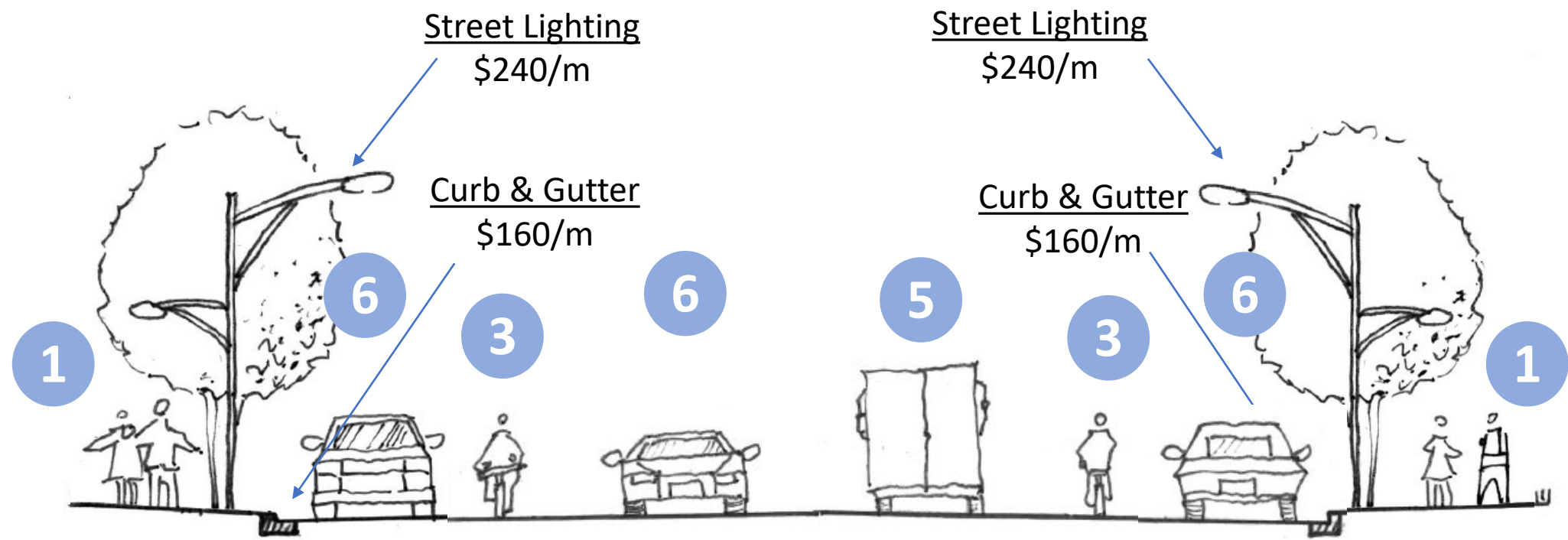


Boulevards
2.0 m wide
\$150/m/side (Landscaped)

Ditch
2.0 m wide
\$30/m/side

Not Including Underground Utilities

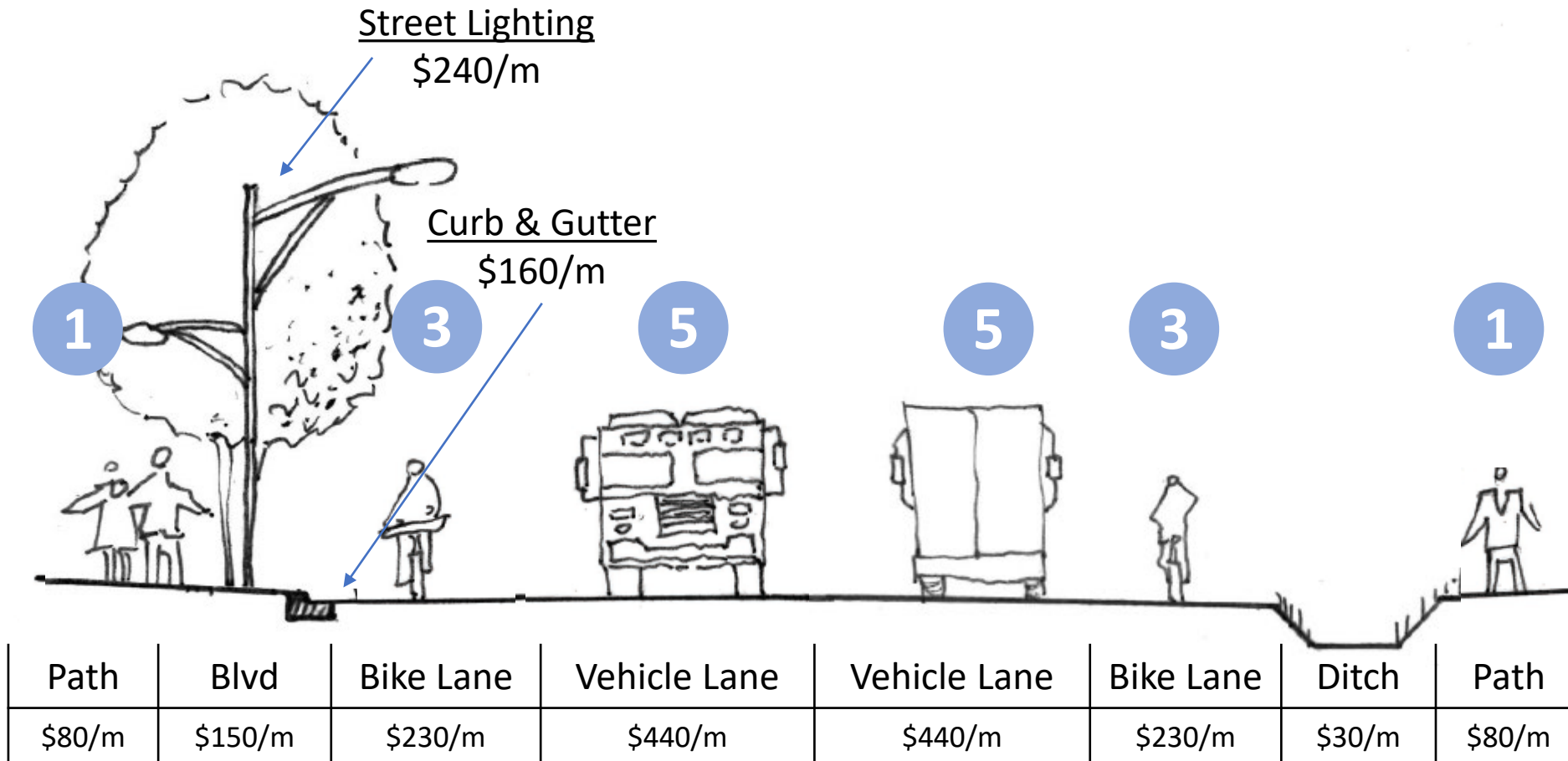
T4T - \$2,246/m
Now - \$3,800/m



Side-walk	Blvd	Parking Lane	Bike Lane	Vehicle Lane	Vehicle Lane	Bike Lane	Parking Lane	Blvd	Side-walk
\$380/m	\$150/m	\$300/m	\$230/m	\$440/m	\$440/m	\$230/m	\$300/m	\$150/m	\$380/m

Not Including Underground Utilities

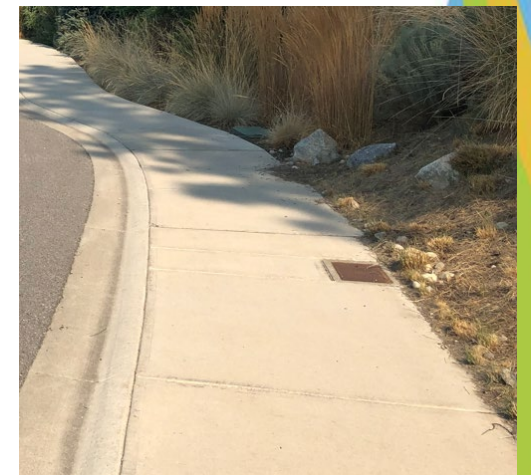
\$2,070/m



Not Including Underground Utilities

Economic Opportunities

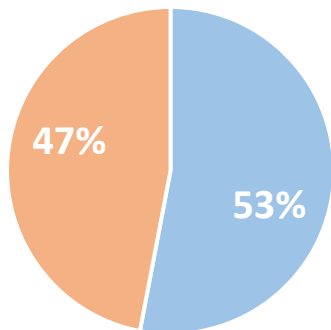
- Engineering Already Employing:
 - Asphalt Pathways vs Concrete Sidewalk
 - Pin on Curbs
 - Recycling Road Surface



Recap

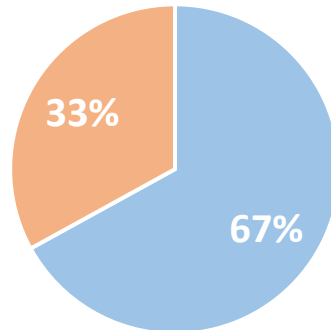
- To Summarize
 - Ahead with Condition
 - Behind with Projects Delivered
 - Costs have Risen by ~55% since 2014
 - Funding Deficit of \$1.22M/yr

2010 Condition



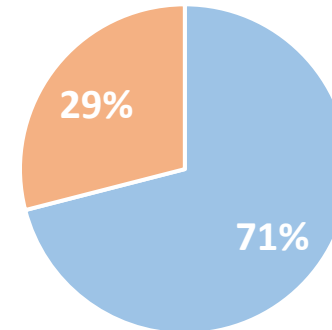
■ Good / Fair ■ Poor

2021 Condition



■ Good / Fair ■ Poor

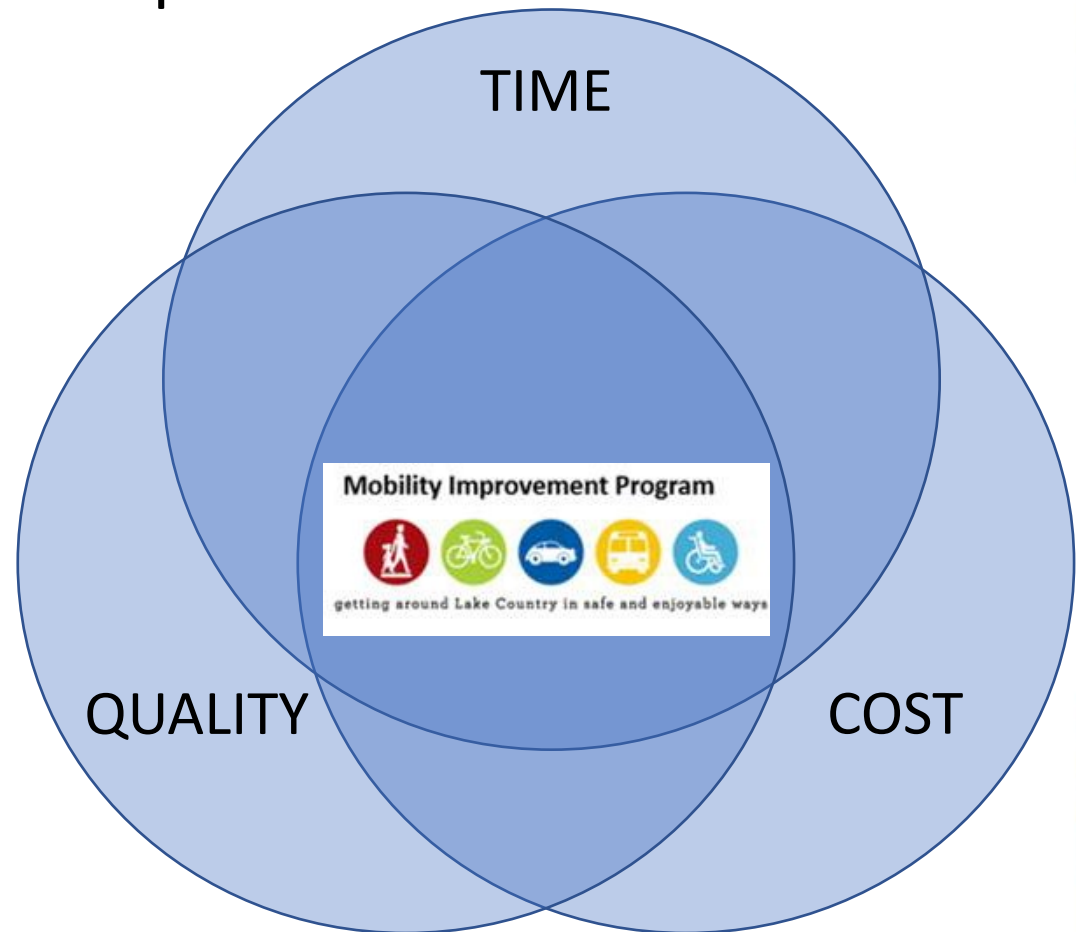
Target Condition



■ Good / Fair ■ Poor

Next Steps

- Complete Condition Assessment Report
- Return with MIP Options
 - Financial Strategy
 - Revised Road Renewal Program
 - Standards
- Finalize MIP Report



MOBILITY IMPROVEMENT PROGRAM



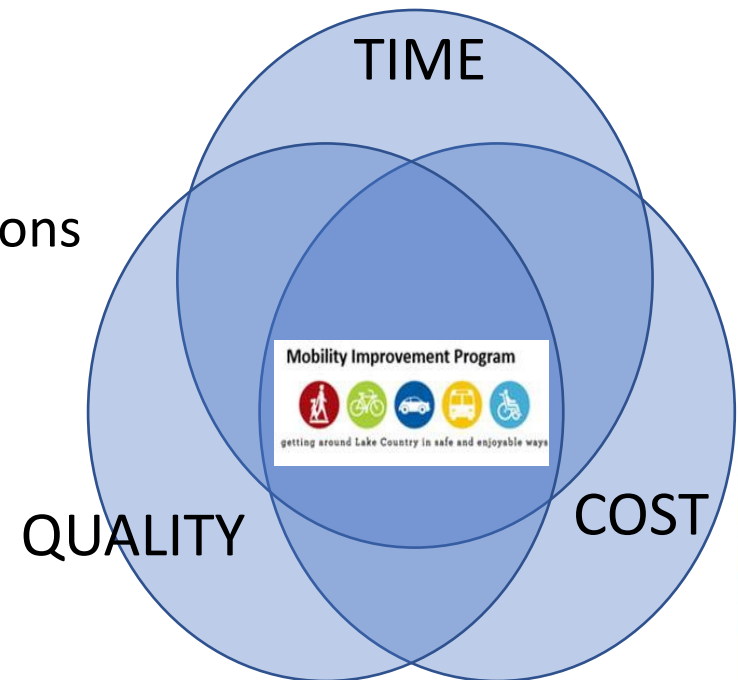
Recap - Strategy Session 24th August 2021

Summary:

- Ahead with Condition
- Behind with Projects Delivered
- Costs have Risen by ~55% since 2014
- Funding Deficit of \$1.22M/yr

Next Steps:

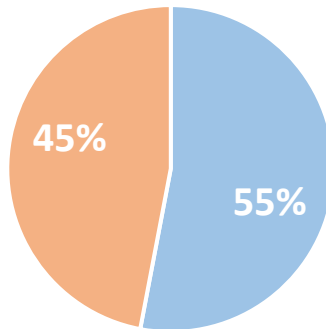
- Complete Condition Assessment Report
- Return with Mobility Improvement Program Options
 - Financial Strategy
 - Revised Road Renewal Program
 - Standards
- Finalize Mobility Improvement Program Report



Mobility Improvement Program

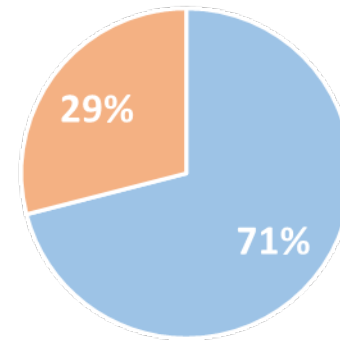
- Program sustainability comprised with additional \$500k/year funding.
- Sustainability – consistent with IAMCP, T4T ,OCP, Councils vision and MMP
- Level of Service defined by T4T, Mobility Master Plan and community expectation

2010 & 2021 Condition



■ Good / Fair ■ Poor

Target Condition

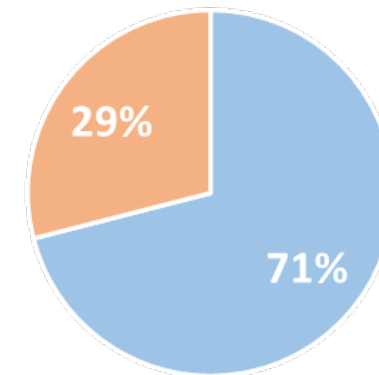


■ Good / Fair ■ Poor

Mobility Improvement Program

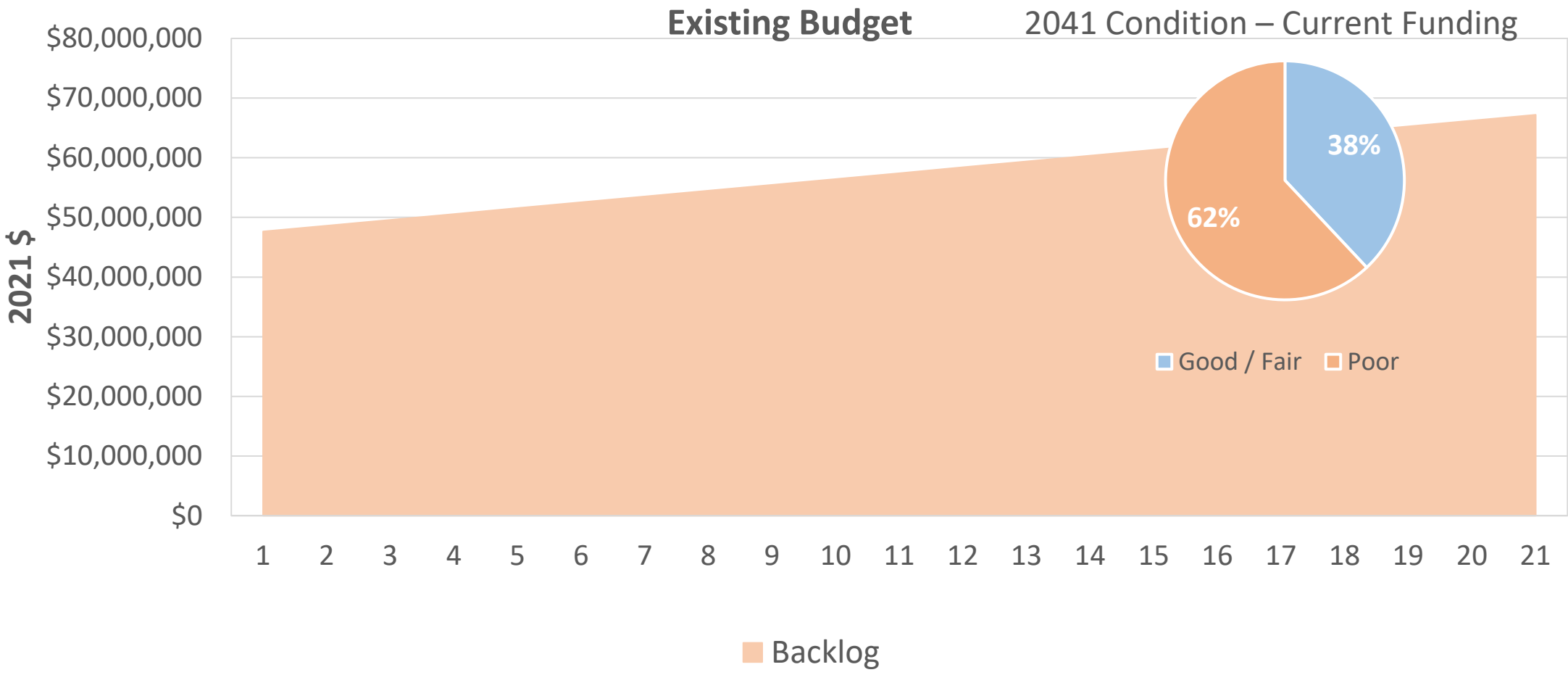
- Additional \$1.2m/year required for a sustained program:
 - Approx. 50/50 split between DCC's and taxation
 - DCC's need to be updated
 - Contains an allowance for land acquisition
- No Additional boulevard, landscaping and street trees.

Target Condition



■ Good / Fair ■ Poor

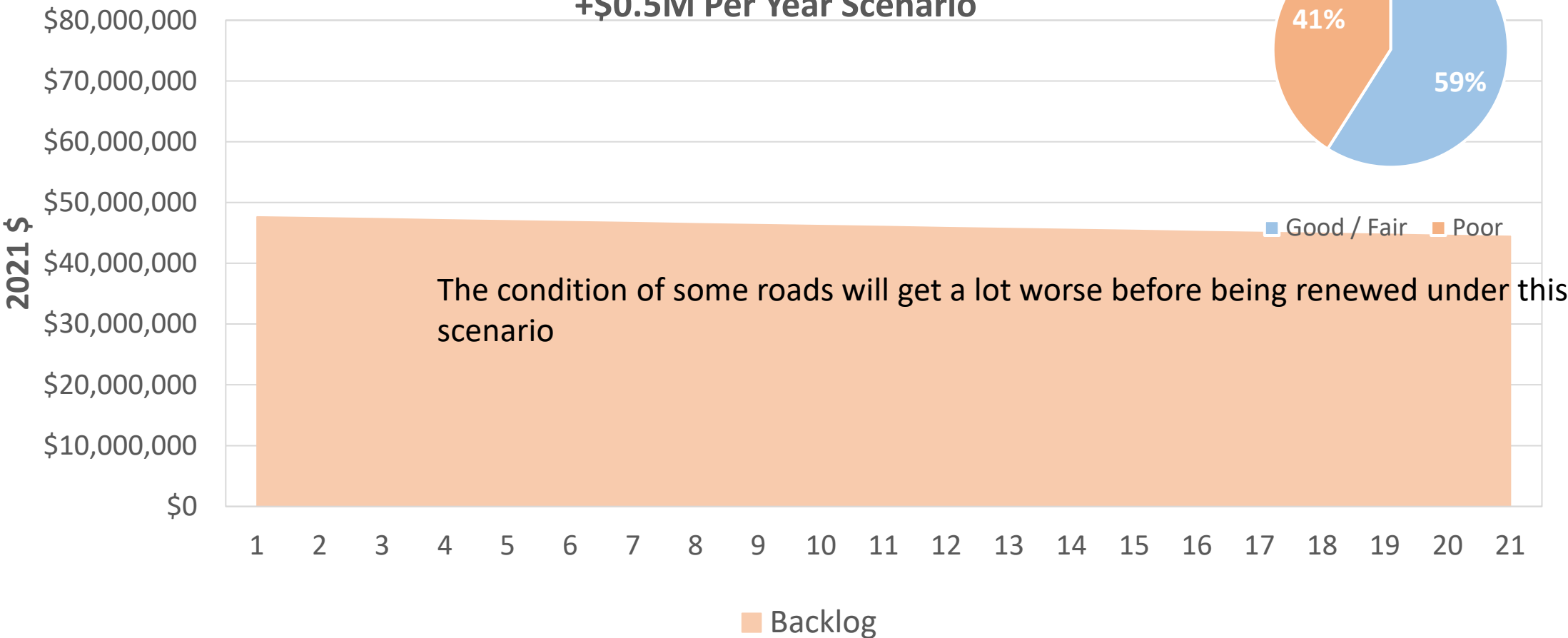
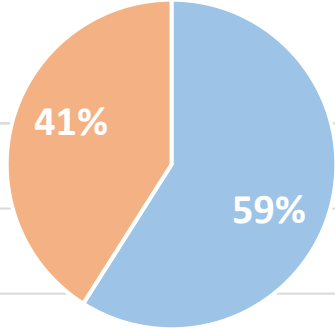
Investment Summary – Current Funding



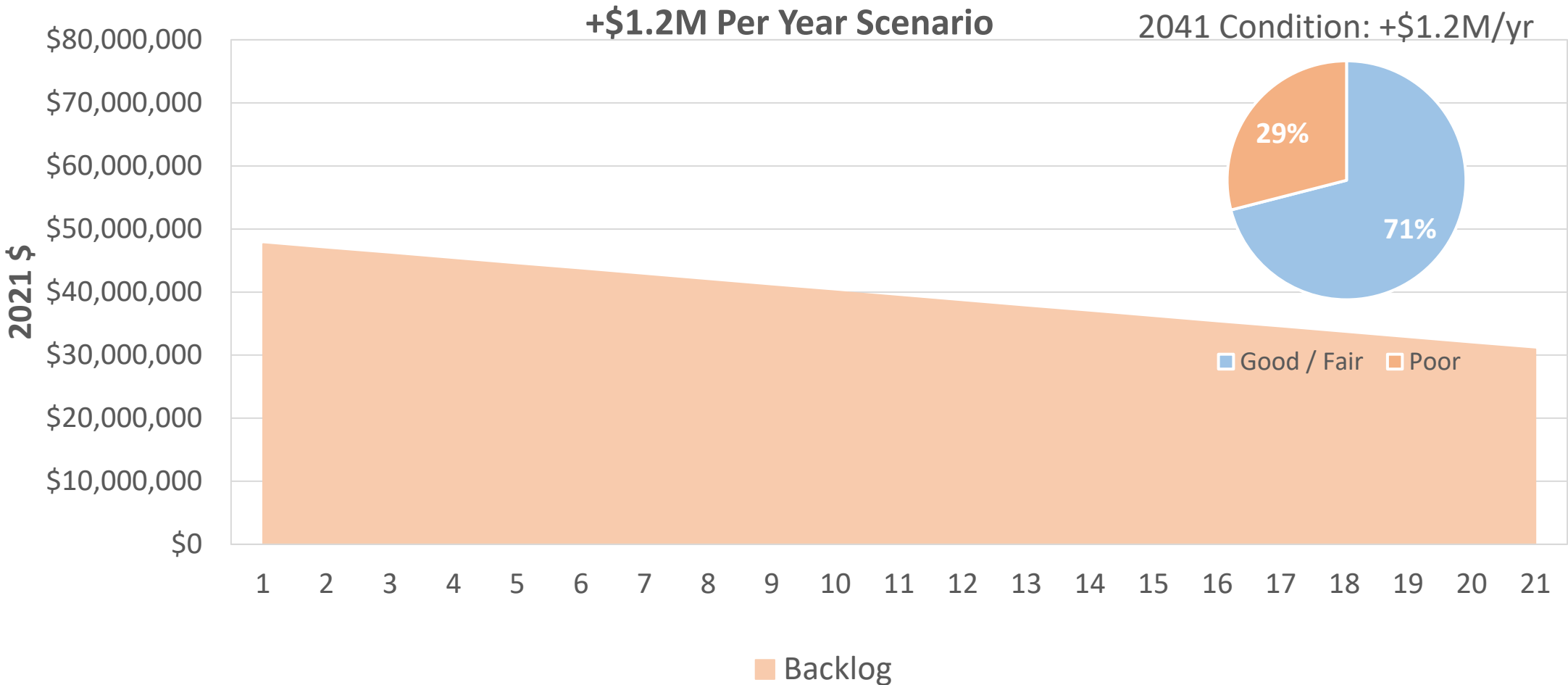
Investment Summary – \$500k/yr Funding

2041 Condition: +\$0.5M/yr

+\$0.5M Per Year Scenario

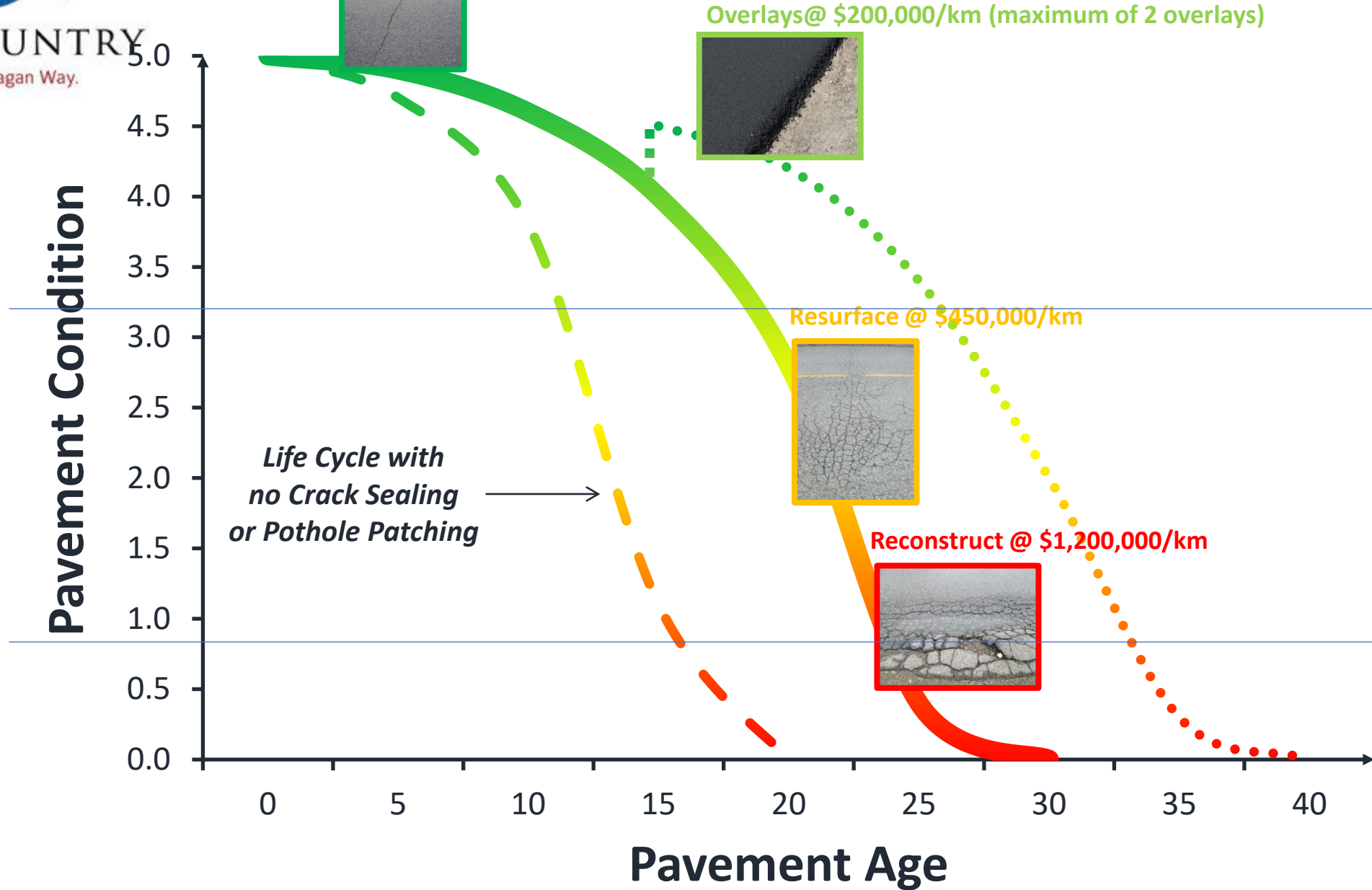


Investment Summary – \$1.2m/yr Funding



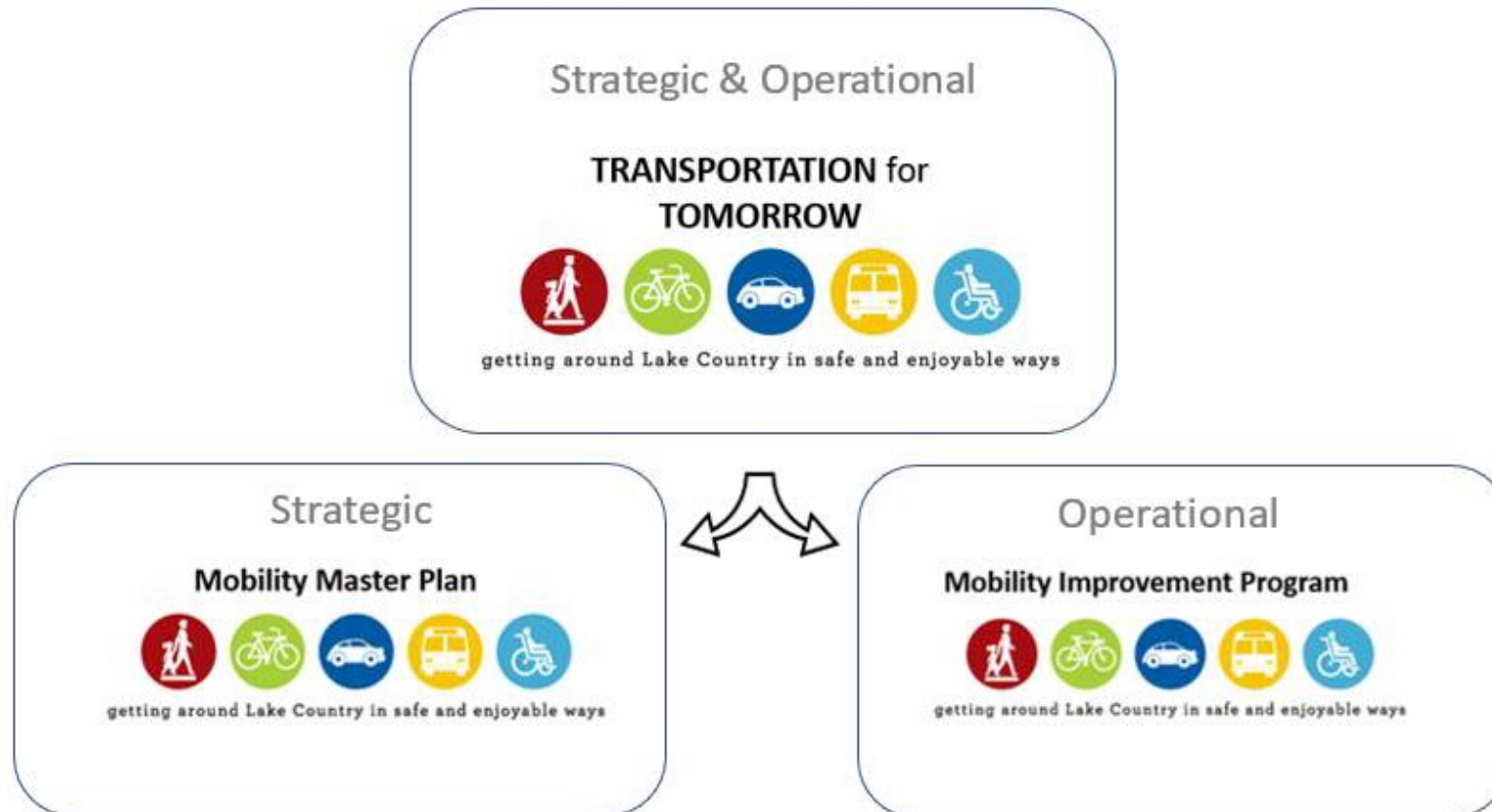
Next Steps

- Council direction on options/information for funding?
- Budget Approval
- Mobility Improvement Program Completion



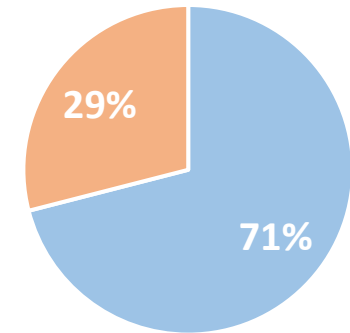
Background

- Mobility Improvement Program
 - Provides Condition Assessment, Direction on Cross-Sections & Financial Plan



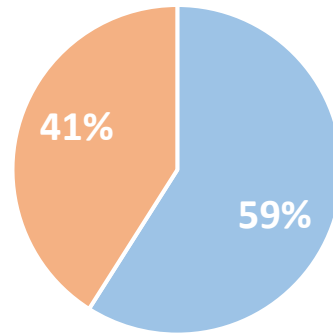
Progress & Findings

2041 Condition: +\$1.2M/yr



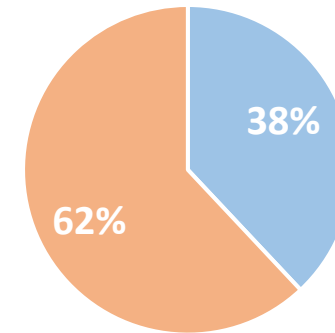
■ Good / Fair ■ Poor

2041 Condition: +\$0.5M/yr



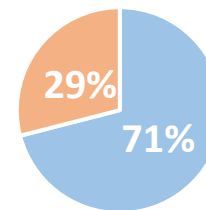
■ Good / Fair ■ Poor

2041 Condition – Current Funding



■ Good / Fair ■ Poor

Target Condition



■ Good / Fair ■ Poor





MOBILITY IMPROVEMENT PROGRAM

MOBILITY IMPROVEMENT PROGRAM



getting around Lake Country in safe and enjoyable ways

Client: District of Lake Country
File No.: A21-026
Date: August 25, 2022
Revision: D.9 - MS



ALIGN
ENGINEERING

ACKNOWLEDGEMENTS

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Infrastructure Services

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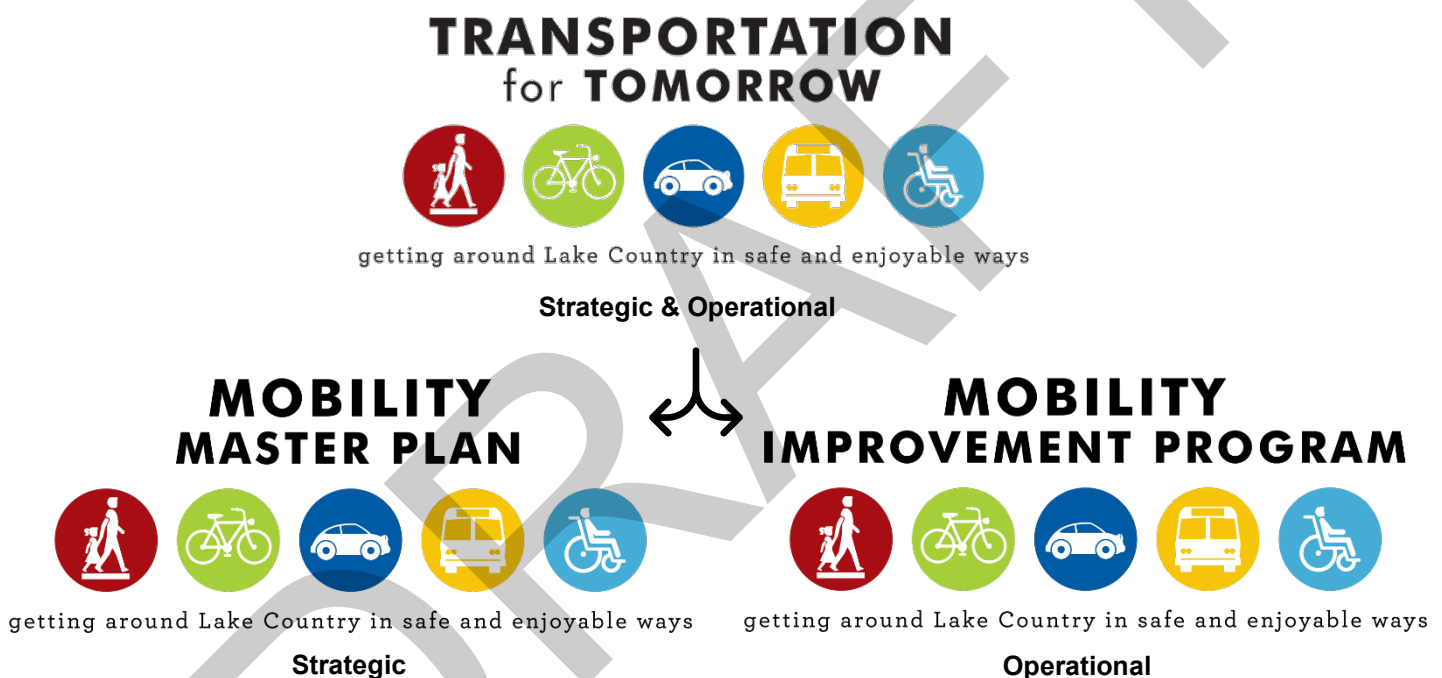
List of Appendices

Appendix A: Master Mobility Improvement Program Project List

1 Introduction

The Mobility Improvement Program provides related programming, guidance, and specifications for infrastructure projects to enhance and maintain mobility in Lake Country. This document builds upon and updates past initiatives in the District to evaluate, maintain, improve, and fund road/ street infrastructure.

This Program supersedes the infrastructure renewal program component of the *Transportation for Tomorrow* plan for operations and maintenance, renewals, and roadway improvements. The recently adopted *Mobility Master Plan* supersedes the strategic component, of the *Transportation for Tomorrow* plan, to redefine the transportation network as the mobility network. Going forward, the *Mobility Master Plan* and Mobility Improvement Program will replace the *Transportation for Tomorrow* plan.



The goal of the Mobility Improvement Program is to provide long-term sustainability of the mobility networks. To achieve this, the Program aims to:

- 1) Maintain safe and functional conditions; and
- 2) Advance the Master Mobility Plan objectives.

1.1 Background

The District of Lake Country operates and maintains 208 lineal kilometres of roadway combined with sidewalks, bike lanes, and transit infrastructure supported by signage, streetlights, landscaping, street furniture, and drainage infrastructure to form the District's mobility network. This network is essential for connecting the community, providing access to lands, and supporting business within the District.

In 2010, the District developed the *Integrated Asset Management Capital Plan* (IAMCP) to evaluate the replacement value of the District's municipal civil infrastructure. This provided a value to the road network and set targets for road conditions acknowledging the lifecycle of road deterioration and renewal. The following *Integrated Transportation Framework* (ITF) provided an assessment of road and street conditions to develop an ongoing maintenance, renewal, and improvement strategy for the network.

The *Transportation for Tomorrow* plan built upon the IAMCP and ITF to establish a detailed implementation plan with necessary funding levels. It identified the level of service of the District's network and the funding gap to maintaining, operating, and improving the network. This established taxation levels required to provide a certain level of service for roadways to achieve the District's transportation vision of "Getting around Lake Country in safe and enjoyable ways."

Since the implementation of the *Transportation for Tomorrow* plan, the District has seen large increments in construction costs in 2017 and 2020/2021.

The *Mobility Improvement Program* builds upon these past initiatives to provide an updated program in-line with the goals and objectives of the *Mobility Master Plan*.

The Mobility Improvement Program was developed through an assessment of road conditions, review of progress on the *Transportation for Tomorrow* capital plan, development of functional cross-section components, and establishing funding requirements.

2 Conditions Assessment

A conditions assessment of the entire District road/ street network was completed in May 2021 through visual inspection. The process used the same methodology and evaluation sheets as the previous conditions assessment completed in 2010 to provide an update on condition to the same roadways. It was assumed that newly constructed roadways, since the previous condition assessment, were in good condition. The visual inspection method was consistent with the *Ministry of Transportation and Infrastructure Pavement Surface Condition Rating Manual*. The application of this methodology was simplified into a three-category ranking for:

- 3 – Good Condition;
- 2 – Fair Condition; or
- 1 – Poor Condition.

The 2021 condition assessment identified that 67% of roads (by length) are in good or fair condition and the remaining 33% are in poor condition. The assessment also determined that many roads have been degrading slower than anticipated and have exceeded their surface life. These roads represent 33% of those that are in good/fair condition and risk quick degradation to a poor condition. A third of the roads remain in poor condition and will need sufficient funding ensure sustainability of the network.

Throughout the District, renewal and reconstruction efforts have improved base materials, surfaces, and drainage on District projects. Newly constructed streets and improvements from development are largely constructed with curb and gutter satisfying further road structure and drainage improvements. From 2010 to 2021, the District's surface conditions improved by approximately 30 kilometres consisting of new road segments and existing road renewals.

3 Renewal Requirements

Road surface deterioration occurs over time and is hastened by water infiltration, freeze/thaw cycles, high summer temperatures, and traffic volumes (particularly worsened by a high proportion of heavy vehicles). **FIGURE 1** shows how pavement life deteriorates over time and how renewal can increase the lifespan of the roadway. The later renewal is applied, the higher the cost. Pavement renewal needs to target road improvements prior to reconstruction to get the most value and life from the asset.

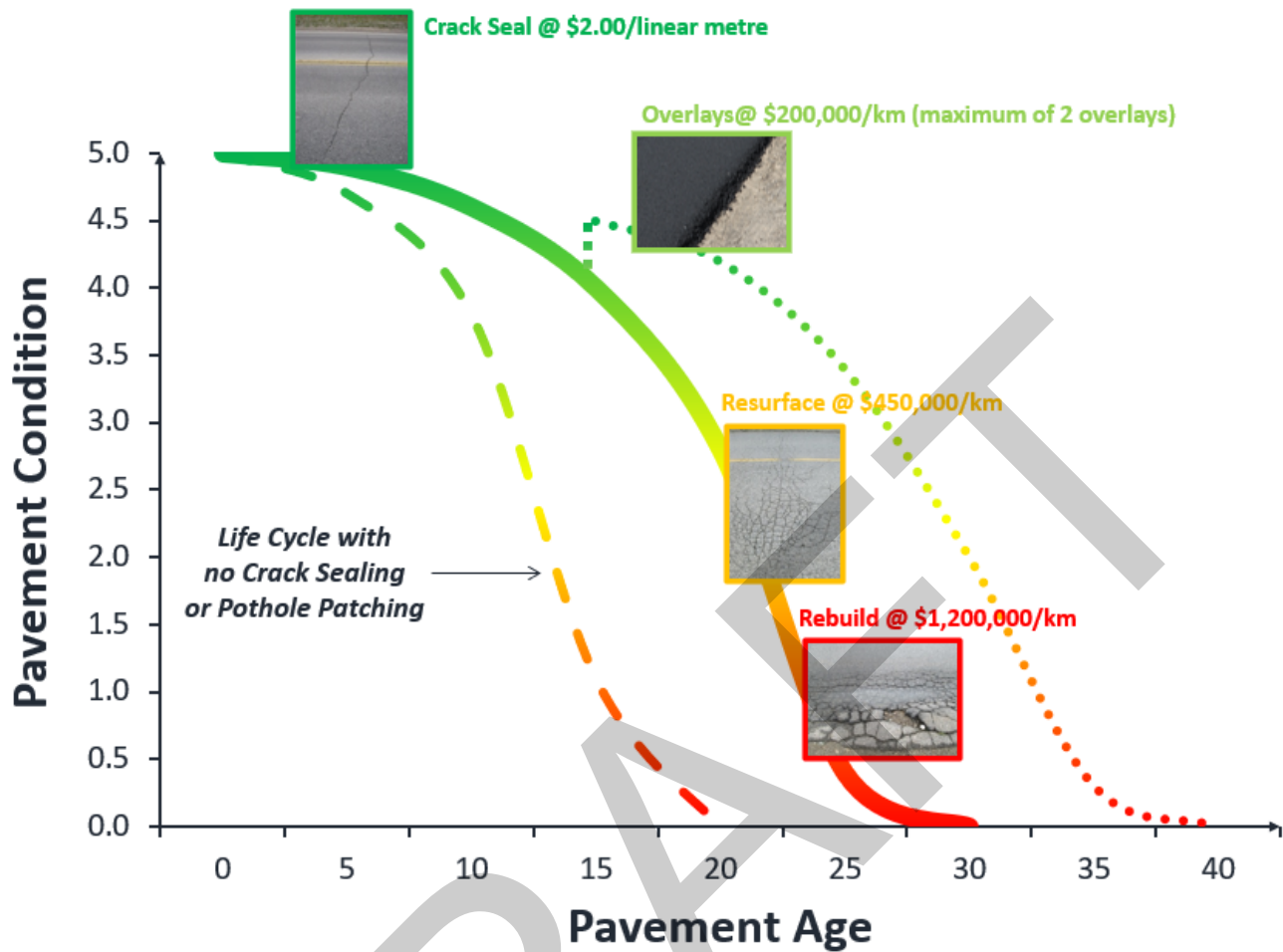


Figure 1: Pavement Deterioration Curve

In 2010, there was a backlog of roads in poor condition of \$30 million. While this was being addressed through the Transportation for Tomorrow Program, the life cycle of roads means good/fair condition roads degrade over time and require improvements later. In 2021, this backlog has grown to \$55 million (85% increase) attributed to increases in construction costs, road surface renewals requirements that have degraded into a state requiring reconstruction, and the addition of stormwater drainage and earthworks to cost estimates.

4 Program Review

The *Transportation for Tomorrow* plan was adopted in 2014 and the funding for the 20-year program officially began in 2016. The plan programmed 81 kilometres, representing higher priority roads, of the 200 kilometres of roadway at a budgeted \$40.3 million dollars in 2014. The remaining roads were not programmed for renewal in the 20-year timeframe. Of the 81 kilometres of road renewal and improvements or active transportation projects, 12 kilometres were completed or under construction during the development of this document. This represents 14% of the Program projects in 30% of the time.

Rising construction costs have exceeded typical inflation rates. A review of construction costs commissioned by the District in 2017 identified a 35% increase in cost. This has increased by an additional 20% since evaluated again in 2021. The latest increase is partially attributed to supply chain shortages from the COVID-19 pandemic. This had led to a \$48.3 million dollar budget for the remaining projects in the Transportation for Tomorrow program in 2021 dollars. Going forward, the Mobility Improvement Program seeks to establish a sustainable funding program the next 20 years of capital road works.

5 Maintenance Requirements

Regular maintenance is required to maintain design life and ensure serviceable operations of the mobility network. Maintenance repairs are relatively low cost when compared to major capital renewal or reconstruction. Inadequate maintenance can create safety problems for the travelling public and rapid loss of service life of the pavement surface and base. Loss of service life increases the life cycle cost of the roadway.

Roadway maintenance provides outcomes related to preservation, safety, user comfort, and aesthetics. The benefit or loss of benefit of these outcomes is the result of funding levels in the following areas:

1. Surface Maintenance
2. Water Drainage
3. Roadside Maintenance
4. Traffic Maintenance
5. Structure Maintenance
6. Emergency Maintenance
7. Winter Maintenance

The operations and maintenance program of the Mobility Improvement Program is carried forward from the *Transportation for Tomorrow* plan which has been evaluated for affordability and focuses primarily on roadway safety and preservation.

The District currently provides roadway maintenance services through in-house, operations, annual contracts, and through a three-year road maintenance contract (see **TABLE 1**). The anticipated outcome for each maintenance service is provided in percentages consistent with research conducted by the BC Ministry of Transportation and Infrastructure and the American Association of State Highway & Transportation Officials (AASHTO).

Table 1: Operations & Maintenance Costs & Outcomes

Maintenance Service	Maintenance Provider	Annual Cost	Safety	Asset Life	User Comfort	Aesthetics
Snow & Ice Removal	3-Year Contract	\$1,351,000	60%	0%	35%	5%
Grading & Dust Control	3-Year Contract	\$197,000	20%	55%	20%	5%
Street Sweeping	3-Year Contract	\$177,000	20%	55%	20%	5%
Line Painting	District Oversight	\$150,000	80%	5%	10%	5%
Road Allowances	District In-House	\$201,000	15%	5%	10%	70%
Traffic Signs	District In-House	\$44,000	80%	5%	10%	5%
Streetlights	District Oversight	\$175,000	80%	5%	10%	5%
Sidewalks	District In-house	\$34,000	20%	55%	20%	5%
Drainage ditches & Storm system	District Oversight & In-house	\$464,000	10%	60%	25%	5%
Total	-	\$2,793,000	-	-	-	-

Note: Costs as of November 2021

5.1 Crack Sealing

It is recommended that a crack sealing program be added to the Operations & Maintenance contract. Crack sealing is a cost-effective method of prolonging pavement structure life. Crack sealing typically lasts 3-5 years on arterial roads and 8-10 years on low volume local roads. It most effective on newer roads approximately 10 years or newer with minor to intermediate cracking. It is best applied to the newest roads and working down the list through the program budget. The extent of cracking and preparation of installation are essential for success. It is ineffective on alligator fractures and can create potholes and propagates cracks from the sealed sections. Crack sealing has seen recent increases in cost and should be budgeting to start around \$2.00 per metre. It is recommended that an annual budget of \$65,000 is provided to develop a sustainable crack sealing program to extend the longevity of District road surfaces.

6 Improvement Requirements

Mobility network improvements identified in the *Master Mobility Plan* will bring multi-modal functionality to existing roadways. This initiative began with the Transportation for Tomorrow Plan where typical cross-sections were developed for the District's context and road hierarchy.

6.1 Cross-Sections

Road typical cross-sections are established to provide a form and function for various classifications of roadways. They can be useful for establishing frontage improvements for development or costing future roadway projects. It is seldom, however, that a typical cross-section applies consistently to a given context. Roadway corridors are often constrained by issues such as but not limited to: terrain, property (or available right-of-way), adjacent environmental conditions (e.g., waterways), rising construction costs,

public expectations, and opportunity management. The result is usually a custom design to accommodate these constraints.

The Mobility Improvement Program, therefore, presents functional criteria to achieve desired performance and balance the needs of all users, address inequalities, and promote the modal hierarchy.

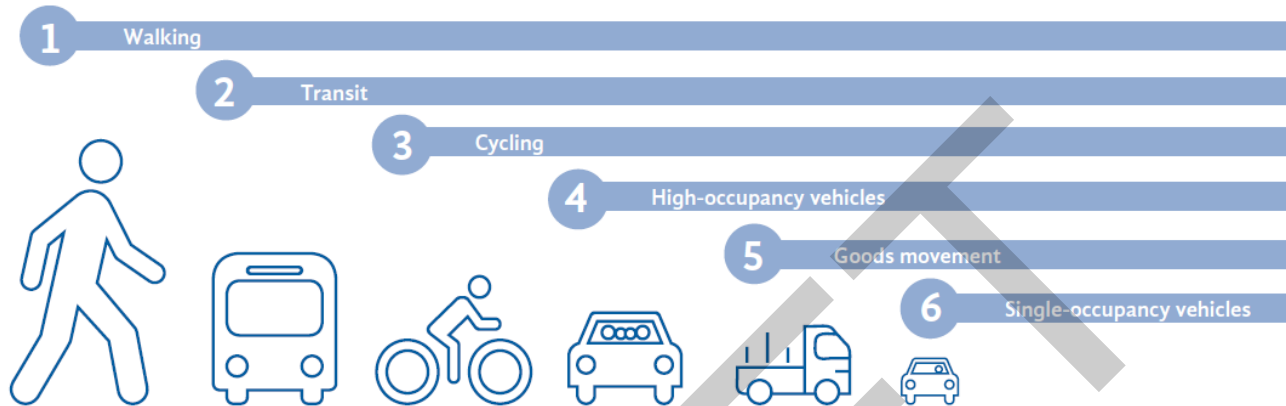


Figure 2: District of Lake Country Modal Hierarchy

Source: District of Lake Country Mobility Master Plan, 2021

6.2 Functional Street Components

The *Mobility Master Plan* characterized the following functional road classifications and codes:

- Arterial Street A-0
- Town Centre Street B-0
- Major Collector Street C-0
- Major Collector Road C-1
- Minor Collector Street D-0
- Minor Collector Road D-1
- Residential Street E-0
- Rural Road E-1

These were designed to be affordable and fit within the District's largely rural natural environment. They also intended to demonstrate how increasing the roadway function comes at an increased cost while improving equity in transportation.

Requirements for each roadway class are provided in **TABLE 2**. It shows the mobility network classification and the required widths for the functional components. The inclusion of multi-use pathways, pedestrian pathways, and bike lanes are defined in the *Mobility Master Plan*. The table considers that constructed roadways will often have a mixture of rural and urban conditions with curb-and-gutter on one side and ditch on the other. **FIGURE 3** shows the application of this and identifies the modal hierarchical components.

Table 2: Functional Component Widths by Mobility Network Classification

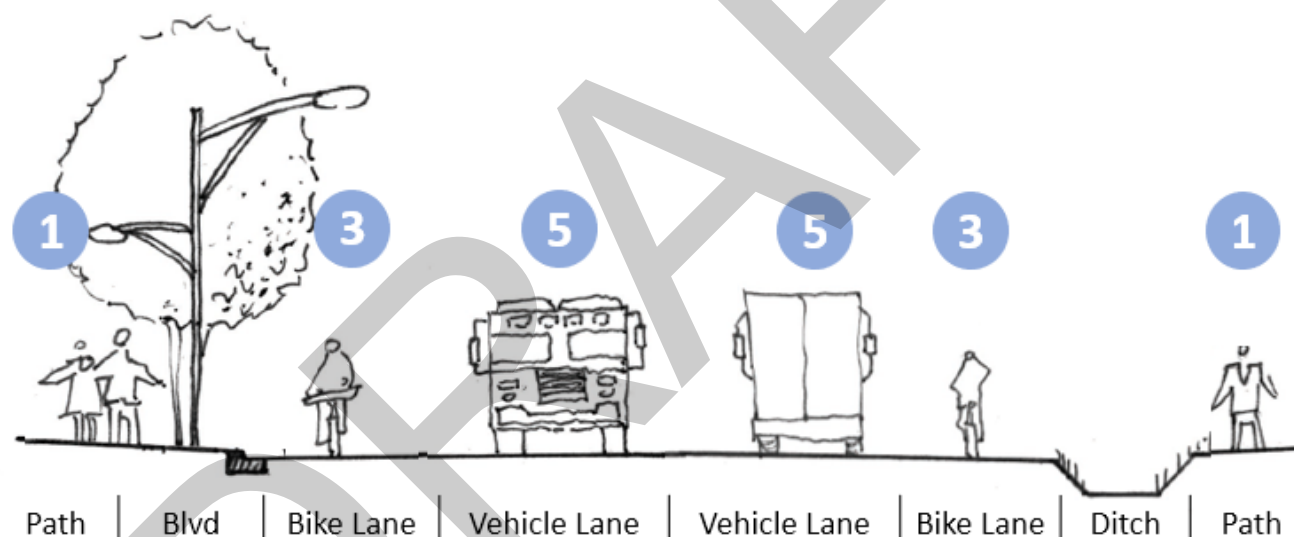
Mobility Network Classification	Multi-Use Pathway	Pedestrian Pathway*		Bike Lanes#	Travel Lanes	Parking#	Shoulder	Boulevard	Curb & Gutter	Ditch
	Width (m)	#	Width (m)	Width (m)	Width (m)	Width (m)	Width (m)	Width (m)	Width (m)	Width (m)
Arterial	3.0	2	1.5	1.8	3.5	-	-	2.0	0.45	2.0
Town Centre St	3.0	2	2.0	1.8	3.3	2.4	-	2.0	0.45	-
Major Collector	3.0	2	1.5	1.8	3.3	-	-	2.0	0.45	2.0
Minor Collector	3.0	2	1.5	1.8	3.2	2.4	-	2.0	0.45	2.0
Residential St	3.0	2	1.5	-	3.2	2.4	-	2.0	0.45	-
Rural Rd	3.0	1	2.0	-	3.2	-	0.5	2.0	-	2.0
Rural Rd Gravel	-	-	-	-	3.0	-	0.5	2.0	-	2.0

Note: Dimensions shown are the recommended minimums.

Facility components are to fit intended road functions and adjacent land uses. Some will have a mix of road and street components (i.e., curb & gutter on one side and ditch on the other).

*Pedestrian pathway shall be 2.0m wide when on only one side of the roadway.

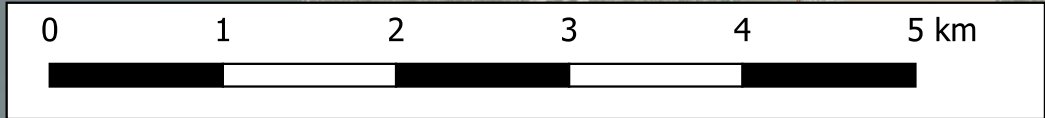
#Bike lanes and parking can use 0.3m of gutter pan when adjacent to curb and gutter.

**Figure 3: Application of Cross-Section Elements**

Note: Numbers relate to the modal hierarchy uses shown in Section 6.1

6.3 Mobility Network Function

The classification of the mobility network is essential for establishing a functional hierarchy to provide varying levels of mobility and access. These various classifications are defined in the Mobility Master Plan along with the functions of roads versus streets. **FIGURE 4** provides a map of the mobility network showing its functional classifications.



LEGEND

Road Class

Arterial Street

Major Collector Road

Major Collector Street

Minor Collector Road

Minor Collector Street

Residential St

Residential Street

Rural Road

Town Centre Street

Future Residential Street

Future Major Collector Road

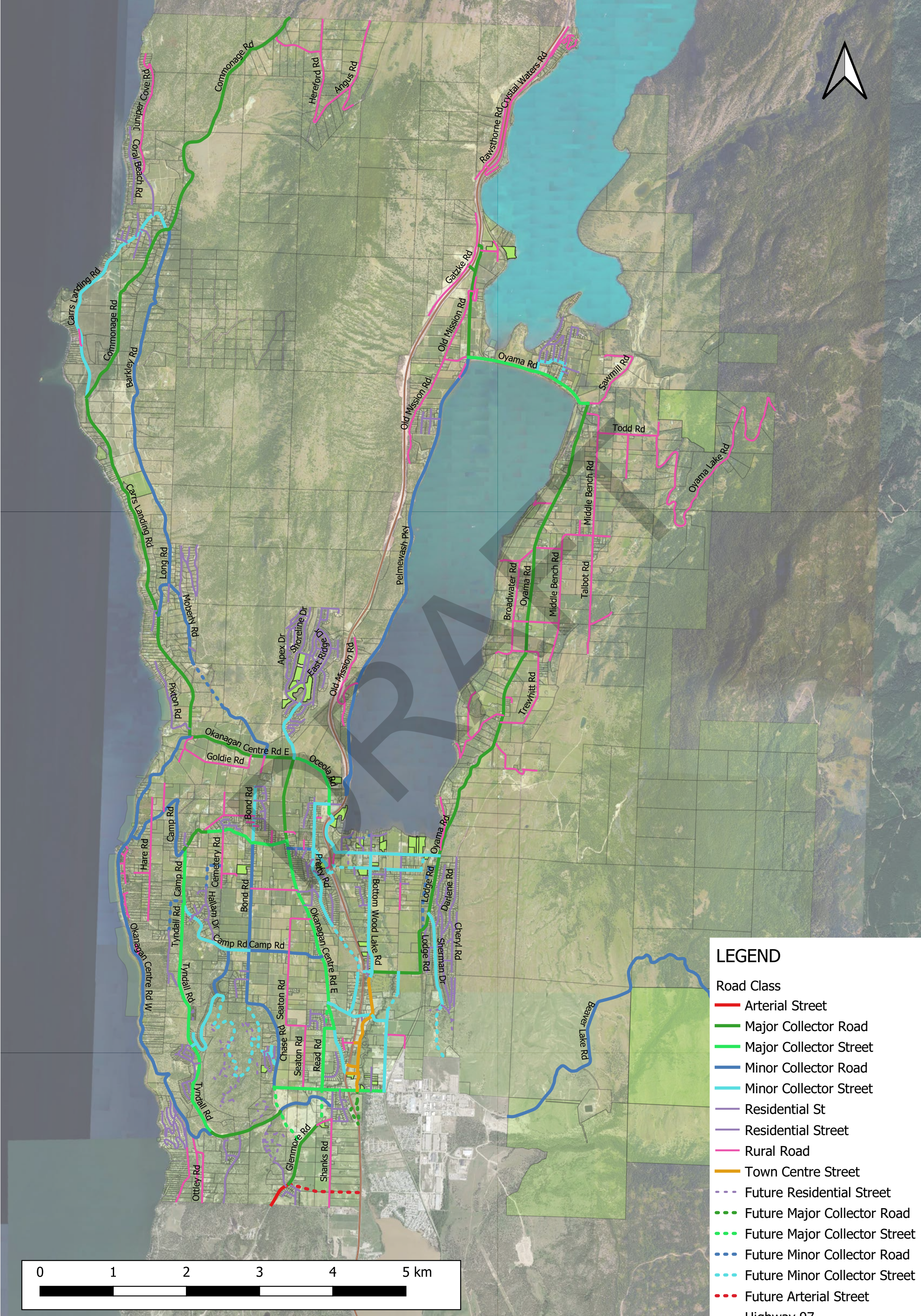
Future Major Collector Street

Future Minor Collector Road

Future Minor Collector Street

Future Arterial Street

Highway 97



7 Funding Strategy

In order to meet the goals and aims of this Mobility Improvement Program, the funding strategy establishes cost estimates to complete capital improvement projects and includes projects that are scheduled to be completed under the Interim Road Renewal Program (which provides interim road resurfacing to chip seal roads). The Mobility Improvement Program is, therefore, comprised of road improvements and rehabilitation.

- Improvements consist of:
 - Reconstruction – Removal and reconstruction of base, surface, and addition of new features and facilities.
 - Renewal – Removal and reapplication of road surface and addition of new materials for new features.
- Rehabilitation consists of:
 - Rebuilding – Removal and reconstruction of existing base and surface.
 - Resurfacing – Removal and reapplication of road surface.
 - Interim Renewal – Chip sealing of surface to extend life of structure and defer renewal or reconstruction.

The funding strategy is intended to provide guidance on road and street improvements. It does not consider improvements from development, future conditions, or potential environmental events.

The Capital Program is currently funded at \$2 million per year as follows:

1. Road Reserve \$1.1 million per year.
2. Canada Community-Building Fund \$0.4 million per year for active transportation improvements.
3. Capital Works Reserve \$0.5 million per year.

7.1 Cost Estimates

Cost estimates for the Mobility Improvement Program were developed from capital costs not including property acquisition for widening, which can increase costs exponentially. The cost estimates in the Program were developed from 2022 construction material rates for the functional road class and typical minimum cross-section components. These cross-sections components are used for planning and budgeting purposes. **TABLE 3** provides the unit costs at 2022 dollars. The hard capital costs for construction include:

- Base materials (gravels);
- Road surface for vehicle lanes, bike lanes, and shoulders;
- Curb & gutter, sidewalks, and pathways;
- Boulevards and streetlights;
- Ditching;
- Stormwater urbanized (curb & gutter) streets; and
- Earthworks for widening to add pedestrian and cycling facilities.

Soft capital costs are also included and comprise of:

- Contingency @ 20%;
- Planning & design @ 12%;
- Construction administration @ 8%;
- District oversight @ 7%; and
- Inflation to be allocated annually.

Table 3: 2021 Functional Cross-Section Component Unit Costs

Element	Width (m)	Surface Cost per km	Cost per km
Sidewalk	1.50	\$172,500	\$281,000
Pedestrian Walkway	1.50	\$26,440	\$80,000
Multi-Use Pathway	3.00	\$52,80	\$161,000
Bike Lane	1.80	\$63,450	\$226,000
Travel Lane	3.50	\$123,380	\$439,000
Parking Lane	2.40	\$84,600	\$301,000
Boulevard	2.00	\$46,000	\$68,000
Curb & Gutter	0.45	\$110,000	\$162,000
Ditch	2.00	\$20,000	\$29,000
Street Lighting	-	-	\$239,000
Landscaped Boulevard	2.00	\$100,000	\$147,000
Storm Drainage	-	-	\$350,000
Earthworks	-	-	\$300,000

Land acquisition or resolving property boundary conflicts is an inherent part of delivering the road improvement and renewal program. This is currently an unfunded element of the program which historically costs around \$140,000 a year. It is suggested that the funding gap is addressed and included in the Mobility Improvement Program funding strategy.

7.2 Mobility Improvement Program

The Mobility Improvement Program allocates 20 years to complete the highest priority projects based on renewal need (road conditions and functionality), active transportation improvements, traffic volumes, connectivity, and safety. Roads in good condition or part of the Interim Pavement Renewal Program were removed from the list. This list should be revisited every year for updates to the five-year capital plan to allow for consideration of cost efficiencies and/or priority changes such as development, combined District capital projects, grant opportunities, and environmental factors or emergencies. The list is provided below in **TABLE 5**. For the 20-year Program Plan to be sustainable a total of \$69.6 million in capital funds (excluding inflationary increases, land acquisition or crack sealing) is required. The financial strategy to support the Mobility Improvement Program will be confirmed in conjunction with the update to the Development Cost Charge Bylaw.

Table 4: Proposed 20-Year Road Improvement & Renewal Program

Road	From	To	KM	Road Class	Scope	2022 Cost Estimate
0-5 Years						
Woodsdale Rd	Highway 97	50m E of Woodsdale Ct	0.52	D-0	Renewal	\$1,347,000
Woodsdale Rd	50m E of Woodsdale Ct	50m E of Seymour Rd	0.18	D-0	Renewal	\$441,000
Woodsdale Rd	Bottom Wood Lake Rd	Reiswig Rd	0.42	D-0	Renewal	\$555,000
Woodsdale Rd	255m E of Reiswig Rd	Lodge Rd	0.27	D-0	Renewal	\$633,000
Robinson Rd	Pretty Rd	OK Centre Rd E	0.35	D-0	Renewal	\$1,134,000
Pretty Rd	225m N of Robinson Rd	Middleton Rd	0.39	D-0	Reconstruct	\$815,000
Pretty Rd	Middleton Rd	Oceola Rd	0.19	D-0	Reconstruct	\$403,000
OK Centre Rd E	Berry Rd	Davidson Rd	2.31	C-0	Renewal	\$4,958,000
Chase Rd	Dick Rd	Camp Rd	2.12	C-1	Reconstruct	\$4,771,000
Beaver Lake Rd	Highway 97	Jensen Rd	0.31	E-0	Reconstruct	\$699,000
Beaver Lake Rd	Jensen Rd	Bottom Wood Lake Rd	0.18	C-0	Reconstruct	\$406,000
6-10 Years						
OK Centre Rd W	Glenmore Rd	Chase Rd Ext	0.66	C-1	Reconstruct	\$2,589,000
Dick Rd	Seaton Rd	Chase Rd	0.40	C-0	Reconstruct	\$1,252,000
Seaton Rd	Dick Rd	Glenmore Rd	0.41	C-0	Reconstruct	\$1,278,000
Glenmore Rd	Highway 97	Seaton Rd	0.20	C-0	Renewal	\$558,000
Glenmore Rd	Shanks Rd	Boundary	1.88	A-0	Reconstruct	\$4,636,000
Oyama Rd	Sawmill Rd	Hebbert Rd	4.87	C-1	Rebuild	\$3,839,000
Bond Rd	Camp Rd	Davidson Rd	1.47	D-1	Renewal	\$2,034,000
Camp Rd	Hallam Dr	Tyndall Rd	0.76	D-0	Reconstruct	\$2,486,000
11-20 Years						
Camp Rd	Tyndall Rd	Davidson Rd	0.75	C-0	Reconstruct	\$1,918,000
Camp Rd	110m W OK Centre Rd E	Seaton Rd	0.46	D-1	Renewal	\$654,000
Camp Rd	Seaton Rd	Bond Rd	0.55	D-1	Renewal	\$773,000
Camp Rd	Davidson Rd	OK Centre Rd W	1.80	D-1	Renewal	\$1,862,000
OK Centre Rd E	Davidson Rd	Oceola Rd	1.15	C-0	Renewal	\$3,715,000
OK Centre Rd W	200m N of Granite Rd	Camp Rd	2.91	D-1	Reconstruct	\$5,268,000
Oyama Rd	Hebbert Rd	Woodsdale Rd	1.80	C-1	Renewal	\$3,498,000
Carr's Landing Rd	OK Centre Rd E	Commonage Rd S	5.04	C-1	Renewal	\$6,613,000
Lodge Rd	Sherman Dr	Woodsdale Rd	0.81	C-1	Renewal	\$870,000
Carr's Landing Rd	Commonage Rd S	Commonage Rd N	3.29	D-1	Renewal	\$3,006,000
Cornwall Rd	Pelmewash Pkwy	Highland Rd	0.24	E-0	Rebuild	\$188,000
Trask Rd	Oyama Rd	Trask Rd	0.42	E-0	Reconstruct	\$1,256,000
Allison Rd	Oyama Rd	Middle Bench Rd	0.37	E-1	Rebuild	\$247,000
Blair Ct	Bond Rd	Cul-de-sac	0.06	E-1	Rebuild	\$49,000
Bonnie Rd	Sherman Dr	Cul-de-sac	0.41	E-0	Resurface	\$85,000
Darlene Rd	Russell Rd	Cul-de-sac	1.09	E-0	Resurface	\$254,000
Russell Rd	Pheasant Rd	Sherman Dr	0.55	E-0	Resurface	\$127,000

Road	From	To	KM	Road Class	Scope	2022 Cost Estimate
Daniel Dr	Lacresta Rd	Dead End	0.41	E-0	Rebuild	\$308,000
E Hill Rd	Todd Rd	Dead End	0.59	E-1	Rebuild	\$365,000
Trask Rd	Trask Rd	Kaloya Park	0.43	E-0	Reconstruct	\$967,000
OK Centre Rd E	Read Rd	Berry Rd	0.36	D-0	Renewal	\$2,707,000

7.3 Interim Pavement Renewal Program

The Interim Pavement Renewal Program provides surface treatments to chip seal lower volume rural roads providing approximately \$600,000 every two years to the capital program. **TABLE 5** provides the list of the 21 projects.

Table 5: Interim Pavement Renewal Program

Road	From	To	KM	Year	Total
Beaver Lake Rd	Eldorado Entrance	First Cattle Guard	4.5	TBD	TBD
Maki Rd	Carrs Landing Rd	Dead End	0.3	2024	\$93,000
Toby Rd	Carrs Landing Rd	Dead End	0.2	2024	\$30,000
Wentworth Rd	Carrs Landing Rd	Dead End	0.2	2024	\$42,000
Whiskey Cove Rd	Carrs Landing Rd	Dead End	0.2	2024	\$43,000
Schaad Rd	Carrs Landing Rd	End of Public Road	0.2	2024	\$61,500
Hare Rd (N)	Camp Rd	Dead End	0.2	2024	\$48,000
Coral Beach Rd	Terrace View Rd	Dead End	1.0	2024	\$200,000
Seaton Rd	Seaton Rd/ Dick Rd	OK Centre Rd E	2.8	2026	\$568,000
Irvine Rd	Pelmewash Parkway	Old Mission Rd	0.3	2028	\$60,000
Old Mission Rd	Pelmewash Parkway	End	2.5	2028	\$500,000
Lloyd Rd	Greenhow Rd	Dead End	0.2	2028	\$40,000
Harris Lane	Lloyd Rd	Greenhow Rd	0.1	2028	\$20,000
Cemetery Rd	Davidson Rd	End	0.8	2030	\$154,000
Nygren Rd	Cemetery Rd	End	0.2	2030	\$40,000
Goldie Rd	OK Center Rd E	OK Center Rd E	1.3	2030	\$260,000
Terrace View Rd	Carr's Landing Rd	Coral Beach	0.9	2032	\$176,000
Juniper Cove Rd	Terrace View Rd	End	1.1	2032	\$220,000
Middlebench Rd	Worst sections	-	3.0	2034	\$600,000
Towgood Rd	Broadwater	Middle Bench Rd	0.6	2036	\$124,000
Broadwater Rd	Oyama Rd	Oyama Rd	1.9	2036	\$380,000

7.4 Road Extensions & Intersections

The industrial lands located between Glenmore Road and Dick/Seaton Rd, that are proposed to redevelop into the Lake Country Business Park, will include the most pertinent intersection capacity improvements and road connections. **TABLE 6** summarizes the road extension and intersection improvements in the Lake Country Business Park requiring an additional \$17.4 million of funding.

Table 6: Lake Country Business Park Road Extension & Intersection Improvements

Project	Description	Length (km)	Cost
Chase Rd Ext	Dick Rd to Okanagan Centre Rd W	0.34	\$1,863,000
Chase Rd Ext	Okanagan Centre Rd W to Glenmore Rd	0.54	\$2,958,000
Read Rd Ext	Seaton Rd to Glenmore Rd	0.45	\$2,465,000
Commonwealth Rd Ext	Highway 97 to Glenmore Rd	1.00	\$2,466,000
Okanagan Centre Rd W & Chase Rd Ext	Intersection Improvement: Roundabout	-	\$1,900,000
Read Rd & Seaton Rd	Intersection Improvement: Roundabout	-	\$1,900,000
Glenmore Rd & Chase Rd Ext	Intersection Improvement: Roundabout	-	\$1,900,000
Glenmore Rd & Commonwealth Rd	Intersection Improvement: Roundabout	-	\$1,900,000

7.5 Summary of Funding Requirements

The following provides a summary of funding levels needed to operate, maintain, and improve the District's mobility network. All costs are correct at the time of this report being published and exclude any adjustments required for inflation.

1. \$3.48 million per year for a total of \$69.6 million in capital funding to renew and improve existing network.
2. \$140,000 annually for a total of \$2.8 million to fund land acquisition costs associated with the Capital improvement and renewal program.
3. \$65,000 per year for a total of \$1.3 million to fund crack sealing to extend road life.
4. \$17.4 million in capital funding to construct road extensions and intersection capacity improvements largely associated with Lake Country Business Park.

8 Recommendations

The Mobility Improvement Program builds upon the successes of previous District programs to operate, maintain, and improve the District's mobility network. The following actions are recommended to continue to provide long-term sustainability of the mobility network, maintain safe and reasonable conditions, and advance the Master Mobility Plan objectives:

1. Continue funding roadway operations and maintenance to preserve roads and maintain service life by adding and annually evaluating a crack seal program.
2. Address the funding deficit for roadway improvements element of the 20-year program to provide a sustainable renewal and improvement program.
3. Complete the Lake Country Business Park Servicing Plan and Area Structure Plan.
4. Continue to update five-year capital plans annually using the Mobility Improvement Program as a guiding document.
5. Update Mobility Improvement Program and condition assessment every five years.



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Appendix A: Master Mobility Improvement Program Project List

Table A-1: Master List of Projects

Road	From	To	Length (km)	Road Class	Scope	Complexity	2022 Cost Estimate
Woodsdale Rd	Highway 97	50m E of Woodsdale Ct	0.52	D-0	Renewal	1	\$1,347,000
Woodsdale Rd	50m E of Woodsdale Ct	50m E of Seymour Rd	0.18	D-0	Renewal	1	\$441,000
Woodsdale Rd	Bottom Wood Lake Rd	Reiswig Rd	0.42	D-0	Renewal	1	\$555,000
Woodsdale Rd	255m E of Reiswig Rd	Lodge Rd	0.27	D-0	Renewal	1	\$633,000
Robinson Rd	Pretty Rd	OK Centre Rd E	0.35	D-0	Renewal	1	\$1,134,000
Pretty Rd	225m N of Robinson Rd	Middleton Rd	0.39	D-0	Reconstruct	1	\$815,000
Pretty Rd	Middleton Rd	Oceola Rd	0.19	D-0	Reconstruct	1	\$403,000
OK Centre Rd E	Berry Rd	Davidson Rd	2.31	C-0	Renewal	1	\$4,958,000
Chase Rd	Dick Rd	Camp Rd	2.12	C-1	Reconstruct	1	\$4,771,000
Beaver Lake Rd	Highway 97	Jensen Rd	0.31	E-0	Reconstruct	1	\$699,000
Beaver Lake Rd	Jensen Rd	Bottom Wood Lake Rd	0.18	C-0	Reconstruct	1	\$406,000
OK Centre Rd W	Glenmore Rd	Chase Rd Ext	0.66	C-1	Reconstruct	1	\$2,589,000
Dick Rd	Seaton Rd	Chase Rd	0.40	C-0	Reconstruct	1	\$1,252,000
Seaton Rd	Dick Rd	Glenmore Rd	0.41	C-0	Reconstruct	1	\$1,278,000
Glenmore Rd	Highway 97	Seaton Rd	0.20	C-0	Renewal	1	\$558,000
Glenmore Rd	Shanks Rd	Boundary	1.88	A-0	Reconstruct	1	\$4,636,000
Oyama Rd	Sawmill Rd	Hebbert Rd	4.87	C-1	Rebuild	1	\$3,839,000
Bond Rd	Camp Rd	Davidson Rd	1.47	D-1	Renewal	1	\$2,034,000
Camp Rd	Hallam Dr	Tyndall Rd	0.76	D-0	Reconstruct	1	\$2,486,000
Camp Rd	Tyndall Rd	Davidson Rd	0.75	C-0	Reconstruct	1	\$1,918,000
Camp Rd	110m W OK Centre Rd E	Seaton Rd	0.46	D-1	Renewal	1	\$654,000
Camp Rd	Seaton Rd	Bond Rd	0.55	D-1	Renewal	1	\$773,000
Camp Rd	Davidson Rd	OK Centre Rd W	1.80	D-1	Renewal	1	\$1,862,000
OK Centre Rd E	Davidson Rd	Oceola Rd	1.15	C-0	Renewal	1	\$3,715,000
OK Centre Rd W	200m N of Granite Rd	Camp Rd	2.91	D-1	Reconstruct	1.25	\$5,268,000
Oyama Rd	Hebbert Rd	Woodsdale Rd	1.80	C-1	Renewal	1	\$3,498,000
Carr's Landing Rd	OK Centre Rd E	Commonage Rd S	5.04	C-1	Renewal	1.25	\$6,613,000
Lodge Rd	Sherman Dr	Woodsdale Rd	0.81	C-1	Renewal	1	\$870,000
Carr's Landing Rd	Commonage Rd S	Commonage Rd N	3.29	D-1	Renewal	1	\$3,006,000
Cornwall Rd	Pelmewash Parkway	Highland Rd	0.24	E-0	Rebuild	1	\$188,000
Trask Rd	Oyama Rd	Trask Rd	0.42	E-0	Reconstruct	1.25	\$1,256,000
Allison Rd	Oyama Rd	Middle Bench Rd	0.37	E-1	Rebuild	1	\$247,000
Blair Ct	Bond Rd	Cul-de-sac	0.06	E-1	Rebuild	1	\$49,000
Bonnie Rd	Sherman Dr	Cul-de-sac	0.41	E-0	Resurface	1	\$85,000
Darlene Rd	Russell Rd	Cul-de-sac	1.09	E-0	Resurface	1	\$254,000
Russell Rd	Pheasant Rd	Sherman Dr	0.55	E-0	Resurface	1	\$127,000
Daniel Dr	Lacresta Rd	Dead End	0.41	E-0	Rebuild	1	\$308,000
E Hill Rd	Todd Rd	Dead End	0.59	E-1	Rebuild	1	\$365,000

Road	From	To	Length (km)	Road Class	Scope	Complexity	2022 Cost Estimate
Trask Rd	Trask Rd	Kaloya Park	0.43	E-0	Reconstruct	1.25	\$967,000
OK Centre Rd E	Read Rd	Berry Rd	0.36	D-0	Renewal	1	\$2,707,000
10th Street	Okanagan Centre Road W	Maddock Avenue	0.05	E-1	Resurface	1	\$9,000
14th Street	Okanagan Centre Road W	Dead End	0.21	E-1	Resurface	1	\$30,000
4th Street	Okanagan Centre Road W	Maddock Avenue	0.08	E-1	Resurface	1	\$13,000
5th Street	Okanagan Centre Road W	Maddock Avenue	0.09	E-1	Resurface	1	\$23,000
6th Street	Okanagan Centre Road W	Maddock Avenue	0.08	E-1	Resurface	1	\$13,000
8th Street	Okanagan Centre Road W	Dead End	0.09	E-1	Resurface	1	\$17,000
Ackerman Road	Young Road	Dead End	0.22	E-0	Resurface	1	\$43,000
Alexis Road	Reimche Road	Dead End	0.09	E-0	Renewal	1	\$129,000
Amundsen Road	Bond Road	McGowan Road	0.41	E-1	Renewal	1	\$276,000
Apex Cres	Apex Drive	Apex Drive	0.34	E-0	Resurface	1	\$70,000
Apex Drive	Shoreline Drive	Dead End	0.97	E-0	Resurface	1	\$202,000
Apex Lane	Apex Drive	Shoreline Drive	0.42	E-0	Resurface	1	\$87,000
Artella Road	Davidson Road	Cul-de-sac	0.20	E-0	Resurface	1	\$45,000
Barrymor Court	Harwood Road	Cul-de-sac	0.05	E-0	Renewal	1	\$62,000
Bartell Road	Middleton Road	Cul-de-sac	0.08	E-0	Resurface	1	\$16,000
Beacon Hill Drive	Tyndall Road	Cul-de-sac	1.28	D-0	Resurface	1	\$348,000
Benchland Court	Benchland Drive	Dead End	0.04	E-0	Resurface	1	\$10,000
Benchland Drive	Dead End	Dead End	0.97	E-0	Resurface	1	\$202,000
Bernau Court	Jackson Court	Dead End	0.27	E-0	Resurface	1	\$56,000
Berry Road	Highway 97	Okanagan Centre Road E	0.45	D-0	Renewal	1	\$557,000
Berry Road	Highway 97	Bottom Wood Lake Road	0.16	D-0	Resurface	1	\$50,000
Bond Road	Davidson Road	Lacresta Road	0.76	D-0	Renewal	1	\$2,007,000
Bottom Wood Lake Road	Woodsdale Road	132m North of Woodsdale Road	0.13	E-0	Renewal	1	\$105,000
Bottom Wood Lake Road	132m North of Woodsdale Rd	Dead End	0.13	E-0	Renewal	1	\$105,000
Bottom Wood Lake Road	Lodge Road	Woodsdale Road	1.63	D-0	Resurface	1	\$647,000
Bottom Wood Lake Road	270m North of Berry Road	Taiji Court	0.19	B-0	Resurface	1	\$102,000
Bottom Wood Lake Road	Beaver Lake Road	The Nexus Park	0.62	D-0	Resurface	1	\$213,000
Bottom Wood Lake Road	Berry Road	270m North of Berry Road	0.40	B-0	Resurface	1	\$162,000
Bottom Wood Lake Road	Taiji Court	Lodge Road	0.10	D-0	Resurface	1	\$55,000
Bottom Wood Lake Road	Swalwell Park	Roundabout	0.00	D-0	Resurface	1	\$1,000
Bottom Wood Lake Road	McCarthy Road	Swalwell Park	0.27	D-0	Resurface	1	\$69,000
Bottom Wood Lake Road	The Nexus Park	McCarthy Road	0.15	D-0	Resurface	1	\$38,000
Brew Road	Okanagan Centre Road E	Dead End	0.14	E-1	Resurface	1	\$24,000
Broadwater Road	Oyama Road	Towgood Road	0.60	E-1	Interim	1	\$135,000
Broadwater Road	Towgood Road	Oyama Road	1.09	E-1	Interim	1	\$246,000
Brun Road	Bottom Wood Lake	Rolyat Road	0.20	E-0	Renewal	1	\$229,000
Butterworth Road	Pelmewash Parkway	Dead End (North)	0.20	E-1	Resurface	1	\$38,000
Butterworth Road	Pelmewash Parkway	Dead End (South)	0.35	E-1	Resurface	1	\$73,000

Road	From	To	Length (km)	Road Class	Scope	Complexity	2022 Cost Estimate
Camp Road	Bond Road	Hallam Drive	0.52	D-1	Renewal	1	\$790,000
Carbonneau Road	Carr's Landing Road	Commonage Road	0.33	E-0	Resurface	1	\$55,000
Celeste Road	Satin Road	Santina Road	0.26	E-0	Resurface	1	\$54,000
Cemetery Road	Davidson Road	Dead End	0.78	E-1	Interim	1	\$154,000
Centrestone Crescent	Centrestone Drive	Centrestone Drive	0.21	E-0	Resurface	1	\$44,000
Centrestone Drive	Tyndall Road	Benchland Drive	0.36	E-0	Resurface	1	\$76,000
Chase Road	Dead End	Glenmore Road	0.18	E-0	Resurface	1	\$33,000
Chase Road	Glenmore Road	Dead End	0.40	E-0	Resurface	1	\$74,000
Cheryl Court	Cheryl Road	Cul-de-sac	0.08	E-0	Resurface	1	\$17,000
Cheryl Road	Darlene Road	Cul-de-sac	0.70	E-0	Resurface	1	\$159,000
Claridge Drive	Trask Road	Kobayashi Court	0.28	E-0	Resurface	1	\$58,000
Clement Road	Bottom Wood Lake Road	Dead End	0.21	E-0	Resurface	1	\$54,000
Cliffshore Court	Cliffshore Drive	Cul-de-sac	0.03	E-0	Resurface	1	\$8,000
Cliffshore Drive	Lake Hill Drive	Cliffshore Court	0.20	E-0	Resurface	1	\$42,000
Cliffshore Drive	Cliffshore Court	Lake Hill Drive	0.50	E-0	Resurface	1	\$104,000
Cliffstone Court	Cul-de-sac	Cul-de-sac	0.22	E-0	Resurface	1	\$46,000
Cliffstone Court	East Ridge Drive	Cliffstone Court	0.10	E-0	Resurface	1	\$21,000
Commonage Road	2.24km	Boundary	3.71	C-1	Renewal	1	\$1,312,000
Copperhill Lane	Cul-de-sac	Cul-de-sac	0.42	E-0	Resurface	1	\$57,000
Copperhill Place	Teresa Road	Cul-de-sac	0.35	E-0	Resurface	1	\$75,000
Copperhill Road	Sherman Drive	Teresa Road	0.12	E-0	Resurface	1	\$30,000
Coral Beach Road	South Dead End	North Dead End	1.06	E-0	Interim	1	\$200,000
Crimson Road	Chase Road	Dead End	0.28	E-0	Resurface	1	\$59,000
Crofton Road	Crimson Road	Dead End	0.17	E-0	Resurface	1	\$31,000
Crystal Waters Road	Highway 97	Highway 97	3.27	E-1	Resurface	1	\$814,000
Dakota Road	Pheasant Drive	Cul-de-sac	0.61	E-0	Resurface	1	\$147,000
Davidson Road	Okanagan Centre Road E	McGowan Road	1.18	C-0	Renewal	1	\$2,751,000
Deldor Road	Mayrus Road	Dead End	0.30	E-0	Resurface	1	\$52,000
Derek Trethewey Drive	Apex Lane	Dead End	0.26	E-0	Resurface	1	\$55,000
Driftwood Court	Shoreline Drive	Cul-de-sac	0.21	E-0	Resurface	1	\$45,000
Dungate Lane	Stuccato Drive	Gibbons Drive	0.15	E-0	Resurface	1	\$27,000
East Hill Road	Talbot Road	Dead End	0.23	E-1	Rebuild	1	\$167,000
East Ridge Court	East Ridge Drive	Cul-de-sac	0.27	E-0	Resurface	1	\$56,000
East Ridge Drive	Lake Hill Drive	Cliffshore Drive	0.79	E-0	Resurface	1	\$245,000
Edan Place	Daniel Drive	Cul-de-sac	0.06	E-0	Resurface	1	\$12,000
Eva Road	Pretty Road	Cul-de-sac	0.40	E-0	Resurface	1	\$97,000
Evans Road	Pelmewash Parkway	Dead End	0.38	E-1	Resurface	1	\$77,000
Finch Road	Okanagan Centre Road W	Granite Road	0.29	E-0	Resurface	1	\$62,000
Finch Road	Granite Road	820m South to Boundary	0.78	E-1	Resurface	1	\$163,000
Finlay Court	Bond Road	Cul-de-sac	0.09	E-1	Resurface	1	\$23,000

Road	From	To	Length (km)	Road Class	Scope	Complexity	2022 Cost Estimate
Floral Road	Lacresta Road	Cul-de-sac	0.04	E-0	Resurface	1	\$8,000
Forest Hill(s) Drive	Cul-de-Sac	Moberly Road	0.69	E-0	Resurface	1	\$163,000
Gable Road	Carr's Landing Road	Toby Road	0.15	E-0	Resurface	1	\$25,000
Gatzke Road	Cul-de-sac	Dead End	1.61	E-1	Resurface	1	\$251,000
Gatzke Road	Pelmewash Parkway	Gatzke Road	0.12	C-1	Resurface	1	\$19,000
Gibbons Drive	Porter Drive	Porter Drive	0.59	E-0	Resurface	1	\$105,000
Glenmore Road	Seaton Road	Shanks Road	0.26	E-1	Resurface	1	\$123,000
Goldie Road	Okanagan Centre Road E	Okanagan Centre Road E	1.09	E-1	Interim	1	\$260,000
Granite Road	Finch Road	Dead End	0.69	E-0	Resurface	1	\$143,000
Grant Road	Dead End	Main Street	0.07	B-0	Resurface	1	\$18,000
Greenhow Court	Greenhow Road	Cul-de-sac	0.17	E-0	Resurface	1	\$34,000
Greenhow Road	Young Road	Greenhow Court	0.51	E-0	Renewal	1	\$650,000
Greenhow Road	Oyama Road	Young Road	0.26	D-0	Renewal	1	\$477,000
Hallam Court	Hallam Drive	Cul-de-sac	0.04	E-0	Resurface	1	\$10,000
Hallam Drive	Camp Road	Klondike Court	0.77	E-0	Resurface	1	\$153,000
Hare Road	Camp Road	Dead End (North)	0.30	E-1	Interim	1	\$48,000
Hare Road	Camp Road	Dead End (South)	1.37	E-1	Resurface	1	\$275,000
Harmen Road	Middle Bench Road	Cul-de-sac	0.19	E-1	Resurface	1	\$43,000
Harrison Road	Moberly Road	Dead End	0.09	E-0	Resurface	1	\$15,000
Harwood Road	Shanks Road	Mountview Road	0.21	E-0	Resurface	1	\$41,000
Hebbert Road	Oyama Road	Pothecary Road	0.74	E-1	Resurface	1	\$131,000
Heritage Court	Cul-de-Sac	Heritage Drive	0.06	E-0	Resurface	1	\$13,000
Heritage Drive	McCoubrey	Dead End	0.40	E-0	Resurface	1	\$83,000
Highland Road	Dead End	Cul-de-sac	0.28	E-0	Resurface	1	\$50,000
Hill Road	Highway 97	Main Street	0.15	B-0	Resurface	1	\$38,000
Irvine Road	Pelmewash Parkway	100m west	0.12	E-1	Interim	1	\$21,000
Irvine Road	100m west	Old Mission Road	0.23	E-1	Interim	1	\$40,000
Ivy Court	Lehmann Road	Cul-de-sac	0.12	E-0	Resurface	1	\$27,000
Jackson Court	Davidson Road	Cul-de-sac	0.24	E-0	Resurface	1	\$51,000
Jane Road	Robinson Road	Cul-de-sac	0.13	E-0	Resurface	1	\$30,000
Janet Court	Mountview Road	Cul-de-sac	0.05	E-0	Resurface	1	\$10,000
Janet Road	Glenmore Road	Mountview Road	0.16	E-0	Resurface	1	\$31,000
Jardines Road	Okanagan Centre Road E	Pretty Court	0.31	E-0	Resurface	1	\$61,000
Jardines Road	Koyama Road	Cul-de-sac	0.06	E-0	Resurface	1	\$13,000
Jolinda Court	Mountview Road	Cul-de-sac	0.08	E-0	Resurface	1	\$17,000
Juniper Cove Road	Terrace View Road	Cul-de-sac	1.82	E-1	Interim	1	\$220,000
Kalwood Road	Pelmewash Parkway	Dead End	0.21	E-1	Resurface	1	\$35,000
Kel-Vern Road	Read Road	Wilson Road	0.35	E-0	Resurface	1	\$73,000
Kel-Win Road	Wilson Road	Cul-de-sac	0.19	E-0	Resurface	1	\$38,000
Kimberlite Drive	Lakestone Drive	Dead End	0.26	E-0	Resurface	1	\$54,000

Road	From	To	Length (km)	Road Class	Scope	Complexity	2022 Cost Estimate
Klondike Court	Hallam Drive	Cul-de-sac	0.13	E-0	Resurface	1	\$30,000
Kobayashi Court	Claridge Drive	Cul-de-sac	0.10	E-0	Resurface	1	\$22,000
Konschuh Road	Bottom Wood Lake	Dead End	0.16	D-0	Resurface	1	\$45,000
Koyama Road	Jardines Road	Okanagan Centre Road E	0.20	E-0	Resurface	1	\$42,000
Lacresta Road	Bond Road	Bond Road	0.47	E-0	Rebuild	1	\$329,000
Lake Breeze Court	Lake Hill Drive	Cul-de-sac	0.25	E-0	Resurface	1	\$52,000
Lake Hill Drive	Oceola Road	Shoreline Drive	0.85	D-0	Resurface	1	\$348,000
Lake Hill Drive	Shoreline Drive	Lake Hill Way	1.37	E-0	Resurface	1	\$559,000
Lake Hill Lane	Stillwater Way	Shoreline Way	0.40	E-0	Resurface	1	\$83,000
Lake Hill Way	Lake Hill Drive	Cul-de-sac	0.28	E-0	Resurface	1	\$59,000
Lake Vista Court	Cliffshore Drive	Cul-de-sac	0.18	E-0	Resurface	1	\$39,000
Lakepine Road	South End of Lakepine	Barkley Road	0.53	D-1	Resurface	1	\$113,000
Lakepine Road	Moberly Road	Cul de Sac	0.23	E-0	Resurface	1	\$62,000
Lakestone Drive	Tyndall Road	Dead End	0.95	E-0	Resurface	1	\$258,000
Lakewood Road	Robinson Road	Cul-de-sac	0.08	E-0	Resurface	1	\$20,000
Land Court	Bernau Court	Cul-de-sac	0.03	E-0	Resurface	1	\$13,000
Lang Court	Davidson Road	Cul-de-sac	0.19	C-0	Resurface	1	\$45,000
Ledgestone Road	Benchland Drive	Cul de Sac	0.14	E-0	Resurface	1	\$29,000
Lehmann Road	Camp Road	Hallam Drive	0.27	E-0	Resurface	1	\$55,000
Limestone Drive	Lakestone Drive	Finch Road	0.34	E-0	Resurface	1	\$70,000
Lodge Road	30m East of Bottom Wood Lake Road	90 Degree Corner	0.67	C-1	Renewal	1	\$813,000
Lodge Road	90 Degree Corner	Sherman Drive	0.85	C-1	Renewal	1	\$991,000
Lodge Road	Highway 97	30m East of Bottom Wood Lake Road	0.10	C-1	Renewal	1	\$63,000
Long Road	Camp Road	0.33km (South)	0.27	D-1	Reconstruct	1	\$553,000
Long Road	Beacon Hill Drive	Gate	0.19	D-0	Resurface	1	\$41,000
Maddock Avenue	8th Street	10th Street	0.33	E-1	Resurface	1	\$44,000
Maddock Avenue	4th Street	Dead End (South)	0.38	E-1	Resurface	1	\$32,000
Main Street	Roundabout	Pollard Road	0.43	B-0	Resurface	1	\$144,000
Main Street	Pollard Road	Winfield Road	0.33	B-0	Resurface	1	\$169,000
Main Street	Winfield Road	Hill Road	0.10	B-0	Resurface	1	\$49,000
Main Street	Beaver Lake Road (Hill Road)	Hill Road (Beaver Lake Road)	0.23	B-0	Resurface	1	\$100,000
Maki Road	Carr's Landing Road	Dead End	0.31	E-0	Interim	1	\$93,000
Marble Ledge Drive	Lakestone Drive	Dead End	0.28	E-0	Resurface	1	\$58,000
Mayrus Road	Bottom Wood Lake Road	Dead End	0.14	E-0	Resurface	1	\$28,000
McCarthy Road	55m South of Bend	Bottom Wood Lake Road	0.42	E-1	Resurface	1	\$101,000
McCoubrey Road	Okanagan Centre Road W	77m North West (Southwest) of Heritage Drive	0.45	E-0	Resurface	1	\$95,000
McCreight Road	Carr's Landing Road	Cul-de-sac	0.28	E-0	Resurface	1	\$57,000
McDonagh Road	Young Road	90m North of Young Road	0.09	E-0	Resurface	1	\$19,000
McDonagh Road	90m North of Young Road	East (North) Dead End	0.08	E-0	Resurface	1	\$18,000
McGowan Road	Davidson Road	Amundsen Road	0.35	E-1	Resurface	1	\$78,000

Road	From	To	Length (km)	Road Class	Scope	Complexity	2022 Cost Estimate
McGowan Road	Amundsen Road	Dead End	0.31	E-1	Resurface	1	\$59,000
Meadow Road	Lodge Road	Dead End	0.28	E-1	Resurface	1	\$46,000
Middle Bench Road	Allison Road	Towgood Road	1.01	E-1	Interim	1	\$154,000
Middle Bench Road	Towgood Road	Cul-de-sac	0.44	E-1	Interim	1	\$67,000
Middle Bench Road	Cul-de-sac	Dead End	0.09	E-1	Interim	1	\$13,000
Middle Bench Road	Oyama Road	Allison Road	2.42	E-1	Interim	1	\$367,000
Middleton Road	Pretty Road	Cul-de-sac	0.42	E-0	Resurface	1	\$108,000
Mimac Court	Mimac Road	Cul-de-sac	0.08	E-0	Resurface	1	\$18,000
Mimac Road	Pretty Road	Cul-de-sac	0.26	E-0	Resurface	1	\$60,000
Moberly Road	Carr's Landing Road	Cul-de-sac	1.68	D-1	Resurface	1	\$391,000
Monte Bella Road	Chase Road	Cul-de-sac	0.40	E-0	Resurface	1	\$84,000
Monte Carlo Road	Chase Road	Dead End	0.10	E-0	Resurface	1	\$18,000
Mountview Road	Harwood Road	Glenmore Road	0.44	E-0	Resurface	1	\$88,000
Mulberry Road	Daniel Drive	Bond Road	0.15	E-0	Resurface	1	\$31,000
Newene Road	Berry Road	Cul-de-sac	0.58	D-0	Reconstruct	1	\$1,882,000
Nighthawk Road	Tyndall Road	Nighthawk Road	0.98	E-0	Resurface	1	\$243,000
Northstar Lane	Townsend	Dead End	0.71	E-0	Resurface	1	\$140,000
Northview Place	Northview Road	Cul-de-sac	0.22	E-0	Resurface	1	\$50,000
Northview Road	Chase Road	Cul-de-sac	0.21	E-0	Resurface	1	\$48,000
Nygren Road	Cemetery Road	Dead End	0.22	E-1	Interim	1	\$40,000
Oceola Road	Pretty Road	Okanagan Centre Road E	0.90	C-0	Resurface	1	\$350,000
Oceola Road	Highway 97	Pretty Road	0.17	C-0	Resurface	1	\$68,000
Ogilvey Lane	Townsend Drive	Dead End	0.23	E-0	Resurface	1	\$40,000
Okanagan Centre Road E	Oceola Road	Carr's Landing Road	1.49	C-1	Resurface	1	\$488,000
Okanagan Centre Road E	Highway 97	Read Road	0.64	E-0	Resurface	1	\$181,000
Okanagan Centre Road W	Camp Road	Carr's Landing Road	1.71	D-1	Reconstruct	1	\$3,437,000
Okanagan Centre Road W	McCoubrey Road	Tyndall Road	0.38	C-1	Resurface	1	\$89,000
Old Mission Road	Irvine Road	Pelmewash Parkway	1.05	E-1	Interim	1	\$202,000
Old Mission Road	Irvine Road	Dead End (South)	1.55	E-1	Interim	1	\$299,000
Old Mission Road	Ponderosa Drive	North to Dead End	1.03	E-1	Resurface	1	\$188,000
Opal Peak Place	Lakestone Drive	Dead End	0.11	E-0	Resurface	1	\$24,000
Ottley Road	Stubbs Road	Dead End	0.76	E-1	Resurface	1	\$132,000
Owl's Nest Road	Dead End (South)	Evans Road	0.13	E-1	Resurface	1	\$14,000
Oyama Road	Greenhow Road	Sawmill Road	0.53	C-0	Resurface	1	\$226,000
Oyama Road	Greenhow Road	Pelmewash Parkway	1.29	C-0	Resurface	1	\$551,000
Pada Road	Talbot Road	Dead End	0.34	E-1	Resurface	1	\$66,000
Parkside Crescent	Lake Hill Drive	Lake Hill Way	0.24	E-0	Resurface	1	\$50,000
Pelmewash	Oceola Road	Oyama Road	6.72	D-1	Resurface	1	\$3,518,000
Pelmewash	Oyama Road	Highway 97	1.57	D-1	Resurface	1	\$411,000
Petrie Road	Robinson Road	Dead End	0.15	E-1	Resurface	1	\$34,000

Road	From	To	Length (km)	Road Class	Scope	Complexity	2022 Cost Estimate
Pheasant Road	Sherman Drive	Cul-de-sac	0.58	E-0	Resurface	1	\$149,000
Pixton Road	Carr's Landing Road	Cul-de-sac	1.26	E-0	Interim	1	\$350,000
Pixton Strata	Pixton Road	Dead End	0.15	E-0	Renewal	1	\$299,000
Pollard Road	Pollard Road	Cul-de-sac (South)	0.09	E-1	Resurface	1	\$17,000
Pollard Road	Highway 97	Cul-de-sac (North)	0.19	E-1	Resurface	1	\$122,000
Pollard Road	Highway 97	Main Street	0.13	B-0	Resurface	1	\$55,000
Ponderosa Drive	Pelmewash Parkway	Cul-de-sac	0.68	E-1	Resurface	1	\$149,000
Porter Drive	Staccato Drive	Gibbons Drive	0.53	E-0	Resurface	1	\$94,000
Pothecary Road	Whipple Road	Dead End	0.19	E-1	Resurface	1	\$26,000
Powley Court	Bottom Wood Lake Road	Cul-de-sac	0.24	E-0	Resurface	1	\$64,000
Pretty Court	Pretty Road	Jardines Road	0.19	E-0	Resurface	1	\$37,000
Pretty Road	Oceola Road	Cul-de-sac	0.15	E-0	Renewal	1	\$259,000
Pretty Road	Pretty Court	Robinson Road	0.71	D-0	Renewal	1	\$855,000
Pretty Road	Eva Road	Pretty Court	0.37	D-0	Renewal	1	\$979,000
Pretty Road	Robinson Road	225m north of Robinson Rd	0.23	D-0	Renewal	1	\$378,000
Quail Road	Lodge Road	Dead End	0.17	E-0	Resurface	1	\$44,000
Rawsthorne Road	Highway 97	Dead End	1.04	E-1	Resurface	1	\$197,000
Read Road	Dick (Seaton) Road	Okanagan Centre Road E	0.97	C-0	Renewal	1	\$1,948,000
Redecopp Court	Redecopp Road (Bottom Wood Lake Road)	Dead End	0.11	D-0	Renewal	1	\$121,000
Redecopp Road	Rolyat Road	Reiswig Road	0.21	D-0	Reconstruct	1	\$470,000
Redecopp Road	Railway	Rolyat (Reiswig) Road	0.27	D-0	Reconstruct	1	\$614,000
Reimche Road	Bottom Wood Lake Road	Alexis Road	0.22	D-0	Renewal	1	\$181,000
Reiswig Road	Woodsdale Road	Dead End	0.40	E-0	Reconstruct	1	\$956,000
Ribbleworth Road	Broadwater Road	Dead End	0.26	E-1	Resurface	1	\$29,000
Roberts Road (Oyama)	Young Road	Dead End	0.15	E-0	Resurface	1	\$27,000
Roberts Road (Winfield)	Pretty Road	Cul-de-sac	0.24	E-0	Resurface	1	\$46,000
Robinson Road	Highway 97	Pretty Road	0.44	D-0	Renewal	1	\$705,000
Rogers Road	Rogers Road	Dead End (East)	0.04	E-0	Resurface	1	\$7,000
Rogers Road	Woodsdale Road	Dead End (West)	0.27	E-0	Resurface	1	\$35,000
Rolyat Road	Redecopp Road	Dead End Brun Road	0.07	E-0	Resurface	1	\$17,000
Rolyat Road	Brun Road	Dead End	0.08	E-0	Resurface	1	\$8,000
Saldin Court	Camp Road	Cul-de-sac	0.06	E-0	Resurface	1	\$16,000
Sandy Cove Court	Apex Drive	Cul-de-sac	0.04	E-0	Resurface	1	\$8,000
Santina Road	Dead End	Sonata Road	0.30	E-0	Resurface	1	\$63,000
Satin Road	Santina Road	Crimson Road	0.09	E-0	Resurface	1	\$20,000
Sawmill Road	Oyama Road	Dead End	1.33	E-1	Resurface	1	\$242,000
Schaad Road	Carr's Landing Road	Dead End	0.36	E-0	Interim	1	\$62,000
Seaton Road	Dick Road	Wilson Road	0.86	E-1	Interim	1	\$172,000
Seaton Road	Wilson Road	Camp Road	1.25	E-1	Interim	1	\$251,000
Seaton Road	Camp Road	Okanagan Centre Road E	0.73	E-1	Interim	1	\$147,000

Road	From	To	Length (km)	Road Class	Scope	Complexity	2022 Cost Estimate
Seymour Road	Woodsdale Road	Cul-de-sac	0.38	E-0	Resurface	1	\$59,000
Shanks Road	Glenmore Road	Dead End	1.20	E-1	Interim	1	\$220,000
Sheldon Road	Dead End	Cul-de-sac	0.33	E-0	Resurface	1	\$73,000
Sherman Drive	Lodge Road	Peter Greer School	1.07	D-0	Resurface	1	\$270,000
Sherman Drive	Peter Greer School	Copper Hill Road	0.23	D-0	Resurface	1	\$62,000
Shoreline Drive	Lake Hill Drive	Dead End	1.49	E-0	Resurface	1	\$579,000
Shoreline Way	Shoreline Drive	Lake Hill Drive	0.16	E-0	Resurface	1	\$49,000
Slateview Crescent	Lakestone Drive	Limestone Drive	0.32	E-0	Resurface	1	\$66,000
Sonata Road	Santina Road	Dead End	0.10	E-0	Resurface	1	\$22,000
Staccato Drive	Lake Hill Drive	Porter Drive	0.47	E-0	Resurface	1	\$83,000
Stillwater Court	Stillwater Way	Cul de Sac	0.05	E-0	Resurface	1	\$11,000
Stillwater Way	Shoreline Drive	Lake Hill Drive	0.28	E-0	Resurface	1	\$110,000
Stubbs Road	Okanagan Centre Road W	Dead End	0.63	E-1	Resurface	1	\$107,000
Sunny Lake Court	Apex Drive	Cul-de-sac	0.04	E-0	Resurface	1	\$8,000
Sylvia Lane	Sylvia Road	Dead End	0.16	E-0	Resurface	1	\$23,000
Sylvia Road	Lake Hill Drive	Sylvia Lane	0.23	E-0	Resurface	1	\$48,000
Taiji Court	Bottom Wood Lake	Cul-de-sac	0.08	E-0	Resurface	1	\$23,000
Talbot Road	Middle Bench Road	Pada Road	1.21	E-1	Resurface	1	\$227,000
Talbot Road	Pada Road	Dead End	0.39	E-1	Resurface	1	\$93,000
Teresa Road	Russell Road	380m South of Twana Road	0.41	E-0	Resurface	1	\$70,000
Teresa Road	380m South of Twana Road	Copper Hill Road	0.51	E-0	Resurface	1	\$123,000
Terrace View Road	Carr's Landing Road	Coral Beach Road	0.90	E-0	Interim	1	\$176,000
Thompson Road	Highway 97 (Crystal Waters Road ???)	Cul-de-sac	0.31	E-1	Resurface	1	\$55,000
Toby Road	Gable Road	Dead End	0.12	E-0	Interim	1	\$30,000
Todd Road	Middle Bench Road	Hayton Creek Road	0.80	E-1	Resurface	1	\$170,000
Todd Road	Hayton Creek Road	Dead End (North)	0.20	E-1	Resurface	1	\$46,000
Towgood Road	Oyama Road	Broadwater Road	0.20	E-1	Interim	1	\$39,000
Towgood Road	Middle Bench Road	Oyama Road	0.43	E-1	Interim	1	\$86,000
Townsend Drive	Forest Hills Drive	Northstar Lane	0.64	E-0	Resurface	1	\$151,000
Trask Road	Young Road	Claridge Drive	0.15	D-0	Resurface	1	\$24,000
Travertine Drive	Lakestone Drive	Granite Road	0.24	E-0	Resurface	1	\$50,000
Trehitt Road	Oyama Road	Oyama Road	1.49	E-1	Resurface	1	\$224,000
Turtle Bay Court	Woodsdale Road	Cul-de-sac	0.10	E-0	Resurface	1	\$26,000
Twana Road	Teresa Road	Cheryl Road	0.12	E-0	Resurface	1	\$29,000
Tyndall Road	Camp Road	440m south of Camp	0.70	C-0	Renewal	1	\$1,585,000
Tyndall Road	Okanagan Centre Road W	370m south of Nighthawk	1.83	C-0	Resurface	1	\$661,000
Tyndall Road	440m south of Camp	370m south of Nighthawk	0.78	C-0	Resurface	1	\$154,000
Velda Road	Cheryl Road	Cul-de-sac	0.27	E-0	Resurface	1	\$65,000
Wageman Road	Bottom Wood Lake	Dead End	0.09	E-0	Resurface	1	\$19,000
Wall Road	Rawsthorne Road	Dead End	0.24	E-1	Resurface	1	\$38,000

Road	From	To	Length (km)	Road Class	Scope	Complexity	2022 Cost Estimate
Wentworth Road	Gable Road	Cul-de-sac	0.20	E-0	Interim	1	\$42,000
Whiskey Cove Road	Carr's Landing Road	Dead End	0.22	E-1	Interim	1	\$43,000
Willett Road	Oyama Road	Dead End	0.63	E-1	Resurface	1	\$95,000
Williams Road	Okanagan Centre Road E	Bond Road	0.16	E-1	Resurface	1	\$33,000
Wilson Road	Seaton Road	Dead End	0.27	E-0	Resurface	1	\$61,000
Winview Road	Read Road	Dead End	0.50	E-0	Resurface	1	\$115,000
Withers Road (6th St)	Hare Road	Dead End	0.21	E-1	Resurface	1	\$37,000
Woodsdale Road	50m East of Seymour Road	Bottom Wood Lake Road	0.36	D-0	Renewal	1	\$906,000
Woodsdale Court	Woodsdale Road	Dead End	0.08	E-1	Resurface	1	\$8,000
Woodview Road	Pretty Road	Dead End	0.21	E-1	Resurface	1	\$37,000
Young Road	Greenhow Road	Trask Road	0.38	D-0	Resurface	1	\$77,000