STP REPORT #2 FUTURE DIRECTIONS | JANUARY 2022

SYSTEMS

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## **1.0 INTRODUCTION**

The City of Maple Ridge (City) is updating their Strategic Transportation Plan (STP) to help address current transportation challenges and shape the future of transportation in Maple Ridge. As Maple Ridge continues to grow the City's transportation system must evolve and be designed to move everyone efficiently and comfortably, no matter how people choose to get to their destinations. Transportation in the city is changing as it adapts to demand, and the addition of new development, technology, and projects that alter how our community moves around. The STP will identify strategies and projects to build connections, improve systems, and plan for the long-term transportation future. The final STP will address all the ways people move around Maple Ridge including driving, walking, cycling, and taking public transportation, and will shape Maple Ridge's multi-modal transportation investments and decision-making over the next 20 years. Community involvement is an important part of the STP update. All community members are invited to be part of creating a new transportation plan that is inclusive, sustainable, and forward-thinking.

The City of Maple Ridge is a community of 82,000 (2016 Census Data) residents in ten neighbourhoods and historic centres that span over more than 260 km<sup>2</sup> of land area between the Fraser River and the Golden Ears Mountains. While rapid population growth – more than doubling in 30 years – has densified urban areas in Maple Ridge, the community still retains its agricultural and small-town roots. The geography provides stunning views and ample outdoor recreation opportunities with urban amenities and easy access to nearby population centres due to its location along Highway 7, along with the West Coast Express into downtown Vancouver.

## 1.1 PLAN PURPOSE

The STP is a long-term plan that will guide policy and investment within the City of Maple Ridge for all modes of transportation. The last STP was completed and adopted in 2014 and has resulted in improvements to the transportation network, including, 128<sup>th</sup> Avenue improvements, Haney Bypass improvements, and ongoing work on the 232<sup>nd</sup> Street improvements. Since 2014, the community has grown and changed, along with the regional, provincial, and global transportation context. It is important for communities to update their long-term plans every five to ten years to understand evolving issues, reassess priorities, and develop new long-term plans that will inform capital planning, ongoing operations and maintenance, as well as policy, programming, and additional studies.



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The City is challenged with maintaining and improving a large transportation network. Transportation decisions affect the community's health, environment, and economy. Effectively planning transportation improvements and policies ensures community members can safety move in and around Maple Ridge. Having a recent, relevant, and clear Strategic Transportation Plan will allow the City to respond to the policy directions and vision articulated in the City's Official Community Plan and the Metro Vancouver Regional Growth Strategy. It will also facilitate communication and partnership with neighbouring municipalities, First Nations, TransLink, and the British Columbia Ministry of Transportation and Infrastructure (MoTI). The purpose of the STP is illustrated in Figure 1-1

### WHAT IS THE STRATEGIC TRANSPORTATION PLAN?

- Update to the 2014 Strategic Transportation Plan
- Long-term plan for multi-modal transportation in Maple Ridge
- Identifies infrastructure projects
- Identifies policy and programming recommendations
- · Provides an implementation plan and cost estimates



Figure 1-1: What is the STP?



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## **1.2 STUDY PROCESS**

The City of Maple Ridge is updating the STP starting in April 2021. The Plan will be developed based on national best practices as well as local expertise and public input. This approach will result in a plan that responds to how we live today and how we want to live in the future. The STP process includes five phases as illustrated in **Figure 1-2** and summarized below:

- **PHASE 1:** Project Launch & Administration this phase includes preliminary project start up tasks and coordination between the project team and City Staff.
- **PHASE 2:** Existing & Future Conditions this phase focuses on technical analysis of existing and projected future conditions and the first round of public and stakeholder consultation. STP Report #1 summarizes the results of this phase.
- **PHASE 3:** Vision, Goals, and Plan Development this phase includes the development of an overarching Vision and Goals to guide the STP and identification of high-level plans for multi-modal networks. This report (STP Report #2) summarizes the results of this phase.
- **PHASE 4:** Strategy Development & Refinement this phase results in the identification and assessment of strategies, as well as development, refinement, and assessment of potential infrastructure projects.
- **PHASE 5:** Implementation & Final Plan this phase completes the study with project prioritization, costing, and development of the final STP.

| ·                                    |                                   |  | NE ARE<br>HERE   |                                  | _ |
|--------------------------------------|-----------------------------------|--|--|----------------------------------|---|
| Figr PHASE 1                         | PHASE 2                           | PHASE 3                                | PHASE 4  | PHASE 5                          |   |
| • Project Launch &<br>Administration | • Existing & Future<br>Conditions | • Vision, Goals, & Plan<br>Development | <ul> <li>Strategy Development</li> <li>&amp; Refinement</li> </ul> | • Implementation &<br>Final Plan | _ |
| Spring 2021                          | Spring / Summer 2021              | Fall 2021                              | Winter 2022  | Spring 2022                      |   |



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This report (STP Report #2 – Future Directions) is the result of Phase 3 and focuses on setting a direction for the future of transportation in Maple Ridge with Vision, Goals, and Strategic Directions. It responds to the results of the Phase 1 and 2 work, which identified existing and future issues and opportunities through both technical planning and engineering work and public and stakeholder engagement. It was developed using input from Council, Stakeholders, and community members as well as transportation best practices, regional direction, existing planning and policy, and technical network review and planning.

## **1.3 COMMUNCIATION & CONSULTATION**

The development of this plan is grounded in consultation with the community. The City sought feedback from a range of voices to create a vision for the future of transportation in Maple Ridge that is inclusive, sustainable, and forward-thinking. Maple Ridge residents were invited to use their voices to help create a plan that reflects how they move today and how they want to move in the future through online consultation using a StoryMap and survey. Stakeholder groups were contacted by letter to inform them of public consultation and encourage them to participate. Hard copies of surveys were also available at City Hall and distributed directly to stakeholder groups that are traditionally more difficult to reach through online consultation. The study also included consultation with the City's Transportation Advisory Committee. More information about the consultation results for Phase 3 of this project are included in **Appendix A**.

The objectives of the public and stakeholder consultation were:

- 1. To encourage meaningful dialogue about the future of transportation in Maple Ridge by:
  - a. ensuring balanced participation with diverse stakeholder representation
  - b. providing opportunities for input to ensure all voices were heard
- 2. To establish the context of the engagement process by:
  - a. clarifying the scope of the Strategic Transportation Plan
  - b. outlining a timeline for the planning process and implementation
  - c. providing information that is up-to-date and informative



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- 3. To deepen community engagement and improve the relevance, depth, and range of voices represented through public feedback by:
  - a. utilizing online engagement tools that make it easy for people to participate
  - b. reaching out to harder-to-reach stakeholders
- 4. To ensure stakeholders and the public clearly understand how their feedback will be used to inform design decisions by:
  - a. clearly communicating who the decision makers are
  - b. reporting back in a way that demonstrates how feedback was used

As part of Phase 3 – Vision, Goals, and Plan Development, an ArcGIS StoryMap and survey were open from November 17 to December 8, 2021. The engagement was advertised on social media and the City's website, and via print media. The study process and preliminary findings of Phase 3 were also presented for feedback from key stakeholders. This round of engagement focused on the proposed vision, goals, key directions, and preliminary draft long-term networks for each mode of transportation.

The survey received 160 responses from Maple Ridge residents. More than 30% of responses were from those between the ages of 35-44, nearly doubling the weight of this age group in the survey. The survey offers insight into the community's transportation aspirations and desired direction for policy and investment The survey results will be used to inform the draft STP.



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## **1.4 REPORT STRUCTURE**

This Report identifies the draft future directions to be incorporated into the STP. It presents the draft vision, goals, strategic directions along with the potential long-term networks developed during Phase 3. It also summarizes feedback for public consultation and identifies a path forward for the remainder of the plan. It comprises the following sections:

- SECTION 1: Introduction this section provides background context about the study process and intent and the outline of this report.
- **SECTION 2:** Context for Future Directions this section provides an overview of the policy context and community aspirations that guided the development of the draft vision, goals, and strategic directions.
- SECTION 3: Future Directions first, this section presents the draft vision and goals. It then explores the draft strategic directions and potential long-term networks for walking / rolling, cycling, transit, driving / goods movement, and new mobility.
- SECTION 4: Summary & Conclusion closes the report and outlines next steps.

This report also includes three Appendices:

- **APPENDIX A:** Public Consultation Summary
- **APPENDIX B:** Maps
- APPENDIX C: Long-Term Transportation Demand Modelling Results



**CITY OF MAPLE RIDGE STRATEGIC TRANSPORTATION PLAN** STP REPORT #2 – FUTURE DIRECTIONS

## 2.0 CONTEXT FOR FUTURE DIRECTIONS

The future directions for transportation in Maple Ridge will flow from a Vision and Goals that are derived from existing policy, technical understanding of the challenges and opportunities facing the community, and input from the public, stakeholders, and Council. This input was used to develop the draft Vision and Goals, which were provided to Council, the public, and stakeholders for feedback.

This section provides context for the development of the draft vision and goals.

## 2.1 EXISTING POLICY

The *City's Official Community Plan* (OCP) and Council's *Strategic Plan* (2019 – 2022) helped shaped the draft vision and goals for the STP. The City's OCP outlines the community's vision, goals, and aspirations for the future and is a guide for decision making on planning, land use, and policy directions for the City.



The vision of the OCP is:

"The District will strive to protect its Community Values into the future, as it becomes more vibrant and prosperous, offering residents a strong local economy, stable and special neighbourhoods, thoughtful development, a diversity of agriculture, and respect for the built and natural environments."

The OCP also includes 45 community principles, with a number that have applicability to the STP. The principles that are most applicable to the STP include:

- Principle 8: Unique and enjoyable communities and places are created through community improvements, quality design, less obtrusive signage, pedestrian friendly environments, accessibility and viewscapes.
- Principle 25: Providing access to nature by way of a trails system is important as a means to optimize recreational resources in an environmentally friendly way.



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- Principle 34: An integrated system of centres or nodes is supported as an important framework for community development.
- Principle 38: Expanding services concurrently with development is regarded by the community as good planning and development practice.
- Principles 40: A well-planned transportation network is central to providing transportation choices that accommodate multi-modal transportation within the community, and connecting with other places.
- Principles 41: The need to address the east-west road capacity issue is recognized as important.
- Principle 42: Improved community bus service is important to provide connections between neighbourhoods and transit services.
- Principle 43: The community desires more frequent West Coast Express trains, with safer pedestrian access to stations.
- Principle 44: Adequate roadway capacity, especially for emergency vehicles, is an important component of developing new areas.
- Principle 45: Citizens value a pedestrian friendly environment that includes a trail network for horses, walking and cycling for recreation and access to amenities, employment, and services.

Common themes in these OCP principles include providing access to nature, connections between neighbourhoods, accessibility for all, good planning practices, supporting pedestrians, and providing adequate capacity.

Council's Strategic Plan (2019 – 2022) included five strategic priorities that have also informed the development of Vision and Goals. These five strategic priorities are illustrated on the next page and listed below:

- Community Safety
- Inter-Governmental Relations
- Growth
- Community Pride & Spirit
- Natural Environment



**CITY OF MAPLE RIDGE STRATEGIC TRANSPORTATION PLAN** STP REPORT #2 – FUTURE DIRECTIONS

## **5 STRATEGIC PRIORITIES**







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## 2.2 STAKEHOLDER & PUBLIC INPUT

Reflection on the community's aspirations for transportation were included as part of the public and stakeholder consultation for Phase 2. This input was reviewed, summarized into a word cloud, and used to inform development of the vision and goals. The resulting word cloud is illustrated in Figure 2-1: Vision .

Public and stakeholders envision a transportation network that is:

- Safe.
- Efficient.
- Connected.
- Green / Sustainable.
- Accessible.
- Fast.
- Affordable.
- Improved infrastructure.
- Less congestion.
- Reliable.



Figure 2-1: Vision for Transportation in Maple Ridge



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Desired outcomes expressed in public and stakeholder consultation were summarized to inform development of goals for the STP. The desired outcomes that informed the goals are summarized in the word cloud in Figure 2-2 and listed below:

- Desire for better connectivity.
- Improve safety for vulnerable road users.
- Desire for shorter travel times by all modes and dissatisfaction with congestion.
- Desire for more reliable driving and transit.
- Stronger emphasis on livability & land use / transportation connection.
- Desire for higher quality of service (transit / roads).
- Importance of connection to nature / recreation.
- Desire to reduce noise pollution and improve air quality.
- Desire to reduce greenhouse gas emissions caused by transportation.
- Desire to ensure there is adequate parking.

The input from the public and stakeholders were used to develop a draft vision and goals. More specific input on existing issues, challenges, and opportunities for all modes of transportation were used to develop the draft strategic directions and



Figure 2-2: Desired Outcomes for the STP

preliminary long-term networks, which were then distributed to the public and stakeholders for feedback as part of Phase 3.



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## **3.0 FUTURE DIRECTIONS**

This section describes the proposed future directions for the Maple Ridge STP based on the work documented in Report #1, the summary of policy, stakeholder, and public input above, and early input from Council. This framework is based on an overarching vision statement and goals that set the direction for more specific proposed long-term network plans and strategic directions for each mode of transportation. The specific strategies and actions that will be developed in Phase 4 of the plan will articulate how the strategic directions and long-term networks will be achieved in service of the goals and vision.

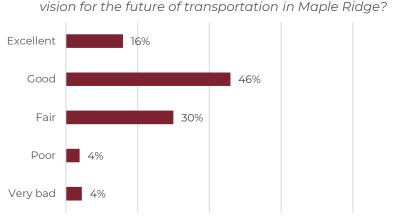
## 3.1 VISION

The draft vision is:

### By 2050, Maple Ridge's transportation system is safe, efficient, connected, accessible, and sustainable. Residents, visitors, and businesses can meet their daily transportation needs reliably and comfortably using their mode of choice.

Feedback from public and stakeholder consultation in Phase 3 indicated broad support for the draft vision statement as written, with **58% of respondents supporting the draft vision statement and another 35% somewhat supporting the vision statement**.

As illustrated in Figure 3-1, more than 60% of respondents indicated that the draft vision statement was good or excellent at aligning with their own vision for the future of transportation in Maple Ridge. Some written feedback and input from stakeholders indicated preference for a closer time horizon than 2050, more specific references to reduced reliance on private vehicles and / or reduction in greenhouse gas emissions, and requests for consideration of equitable and affordable transportation options; however, these changes were a small proportion of the overall comments. Overall, the feedback indicates a preference to move forward with the vision as stated above.



How well do you feel the Draft Vision aligns with your

Figure 3-1: Public Engagement Support for Draft Vision



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## 3.2 GOALS

Goals provide the STP more specific direction to understand which strategies, actions, and investments best align with the community's desired outcomes and address the most pressing existing issues. The draft goals listed to the right align with the draft vision and are intended to reflect the desired outcomes expressed by the public, stakeholders, and Council. They reflect the core themes of safe, connected, efficient and reliable, accessible, sustainable, and cost effective transportation that were common throughout the review of existing policy and consultation.

These draft goals were presented to Council and circulated as part of the Phase 3 consultation. All of these goals had **strong support with the public with between 73% and 95% of respondents supporting** (i.e. responding 'support' or 'strongly support') each of these draft goals as written. None of the draft goals saw more than 5% of respondents opposing the goal. The draft goals concerning safety and accessibility had particularly low levels of opposition, with only 2% of respondents opposing those goals as written.

Beyond the goals listed here, written commentary within the survey and from stakeholders expressed a

## The Draft Goals



A safe transportation system where people and goods can move comfortably without fear of harm

A connected transportation system where neighbours can meet, businesses can thrive, and people and goods can move within our community

An efficient and reliable transportation system that allows people to get to their destinations on time

An accessible transportation system where people of all ages, abilities and incomes can comfortably reach their destination

A sustainable transportation system that is connected to nature and minimizes environmental impacts

A cost effective transportation system where municipal expenditures have a high return on investment

desire for greater attention to access to schools, prioritization of active transportation, and a greater emphasis on emissions reduction. Some stakeholders also suggested that the cost effectiveness of transportation investment – as considered by the final goal – include consideration of the economic benefits of walking and cycling. These themes can be reflected in the more detailed



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work on strategies and actions in Phase 4. A small number of respondents to the public survey (less than 4%) expressed a desire for a plan that prioritized private vehicle travel and / or a stronger focus on traffic flow for private vehicles.

These results, along with responses from stakeholders indicate strong support for moving forward with these draft goals as written, with some more specific priorities reflected in plan development.

## 3.3 STRATEGIC DIRECTIONS & LONG-TERM NETWORKS

Phase 1 and 2 of the STP identified issues, opportunities, and gaps in transportation in Maple Ridge. The strategic directions and long-term networks seek to address these issues and gaps and to leverage opportunities by moving towards the future envisioned by the draft vision and goals.

As illustrated in Figure 3-2, the strategic directions and long-term networks are organized according to five thematic areas, all of which will be advanced in service of the goals of a safe, connected, reliable, accessible, sustainable, and cost-effective transportation system in Maple Ridge.

The remainder of this section identifies draft strategic directions and preliminary long-term networks for each of the thematic areas.



Figure 3-2: Thematic Areas & Goals



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## 3.3.1 WALKING / ROLLING

Walking and rolling is the most fundamental form of transportation. STP Report #1 outlined issues, including:

- There are connectivity gaps in the walking and rolling network in established areas and rural areas.
- There is a strong desire to address connectivity gaps on busier roadways to access frequent transit.
- The costs to address these gaps can be high in established / older areas of the City and it is important that the plan consider these costs and the potential return on investment.

The five draft strategic directions for walking / rolling as outlined below respond to the issues, gaps, and opportunities identified in STP Report #1 by focusing on providing safe and accessible connections to important destinations, in evolving areas, and around transit. All of the strategic directions received support from the public and stakeholders, with every direction receiving **support from at least 73% of respondents** and no more than 6% of respondents opposed to any of the directions. Following are the draft strategic directions for walking / rolling that and that are expected to move the City towards the vision and goals presented earlier:

- Complete community connections to ensure residents can walk to important destinations like schools, commercial areas, and community centres.
- Invest and partner for a walkable Regional City Centre to ensure most trips in the Town Centre can be comfortably and safely made by walking.
- Invest and partner for a walkable Lougheed Transit Corridor Area to ensure that people living and working along the RapidBus route can comfortably and safely get to transit and key destinations.
- Prioritize personal safety and comfort by ensuring walking infrastructure is accessible, including safe crossings and lighting.
- Update standards for pedestrian infrastructure to ensure new communities are designed to meet current best practices and achieve the Vision and Goals.

A central component of achieving a safe, connected, and accessible pedestrian network is investing in addressing network gaps in existing neighbourhoods. These investments may include sidewalks or multiuse pathways, along with safe and accessible crossings, lighting, and / or other improvements as indicated by local conditions. Figure 3-3<sup>1</sup> illustrates a potential long-term pedestrian network to guide municipal and partner investment over the long-term. This does not show all pedestrian infrastructure



<sup>&</sup>lt;sup>1</sup> A larger size copy of this map is included in Appendix B.

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that may be built by developers as part of new communities and / or infill, which will be addressed through policy recommendations.

The proposed walking network focuses investment to create a connected network of sidewalks and multi-use pathways that serves schools, commercial areas, and planned rapid and frequent transit – locations where people are most likely to walk. It closes gaps around key destinations and seeks to create a network of connected and complete walking facilities, particularly within denser, mixed-use areas where people are more likely to choose walking.

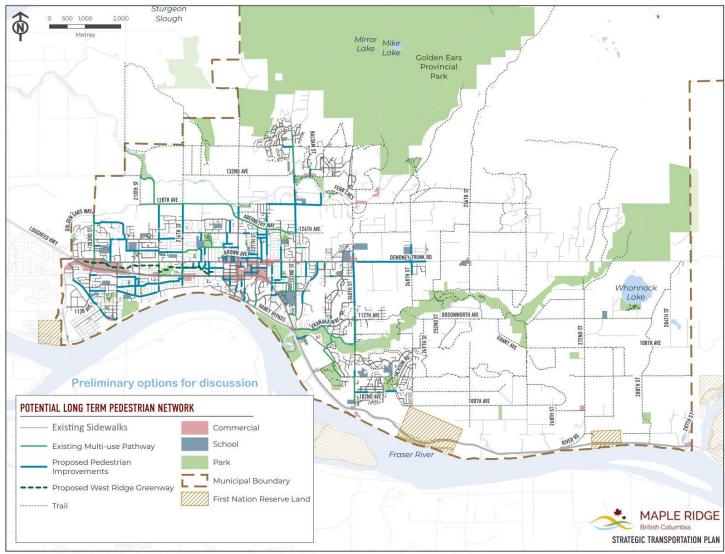
Key components of the proposed walking network include:

- The proposed West Ridge Greenway, which will provide a high quality, enjoyable, urban walking and cycling connections through the evolving Lougheed Transit Corridor Area. This high-quality connection is expected to be achieved through development.
- Completing the sidewalk network within the City Centre, with pedestrian facilities on both sides of all roadways.
- East-west routes both north of Dewdney Trunk Road and south of Lougheed Highway.
- North-south routes to connect to future rapid transit and commercial areas along Laity Street, 216<sup>th</sup> Street, 228<sup>th</sup> Street, and 232<sup>nd</sup> Street.
- Improved connections within and between community destinations in the Cottonwoods and Albion neighbourhoods.

Public and stakeholders expressed support for the proposed walking network. **Fifty-four percent of survey respondents indicated that the proposed network is good or excellent at addressing walking / rolling issues and gaps, with only 14% indicating it was poor or very bad.** Additional feedback from stakeholders and the public affirms the need to focus on safety, particularly around schools and to focus on safe walking to community destinations as a high priority for implementation. Some feedback focused on better integrating walking infrastructure to provide access to nature and on the connection between strong, complete communities and walkability. This input will be integrated into the specific strategies and actions developed in Phase 4.



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Figure 3-3: Proposed Long-Term Pedestrian Network



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## 3.3.2 CYCLING

Cycling is a growing mode of transportation across the Metro Vancouver region and stakeholders at the local, regional, and provincial levels have expressed the need for a safe and connected cycling network. STP Report #1 outlined issues for cycling as a mode of transportation, including:

- There are connectivity gaps in the cycling network and limited all ages and abilities (AAA) cycling facilities.
- There is broad support for cycling facilities that are physically separated from traffic.
- Safety and comfort are important considerations for the cycling network.

Four draft strategic directions are proposed to respond to the issues, gaps, and opportunities identified in STP Report #1 by partnering to provide a safe and comfortable network of routes that focus on providing connections to key community and regional destinations. All the strategic directions received support from the public and stakeholders, with every direction receiving support from at least 66% of respondents and no more than 10% of respondents opposed to any of the directions. Following are the draft strategic directions for cycling that are expected to move the City towards the vision and goals presented earlier:

- Provide a safe and comfortable network of cycling routes that connect main areas of the City and neighbourhoods separated from traffic on high speed and volume roadways.
- · Partner to complete regional cycling network that connects to neighbouring municipalities.
- Leverage grant funding opportunities, maximize potential, and grow local and regional cycling.
- Complete connections to community destinations to ensure that most residents and visitors can easily and comfortably access amenities across the City by bicycle.

Figure 3-4<sup>2</sup> illustrates a potential long-term cycling network based on the strategic directions and review of issues and gaps. The proposed network includes two complementary components – primary and secondary routes. The map does not show all cycling infrastructure that may be built by developers as part of new communities and / or infill, which will be addressed through policy recommendations.

The primary network serves key community destinations, including the City Centre and schools. It is intended to be suitable for people of all ages and abilities and to make cycling more attractive to more people for short, daily trips. The design intent for the primary network is to be separated from traffic or located on a low-volume, low-speed roadway. The primary network is illustrated



<sup>&</sup>lt;sup>2</sup> A larger size copy of this map is included in Appendix B.

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in purple, with dotted purple representing locations where there is currently no accommodation for cyclists and solid purple being existing bicycle routes – although these routes may not meet the objectives for the primary network as currently constructed.

The secondary network is shown in orange. It is intended to support the primary network and may serve more confident cyclists who are comfortable riding on a broader variety of infrastructure. The dotted orange line represents locations where there is currently no accommodation for cyclists and the solid orange line is existing bicycle routes. A solid line does not preclude the need for future improvements for safety or connectivity.

Key components of the proposed cycling network include:

- The proposed West Ridge Greenway, which will provide a high quality, enjoyable, urban walking and cycling connections through the evolving Lougheed Transit Corridor Area. This high-quality connection is expected to be achieved through development.
- A continuous and connected primary cycling route from the municipal boundary with Pitt Meadows to the City Centre in alignment with the planned regional bikeway network.
- North-south primary cycling connections along 203<sup>rd</sup> Street, 216<sup>th</sup> Street, 232<sup>nd</sup> Street, and 240<sup>th</sup> Street.
- Primary cycling connections proposed along new arterial road connections at Abernethy Way / 124<sup>th</sup> Avenue and 240<sup>th</sup> Street.
- Higher density of primary connections in the City Centre.
- Working towards all schools being in close proximity to a cycling route, with most served by the primary network.

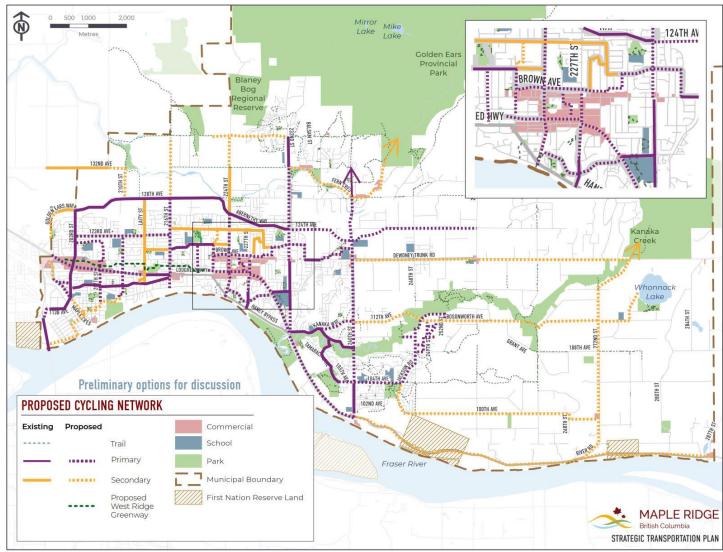
## Overall, this network received support from stakeholders and the public, with 54% of survey respondents indicating that the network was good or excellent at addressing cycling issues and gaps in Maple Ridge and only 9% indicating it was poor or

**very bad.** Comments focused on the need for safe bicycle connections that are separate from high volume / high speed roadways and the need for traffic calming along cycling routes. Key feedback on this network from stakeholders included a desire to change routing to reduce grade changes and improve the convenience and directness of travel to key destinations. Feedback included requests to add a connection along the Haney Bypass3 and reconfigure the network in the Albion and Cottonwood neighbourhoods. Feedback from stakeholders and the public also included requests to add additional routes to the primary network, including along Dewdney Trunk Road. Stakeholders also noted the importance of complete communities to facilitate greater cycling mode share. This input will be considered and integrated where possible as part of Phase 4.



<sup>&</sup>lt;sup>3</sup> The Haney Bypass is under the jurisdiction of the Ministry of Transportation and Infrastructure).

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Figure 3-4: Proposed Long-Term Cycling Network



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## 3.3.3 TRANSIT

Transit is expected to have a central role in increasing the people moving capacity of Maple Ridge's transportation system and achieving the goals outlined earlier in this report. STP Report #1 outlined issues for transit, including:

- There is limited access to frequent, high-speed transit with extended service hours, including weekends.
- There is a desire to expand West Coast Express service.
- There are gaps in the sidewalk network that provides walking connections to transit.
- Residents would like amenities for transit such as shelters, benches, and lighting improvements.
- Current transit operations can be unreliable due to traffic congestion and inability to maintain speed for buses.

Three draft strategic directions are proposed to respond to the issues, gaps, and opportunities identified in STP Report #1 by focusing on transit-supportive land use and infrastructure improvements that are within the City's control. All of the strategic directions received support from the public and stakeholders, with every direction receiving support from at least 78% of respondents and no more than 5% of respondents opposed to any of the directions. The most common suggestions for additions to the strategic directions were to expand West Coast Express service, improve the speed and efficiency of transit, and to provide park and rides for bicycles and cars. Following are the draft strategic directions for transit that are expected to move the City towards the vision and goals presented earlier:

- Continue pursuing land use planning that supports transit to ensure that the community and transit are oriented around one another, promoting transit use.
- Partner for more reliable and efficient transit through road network improvements to ensure that transit can maintain its operating schedule and be a reliable mode of transportation.
- Complete connections to community destinations to ensure that all residents and visitors can easily and comfortably access amenities across the City and the region.

Figure 3-5<sup>4</sup> illustrates the proposed long-term transit network, which is grounded in the recommendations of the *Maple Ridge – Pitt Meadows Area Transport Plan* (2020) and the draft Transport 2050. Transit routing and frequency are under the jurisdiction of TransLink and are subject to change over time based on evolving needs. Key features include:



<sup>&</sup>lt;sup>4</sup> A larger size copy of this map is included in Appendix B.

STP REPORT #2 – FUTURE DIRECTIONS

- Transit priority improvements to support rapid transit along Lougheed Highway from the municipal boundary with Pitt Meadows to the City Centre. Modelling indicates that dedicated transit priority lanes on Lougheed Highway can be expected to more than double ridership when compared to frequent service mixed with traffic. A City Centre park and ride was also considered as part of this improvement, but it was not included in the proposed network because it was not found to attract substantial new ridership. Analysis indicated that a City Centre park-and-ride did not increase the attractiveness of transit for most driving trips. A park and ride in the Town Centre would not be expected to be a cost effective investment.
- Improved mobility hubs at the Port Haney West Coast Express Station and in Albion. The mobility hub at Albion is
  envisioned to include West Coast Express service and a park and ride, subject to further study and partnerships. A new West
  Coast Express Station with a low-cost, fully accessible park and ride would be expected to attract 600 to 800 riders in the
  peak period and to decrease traffic volumes on east-west arterial roads and Lougheed Highway / Haney Bypass.
- Broad increase in transit service frequency to 15 minutes or better throughout the developed areas of the City, resulting in the majority of residents, commercial areas, schools, and other key community destinations being within 400 m of frequent (i.e. 15 minute or better) transit service.
- Fixed route bus transit service in rural areas, some industrial areas, some parks, and some lower density residential areas.
- Localized transit priority improvements at locations where congestion contributes to delay and low reliability for bus service. These locations and transit needs will be confirmed with TransLink in Phase 4.

This network received support from stakeholders and the public, with 58% of survey respondents indicating that the network as proposed was good or excellent at addressing transit issues and gaps in Maple Ridge and only 15% indicating it was poor or very bad. Additional feedback from stakeholders and the public included information about historic feasibility challenges around providing a West Coast Express station with a park and ride in Albion and requests for additional service for areas east of 240<sup>th</sup> Street. This input will be reviewed and considered for integration as part of Phase 4.



STP REPORT #2 – FUTURE DIRECTIONS

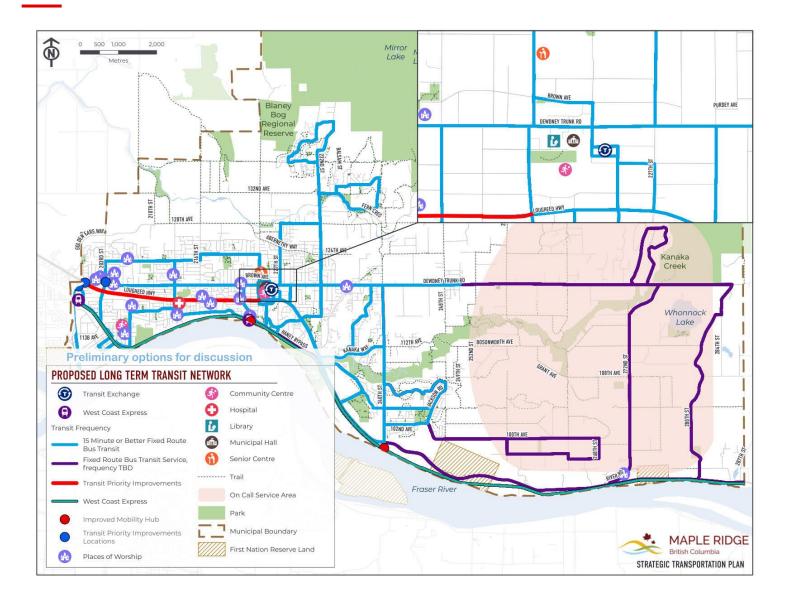


Figure 3-5: Proposed Long-Term Transit Network



STP REPORT #2 - FUTURE DIRECTIONS

## 3.3.4 DRIVING / GOODS MOVEMENT

Driving is currently the most common mode of transportation in Maple Ridge and the use of the road network for commercial vehicles is important to the local economy. STP Report #1 outlined issues for driving and goods movement, including:

- There is growing congestion on roads impacting travel peak hour times on the western side of the City. There is a desire to expand Golden Ears Way north of Highway 7 from two to four lanes.
- There is a desire to expand Abernethy Way east from 232 Street to 240 Street and extend 240 Street north to the Silver Valley area.
- Ensuring fast efficient movement of goods and services is important for local businesses and the economy.
- Improving the safety of the transportation network by reducing the number of severe collisions.
- There is growing congestion on parts of Lougheed Highway (Highway 7 and the Haney Bypass are owned and operated by the BC Ministry of Transportation and Infrastructure).

The four draft strategic directions for driving / goods movement respond to the issues, gaps, and opportunities identified in STP Report #1 by focusing on investing in improved safety, reliability, safety, and connectivity. **All the strategic directions received support from the public and stakeholders, with every direction receiving support from at least 76% of respondents and no more than 11% of respondents opposed to any of the directions.** Following are the draft strategic directions for driving / goods movement that are expected to move the City towards the vision and goals presented earlier:

- Completing the network to ensure that neighbourhoods and destinations are connected to one another in an efficient way.
- Ensure proactive steps are taken to improve safety for vulnerable road users and motorists.
- Road expansion and major improvements to accommodate recent and future growth in Maple Ridge and neighbouring municipalities.
- Local improvements to intersections to improve access and efficiency of the transportation system.

Comments on the strategic directions focused on improving efficiency and reliability on key corridors, including Lougheed Highway, Golden Ears Way, Haney Bypass, Dewdney Trunk Road, and connectivity to the Silver Valley area. While some comments called for expanded road capacity, a similar number called for limits on road network expansion and / or shifting focus to sustainable modes of transportation and calming / slowing traffic.



STP REPORT #2 - FUTURE DIRECTIONS

Figure 3-6<sup>5</sup> illustrates the proposed long-term road network classification and identifies proposed new connections and major road widenings. It does not show individual intersection improvements, which will be identified as part of Phase 4. New connections and road widenings were identified in previous plans and policy documents and confirmed through scenario modelling using the regional travel demand model, which has been updated to reflect proposed land uses in Maple Ridge and Mission. New communities and industrial areas are expected to have additional collector and local roads, which will be determined through neighbourhood planning and are not shown on the proposed long-term network map.

Key components of the proposed driving / goods movement network include:

- Widening Golden Ears Way to four lanes between 210<sup>th</sup> and Lougheed Highway to accommodate daily traffic volumes between 24,000 and 36,000 vehicles by 2050..
- Widening the Haney Bypass<sup>6</sup> to four lanes to accommodate between 36,000 and 50,000 vehicles per day by 2050 and to reduce future daily traffic volumes through the City Centre.
- Extending Abernethy Way in phases from 232<sup>nd</sup> Street to 240<sup>th</sup> Street, and (in the long-term) to 256<sup>th</sup> Street to improve connectivity, efficiency, and reliability. These improvements are expected to reduce traffic along Dewdney Trunk Road and are descrived further below:
  - The extension of Abernethy Way to 240<sup>th</sup> Street is expected to accommodate approximately 15,000 vehicles per day by 2050
  - The extension of Abernethy Way from 240<sup>th</sup> Street to 256<sup>th</sup> Street is expected to accommodate approximately 9,000 vehicles per day by 2050.
- Extending 240<sup>th</sup> across the Alouette River to connect with Fern Crescent, which provides secondary access to neighbourhoods in Silver Valley to accommodate demand and improve access for emergency services. This link is expected to carry approximately 8,000 vehicles per day by 2050. This infrastructure, in combination with the Abernethy extension to 240<sup>th</sup>, is expected to reduce traffic volumes along 132<sup>nd</sup> Avenue and 232<sup>nd</sup> Street
- Connecting the Thornhill area to Lougheed Highway, likely near Jackson Road / 100<sup>th</sup> Street to accommodate more than 9,000 vehicles per day. The feasibility and alignment of this connection are to be determined.



<sup>&</sup>lt;sup>5</sup> A larger size copy of this map is included in Appendix B.

<sup>&</sup>lt;sup>6</sup> Under the jurisdiction of the Ministry of Transportation and Infrastructure.

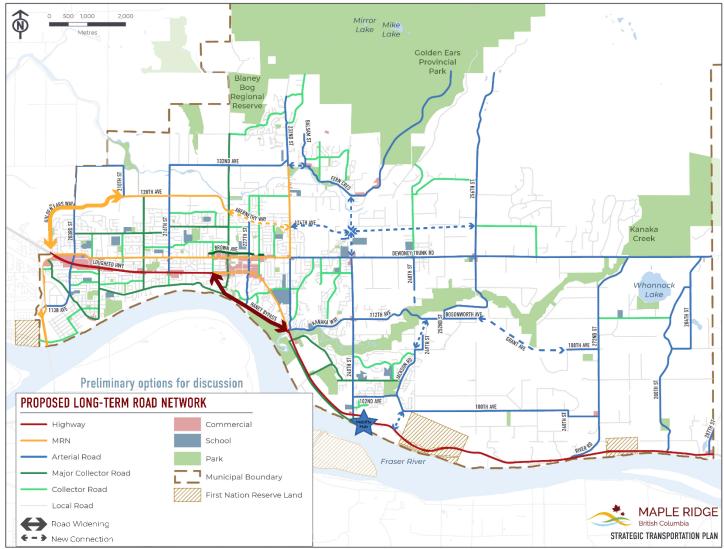
STP REPORT #2 – FUTURE DIRECTIONS

• Updated some road classifications to better reflected their existing and projected role in the transportation network, including Brown Avenue, 210<sup>th</sup> Street between 117<sup>th</sup> Avenue and Dewdney Trunk Road.

Public and some stakeholders expressed support for the proposed driving / goods movement network. Fifty-three percent of survey respondents indicated that the proposed network is good or excellent at addressing driving / goods movement issues and gaps, with 19% indicating it was poor or very bad. Some stakeholders expressed a desire for limiting road network expansion and investment. Stakeholders and the public noted that safety is a primary concern and that road network improvements should be focused on improving safety for vulnerable road users, including reducing speeds through traffic calming on some corridors, improving lighting, and intersection safety improvements. This input will be integrated into the specific strategies and actions developed in Phase 4.



STP REPORT #2 – FUTURE DIRECTIONS



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Figure 3-6: Proposed Long-Term Road Network



STP REPORT #2 - FUTURE DIRECTIONS

## 3.3.5 NEW MOBILITY

Transportation is evolving as new technology emerges and creates new choices, opportunities, and challenges. A number of rapidly evolving technologies and policies are currently changing transportation, including electrification, connectivity, automation, and road pricing. Emerging changes include:

- Growing demand for electric vehicles
- Availability of e-bikes and e-scooters are increasing the potential to travel longer distances and / or challenging terrain via active transportation.
- Ridehailing (e.g. Uber and Lyft) have begun operations across Metro Vancouver.
- Car sharing has become a viable replacement for car ownership in some of Metro Vancouver's urbanized areas.

The three draft strategic directions for new mobility respond to the issues, gaps, and opportunities identified in STP Report #1 by focusing on supporting electrification and new ways of travelling, while continuing to coordinate on new mobility at the regional level. All the strategic directions received support from the public and stakeholders, with 53% of respondents indicating that the strategic directions were good or excellent at addressing new mobility issues and gaps. Following are the draft strategic directions for new mobility that are expected to move the City towards the vision and goals presented earlier:

- Support the 'electrification' of travel to ensure that the City can accommodate future trends, and proactively reduce greenhouse gas emissions.
- Explore the role of new ways of travelling, including car share (e.g. Evo, Modo), ride share (e.g. Uber, Lyft), micromobility (bike share, electric bikes, scooter share, etc.) improving mobility for all.
- Coordinate for automation to ensure that the regional introduction of Autonomous Vehicles is smooth and creates a positive impact on the transportation network.

Stakeholders and the public suggested some specific focus areas within this theme, including increasing the speed of implementation and ensuring that safety is prioritized as new modes are introduced. Stakeholders also suggested a greater focus on electric vehicle charging as part of all new buildings and that the STP considers how mobility pricing may shape the future of transportation regionally and locally by 2050.



STP REPORT #2 – FUTURE DIRECTIONS

## 4.0 SUMMARY & CONCLUSION

This Report provided an overview of the draft vision, goals, strategic directions, and preliminary long-term networks that will form the basis of the STP. It summarized key feedback from stakeholders and the public that will shape the development of more specific strategies and actions in Phase 4. Some of the key overarching findings include:

• The draft vision and goals received a high level of support as drafted. The vision and goals received a high level of support in the public consultation survey and general support from stakeholders. Following further feedback from Council the draft vision and goals will be finalized for inclusion in the STP.

## **DRAFT VISION**

By 2050, Maple Ridge's transportation system is safe, efficient, connected, accessible, and sustainable. Residents, visitors, and businesses can meet their daily transportation needs reliably and comfortably using their mode of choice.

## The Draft Goals



A safe transportation system where people and goods can move comfortably without fear of harm



A connected transportation system where neighbours can meet, businesses can thrive, and people and goods can move within our community



An efficient and reliable transportation system that allows people to get to their destinations on time

An accessible transportation system where people of all ages, abilities and incomes can comfortably reach their destination

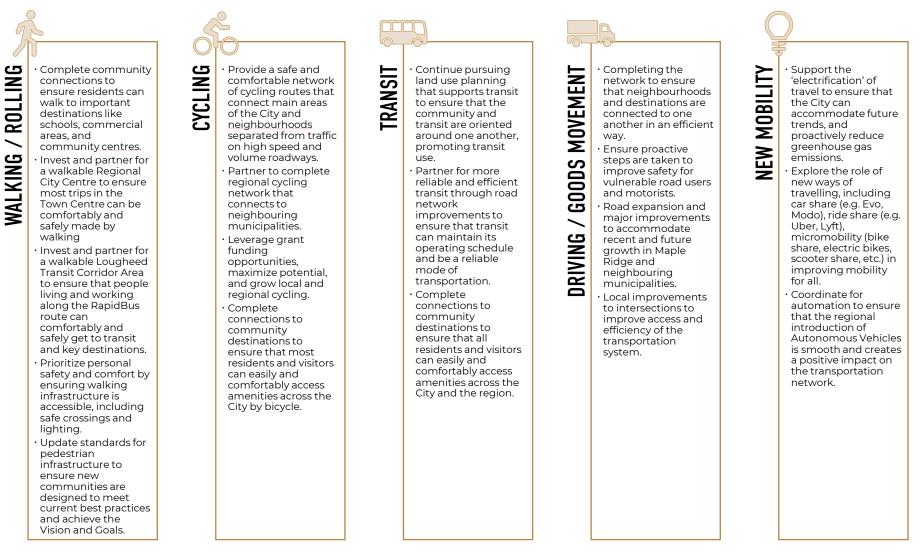


A cost effective transportation system where municipal expenditures have a high return on investment



STP REPORT #2 - FUTURE DIRECTIONS

• The draft strategic priorities align with the goals and objectives and have strong support from the public and stakeholders as drafted. The draft strategic priorities will be refined based on stakeholder and public input and presented to Council for feedback before being finalized for inclusion in the STP.





STP REPORT #2 - FUTURE DIRECTIONS

- The STP should reflect the importance of complete communities for a safe, connected, efficient & reliable, accessible, sustainable, and cost-effective transportation system. Stakeholders and the public identified to the importance of complete, mixed-use communities also known as 15-minute communities in delivering the vision and goals.
- The proposed long-term networks for each mode address the most pressing issues and gaps. The high levels of support suggests that the overarching approach and resulting networks should be carried forward with adjustments to some connections based on stakeholder and public input.
- There are a number of key corridors that are central achieving the vision and goals by providing for multiple modes of transportation. Coordinated, multi-modal improvements in addition to policy guidance for development and urban design will be required for these key corridors to fully contribute to achieving the vision and goals. These corridors include:
  - Lougheed Highway<sup>7</sup> from the Pitt Meadows boundary through the City Centre;
  - Golden Ears Way
  - Abernethy Way / 124<sup>th</sup> Avenue
  - o Dewdney Trunk Road from Lougheed Highway to 232<sup>nd</sup> and from 232<sup>nd</sup> Street to 256<sup>th</sup> Street
  - o 240<sup>th</sup> Street
  - o 203<sup>rd</sup> Street / 113B Avenue
  - Laity Street
  - o 216<sup>th</sup> Street
  - Brown Avenue
  - 。 The West Ridge Greenway
  - Thorne Avenue / 117<sup>th</sup> Avenue Corridor
  - o 123<sup>rd</sup> Avenue
  - Thornhill Access roadway
  - 。 Fern Street
  - o 132<sup>nd</sup> Avenue

The findings summarized in this report will be used to refine the strategic directions and develop the specific strategies and actions that will form the core of the STP.



<sup>&</sup>lt;sup>7</sup> Lougheed Highway from the Pitt Meadows Boundary to the Haney Bypass are under the jurisdiction of the Ministry of Transportation.

# **APPENDIX A**

## PUBLIC CONSULTATION SUMMARY



# MAPLE RIDGE STRATGIC TRANSPORTATION PLAN

# Phase 3 Community Survey Summary Report

### **INTRODUCTION**

The City of Maple Ridge is updating its 2014 Strategic Transportation Plan to shape the future of transportation in Maple Ridge and respond to changing transportation needs and trends. As a part of Phase 3 of the planning process, the project team completed technical analysis and integrated valuable input provided by residents and stakeholders to summarize the issues and gaps for all modes of transportation in Maple Ridge. This information was used to develop a draft vision statement, goals, and long-term strategic directions for different modes of transportation within the community.

To obtain public input on the draft vision, goals, and directions an online ESRI StoryMap with an embedded SurveyMonkey survey was available through the City's website from November 17 to December 8, 2021.

The survey received 160 responses, which has been summarized below. The results of this survey will be used to inform the draft Strategic Transportation Plan.



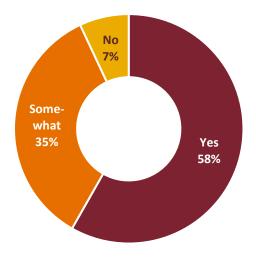
### **PART 1: VISION & GOALS**

Recommendations in the Strategic Transportation Plan will be guided by the Vision and Goals. The Draft Vision is:

By 2050, Maple Ridge's transportation system is safe, efficient, connected, accessible, and sustainable. Residents, visitors, and businesses can meet their daily transportation needs reliably and comfortably using their mode of choice.

#### Do you support this Draft Vision Statement?

Respondents were asked whether they supported the draft vision statement. The majority (58%) do, while 35% somewhat support the vision statement , and 7% do not support the vision statement.

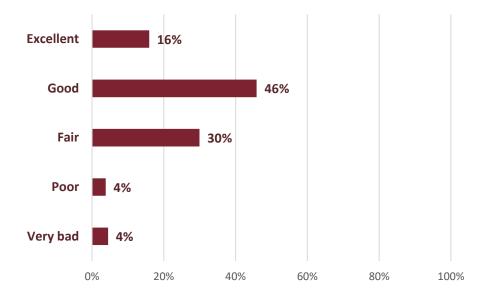


158/160 answered this question



# How well do you feel the Draft Vision aligns with your vision for the future of transportation in Maple Ridge?

Respondents were asked how well they felt the Draft Vision aligned with their vision for the future of transportation in Maple Ridge. Sixty-two percent selected *good* or higher, while 30% selected *fair*, and 4% selected *poor*.



#### 157/160 answered this question

# Is there anything we missed as part of the Vision statement?

In total, there were 79 responses to this question. The comments were coded according to key themes that emerged in the analysis. In some instances, more than one theme was identified per response. A summary of the key themes is below:

- Timing and Implementation (24 comments)
  - 2050 is too far away (19)
  - The statement is too vague (5)

#### • Areas of Focus to Include (18 comments)

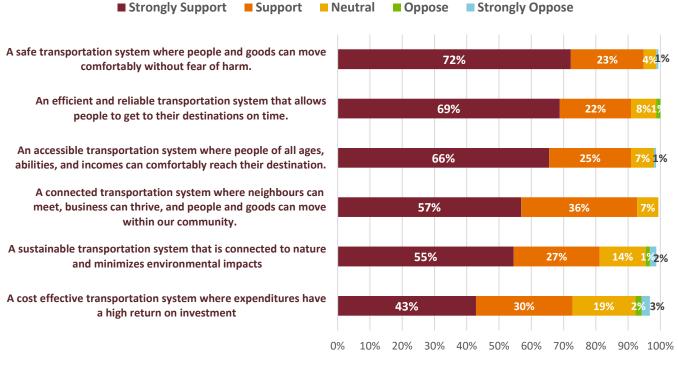
- Reducing vehicle reliance (5)
- Affordability (4) / Accessibility for handicapped and seniors (1)
- Cost efficiency (4)
- Traffic flow for cars and trucks (2)
- Rapid options (2)
- Environmental Focus (14 comments)
  - Climate-forward planning (sustainability, reducing GHGs) (5)
  - Protecting nature (2)
- Access and Connections (11 comments)



- Regional connections (3)
- Expanding the network (3)
- Access to schools (3)
- Access to rural areas (2)
- Development (4 comments)
  - Invest in infrastructure before development (4)

As part of the Strategic Transportation Plan, we have developed six draft Goals that are proposed to guide the development of more specific strategies and recommendations. Please tell us about your support for each of the goals: Respondents were presented with the six draft goals to guide the development of the Plan. They were then asked to rate their level of support for each. The goals that received the highest levels of support include *A safe transportation system*, followed by *an efficient and reliable transportation. A Cost*-

*effective transportation system* received the lowest amount of support from respondents.



156/160 answered this question



# Are there any other overarching goals that we missed? Please describe briefly below.

In total, there were 51 responses to this question. The comments were coded according to key themes that emerged in the analysis. In some instances, more than one theme was identified per response. A summary of the key themes is below:

- Access and Connections (16 comments)
  - Access to schools (6)
  - Better connections within the community (East End, Whonnock, N/S) (6)
  - Connections to other municipalities (4)
- Prioritize Active Transportation (14 comments)
  - Foster more active transportation opportunities (5)
  - Reduce the reliance on single occupancy vehicles (4)
  - Prioritize pedestrians (3)
  - Traffic calming needed (2)
- Climate and Sustainability (11 comments)
  - Climate forward planning (reducing GHGs, protecting nature) (7)
  - Define and prioritize sustainable transportation (4)

#### • Traffic Management (8 comments)

- Improve traffic flow (4)
- Prioritize vehicles (2)
- Infrastructure for electric vehicles needed (2)

#### • Community Planning (5 comments)

- Plan for the future growth (3)
- More complete communities (2)
- Other (9 comments)
  - Affordability (parking, transit) (5)
  - More specificity needed (ROI, comfortability, accessibility) (4)

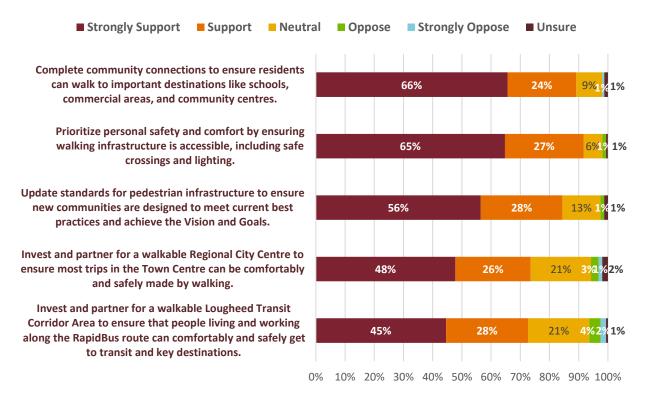


### **PART 2: KEY DIRECTIONS**

### Walking and Rolling Key Directions

# There are five draft strategic directions for walking / rolling. Please tell us about your support for each of the proposed strategic directions.

Respondents were presented with the five draft strategic goals for walking and rolling. They were then asked to rate their level of support for each. The goals that received the highest levels of support include *complete community connections,* followed by *prioritize personal safety and comfort. Invest and partner for a walkable Lougheed Transit Corridor Area* received the lowest amount of support from respondents.



#### 157/160 answered this question

# Are there any additional strategic directions we should consider?

In total, there were 54 responses to this question. The comments were coded according to key themes that emerged in the analysis. In some instances, more than one theme was identified per response. A summary of the key themes is below:

- Safety (28 comments)
  - Prioritize school zones for safety/walking infrastructure (especially at Yennadan Elementary) (13)
  - Safer crosswalks (6)
  - Traffic calming measures needed (3)
  - Improve lighting (2)



- Accessibility (2)
- Prioritize pedestrian safety (2)

#### • Other priorities (19 comments)

- Improve parking / increase parking enforcement (6)
- Better transit access (4)
- Traffic flow improvements (3)
- Prioritize vehicles (3)
- Update what we have instead of building new (3)

#### • More Pedestrian Infrastructure (7 comments)

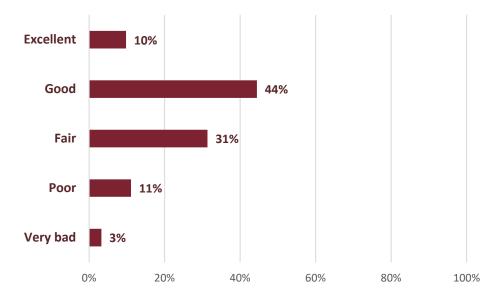
- Prioritize greenways (3)
- Scenic routes (along the river) (2)
- More sidewalks (2)

#### • Community Planning (7 comments)

- Thoughtful community planning / compliance from developers (5)
- Build complete communities (2)

# How well does this proposed network address walking / rolling issues and gaps in Maple Ridge?

Respondents were presented with a map of the proposed walking and rolling network. This map can be found by clicking here. They were then asked how well they felt this proposed network addressed walking and rolling issues in Maple Ridge. Fifty-four percent selected *good* or higher, while 31% selected *fair*, and 11% selected poor.



153/160 answered this question



# How could we improve the proposed network to address walking / rolling issues and gaps in Maple Ridge?

In total there were 68 responses to this question. The comments were coded according to key themes that emerged in the analysis. In some instances, more than one theme was identified per response. A summary of the key themes is below:

- Specific Improvements (21 comments)
  - Expand improvements on Dewdney Trunk Road (pedestrian safety) (5)
  - East end connections and trail signage (5)
  - Improve Silver Valley (connections, schools) (2)
  - Sidewalks on Dogwood Avenue (2)
  - Other improvements (rural areas, Fern Crescent, Lower Hammond, River Road, Albion, Downtown) (7)

#### • More Infrastructure (14 comments)

- High traffic areas should be prioritized (schools, business centers, community centers, rural areas) (14)
- More sidewalks / walking trails needed (6)
- More bike lanes needed (2)

#### • Safety Improvements (13 comments)

- Overall safety for pedestrians (e-mobility plans, crosswalks) (6)
- Better lighting (5)
- Traffic calming needed (2)

#### • Prioritize Motor Vehicles (6 comments)

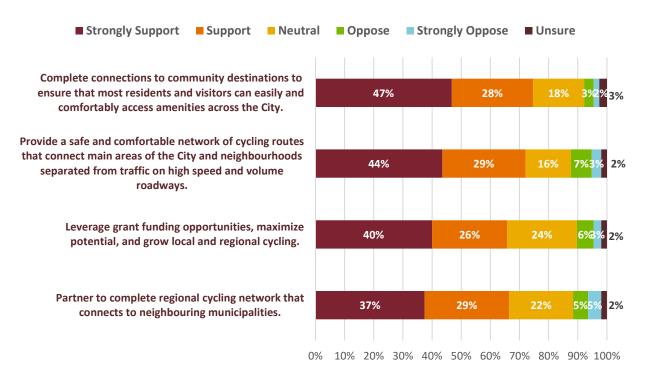
- Improve parking (4)
- Improve traffic flow (2)
- Planning (7 comments)
  - More complete connections needed (5)
  - Established routes needed (trucking, small buses) (2)



# **Cycling Key Directions**

# There are four draft strategic directions for cycling. Please tell us about your support for each of the proposed strategic directions.

Respondents were presented with the four draft strategic goals for cycling. They were then asked to select their level of support for each. The goals that received the highest levels of support include *complete community connections to community destinations,* followed by *provide a safe and comfortable network of cycling routes. Partner to complete a regional cycling network* received the lowest amount of support from participants.



155/160 answered this question

# Are there any additional strategic directions we should consider?

In total, there were 47 responses to this question. The comments were coded according to key themes that emerged in the analysis. In some instances, more than one theme was identified per response. A summary of the key themes is below:

- Routes and Access (13 comments)
  - Bike infrastructure for schools (3)
  - Bike paths in rural areas (3)
  - More scenic routes along the river (3)
  - Ensure complete connections (2) / Direct routes (2)
- Safety (10 comments)
  - E-mobility safety plan (3)



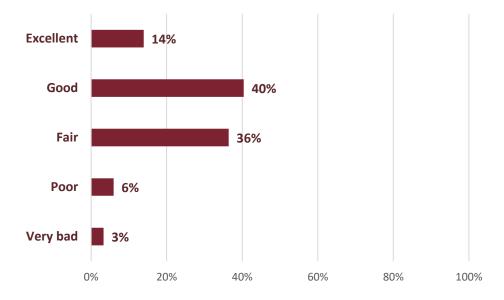
- Separate bikes from cars / parking (3)
- Bike paths away from major routes (2)
- Prioritize safety (2)

#### • Other Priorities (10 comments)

- Not needed / not enough cyclists (4)
- Prioritize schools over bikes (2)
- Prioritize equestrians (2)
- Prioritize traffic flow (2)
- Infrastructure Upgrades (7)
  - Bike locks (4)
  - Design infrastructure for all weather (3)

# How well does this proposed network address cycling issues and gaps in Maple Ridge?

Respondents were presented with a map of the proposed cycling network. This map can be found by clicking here. They were then asked how well they felt this proposed network addressed cycling issues in Maple Ridge. Fifty-four percent selected *good* or higher, while 36% selected *fair*, and 6% selected poor.



151/160 answered this question



How could we improve the proposed network to address cycling issues and gaps in Maple Ridge? Please list other network connections you would like us to consider.

In total, there were 66 responses to this question. The comments were coded according to key themes that emerged in the analysis. In some instances, more than one theme was identified per response. A summary of the key themes is below:

- Safety (23 comments)
  - Safe/separate infrastructure (9)
  - Separate bike lanes from busy roads (6)
  - o AAA (2)
  - Traffic calming (2)
  - Better signage (2)
  - Better lighting (2)

#### • Specific Improvements (12 comments)

- Safety improvements on Dewdney (5)
- Connections on Haney Bypass (3)
- Safety improvements on 210 (2)
- Maintenance / safety on 203 (2)

#### • Connections and Routes (18 comments)

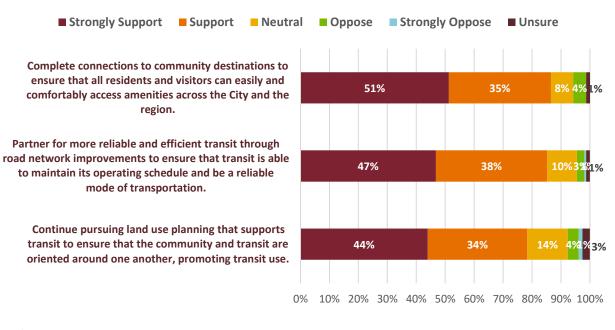
- Connections in rural areas (4)
- Access to dike (3)
- Direct routes (3)
- Connect to other communities (2)
- Complete connections (2)
- E-bike connections (2)
- Connect to transit (2)

### **Transit Key Directions**

# There are three draft strategic directions for transit. Please tell us about your support for each of the proposed strategic directions.

Respondents were presented with the three draft strategic goals for transit. They were then asked to select their level of support for each. The goals that received the highest levels of support include *complete connections to community destinations,* followed by *Partner for more reliable and efficient transit. Continue pursuing land use planning that supports transit* received the lowest amount of support from participants.





#### 157/160 answered this question

### Are there any additional strategic directions we should consider?

In total, there were 50 responses to this question. The comments were coded according to key themes that emerged in the analysis. In some instances, more than one theme was identified per response. A summary of the key themes is below:

- Make Commuting Simple (29 comments)
  - Expand WCE services (7)
  - Speed / Efficiency (7)
  - Park and rides for bikes and cars (6)
  - Support Skytrain / LRT (4)
  - More bus routes (3)
  - Promote economic growth to reduce commuting (2)

#### • Other Priorities (9 comments)

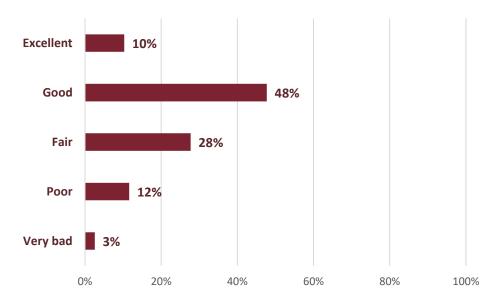
- Prioritize non car movement (3)
- Infrastructure for electric cars (2)
- Improve feeder routes (2)
- Improve traffic flow (2)
- More Connections (8 comments)
  - Connect other communities (6)
  - Connections in rural areas (2)
- Other (6)



- o Build before 2050 (2)
- Accessibility for all abilities (2)
- Wait until after COVID-19 to implement (2)

# How well does this proposed network address transit issues and gaps in Maple Ridge?

Respondents were presented with a map of the proposed transit network. This map can be found by clicking here. They were then asked how well they felt this proposed network addressed transit issues in Maple Ridge. Fifty-eight percent selected *good* or higher, while 28% selected *fair*, and 12% selected poor.



#### 155/160 answered this question

# How could we improve the proposed network to address transit issues and gaps in Maple Ridge?

In total, there were 49 responses to this question. The comments were coded according to key themes that emerged in the analysis. In some instances, more than one theme was identified per response. A summary of the key themes is below:

#### • Access and Routes (22 comments)

- Access for East Maple Ridge (10)
- Transit access for students (4)
- More direct routes (3)
- Transit options for rural areas (3)
- Park and ride (2)
- Other Improvements (12 comments)
  - More convenient times (5)

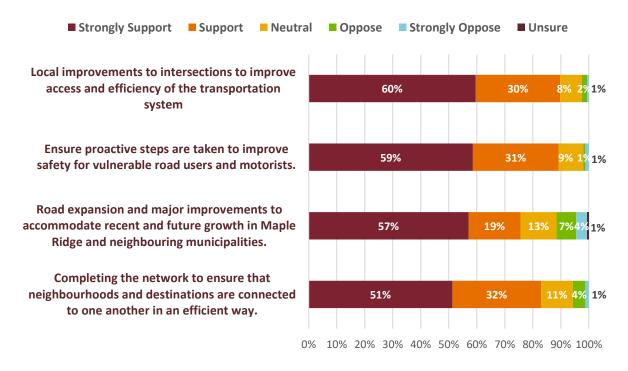


- Improve traffic flow (4)
- Reliability (3)
- Infrastructure Updates (10 comments)
  - Support Skytrain / LRT (5)
  - Transit should match the increase in development (3)
  - Pullout bus stops (2)

### Driving and Goods Movement Key Directions

There are four draft strategic directions for driving / goods movement. Please tell us about your support for each of the proposed strategic directions.

Respondents were presented with the four draft strategic goals for driving and goods movement. They were then asked to select their level of support for each. The goals that received the highest levels of support include *local improvements to intersections,* followed by *ensure proactive steps are taken to improve safety for vulnerable road users. Completing the network* received the lowest amount of support from participants.



158/160 answered this question



### Are there any additional strategic directions we should consider?

In total, there were 68 responses to this question. The comments were coded according to key themes that emerged in the analysis. In some instances, more than one theme was identified per response. A summary of the key themes is below:

- Specific Improvements (28 comments)
  - Improve traffic flow on Golden Ears Way (6)
  - Widen specific areas (Lougheed Highway, Haney Bypass, Dewdney Trunk Road, 240) (7)
  - Improve the Abernathy connector (4)
  - Another route to access Silver Valley / Rockridge (3)
  - Ease congestion/traffic calming on 232 and 128 (3)
  - Make Dewdney Trunk Road one way, and do the same for Lougheed Highway in the opposite direction (2)
  - River Road should not be a main collector road (2)

#### • Other Priorities (27 comments)

- Promote Active Transportation (10)
- Expanding roads only promotes driving (10)
- Traffic calming (5)
- Focus on complete communities (2)

#### • Traffic Improvements (8 comments)

- Traffic flow (5)
- Traffic enforcement (3)

#### • Priority Areas (6 comments)

- Prioritize school areas (4)
- Evacuation routes (2)

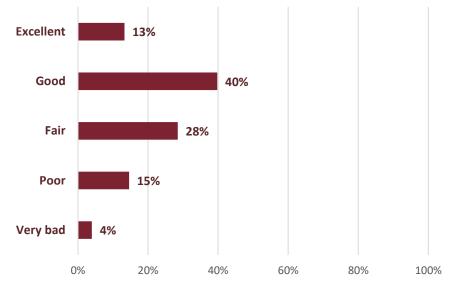
#### • Other (10 comments)

- Infrastructure should match projected growth (5)
- Environmental considerations (3)
- Fund improvements through developer fees (2)

# How well does this proposed network address driving / goods movement issues and gaps in Maple Ridge?

Respondents were presented with a map of the proposed driving and goods movement network. This map can be found by clicking here. They were then asked how well they felt this proposed network addressed driving and goods movement issues in Maple Ridge. Fifty-three percent selected *good* or higher, while 28% selected *fair*, and 15% selected *poor*.





151/160 answered this question

# How could we improve the proposed network to address driving / goods movement issues and gaps in Maple Ridge?

In total, there were 61 responses to this question. The comments were coded according to key themes that emerged in the analysis. In some instances, more than one theme was identified per response. A summary of the key themes is below:

- Specific Improvements (17 comments)
  - Widen specific areas (Dewdney Trunk Road, Abernathy, 128) (6)
  - Improve Golden Ears Way (3)
  - Better lighting on major routes (Lougheed, 210, 128) (3)
  - Safer intersections (200 and Maple Meadows Way, 128 at 210, DTR at 264) (4)
  - Fix overpass at Dewdney and Lougheed (2)

#### • Traffic Flow Improvements (17 comments)

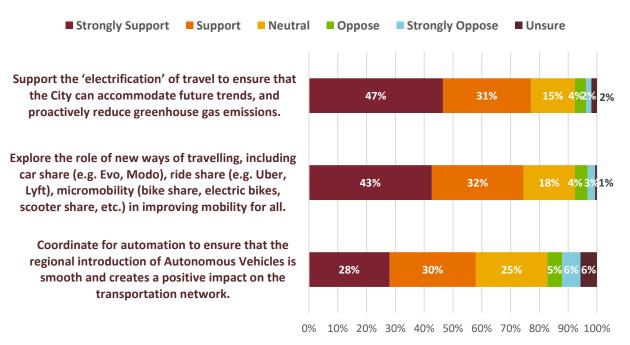
- Improve through fares (9)
- Overpasses for traffic flow (4)
- Prioritize school areas (4)



## New Mobility Key Directions

# There are three draft strategic directions for new mobility. Please tell us about your support for each of the proposed strategic directions.

Respondents were presented with the three draft strategic goals for new mobility. They were then asked to select their level of support for each. The goals that received the highest levels of support include *support the electrification of travel,* followed by *explore new ways of traveling. Coordinate for automation* received the lowest amount of support from participants.



#### 158/160 answered this question

#### Are there any additional strategic directions we should consider?

In total, there were 38 responses to this question. The comments were coded according to key themes that emerged in the analysis. In some instances, more than one theme was identified per response. A summary of the key themes is below:

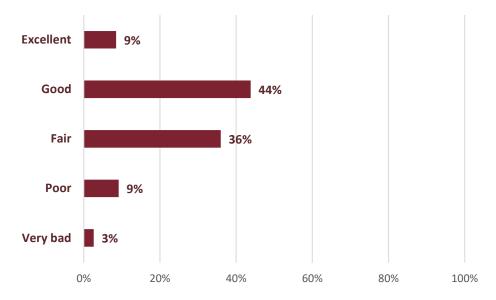
- Support Electrification (13 comments)
  - Charging infrastructure (6)
  - Support for future electrification (5)
  - E-bikes (cargo bike options, safety) (2)
- Other Priorities (10 comments)
  - Focus on basic needs first (5)
  - Prioritize the environment (4)
  - Prioritize nonvehicle transport (2)



- Other (6 comments)
  - Safety concerns with shared use (2)
  - Car share opportunities (2)
  - Accessibility (access to electric cars, affordability of road pricing for those with disabilities) (2)

# How well do these proposed strategic directions address new mobility issues and gaps in Maple Ridge?

Respondents were asked how well they felt these proposed strategic directions addressed new mobility issues in Maple Ridge. Fifty-three percent selected *good* or higher, while 36% selected *fair*, and 9% selected *poor*.



#### 153/160 answered this question

# How could we improve the proposed strategic directions to address new mobility issues and gaps in Maple Ridge?

In total, there were 34 responses to this question. The comments were coded according to key themes that emerged in the analysis. In some instances, more than one theme was identified per response. A summary of the key themes is below:

- Planning (11 comments)
  - Improve before 2050 (4)
  - Planning for the future (4)
  - Prioritize infrastructure over community growth (3)
- Vehicle Options (6 comments)
  - Subsidize e-vehicles (2)

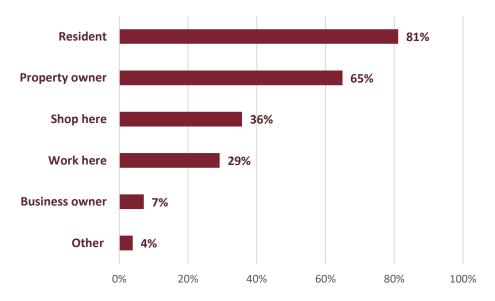


- Support car share (2)
- Remove trucking traffic (2)
- Safety (6 comments)
  - E-bike safety plan (4)
  - Micro mobility safety concerns (2)
- Sustainable Transportation (4 comments)
  - Promote more Active Transportation (2)
  - Environmental considerations (2)

### DEMOGRAPHICS

### What is your connection to Maple Ridge?

Eighty-one percent of survey respondents identify as residents of Maple Ridge, and 65% identify as being property owners.



#### 154/160 answered this question

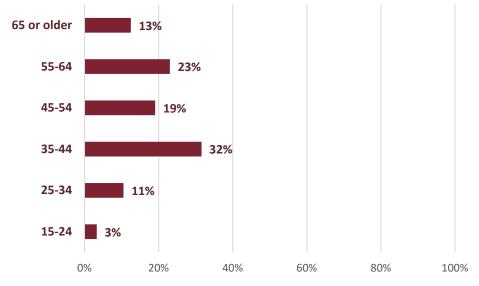
Of the six respondents who chose "other", the comments included:

- Being Retired
- PAC president of a local school
- Visiting family
- Mother / Caretaker of a person with disabilities
- Former resident
- Shop here (but there is a lack of stores)



## How old are you?

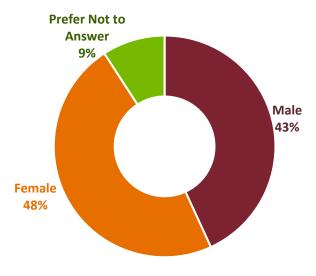
The majority of respondents (85%) are between the ages of 25-64, 13% are above the age of 65, and 3% are between the ages of 15-24. The survey results are not representative of Maple Ridge's population as residents between the ages of 35-44 make up only 13% of the population, more than doubling their weight in this survey. Additionally, those between the ages of 15-24 are underrepresented.



152/160 answered this question

# What is your gender?

Forty-eight percent of survey respondents were female, while 43% were male and 9% preferred not to say. No respondents selected *Non-binary* or *Other*. Women are slightly underrepresented in this survey, as they represent 51% of Maple Ridge's population.

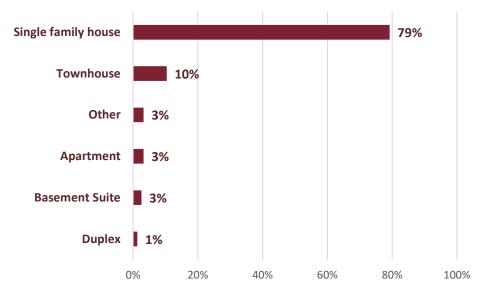


153/160 answered this question



## What type of household do you live in?

The majority of respondents live in a single family home (79%). This survey is overrepresented by people who live in single family homes as 56% of Maple Ridge residents live in a single family home.



#### 154/160 answered this question

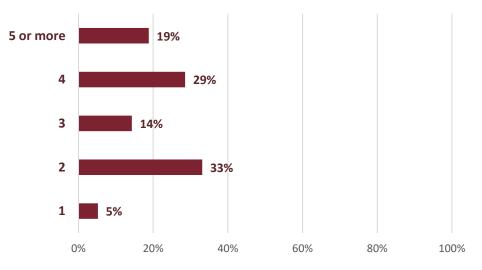
Of the five respondents who chose "other", the comments included:

- Farm (2)
- Detached condo
- Acreage

# Including yourself, how many people live in your household?

The highest number of survey respondents (39%) live with four or more people in their household, while 33% live with two or more people in their household. This survey is overrepresented by households living with four people as those households make up 17% of the population and underrepresented by those living alone, as those households make up 22% of the population.

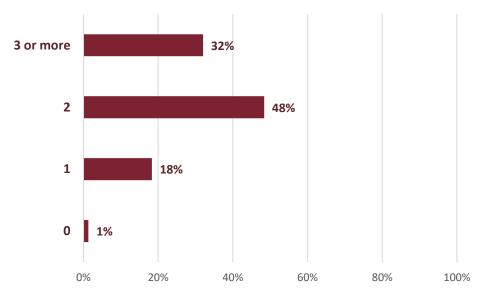




#### 154/160 answered this question

# How many vehicles are registered to your household?

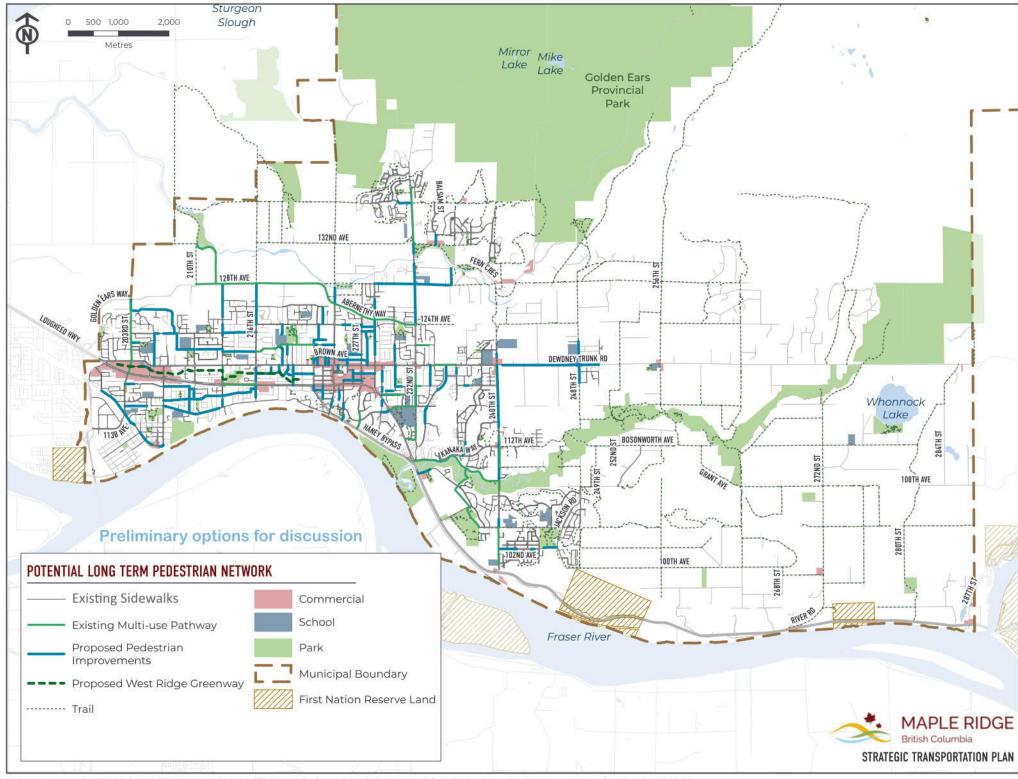
Almost all respondents had at least one car registered to their household.



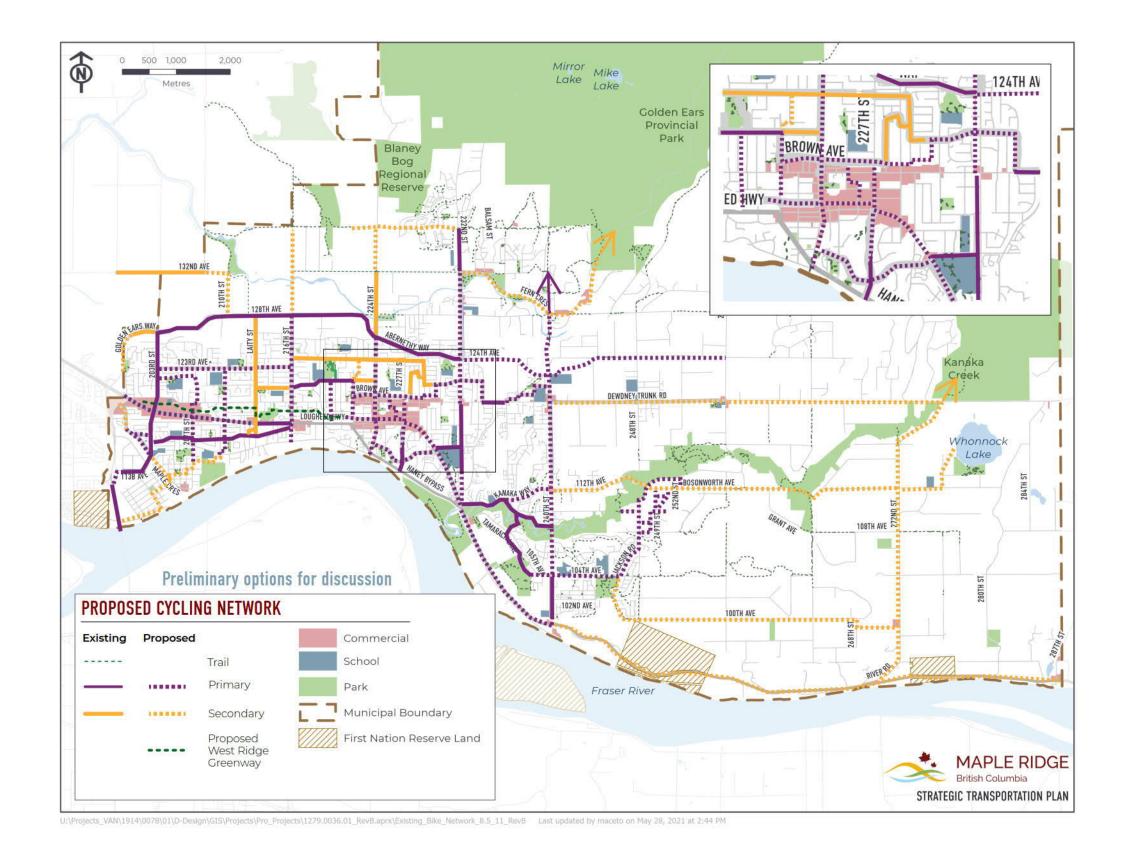
153/160 answered this question

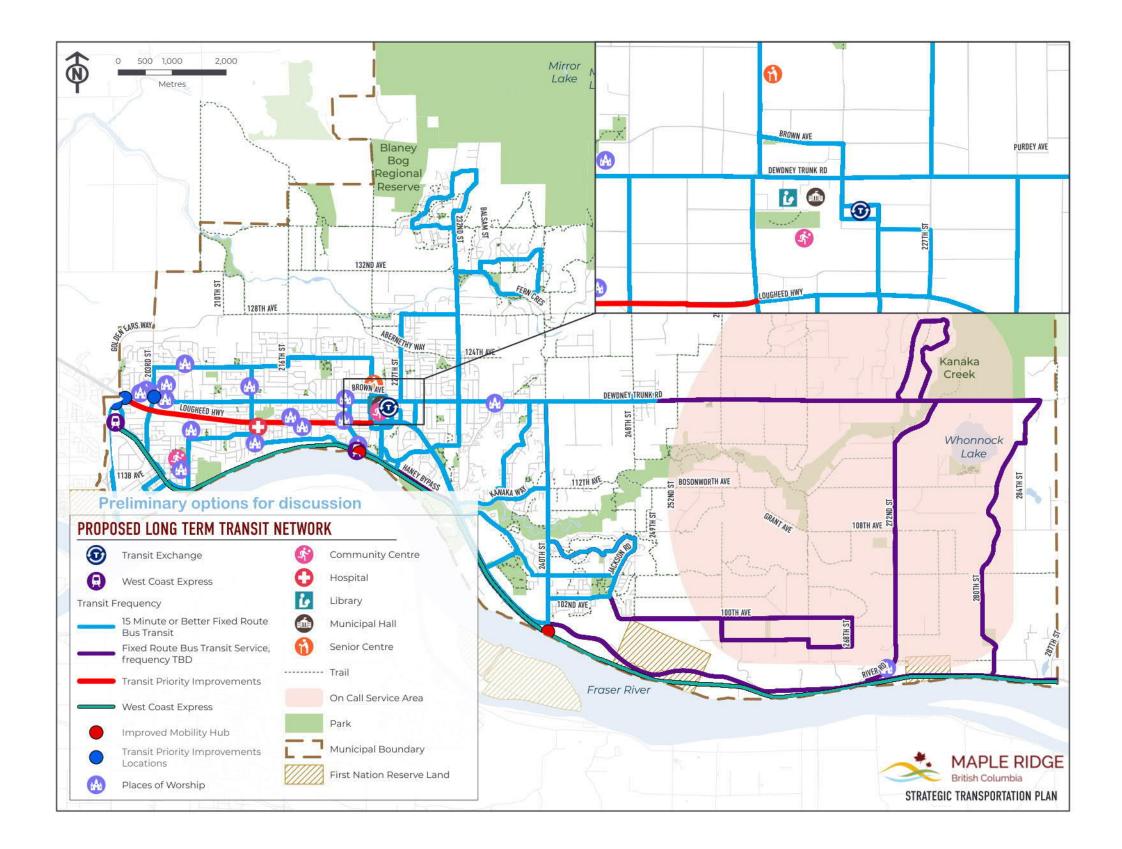
# <u>APPENDIX B</u>

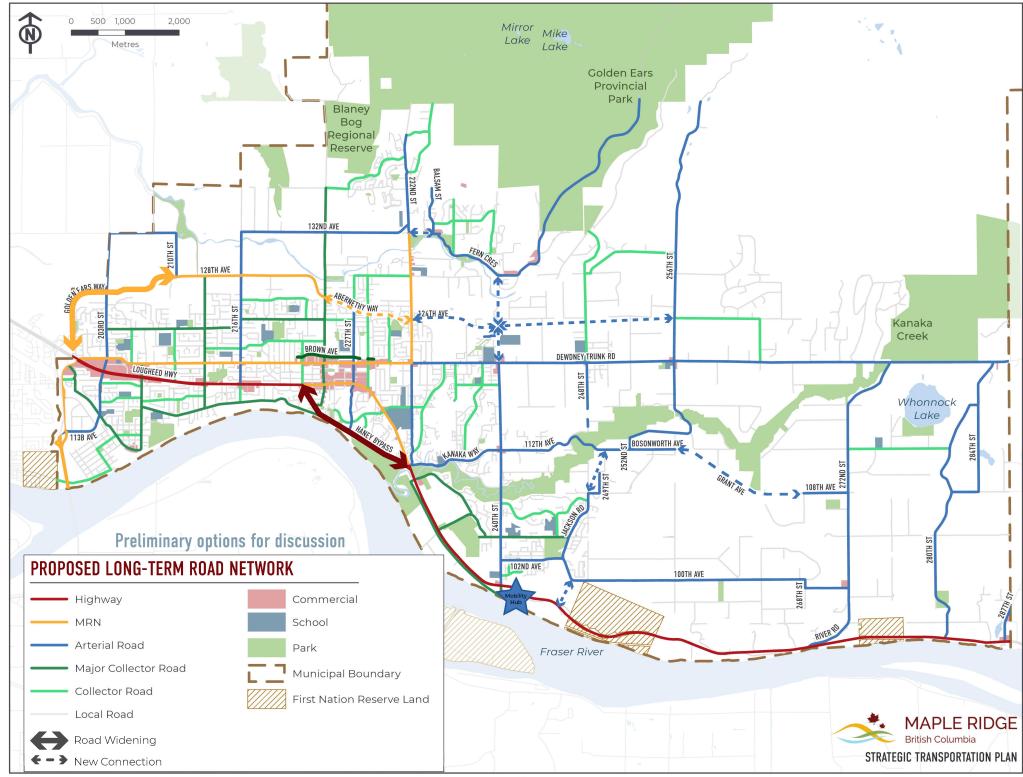
MAPS



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# **APPENDIX C**

LONG-TERM TRANSPORTATION DEMAND MODELLING RESULTS MEMORANDUM



- DATE: January 10, 2022
  - TO: Mark Halpin
  - CC: Allison Clavelle
- FROM: Ming Xia
  - FILE: 0995.0047.01
- SUBJECT: Long-Term Transportation Demand Modelling Results Memorandum (DRAFT)

# **1.0 INTRODUCTION**

This memorandum summarizes the process of developing the growth assumptions for the long-term traffic analysis as part of the STP update.

The TransLink Regional Transportation Demand Model (RTM), version 3.4, was used to develop future growth assumptions. The RTM is a macroscopic model that covers the entire Lower Mainland. The RTM package includes four horizons: 2011, 2017, 2035 and 2050, and 44 traffic analysis zones (TAZs) within Maple Ridge (see **Figure 1**). The 2017, 2035 and 2050 models were used as the existing, future medium- and future long-term horizons, respectively, to develop growth assumptions.

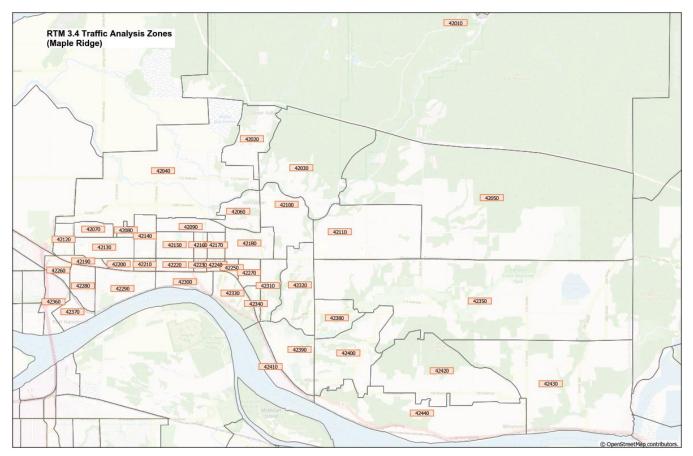


Figure 1: Maple Ridge TAZ

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2.0 CONFIRM BASE

The 2017 model network was reviewed and adjusted based on Google Maps images so that the existing network reflects today's condition. This includes confirming the major road network and number of lanes within Maple Ridge.

Prior to reviewing the model output, the existing 2017 land use assumptions from the RTM were confirmed with the City Planning staff.

### 2.1 TRIP GENERATION

The daily vehicle trips generated within Maple Ridge are calculated using peak hour expansion factors described in the RTM's User Guide and summarized in **Table 1**.

Table 1: 2017 RTM Auto Trips Summary

| Peak<br>Period | Auto Trips<br>(trips/hr) | Expansion<br>Factor |
|----------------|--------------------------|---------------------|
| AM             | 10,206                   | 3.68                |
| MD             | 6,161                    | 9.2                 |
| PM             | 9,349                    | 3.11                |
|                | Daily Trips              | 123,317             |

The comparison of the daily vehicle trips generated within Maple Ridge from the model and TransLink's 2017 Trip Diary indicates that the model's vehicle trip generation is approximately 25% less than the Trip Diary's results (**Table 2**).

Table 2: Trip Generation Comparison (2017 Trip Diary vs. 2017 RTM)

| Trips per Day (RTM)        | 123,317 |  |
|----------------------------|---------|--|
| Trips per Day (Trip Diary) | 164,846 |  |
| Difference (absolute)      | -41,529 |  |
| Difference (%)             | -25%    |  |

### 2.2 ORIGIN / DESTINATION TRAVEL PATTERNS

**Table 3** illustrates the comparison of vehicle trips originated within Maple Ridge from the model and the TripDiary data. Similarly to daily trip generation, the daily origin / destination patterns were estimated by applyingthe associated peak expansion factors to each AM, Midday and PM peak model results.

The comparison indicates that the model's origin / destination distribution patterns generally are within a 5% difference of the Trip Diary's results.

It should also be noted that this is not a direct comparison as the model results are estimates from peak hours while the Trip Diary's results are daily results.

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Table 3: Distribution Comparison (2017 Trip Diary vs. 2017 RTM)

| Trip Destination   | Trip Diary | RTM  | Difference<br>% |
|--|------------|------|-----------------|
| Maple Ridge  | 65%        | 60%  | -5%             |
| Metro Vancouver (excl. Coquitlam/Port<br>Coquitlam/Port Moody) | 10%        | 6%   | -4%             |
| Coquitlam/Port Coquitlam/Port Moody                            | 9%         | 9%   | -               |
| Pitt Meadows   | 7%         | 6%   | -1%             |
| Surrey/Delta/White Rock  | 3%         | 8%   | 5%              |
| Mission  | 2%         | 3%   | 1%              |
| Langley Township & City  | 2%         | 6%   | 4%              |
| FVRD (excl. Mission)   | 2%         | 2%   | -               |
| Total  | 100%       | 100% | -               |

### 2.3 SCREENLINE VOLUME COMPARISON

Six screenlines<sup>1</sup> have been developed to compare the magnitude of traffic flow entering / exiting areas within Maple Ridge using the model volumes and 2021 volumes<sup>2</sup>. The comparison suggests that the model volumes are generally approximately 27% to 34% lower than the observed counts throughout the city.

#### 2.4 OBSERVATION & CONCLUSION

Given that the growth assumptions will be developed using the difference between the existing and future horizons instead of the direct model output and also knowing that both the model's trip generation and assignment are approximately 30% lower than observed throughout, it was concluded that the percentage difference between the existing and future modified RTM could be used for the purpose of this study.

# 3.0 DEVELOPING FUTURE BASE GROWTH ASSUMPTIONS

The future 2035 and 2050 land use assumptions with adjustments made to population and household data provided by the City are summarized in **Table 4**. The land use information, including detailed breakdowns (which were estimated proportionally using totals) were incorporated in the model.

<sup>&</sup>lt;sup>1</sup> The five screenlines include: 1) east of Golden Ears Way, 2) south of Dewdney Trunk Road, 3) north of Lougheed Highway, 4) south of Lougheed Highway, 5) south of City Centre, and 6) east of 240 Street.

<sup>&</sup>lt;sup>2</sup> As part of the traffic analysis, all of the existing counts have been adjusted to the 2021 condition (without COVID-19 impact) based on historical growth rates.

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#### Table 4: 2035 and 2050 Land Use Assumptions

|       |            | 2035       |           |            | 2050       |           |  |
|-------|------------|------------|-----------|------------|------------|-----------|--|
| TAZ   | Population | Employment | Household | Population | Employment | Household |  |
| 42010 | 55         | 519        | 20        | 59         | 594        | 22        |  |
| 42020 | 4,100      | 297        | 1,507     | 4,100      | 316        | 1,507     |  |
| 42030 | 5,260      | 523        | 1,934     | 7,700      | 577        | 2,831     |  |
| 42040 | 941        | 418        | 346       | 943        | 489        | 347       |  |
| 42050 | 2,223      | 974        | 817       | 2,255      | 1,010      | 829       |  |
| 42060 | 2,481      | 298        | 912       | 2,745      | 298        | 1,009     |  |
| 42070 | 1,311      | 194        | 482       | 1,377      | 225        | 506       |  |
| 42080 | 344        | 125        | 126       | 344        | 161        | 126       |  |
| 42090 | 2,758      | 298        | 1,014     | 2,818      | 300        | 1,036     |  |
| 42100 | 1,185      | 334        | 436       | 1,378      | 336        | 507       |  |
| 42110 | 1,870      | 478        | 688       | 1,870      | 481        | 688       |  |
| 42120 | 1,935      | 374        | 711       | 1,936      | 438        | 712       |  |
| 42130 | 3,574      | 584        | 1,314     | 3,690      | 649        | 1,357     |  |
| 42140 | 2,696      | 460        | 991       | 2,857      | 529        | 1,050     |  |
| 42150 | 2,634      | 642        | 968       | 2,867      | 790        | 1,054     |  |
| 42160 | 3,800      | 1,456      | 1,397     | 5,160      | 1,785      | 1,897     |  |
| 42170 | 4,300      | 1,345      | 1,581     | 5,856      | 1,663      | 2,153     |  |
| 42180 | 4,354      | 1,271      | 1,601     | 5,390      | 1,427      | 1,982     |  |
| 42190 | 1,200      | 1,988      | 441       | 1,900      | 2,179      | 699       |  |
| 42200 | 2,000      | 338        | 735       | 2,400      | 461        | 882       |  |
| 42210 | 1,000      | 284        | 368       | 1,100      | 418        | 404       |  |
| 42220 | 3,000      | 741        | 1,103     | 3,450      | 1,015      | 1,268     |  |
| 42230 | 2,947      | 1,755      | 1,083     | 4,018      | 2,026      | 1,477     |  |
| 42240 | 2,247      | 2,373      | 826       | 3,063      | 2,516      | 1,126     |  |
| 42250 | 675        | 1,609      | 248       | 804        | 1,812      | 296       |  |
| 42260 | 1,000      | 736        | 368       | 1,100      | 975        | 404       |  |
| 42270 | 2,100      | 542        | 772       | 2,251      | 738        | 828       |  |
| 42280 | 3,500      | 1,271      | 1,287     | 3,600      | 1,653      | 1,324     |  |
| 42290 | 4,000      | 1,938      | 1,471     | 4,300      | 1,985      | 1,581     |  |
| 42300 | 4,490      | 1,475      | 1,651     | 6,105      | 1,667      | 2,244     |  |
| 42310 | 3,390      | 440        | 1,246     | 3,601      | 449        | 1,324     |  |
| 42320 | 7,841      | 1,326      | 2,883     | 7,877      | 1,332      | 2,896     |  |
| 42330 | 5,651      | 1,572      | 2,003     | 7,691      | 1,881      | 2,828     |  |
| 42340 | 340        | 217        | 125       | 414        | 312        | 152       |  |
| 42350 | 3,110      | 672        | 1,143     | 3,122      | 671        | 1,148     |  |
| 42360 | 0          | 2,294      | 0         | 0          | 2,728      | 0         |  |
| 42370 | 1,801      | 456        | 662       | 2,119      | 541        | 779       |  |
| 42380 | 1,406      | 72         | 517       | 1,996      | 84         | 734       |  |
| 42390 | 2,307      | 449        | 848       | 2,361      | 491        | 868       |  |

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| TAZ   | 2035       |            |           | 2050       |            |           |
|-------|------------|------------|-----------|------------|------------|-----------|
| IAL   | Population | Employment | Household | Population | Employment | Household |
| 42400 | 8,528      | 977        | 3,135     | 9,706      | 977        | 3,568     |
| 42410 | 26         | 1,038      | 10        | 26         | 1,315      | 10        |
| 42420 | 520        | 51         | 191       | 650        | 1,747      | 239       |
| 42430 | 805        | 675        | 296       | 809        | 679        | 298       |
| 42440 | 692        | 509        | 254       | 792        | 639        | 291       |
| Total | 110,397    | 36,387     | 40,587    | 128,600    | 43,364     | 47,279    |

The future road network was maintained unchanged from today's condition to form a "do nothing" future base scenario.

Using the percentage growth between the existing and future models, a set of growth factors ranging from 1.0% to 1.5% per year were used to develop future traffic volumes. A review of the future volumes was conducted with a few manual adjustments so that the traffic volumes along a corridor are better balanced. For illustration purposes, **Figure 2** to **Figure 5** are the model plots showing the volume differences between the 2017 and 2035 and 2050 models.

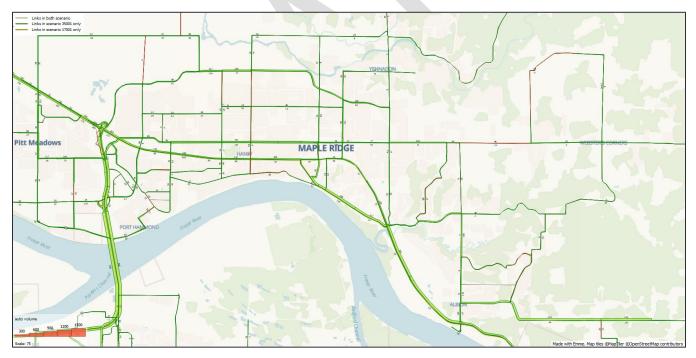


Figure 2: 2035 vs. 2017 AM Volume Difference Model Plot

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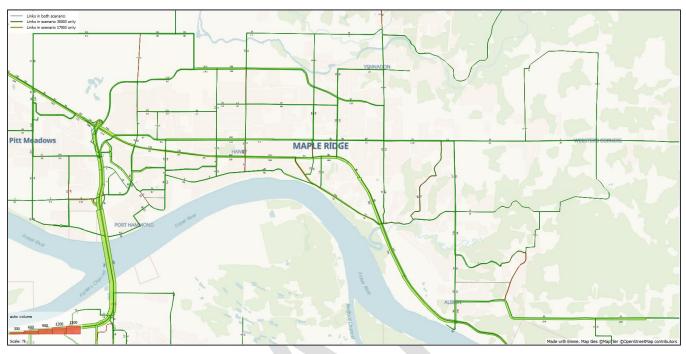


Figure 3: 2035 vs. 2017 PM Volume Difference Model Plot

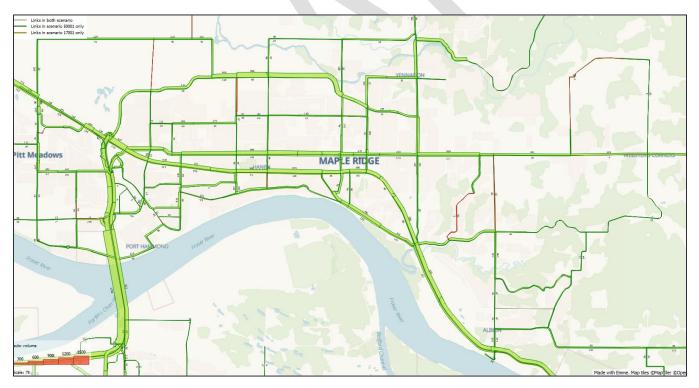


Figure 4: 2050 Base vs. 2017 AM Volume Difference Model Plot

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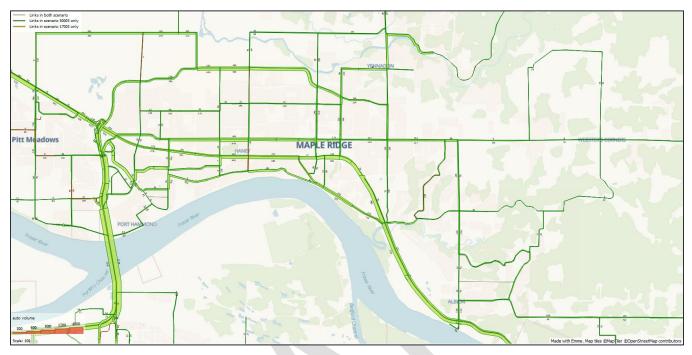


Figure 5: 2050 Base vs. 2017 PM Volume Difference Model Plot

# 4.0 DEVELOP FUTURE OPTIONS

Upon the development of the future base scenario, a review of network capacity was conducted at the corridor level. Based on the findings of this review and through conversations with the City, several future options were developed and evaluated (**Table 5**). At this point, the analysis focused on the 2050 horizon.

Table 5: Future Options Summary

| Scenario   | Improvements  |
|------------|---|
| Scenario 1 | <ul> <li>New connections*: <ul> <li>North Lougheed Connector (2/2 lane MRN) connecting Golden Ears Way and Harris Rd</li> <li>124 Ave (1/1 lane Arterial) connecting 232 St and 256 St</li> <li>240 St (1/1 lane Arterial) connecting the fork of 240 St and 241 St and Fern Cres</li> <li>Grant Ave (1/1 lane Arterial) connecting Bosonworth Ave and 108 Ave</li> <li>Jackson Rd (1/1 lane Arterial) connecting 248 St and 112 Ave</li> <li>Thornhill connector (1/1 lane Arterial) connecting Hwy 7 and 100 Ave</li> </ul> </li> <li>Roadway Upgrade <ul> <li>Golden Ears Way (4-lane (2/2) MRN) between Hwy 7 ramp and 210 St</li> <li>Abernethy Way (4-lane (2/2) MRN) between 224 St and 232 St</li> <li>Fern Cres 4-lane (2/2) MRN between 232 St and Balsam St</li> <li>Hany Bypass (4-lane) highway</li> </ul> </li> </ul> |
|            | <ul> <li>Transit improvements</li> <li>New bus lanes on Lougheed between Golden Ears and 224 St (4 GP + 2 bus lanes)</li> <li>Rapid bus w/ 5 min frequency</li> </ul>   |

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| Scenario    | Improvements   |
|-------------|--|
|             | • A new WCE station with a Park and Ride (PnR) lot in Albion (near 240 Street)                                       |
| Scenario 1a | Scenario 1 but excludes the dedicated bus lanes on Lougheed  |
| Scenario 1b | Scenario 1 with additional dedicated bus lanes on Lougheed into the Town Centre and a PnR station in the Town Centre |

\*Albion industrial connector is not included in the table as the RTM results are typically high-level. The impact of this connector will be reviewed separately from the macro-modelling process.

# 4.1 **OPTION 1**

The option model was built using the base RTM model to incorporate the improvements described above. The daily traffic volumes for Scenario 1 were estimated at key locations to understand the magnitude of the impact introduced by each improvement. **Figure 6** illustrates the 2050 base daily volumes and the option 1 volumes with changes in callout boxes at key locations.

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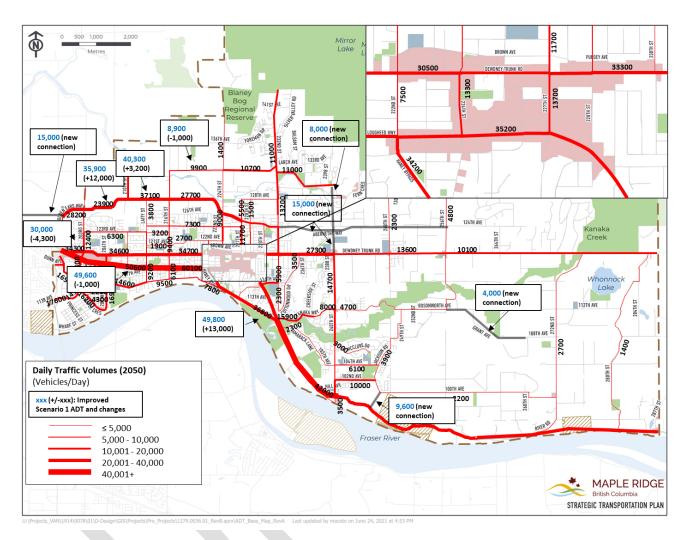


Figure 6: Estimated ADT (Scenario 1) at Key Locations

The model results suggest that the new connections and roadway widening at Golden Ears Way, Haney Bypass and Abernethy way will attract a significant amount of traffic (10,000+ vehicles per day) for some sections which will alleviate traffic pressure from their parallel routes. The dedicated bus-on-shoulder lanes on Lougheed Highway will almost double transit ridership from 100 to 200 people per hour to 200 to 300 people per hour compared to the base case. The vehicle volumes on Lougheed will decrease by approximately 200 vehicles per hour.

The new WCE station coupled with a new PnR lot also attracted a significant amount of usage (up to 800 boarding/alighting) and increased the overall ridership by 400 people per hour. The model results further suggest that the majority of the station's boarding and alighting are the PnR users, which means that having a PnR lot is critical in attracting users for the new WCE Albion station. It should be noted that the PnR lot was coded free of charge with a minimal travel time penalty to understand the maximum potential usage of the lot and station.

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### 4.2 OPTION 1A

As the only difference between Option 1A and Option 1 is that Option 1A does not include dedicated bus on shoulder lanes on Lougheed Highway, Lougheed Highway's traffic volumes and transit ridership data were reviewed. The model results showed that without the bus lanes, the traffic volumes and ridership on Lougheed Highway will be similar to the base condition.

### 4.3 OPTION 1B

The model results indicate that extending the bus-on-shoulder lanes on Lougheed into the Town Centre will increase the transit ridership by up to approximately 50 people per hour in one direction while having a similar amount of vehicle traffic volumes compared to Option 1. The model results also indicate that the PnR in the Town Centre does not attract significant usage.

# 5.0 NEXT STEPS

Upon the confirmation of the long-term corridor improvements, local improvements at the intersection level will be explored to address operational and safety issues.

Sincerely,

#### URBAN SYSTEMS LTD.

Ming Xia, P.Eng., PTOE Transportation Engineer

cc: Allison Clavelle, P.Eng.

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