

# TRANSIT *future*

▶ *service plan*

## MISSION NETWORK RESTRUCTURE

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MAY 2023



# Territorial Acknowledgement

We acknowledge with respect that BC Transit carries out its work on the traditional territories of indigenous nations throughout British Columbia.

The City of Kelowna lies within the ancestral and unceded traditional territory of the Syilx (Okanagan) First Nations.

Here in Victoria, we are on the lands of the Lekwungen people, also known as the Songhees and Esquimalt First Nations.

***We are grateful to live, work, and play on their traditional lands.***

# Table of Contents

**01**

Transit Today

**02**

Transit Need

**03**

System Performance

**04**

Engagement

**05**

What we Heard

**06**

Proposal

**07**

Infrastructure

**08**

Next Steps

**09**

Appendix

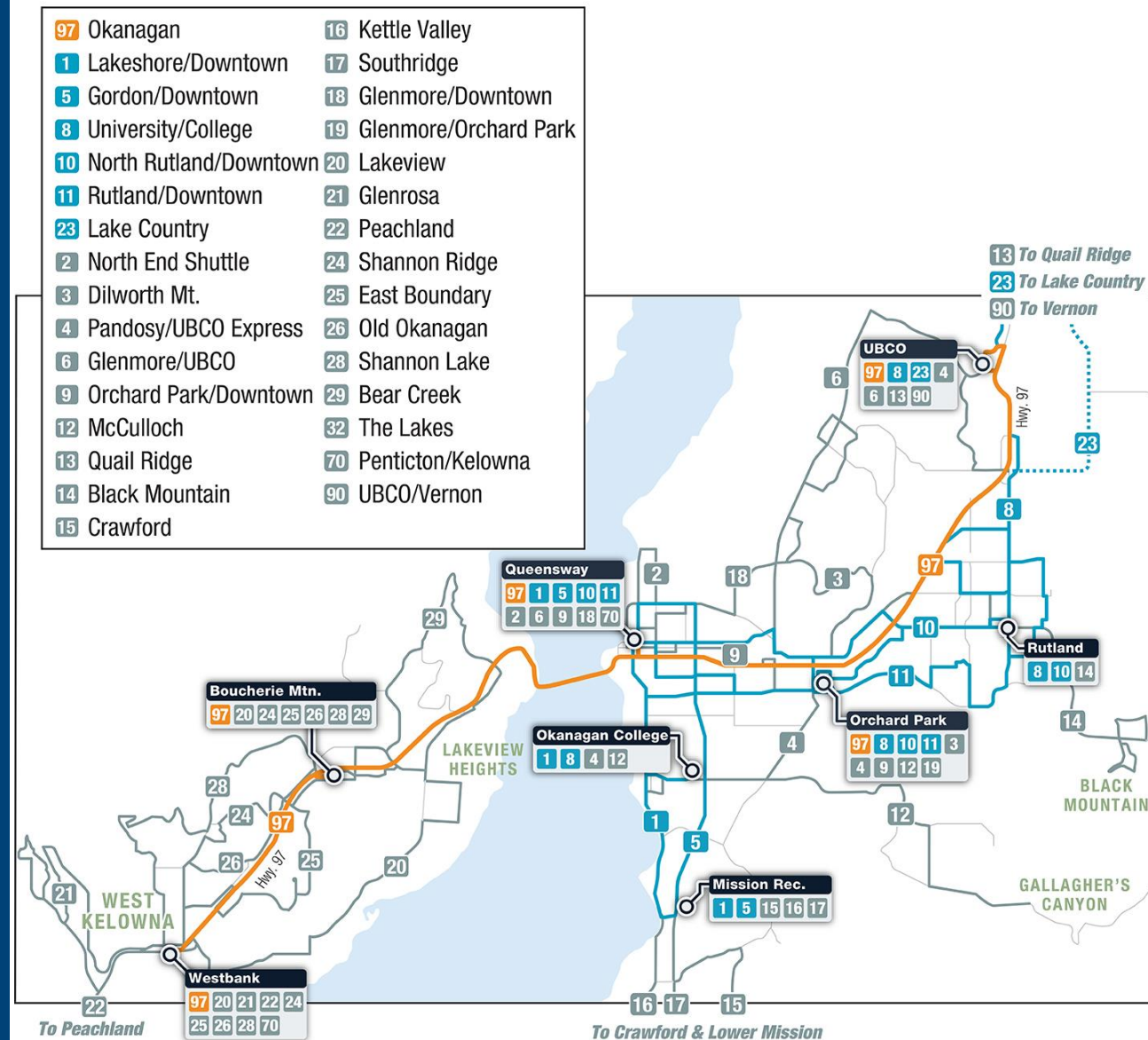
# 01 Transit Today

## Central Okanagan Transit System

Established in 1997, conventional transit service in the Central Okanagan has expanded to 87 vehicles carrying 5,939,178 passengers in 2019, a 22% increase over the previous five years. Ridership dropped in 2020/21 to 2,642,332 total passengers due to the COVID-19 pandemic but rebounded to 4,585,810 in 2021/22 and continued growth in 2022/23 to 5,587,691. Currently ridership sits at 94% of pre-pandemic levels\*. The system operates using over 208,000 annual service hours. Service expansions have occurred incrementally as resources have become available. Final decisions on fares, routes, and service levels are made by the partners within the Kelowna Transit System.

Today, conventional service within the Kelowna Regional Transit System consists of 30 routes and 87 vehicles.

\*These numbers are based off BC Transits financial model which is what is used in the Annual Operating Agreement



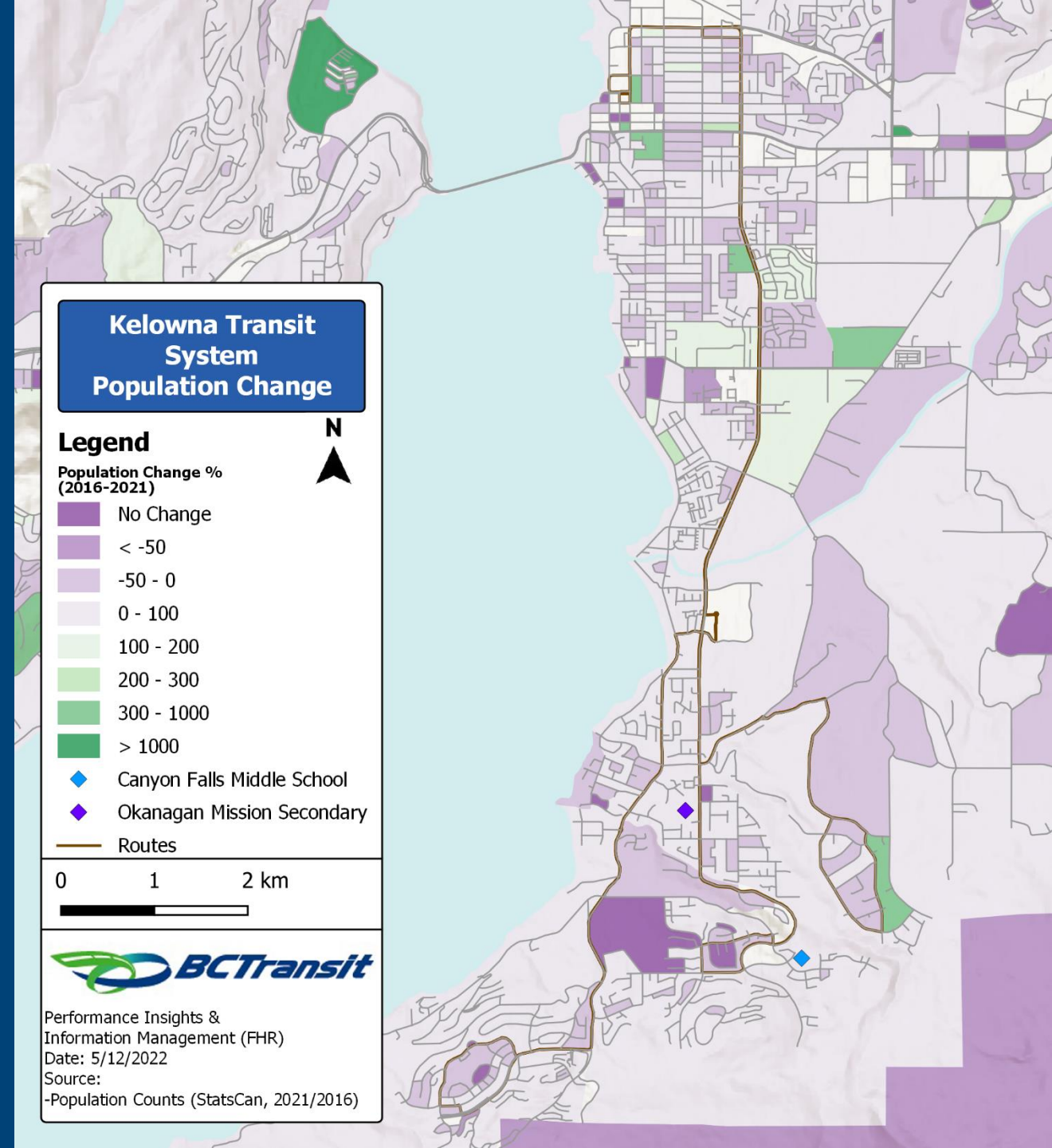
# 01 Transit Today

## About the Mission area

Four local routes serve the Upper and Lower Mission: 5 Gordon, 15 Crawford, 16 Kettle Valley and 17 Southridge; routes 5, 16 and 17 were examined as part of this review. Ridership and bus stop data on these routes was reviewed and, alongside current and forecasted land uses and demographic shifts, helped inform the options presented to the public for consideration.

As indicated in the map, population density within the Upper and Lower Mission is generally lower than areas closer to the city centre. However, there are pockets of higher density, particularly in the Upper Mission along Chute Lake Road and Quilchena Drive and the Lower Mission around Mission Recreation Park.

Density is a key component in influencing potential ridership, but it should be considered alongside other factors such as demographics, topography, road network characteristics and overall relationship of routes to the broader network.



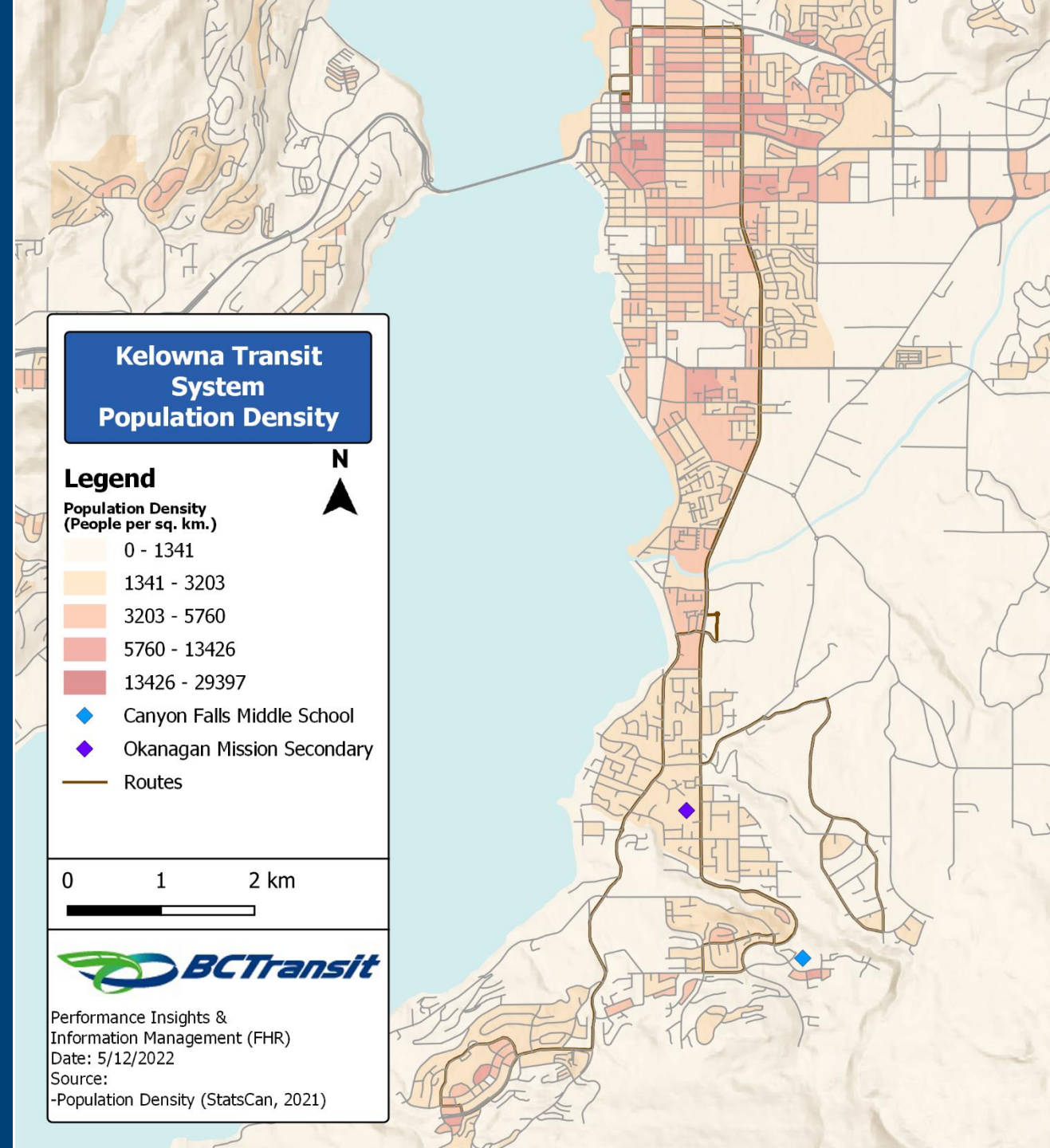
# 02 Transit Need

## About the Mission area

The population within the Mission saw some growth between the 2016 and 2021 Census years, with growth distributed relatively evenly across the area.

Restructuring of the Crawford neighbourhood is not within scope of this study due to the disaggregate road network and topography of the area. It will be addressed in other planning initiatives in the 2023/24 fiscal year.

*The Statistics Canada Journey to Work mode share in Kelowna dropped from 4.3% in 2016 to 4% in 2021. The 2013 Household Travel Survey indicated that the Mission's transit mode share was 2 per cent, representing the lowest mode share across the City for areas with available data.*



# 03 System Performance

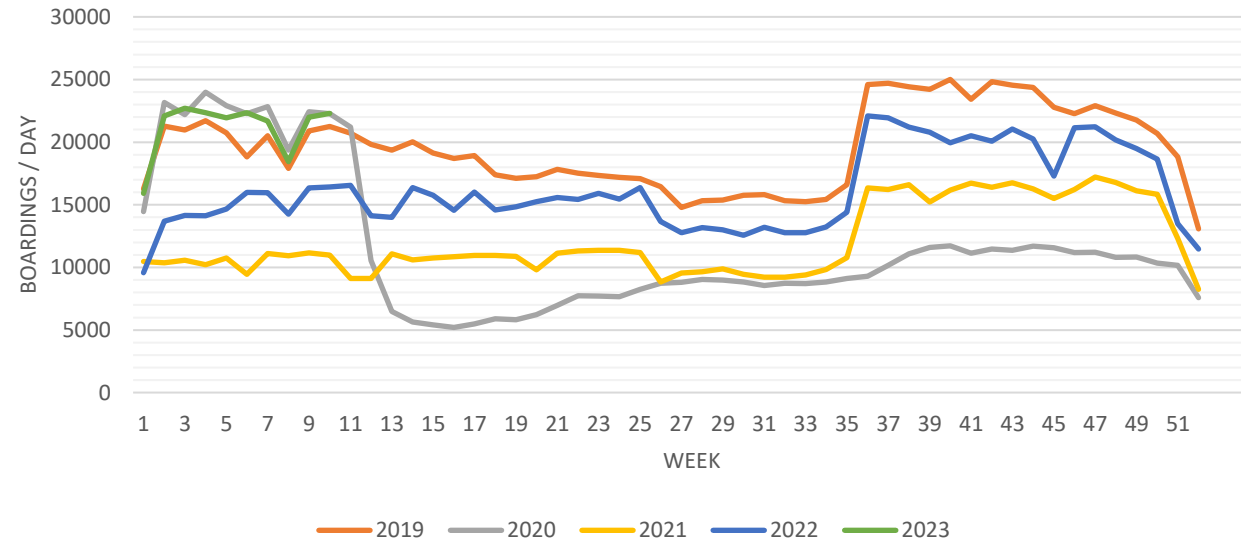
## Ridership by Week

Transit ridership on routes serving the Mission area is its highest in the fall, and drops in December following the same trend as the rest of Kelowna. Ridership rebounds slightly in spring and decreases through the summer until the following fall. Ridership has rebounded since the COVID-19 pandemic, operating at approximately 80% Kelowna-wide, and 90% within the Mission area.

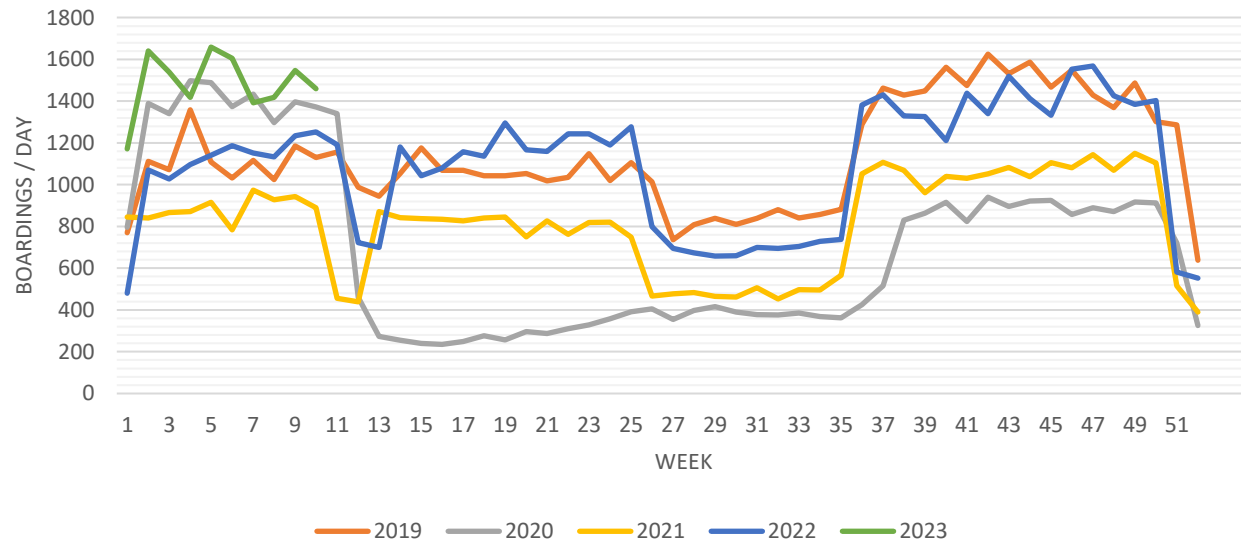
## Key Takeaways

- Between January 2022 and June 2022, ridership in the Mission area was approximately 10% higher than pre-pandemic levels
- Generally, the Mission area follows the same ridership trends as the rest of the Central Okanagan

Central Okanagan - Total Boardings per Day



Routes 5, 15, 16, 17 - Total Boardings per Day



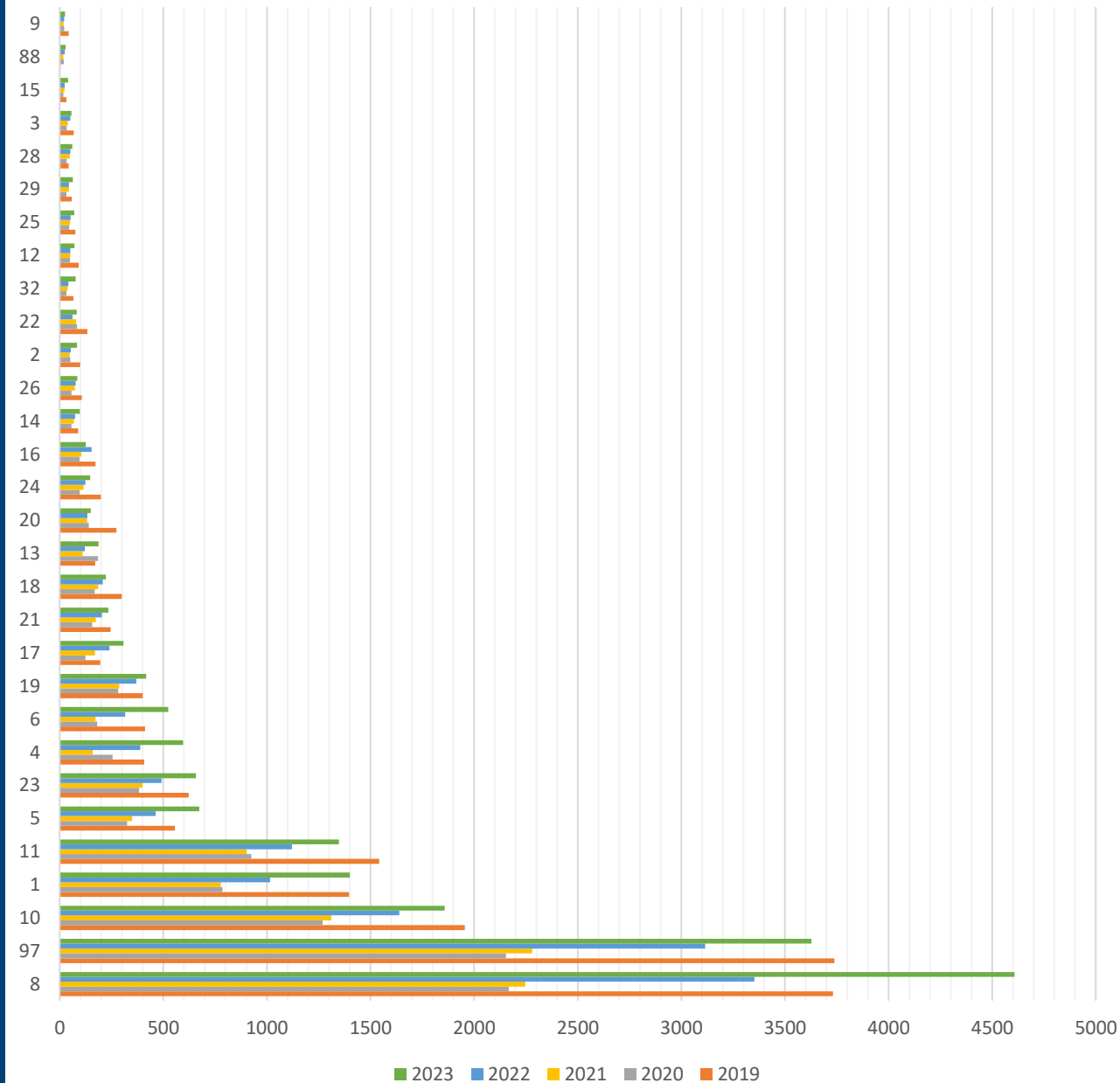
# 03 System Performance

## Daily Ridership

Ridership is the highest on route 8 University and 97 Okanagan in Kelowna. These five routes that service the Mission area move between 25 and 1,400 people a day. Route 1 Lakeshore were not in scope of this study.

- **Route 1 Lakeshore** moves the 4<sup>th</sup> most people in Kelowna. With a slow rebound through 2021 and 2022, it has recently just surpassed its 2019 performance.
- **Route 5 Gordon** moves the 6<sup>th</sup> most people out of all routes in Kelowna each day. After losing 41% of its ridership between 2019 and 2020, so far in 2023 it is surpassing 2019 ridership by 21%.
- **Route 15 Crawford** is the third lowest performing route in Kelowna with only 40 boardings a day.
- **Route 16 Kettle Valley** moves 126 people a day, a 27% loss of ridership since 2019.
- **Route 17 Southridge** moves 308 people a day, a 57% increase since 2019.

Average Daily Ridership





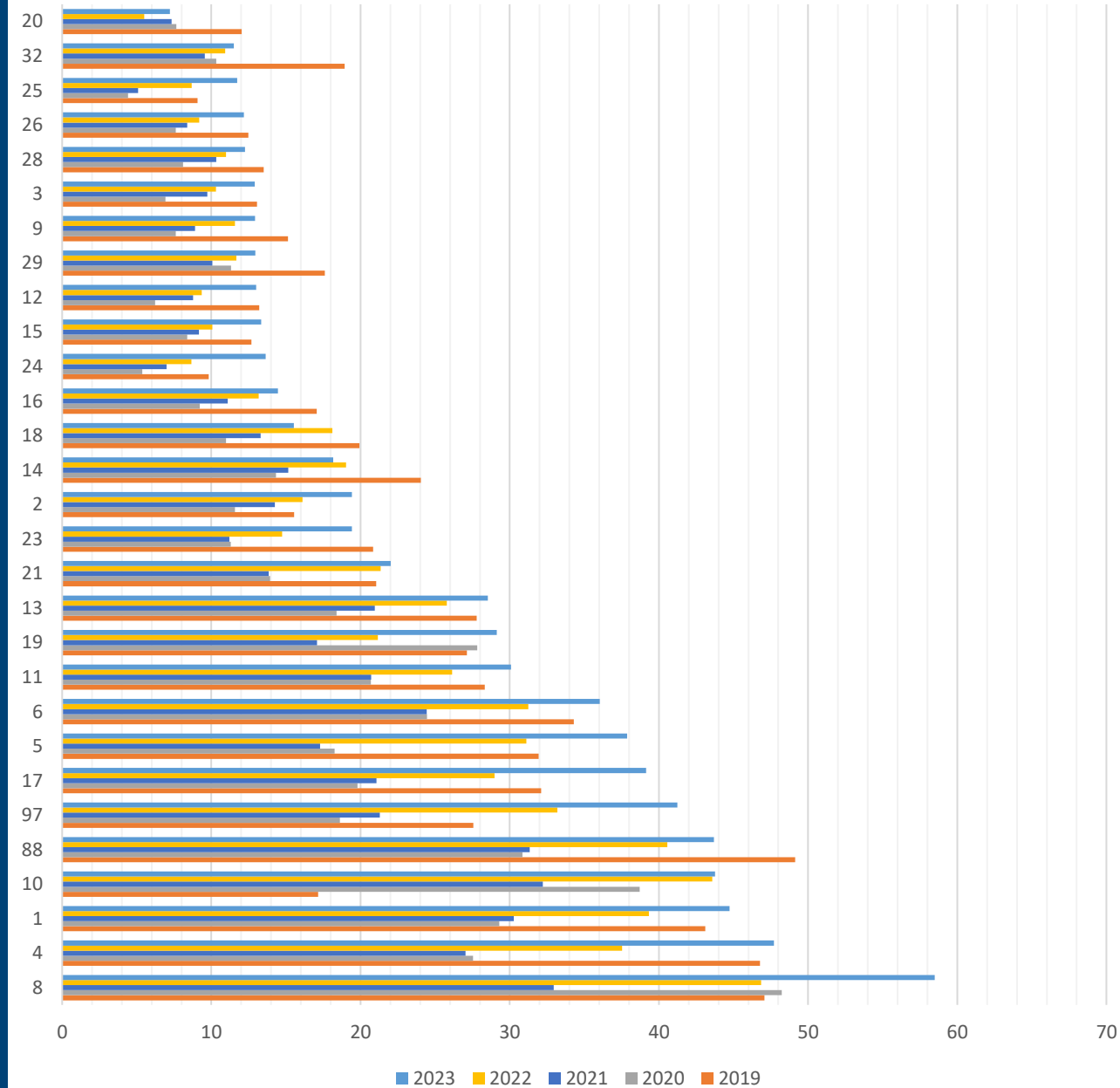
# 03 System Performance

## Boardings per Revenue Hour

Kelowna follows specific guidelines as part of ongoing management of the network. They identify recommended minimum service levels for the specific route. Boardings per revenue hour standardize performance across routes and therefore have these guidelines associated with them.

- **Route 5 Gordon** is considered a Frequent Transit Network (FTN) and still performing under the guidelines set at **45** by 13%.
- **Route 15 Crawford** is considered a coverage-based Local Transit Network (LTN) with a guideline set at **15**. It is underperforming by 9%.
- **Route 16 Kettle Valley** is considered a ridership-based LTN with a guideline set at 25. It is underperforming by 38%.
- **Route 17 Southridge** is also a ridership-based LTN and is over-performing by 65%.

Average Boardings per Revenue Hour



# 04 Engagement

## How we engaged with the Mission community

As part of BC Transit’s commitment to public engagement, outreach was carried out to identify the preferred service option for inclusion in the final plan.

Engagement ran online from May 24, 2022, to June 29, 2022, with paper copies of the survey distributed during the same period. Marketing to the community was conducted primarily online, consisting of a project website, social media ads and announcements on local school webpages. Ads were also placed at bus stops at key locations in Kelowna.

The engagement summary report was completed and posted online [here](#).



**146** Online Survey Respondents



**24** Map Pins



**1,159** Page Views



# 05 What we Heard

## Addressing the problems

The purpose of conducting this study was to find solutions to existing problems within the current transit network. This included:

- Improving connection to elementary and post-secondary educational institutions
- Addressing underperforming service and finding ways to improve ridership
- Commuter travel times and associated contributing factors such as number of transfers required to destinations city wide



# 05 What we Heard

## Feedback on Options Presented

Three options were presented to the public for consideration.

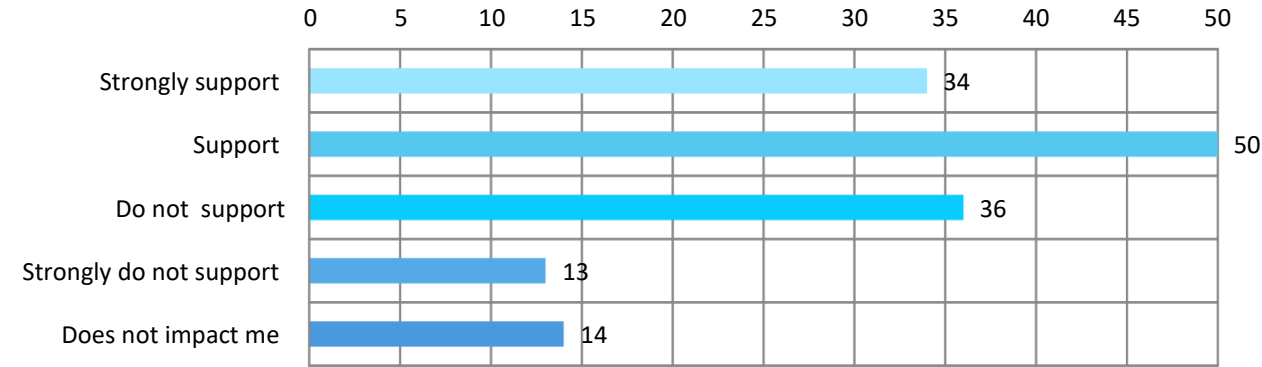
Option 2 had 10% more support than Option 1, whereas Option 3 had the least amount of support from respondents who were impacted.

Respondents who did not support Option 1 did not like the removal of service from Chute Lake Road and the loss of service from schools\*. Respondents who did not support Option 2 did not want to have to transfer in Kettle Valley/Lower Mission.

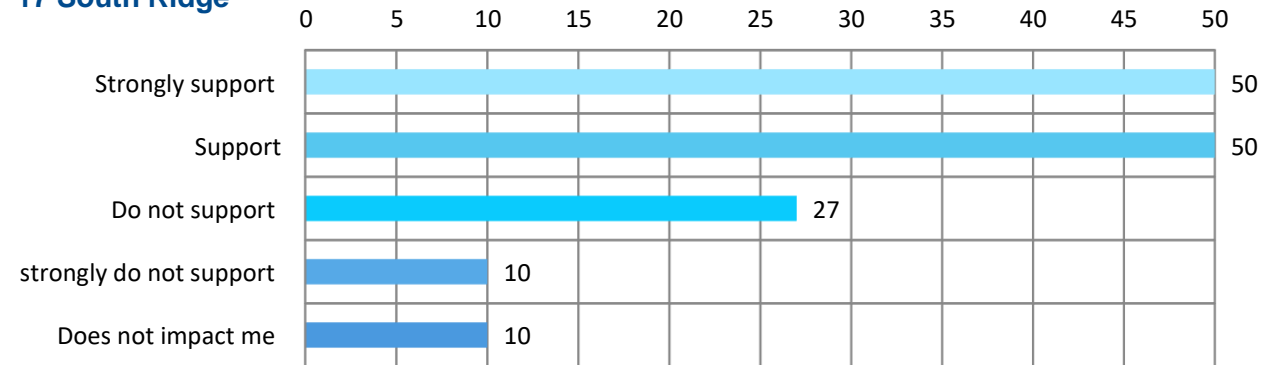
Respondents who did not support Option 3 did not want the reduction of frequency due to the longer route times.

*\*Contrary to this, transit service would not be removed from schools but rather improved with this option*

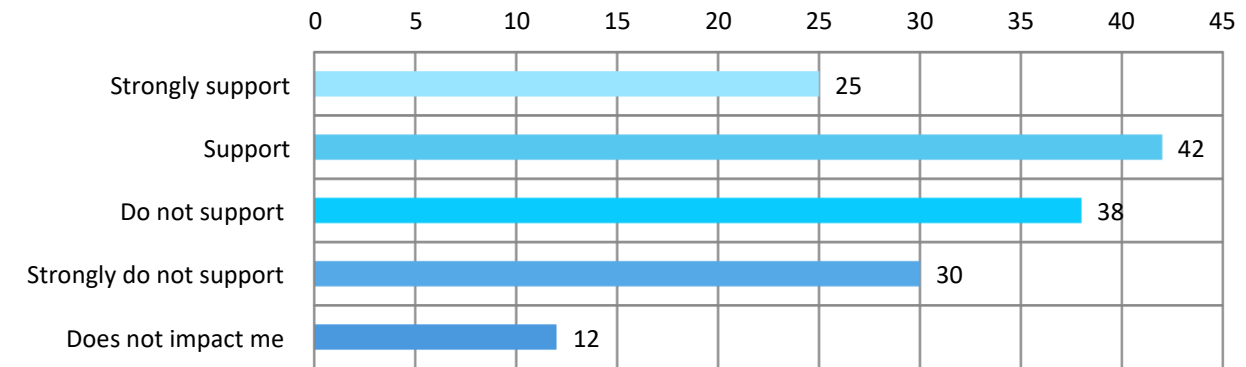
### Option 1 – Route 16 Kettle Valley and Route 17 South Ridge combined into one route



### Option 2 – Extension of 17 South Ridge to enable a transfer between 16 Kettle Valley and 17 South Ridge



### Option 3 – Bidirectional Loop combining Route 16 Kettle Valley and 17 South Ridge



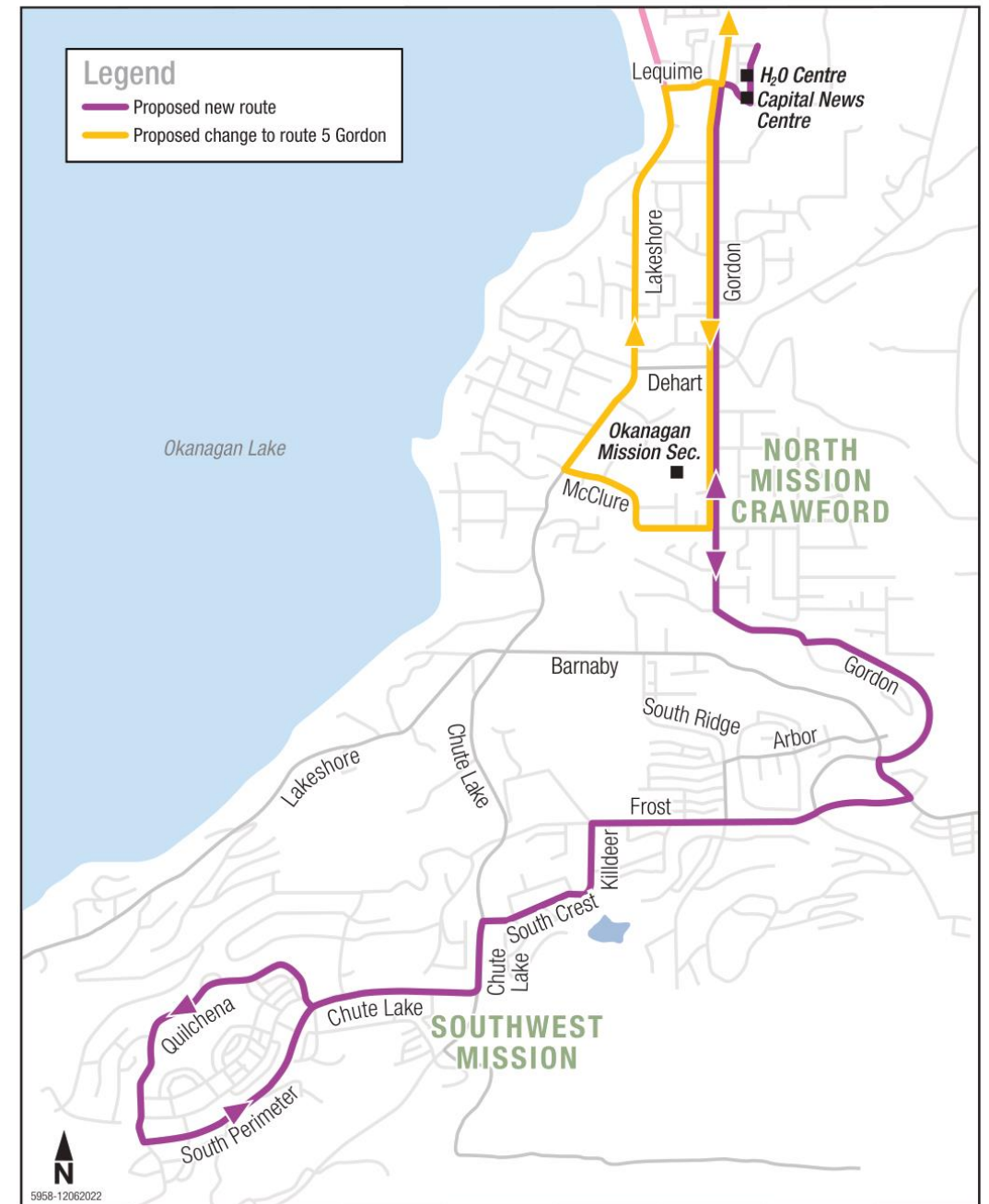
# 06 Proposal

## Preferred Option – New Mission Route

While Option 2 received the most support by impacted respondents, Option 1 is preferred from an operational standpoint and was ultimately selected as the final option with slight modifications to improve coverage.

This route would see route 16 Kettle Valley and route 17 South Ridge combined into one, and route 5 Gordon extended south to McClure. Option 1 maintains access to all local schools without adding significant run time and provides a one seat ride for students that live in Kettle Valley. While some stop closures are required, this option maintains all the highest ridership stops. Further bus stop changes can be seen on page 14.

The modification to Option 1 would see the route service Canyon Falls Middle School directly by operating on Frost Road and Steele Road.

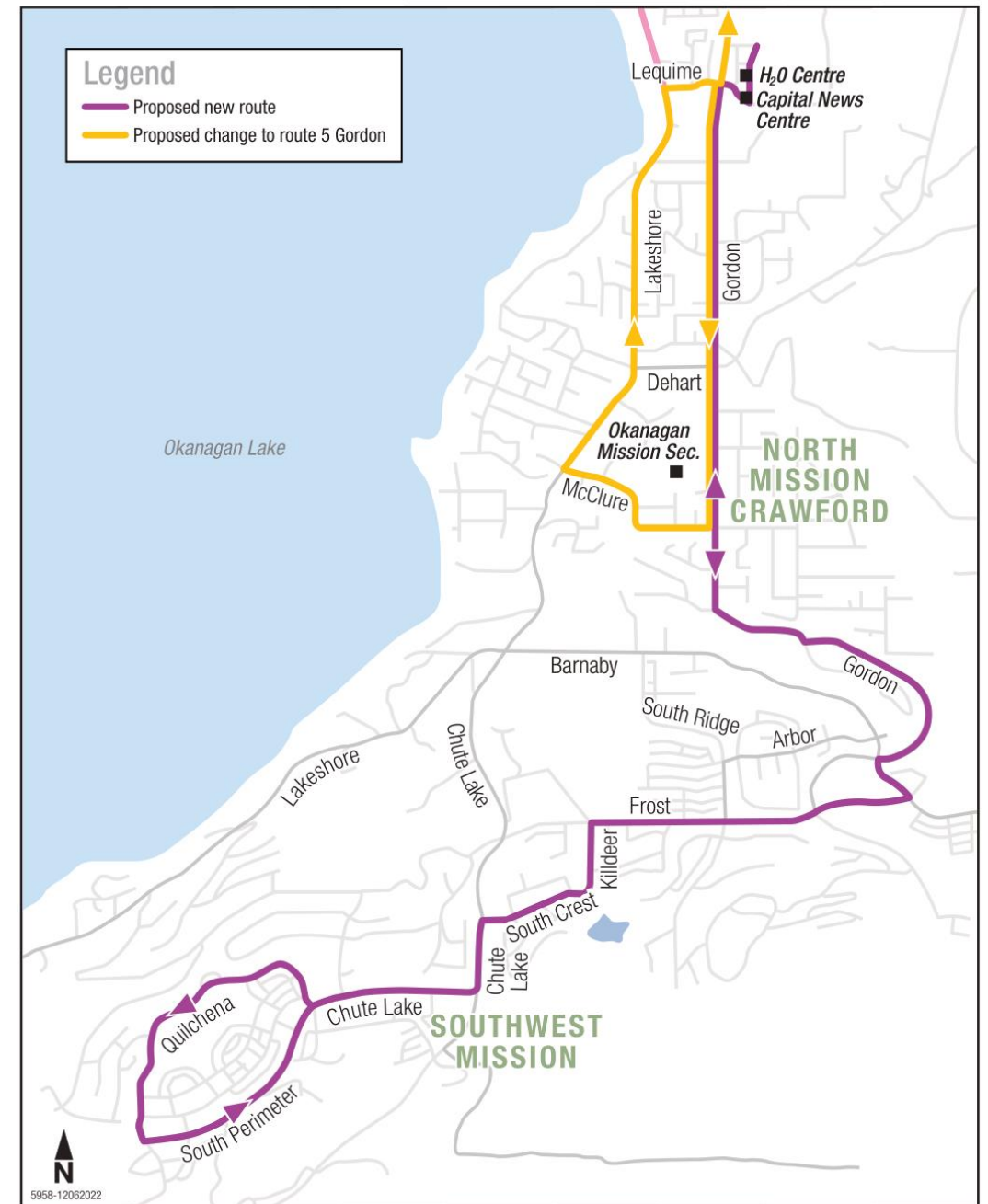


# 06 Proposal

## Preferred Option – Network Impacts

The new route would require 5 Gordon to be extended to McClure Road, which would increase the running time approximately 15 minutes per trip. To accommodate the change, routes 5 Gordon, 1 Lakeshore and 2 North End Shuttle would see schedule changes and trip times shift to accommodate the route extension.

5 Gordon would service the Lower Mission every other trip, providing 60-minute service in the off-peak and 30-minute service in the peak. This would be similar to the levels of service the area currently has.



# 07 Infrastructure

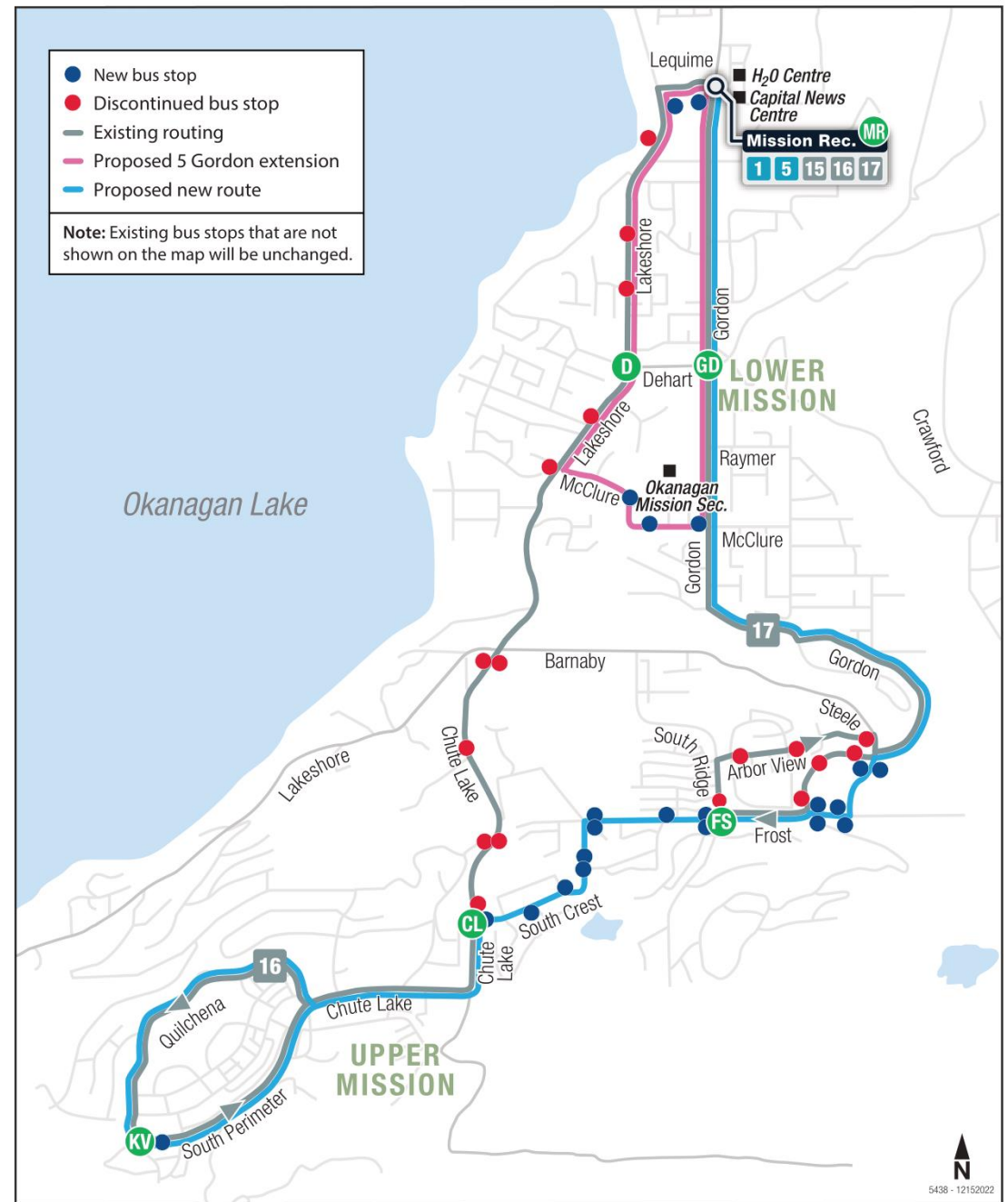
## Bus Stop Changes

The chosen option requires several modifications to the existing bus stops. To ensure compliance with current standards, BC Transit will collaborate with the City of Kelowna while implementing improvements in stages. It is important to note that the option selected guarantees the preservation of all high-usage stops. Furthermore, Frost Road, Steele Road and South Crest Drive in Upper Mission will have new bus stops installed, while Lower Mission will have five new stops on McClure Road and the Lakeshore Road /Lequime Road area. There will be a total of 16 stops decommissioned and 21 new stops with an estimated cost of \$148,000\*. More detailed information on each stop including infrastructure considerations, cost estimates as well as proposed timelines are included in Appendix A.

It is recommended that appropriate signage be posted at stops prior to their closure, so riders are aware of upcoming changes and can plan their travel accordingly.

\*The estimate includes a 25% contingency budget

\*The estimate does not include potential improvements to existing stops that will remain in service



Mission Network Restructure Plan

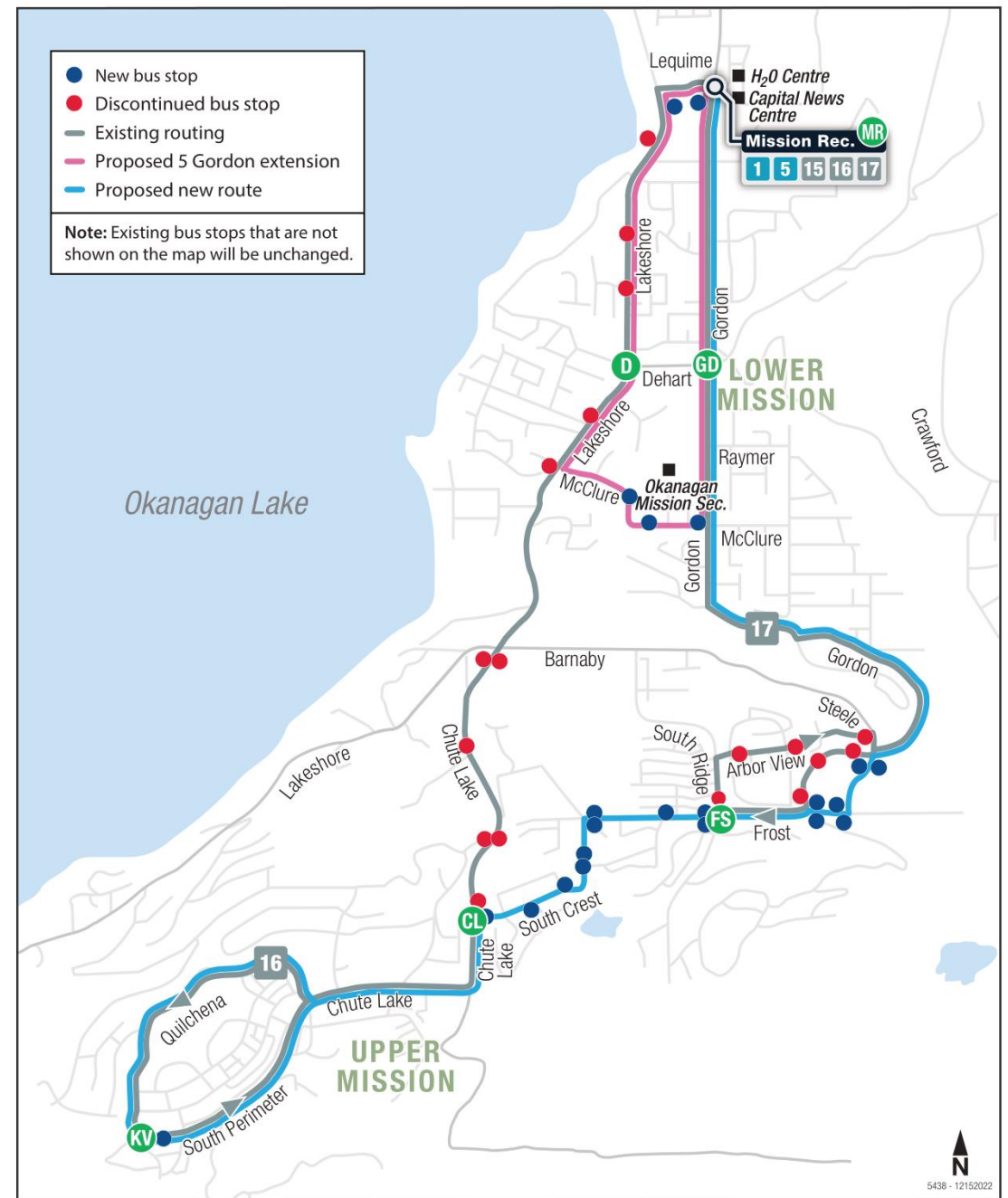
# 08 Moving Forward

## Funding the plan

To achieve the goals of this plan, capital and operating investments in the transit system will be required over the next five years and beyond. Annual operating costs are based on service hours that are projected to increase by 3,500 service hours and 1 vehicle. The plan also calls for capital investments that will be delivered incrementally by the City of Kelowna that include:

- Improvements to customer amenities at transit stops
- Development of new bus stops to support network changes

Performance of the transit system is monitored on an annual basis, which is typical for transit systems of this size. Performance may be monitored more closely after a significant service change to evaluate the change. Service improvements recommended within this plan will be integrated into the 3-Year Transit Improvement Process (TIP), which is updated on an annual basis. While priorities for enhancements network-wide are subject to change from year to year based on available resources, it is anticipated that Mission Restructuring will occur within the 2–3-year horizon.



Mission Network Restructure Plan



# 09 Appendix A – New bus stops in support of network restructure

Action	Stop ID & Location	Currently support accessible boarding	Infrastructure Considerations
New Stop	EB Southcrest at Chute Lake	Y	Site suitable as is initially - signage on streetlight. Improvements: pad back of sidewalk to enhance accessible boarding & accommodate a bench.
New Stop	WB Southcrest at Chute Lake	N	Currently no sidewalk connection. Improvements: sidewalk to intersection, road crossing paint markings. Pad back of sidewalk, sign sleeve.
New Stop	EB Southcrest at Tungsten	N	Suitable as is initially. Sign pole required placed back of sidewalk. Future improvements: pad and bench back fo sidewalk.
New Stop	WB Southcrest at Quartz	N	Currently rural road edge. Pole required for bus stop signage. Future improvements: accessible boarding platform, sidewalk connection - anticipated development frontage improvements.
New Stop	NB Killdeer at Lefevere	Y	Suitable as is initially. Future improvements: pad back of sidewalk, sign sleeve, bench.
New Stop	SB Killdeer at Lefevere	N	Currently rural road edge. Pole required for bus stop signage. Future improvements: rural standard accessible boarding platform.
New Stop	EB Frost at France	N	Boulevard-based boarding platform required to link sidewalk. Signage on streetlight. Further improvements: pad back of sidewalk with bench.
New Stop	WB Frost at France	N	Currently rural road edge. Pole required for bus stop signage. Future improvements: rural standard accessible boarding platform.
New Stop	WB Frost at Seon	Y	Suitable as is initially. Signage on streetlight. Improvements: pad back of sidewalk, bench. <b>Stop may be omitted due to proximity to next stop to east.</b>
New Stop	EB Frost at South Ridge	Y	Suitable as is initially. Signage on streetlight. Future improvements: pad back of sidewalk, bench.

# 09 Appendix A – New bus stops in support of network restructure

Action	Stop ID & Location	Currently support accessible boarding	Infrastructure Considerations
New Stop	EB Gordon at Frost	Y	Unurbanized currently. Sign pole required. Improvements: sidewalk connection to Southridge & accessible boarding platform, sign sleeve, bench.
New Stop	WB Gordon at Frost	N	Grass boulevard currently. Improvements: Boulevard accessible platform, tactile pad, sign sleeve, bench (pre-duct for future shelter). Design is coordinated with development.
New Stop	EB Frost at Steele	N	Grass boulevard currently. Future improvements: Boulevard accessible platform, tactile, sign sleeve, bench (pre-duct for future shelter). Design is coordinated with development.
New Stop	WB Frost at Steele	N	Grass boulevard currently. Signage on streetlight. Future improvements: boulevard boarding platform, tactile, sign sleeve, bench (pre-duct for future shelter). Delivery to be coordinated with development.
New Stop	SB Steele at Gordon	N	Unurbanized currently. Signage on streetlight. Future improvements: sidewalk link to Steele Rd., accessible boarding platform, tactile, sign sleeve, bench (pre-duct for future shelter). Delivery to be coordinated with development.
New Stop	NB Steele at Gordon	N	Unurbanized currently. Sign pole required. Future improvements: sidewalk link to Gordon Dr., accessible platform, sign sleeve. Possible coordination with development.
New Stop	WB McClure NS Elm	Y	Grass boulevard currently. Sign pole required. Improvements: accessible platform, sign sleeve. Possible operational safety challenges with site.
New Stop	WB McClure FS Bonjou	N	Fragmented sidewalk segments currently. Sign pole required. Future improvements: infill sidewalk, accessible platform, bench back of walk, sign sleeve. City deferred revenue available for this site.
New Stop	NB McClure FS Bonjou	Y	Unurbanized currently. Sign pole required. Future improvements: sidewalk, small pad with bench back of sidewalk. Stop may be too close to previous. Could omit and reconsider when/if sidewalk planned in future.
New Stop	NB Lakeshore NS Lequime	N	Suitable as is initially. Sign pole required. Future improvements: pad, bench back of sidewalk, sign sleeve.