

# TRANSIT *future*

► **Local Area Transit** plan

## LAKE COUNTRY

### 2022



City of Kelowna  
City of West Kelowna  
District of Lake Country

Westbank First Nation  
District of Peachland  
Regional District of  
Central Okanagan



# Territorial Acknowledgement

We would like to acknowledge with respect that BC Transit carries out its work on the traditional territories of indigenous nations through out British Columbia

The District of Lake Country lies within the ancestral and unceded traditional territory of the Okanagan.

Here in Victoria we are on the lands of the Lkwungen People, also known as the Songhees and Esquimalt First Nations Communities.

**We thank them for allowing us to live, work, and play on their lands.**

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# 01 Transit Vision

*Transit is a preferred choice for residents and tourists, attracting riders through comfortable, safe, accessible, convenient and reliable service.*

The Lake Country Local Area Transit Plan (LATP) builds upon the Central Okanagan Transit Future Plan (TFP) and the Central Okanagan Transit Future Action Plan (TFAP) by establishing localized transit service and infrastructure improvements over the next five to ten years. These improvements have been prioritized into short, medium, and long-term categories based on a review of existing transit service, changes to land use and land use plans, and feedback collected through public engagement.

The LATP upholds community goals and objectives contained in the Lake Country Official Community Plan and works to strengthen the link between transportation and land-use in support of sustainable growth. The Plan also serves to inform any future local or regional transportation plans.



Alignment of transportation  
and land use planning



Coordinated approach to make  
transit the preferred choice



Transit is both accessible and  
equitable



Development of transit to  
integrate with active modes



Transit links to key destinations,  
including parks, schools and the airport

## 02 BC Transit Future Initiatives

### Low Carbon Fleet Program

First deployment of electric buses will happen in the Victoria Regional Transit System in 2022.

BC Hydro will help determine the readiness of the electricity infrastructure to support electric fleets across the province. BC Transit will work with the Ministry of Transportation and Infrastructure to refine the anticipated funding requirements, for buses and new operation and maintenance facilities.

#### [Low Carbon Fleet Program](http://www.bctransit.com/low-carbon-fleet-program)

[www.bctransit.com/low-carbon-fleet-program](http://www.bctransit.com/low-carbon-fleet-program)

### Electronic Fare Strategy - Umo Platform

Smart ticketing providing new ways to pay. BC Transit is working to not only improve rider convenience but also enable mobility partnerships and create new data collection opportunities. Systems will also accommodate a mix of fare products, including cash fares. The system will also be able to operate in areas with low-cell phone coverage/service.

#### [Umo Platform](http://www.bctransit.com/umo)

[www.bctransit.com/umo](http://www.bctransit.com/umo)

### Digital On Demand

Digital On Demand transit uses technology to dynamically dispatch a bus, van or fleet of vehicles dictated by riders. BC Transit is currently completing a feasibility to determine how and where digital on demand transit may be delivered in communities across BC.

**A service priority can be found in Chapter 09.**

### Next Ride

Door to door journey planning. Provides bus location information to customers via transit apps, enhances operations control and route information for the operator.

#### [Next Ride Kelowna](http://nextride.kelowna.bctransit.com)

[nextride.kelowna.bctransit.com](http://nextride.kelowna.bctransit.com)



### Development Referral Program

Local governments or developers can send any referrals and supporting information to BC Transit to review and provide comments to the local government or developer about how the proposal may effect current of future transit service and infrastructure and how the application or plan could be changed to better support current or future transit service and infrastructure.

#### [Referral Program](http://www.bctransit.com/development-referral-program)

[www.bctransit.com/development-referral-program](http://www.bctransit.com/development-referral-program)



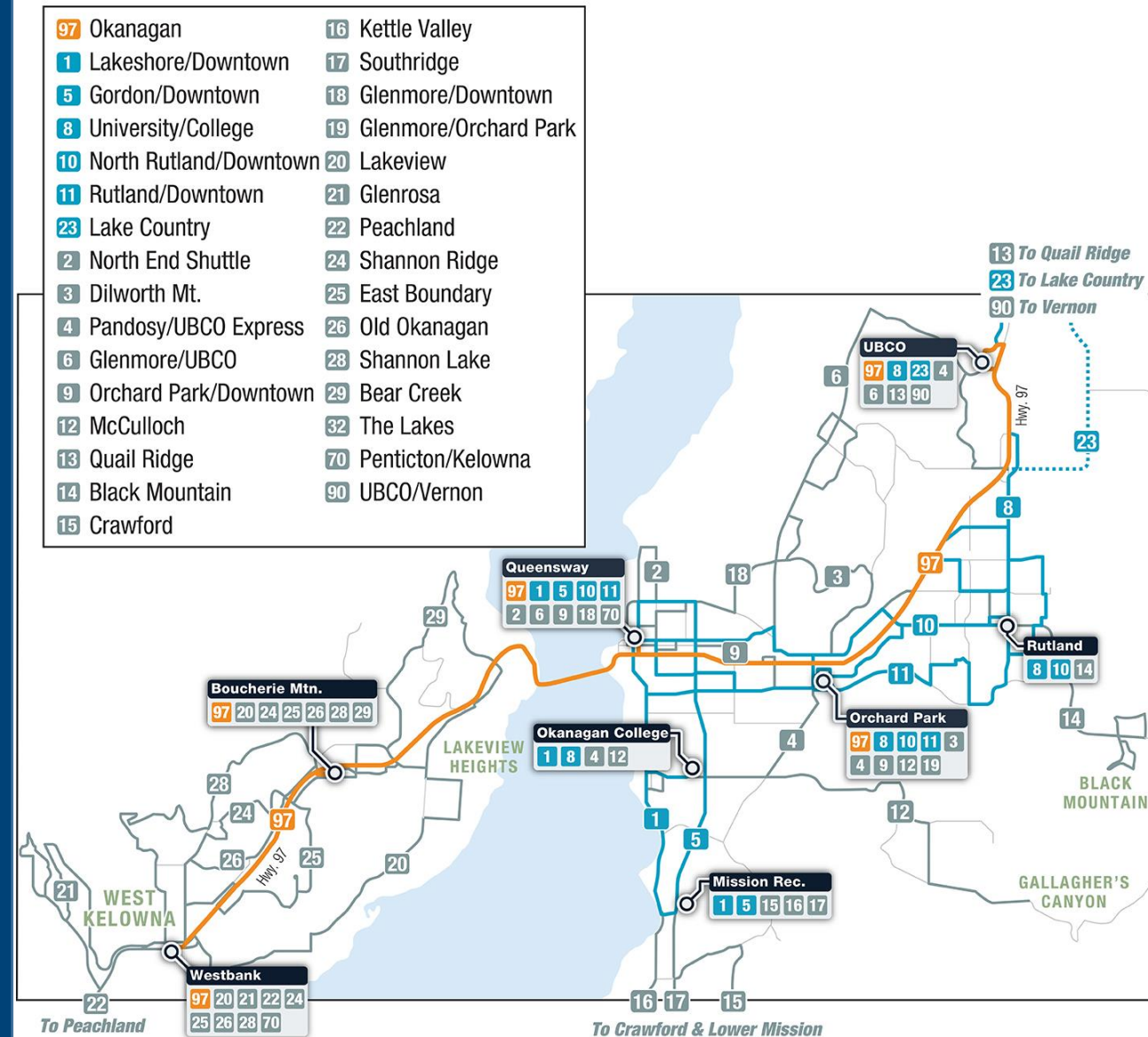
# 03 Transit Today

## Part of Kelowna Regional Transit System

Lake Country falls within the Kelowna Regional Transit System and is located farthest north of the system service area. The system also includes Kelowna, Westbank First Nation, West Kelowna and Peachland.

Established in 1997, service in the Central Okanagan has expanded to 87 vehicles carrying 5,939,178 passengers in 2019, a 22% increase over the past five years. Ridership has dropped considerably in 2020/21 to 2,642,332 total passengers due to the COVID-19 pandemic. The system operates utilizing 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, the Kelowna Conventional Transit System consists of 30 routes and 87 vehicles.

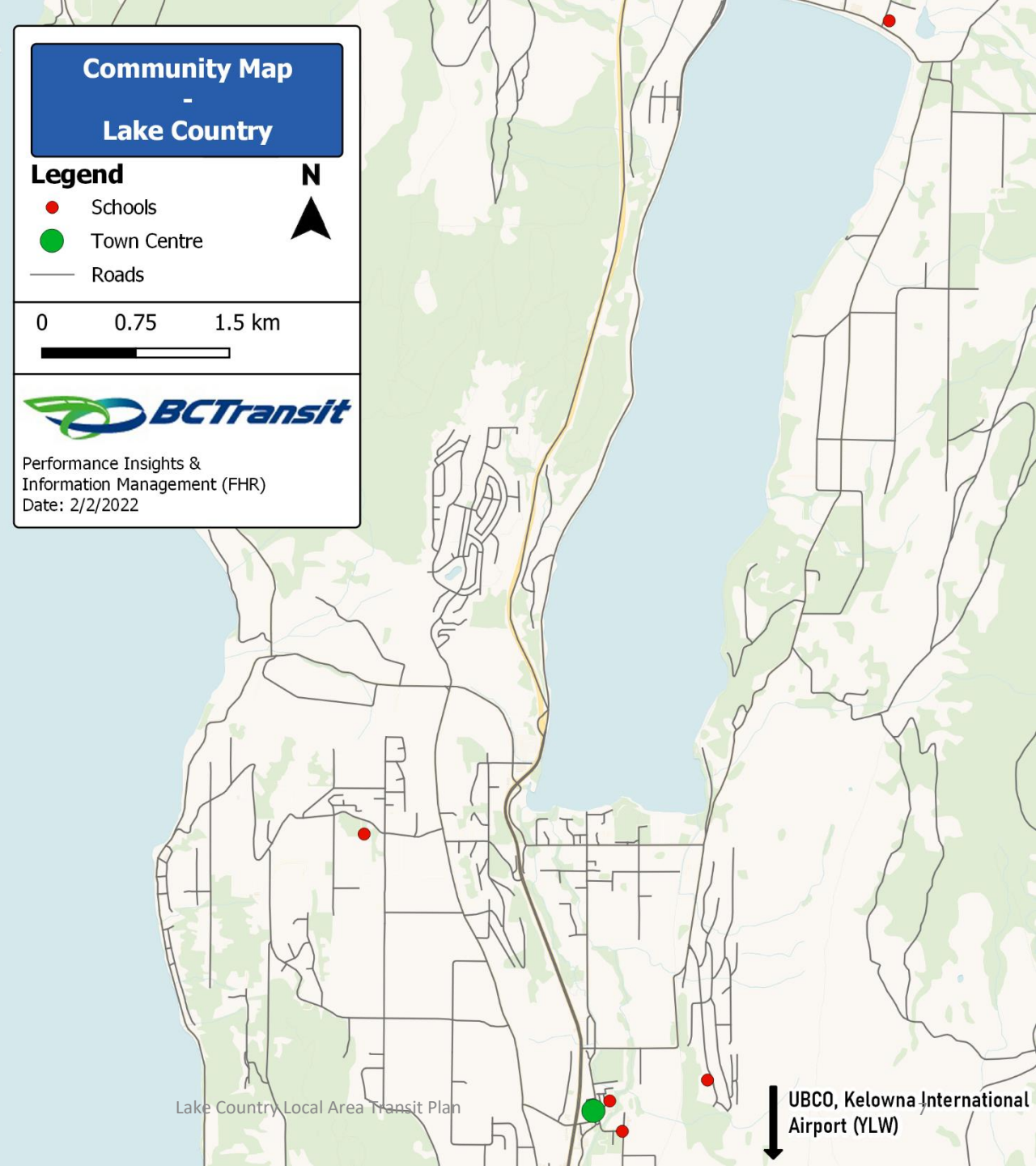


# 03 Transit Today

## District of Lake Country

Contrasting the beautiful waterfront and winery estates, Lake Country also boasts major centres for population, employment, services and activities. Lake Country contains two local routes, 23 Lake Country and 32 The Lakes.

Lake Country is primarily an **auto-oriented community** due to its geography. Within Lake Country's Mobility Master Plan, Lake Country has set a goal to expand transit ridership by increasing its **transit mode share from 2% to 10% by 2040**. As technology evolves and the population increases, an opportunity to change transportation habits exists. By promoting public transit and other sustainable modes, Lake Country can be prepared for a shift to more sustainable transportation habits.





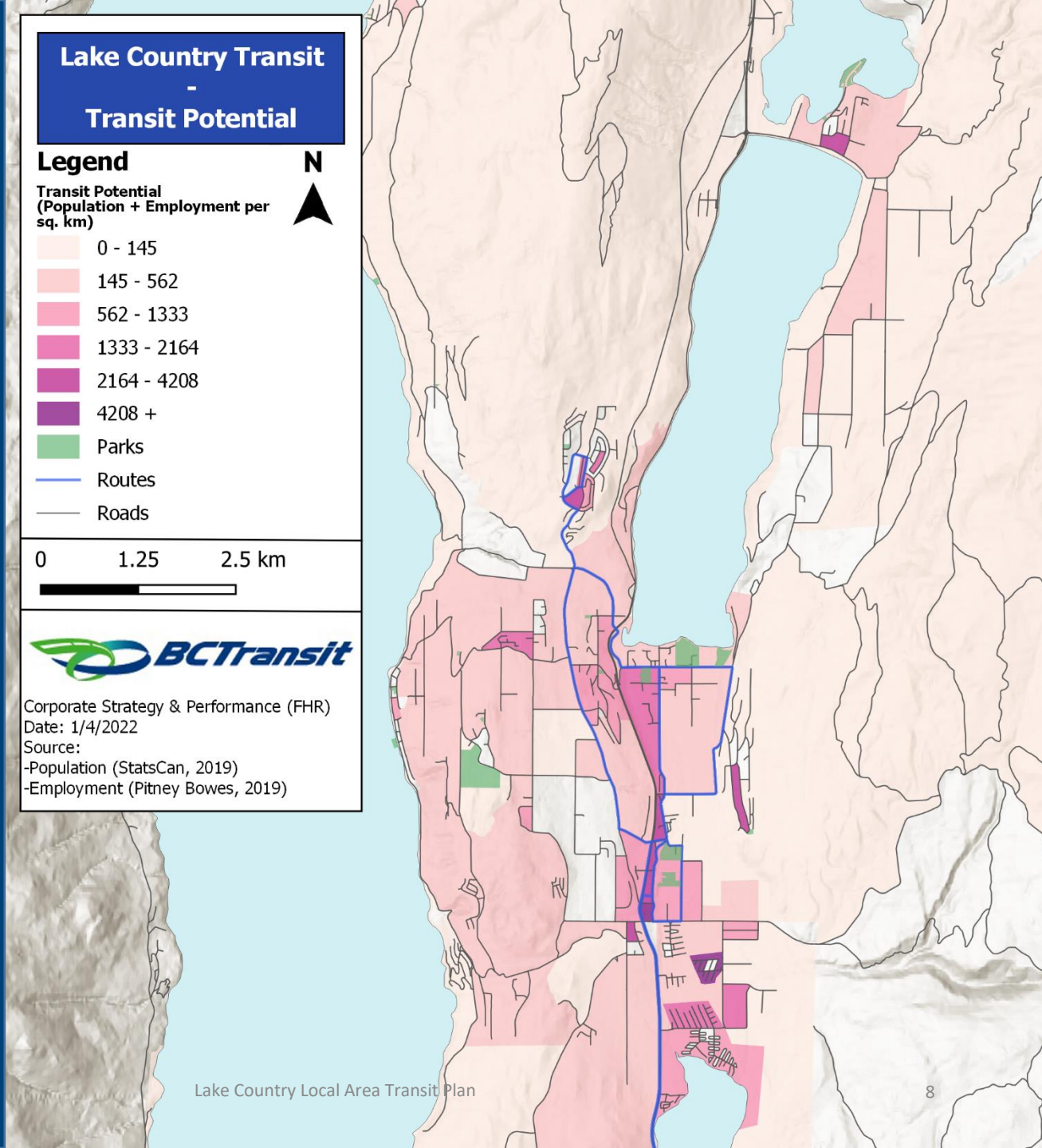
# 04 Transit Need

## Who is Lake Country?

The District of Lake Country shares its southern border with the City of Kelowna. Lake Country's population has increased 22% between 2016 and 2021 sitting at 15,817. The geographic bounds of Lake Country include four distinct neighbourhood wards which are Carr's Landing, Okanagan Centre, Oyama and Winfield.

Lake Country transit is connected primarily to the University of British Columbia where it connects with the Rapid Transit line 97 Okanagan, providing service throughout the Central Okanagan. This creates the majority of the ridership demand, which helps provide higher service levels to the main spine of Lake Country; however, it requires a careful balance to ensure the needs are met for both local and more regional travel needs.

This plan seeks to develop a future network with these key challenges and opportunities in mind.





# 05 System Performance

## Ridership by Month

Transit ridership in Lake Country peaks in the fall, and drops in December following the same trend as the rest of Kelowna. Ridership rebounds slightly in spring, and decreases again until the following fall. Ridership has begun to rebound since the Covid-19 pandemic, operating at approximately 50% of pre-pandemic ridership.

### Key Takeaways

- Boardings per month increased an average of 30% from 2020 to 2021 during the fall (September to November).
- Pre-Covid, ridership in Lake Country performed strongly during the summer months in comparison to the rest of the Kelowna. However, post-Covid Lake Country has performed on par with the rest of the system throughout the summer – potentially indicating a decrease in tourism activities.

Ridership by Month



30% ↑

Boarding's per month  
(2021 vs. 2020 post-Covid)

37% ↓

Boarding's per month  
(2021 vs. 2019)

200+ ↑

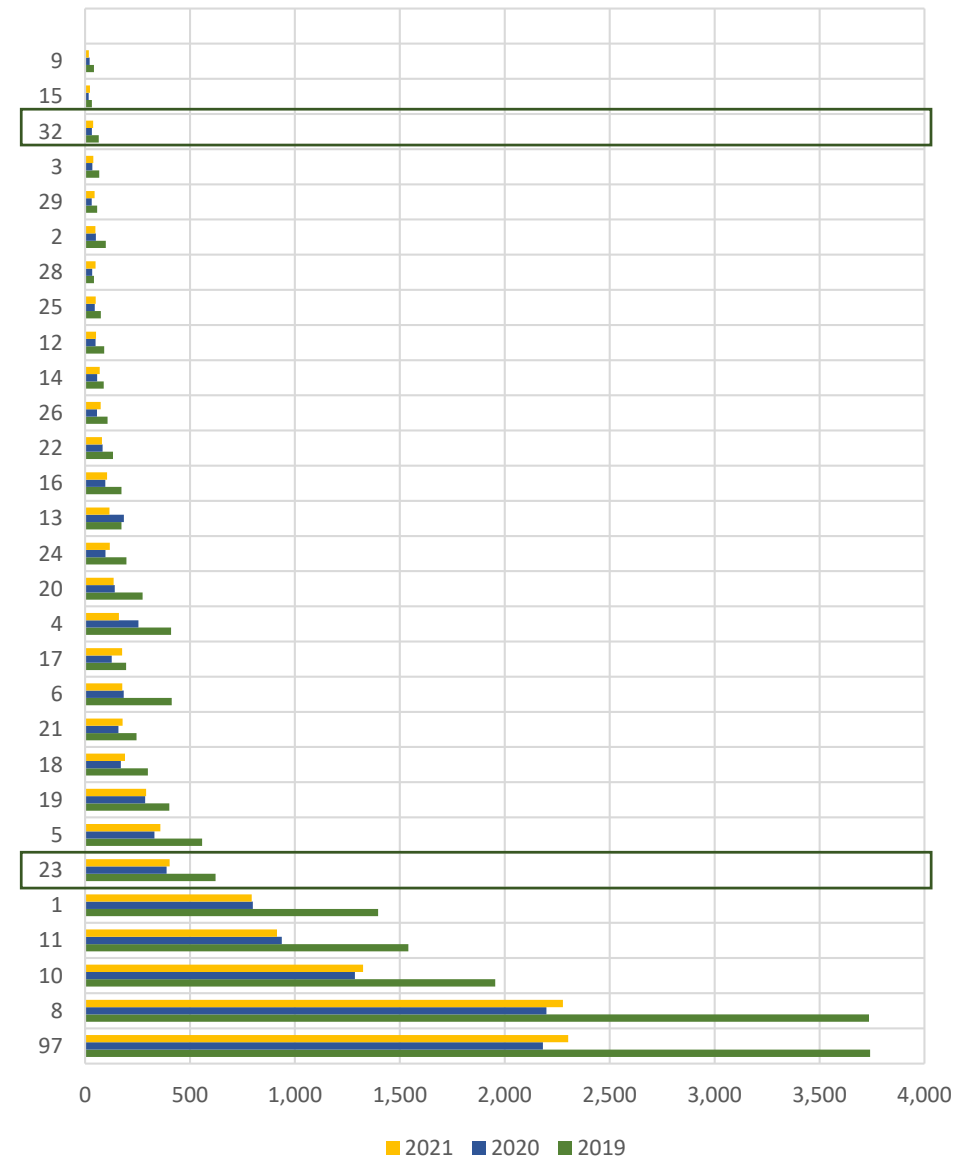
Average monthly  
boarding's following  
April 2020

# 05 System Performance

## Total Ridership

- **Route 23 Lake Country** moves the 6<sup>th</sup> most people out of all routes in Kelowna each day. After losing 37% of its ridership between 2019 and 2020, it gained 4% back in 2021.
- **Route 32 The Lakes** only moves 38 people a day, a 41% loss of ridership since 2019.
- The highest performing routes (**8 University** and **97 Okanagan**) both connect to UBCO, the main connection hub to **23 Lake Country**.

Total Boarding's per Day



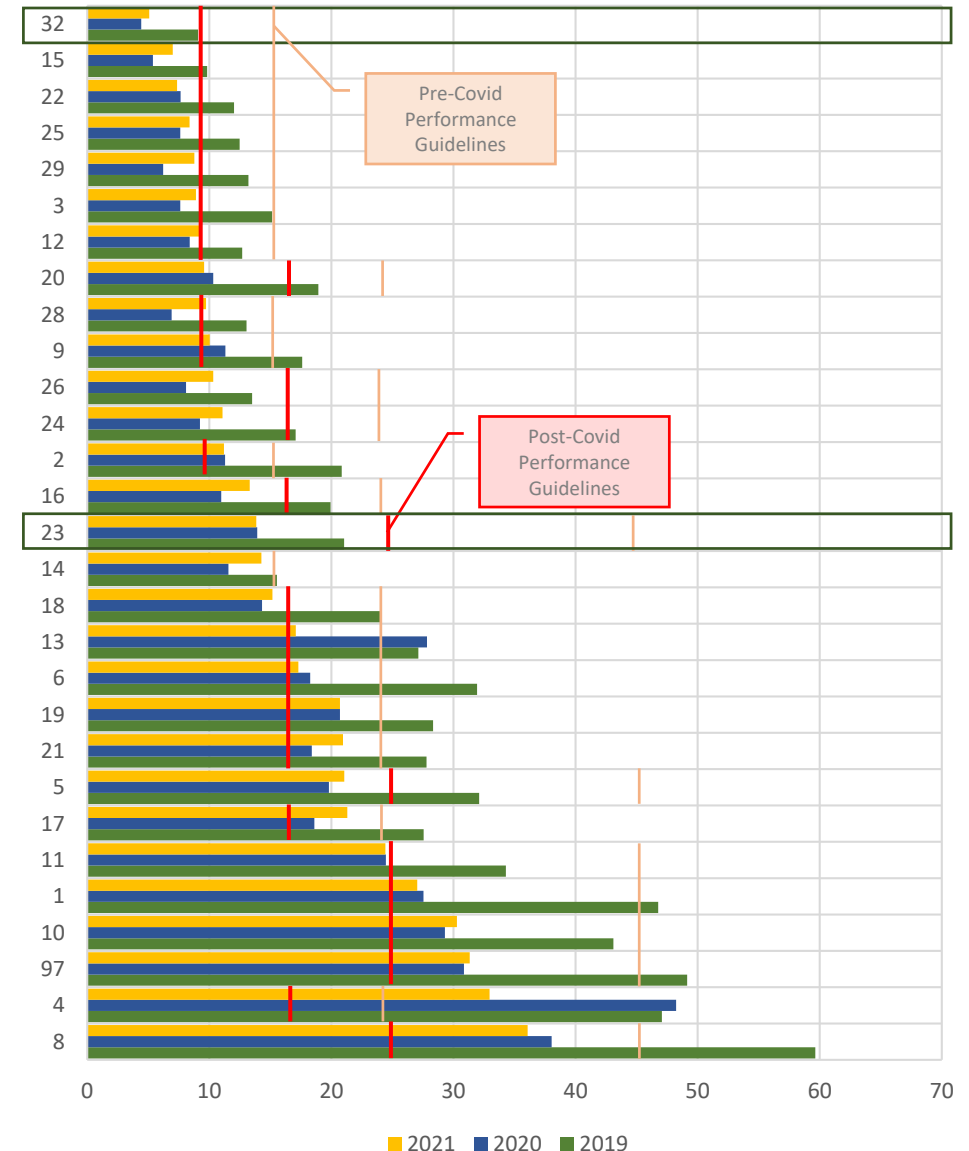
# 05 System Performance

## Boarding's 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. These metrics have been modified due to the pandemic based on the system-wide decrease of ridership, as shown on the graph to the right.

- **Route 23** has not seen an increase in productivity from 2020 to 2021, unlike most other routes in the Kelowna system. It is performing below the system's performance guidelines.
- Although important for providing basic service access to residents and employees throughout Lake Country, local coverage **Route 32** is the least productive route in Kelowna, but has seen a 15% increase between 2020 and 2021.
- **Both routes should see changes to ensure transit utilization improves in Lake Country.**

Boarding's per Revenue Hour



# 06 Engagement

## *How we Engaged with the Lake Country Community*

As part of BC Transit’s commitment to public engagement, outreach was carried out to identify draft service and infrastructure through workshops with key stakeholders as well as public engagement.

Engagement was launched online from January 8, 2021 to February 8, 2021. BC Transit also worked with Lake Country staff to deliver paper surveys in response to the communities request. Marketing to the community was facilitated through a variety of tools including: a project website, newspaper ads, radio ads, mail-out ads to residential addresses, and social media advertisements.



**139** Survey Respondents



**260** Total Comments



**1,160** Page Views



### **Stay engaged**

Check out the full engagement summary report and register for future updates.

[engage.bctransit.com/lakecountry2021](https://engage.bctransit.com/lakecountry2021)



# 07 What we Heard

## Key Themes

**Improved Frequency** – General interest to increase service frequency on both **23 Lake Country** and **32 The Lakes**.

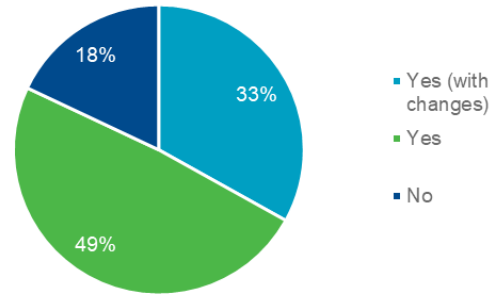
**Support for New Routes** – Generally, residents supported the proposed changes that the plan introduced, including the short-term and long-term restructuring. Specific information can be found in section 08 and section 09.

**Airport Service** - Desire for transit to serve the airport most efficiently by remaining largely on the highway.

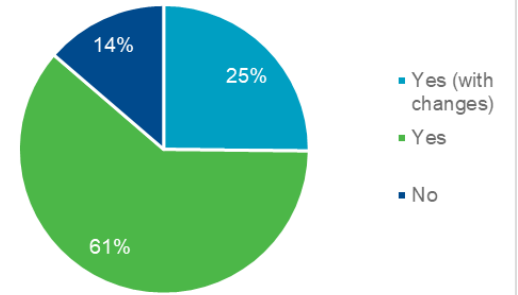
**Expand Service Area** – Providing service to communities such as Oyama and Okanagan Centre.

**Infrastructure Improvements** – Access to bus stops with lighting and shelter coverage.

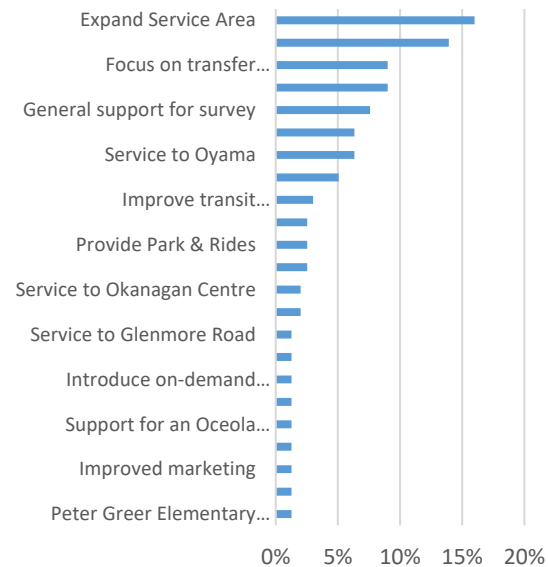
Short-Term Network Proposal Support



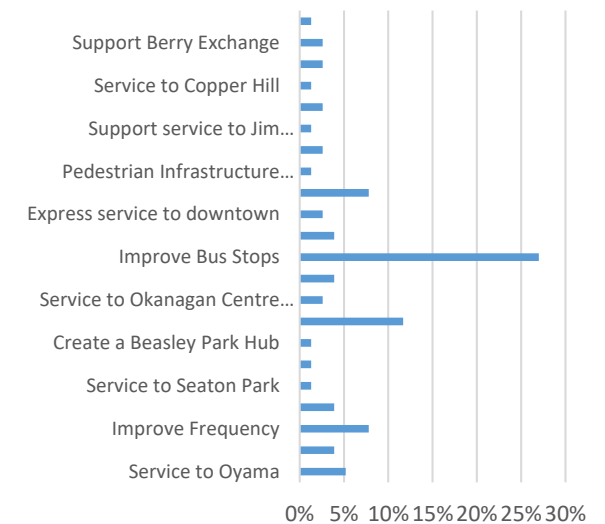
Long-Term Network Proposal Support



Other Improvement Themes



Infrastructure Improvement Themes



## 08 Short-Term Service Priorities (1 to 2 years)

Priority	Description	Expansion Resources
Restructure 23 Lake Country within Lake Country	Modify existing 23 Lake Country to serve areas of higher density and provide bi-directional service along main corridor.	+500 service hours
Restructure 32 The Lakes	Modify existing 32 The Lakes to provide service to more of Lake Country.	1,000 service hours
Add limited service to 32 The Lakes	After the initial year of service, expand local route to incorporate limited trips to Davidson Road and Sherman Drive.	200 hours
	Total Service Hours and Buses Required	700 service hours
	Estimated Local Share of Costs *	30,000\$ to 40,000\$

*\*This cost estimate is based on the share that Lake Country would contribute through their Annual Operating Agreement. Other costs that may be incurred due to system improvements for the Entire Kelowna Regional Transit System may impact the final cost.*

# Local Network Restructure

*New local and frequent transit network will be able to provide more service area coverage, and provide faster service between Lake Country and Kelowna.*

To improve transit in Lake Country, engagement supported the modification of the local network, 32 The Lakes\*. This modification would see the route provide service along Okanagan Centre Road and Lodge Road/Woodsdale Road.

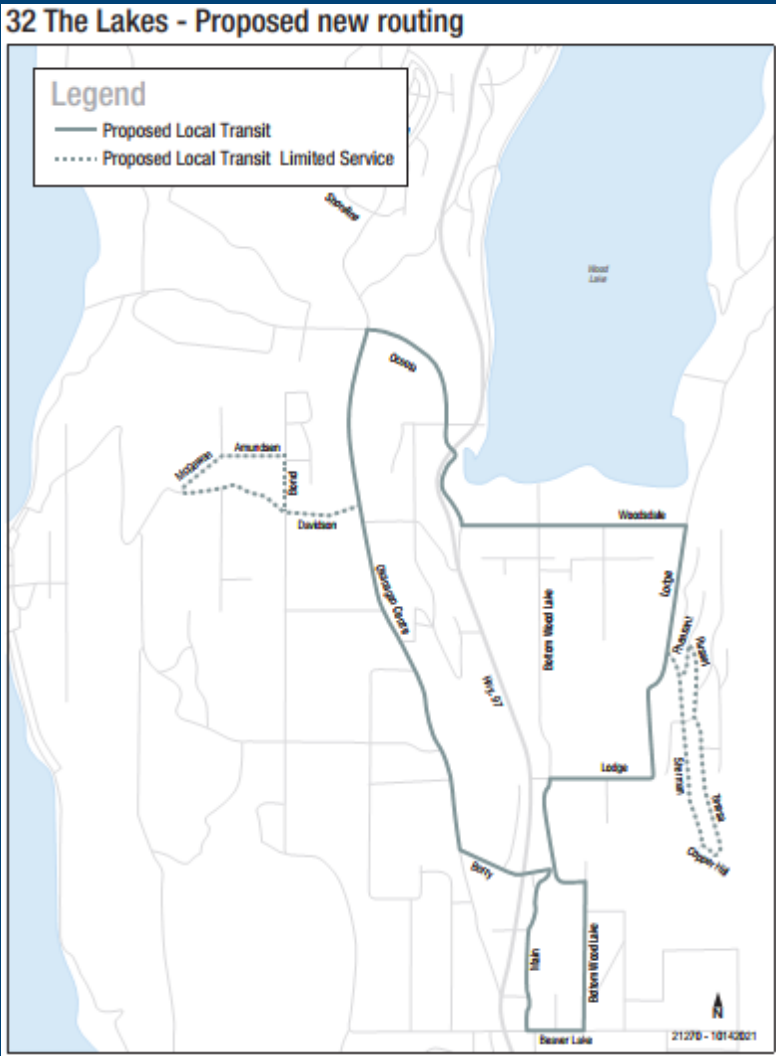
To further improve the local network, additional, limited service has been included to provide service to Davidson Road area as well as Sherman Drive. Public engagement also supported better midday and early evening service frequency from the originally proposed 2 hour frequency. The proposal has seen a modification to include hourly service within those times. Service will remain at 30 minutes as exists now during the regular peak commuter times.

1,200  
Annual service hours

*\*The name of route 32 The Lakes will change after implementation to 32 Lake Country*

Local Transit Network (32) Targeted Service Span and Frequency			
Service Span	Weekdays 6:00am to 12:00am	Saturdays 7:00am to 12:00am	Sundays 8:00am to 12:00am
Peaks	30 min	30 min	45 min
Midday	60 min*	60 min*	120 min
Early Evening (6pm to 8:30pm)	60 min*	60 min*	120 min
Late Evening (8:30pm to 12:00am)	120 min	120 min	N/A

*\*Increased based on public engagement frequency*



# Frequent Network Restructure

*New local and frequent transit network will be able to provide more service area coverage, and provide faster service between Lake Country and Kelowna.*

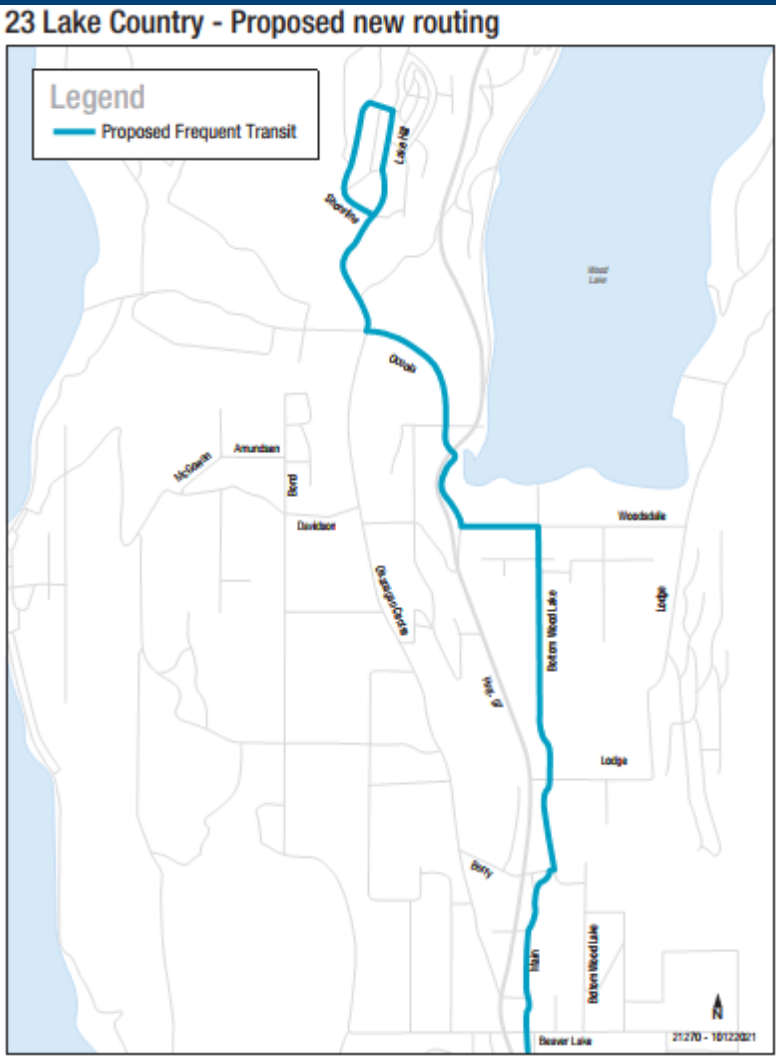
To improve transit in Lake Country, engagement supported the modification of the frequent network, 23 Lake Country. This modification would streamline the route to run directly down Bottom Wood Lake Road and the core of Lake Country.

As this proposal reduces the service coverage of 23 Lake Country (supported by the modification to 32 The Lakes) This service change leads to a surplus of hours to be reallocated into the local transit service.

+500

Annual service hours

Frequent Transit Network (23) Targeted Service Span and Frequency			
Service Span	Weekdays 5:30am to 12:00am	Saturdays 7:00am to 12:00am	Sundays 8:00am to 12:00am
Peaks	20-30 min	30 min	45 min
Midday	30 min	30 min	60 min
Early Evening (6pm to 8:30pm)	30 min	30 min	60 min
Late Evening (8:30pm to 12:00am)	60-90 min	60-90 min	60-90 min





## 09 Medium-Term Service Priorities (2 to 4 years)

Priority	Description	Expansion Resources
Restructure Service at Kelowna International Airport	Modify existing 23 Lake Country to remove service from Airport Way, and provide more efficient service by remaining largely on the highway.	Infrastructure Investment
Pursue On-Demand Service design in Lake Country	32 The Lakes to be converted in part to an On-Demand Service.	Cost Neutral
	Total Resources Required	Cost Neutral

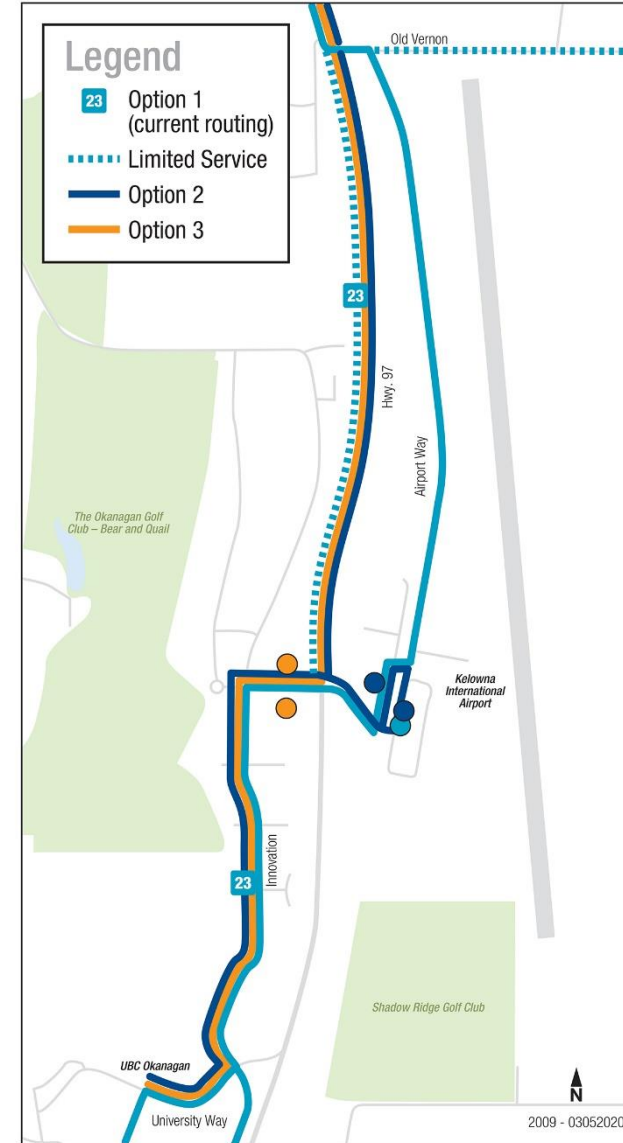
# Airport Service Improvement

## *Modify access of 23 Lake Country to the airport*

To ensure BC Transit and the District of Lake Country are providing the most effective service, options were presented to the public to gauge how airport service works, and if it could be done better. It was determined that service will follow Option 2 on the map to the right. This will remove service from Airport Way, and make 23 Lake Country more direct between the University of British Columbia and Lake Country. It will also improve on-time performance by remaining on the highway for a longer portion of the trip.

To pursue this improvement, infrastructure improvements will have to be made on the Kelowna Airport property to allow for the bus to turn around.

Kelowna International Airport Service Options



# On-Demand Service in Lake Country

*Modify 32 The Lakes to incorporate on-demand technology*

This proposal looks to pursue converting the local transit service in Lake Country to an On-Demand Service. As seen on the image to the right, there are multiple types of on-demand transit service. This proposal would be implemented in phases, beginning with a **Flexible Routing** service design.

On-Demand Service Phasing		
Phase	Service Type	Timeline
1	Convert 32 The Lakes to an On-Demand Service. Provide <b>flexible Routing</b> opportunities by calling into Kelowna Transit up to one day in advance to allow for the bus to deviate up to 1 kilometre off of the fixed route.	2 years
2	Opportunity to work with BC Transit to consider modifying the service to incorporate Digital On Demand technology such as booking a trip using your mobile phone. Service may be modified to <b>Curb-to-Curb Service</b> .	3 years +



## Flexible Routing

- Requires existing fixed-route service
- Requires street network accessible by standard transit vehicles
- Requires layover facilities to recover time and minimize delay
- Zone size is usually smaller than other on-demand formats
- Consider consolidating very low frequency routes in similar directions with a single flexible route



## First/Last Mile Service

- Requires nearby higher-order transit
- Provides a wider catchment area and more spread-out and lower-demand trip generators
- Zones are typically less than 15-20 square kilometers
- Consider in residential or mixed-use areas nearby higher-order transit such as commuter rail or BRT, but beyond a comfortable walking distance



## Shuttle Service

- Requires nearby higher-order transit
- Serves a limited number of trip generators within the zone, with service directed to higher-order transit
- Service is traditionally short distance
- Consider in employment areas nearby higher-order transit such as commuter rail or BRT, but beyond a comfortable walking distance



## Curb-to-Curb Service

- Useful for providing large coverage of low-demand and widely distributed trip generators
- Zones are typically less than 15-20 square kilometers
- Demand in zone is generally too low and inconsistent over the service period to warrant attractive fixed-route transit
- Trips are localized within the zone
- Useful when expanding service into new areas on the urban fringe

# 10 Long-Term Service Priorities (5 to 7 years)

Priority	Description	Expansion Resources
Add new local route	Add additional route to supplement the Local Transit Network in Lake Country.	2,000 service hours, 1 bus
Improve frequency of 23 Lake Country	Add additional trips on 23 Lake Country to increase the span of 15 minute service frequency.	1,200 service hours
Add introductory service to new areas	Demand dependent, evaluate which area(s) could support a new route or an extension of an existing route.	~1,000 service hours to 3,000 service hours and 1 bus
	Total Resources Required	4,200 service hours and 1 bus to 6,200 service hours and 2 buses
	Estimated Local Share of Costs *	250,000\$ to 400,000\$

*\*This cost estimate is based on the share that Lake Country would contribute through their Annual Operating Agreement. Other costs that may be incurred due to system improvements for the Entire Kelowna Regional Transit System may impact the final cost.*



# New Local Transit Route

*An additional local transit route will be added to Lake Country*

As demand grows within Lake Country, a bi-directional loop will not be sufficient. Therefore it is recommended that an additional route is added to provide east and west service separately. This will provide more convenient service that operates more frequently, and less opportunity for on-time performance issues (fewer late buses). Depending on the year of implementation, total service hours may change.

2,000

Annual service  
hours

1

Medium-duty  
vehicle

Proposed Long Term Local Transit Network



## Service to New Areas

*Evaluate next area to provide service to in Lake Country*

As Lake Country grows and the density of neighbourhoods increases, providing service to new areas will be a necessity. The areas outlined on the right are all potential locations to provide additional service\*.

Demand dependent, these areas will be prioritized and presented to Lake County to determine which should be implemented. Service may be provided to these areas with either a new route, or a modification of the local transit within Lake County.

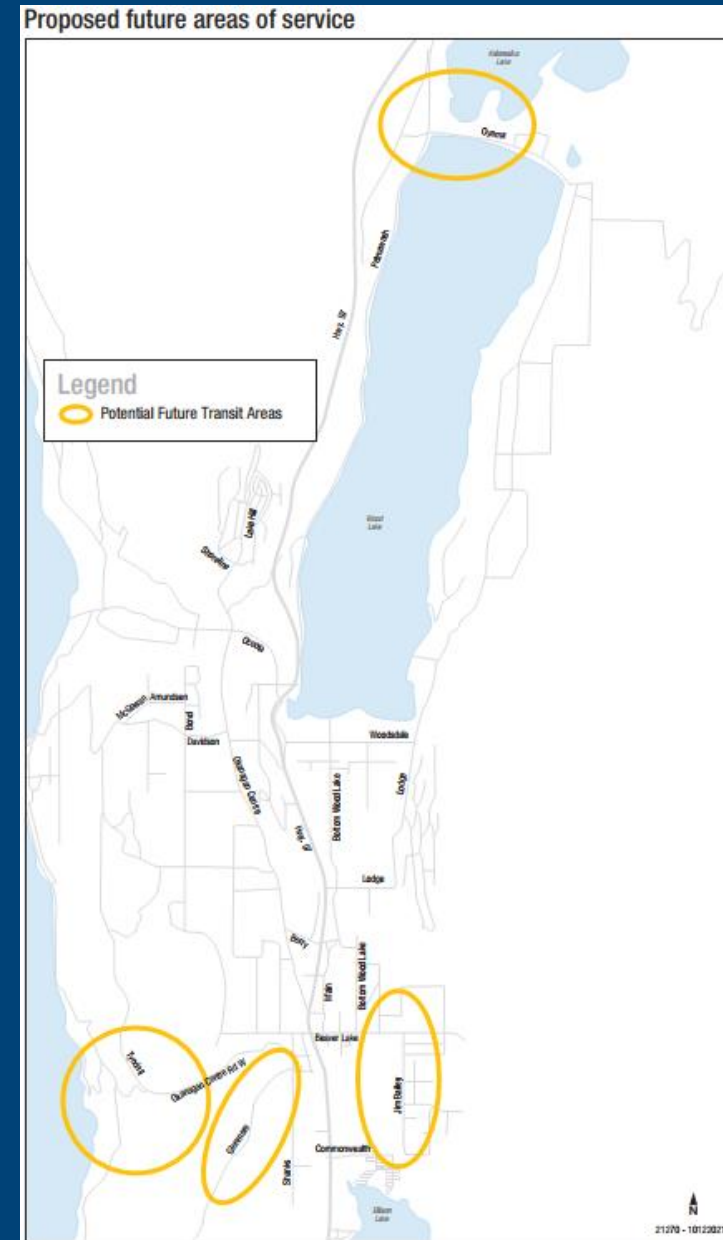
*\*If on-demand service is implemented, these areas will already have service and implementation of fixed-route service can be reviewed again*

~1,000  
to 3,000

Annual service hours

~1

## Medium-duty vehicle



# 11 Infrastructure Priorities

Priority	Description	Resources/Partners
Lake Country Park & Ride	Adding a new park & ride within Lake Country was identified through this process. Potential location includes Winfield.	District of Lake Country, BC Transit
Oceola Transportation Hub	A transportation hub was identified through this process to ensure future transit routes have strong connectivity to other modes of transportation in Lake Country. This would support the additional local transit route.	District of Lake Country, BC Transit
Improve bus stops in Lake Country	Improvements to transit amenities at key bus stops in Lake Country was identified through the public engagement process as a key priority. BC Transit will work with Lake Country and the Ministry of Transportation and Infrastructure to opportunities for improved shelters and lighting.	District of Lake Country, BC Transit, MOTI
Berry Transit Exchange	Improved transit exchange in alignment with additional local transit routes and frequency.	District of Lake Country, BC Transit

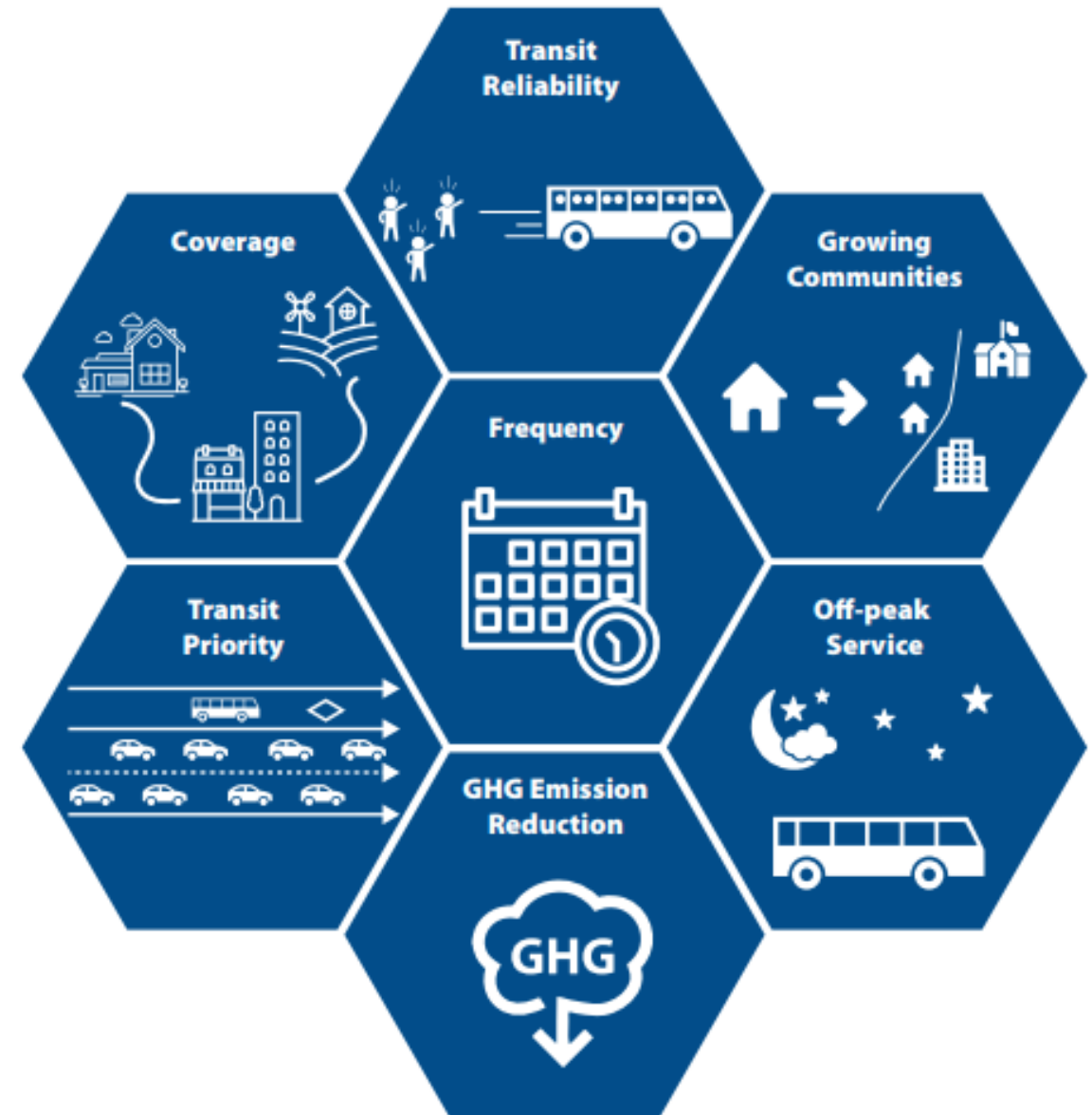
# 12 Moving Forward

## *Monitoring and Implementation*

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 will be integrated into the Three Year Transit Improvement Process (TIP), which is updated on an annual basis. Priorities are subject to shift from year to year based on available resources. Infrastructure improvements will be incorporated into BC Transit's Capital Plan. Prior to implementation of service changes, BC Transit planning staff will work with staff at the District of Lake Country to ensure service improvements appropriately reflect local needs, goals and objectives set by Council. Additional targeted engagement may be conducted to ensure priorities in years two to five of the plan are supported by the public at that time.

Route ridership performance will be assessed using the Service Standards & Performance Guidelines created for Kelowna in 2018.





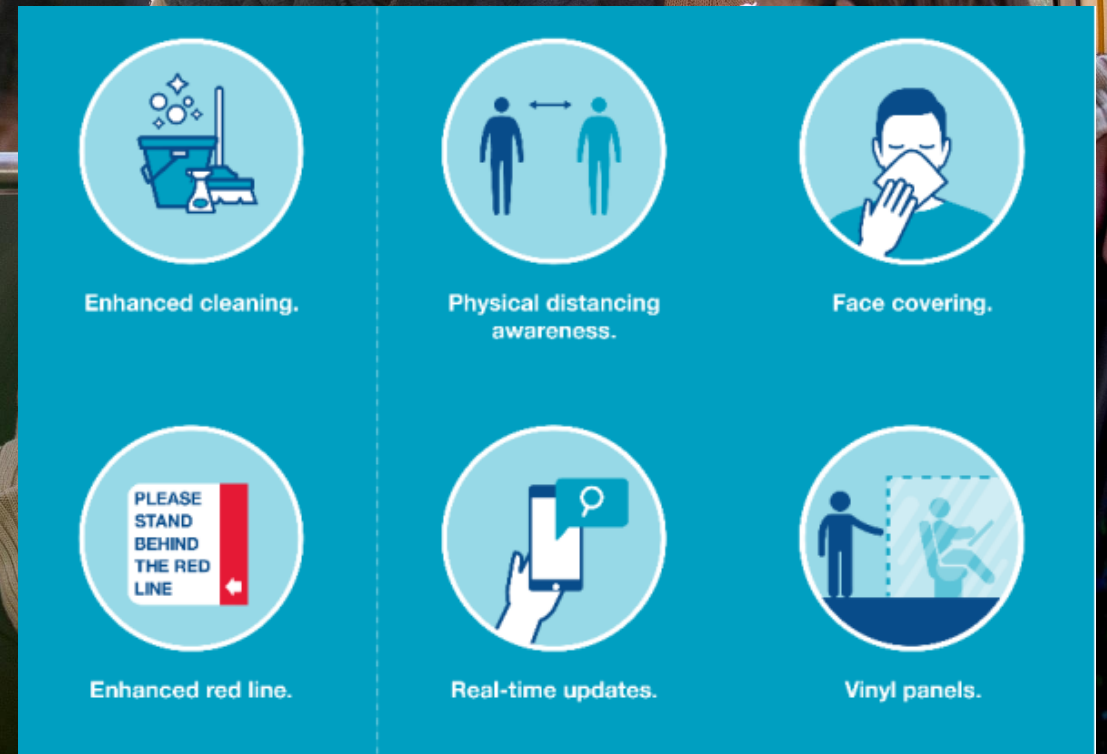
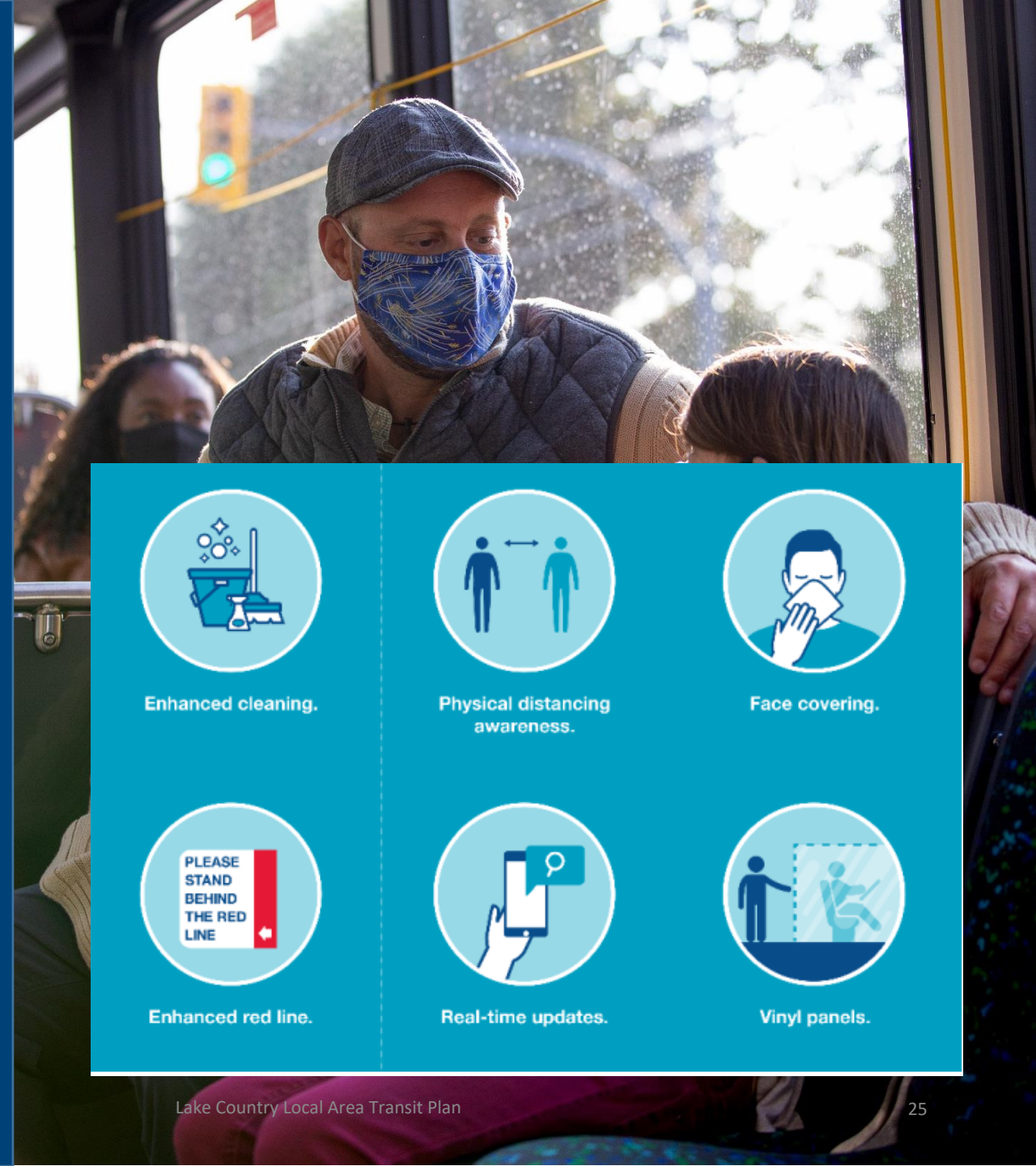
# 13 COVID-19 Response

*BC Transits top priority is the safety of our passengers and operators*

Following the guidance of the Provincial Health Office and WorkSafeBC, and drawing on the best practices of the transit industry worldwide, BC Transit has implemented measures on our buses to respond to COVID-19, and have put a plan together to align with BC's Restart Plan see the strategy and details at <https://bctransit.com/COVID19>.

To support ridership return the Province of British Columbia has provided restart funding to the Local Government sponsors to ensure the continued effective delivery of transit across your transit system.

**Free Transit for Children 12 and Under program** was introduced in September 2021 this aligns with BC Transit's commitment to delivering initiatives to drive new and effective measures to improve your transit experience. The program will help grow young ridership, create life-long transit users and further reduce congestion on our roads.



# 14 Acknowledgments

*Thank you Lake Country*

BC Transit would like to thank the many individuals, community organizers, local government staff, First Nations, and businesses who assisted in this consultation process.

Thank you to the almost 150 members of the public, riders and non-riders alike, who contributed to the plan's development as a key stake-holder, by taking a survey, or submitting written or verbal comment.

Your support in working to better transit in our community is appreciated.

