



Okanagan Gateway Transportation Study

Kelowna Council Presentation

July 13, 2020

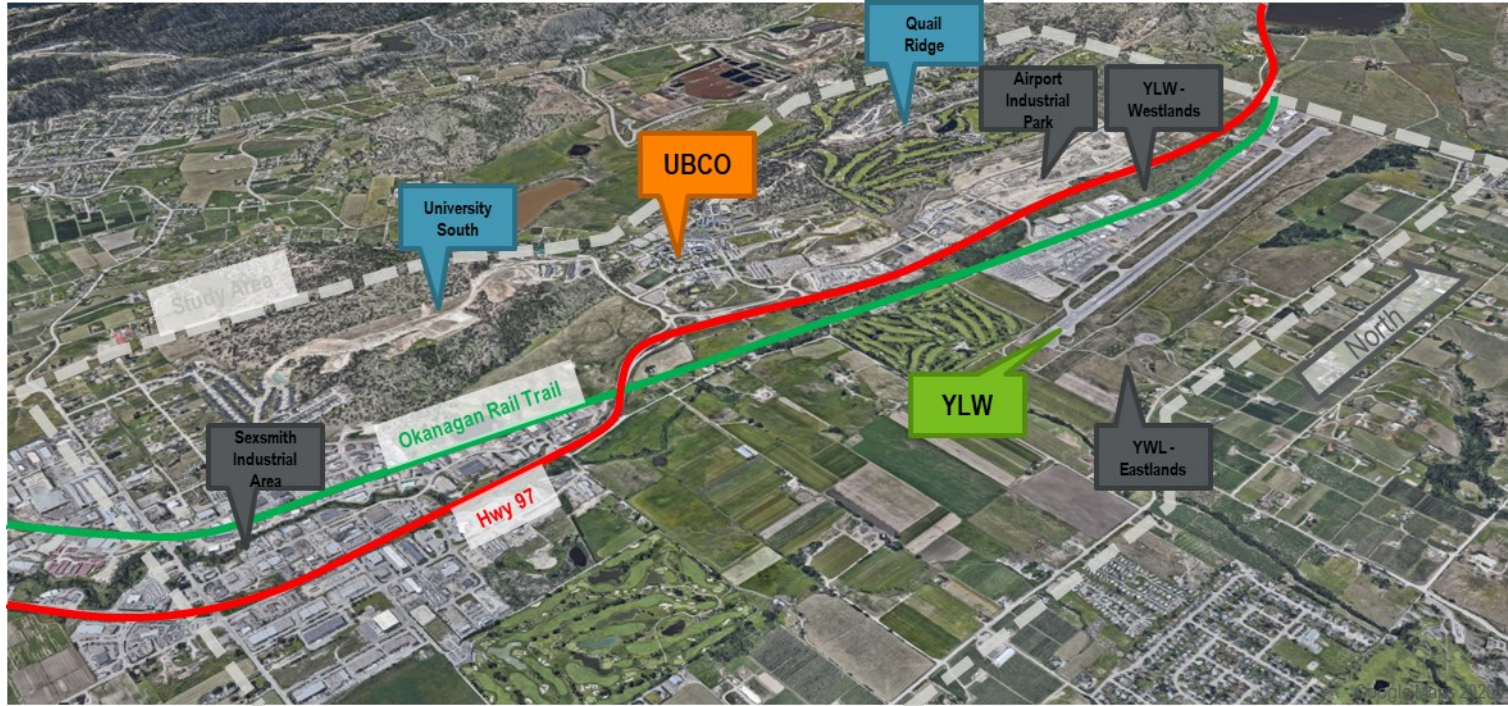


The Okanagan Gateway Transportation Study (OGTS)

- ▶ An overall transportation strategy for an important and growing area.
- ▶ In partnership, the BC Ministry of Transportation and Infrastructure, the City of Kelowna, Kelowna International Airport and the University of British Columbia coordinated efforts to assess future transportation needs.
- ▶ An approach that recognizes shared interest in the Gateway's success, the interconnected nature of transportation and the benefits of coordinated action.

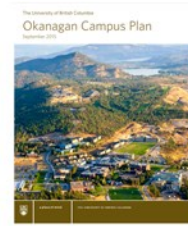


The Okanagan Gateway



The Okanagan Gateway Transportation Study (OGTS)

- ▶ A focused technical study of the future transportation needs of the Okanagan Gateway
- ▶ Considers current and future conditions.
- ▶ Recommends policies, projects and programs for consideration within other City, regional and provincial plans.



**Kelowna Transportation
Master Plan**



**Regional Transportation
Plan**



01 Objectives and Background

02 Travel Patterns

03 Modal Shift

04 Implementation and Future Study

01

Objectives and Background

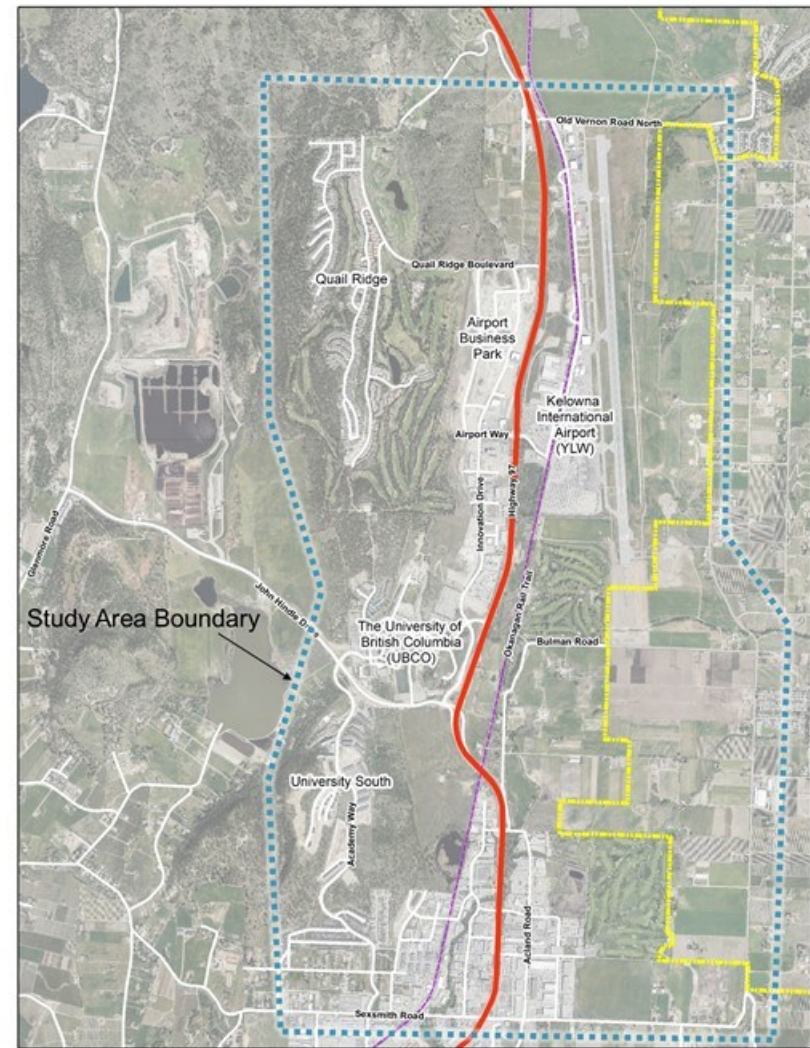
OGTS Partners



The OGTS

- defines future transportation projects, programs and policies to strengthen the economy and quality of life
- furthers the OGTS partners' commitment to climate action
- improves connections to YLW and UBCO

The OGTS supports the vision of YLW, UBCO and surrounding area as a growing, vibrant and connected hub that benefits the whole region.



Functions and Objectives

Core Function	Functional Objectives and Description
Access for people to and from the Okanagan Gateway	<ul style="list-style-type: none">• Provision of capacity for private vehicles will meet the residual demand not accommodated by transit, active modes or through trip reduction strategies.
Business, tourism and industrial access to and from the Okanagan Gateway	<ul style="list-style-type: none">• Strategically-placed highway access is focused on supporting economic growth in the area, with a particular emphasis on moving goods to and from the Gateway.
Moving people and goods through the Okanagan Gateway	<ul style="list-style-type: none">• The network will allow for efficient and generally unimpeded travel through the Gateway on the highway and rail trail.
Moving people within the Okanagan Gateway	<ul style="list-style-type: none">• Given the short nature of internal Gateway trips, walking, cycling and transit should be prioritized for trips between internal Gateway locations on local streets.

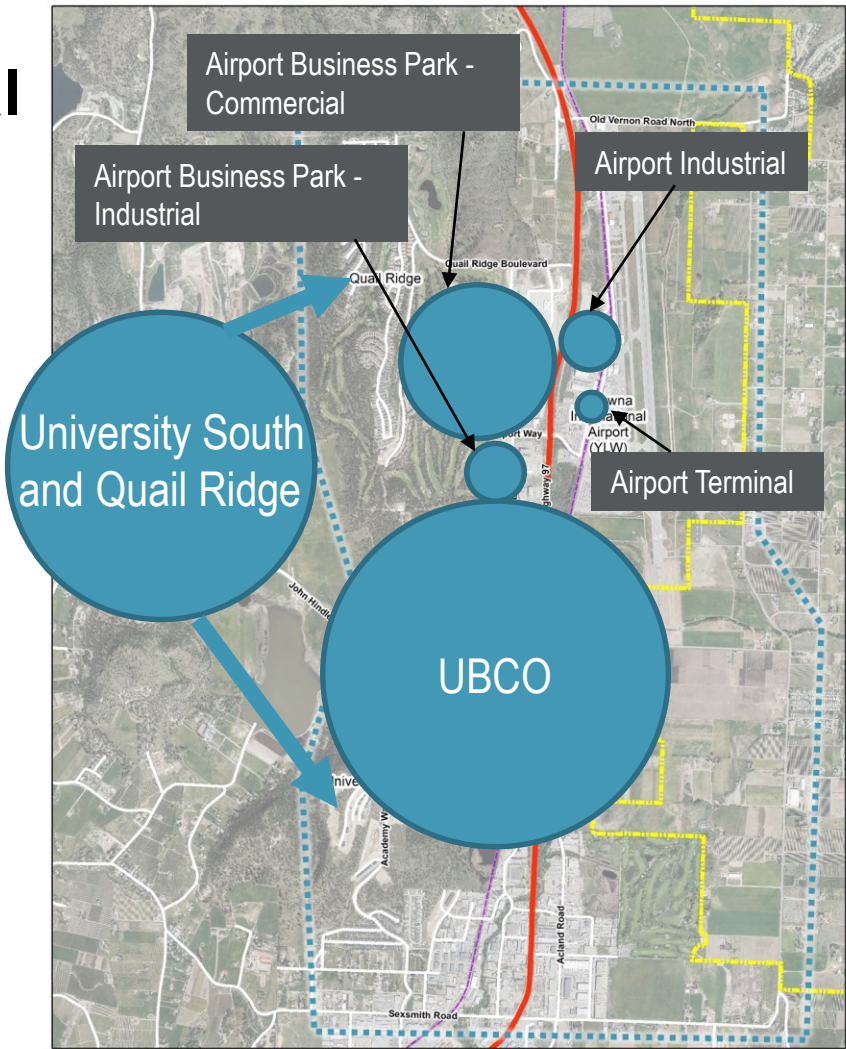
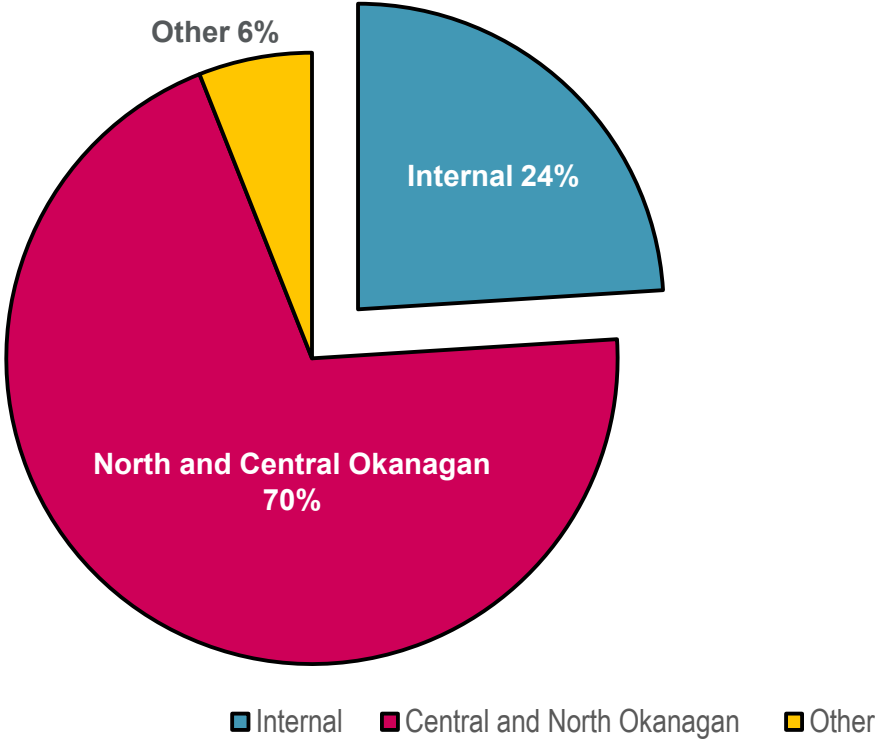
02

Travel Patterns

Existing Travel Patterns – Internal

(Streetlight Data)

Travel to the Gateway

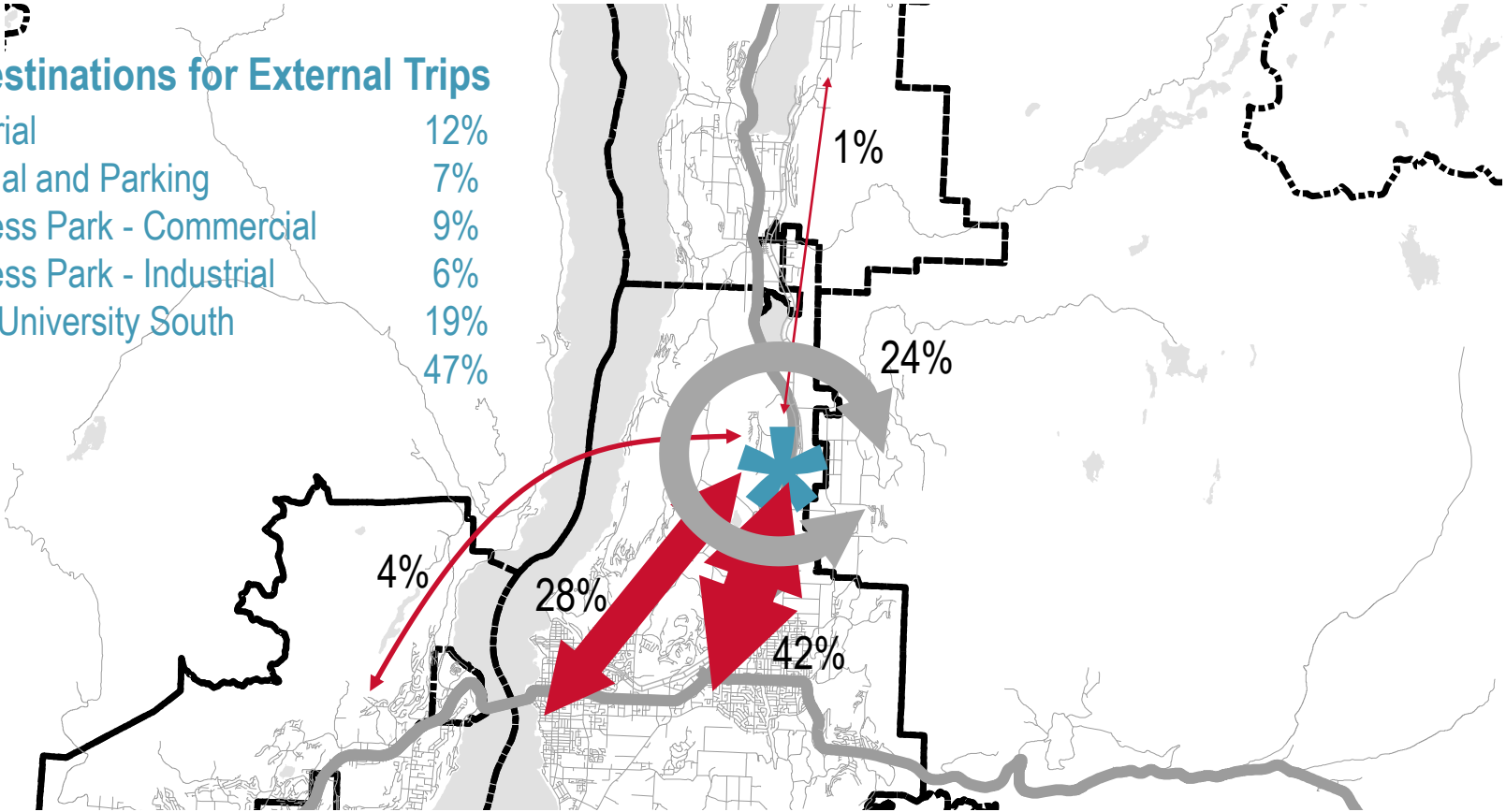


Existing Travel Patterns – External

(Streetlight Data)

Gateway Destinations for External Trips

Airport Industrial	12%
Airport Terminal and Parking	7%
Airport Business Park - Commercial	9%
Airport Business Park - Industrial	6%
Quail Ridge / University South	19%
UBCO	47%

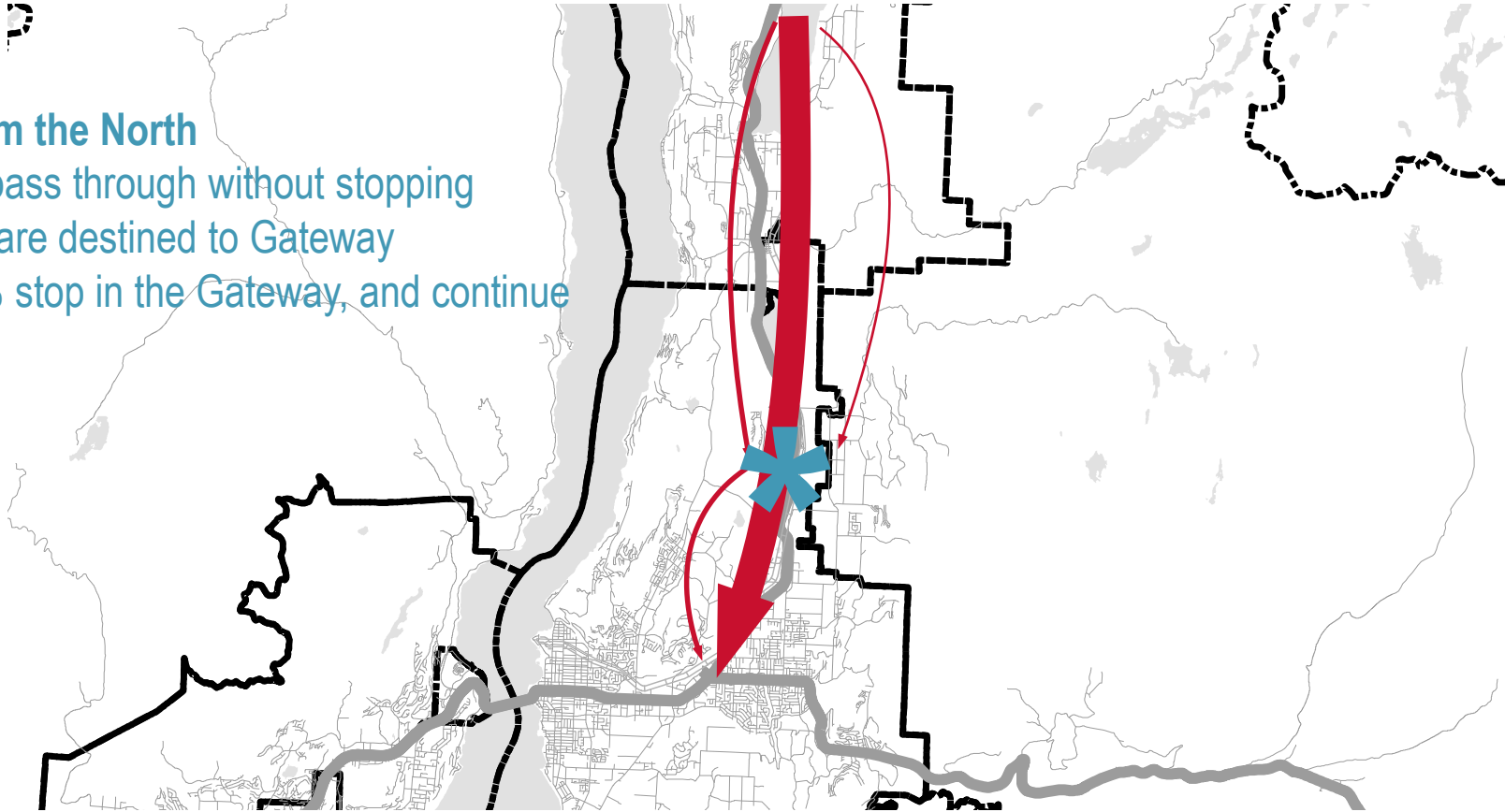


Existing Travel Patterns – From the North

(Streetlight Data)

Trips from the North

- 72% pass through without stopping
- 2.5% are destined to Gateway
- 25.5% stop in the Gateway, and continue



Total Daily Gateway Trips (to/from/through Gateway)

by car - 164,000



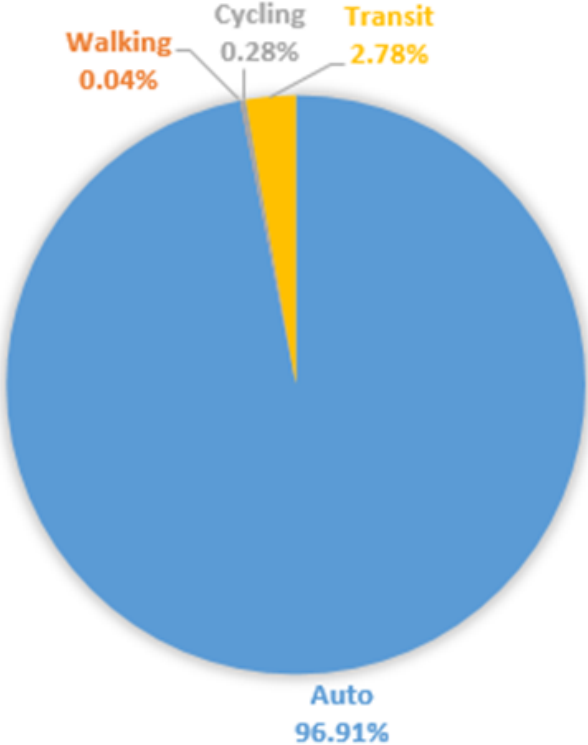
by transit - 4,700



cycling - 50



walking - 50



Future Issues (unless something changes)

- Highway access to YLW
- UBCO Access
- Sexsmith Road and adjacent area
- Internal Gateway Travel
- Other
 - Industrial expansion
 - Active transportation network gaps
 - Network redundancy
 - Transit at airport
 - Minor street access to the highway

03

Modal Shift

Trends and Technology

Potential Effects on Vehicle Demand



Younger generations are less car-dependent than their parents



Job automation in industrial and agricultural fields



Trending towards telecommuting



Goods movement optimization and drones



Online shopping



Shared mobility



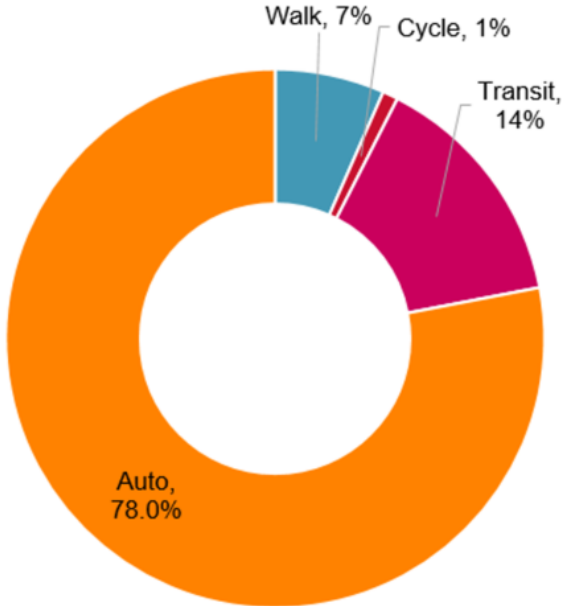
Automated and connected vehicles*



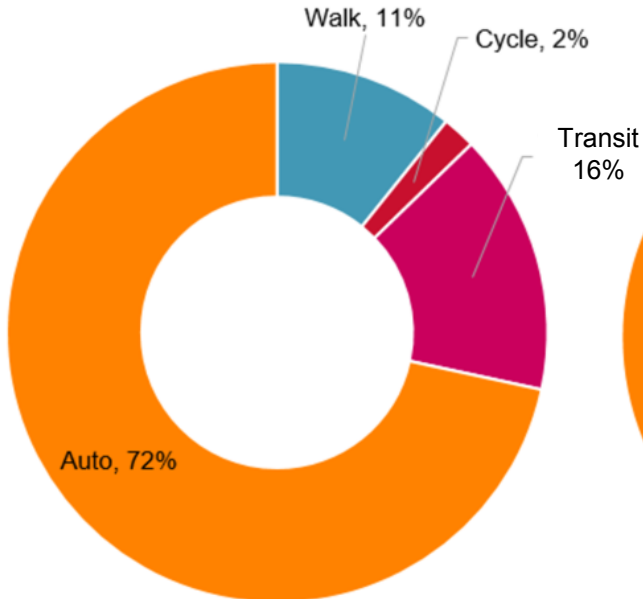
Vehicle electrification

* - Likely to be affected by government regulation

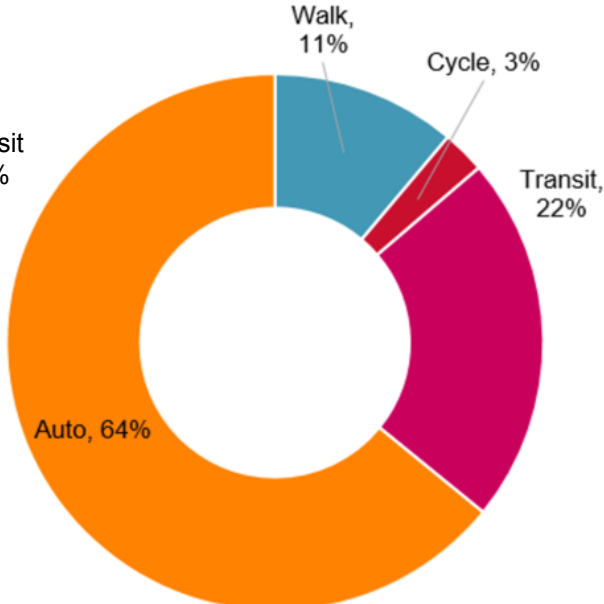
The OGTS Mode Shift Strategy



Existing



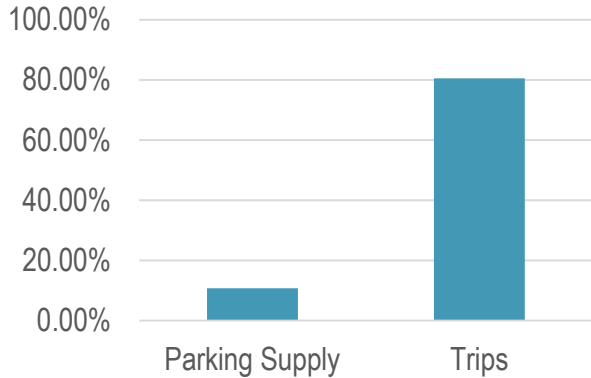
No Mode Shift Strategy



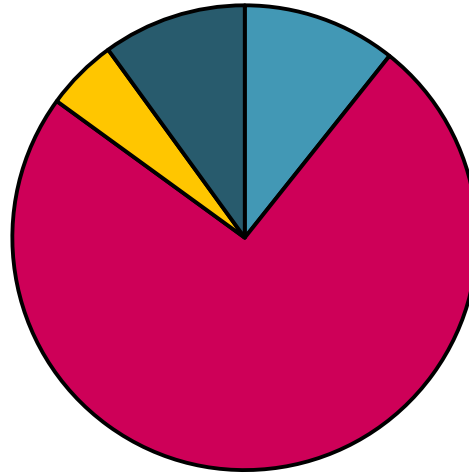
With Mode Shift Strategy

Travel to UBCO

Now to 2040



Allocation of Future Trips



■ Vehicle
 ■ Transit
 ■ Walking
 ■ Cycling

Scenario	Parking Spaces	Trips (AM + PM PHs)				
		Walk	Bike	Transit	Auto	Total
Existing	2,900	545	42	1383	2221	4190
Future (based on EMME Model)	Un-constrained	1134	76	2495	3856	7561
Adjusted Future (based on parking constraint)	3,210	1204	215	3683	2458	7561

Airport Transit

- Airport Daily Trips (all modes) - ~7,000
- Cost to extend RapidBus (or similar service) from UBCO to YLW:
 - Daily half hour service 6:00 am to 9:00 pm (15 hours/day) - \$630,000/year
 - Typical farebox recovery of 36% generates \$224,000 in annual revenue
 - Requires about 250 trips/day to achieve 36% farebox recovery
 - **Transit mode share needs to be approx. 3.6%**
 - Service hours could be extended to align with Kelowna Flightcraft shift change by dropping late evening frequency to hourly

Transit Use is Low at Airports...

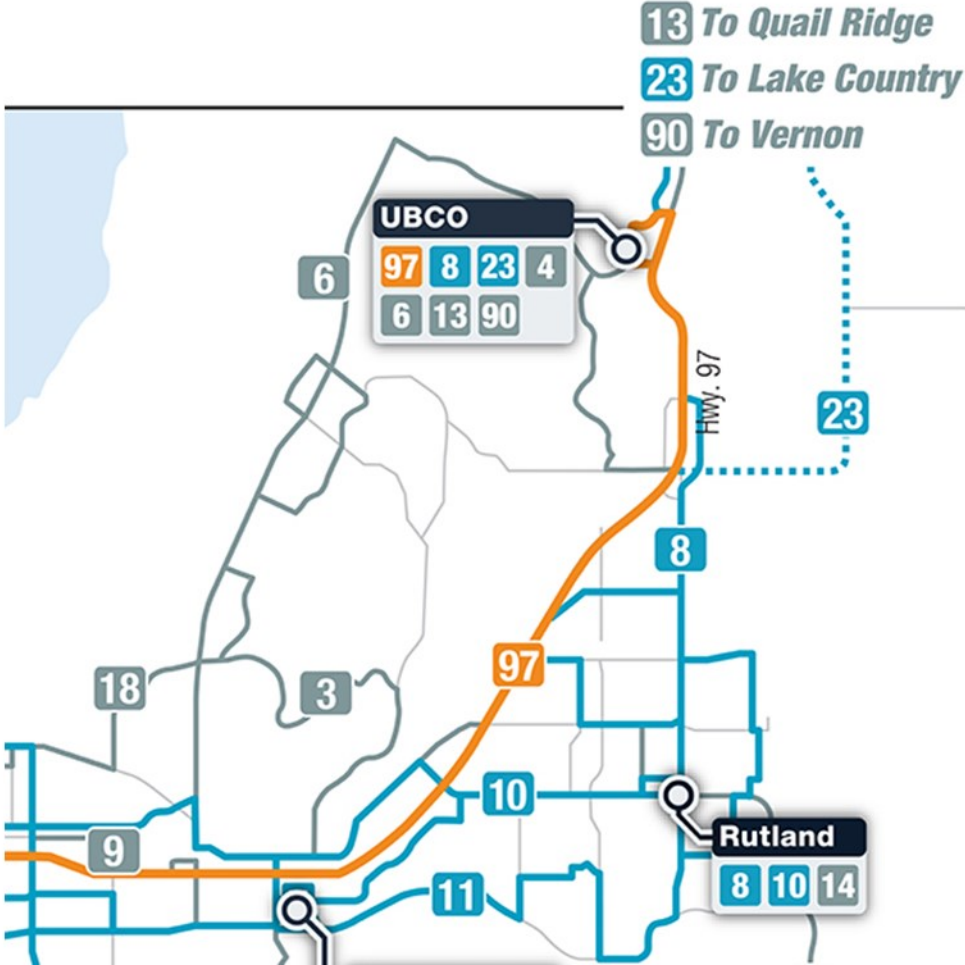
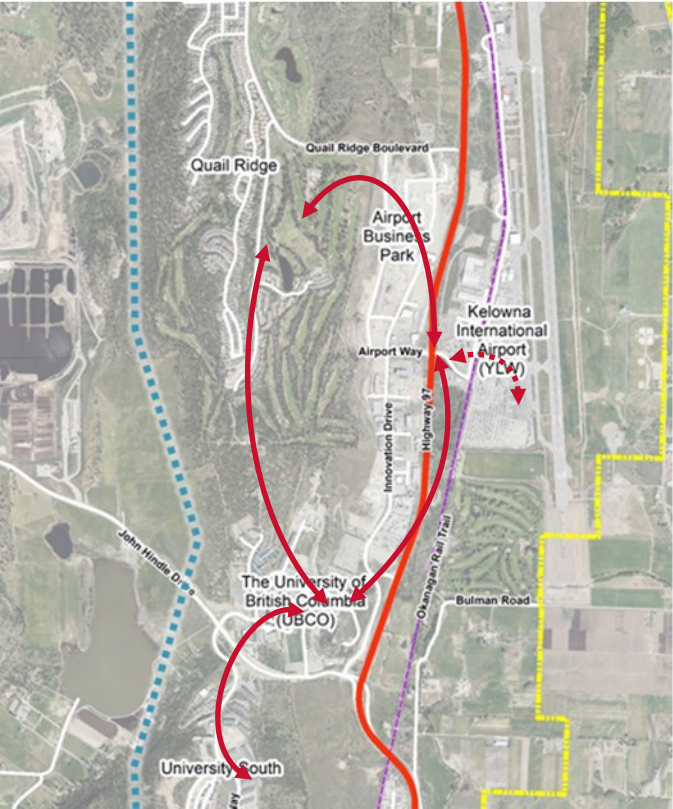
- **Winnipeg:** "Currently only about 2% of trips to the airport use transit"
- **Victoria:** "Only 60 passengers carried on a typical day. Most of trips are employees going to/from work"

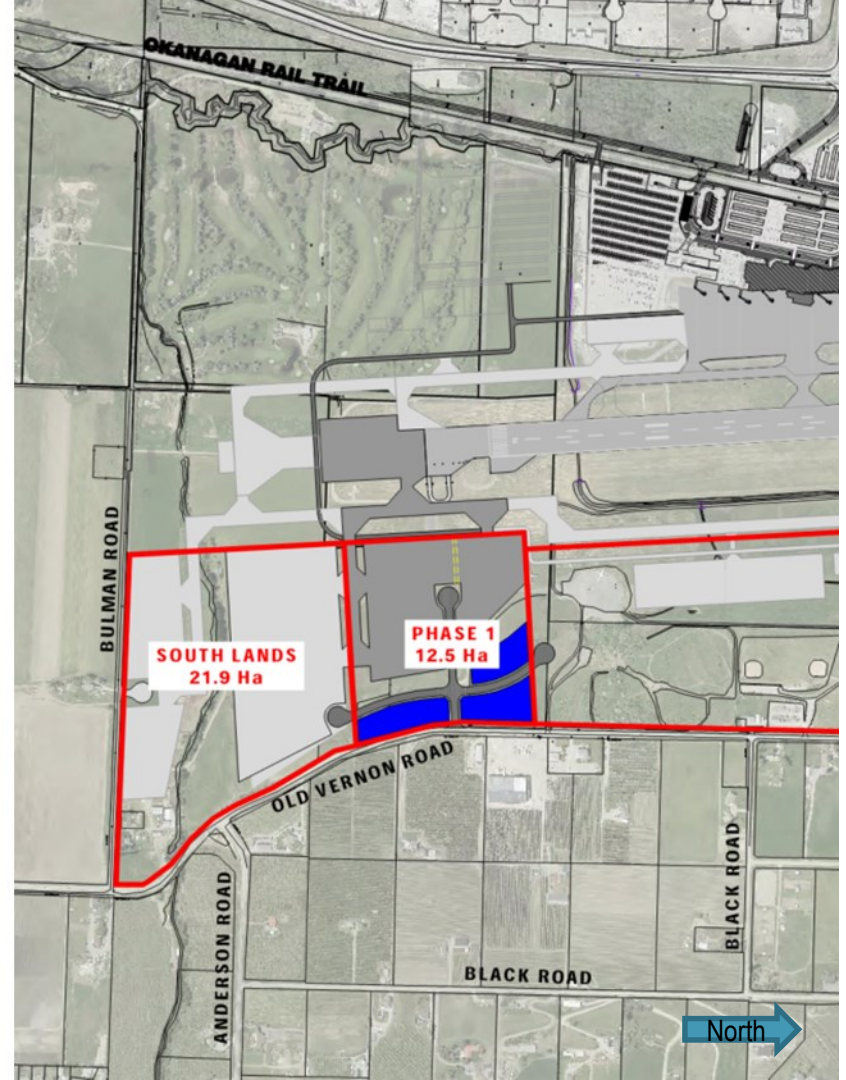
Quail Ridge Connection

- Current connection uses Pine Trail, which generally parallels the Glenmore Ellison Improvement District (GEID) access between Country Club Drive and the Upper Residence parking lot
- Rugged and not lit
- 2019 counts by UBCO – average daily use
 - 195 pedestrians
 - 33 cyclists



Gateway Transit Shuttle





Pedestrian Network Gaps



Airport to hotels –
southwest side



Sexsmith Road –
sidewalk gaps



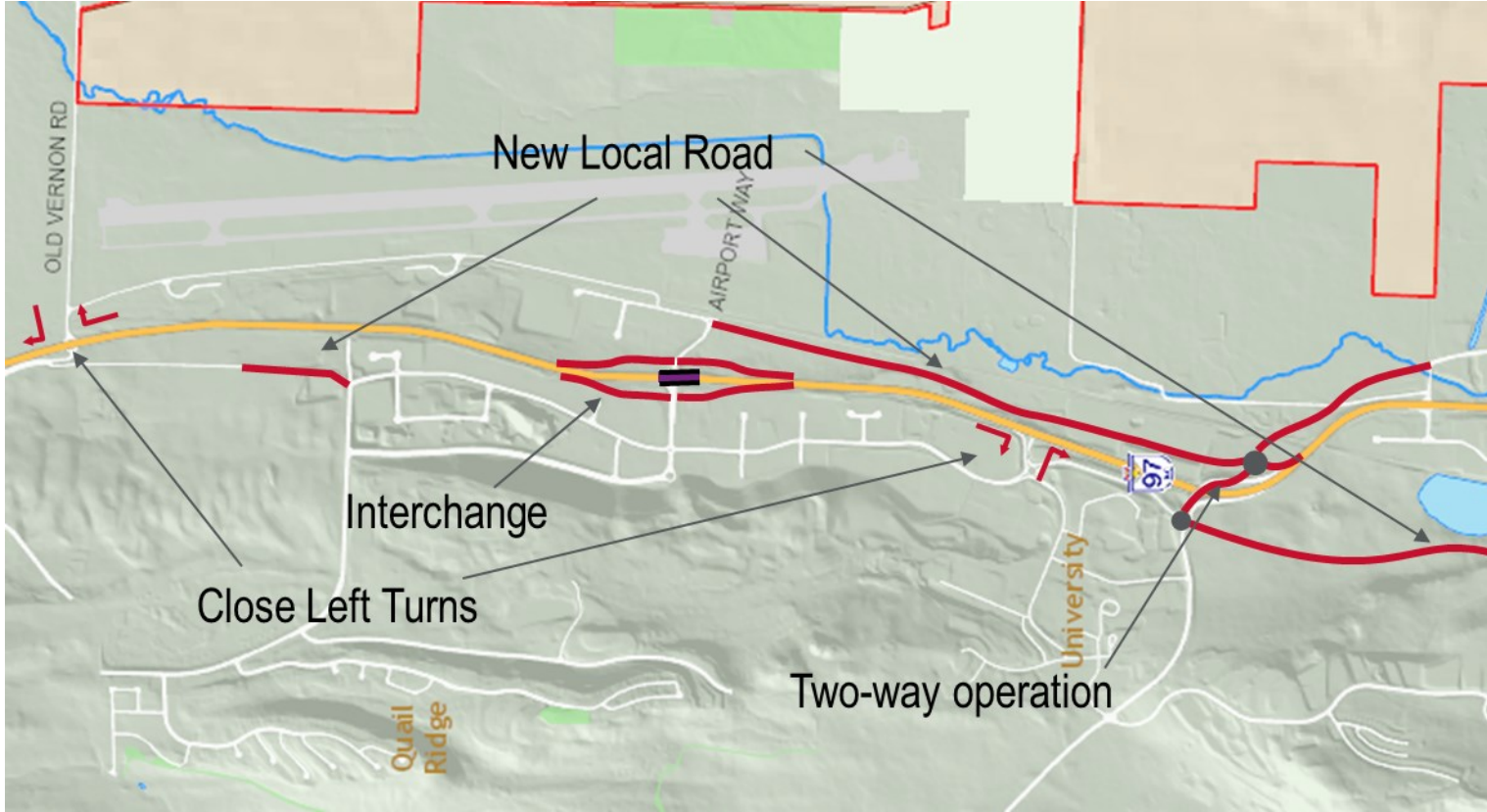
Innovation Drive –
sidewalk gaps

Potential Employer Based Initiatives

- On-site cycling infrastructure and end-of-trip facilities (secure bike storage, showers, change areas, etc.);
- Employee programs and incentives to coordinate shift times to align with transit service;
- Incentives to use transit or cycle, such as transit pass subsidies or fun programs such as bike to work week; and,
- Carpool incentives such as reduced parking costs or premium parking spaces.

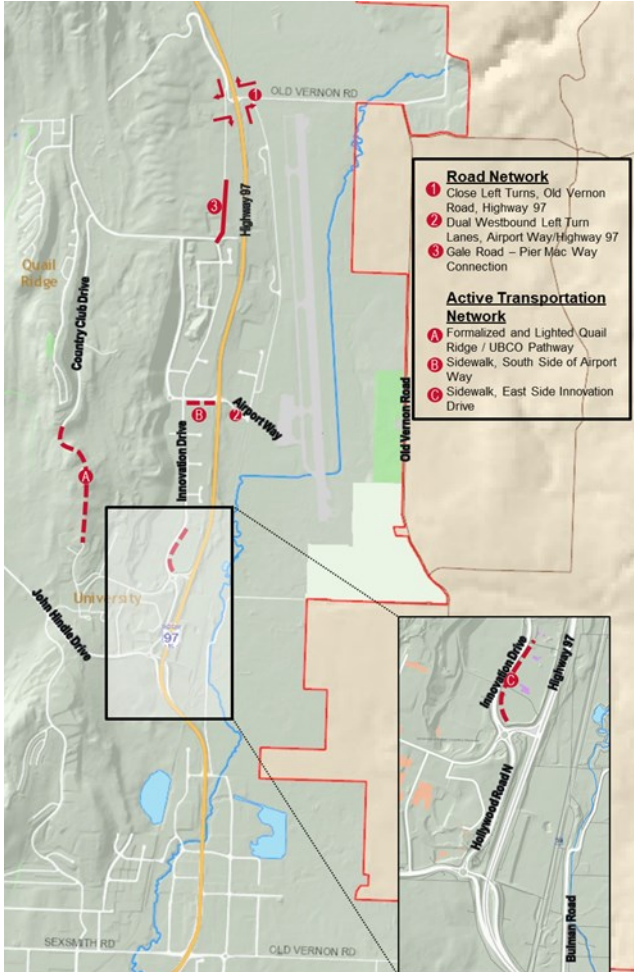
04 **Implementation and Future Study**

Road and Highway Network

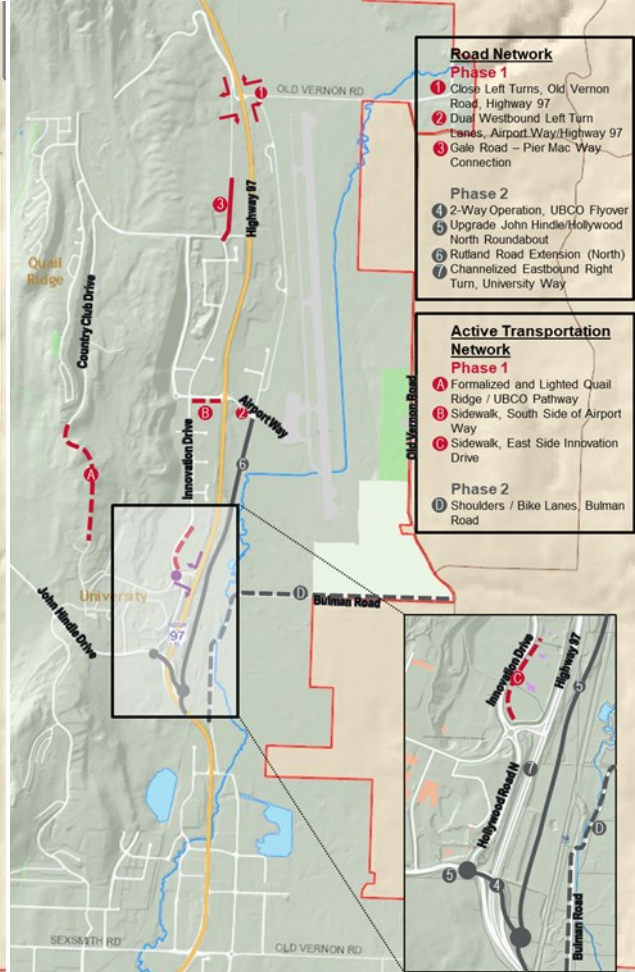


Implementation

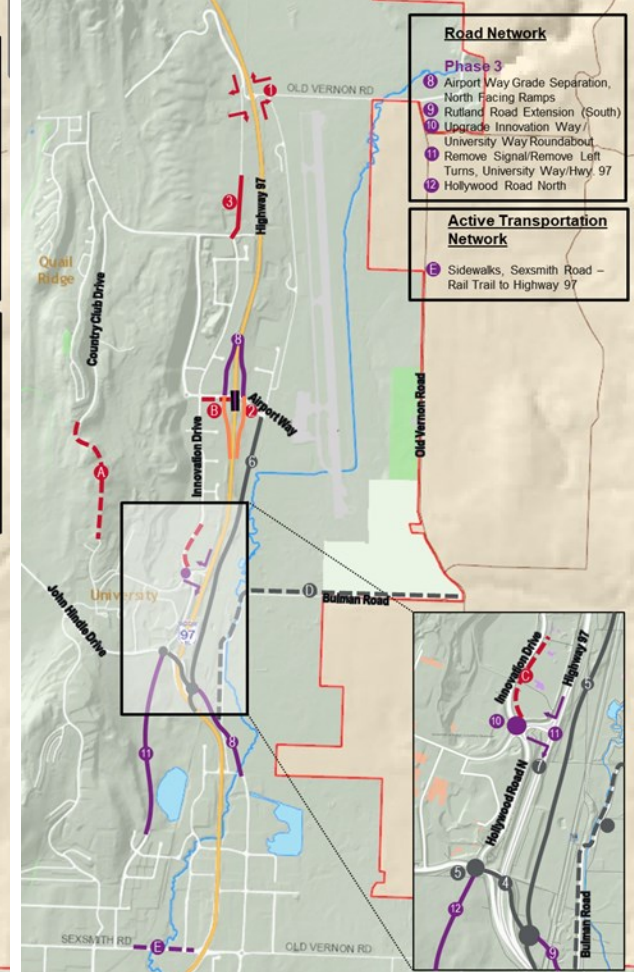
- Phased approach that allows investment to be spread over the full horizon of the OGTS
- Phasing Assumptions
 - Phase 1 – within 5 years
 - Phase 2 – 5 to 10 years
 - Phase 3 – 10 to 15 years
 - Phase 4 – beyond 15 years
- Priorities will change over time; implementation should be adaptable to take advantage of opportunities (eg., funding)
- OGTS is a conceptual plan; further detailed planning and engineering refinement is required to optimize concepts.



Phase 1



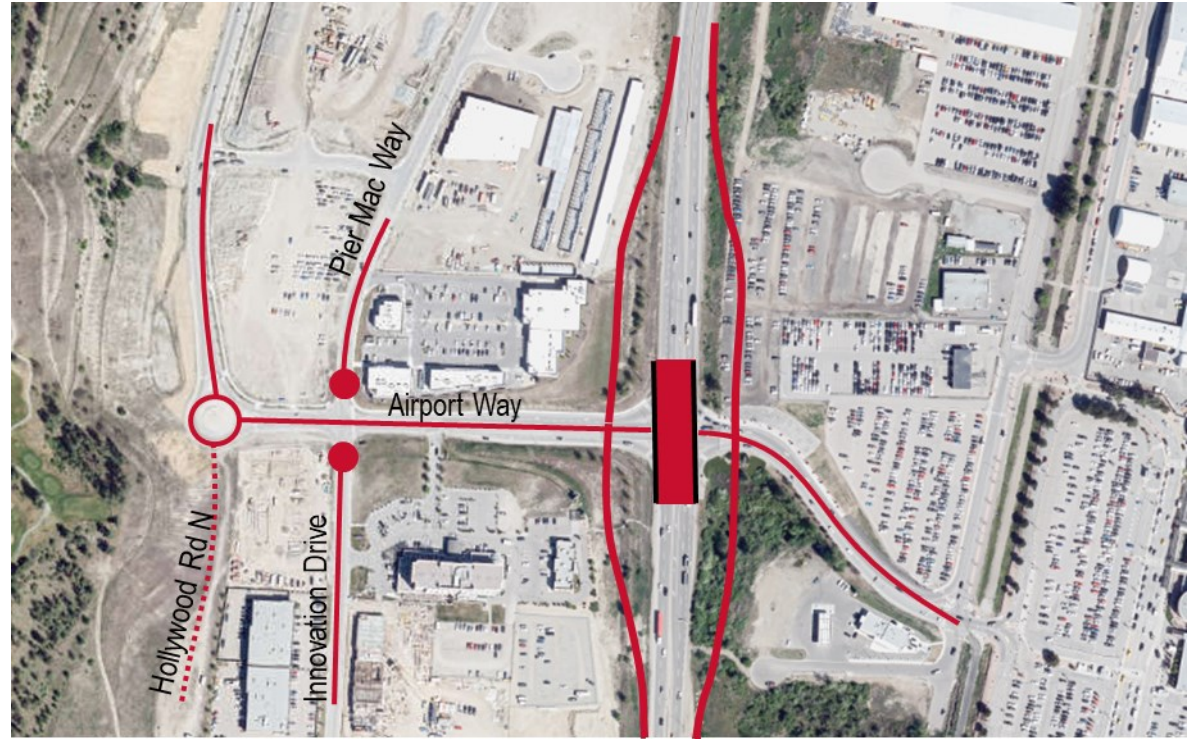
Phase 2



Phase 3

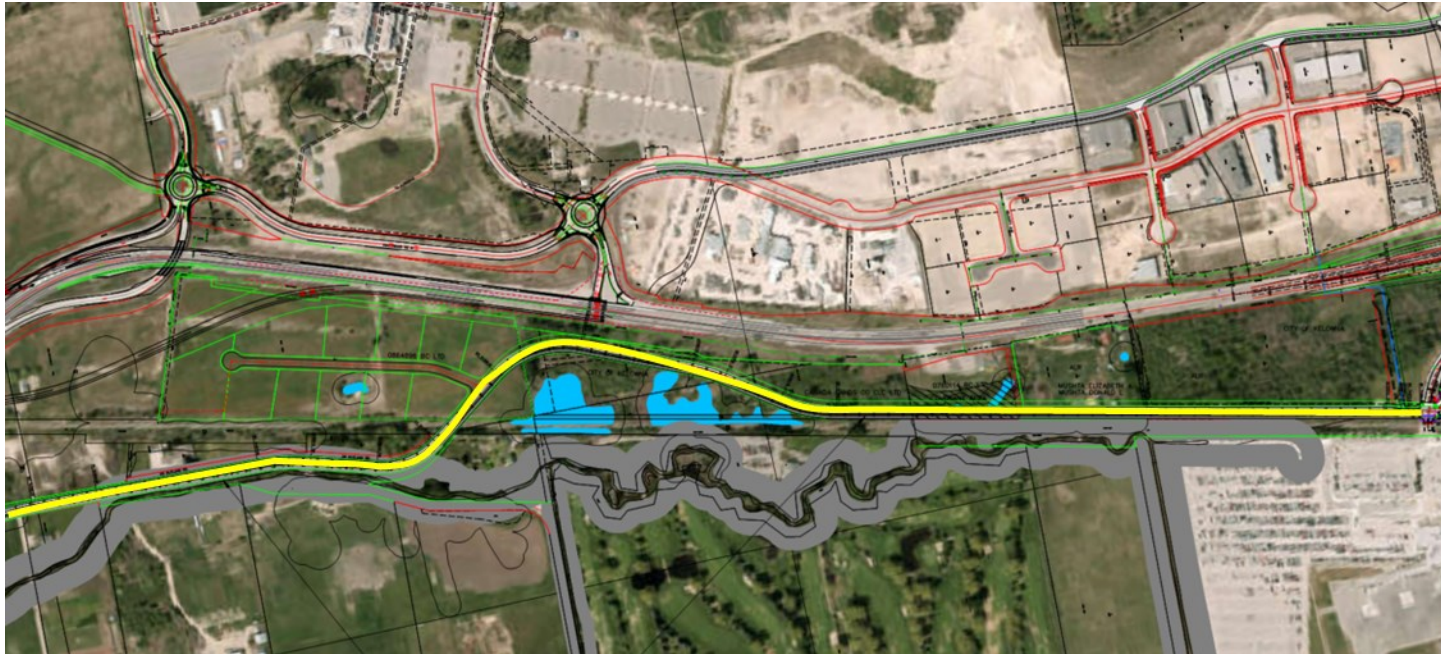
Future Engineering Refinement – Airport Way Interchange

- Previous versions required Hollywood North Extension, closure of Innovation Way
- Through design and engineering, optimize interchange and local road network connections



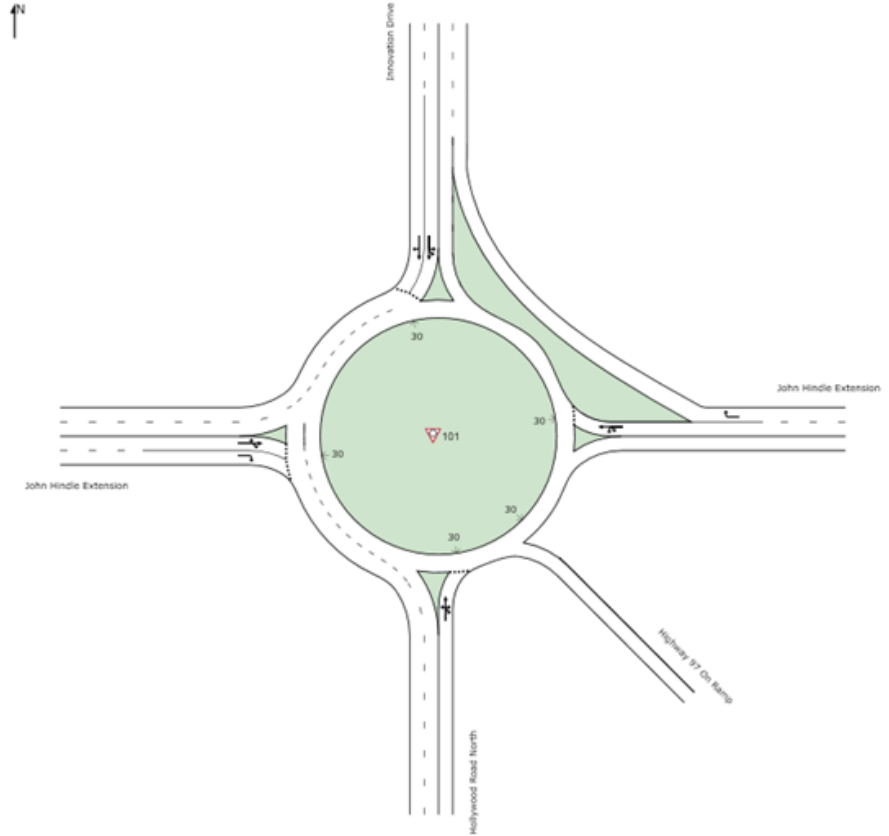
Future Engineering Refinement – Rutland Road Extension

- Previous alignments impacted wetlands, Okanagan Rail Trail
- Opportunity to reduce impact by routing through YLW-owned lands



Future Engineering Refinement – John Hindle Drive Extension

- Roadway geometry associated with UBCO Flyover conversion to two-way traffic
- Detailed traffic operations assessments on roundabouts on both sides of Highway 97
- Detailed assessment of Highway 97 exit to roundabout on east side



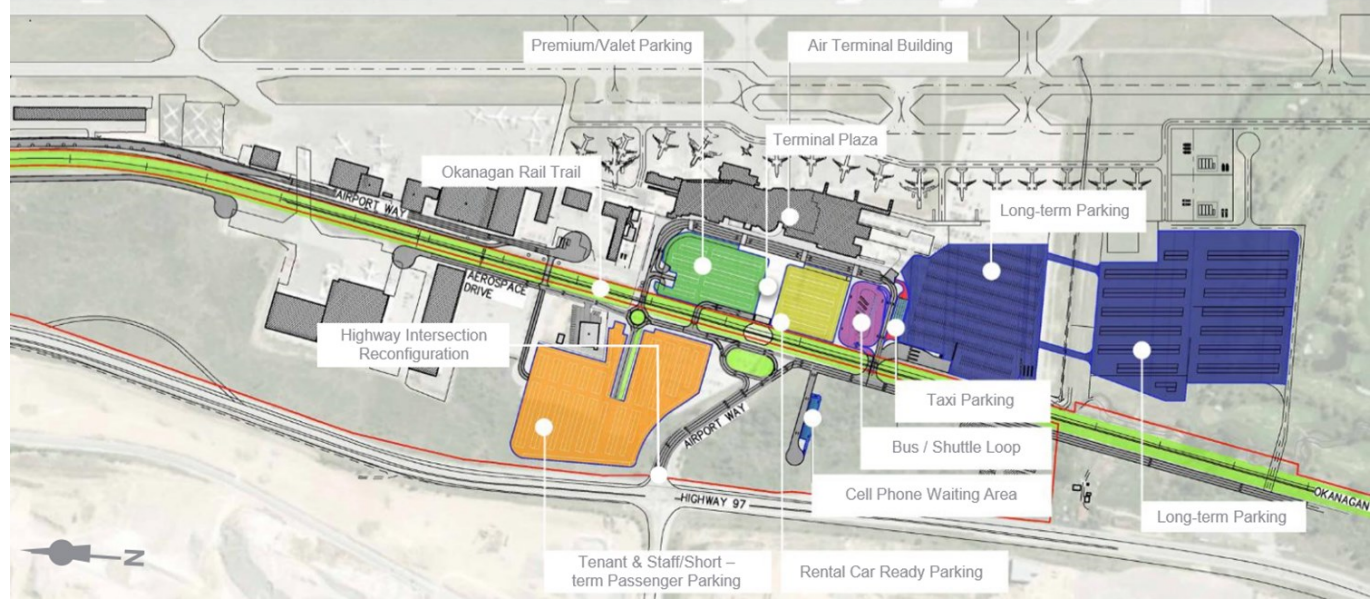
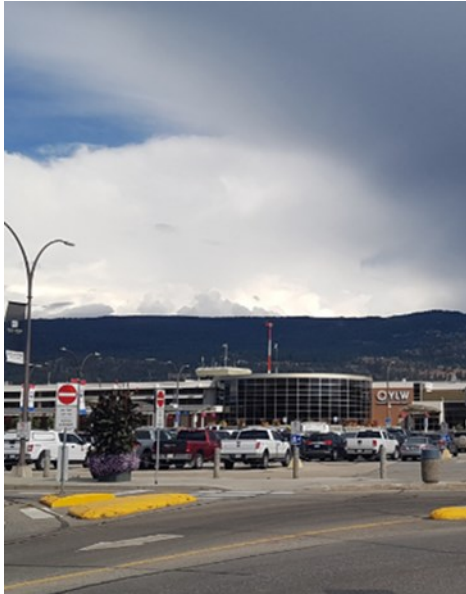
Future Engineering Refinement – UBCO Transit

- Significant service planning update
- Revenue and cost recovery assessments (eg., UPass effects)
- Gateway shuttle



Future Engineering Refinement – Airport Transit

- Strategy to build to 3-4% transit mode split
- Service planning
- Employer coordination
- East airport industrial lands





THE UNIVERSITY OF BRITISH COLUMBIA

Thank you.

Questions?