

Bridge River Capital Projects: Bridge River Access and Accommodation Study

Lillooet, Virtual Open House – January 2024



Winter 2024 Virtual Open House

Bridge River Access & Accommodation Study

BC Hydro Bridge River Capital Projects

January 2024

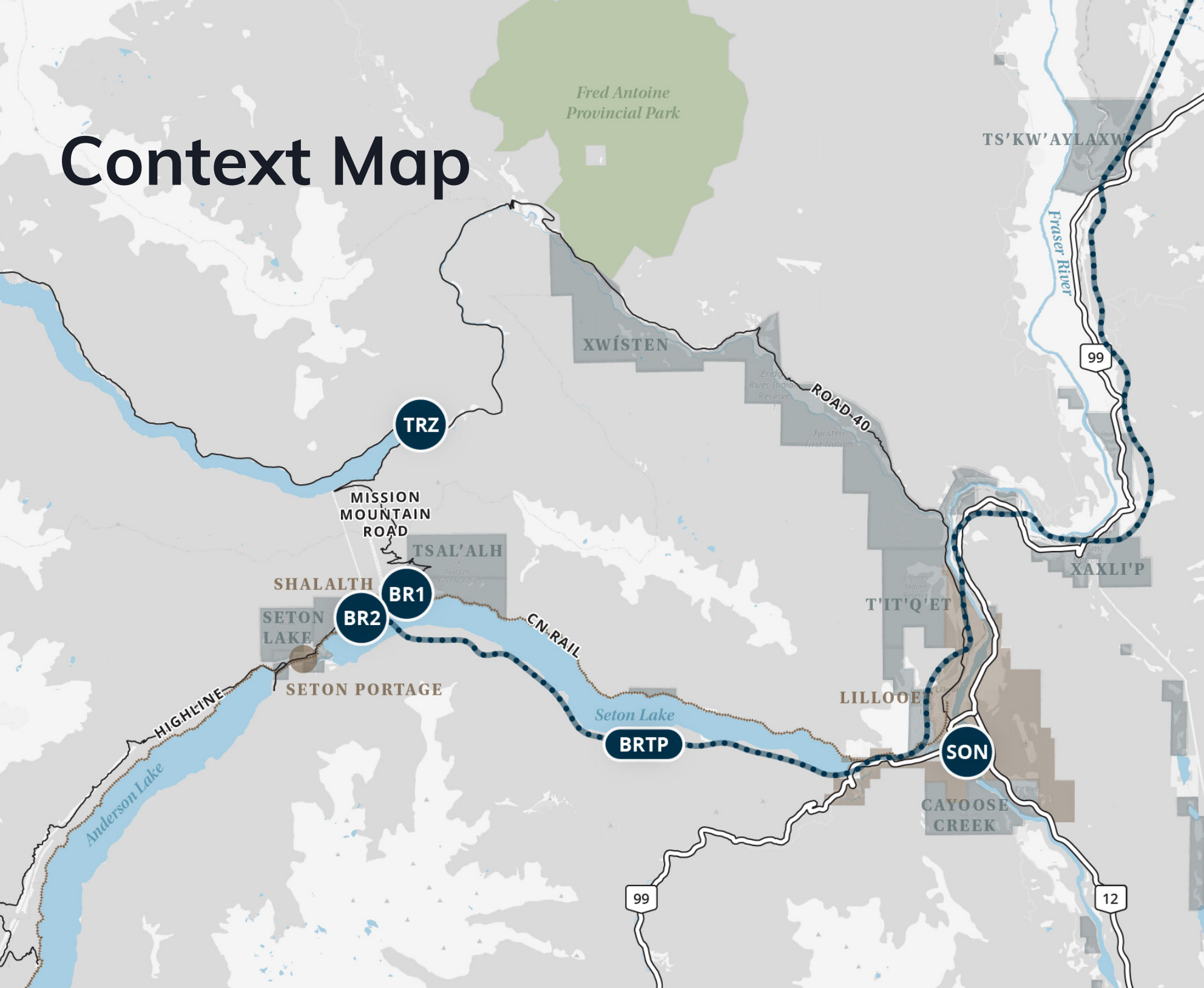


Agenda

- 1 Study Overview
- 2 Regional Importance
- 3 Engagement Summary
- 4 Structured Decision Making
- 5 Additional Recommendations
- 6 Community Benefits
- 7 Questions

1 Study Overview

Context Map



Legend

Lands & Transportation

-  First Nations Reserves
-  Communities
-  Provincial Parks
-  Waterbodies
-  Provincial Highway
-  Regional Roadway
-  Railway

BC Hydro Facilities

-  Terzaghi Dam
-  Bridge River Powerhouse 1
-  Bridge River Powerhouse 2
-  Bridge River Transmission Project
-  Seton Powerhouse

How Far Along is the Study?

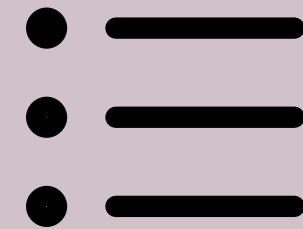
- We are in the **evaluation stage**



Reviewing what we heard during Phase 1 Engagement

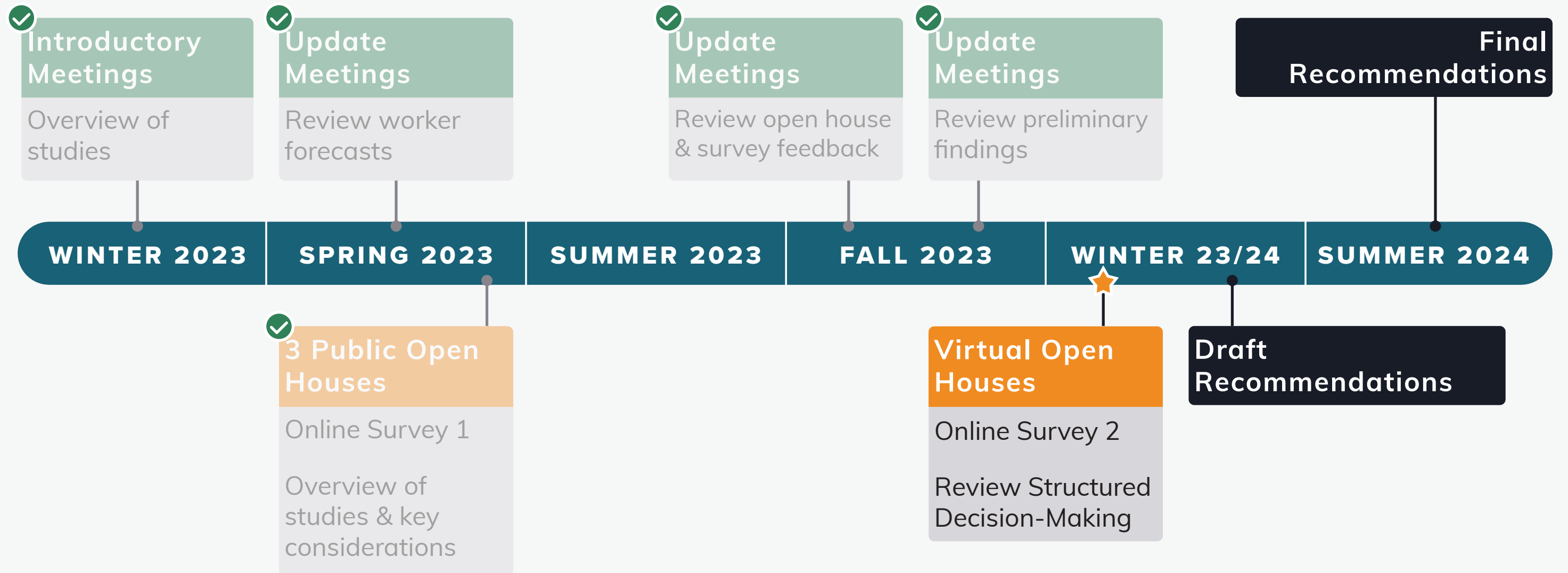


Creating evaluation criteria (objectives and measures)



Shortlisting potential options for site access and accommodations

Project Timeline

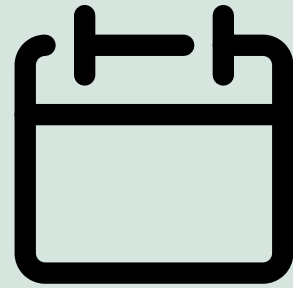


2 Regional Importance

Need for the Study



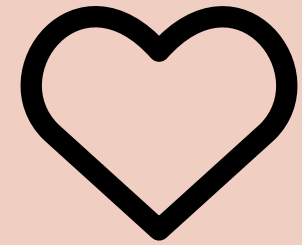
High workforce
needs in remote
area



Risks related to
schedules (e.g.,
flow conditions,
harsh weather)

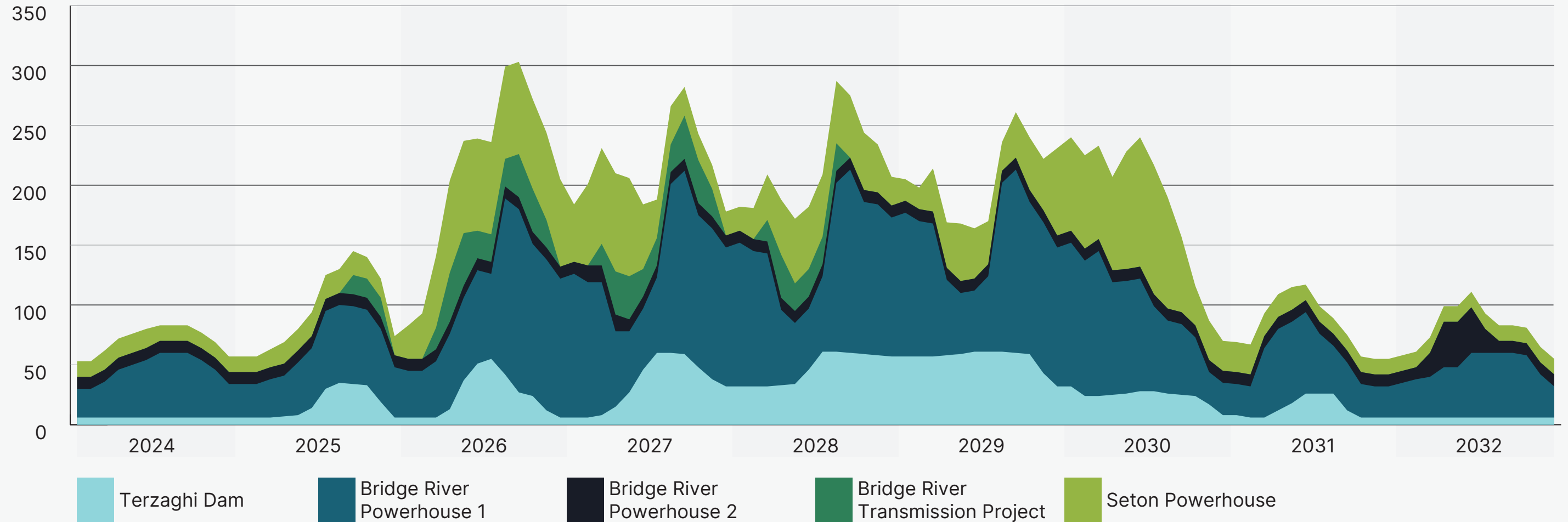


Challenging area
for travel



Potential socio-
economic impacts

Cumulative Regional Worker Forecast, 2024-2032



Worker forecast numbers include regular maintenance and operations personnel, as well as workers for capital projects in the region. All data is provided on an "as is" basis. BC Hydro makes no representation or warranty as to the accuracy, completeness, timeliness, merchantability or fitness for a particular purpose of any data provided by BC Hydro. The data may be outdated or inaccurate and should be used for presentational purposes only.

3 Engagement Summary

Phase 1 Engagement

May - July 2023



Phase 1 Engagement Activities

**St'át'imc
Nation**

Consultation +
Engagement



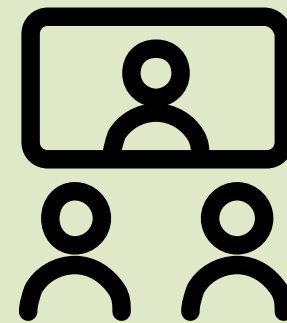
31

Stakeholder
Meetings & Calls

71
Survey Responses

35

People @ Lillooet
Open House



29

People @ Virtual
Open House

What We Heard - Key Themes



Transportation



Accommodations



Social Impacts



Economic
Development



Infrastructure
Impacts

Phase 2 Engagement

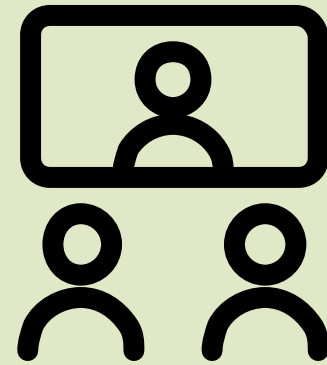
September - February 2024



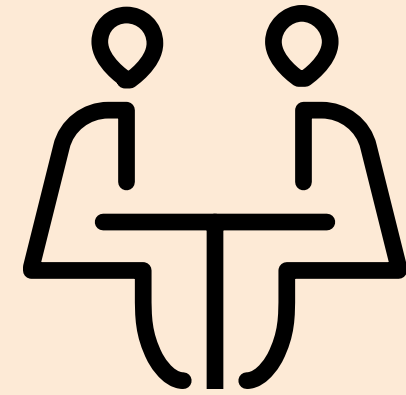
Phase 2 Engagement Activities



**Stakeholder
Meetings**



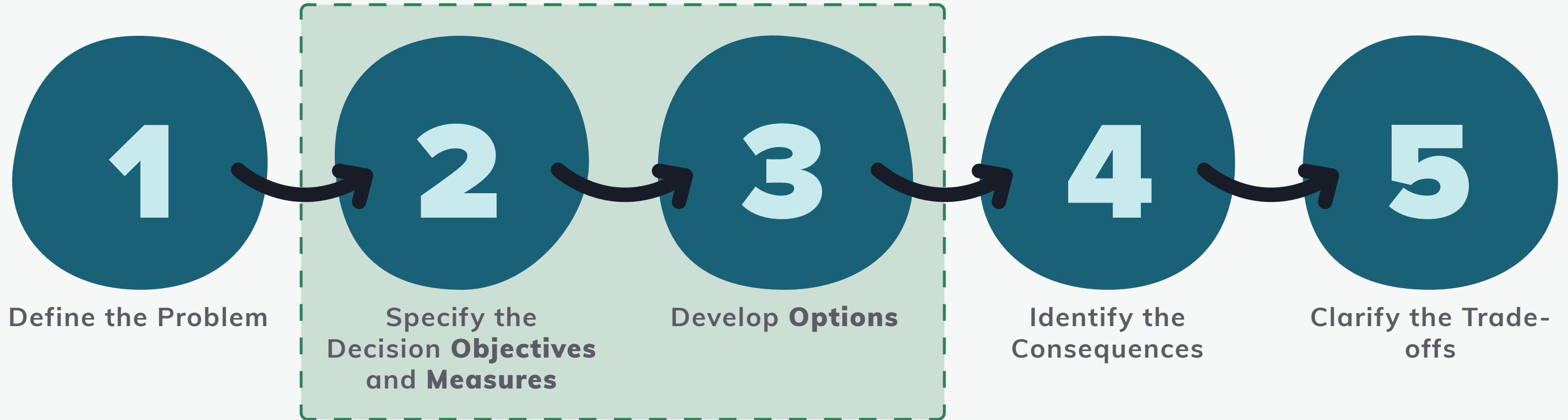
**Virtual Open
Houses**



**St'át'imc
Meetings**

4 Structured Decision Making

Structured Decision Making (SDM) Framework



Structured Decision Making (SDM) Definitions

options

- Potential solutions to the defined problem

objectives

- Guiding principles and values
- Used to evaluate each option and compare their viability and merits
- Key decision drivers
- Represent end project goals rather than solutions

measures

- Specific indicators used to measure the objectives
- Describe trade-offs between options

1 Define the Problem

Defining the Problems

1. Where will workers stay for each project?
2. How will workers, equipment, and material deliveries access accommodation locations and work sites?
3. Which accommodation type(s) will be used to house workers?

Defining the Problems

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SDM 1
WHERE TO STAY

SDM 2
HOW TO STAY

**+ ADDITIONAL
RECOMMENDATIONS**

2 Specify the Decision Objectives and Measures

Informed By Technical Data

- Historical road closure and accident data
- Terrain hazard assessment
- Site visit observations
- Travel time estimates
- Potential spread of invasive species
- Potential impact to wildlife corridors
- Project costs
- Vehicle operating and maintenance costs
- Peak workforce estimates
- Capacity of bus, rail, and boat transportation
- Union agreements
- Background reports and news articles

Informed By Engagement

- Conversations and meetings with BC Hydro, SLRD, St'át'imc representatives, RCMP, Interior Health, District of Lillooet, and Lillooet and Seton Portage Chambers of Commerce
- Public interest in how businesses can benefit from increased population
- Public concern about businesses' ability to adapt to changes in demand as projects ramp up and down
- Input from Lillooet Regional Invasive Species Society
- Public support for quality worker conditions

DRAFT OBJECTIVE

Maximize Stakeholder Support

Measures	Option A	Option B	Option C
Distance to nearby community businesses			

DRAFT OBJECTIVE

Maximize St'át'imc Support

Measures	Option A	Option B	Option C
Potential partnership with St'át'imc Nation			

Minimize Costs

Measures	Option A	Option B	Option C
Estimated cost to implement accommodations			
Estimated cost to operate accommodations			
Estimated average annual vehicle operating cost			

DRAFT OBJECTIVE

Minimize Project Schedule

Measures	Option A	Option B	Option C
Estimated timeline to implement accommodations			
Months added to schedule based on commuting requirements (time lost to commute)			
Estimated average annual travel time for workers			
Potential lost days of work based on historical average yearly closure time for each route			

DRAFT OBJECTIVE

Minimize Environmental Impacts

Measures	Option A	Option B	Option C
Hectares cleared for accommodation site			

DRAFT OBJECTIVE

Maximize Worker Retention & Worker Conditions

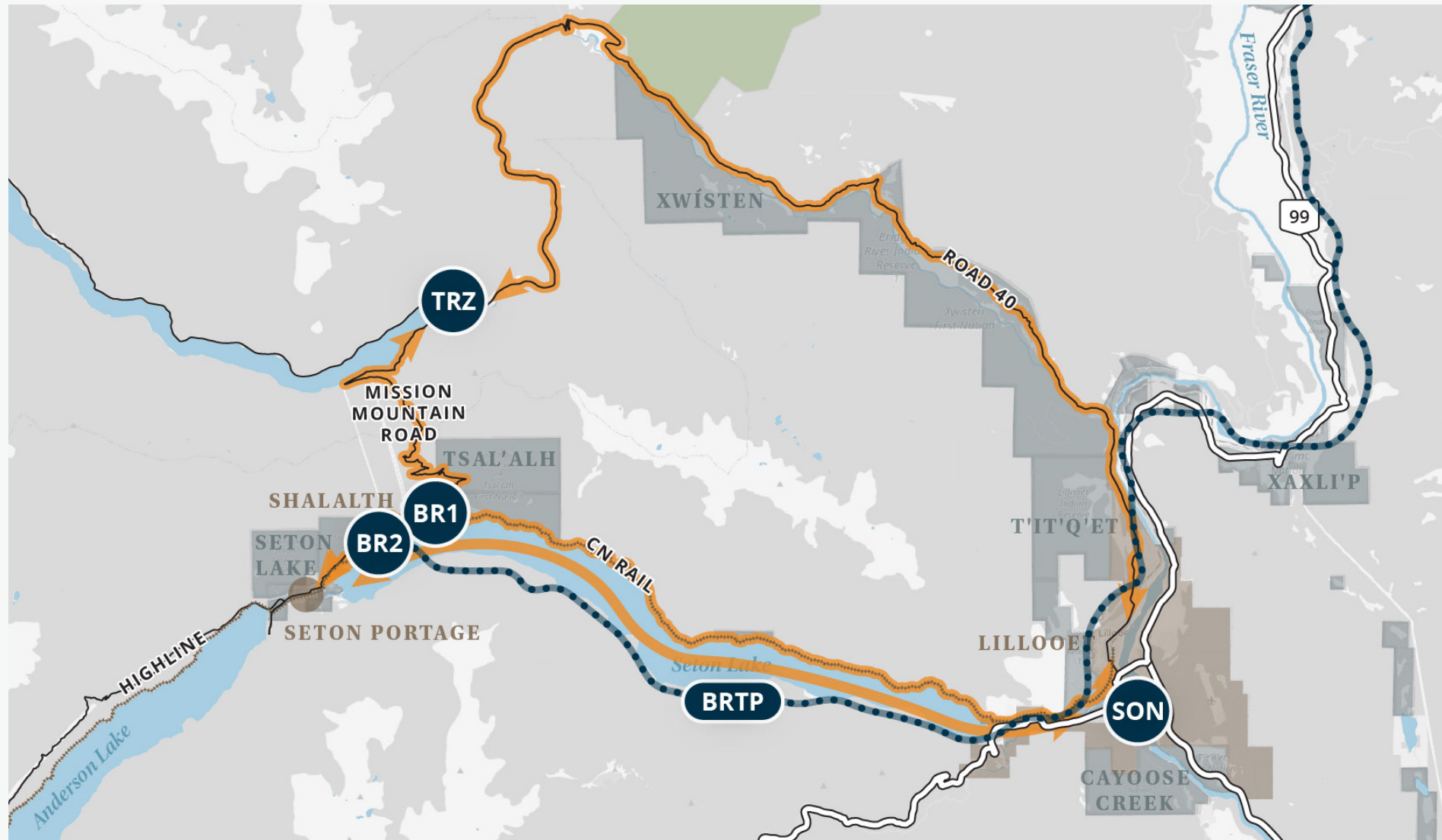
Measures	Option A	Option B	Option C
Distance to nearby amenities including trails and recreation options			

Maximize Travel Safety

Measures	Option A	Option B	Option C
Average annual travel time (worker-hours / year) through moderate to very high risk geohazards			
Estimated increase in daily traffic as a result of the project relative to the existing traffic volumes, by route			

3 Develop Options

Potential Movement Options



ROADWAYS

- Road 40 (Lillooet to Gold Bridge)
- Mission Mountain Road

RAILWAYS

- CN Line (Lillooet to Seton Portage)

WATERWAYS

- (Lillooet to Seton Portage)

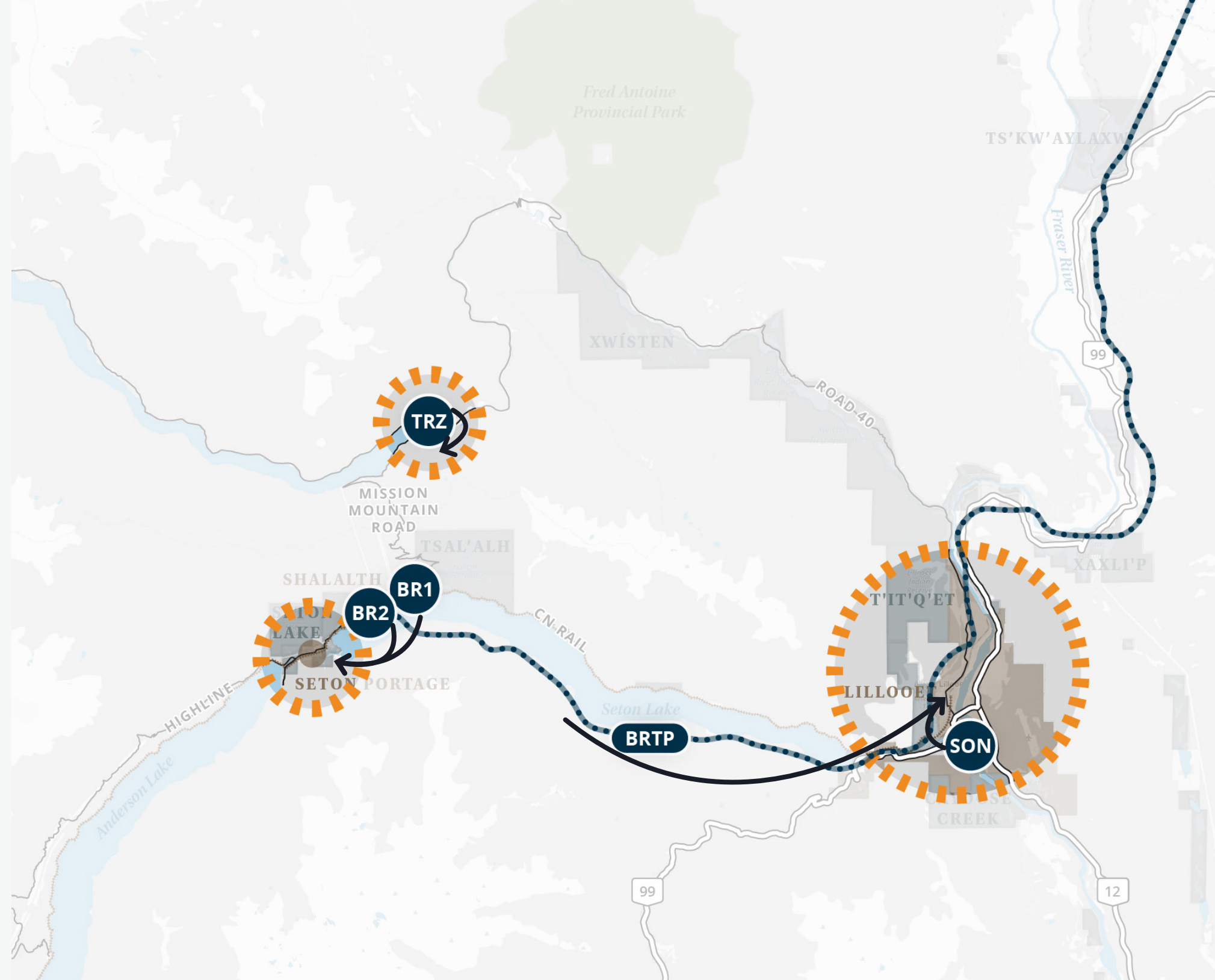
Option A

Accommodation Locations

- Terzaghi, Seton Portage, and Lillooet

Travel

- No daily commute
- Shift change travel via Road 40 (Lillooet to Terzaghi) and Mission Mountain Road



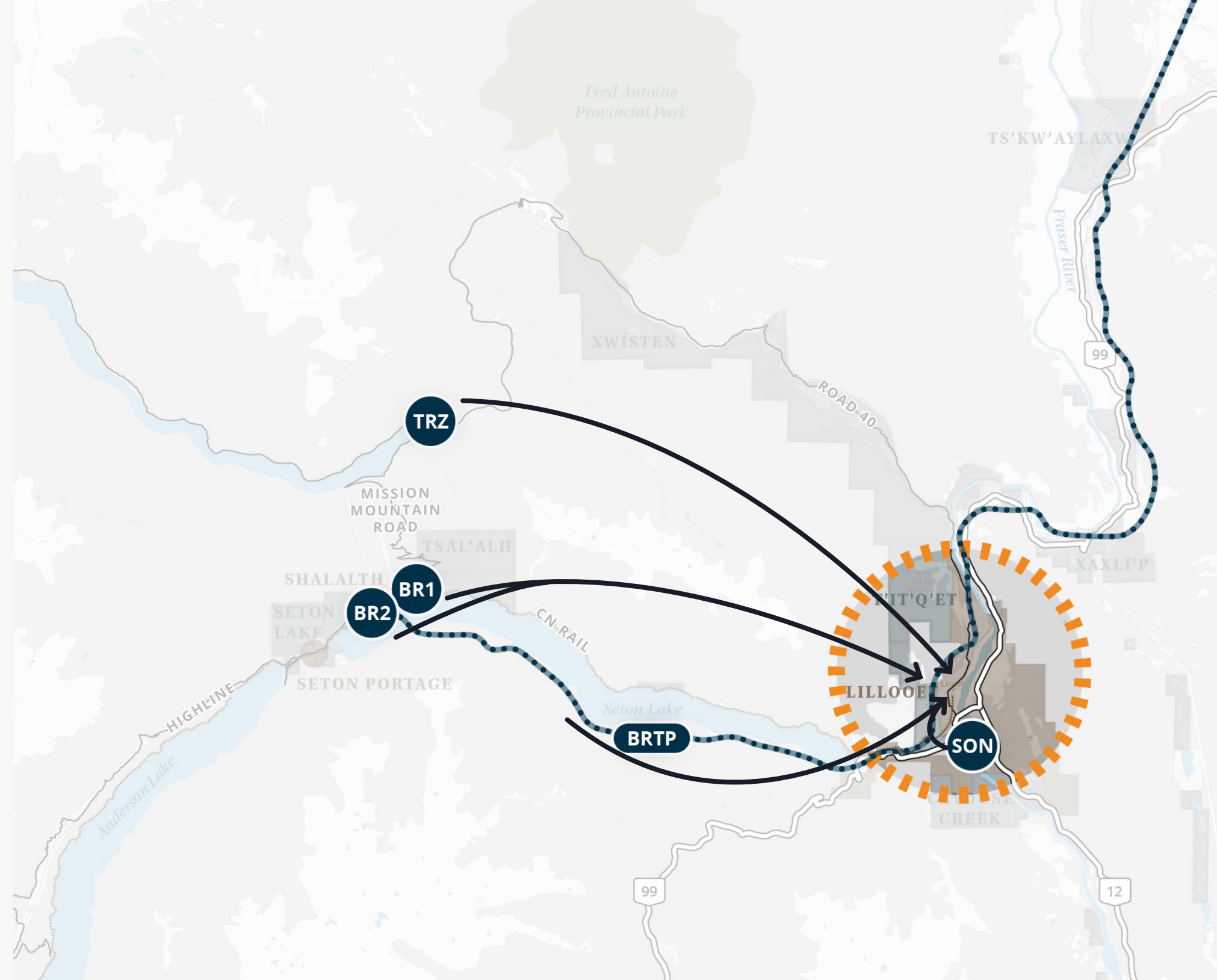
Option B

Accommodation Locations

- Lillooet

Travel

- Daily commute via Road 40 (Lillooet to Terzaghi)
- Daily commute via CN Line (Lillooet to Seton Portage) OR Waterways (Lillooet to Seton Portage)
- No shift change travel



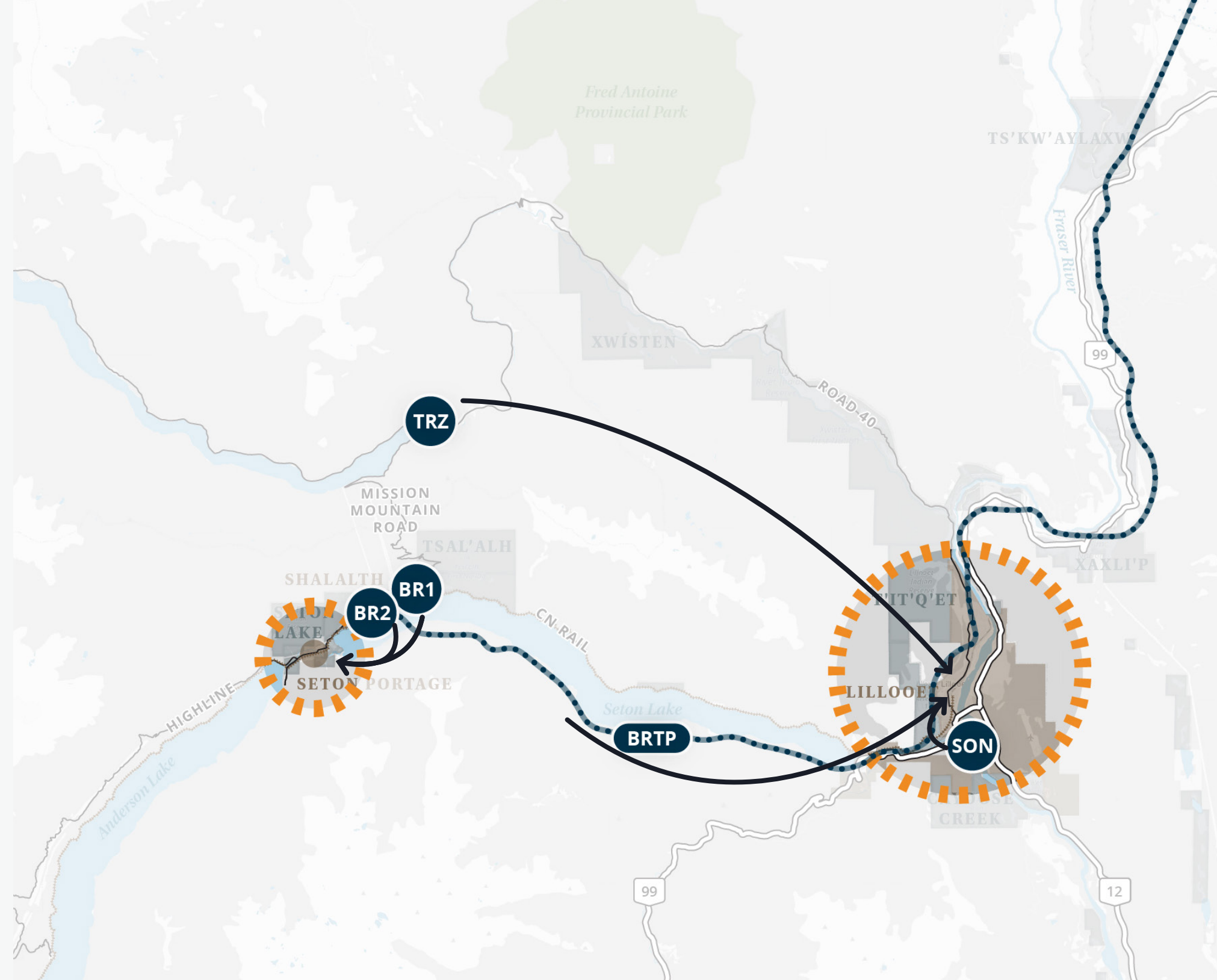
Option C

Accommodation Locations

- Seton Portage and Lillooet

Travel

- Daily commute via Road 40 (Lillooet to Terzaghi)
- Shift change travel via Road 40 (Lillooet to Terzaghi) and Mission Mountain Road



4 Identify the Consequences

Defining the Problems

1. Where will workers stay for each project?
2. How will workers, equipment, and material deliveries access accommodation locations and work sites?
3. Which accommodation type(s) will be used to house workers?

SDM 1
WHERE TO STAY

SDM 2
HOW TO STAY

**+ ADDITIONAL
RECOMMENDATIONS**

DRAFT SUMMARY TABLE

SDM 1 Where to Stay

Objectives	Measures	A	B	C
Maximize Stakeholder Support	Distance to nearby community businesses			
Maximize St'át'imc Support	Potential partnership with St'át'imc Nation			
Minimize Costs	Estimated cost to implement accommodations			
	Estimated cost to operate accommodations			
	Estimated average annual vehicle operating cost			
Minimize Project Schedule	Estimated timeline to implement accommodations			
	Months added to schedule based on commuting requirements (time lost to commute)			
	Estimated average annual travel time for workers			
	Potential lost days of work based on historical average yearly closure time for each route			
Minimize Environmental Impacts	Hectares cleared for accommodation site			
Maximize Worker Retention & Conditions	Distance to nearby amenities including trails and recreation options			
Maximize Travel Safety	Average annual travel time (worker-hours / year) through moderate to very high risk geohazards			
	Estimated increase in daily traffic as a result of the project relative to the existing traffic volumes, by route			

DRAFT SUMMARY TABLE

SDM 2 How to Stay

Objectives	Measures	A	B	C
Minimize Impacts to Local Housing & Tourism Industry	Expected use of existing commercial accommodations			
	Expected use of existing non-commercial accommodations			
Support Municipal Services & Infrastructure	Estimated water use by month			
	Impact on existing infrastructure as a result of the accommodations method			
Minimize Community Disturbance	Expected volume of workers traveling through residential areas			
	Number of workers staying within communities			
	Whether workers are staying in the community or not			
Maximize Stakeholder Support	Distance to nearby community businesses			
Maximize St'át'imc Support	Potential partnership with St'át'imc Nation			
Minimize Costs	Estimated cost to implement accommodations			
	Qualitatively assessment based on expected reliability			
Minimize Environmental Impacts	Hectares cleared for accommodation site			
Maximize Worker Retention & Conditions	Distance to amenities in town			
	Qualitatively assessment of distribution of worker accommodations			

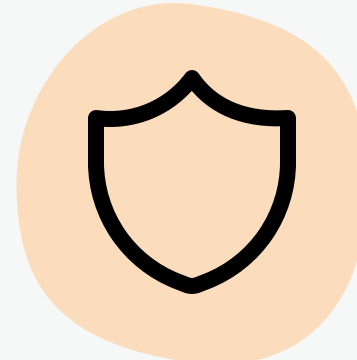
5 Additional Recommendations

Additional Recommendations

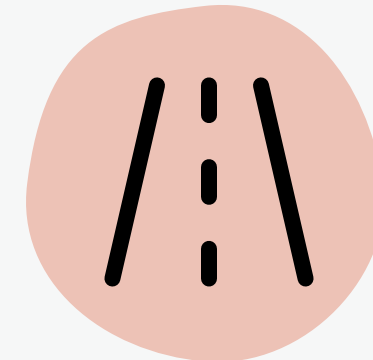
- The Structured Decision Making process uses objectives and measures to differentiate between potential options.
- However, as part of the Study there will be recommendations put forward that **apply no matter which option is chosen.**



Healthcare



Policing &
Security



Driving & Road
Use



Emergency
Management



Noise &
Disturbance



Social Behaviour



Communication
with Businesses



Invasive Species
Management

6 Community Benefits

Community Benefit Framework

- During the study, we heard requests for community benefits and ‘legacy projects’ which were beyond the scope of this study.
- As BC Hydro moves through project planning and implementation phases, this **input has been recorded and will be used for consideration should further mitigation be required.**

Community Benefit Framework

- During the study, we heard requests for community benefits and ‘legacy projects’ which were beyond the scope of this study.
- As BC Hydro moves through project planning and implementation phases, this **input has been recorded and will be used for consideration should further mitigation be required.**
- Many of BC Hydro’s Bridge River Capital Projects are **subject to review by the BC Utilities Commission.**
- Any mitigation and compensation measures related to these capital projects **must link directly to a project impact.**
- Any measures put forward in BC Hydro’s application will be scrutinized by the BC Utilities Commission (BCUC) and intervenors.

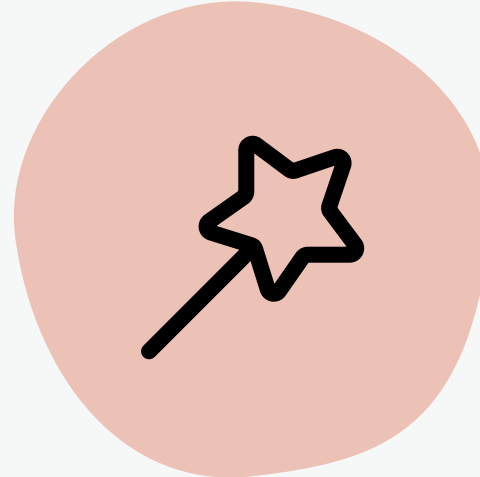
Community Benefit Ideas - What We Heard



Parks & Open Space
Improvements



Water Treatment
Upgrades



Beautification
Projects



Permanent Housing



Recreation Upgrades

Take our survey!

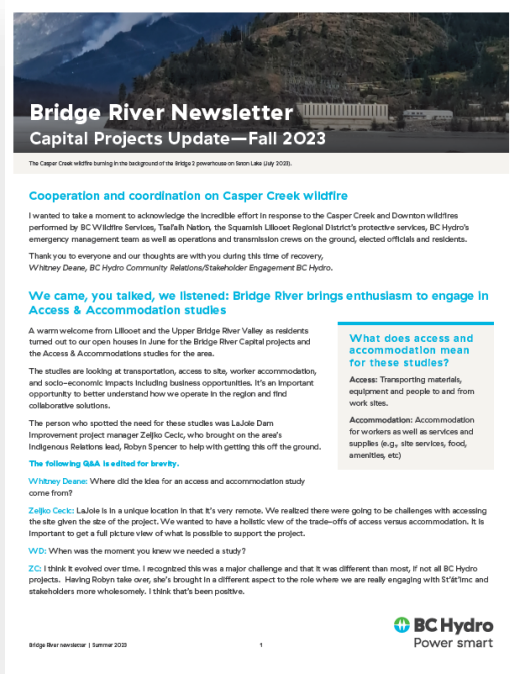


4 Ways to Find the Survey:

1. Scan the QR code with your phone and follow the link
2. Go to www.bchydro.com/bridgeriver
3. Click the link in the chat
4. Bridge River Capital Project update subscribers will receive an emailed link



Communications and Contact Info.



How we inform you about our work:

- Local ads
- Open Houses
- Bi-annual newsletter
- Delegations to local governments
- www.bchydro.com/bridgeriver
- Email projects@bchydro.com
- Phone: 1-866-647-3334

Questions?



BC Hydro

Power smart