

Kicking Horse Canyon Project PHASE 4

Project Overview

Lake Louise Advisory Board

December 10, 2019



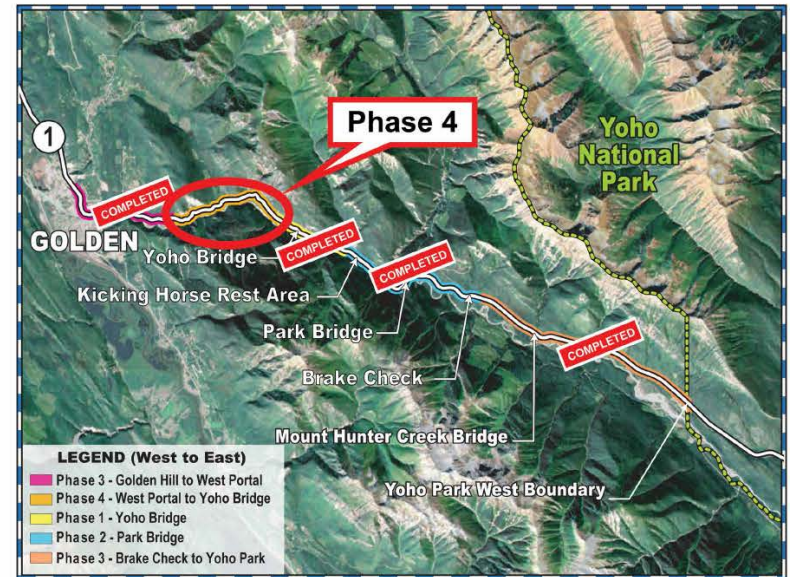
transportation
investment
corporation

Agenda

- Introductions & purpose
- Project overview presentation
- Questions & answers / dialogue

Background

- The Kicking Horse Canyon Project was launched in 2003 to upgrade the 1950's-era two-lane Trans-Canada Highway between Golden and Yoho Park to a modern 4-lane standard
- The corridor carries over 12,000 vehicles daily in the summer, including commercial trucks moving millions of dollars in goods
- It plays a key role in Asia-Pacific trade, the movement of people, goods, and services, and supports area tourism
- The project is within the asserted traditional territories of the Secwépemc and Ktunaxa Nations
- Construction of the fourth and final phase is to begin in 2020, with completion in Winter 2023/24
- Budget: \$601 million: \$215.2 million (Canada); \$385.8 million (BC)



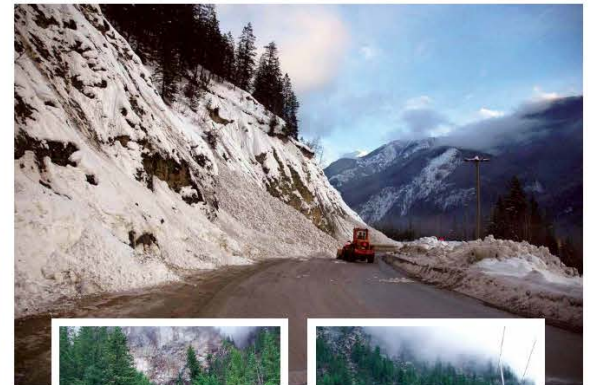
Meeting the Need for Improved Traveller Safety

- Improved alignment through flatter curves and grades consistent with adjacent highway segments and current standards
- Improved sightlines and stopping sight distance
- Additional lanes and median barrier to reduce collision potential
- 2.5 m shoulders to provide safer area for cyclists
- Improved connections to Dart Creek Forest Service Road and CP access roads
- Reduced potential for avalanche and rockfall to reach vehicles
- Reduced wildlife collisions
- Target: reduced collisions overall by 66%



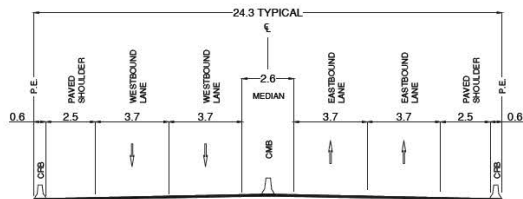
Meeting the Need for Improved Capacity and Reliability

- Improved capacity with 4-lane divided highway with 100 km/hr speed limit
- Reduced travel time through increased average speed
- Reduced potential for avalanches closing highway
- Reduced potential for rockfall closing highway lanes

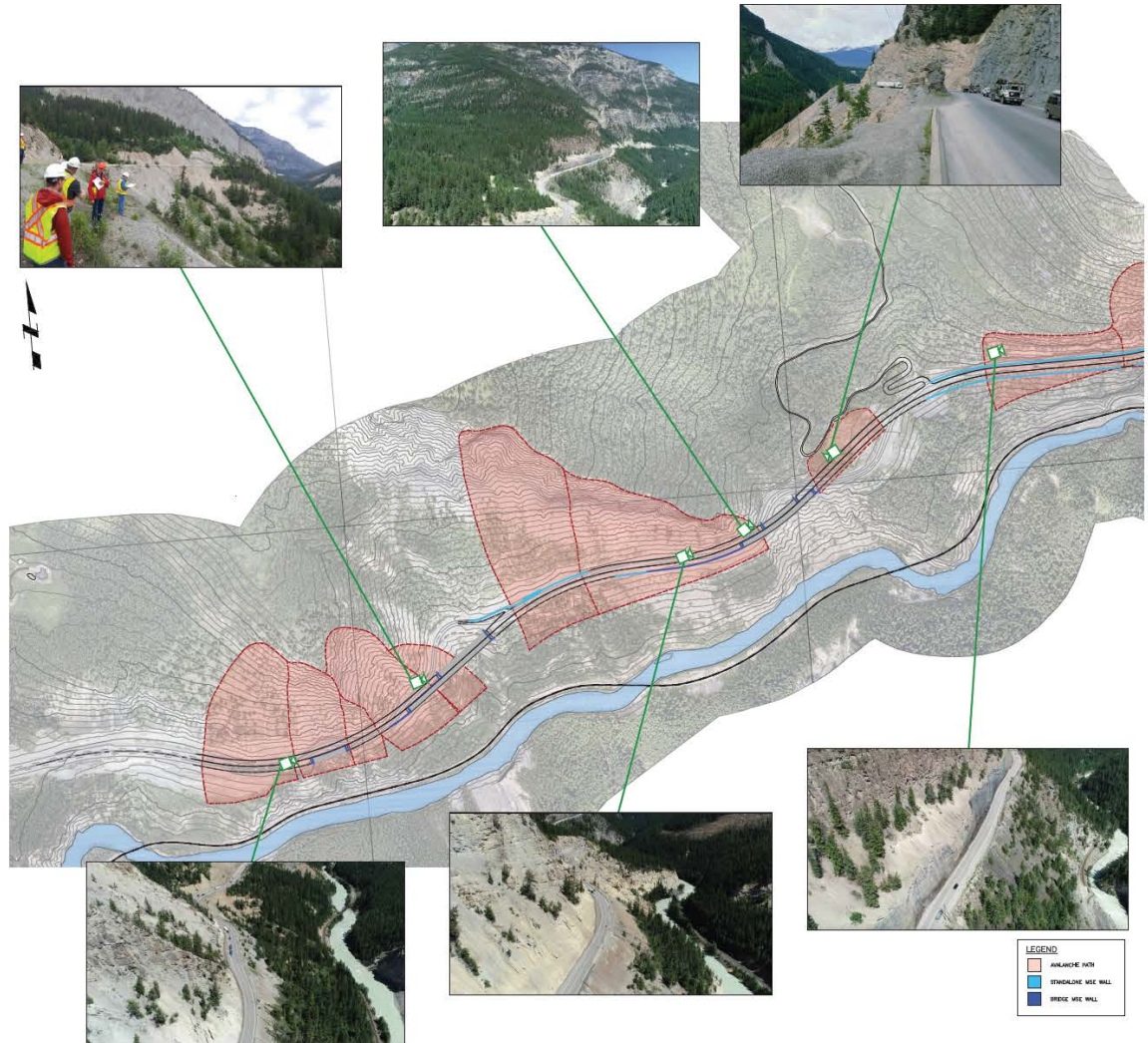


One Possible Solution

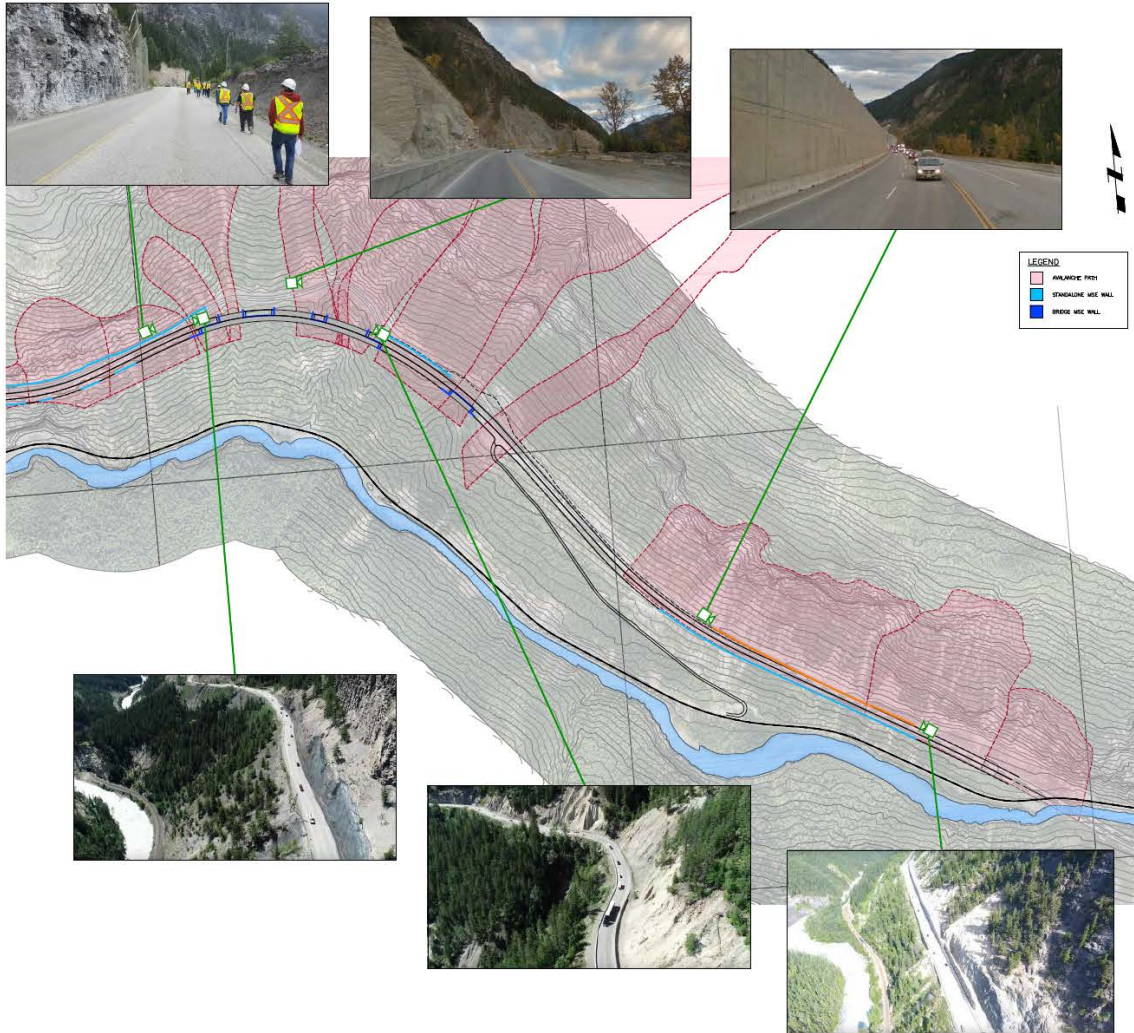
- To prove the project can be built, the Ministry has prepared a “reference concept”, which would bring the road up to a modern 100 km/hour standard
- It includes:
 - Straightening 13 sharp curves
 - Five bridges
 - Reduced impact potential of 13 avalanche paths
 - Median barrier
 - Wildlife fencing
 - Wildlife passage



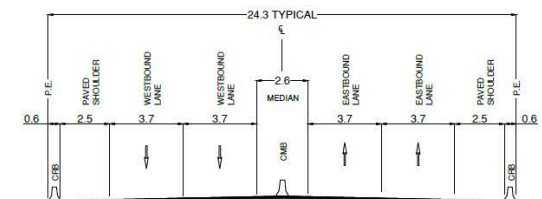
TYPICAL HWY. 1 CROSS SECTION



One Possible Solution



- This project will be delivered as a “Design-Build” contract, meaning the contractor will be responsible for both the design and construction of the works
- The contractor will be expected to apply innovative ideas and approaches to meet or exceed the project objectives



TYPICAL HWY. 1 CROSS SECTION

Meeting the Challenge

- The top challenges for construction are:
 1. Safety of the travelling public and construction workers
 2. Constructability
- These challenges are caused by the constraints in this area of the corridor, which include:
 - Very narrow roadway and working area for removal of large sections of mountainside
 - Unstable, steep slopes both above and below the roadway
 - Need to prevent impacts to the CP Rail line, which averages 30 trains daily
 - Need to prevent impacts to the Kicking Horse River



How the Traffic Management Strategy Was Developed

- Extensive consultation which included:
 - The community, local governments, businesses and School District
 - Emergency services, Parks Canada and BC Trucking Association
 - Ministry of Transportation and Infrastructure
- Detailed on-site assessments were carried out to identify and analyse all the possible solutions
 - Assessment determined Hwy 93/95 can safely function as alternate route during off-peak closures



Selected Traffic Management Strategy

- Underlying principles:
 - Safety of crews and travelling public
 - Minimizing Highway 1 closures while enabling construction to be completed within a reasonable timeframe
 - Avoiding closures during high traffic periods (e.g. summer daytime)
 - Minimizing impacts to local communities and businesses (e.g. no extended closures during rafting or ski season)

The proposed strategy blends the following:

- Single lane alternating traffic (SLAT)
 - Delays of up to 20 minutes
- Scheduled short closures (2 hours or less)
- Scheduled overnight closures (2-10 hours)
- Extended 24-hour scheduled closures (Spring, Fall)
 - 30 minute window for commuters, school buses and other essential local trips in morning and evening

Incident Management:

- Access through the work zone for emergency services will be provided as needed
- In the event of an incident closing Kicking Horse Bridges in Golden or otherwise restricting the use of the alternate route during longer closures, the Design-Builder will open the Trans-Canada Highway

Traffic Management Strategy – A Closer Look

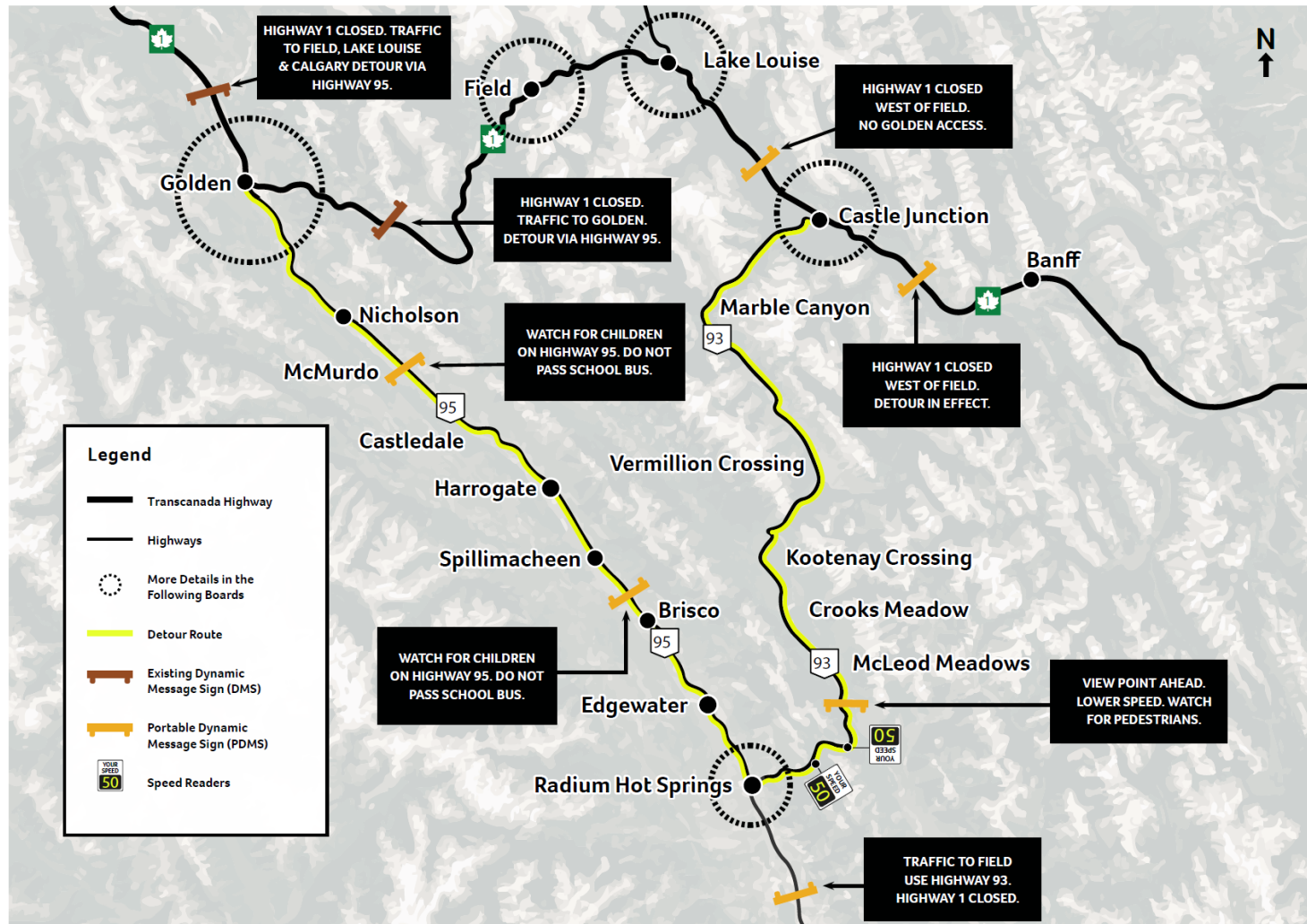
Proposed Traffic Stoppages

TYPE OF STOPPAGE	J	F	M	A	M	J	J	A	S	O	N	D
Extended 24-hour shoulder-season closures				Except Easter weekend						Except September, Thanksgiving & Remembrance Day weekends		
Night closures 2-10 hours	7:30 pm – 5:30 am					9:30 pm – 5:30 am						7:30 pm – 5:30 am
Closures 2 hours or less	Anytime except peak hours					Nights only 7:30 pm – 5:30 am						Anytime except peak hours
Single-lane alternating traffic (SLAT) (20 minute delays)	Anytime					Nights only 7:30 pm – 6:30 am						Anytime

Notes:

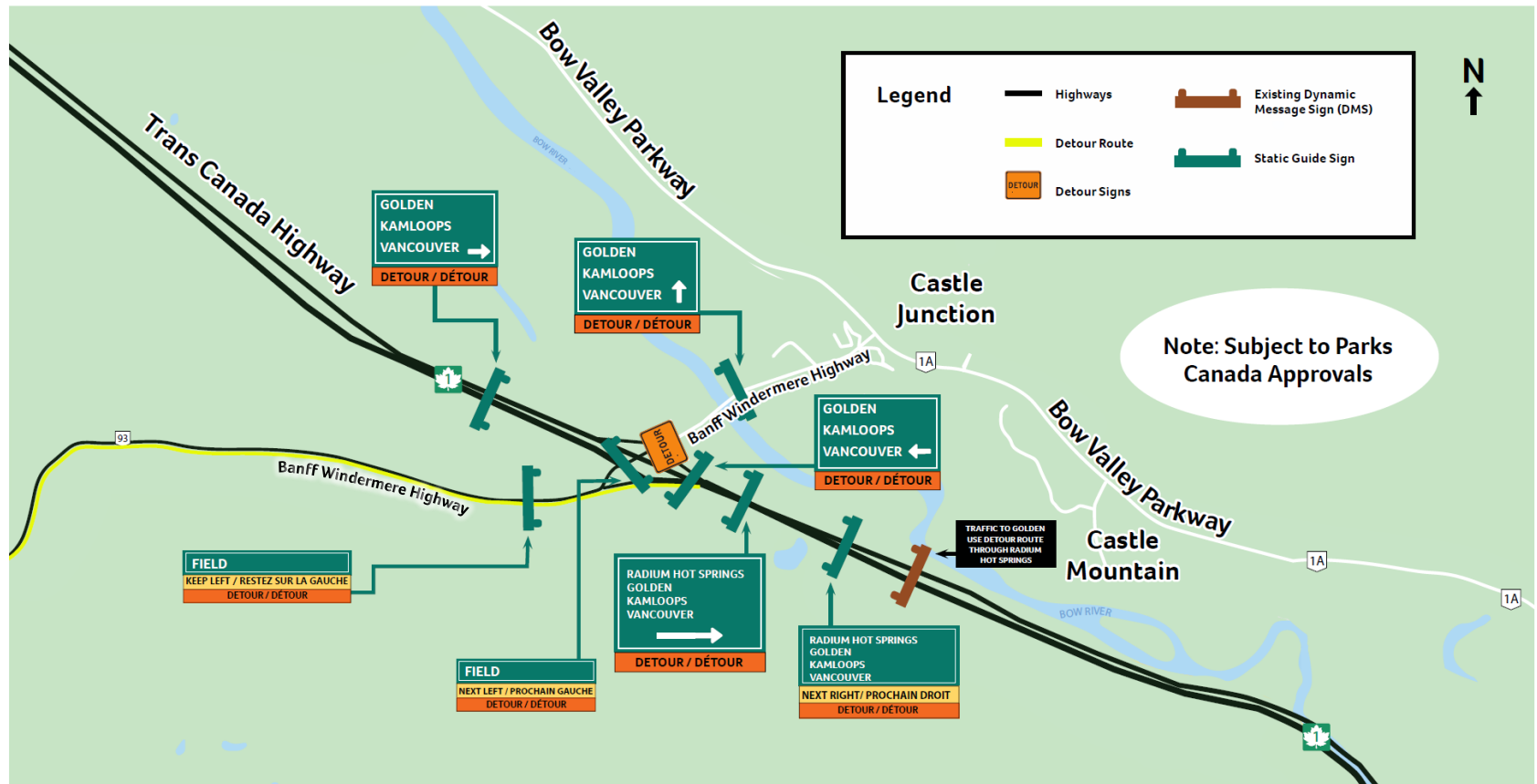
- Strategy to be refined with help of public input
- No daytime stoppages in the summer
- Extended closures may begin with the fall 2020 shoulder season
- During extended 24-hour closures, brief openings are planned twice daily for commuters, school buses and other essential trips; a commuter pass system is under consideration
- Contractor will be required to provide advance notification of closure schedule to allow the public to make reliable travel plans

Traffic Management Concept for the Alternate Route



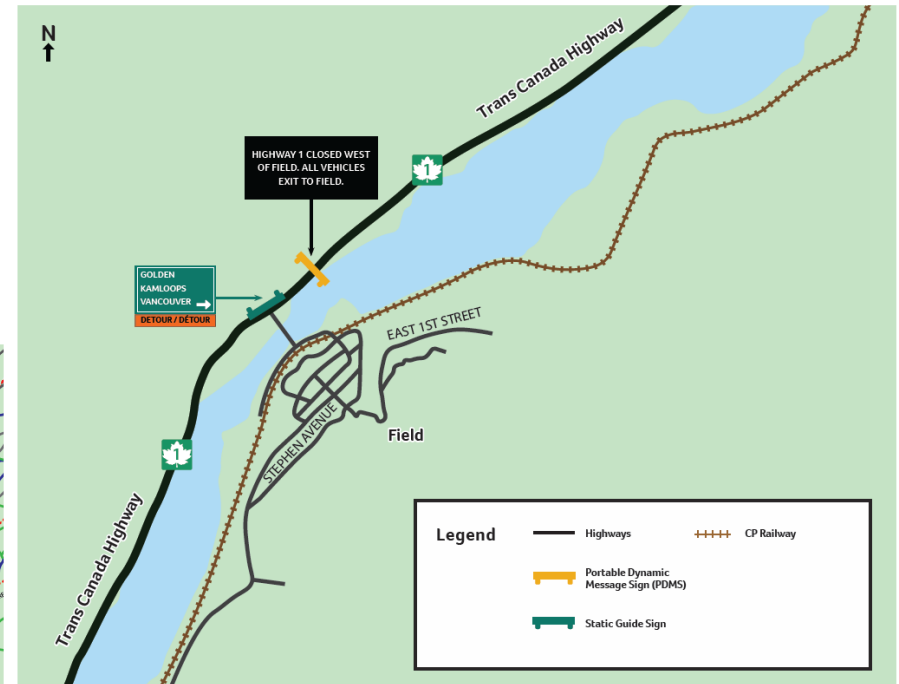
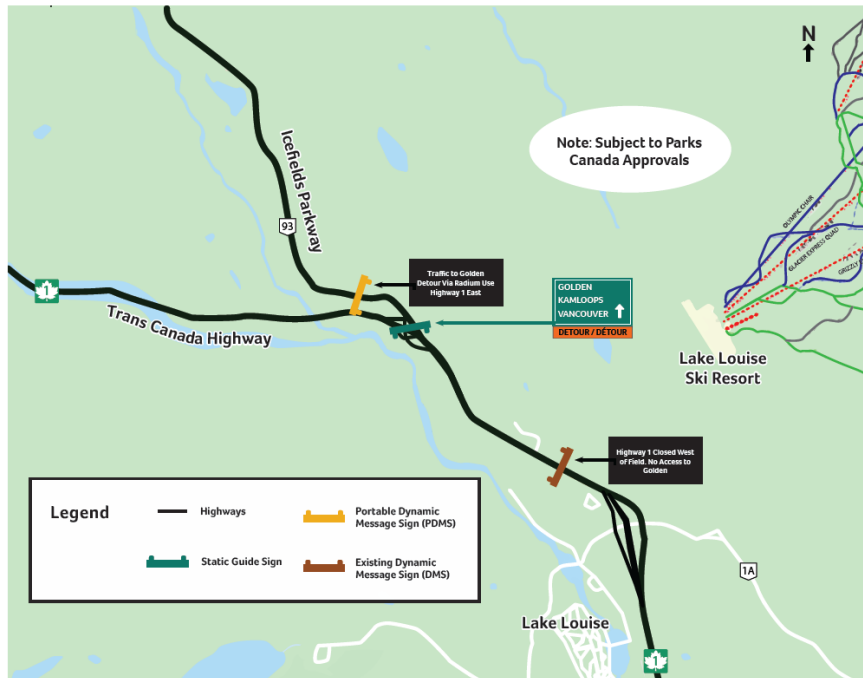
Traffic Management Concept – Castle Junction

- Clear signing for detour route
- Combination of static and dynamic signs



Traffic Management Concept – Lake Louise and Field

- Clear guide signs for detour
- Combination of static and dynamic signs



Lake Louise



Note: Subject to Parks Canada Approvals

Icefields Parkway
93

Traffic to Golden
Detour Via Radium Use
Highway 1 East

GOLDEN
KAMLOOPS
VANCOUVER
↑
DETOUR / DÉTOUR

Lake Louise
Ski Resort

Trans Canada Highway

Highway 1 Closed West
of Field. No Access to
Golden

Legend

- | | | | |
|---|-------------------|---|--------------------------------------|
|  | Highways |  | Portable Dynamic Message Sign (PDMS) |
|  | Static Guide Sign |  | Existing Dynamic Message Sign (DMS) |

Lake Louise

1A

OLYMPIC CLARK
GLACIER EXPRESS QUAD
GROZZLY MAP



Field

Trans Canada Highway

HIGHWAY 1 CLOSED WEST
OF FIELD. ALL VEHICLES
EXIT TO FIELD.

GOLDEN
KAMLOOPS
VANCOUVER →
DETOUR / DÉTOUR

EAST 1ST STREET

STEPHEN AVENUE

Field

Trans Canada Highway

Legend



Highways



CP Railway



Portable Dynamic
Message Sign (PDMS)



Static Guide Sign

Community Engagement

- In past year, there have been dozens of meetings with key stakeholder groups and organizations
- Community Liaison Committee (CLC) established October 2018
- Dialogue has included considerations for:
 - Traffic management, including timing, communications & alternate route
 - Environment, including wildlife; air and water quality
 - Local and regional economy during and after construction
 - Employment and business opportunities

Community Liaison Committee	
Sector/Interest/Role	Agency
Municipal	Town of Golden
District municipality	CSRD
Indigenous communities	Shuswap Indian Band Ktunaxa First Nation
Tourism	Tourism Golden Golden / highway accommodators
Business	Kicking Horse Country Chamber of Commerce
Social / local amenities	Golden Community Social Services Co-op
Elementary / secondary education	Rocky Mountain School District #6
Post-secondary education	College of the Rockies
Recreational	Kicking Horse River Outfitters Association Kicking Horse Mountain Resort (RCR) Parks Canada
Commercial transportation	BC Trucking Association
Emergency services & safety	Police Fire Rescue Ambulance Search & Rescue / Emergency Management
Environmental	Wildsight Rod & Gun Club Golden and District Air Quality Committee



Moving Forward

- Design-Build procurement underway
- Contract award and construction start 2020
- Completion Winter 2023/24



Keeping in Touch

- We welcome your ongoing input
- Reach us directly:
 - Visit www.kickinghorsecanyon.ca for the latest information
 - Email us at KHCPAdmin@gov.bc.ca
 - Call us at **778-940-0711**

