

Monthly Status Report

Reporting Period
February 2023

1. Introduction

1.1 Project Overview

The Kicking Horse Canyon Project – Phase 4 (KHCP4) is located on the Trans-Canada Highway approximately 4 km east of the Highway 95 junction at Golden BC. It is the final phase of the 26 km-long Kicking Horse Canyon Project which has been incrementally improving the highway to a modern four lane standard at a 100 km/h design speed, including bridge replacements and natural hazard reduction features to improve safety and reliability. The scope of work includes:

- Widening 4 km of two lane and 0.8 km of three lane highway to four lanes
- Highway realignment to a 100 km/h design speed
- Installation of median barrier, wildlife exclusion fencing and passages
- Provision of snow avalanche and rock fall hazard reduction measures; and
- Shoulder widening for cyclists

Construction of the fourth and final phase to complete the remaining – and most difficult – 4.8 kilometres is expected to be substantially complete in winter 2023-24.

Additional information and updates about the Project can be found on the Project’s website <https://www.kickinghorsecanyon.ca/>

1.2 Project Delivery

Transportation Investment Corporation, a provincial Crown corporation, is delivering and overseeing this \$601 million Project. The Project is being delivered under B.C.'s Community Benefits Agreement and the Project workforce is being provided by B.C. Infrastructure Benefits Inc. (BCIB)

The Project is cost-shared, with the Government of Canada contributing \$215 million.

Kicking Horse Canyon Constructors (KHCC) was selected to design and construct the fourth and final phase of the Kicking Horse Canyon Project near Golden.

The Project is a multi-phase Project to improve safety and mobility over approximately 26 kilometres of two-lane highway. Three phases of work have been completed. The fourth and final phase to transform the remaining section of about 4.8 kilometres is under construction.

1.3 Project Goals

Based on the Ministry's mandate, six primary goals have been identified for the Project:

Transportation: Improve highway safety, capacity, and reliability of the highway corridor.

Financial: Plan and deliver the Project that meets the approved scope, schedule and budget targets cost effectively.

Environment: Reduce wildlife collision rates and minimize impacts on future wildlife movements.

Economic Development: Support the growth of the local and regional economy by improving highway safety and reliability and assist the efficient movement of people and goods along the Project corridor.

Social and Communities: Engage with Indigenous Communities, local communities, and key stakeholders to identify opportunities, issues and information pathways that will inform the delivery of the Project.

Deliverability: Constructable and operable.

2. Project Update

2.1 Project Dashboard

		Objectives	Project Status	Comments
Project Delivery	Scope	Meet the approved scope.	●	<ul style="list-style-type: none"> The Project includes the widening of 4.8km of Highway 1 to a 4-lane 100km/hr. standard and is being delivered within the approved scope.
	Schedule	Delivered within the approved schedule.	●	<ul style="list-style-type: none"> The Project is on schedule to be completed by winter 2023/2024.
	Budget	Delivered within the approved budget. Total Project budget is \$601 million.	●	<ul style="list-style-type: none"> Project spending for the month of February 2023 was \$9.6 million and total Project spending to date is \$453.2 million. Total Federal Recoveries to date are \$207.9 million. The Project is forecast to be delivered within budget.
	Safety	Take every reasonable step to ensure that our work is performed safely and in compliance with all applicable safety regulations, and in accordance with government policy.	●	<ul style="list-style-type: none"> Workplace Occupational Health and Safety (OHS) committee is in place and active. The Health and Safety Plan for Project work is in place which includes specific COVID-19 protocols. Lost Time Injury Frequency Rate (LTIFR) for the Project remains at 0. The 2021 average Injury Rate for Heavy Construction (Bridge, Overpass, or Viaduct Construction or Repair) is 1.2 as per WorkSafeBC.
	Quality	Implement an effective Quality Management System.	●	<ul style="list-style-type: none"> Daily quality monitoring ongoing with no major issues observed.
	Environmental	Ensure our work is performed in an environmentally responsible manner.	●	<ul style="list-style-type: none"> Ongoing submission reviews for management plans. Ongoing weekly site surveillance visits.
	Archaeology	Ensure the work is performed in a manner that meets the standards of the Heritage Conservation Act.	●	<ul style="list-style-type: none"> Finalizing reporting.
	Design and Construction	Provide design and technical oversight, coordinate and manage activities on site, and conduct compliance reviews.	●	<ul style="list-style-type: none"> Oversight of Design-Build-Agreement (DBA) Project work. Compliance reviews during construction. Ongoing review of KHCC design and management plans. Regular site surveillance and inspections by Project team. Ongoing traffic management and active traffic monitoring during construction.

		Objectives	Project Status	Comments
	Community Benefits	Work collaboratively with BC Infrastructure Benefits Inc. (BCIB) to successfully implement the Community Benefits Agreement (CBA).	●	<ul style="list-style-type: none"> Ongoing coordination and collaboration with BCIB to implement the CBA and meet workforce requirements.
Partners/Stakeholders	Indigenous Groups	Continue to build and maintain a positive collaborative working relationship.	●	<ul style="list-style-type: none"> Continued collaboration and engagement with Indigenous Groups on key environmental values. Continued engagement with KHCC and Indigenous Groups on contract and employment opportunities.
	Third Parties	Continue to build and maintain positive relationships and secure agreements with Project partners and other third parties.	●	<ul style="list-style-type: none"> Regular communication and coordination with CP Rail. Ongoing reviews of utility designs.
	Public and Stakeholder Engagement	Continue to build and maintain positive relationships with the community and other stakeholders.	●	<ul style="list-style-type: none"> Ongoing work to enhance quality and reliability of traffic notifications. Regular website and social media updates including highway status calendar and stakeholder notices.

Status	Description
●	Managing critical issues, negotiating resolution; action required immediately
●	Managing some issues, negotiating resolution; action required in the near term
●	Stay the Course – no action required

3. Project Documents and Achievements to Date

Project Delivery	Project Planning and Development	<ul style="list-style-type: none"> • <u>Business Case Supplemental Memo (2019)</u> • <u>Cost Report (2019)</u> • <u>Risk Report (2019)</u> • Executed Design-Build-Agreement (November 2020)
	Environmental	<ul style="list-style-type: none"> • <u>Environmental Synopsis Report (2016)</u> • <u>Various Environmental Reports (2005 – 2016)</u>
	Archaeology	<ul style="list-style-type: none"> • Heritage Inspection Permit 2019-0208 (2019) • Archaeological and Heritage Resource Management Plan (AHRMP),(August 2020) • Site Alteration Permit 2020-0297 (October 2020) and subsequent amendments
	Community Benefits	<ul style="list-style-type: none"> • <u>Community Benefits Agreement (July 2018)</u> • BCIB Health and Safety Program (March 2020) • <u>BCIB Sub-Appendix with the Kicking Horse Project Information (March 2020)</u> • BCIB – Allied Infrastructure and Related Construction Council (AIRCC) Enabling Agreement Executed (May 2020)
	Third Parties	<ul style="list-style-type: none"> • Contribution Agreement – Government of Canada (2017)

4. February Highlights and Three Month Lookahead

4.1 Safety

Scope:	<ul style="list-style-type: none"> Establish Occupational Health and Safety (OH&S) Project delivery objectives and performance measures. Manage Project OH&S activities and monitor performance metrics. Ensure the Project complies with relevant WorkSafeBC regulations and government requirements. Outline relevant health and safety management processes and activities.
Monthly Highlights:	<ul style="list-style-type: none"> Site Safety Audit was conducted on February 24, no significant issues identified. The next audit will be scheduled in March 2023. There were no first aid incidents, 1 near miss, and 1 minor equipment damage for the month. Lost Time Injury Frequency Rate (LTIFR) for the Project is 0, which is less than the WorkSafeBC 2021 average of 1.2 for Bridge, Overpass, or Viaduct Construction or Repair (subsector Heavy Construction). Ongoing implementation of avalanche training, forecasting and awareness.
Three Month Lookahead:	<ul style="list-style-type: none"> Maintain Province's Safety Management Plan for implementation as part of the Design-Build Agreement to align with KHCC, Transportation Investment Corporation (TIC), the Owner's Engineer (OE) and Ministry of Transportation and Infrastructure requirements. Conduct orientation and safety training for onsite personnel as required. Conduct surveillance audits of KHCC's safety management performance.

4.2 Quality

Scope:	<ul style="list-style-type: none"> Establish quality objectives and performance measures. Monitor relevant quality management performance metrics. Manage Project quality management activities.
Monthly Highlights:	<ul style="list-style-type: none"> Reviewed five (5) Non-Compliance Reports (NCR) received from KHCC, no significant issues found. Suitable corrective actions were identified.
Three Month Lookahead:	<ul style="list-style-type: none"> Oversee quality of KHCC work onsite. Record and distribute daily observation reports of work onsite. Review KHCC quality records for compliance to the DBA. Conduct monthly audits of KHCC quality processes.

4.3 Environmental

Scope:	<ul style="list-style-type: none"> • Complete environmental reviews of KHCC’s submissions. • Support communications team with stakeholder engagement. • Conduct site surveillance and provide environmental support to Project as and when needed.
Monthly Highlights:	<ul style="list-style-type: none"> • Reviewed KHCC submissions, permits and designs. • Regular and ongoing site environmental surveillance.
Three Month Lookahead:	<ul style="list-style-type: none"> • Review KHCC’s environmental submissions. • Conduct site environmental surveillance. • Continue collaboration with the Golden District Rod and Gun Club and the Ktunaxa Nation Council on bighorn sheep monitoring.

4.4 Archaeology

Scope:	<ul style="list-style-type: none"> • Managing, directing, and undertaking all archaeological work, including Archaeology Impact Assessment (AIA), Systematic Data Recovery (SDR), and monitoring. • Providing the Province and KHCC with information for the management of archaeological and heritage resources. • Responding to chance archaeological or heritage finds.
Monthly Highlights:	<ul style="list-style-type: none"> • Final reporting ongoing.
Three Month Lookahead:	<ul style="list-style-type: none"> • Final reports expected to be complete by spring 2023.

4.5 Design and Construction

Scope:	<ul style="list-style-type: none"> • Travel demand forecasting, traffic operations modelling, traffic data collection, and other related engineering services in support of the traffic management regime proposed for the Project. • Provide technical support to the Project team during the review of contractor submittals. • Oversight of DBA Project work. • Compliance reviews during construction. • Develop plans for managing traffic along the alternate route Highway 93/95 during full Project closures. • Establish agreements with other jurisdictions for provision of services along the alternate route.
Monthly Highlights:	<ul style="list-style-type: none"> • KHCC has three pile installation rigs and four available crews on rotation conducting foundation pile installation operations.

- Sheep's Bridge – East and west abutment pier foundation works ongoing.
- Bighorn Viaduct – East bound Stage 1 works underway.
- Bighorn Bridge – Traffic using eastbound lanes. No significant work in February.
- Lynx Viaduct – Traffic using eastbound lanes. Westbound footing construction and sub-cap installation ongoing with drift link installations in preparation for concrete pours.
- Frenchman's Bridge – Traffic using eastbound lanes. Westbound footing construction and sub-cap installation ongoing. Temporary crane pad installation underway.
- Frenchman's Viaduct – Traffic using eastbound lanes. Formwork for the westbound cast-in-place (CIP) spread footings ongoing.
- Elk Viaduct – Traffic using eastbound lanes. Westbound pile installation underway.
- Cut 1 – Upslope rockfall attenuator installation completed, production blasting and rock excavation ongoing.
- Cut 3 – All excavation to subgrade completed with subbase and base gravels underway. Rock slope stabilization and drape mesh installation ongoing concurrently.
- Cut 4 – Blasting and mechanical rock excavation in the Cut 4 area (Blackwall) ongoing as required for access to foundation piles, pile caps and stringers.
- Wolf Viaduct – Traffic using eastbound lanes. Excavation for the CIP median wall base completed.
- Bison Upslope Wall – Second layer of shotcrete (architectural finish) to begin in early 2023. No work in February.
- Pronghorn Upslope Wall – Temporary crane pad installation to facilitate pile work below Pronghorn.
- Grizzly Viaduct – Drift link and precast stringer installation ongoing.
- Grizzly Walls – CIP deck installation ongoing for eastbound lanes. Mechanically Stabilized Earth (MSE) wall erection at Grizzly Wall 2 and 3 is ongoing with final grading for the pavement structure underway. No work in February.
- Blackwall Bridge – Traffic using eastbound lanes. Crews have stripped formwork from parapet closure pour & have finished installing parapet railings. Carpenters are installing access for Middle Pier works.
- Marmot Viaduct - Traffic using eastbound lanes. Coping concrete installation complete, westbound pile installation has commenced.
- Caribou Viaduct – Coping formwork and rebar installation at east abutment completed. Coping formwork installation at west abutment ongoing.
- Caribou Fill/Wall – Stabilization piling cleaned out and prepared for concrete infill.
- Hedgehog Wall/Viaduct – Traffic using eastbound lanes. No work in February.

Three Month Lookahead:	<ul style="list-style-type: none"> • Province review of documents and management plans as they are finalized. • Manage slope survey monitoring consultant. • Undertake site surveillance, inspections, and audits by Project team, including OE Lead Engineer, OE Quality Manager, and OE Safety Advisor. • Preparation for Spring Closure and Commuter Pass Program for 2023. • Monitor KHCC traffic management performance through site. • Expected completion and demobilization of pile driving crews and equipment.
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4.6 Indigenous Groups

Scope:	<ul style="list-style-type: none"> • Fulfill Province’s duty to consult and accommodate Identified Indigenous communities and facilitate engagement and collaboration with communities on environmental and socio-economic interests.
Monthly Highlights:	<ul style="list-style-type: none"> • Project team meetings with Indigenous communities. • Continued collaboration with KHCC Indigenous Contracting and Employment Coordinator (ICEC) on employment opportunities for Indigenous Groups.
Three Month Lookahead:	<ul style="list-style-type: none"> • Continue regular meetings with all Identified Indigenous Groups, including the Pespesellkwe, Ktunaxa, and Shuswap Indian Band. • Continue monitoring and collaring of Bighorn sheep with Ktunaxa Nation Council (KNC) and Golden Rod and Gun Club.

4.7 Third Parties

Scope:	<ul style="list-style-type: none"> • Develop utilities and rail agreements as required. • Secure local and regional government approvals as required.
Monthly Highlights:	<ul style="list-style-type: none"> • Regular communication and coordination with CP Rail.
Three Month Lookahead:	<ul style="list-style-type: none"> • Continue implementation of Protocol Agreement. • Coordinate blasting with CP.

4.8 Public and Stakeholder Engagement

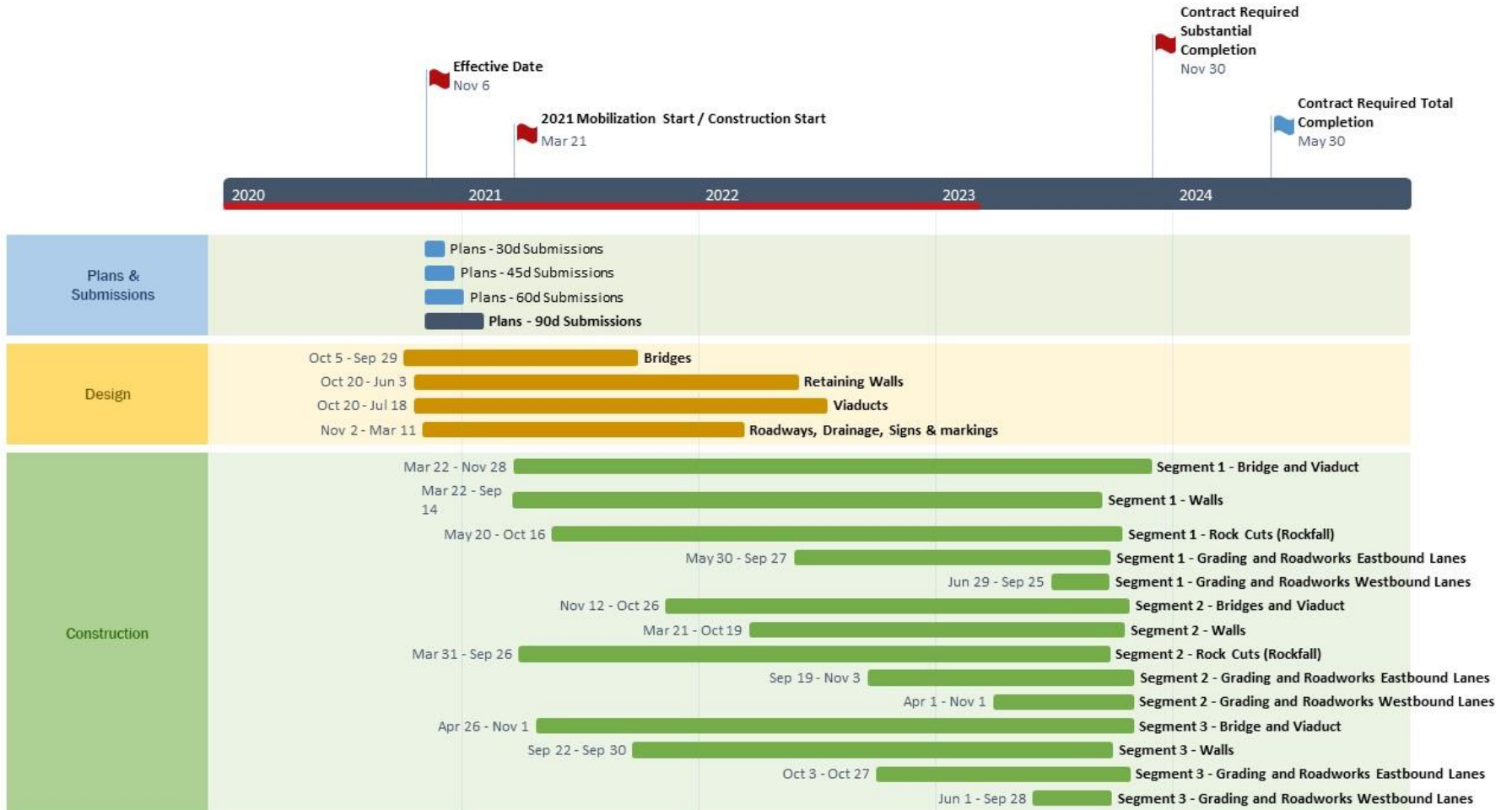
Scope:	<ul style="list-style-type: none"> • Manage ongoing public and stakeholder communications and engagement.
Monthly Highlights:	<ul style="list-style-type: none"> • Released monthly Project newsletter. • Responded to public/stakeholder inquiries. • Met with Town of Golden Council to provide a project update.

**Three Month
Lookahead:**

- Oversight of KHCC's communication and public engagement obligations and activities.
- Build awareness of construction and traffic management activities with media info bulletins/interviews, website updates, newsletters and advisories, and social media.
- Continue direct dialogue with key stakeholders.
- Outreach with project updates to local governments. Meetings planned with Radium Hot Springs, Regional District of East Kootenay and Columbia-Shuswap Regional District in March.

5. Schedule

The following schedule depicts deliverables, milestones and associated dates and timelines for the implementation phase of the Project, as well as anticipated construction timelines.



6. Project Photos



Figure 1: Cut 1 – Blasting and excavation ongoing – February 24, 2023



Figure 2: Frenchman's Bridge – Rebar installation for westbound transition pier – February 27, 2023



Figure 3: Cut 4 – Crews continue to load and haul blast material to disposal site – February 28, 2023



Figure 4: Grizzly Viaduct – Pre-cast stringers installation ongoing – February 28, 2023



Figure 5: Lynx Viaduct –Pile installation ongoing – February 27, 2023



Figure 6: Caribou Viaduct- Installation of east and west abutments continue – February 24, 2023