

Monthly Status Report

Reporting Period
October 2021

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 will be delivered under B.C.'s Community Benefits Agreement and the Project workforce will be 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) has been 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 and results of consultation to date, 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: Constructible 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.
	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">The project spending for the month of October 2021 was \$18.4 million and total project spending to date is \$233.6 million. Total Federal Recoveries to date are \$108.3 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">The Project's Health and Safety requirements are defined within the Project Management Plan (PMP).Workplace Occupational Health and Safety (OHS) committee 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.

	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"> Conducted sediment removal at one site downslope of the current highway alignment.
	Operations	Implement improvements to the Alternate Route along H93/95	●	<ul style="list-style-type: none"> Monitored Traffic Management strategies and ongoing implementation of the fall extended closure.
	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 project work. Compliance reviews during construction. Review of KHCC design and management plans ongoing. Site surveillance and inspections by project team.
	Community Benefits	Work collaboratively with BCIB and successfully implement the Community Benefits Agreement.	●	<ul style="list-style-type: none"> Project Team is working with BCIB to meet labour requirements. BCIB labour working onsite; permits have been issued.
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 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 meetings with CP Rail.
	Public and Stakeholder Engagement	Continue to build and maintain positive relationships with the community and other stakeholders.	●	<ul style="list-style-type: none"> Worked with KHCC to improve quality and reliability of traffic notifications. 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-Finance 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) • BCIB Apprenticeship and Training Targets (March 2020) • <u>BCIB Sub-Appendix with the Kicking Horse Project Information (March 2020)</u> • BCIB – AIRCC Enabling Agreement Executed (May 2020)
	Third Parties	<ul style="list-style-type: none"> • Contribution Agreement – Government of Canada (2017)

4. October 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 inspection conducted on October 8, with no significant concerns identified.
Three Month Lookahead:	<ul style="list-style-type: none">• Maintain Province's Safety Management Plan for implementation as part of the Design Build Agreement (DBA) to align with KHCC, Transportation Investment Corporation (TIC), WSP and Ministry of Transportation and Infrastructure (MoTI) requirements.• Orientation and safety training for onsite personnel as required.• Conduct surveillance audits of KHCC's safety management performance. Next audit scheduled for November 5.

4.2 Quality

Scope:	<ul style="list-style-type: none">• Establish quality management project objectives and performance measures.• Monitor relevant quality management performance metrics.• Manage project quality management activities.
Monthly Highlights:	<ul style="list-style-type: none">• Three (3) Non-Compliance Reports (NCR) were received from KHCC. The project team reviewed and close all three NCR's.
Three Month Lookahead:	<ul style="list-style-type: none">• Review KHCC quality specific management plans.• Oversee quality of KHCC work onsite.• Record and distribute daily observation reports of work on site.• Review KHCC quality records for compliance to the DBA.

4.3 Environmental

Scope:	<ul style="list-style-type: none">• Complete environmental reviews of KHCC's submissions.• Support communications team with stakeholder engagement.• Provide environmental support to Project as and when needed.
Monthly highlights:	<ul style="list-style-type: none">• Reviewed and commented on KHCC submissions, permits and designs.• Completed environmental site surveillance and reporting.• Coordinated with Golden Rod and Gun Club on bighorn sheep data.• Environmental audit conducted on October 28, 2021, no major issues.

Three Month Lookahead:	<ul style="list-style-type: none"> • Provide support at meetings with stakeholders and Indigenous groups. • Review and comment on KHCC's environmental submissions. • Provide environmental support to Project. • Site environmental surveillance.
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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 archaeological 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"> • Submitted revised investigation permit application to undertake SDR to the Branch. • Conducted sediment removal at one site downslope of the current highway alignment. • Undertook a site visit to establish safety measures for delivery of SDR along Dart Creek FSR.
Three Month Lookahead:	<ul style="list-style-type: none"> • Additional SDR under investigation permit along Dart Creek FSR. • Artifact analysis ongoing in the laboratory. • Completion of 2020 SDR and AIA Reports. Continue with and update 2021 SDR and AIA Reports. • Submit remaining 2020 site form updates and 2021 site form updates.

4.5 Operations

Scope:	<ul style="list-style-type: none"> • Develop plans for managing traffic along the Alternate Route H93/95 during full project closures. • Develop and implement plans for enhancements along Arterial Route in Golden to support Alternate Route. • Establish agreements with other jurisdictions for provision of services along the Alternate Route.
Monthly Highlights:	<ul style="list-style-type: none"> • Monthly performance monitoring on traffic management completed, including Alternate Route. • Two additional changeable message signs added to Highway 95 to increase wildlife awareness.
Three Month Lookahead:	<ul style="list-style-type: none"> • Monitoring traffic management performance. • Developing and monitoring Village of Radium Hot Springs chain up procedure. • Coordinate additional RCMP and CVSE enforcement.

4.6 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 design build project work. • Compliance reviews during construction.
Monthly Highlights:	<ul style="list-style-type: none"> • Participated in KHCC Submission reviews; managed design and construction issues (e.g., archaeology permits, geotechnical baseline, avalanche ditch widths). • Managed changes to concrete mix designs. • Reviewed weekly and monthly slope survey monitoring program deliverables. • Site visit conducted by Lead Engineer to review implementation of KHCC's safety program (October 8, 2021). • Sheep's Bridge – girder installation completed. Diaphragm formwork at abutments underway. • Bighorn Viaduct – foundation pile installation began. • Bighorn Bridge – foundation pile installation underway, including transition piers, abutments pier cap, column and pile cap construction continued in preparation for girder installation. • Lynx Viaduct – pile installation (ongoing) with eastbound bents first to facilitate traffic phasing. • Frenchman's Bridge – fence installation and access road pioneering completed with temporary crane trestle installation underway. • Cut 2 – Pioneering road access to the top of cut continued with small blasts to facilitate the access road. Cut scheduled for completion November 20, 2021. • Cut 3 – Type D (overburden) and Type A (Rock) excavation continued. • Dart Creek Forest Service Road – road completed except the last 150m approaching Highway 1. Road being used for heavy haul to surplus disposal site and being maintained by KHCC. Archaeology works ongoing. • Cut 4 – mechanical rock excavation in the Cut 4 area (Blackwall) continued. • Grizzly Walls / Viaduct – site preparation and temporary access road construction mostly completed and foundation pile installation ongoing. • Blackwall Bridge – access road construction to East and West abutments and Piers continued. Temporary crane trestles being constructed. • Marmot Bridge – Access road construction continued with soil anchor stabilization installation almost complete. • Caribou Fill/Wall – Access excavation and L-30 access road construction halted while final design for Caribou Viaduct and wall are being completed. • Hedgehog Wall – Access road construction and Foundation began.
Three Month Lookahead:	<ul style="list-style-type: none"> • Continue participation in weekly meetings with KHCC and CP. • Province review of designs and management plans as design is finalized.

	<ul style="list-style-type: none"> • 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.
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4.7 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"> • Met with Ktunaxa Nation Council (KNC) to discuss bighorn sheep monitoring. • Held project team meetings with Indigenous groups. • 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. • Continued collaboration with KHCC ICEC to ensure Schedule 22 DBA requirements are met. • Continued collaboration with KHCC4 environment team to ensure Indigenous groups' concerns are considered in Construction Environmental Management Plan (CEMP) review.

4.8 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"> • KHCC submitted interim phase 2 temporary utility relocation designs to Province.
Three Month Lookahead:	<ul style="list-style-type: none"> • Continue implementation of Protocol Agreement. • Review of KHCC utilities designs ongoing. • Finalize the phase 1a costs and Letter of Authority for BC Hydro and KHCC. • Review final design for phase 2 temporary utility relocation. • Coordinate blasting with CP; blasting ongoing Cut 2 and Cut 3, first blast above CP (Cut #1) expected April 2022. • Resolution of CP request to increase size of track-level culverts.

4.9 Public and Stakeholder Engagement

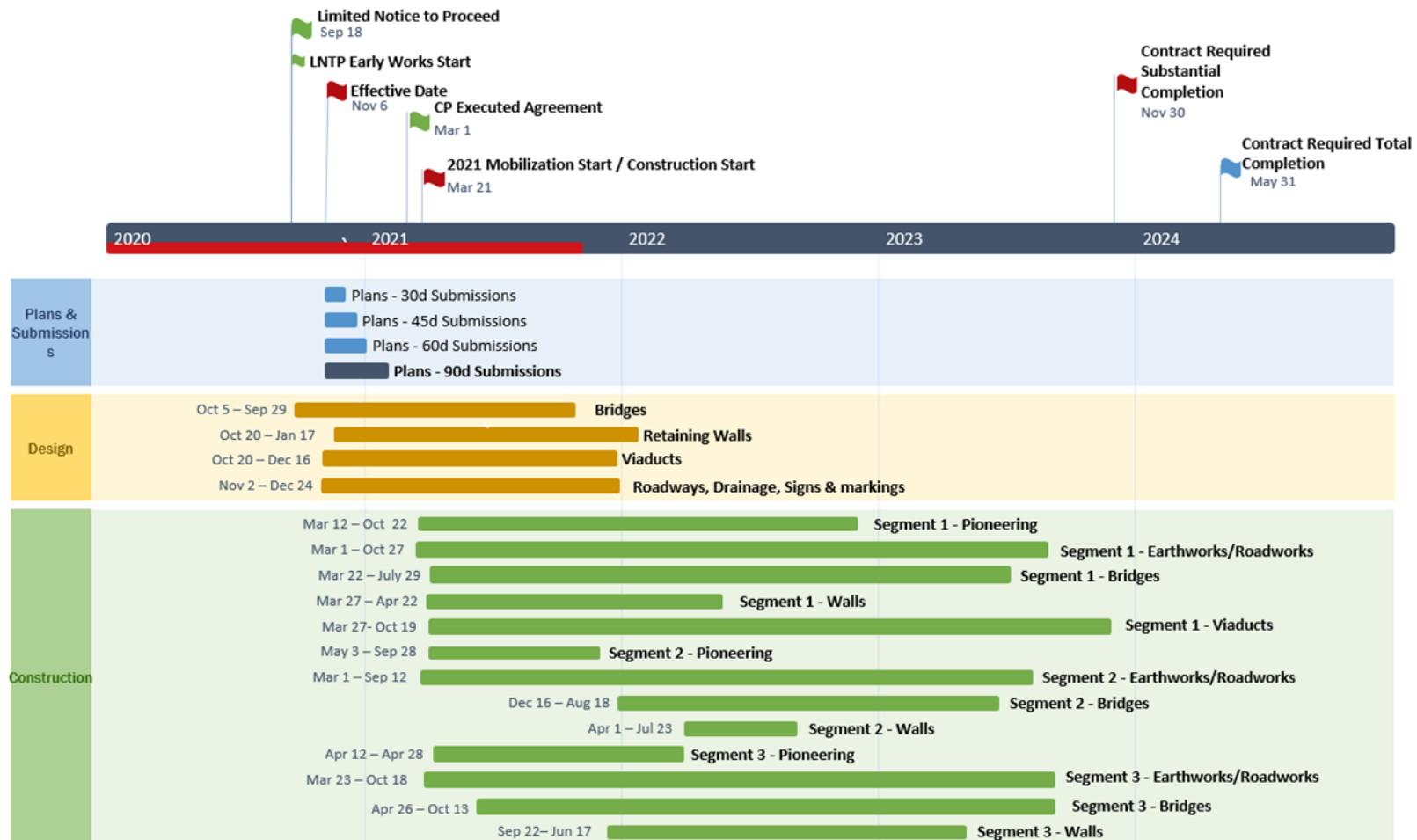
Scope:	<ul style="list-style-type: none"> • Manage ongoing public and stakeholder communications and engagement.
Monthly Highlights:	<ul style="list-style-type: none"> • Released monthly project newsletter. • Responded to public/stakeholder inquiries. • Presentation to Golden Town Council.

**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 and Community Liaison Committee.
- Public information webinar on project progress in the winter.
- Update local government on project progress.

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: Bighorn Wall - Pile concreting continued; looking east from Sheep west abutment - Oct 1, 2021

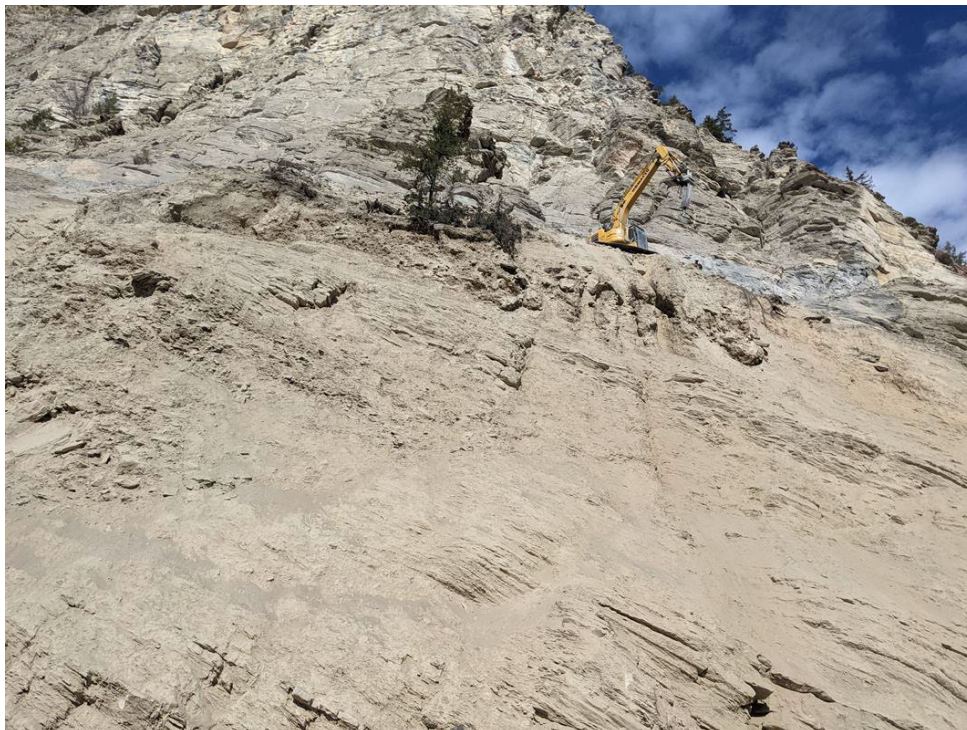


Figure 2: Cut 2 - Continue scaling slopes with excavator. - Oct 4, 2021



Figure 3: Sheep bridge - Starting formwork for P1 (expansion end) diaphragm - Oct 19, 2021



Figure 4: Marmot Viaduct - Concreting piles - Oct 22, 2021



Figure 5: Sheep's Bridge - Looking east - Oct 29, 2021



Figure 6: Bighorn – Installing Doka forms on pier 1 Oct 30, 2021