

# Monthly Status Report

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**Reporting Period**  
**August 2021**

# 1. Introduction

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## 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.

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 being prepared for construction and is expected to be substantially complete in winter 2023-24. This section will also feature four lanes of divided highway, along with improved avalanche and rock fall protection, fencing and passage for wildlife, and wider shoulders to accommodate cyclists.

## 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"><li>The project includes the widening of 4.8km of Highway 1 to a 4-lane 100km/hr. standard.</li></ul>
	Schedule	Delivered within the approved schedule.	●	<ul style="list-style-type: none"><li>The Project is on schedule to be completed by Winter 2023/2024.</li></ul>
	Budget	Delivered within the approved budget Total project budget is \$601 million.	●	<ul style="list-style-type: none"><li>The project spending for the month of August 2021 was \$16.2 million and total project spending to date is \$204.5 million. Total Federal Recoveries to date are \$94.0 million. The Project remains on budget.</li></ul>
	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"><li>The Project is defining Health and Safety requirements within Project Management Plan (PMP).</li><li>Workplace Occupational Health and Safety (OHS) committee in place and active.</li><li>The Health and Safety Plan for Project work is in place which includes specific COVID-19 protocols.</li><li>Lost Time Injury Frequency Rate (LTIFR) for the Project remains at 0.</li></ul>

Partners	Quality	Implement an effective Quality Management System.	●	<ul style="list-style-type: none"> <li>Conducted monthly site visit for audit purposes, with no major issues identified.</li> </ul>
	Environmental	Ensure our work is performed in an environmentally responsible manner.	●	<ul style="list-style-type: none"> <li>Submission reviews took place for management plan and permits.</li> <li>Completed weekly site surveillance visits.</li> </ul>
	Archaeology	Ensure the work is performed in a manner that meets the standards of the Heritage Conservation Act.	●	<ul style="list-style-type: none"> <li>Completed 16 days of fieldwork.</li> <li>Conducted archaeological investigation in the Dart Creek Forest Service Road (FSR) area.</li> </ul>
	Operations	Implement improvements to the Alternate Route along H93/95	●	<ul style="list-style-type: none"> <li>Construction cameras were installed and are operational.</li> <li>Monitored Traffic Management strategies.</li> <li>Installed sign overlays on Alternate Route signs to address overall driver confusion and improve safety.</li> <li>Scheduled winter preparation meeting with the District.</li> </ul>
	Design and Construction	Provide design and technical oversight, coordinate and manage activities on site, and conduct compliance reviews.	●	<ul style="list-style-type: none"> <li>Sheep's Bridge – Pile installation, and column and pile cap construction ongoing, abutment construction is underway.</li> <li>Bighorn Bridge – Temporary access road construction and crane pad installation, pile, and pile cap installation ongoing.</li> <li>Cut 2 – Access road pioneering continues.</li> <li>Cut 3 – Overburden and rock excavation ongoing. Progressive blasting program ongoing.</li> <li>Dart Creek Forest Service Road – Archaeology works ongoing, and road realignment has been completed.</li> <li>Grizzly Walls / Viaduct – Site preparation and temporary access road construction (ongoing), rock fall protection fencing almost complete; Pile installation ongoing.</li> <li>Lynx Viaduct – Pile installation (ongoing), temporary access road construction, soil anchor installation for access road ongoing.</li> <li>Blackwall Bridge – rockfall protection fencing installation commencing soon.</li> <li>Marmot Bridge – Soil anchor installation for access road construction ongoing, clearing and grubbing completed.</li> <li>Caribou Fill/Wall – L-30 Access Road to CP Lands construction ongoing.</li> <li>Hedgehog Wall – Soil anchor and snow fencing installation for rockfall protection ongoing.</li> </ul>
	Community Benefits	Work collaboratively with BCIB and successfully implement the Community Benefits Agreement.	●	<ul style="list-style-type: none"> <li>Project Team is actively working with BCIB.</li> <li>BCIB labour working onsite; permits have been issued.</li> </ul>
Partners	Indigenous Groups	Continue to build and maintain a positive collaborative working relationship.	●	<ul style="list-style-type: none"> <li>Continued to work with Indigenous Groups on key Environmental concerns (Bighorn Sheep).</li> </ul>

				<ul style="list-style-type: none"> <li>Continuing to work with Indigenous Groups on contract opportunities.</li> </ul>
	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"> <li>Regular meetings with CP Rail took place.</li> <li>Upslope rockfall attenuator fencing is 80% complete.</li> </ul>
	Public and Stakeholder Engagement	Continue to build and maintain positive relationships with the community and other stakeholders.	●	<ul style="list-style-type: none"> <li>Worked with KHCC to improve quality and reliability of traffic notifications.</li> <li>Met with BC Trucking Association.</li> </ul>

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"> <li><a href="#"><u>Preliminary Design Report (2008)</u></a></li> <li><a href="#"><u>Options Evaluation (2014)</u></a></li> <li><a href="#"><u>Delivery Options Report (2016)</u></a></li> <li><a href="#"><u>Budget Disclosure Statement (2017)</u></a></li> <li><a href="#"><u>Business Case (2016)</u></a></li> <li><a href="#"><u>Business Case Supplemental Memo (2019)</u></a></li> <li><a href="#"><u>Cost Report (2019)</u></a></li> <li><a href="#"><u>Risk Report (2019)</u></a></li> </ul>
	Procurement	<ul style="list-style-type: none"> <li><a href="#"><u>Relationship Review Process Description (2019)</u></a></li> <li><a href="#"><u>Relationship Review Consultant Protocol (2019)</u></a></li> <li>Design-Build RFQ Closed November 2019</li> <li>Archaeology RFP Closed January 2019</li> <li><a href="#"><u>Design-Build RFP Issued December 2019</u></a></li> <li><a href="#"><u>Preferred proponent chosen (September 2020)</u></a></li> <li>Limited Notice to Proceed Agreement (LNTP) signed and implemented (September 2020)</li> </ul>
	Environmental	<ul style="list-style-type: none"> <li><a href="#"><u>Environmental Synopsis Report (2016)</u></a></li> <li><a href="#"><u>Various Environmental Reports (2005 – 2016)</u></a></li> </ul>
	Archaeology	<ul style="list-style-type: none"> <li>Archaeological and Heritage Resource Management Plan (<a href="#"><u>AHRMP</u></a>) (August 2020)</li> </ul>
	Operations	<ul style="list-style-type: none"> <li><a href="#"><u>Planning for Traffic Management and Closures during construction</u></a></li> </ul>

	Technical	<ul style="list-style-type: none"> <li>Reference concept design developed (2016)</li> <li><a href="#">Reference concept design updated (2019)</a></li> <li>Various geotechnical reports (2005-2019)</li> </ul>
	Community Benefits	<ul style="list-style-type: none"> <li><a href="#">Community Benefits Agreement (July 2018)</a></li> <li>BCIB Health and Safety Program (March 2020)</li> <li>BCIB Apprenticeship and Training Targets (March 2020)</li> <li><a href="#">BCIB Sub-Appendix with the Kicking Horse Project Information (March 2020)</a></li> <li>BCIB – AIRCC Enabling Agreement Executed (May 2020)</li> </ul>
Partners / Stakeholders	Indigenous Relations	<ul style="list-style-type: none"> <li>Ongoing engagement and consultation</li> </ul>
	Third Parties	<ul style="list-style-type: none"> <li>Contribution Agreement – Government of Canada (2017)</li> </ul>
	Public and Stakeholder Engagement Third parties	<ul style="list-style-type: none"> <li>Community Liaison Committee established (2018)</li> <li>Held Public Information Sessions in Golden and Radium (2019)</li> <li>Held public presentations to various stakeholders (2019-2020)</li> </ul>

## 4. August Highlights and Three Month Lookahead

### 4.1 Safety

Scope:	<ul style="list-style-type: none"> <li>Establish Occupational Health and Safety (OH&amp;S) Project delivery objectives and performance measures.</li> <li>Manage Project OH&amp;S activities.</li> <li>Monitor relevant OH&amp;S performance metrics.</li> <li>Ensure the Project complies with relevant WorkSafeBC regulations and government requirements.</li> <li>Identify specific health and safety roles and responsibilities.</li> <li>Outline relevant health and safety management processes and activities.</li> </ul>
Accomplished in Month:	<ul style="list-style-type: none"> <li>Continued to receive health and safety updates and incident reports from BCIB and KHCC.</li> <li>One site safety inspection was conducted on August 6. Coordination between the Province BCIB and KHCC is ongoing.</li> <li>One near miss was documented on the health and safety log for August. It was deemed minor, and the incident resulted in no lost time due to injury.</li> <li>Lost Time Injury Frequency Rate (LTIFR) for the Project remains at 0.</li> </ul>
Three Month Lookahead:	<ul style="list-style-type: none"> <li>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.</li> <li>Orientation and safety training for onsite personnel as required.</li> <li>Conduct surveillance audits of KHCC's safety management performance.</li> </ul>

## 4.2 Quality

<b>Scope:</b>	<ul style="list-style-type: none"><li>• Establish quality management project objectives and performance measures.</li><li>• Monitor relevant quality management performance metrics.</li><li>• Manage project quality management activities.</li><li>• Identify specific quality management roles and responsibilities.</li></ul>
<b>Accomplished in Month:</b>	<ul style="list-style-type: none"><li>• A quality audit on construction management was conducted August 10 onsite by the QE Quality Manger.</li><li>• Reviewed four Non-Compliance Reports (NCR) from KHCC; issued one NCR to KHCC.</li><li>• Reviewed KHCC monthly quality records and test results for compliance to the DBA.</li></ul>
<b>Three Month Lookahead:</b>	<ul style="list-style-type: none"><li>• Review KHCC quality specific management plans and provide comments.</li><li>• Oversee quality of KHCC work onsite.</li><li>• Record daily observation reports of work on site.</li><li>• Review KHCC quality records for compliance to the DBA.</li><li>• Bringing on board an additional Quality Surveillance Technician to focus on structures in September 2021.</li></ul>

## 4.3 Environmental

<b>Scope:</b>	<ul style="list-style-type: none"><li>• Complete environmental reviews of KHCC's submissions.</li><li>• Support communications team with stakeholder engagement.</li><li>• Provide environmental support to Project as and when needed.</li></ul>
<b>Accomplished in Month:</b>	<ul style="list-style-type: none"><li>• Reviewed and commented on contractor submissions for CEMP and permits.</li><li>• Weekly site environmental surveillance conducted, and a surveillance report was generated.</li><li>• Coordination with Golden Rod and Gun Club.</li></ul>
<b>Key Activities for Next 3 Months:</b>	<ul style="list-style-type: none"><li>• Support stakeholder and Indigenous Group meetings; responding to follow-up comments and questions, as requested by the Province.</li><li>• Review and comment on Design Builder's environmental submissions.</li><li>• Provide environmental support to Project as and when needed.</li><li>• Site environmental surveillance.</li></ul>

## 4.4 Archaeology

<b>Scope:</b>	<ul style="list-style-type: none"><li>• Managing, directing, and undertaking all archaeological work, including Archaeology Impact Assessment (AIA), Systematic Data Recovery (SDR), and archaeological monitoring.</li><li>• Providing the Province and KHCC with information for the management of archaeological and heritage resources.</li><li>• Responding to chance archaeological or heritage finds.</li></ul>
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<b>Accomplished in Month:</b>	<ul style="list-style-type: none"> <li>• 16 days of fieldwork completed.</li> <li>• Completed additional AIA at proposed ditching and culvert areas along Dart Creek Forest Service Road.</li> <li>• Completed processing of sediments from Dart Creek area.</li> <li>• Submitted shift summary for July 16-31.</li> <li>• Submitted draft of 2019-0208 Interim Report – 2021 AIA for proposed ditching and culverts on the Dart Creek Forest Service Road to the Archaeology Branch for review.</li> </ul>
<b>Key Activities for Next 3 Months</b>	<ul style="list-style-type: none"> <li>• Monthly reporting for AIA and SDR works along Dart Creek FSR.</li> <li>• Artifact laboratory analysis is ongoing.</li> <li>• 2020 SDR reporting.</li> <li>• 2021 SDR and AIA reporting.</li> <li>• Submit remaining 2020 site forms updates and 2021 site form updates.</li> <li>• Alteration permit amendment request submissions, as needed.</li> <li>• Ongoing shift summary reporting.</li> <li>• Submit investigation permit application to undertake SDR.</li> </ul>

## 4.5 Operations

<b>Scope:</b>	<ul style="list-style-type: none"> <li>• Develop plans for managing traffic along the Alternate Route H93/95 during full project closures.</li> <li>• Developed and implemented plans for enhancements along Arterial Route in Golden to support Alternate Route.</li> <li>• Establish agreements with other jurisdictions for provision of services along the Alternate Route.</li> </ul>
<b>Accomplished in Month:</b>	<ul style="list-style-type: none"> <li>• Construction cameras were activated; ongoing monitoring of KHCC Traffic Management strategies.</li> <li>• Scheduled winter preparation meeting with District, Concession, Project, and KHCC in late September.</li> <li>• Installed sign overlays on Alternate Route signs to address overall driver confusion and improve safety.</li> </ul>
<b>Key Activities for Next 3 Months:</b>	<ul style="list-style-type: none"> <li>• Monitoring Alternate Route performance.</li> <li>• Winter preparation.</li> <li>• Commuter / Day pass distribution.</li> <li>• Establish program for Alternate Route Enforcement with RCMP/CVSE.</li> <li>• Develop Traffic Control Plan for September at Highway 95 / TCH junction.</li> </ul>

## 4.6 Design and Construction

<b>Scope:</b>	<ul style="list-style-type: none"> <li>• Development of a reference concept, technical requirements/specifications, and related technical studies for the Project.</li> <li>• 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.</li> <li>• Technical input to the procurement processes.</li> </ul>
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	<ul style="list-style-type: none"> <li>• Provide technical support to the Project Team during the review of contractor submittals.</li> <li>• Oversight of design build project work.</li> <li>• Compliance reviews during construction.</li> </ul>
<b>Accomplished in Month:</b>	<ul style="list-style-type: none"> <li>• Participated in KHCC Submission reviews; managed design and construction issues (e.g., archaeology permits, geotechnical baseline, avalanche ditch widths).</li> <li>• Managed changes to concrete mix designs.</li> <li>• Reviewed weekly and monthly slope survey monitoring program deliverables</li> <li>• Two site visits by OE Lead Engineer (Aug 3 to 5, and Aug 24 to 26).</li> <li>• Sheep's Bridge – Pile installation and column and pile cap construction ongoing, abutment construction is underway.</li> <li>• Bighorn Bridge – Temporary access road construction and crane pad installation, pile, and pile cap installation ongoing.</li> <li>• Cut 2 – Access road pioneering continues.</li> <li>• Cut 3 – Overburden and rock excavation ongoing. Progressive blasting program ongoing.</li> <li>• Dart Creek Forest Service Road – Archaeology works ongoing and road realignment has been completed.</li> <li>• Grizzly Walls / Viaduct – Site preparation and temporary access road construction ongoing, rock fall protection fencing almost complete; Pile installation ongoing.</li> <li>• Lynx Viaduct – Pile installation (ongoing), temporary access road construction, soil anchor installation for access road ongoing.</li> <li>• Blackwall Bridge – rockfall protection fencing installation commencing soon.</li> <li>• Marmot Bridge – Soil anchor installation for access road construction ongoing, clearing and grubbing completed.</li> <li>• Caribou Fill/Wall – L-30 Access Road to CP Lands construction ongoing.</li> <li>• Hedgehog Wall – Soil anchor and snow fencing installation for rockfall protection ongoing.</li> </ul>
<b>Key Activities for Next 3 Months:</b>	<ul style="list-style-type: none"> <li>• Participate in weekly meetings with KHCC and with CP.</li> <li>• Participate in Implementation activities including review submissions, participate in daily meetings handle design and construction issues as they arise and provide technical input for the resolution of claims.</li> <li>• Participate in communications working group meetings.</li> <li>• Support resolution of key issues including the archaeology permit timelines, and support CP's timely review of submissions.</li> <li>• Conduct review of monthly statement of progress payment submissions.</li> <li>• Manage slope survey monitoring consultant.</li> <li>• Site visits by OE Lead Engineer, OE Quality Manager, and OE Safety Advisor.</li> <li>• Construction: blasting for rock cuts being carried out for remainder of construction season.</li> <li>• One additional OE field team member to mobilize in mid-to-late September.</li> </ul>

## 4.7 Indigenous Groups

<b>Scope:</b>	<ul style="list-style-type: none"><li>• Fulfill Province's duty to consult with identified Indigenous communities.</li><li>• Reach accommodation agreements with Indigenous communities through negotiation.</li><li>• Facilitate Indigenous community engagement in environment and socio-economic review.</li><li>• Develop indigenous requirements for inclusion in DBA.</li><li>• Reach accommodation agreements with Indigenous Groups.</li></ul>
<b>Accomplished in Month:</b>	<ul style="list-style-type: none"><li>• Met with Ktunaxa Nation Council (KNC) to discuss Bighorn Sheep monitoring.</li><li>• Provided Indigenous Groups with Systematic Data Recovery summaries.</li><li>• Collaborated with Environmental team on Construction Environmental Management Plan (CEMP) review and Archaeology updates.</li><li>• Collaborated with KHCC Indigenous Contracting and Employment Coordinator on employment opportunities for the Indigenous Groups.</li></ul>
<b>Key Activities for Next 3 Months:</b>	<ul style="list-style-type: none"><li>• Continue regular meetings with all identified Indigenous Groups, including the Pespesellkwe, Ktunaxa, and Shuswap Indian Band.</li><li>• Continued collaboration with KHCC ICEC to ensure Schedule 22 DBA requirements are met.</li><li>• Continue support with Ktunaxa as per Strategic Engagement Agreement.</li><li>• Continue collaboration with KHCCP4 environment team to ensure Indigenous groups concerns are considered in Construction Environmental Management Plan (CEMP) review.</li></ul>

## 4.8 Third Parties

<b>Scope:</b>	<ul style="list-style-type: none"><li>• Develop utilities and rail agreements as required.</li><li>• Secure local and regional government approvals as required.</li></ul>
<b>Accomplished in Month:</b>	<ul style="list-style-type: none"><li>• Ongoing meetings with CP.</li><li>• Upslope rockfall attenuator fencing is 80% complete.</li></ul>
<b>Key Activities for Next 3 Months:</b>	<ul style="list-style-type: none"><li>• Continued implementation of Protocol Agreement with CP.</li><li>• Review of KHCC utilities designs is ongoing.</li><li>• Complete rockfall attenuator fencing.</li><li>• Coordinate blasting with CP; first blast above CP (Cut #1) expected mid-September.</li></ul>

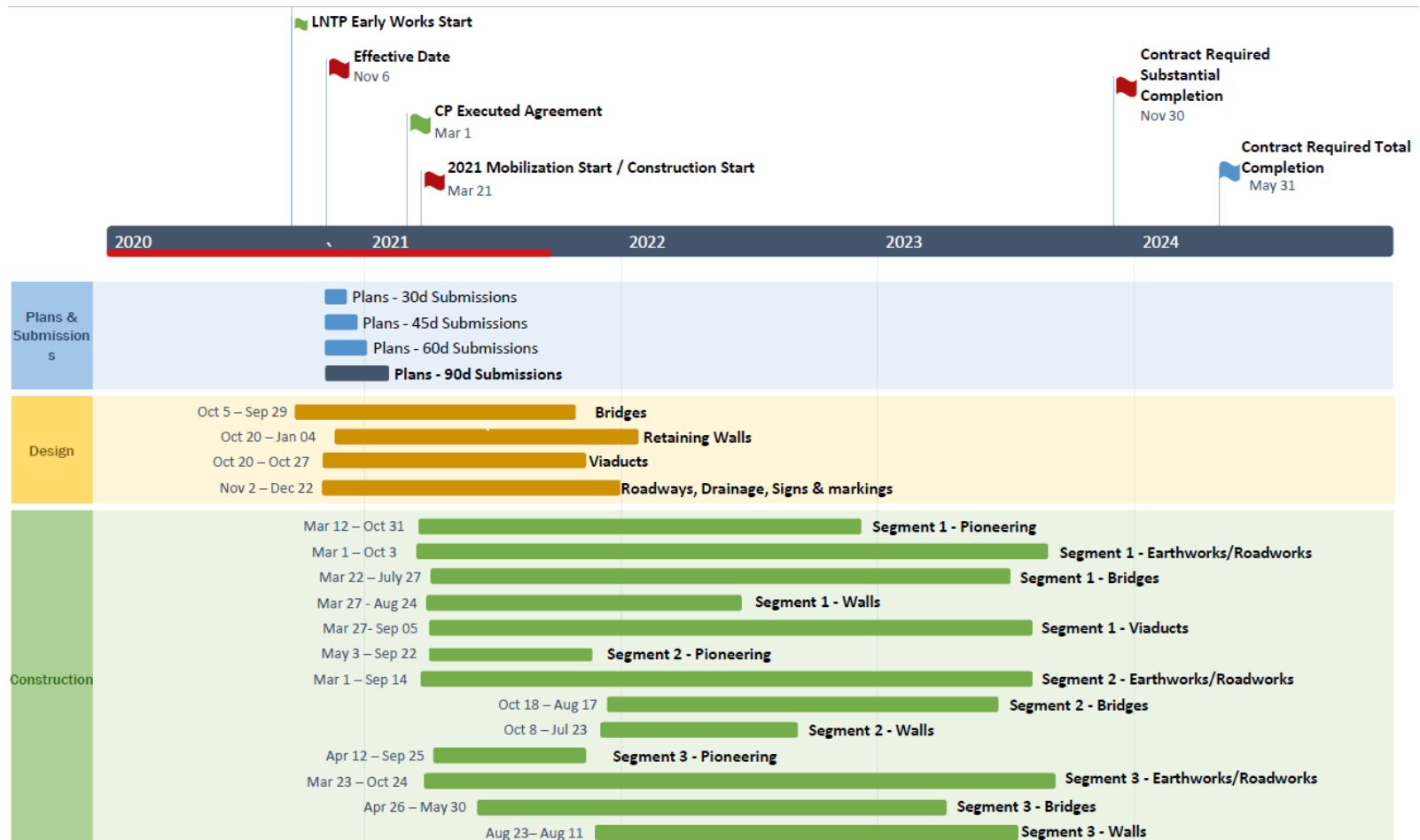
## 4.9 Public and Stakeholder Engagement

<b>Scope:</b>	<ul style="list-style-type: none"><li>• Manage ongoing public and stakeholder communications and engagement.</li><li>• Communications strategy and activities.</li><li>• Determine communications and community relations for inclusion in the contract.</li></ul>
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<b>Accomplished in Month:</b>	<ul style="list-style-type: none"> <li>• Released project newsletter.</li> <li>• Responded to public/stakeholder inquiries.</li> <li>• Website and social media updates including highway status calendar and stakeholder notices.</li> <li>• Held webinar-format public information session and follow-up Q&amp;A session.</li> <li>• Commenced preparations for reactivation of commuter pass system for fall 2021 extended closures.</li> </ul>
<b>Key Activities for Next 3 Months:</b>	<ul style="list-style-type: none"> <li>• Oversee KHCC's Communication and Public Engagement (C/PE) obligations and activities.</li> <li>• Continue to build awareness of construction and traffic management activities with media info bulletins/interviews, website updates, newsletters and advisories, and social media.</li> <li>• Continue direct dialogue with key stakeholders and Community Liaison Committee.</li> <li>• Continue development and installation of display content for project office in Golden.</li> <li>• Begin planning for a winter period update public information session on KHCC design and activities.</li> <li>• Reinstate canyon commuter pass system for fall 2021 extended closure.</li> </ul>

## 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

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**FIGURE 1: BIGHORN WALL – DRILLING 1<sup>ST</sup> CASING OF THE 7<sup>TH</sup> PILE ALONG THE VIADUCT AUG 3, 2021**



**FIGURE 2: KHCC CREWS TRIMMING SLOPE AND INSTALLING WIRE MESH AT GRIZZLY 4 AUG 5, 2021**



**FIGURE 3: BIGHORN – PGE CREWS PREPARING FOR GROUTING AT UPPER BENCH MICRO PILES AUG 13, 2021**



**FIGURE 4: EAST ABUTMENT TRANSITION PIER PAD COMPLETED AT BIGHORN AUG 13, 2021**



**FIGURE 5: HARRIS REBAR CREWS INSTALLING REBARS FOR PILE CAP AT SHEEP'S BRIDGE AUG 14, 2021**



**FIGURE 6: SHEEP'S BRIDGE – PIER 2 NORTH PIER CAP AUG 23, 2021**



**FIGURE 7: SHEEP'S BRIDGE – PIER 2 NORTH PIER CAP REBAR INSTALLATION AUG 24, 2021**