

Monthly Status Report

Reporting Period
July 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.

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"> 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 July 2021 was \$9.7 million and total project spending to date is \$188.3 million. Total Federal Recoveries to date are \$87.8 million. The Project remains on 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 is defining Health and Safety requirements within Project Management Plan (PMP) Workplace OHS committee in place and active. Monitoring of COVID-19 situation is ongoing No lost time this month
	Quality	Implement an effective Quality Management System.	●	<ul style="list-style-type: none"> Conducted monthly site visit for audit purposes, with no major issues identified

	Environmental	Ensure our work is performed in an environmentally responsible manner.	●	<ul style="list-style-type: none"> • Submission reviews for management plan and permits • Completed 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"> • Completed 31 days of fieldwork • Archaeological investigation conducted in the Dart Creek Forest Service Road (FSR) area.
	Operations	Implement improvements to the Alternate Route along H93/95	●	<ul style="list-style-type: none"> • Commuter day passes distributed • Relocated two Changeable Message Signs (CMS) in support of wildlife signage along Hwy 95
	Design and Construction	Provide design and technical oversight, coordinate and manage activities on site, and conduct compliance reviews.	●	<ul style="list-style-type: none"> • Sheep's Bridge – Pile installation ongoing, bridge abutment construction underway, Geotech investigation completed • Bighorn Bridge – Temp access road construction and crane pad installation, pile installation, Geotech investigation completed • Cut 3 – Type D (overburden) excavation ongoing • Dart Creek Forest Service Road – Archaeology works ongoing, clearing and grubbing road upgrading and maintenance • Grizzly Walls / Viaduct – Site preparation and temp access road construction ongoing, rock fencing installation • Lynx Viaduct – Pile installation (ongoing), temp access road construction, soil anchor installation for access road • Blackwall Bridge – Clear and Grub / rock fence installation pending • Marmot Bridge – Soil anchor installation for access road construction, clear and grub • Caribou Fill/Wall – Access excavation and L-30 Access Road construction • Hedgehog Wall – Soil anchor and snow fencing installation for rockfall protection
	Community Benefits	Work collaboratively with BCIB and successfully implement the Community Benefits Agreement.	●	<ul style="list-style-type: none"> • Project Team is actively working with BCIB • 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"> • Finalized Shuswap Indian Band (SIB) accommodation agreement • Continued to work with Indigenous Groups on key Environmental concerns (Sheep) • Continuing to work with Indigenous Groups on contract 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"> • Ongoing meetings with CP Rail • Temporary and permanent design proceeding with BC Hydro

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 • Successful meeting with BC Trucking Association
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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"> • Preliminary Design Report (2008) • Options Evaluation (2014) • Delivery Options Report (2016) • Budget Disclosure Statement (2017) • Business Case (2016) • Business Case Supplemental Memo (2019) • Cost Report (2019) • Risk Report (2019)
	Procurement	<ul style="list-style-type: none"> • Relationship Review Process Description (2019) • Relationship Review Consultant Protocol (2019) • Design-Build RFQ Closed November 2019 • Archaeology RFP Closed January 2019 • Design-Build RFP Issued December 2019 • Preferred proponent chosen (September 2020) • Limited Notice to Proceed Agreement (LNTP) signed and implemented (September 2020)
	Environmental	<ul style="list-style-type: none"> • Environmental Synopsis Report (2016) • Various Environmental Reports (2005 – 2016)
	Archaeology	<ul style="list-style-type: none"> • Archaeological and Heritage Resource Management Plan (AHRMP) (August 2020)
	Operations	<ul style="list-style-type: none"> • Planning for Traffic Management and Closures during construction
	Technical	<ul style="list-style-type: none"> • Reference concept design developed (2016) • Reference concept design updated (2019) • Various geotechnical reports (2005-2019)

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

4. July 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 • Monitor relevant OH&S performance metrics • Ensure the Project complies with relevant WorkSafeBC regulations and government requirements • Identify specific health and safety roles and responsibilities • Outline relevant health and safety management processes and activities
Accomplished in Month:	<ul style="list-style-type: none"> • Update Province's Site-Specific Safety Management Plan and Orientations (ongoing) • Site safety audit conducted on July 5, 2021
Three Month Lookahead:	<ul style="list-style-type: none"> • Maintain Province's Safety Management Plan for implementation under 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 August 6, 2021

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.
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	<ul style="list-style-type: none"> • Identify specific quality management roles and responsibilities
Accomplished in Month:	<ul style="list-style-type: none"> • Reviewed and commented on KHCC Quality Management Plans (ongoing) • Site visit by safety advisor to observe KHCC internal quality audit on micro piles • Reviewed KHCC monthly quality records and test results for compliance to the DBA • Reviewed 12 NCRs from KHCC
Three Month Lookahead:	<ul style="list-style-type: none"> • Review KHCC quality specific management plans and provide comments • Oversee quality of KHCC work onsite • Record daily observation reports of work on site • Review KHCC quality records for compliance to the DBA • Bring on board an additional Quality Surveillance Technician to focus on structures in September 2021

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
Accomplished in Month:	<ul style="list-style-type: none"> • Reviewed and provided comment on KHCC’s plan and design submissions • Reviewed and provided input on Design-Builder environmental permit submissions • Performed weekly site environmental surveillance • Coordination with Golden Rod and Gun Club on Bighorn Sheep impacts
Key Activities for Next 3 Months:	<ul style="list-style-type: none"> • Support at stakeholder and Indigenous Group meetings; responding to follow-up comments and questions, as requested by the Province • Review and comment on Design Builder’s environmental submissions • Provide environmental support to Project as and when needed • Site environmental surveillance

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
Accomplished in Month:	<ul style="list-style-type: none"> • 31 days of fieldwork completed • Completed archaeological monitoring and sample collection in Dart Creek FSR area • Shift summary reports sent to Province and Indigenous communities • Undertook additional AIA at priority ditching and culvert areas along Dart Creek FSR

	<ul style="list-style-type: none"> • Responded to requests for archaeological information from BC Hydro for work in the Project area
Key Activities for Next 3 Months	<ul style="list-style-type: none"> • Additional AIA and SDR as needed along Dart Creek Forest Service Road • Artifact analysis ongoing in the laboratory • 2020 SDR reporting, 2021 SDR and AIA reporting • Submission of remaining 2020 site forms updates • Alteration permit amendment request submissions, as needed • Ongoing shift summary reporting

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 an 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
Accomplished in Month:	<ul style="list-style-type: none"> • Traffic modeling for H1/H95 intersection during extended closure completed • Stakeholder interviews related to Alternate Route performance completed (delivered jointly with Rocky Mountain District) • Monitoring KHCC traffic management performance within project site • Assessment performed on the condition of Alternate Route
Key Activities for Next 3 Months:	<ul style="list-style-type: none"> • Construction camera commissioning and activation • Monitor Alternate Route performance during extended closures • Monitor Traffic Management during evening and overnight closures • Commuter day and season passes distribution in September 2021 • Fall Pavement Marking (September) along the Alternate Route (H95 and H93S) • Enhanced Maintenance Services commence during Alternate Route implementation

4.6 Design and Construction

Scope:	<ul style="list-style-type: none"> • Development of a reference concept, technical requirements/specifications, and related technical studies for the Project • 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 • Technical input to the procurement processes • Provide technical support to the Project Team during the review of contractor submittals • Oversight of design build project work • Compliance reviews during construction
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Accomplished in Month:	<ul style="list-style-type: none"> • Manage Province's Site surveillance process including orienting Quality Surveillance Technicians in Golden • Review of KHCC Plans and proposed courses of action including Work Method Statements, Inspection and Testing Plans and other Quality Records • Participated in contract activities including review of Interim and Final Submissions, leading daily briefing meetings, and handling design and construction issues • Managed changes to concrete mix designs • Reviewed weekly and monthly slope survey monitoring program deliverables • Partnering session with KHCC completed on July 22 in Golden • Two site visits by Lead Engineer (July 5 to 7, and July 20 to 22) • Sheep's Bridge – Pile installation ongoing, bridge abutment construction underway, Geotech investigation completed • Bighorn Bridge – Temp access road construction and crane pad installation, pile installation, Geotech investigation completed • Cut 3 – Type D (overburden) excavation ongoing • Dart Creek Forest Service Road – Archaeology works ongoing, clearing and grubbing road upgrading and maintenance • Grizzly Walls / Viaduct – Site preparation and temp access road construction ongoing, rock fencing installation • Lynx Viaduct – Pile installation (ongoing), temp access road construction, soil anchor installation for access road • Blackwall Bridge – Clear and Grub / rock fence installation pending • Marmot Bridge – Soil anchor installation for access road construction, clear and grub • Caribou Fill/Wall – Access excavation and L-30 Access Road construction • Hedgehog Wall – Soil anchor and snow fencing installation for rockfall protection
Key Activities for Next 3 Months:	<ul style="list-style-type: none"> • Oversee KHCC Project Work onsite for compliance to DBA • Review KHCC construction plans and proposed courses of action under the Review and Consent procedure • Participate in implementation activities including reviewing submissions, participating in daily meetings, managing design and construction issues as they arise, and providing technical input for the resolution of claims • Support resolution of key issues including the archaeology permit timelines, and support CP's review of submissions • Conduct review of monthly statement of progress payment submissions • Manage slope survey monitoring consultant • Monthly site visits by OE Lead Engineer, OE Quality Manager, and OE Safety Advisor • Construction: blasting for rock cuts being carried out for remainder of construction season • One additional OE field team member to mobilize in mid-to-late September

4.7 Community Benefits

Scope:	<ul style="list-style-type: none"> • Work collaboratively with BC Infrastructure Benefits Inc. (BCIB) to successfully implement the Community Benefits Agreement (CBA)
Accomplished in Month	<ul style="list-style-type: none"> • 135 BCIB workers registered on site in July, including 45 priority hires (numbers will vary dependent on available work) • 97 permitted workers have been utilized by the Design Builder to date through multiple permits issued, including clearing, drilling, traffic control high angle rope access, scaling and rockwork. • Safety manager met with BCIB regarding workforce and safety on site
Key Activities for Next 3 Months	<ul style="list-style-type: none"> • Continue to grow workforce onsite through BCIB labour and permitted work • Workforce analysis and forecasting for BCIB • Continued regular meetings with BCIB and KHCC to discuss implementation of CBA on KHCP4 • Closely align oversight of Worker Safety between the Province's construction management team and BCIB to avoid duplication and to ensure audits/oversight is timely and appropriate

4.8 Indigenous Groups

Scope:	<ul style="list-style-type: none"> • Fulfill Province's duty to consult with identified Indigenous communities • Reach accommodation agreements with Indigenous communities through negotiation • Facilitate Indigenous community engagement in environment and socio-economic review • Develop indigenous requirements for inclusion in DBA • Reach accommodation agreements with Indigenous Groups
Accomplished in Month:	<ul style="list-style-type: none"> • Facilitated meeting between Stantec and Pespesellkwe te Secwepemc (PteS) on KHCP4 archaeology program • Met with Ktunaxa Nation Council (KNC) to discuss work plan and Bighorn Sheep Management • Provided Indigenous Groups with Systematic Data Recovery Summaries for Dart Creek area • Collaborate with KHCC Indigenous Contracting and Employment Coordinator (ICEC) on employment opportunities for the Indigenous Groups
Key Activities for Next 3 Months:	<ul style="list-style-type: none"> • Regular meetings continue to be held 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 support with Ktunaxa as per Strategic Engagement Agreement • Continued collaboration with KHCP4 environment team to ensure Indigenous groups concerns are considered in CEMP review

4.9 Third Parties

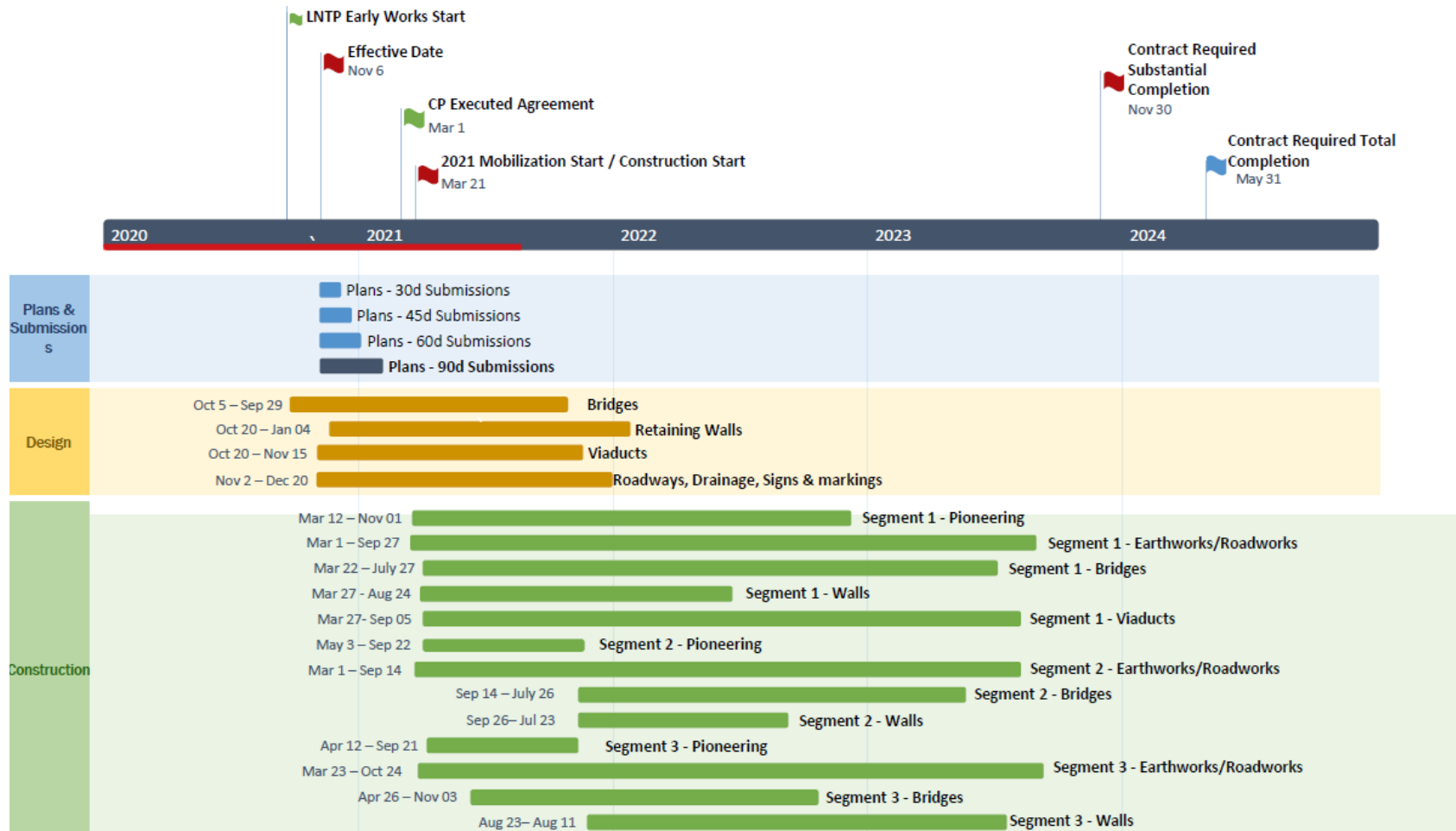
Scope:	<ul style="list-style-type: none"> • Develop utilities and rail agreements as required • Secure local and regional government approvals as required
Accomplished in Month:	<ul style="list-style-type: none"> • Review of KHCC utility permanent design package • Track-level ditching complete • Upslope rockfall attenuator fencing 70% complete
Key Activities for Next 3 Months:	<ul style="list-style-type: none"> • Continued implementation of Protocol Agreement with CP • Review of KHCC utilities designs ongoing • Complete rockfall attenuator fencing • Coordinate blasting with CP; first blast August 5

4.10 Public and Stakeholder Engagement

Scope:	<ul style="list-style-type: none"> • Manage ongoing public and stakeholder communications and engagement • Communications strategy and activities • Determine communications and community relations for inclusion in the contract
Accomplished in Month:	<ul style="list-style-type: none"> • Distributed project newsletter to subscribers • Collaborated with project teams in preparation for adoption of new stakeholder management system • Updated websites and social media accounts including highway status calendar and stakeholder notices • Prepared and led successful meeting with BC Trucking Association • Preparation for virtual public information session to be held this summer, including team training on webinar platform
Key Activities for Next 3 Months:	<ul style="list-style-type: none"> • Oversee KHCC's Communication and Public Engagement (C/PE) obligations and activities • Ongoing: build awareness of construction and traffic management activities with media info bulletins/interviews, website updates, newsletters and advisories, and social media • Ongoing dialogue with key stakeholders and Community Liaison Committee • Complete planning and execution of public information session on KHCC design and activities • Prepare for canyon commuter pass system for re-implementation for Fall 2021 extended closure

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 BRIDGE - TEMPORARY ACCESS STAIRS TO MICROPILE OPERATION - JUL 5, 2021



FIGURE 2 – BIGHORN BRIDGE - MICRO-PILE OPERATION CENTRE PIER PILLAR JUL 5, 2021



FIGURE 3: MARMOT - GRA COMPLETED 90% OF FENCE. - JUL 8, 2021



FIGURE 4: SPIDEX EXCAVATOR REMOVING DEBRIS FROM ROCK FENCING - JUL 8, 2021



FIGURE 5: CREWS INSTALLING MICRO PILES AT SHEEP'S BRIDGE CENTER PIER - JUL 14, 2021



FIGURE 6: KHCC CLEANING AND DOUBLE-CHECKING FORMS FOR CONCRETE POUR AT SHEEP'S BRIDGE. - JUL 21, 2021



FIGURE 7: CUT 3 - MASS EXCAVATION AND GEOTECHNICAL DRILLING. - JUL 27, 2021