CABLEWAY UPGRADES AND REPAIRS AT TASEKO RIVER AT OUTLET OF TASEKO LAKES (08MA003)

ENVIRONMENT AND CLIMATE CHANGE CANADA
NATIONAL HYDROLOGICAL SERVICES
HYDROLOGICAL OPERATIONS & ENGINEERING SERVICES – NORTH & WEST

1.0 Introduction

Environment and Climate Change Canada (ECCC) maintains cableway and hydrometric gauging stations across approximately 500 sites in the Pacific and Yukon areas. The hydrometric data support activities such as policy development, infrastructure design, water allocation, flood and drought response, recreation, navigation, ecosystem protection, and scientific study.

Hydrometric stations typically consist of a “walk-in” or “look-in” instrument shelter and a cableway or metering bridge to measure discharge. Other structures include helicopter pads and access stairways.

Many of the hydrometric stations were built decades ago and structural degradation has occurred over time. As such, infrastructure deficiencies and safety concerns have been identified; requiring repairs and upgrades to return these stations to operational condition.

1.1 Objective

ECCC requires a Contractor to conduct construction activities to upgrade the existing cableway to a level of safety acceptable for personnel operation at the Water Survey of Canada Station at Taseko River at Outlet of Taseko Lakes.

2.0 Project Station Location and Access

The station’s coordinates are approximately 51.37900 N and 123.63122 W NAD83, 141km southwest of Williams Lake by air. There is also potential, unconfirmed road access to approximately 150m from the home-side of the station, as follows. From Lees Corner, turn onto Hanceville Cut Off Rd. Continue right at the fork on Big Creek Rd. After approx. 3.75km, turn right onto Taseko Lake Rd. Continue along Taseko Lake Rd. for approx. 54km. Cross the bridge over Taseko River; the road changes to Nemaiah Valley Rd. at this point. Continue along Nemaiah Valley Rd. for approx. 13.5km. Turn left onto Elkin Creek FSR (Tuzcha Lake Road) and continue for approx. 20km. The closest road point is approx. 150m from the site location. See Figure 1 and Figure 2 below for the station location and station map, respectively.

There is no confirmed road access to the home-side and far-side. The contractor is responsible for developing and executing a plan to transport the necessary equipment and personnel to the home-side and far-side of the river to complete the scope of work without any materials or equipment entering the stream.

The schedule has been chosen to minimize risk of saturation within the excavation, but it is possible that groundwater at any depth may be encountered within the excavation on both banks. Shoring or proper sloping of the excavation will be expected. Determination of ground water level, and completion of work under high ground water level is responsibility of contractor.

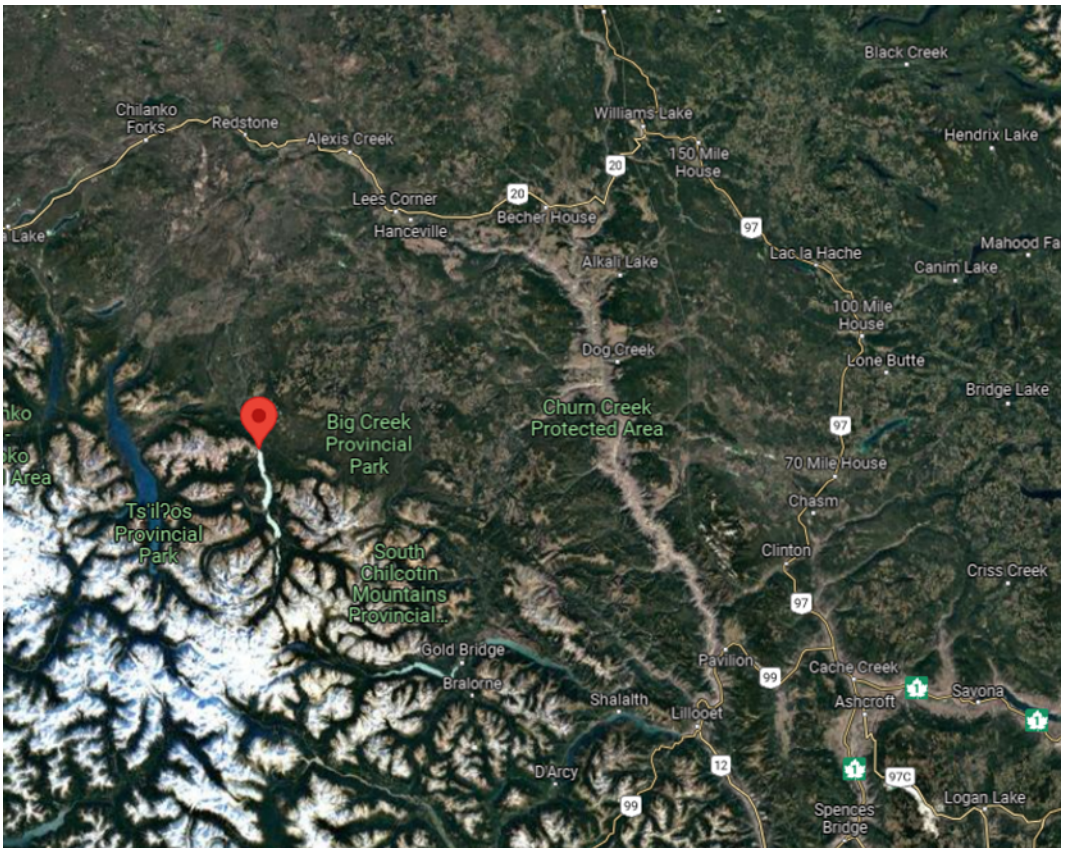

Figure 1: *Station Location*

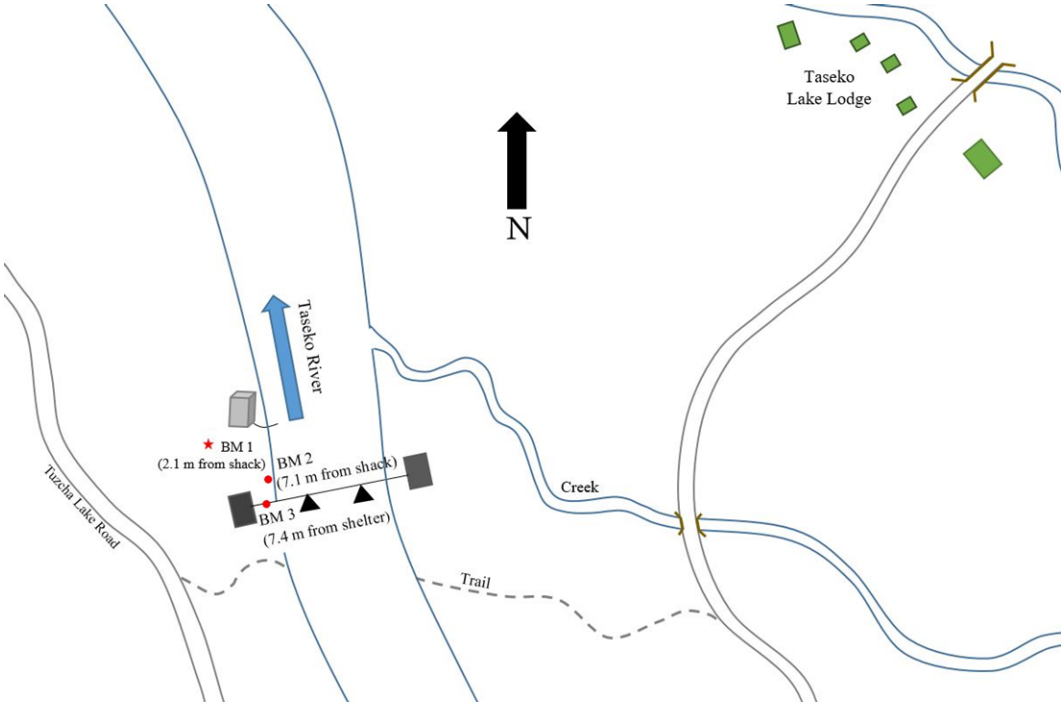

Figure 2: *Station Map*

3.0 Existing Infrastructure

The existing cableway spans approximately 59m across Taseko River (Figure 3). The spanning cables consist of a main 1” diameter IWRC and 3/8” 1x7 marker cable with 1 attached marker cone.

Left Bank Home Side Existing Infrastructure

The home-bank cable support consists of a 16’ tall steel circular pipe A-frame resting on galvanized HD pipe footings. The A-frame components consist of a ladder leading to a wood decking platform. An aluminum stand-up cable car is attached to the main cable and rests above the platform.

The main cable and marker cable are attached to a single plate anchor buried behind the A-frame. The anchor has a 0.53m stick-out length and 30 degree rod angle. A 3/8” 1x7 tieback cable is attached to the plate anchorage and the A-frame to provide additional support.

Right Bank Far Side Existing Infrastructure

The far-bank cable support consists of a 16’ tall steel circular pipe A-frame resting on galvanized HD pipe footings. The A-frame components consist of a ladder leading to a wood decking platform.

The main cable and marker cable are attached to a single plate anchor buried behind the A-frame. The anchor has a 0.89m stick-out length and 30 degree rod angle. A 3/8” 1x7 tieback cable is attached to the plate anchorage and the A-frame to provide additional support.

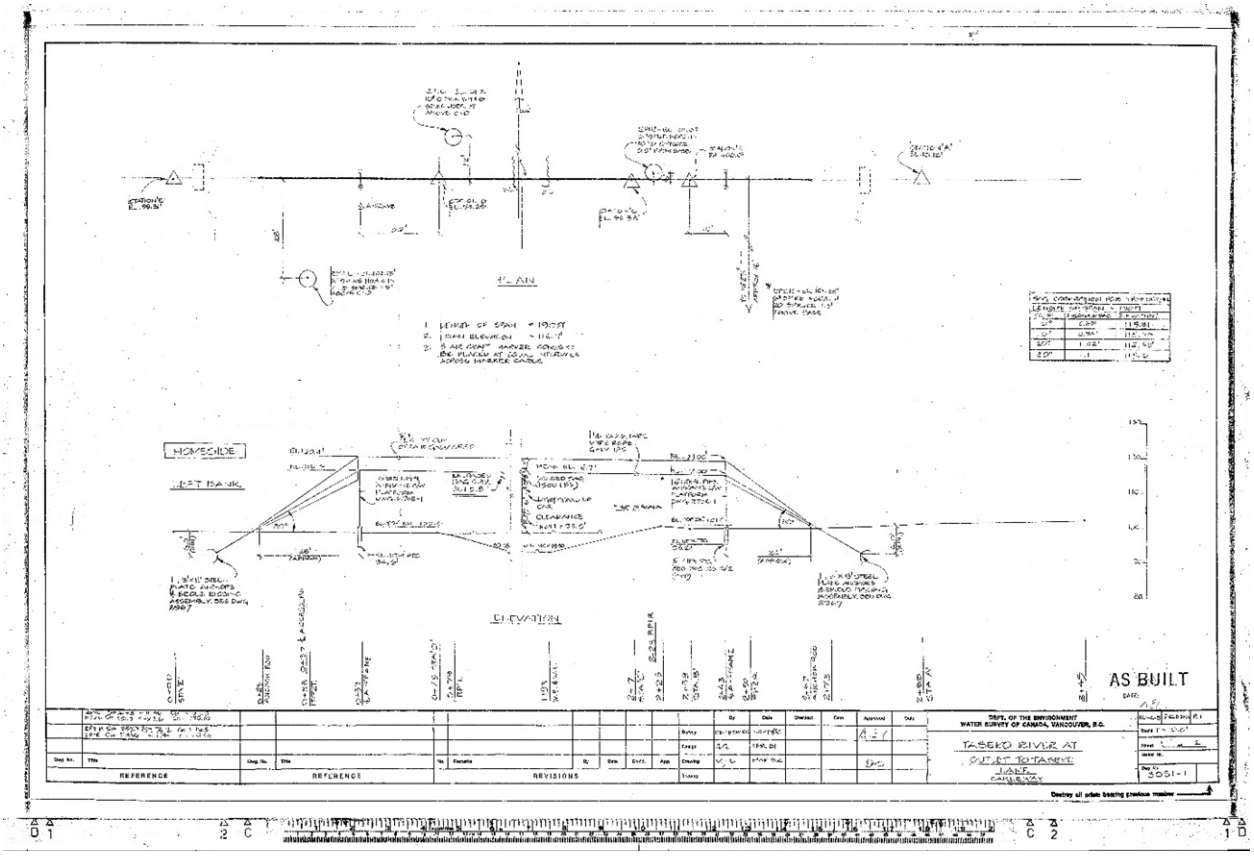

Figure 3:

4.0 Scope

The contractor will provide mobilization and demobilization, all labour, supervision/project management, equipment, and supplies, as required, to complete the requested services. The scope includes, but is not limited to, the following:

4.1 Mobilization and demobilization

a) Includes pick-up and transportation of materials from Richmond, BC to the project site.

4.2 Remove the existing steel plate anchors and install [two, three] (2) new steel plate anchors (including **bridles, tieback plates, etc.) on home-side and on the far-side as per drawings**

a) Removal of existing anchors prior to placement of new anchors;
b) Compaction of the soil during backfill of steel plate anchor excavation;
c) Excavation for anchors for a specific bank must be done simultaneously;
    i For example, for double steel plate anchors, excavation must be done such that both steel anchors are placed and orientated correctly in the hole(s) before the backfilling of either anchor takes place;
d) Anchor rod angles to horizontal must be the same as the bridle cable angle to which they attach;
e) Contractor responsible for ensuring orientation of anchors rods and cables are per Drawings;
f) If orientation cannot be achieved, the contractor must notify the Technical Authority immediately and prior to backfilling;
g) The contractor imust excavate as deep as required for proper placement of infrastructure per ECCC requirements as shown on Drawings. This includes removal of all rock regardless of size from the required area for proper placement of [anchors, footings];
h) Excavation is not to be backfilled until written approval is provided by ECCC Technical Authority;
i) Excavation to be completed by hand if excavator cannot access the site, or if stated elsewhere that work is to be completed by hand excavation;
j) Load test is not required for anchors, ECCC field review will be conducted prior to concealment;
k) Excavation must still be completed if groundwater is encountered; and
l) Work includes installation of a bridle cable system, tieback plates on the anchor rods, and all other assets as per Drawings.

4.3 Removal of existing footings and installation of two (2) 0.8m x 0.8m x 1.5m new footings for A-frame on the home side and two (2) 0.8m x 0.8m x 1.5m footings for A-frame on the far side

a) Placement of new footings after inspection by ECCC of bottom of excavation. Do not over excavate in depth. Over excavation to be compacted to match in-situ compaction;
b) Bottom of steel plate footing to make full contact with soil. Footing base plate may not be perfectly straight.
c) Compaction of the soil during backfill of footings excavation;
d) Contractor responsible for ensuring orientation per drawings is achieved when installing footings;
e) If orientation cannot be achieved, the contractor must notify the Technical Authority immediately in writing and prior to backfilling of footings;
f) Footing spacing, top elevation, and location to be the same as existing footings;
g) Excavation to be completed by hand if excavator cannot access site or if stated elsewhere that work is to be completed by hand excavation;
h) Excavation must still be completed if groundwater is encountered; this includes removal of all rock regardless of size from the required area for proper placement of footings.

4.4 Removal of existing A-frame/footing hinges and installation of two (2) new hinges on the home side and two (2) on the far side

4.5 Resetting A-frames to plumb

a) A-frame footing hinges do not rotate to 90º from vertical, making it difficult to pre-assemble while laying down. Supports may be required for assembly of the A-frame;
b) A-frame angle upon completion must be accepted by ECCC Technical Authority; less than 1 degree off plumb is acceptable;

4.6 Removal of existing tieback cables and installation of two (2) tieback cables on the home side and two (2) tieback cables on the far side and all associated hardware

a) New tieback cables are 1/2” 6x26 EIPS IWRC;
b) Hardware to be installed as per Drawings;
c) Hardware includes (see Drawings for full list):
    i Fist Grips;
    ii Thimbles; to be twisted, placed around the object required, then twisted back to their original state unless otherwise specified by the Technical Authority; cutting of thimbles not allowed;
    iii Turnbuckles; and
    iv Shackle for HD A-frames

4.7 Removal of existing and installation of new main cable with 7/8” 6x26 IWRC and all associated hardware

a) Main cable cannot be temporarily secured to A-frame; at all times the main cable to A-frame contact must remain free to move; main cable is not allowed to slide over stationary objects; provide snatch blocks / pulleys with a diameter of no less than 10 times the diameter of main cable;
b) Hardware to be installed as per drawings;
c) Hardware includes (see Drawings for full list):
    i Fist Grips;
    ii Thimbles; to be twisted, placed around the object required, then twisted back to their original state unless otherwise specified by the Technical Authority; cutting of thimbles not allowed;
    iii Turnbuckles.

4.8 Removal of existing and installation of new 3/8” aircraft marker cable with all associated hardware

a) Hardware to be installed as per drawings;
b) Hardware includes (see Drawings for full list):
    i Fist Grips;
    ii Thimbles; to be twisted, placed around the object required, then twisted back to their original state unless otherwise specified by the Technical Authority; cutting of thimbles not allowed;
    iii Turnbuckles;
    iv Remove existing marker cones, install three (3) new marker balls, position marker balls on new cable evenly spaced over river channel.

4.9 Removal of existing and installation of new A-frame ladders and brackets

a) Ladder first rung between 0-14 inches from ground

4.10 Installation of A-frame safety loop on each bank as per Drawings

4.11 Removal of existing and installation of new home side platform decking

a) Decking platform wood plank to be cut to provide 15 inches of clearance from centreline of ladder.

4.12 Installation of platform safety rails, platform gates, and danger signs on both banks

a) Provide means to rivet signs to platforms

4.13 Removal of existing and installation of new Light-Stand-Up (LSU) cable car

4.14 Raising platform on A-frame to correct position (far-side only)

a) Platform was originally installed in the wrong position and needs to be moved upwards. Holes on A-Frame are pre-drilled.

4.15 Setting of main and marker cable sags

a) Main cable sag to be set according to sag table below, note drawings state end parameter for turnbuckle remaining adjustment (no more than 75mm of thread);

b) Messenger cable will be tightened until mid-span sag matches sag in the mid-span of the main cable.

Sag Table

Temperature (°C)	Unloaded Sag (m)
-15	1.200
-10	1.243
-5	1.280
0	1.318
5	1.354
10	1.390
15	1.425
20	1.459
25	1.493
30	1.525
35	1.560

4.16 Disposal of infrastructure that is being replaced/upgraded and construction waste

4.17 Restoration of the site to the same condition as before construction work started

4.18 Monitor river flows and ensure Work is protected from high flows at all times

4.19 Any trees that are required to be removed to provide access or safe working conditions for the work are included in the scope of work but must be pre-approved in writing by the Technical Authority

5.0 Considerations and General Requirements

5.1 General Requirements

The above-noted cableway is **out of service** and **should not** be used under any circumstance for the transportation of people. Goods may be transported with the cableway with advanced approval from the Technical Authority. It is the contractor's responsibility to ensure safety for any goods on the cableway.

5.2 Cost Breakdown Submittal

The selected proponent must submit the Cost Breakdown to the Department Representative within 5 business days of Contract Award. The Cost Breakdown must be accepted by the Department Representative before commencement of work. The Cost Breakdown must include, as a minimum, the following sections:

a) Submittals
b) Mobilization
c) Replacement of main cable with 7/8" cable and hardware
d) Replacement of marker cable with 3/8" cable and hardware
e) Installation of three (3) aircraft marker balls on marker cable at specified spacing
f) Removal of existing and installation of new anchor systems (including bridles) and tieback plates
g) Removal of existing and installation of new tieback cables and hardware
h) Removal of existing and installation of new footings and components
i) Re-setting A-Frames to plumb
j) Replacement of A-Frame ladders and associated brackets
k) Installation of platform safety bars, platform gates, and danger signs
l) Installation of main cable safety loops

m) Replacement of home side platform decking
n) Replacement of LSU cable car
o) Repositioning of A-frame platform to correct location on far-side
p) Setting of main and marker cable sags
q) Demobilization

Others, listing items as applicable

5.3 Work Plan

The contractor must provide a Work Plan, clearly stating their methodology for the relevant points as listed below:

a) Installation of the new steel plate anchors;
b) Method of formwork;
c) Concrete design mixture;
d) Method of concrete placement to ensure performance is achieved;
e) Lowering and replacing the main cable and marker cable. Cable must not enter the river;
f) Safety considerations for traffic on river;
g) ECCC supplied materials must be covered fully with a tarp when not being used, the security of all materials provided to the contractor is the responsibility of the contractor after receiving from ECCC;
h) Stabilizing or lowering A-frame; the A-frame cannot impact the river bank or be placed in the stream;
i) The steel A-frames have a pin base connection, meaning they are unstable under reduced tension in the existing cables.
j) A-frame structures on both banks are required to be stabilized in all directions during the entire construction activity;
k) List of contractor's tools and equipment; See Section 5.17 for ECCC recommendations.

ECCC Technical Authority has five (5) business days to review and provide comments.

5.4 Quality Control Plan

The contractor must provide a Quality Control Plan. The Quality Control Plan must outline the contractor's plan to ensure all work is executed to the required quality.

The contractor must maintain daily inspection reports that itemize the results of all Quality Control inspection conducted by the contractor. All reports must be made available for review by the Departmental Representative upon request.

5.5 Waste Management Plan

Deposits of any construction debris into any waterway are strictly forbidden. The Waste Management Plan must include:

a) Alternative Waste Disposal: Prepare a listing of each material proposed to be salvaged, reused, recycled or composted during the course of the project, and the proposed local market for each material;
b) Landfill Materials: Identify materials that cannot be recycled, reused or composted and provide explanation or justification;
c) Landfill: Name of the landfill where rubbish will be disposed.

5.6 Health and Safety Plan

The contractor must provide a Health and Safety Plan, clearly stating the procedures for ensuring safety throughout the project. This should include steps in the case of emergency, in the case of potential construction problems, and everyday procedures to promote safety. If at the time of construction the COVID-19 pandemic is ongoing, the contractor must include measures to reduce the risk of COVID-19 spread between individuals on site. Health and Safety Plan must be in conformity with all regulations and requirements outlined in Section 7.0.

5.7 Environmental Protection Plan

The contractor must provide an Environmental Protection Plan, which should include the following:

a) Name of personnel responsible for ensuring adherence to Environmental Protection Plan;
b) Identification of type and location of erosion and sediment controls to be used, including monitoring and reporting requirements to ensure that control measures are in compliance with Federal, Provincial, and Municipal laws and regulations;
c) Plan in the event of unforeseen spill of regulated substance, which includes procedures, instructions, and reports;
d) Contaminant prevention plan identifying potentially hazardous substances to be used on job site; intended actions to prevent introduction of such materials into air, water, or ground; and detailing provisions for compliance with Federal, Provincial, and Municipal laws and regulations for storage and handling of these materials;
e) Material Safety Data Sheets (MSDS).

Reference Standards:

f) Canadian Landscape Standard 2016, First Edition;
g) British Columbia Heritage Conservation Act, 1996;
h) BC Water Sustainability Act – Water Sustainability Regulation, B.C. Reg. 36/2016;
i) Fisheries Act (R.S.C., 1985, c. F-14);
j) Migratory Birds Convention Act, 1994 (S.C. 1994, c. 22) ;
k) Species at Risk Act (S.C. 2002, c. 29).

5.8 Site Access and Layout Plan

The contractor shall prepare and submit a Site Access and Layout Plan indicating proposed locations of access routes, lay down areas, and vegetation clearing required to complete the work. Plan must also include remediation of access and laydown areas.

Snow clearing/access path clearing/fixing, removal of vegetation if required (based on recommendation and approval of an Environmental Consultant and/or Technical Authority), is the responsibility of the contractor. If access requires removal of vegetation, pre-approval must be sought from ECCC Technical Authority, a Qualified Environmental Professional may be required on-site for this work.

5.9 Inspection

a) Allow Departmental Representative access to Work. If part of Work is in preparation at locations other than Place of Work, allow access to such Work whenever it is in progress;
b) Give timely notice (5 business days) requesting inspection if Work is designated for special tests, inspections or approvals by Departmental Representative instructions;
c) If contractor covers or permits to be covered Work that has been designated for special tests, inspections or approvals before such is made, uncover such Work, have inspections or tests satisfactorily completed and make good such Work;
d) Departmental Representative will order part of Work to be examined if Work is suspected to be not in accordance with Contract Documents. If, upon examination such work is found not in accordance with Contract Documents, correct such Work and pay cost of examination and correction.

5.10 Rejected Work

Remove defective Work, whether result of poor workmanship, use of defective products or damage and whether incorporated in Work or not, which has been rejected by Departmental Representative as failing to conform to Contract Documents. Replace or re-execute in accordance with Contract Documents.

5.11 Cable Installation

The main cable or marker cable must not be dragged across the river by boat or connected to a boat. Cable must not be dragged over objects that may cause damage, such as stationary metal. The cable must be pulled across the river from either shore by winching or other similar methods. Anchors must be sufficiently braced if attaching cables, as anchor rods will bend if pulled off axis. When pulling a cable, the cable must be pulled through a block with a minimum sheave diameter of 10 times the diameter of the cable at each change in direction. Any main or marker cable installation must be from the reel to the cableway, the cable is not to be laid on the ground prior to installation. During removal of existing and installation of new of cables, the A-frame(s) must remain braced in both directions at all times until the work is complete.

The contractor is required to have the proper equipment and experience to carry out cable installation. Cables must be installed in accordance to the ECCC/Technical Authority design and specifications, cable manufacturer, and cable hardware specification/guidelines. The main cable is required to be installed at the design unloaded sag and tensioned correctly and secured per ECCC standards upon construction completion. The contractor is responsible for stretching the cable after installation. To stretch cable, set the sag according to the table, then traverse using the cable car with a minimum load of 300lbs, repeat three times and set sag.

5.12 Fist Grip Installation

Wire rope grips installed and torqued to manufacturer's procedures and per drawings. Fist grips are to be installed only once. Contractor responsible for providing extra fist grips if they are required for installation purposes where they will be installed and removed.

5.13 Groundworks

The contractor is required to abide by the following requirements.

a) The contractor is required to have sufficient equipment and experience to carry out the plate anchors and A-frame footings installation. Anchors must be installed at an adequate depth to achieve the correct angles and stick-out as per drawings, and it is the responsibility of the contractor to do so;
b) Full documentation including photographs must be provided to ECCC's Technical Authority. ECCC will conduct a field review prior to concealment to ensure adherence to requirements;
c) Organic material, such as tree branches, bushes, etc., are not to be used as backfill;
d) All excavation must be properly shored in accordance with the Canadian Labour Code and Worker's Compensation Board Guidelines;
e) Provide temporary erosion and sedimentation control measures to prevent soil erosion and discharge of soil-bearing water runoff or airborne dust to adjacent properties and waterways;
f) Remove erosion and sedimentation controls and restore and stabilize areas disturbed during removal;
g) Provide de-water plan to ensure pumped water (if required) is filtered before reaching the river;
h) All backfill material, regardless of type shall be placed in lifts not exceeding 150 mm in thickness of loose material, and each lift shall be mechanically tamped with pneumatic tampers or and ECCC approved equivalent. Compact each layer before placing succeeding layer. Each layer shall be brought to its required degree of compaction throughout its entire width before successive layers are placed. The rate of placing the backfill material shall be such that the tamper can compact thoroughly and uniformly;
i) Backfill layers to be placed simultaneously on both sides of installed Work to equalize loading;

5.14 Property and Public Safety

The contractor must not enter the site without approval from the Technical Authority.

The contractor is responsible for the health and safety of the public during and outside construction hours. Lowered cables are not allowed to be left unattended and open holes must physically barricaded to prevent accidental entry. If the cable must be lowered, the contractor is responsible for ensuring the safety of any persons within the vicinity of the project, including the public using trails or the river system, a flagger with suitable warning devices may be required.

5.15 Work Authorization

A construction methodology (see Section 5.3) for all parts of the Work must be submitted to ECCC Technical Authority for review. ECCC Technical Authority has five (5) business days to review and provide comments.

The contractor must provide photos of its work at the site, before, during, and after construction activities. This includes photos of all major installations and changes on the construction site. Extra measures must be taken for installation of the cables/fist grips and steel plate anchors to meet the adequate depth and angle requirements.

Receipt of disposal at an approved facility must be provided to ECCC by the contractor. Photos of the material being disposed at an approved facility are also required. All photos must be provided to the Technical Authority within ten (10) business days from completion of the Work. ECCC reserves the right to withhold payment in the case of inadequate photos or receipt.

The following documents will be maintained on-site by the contractor, one copy of each document as follows:

a) Statement of Work;
b) Contract Drawings, as provided by ECCC;
c) Work Plan;
d) Schedule;
e) Quality Control Plan;
f) Waste Management Plan;
g) Health and Safety Plan;
h) Environmental Protection Plan;
i) Site Access and Layout Plan;
j) Contract Documents, as agreed upon;
k) Addenda, as agreed upon;
l) Other Modifications to Contract, as agreed upon;
m) Other documents as required.

Protect archeological materials in accordance with the British Columbia Heritage Conservation Act. If Archeological materials are exposed/discovered during Work, stop all Work and notify the Departmental Representative immediately.

The contractor must ensure the site is left at the same grade and ground layout as was found. No piles of soil are to be left, any leftover fill must be scattered uniformly through the site. All excess materials, waste, and tools must be removed from the site during demobilization.

Delivery of the project on schedule, budget, and safely is the responsibility of the contractor. ECCC is not obliged to provide guidance or suggestions beyond those outlined in Section 10.0. It is the responsibility of the contractor to ensure that the construction meets the standards and dimensions specified by ECCC. The contractor should not rely on ECCC to provide construction methodology.

5.16 Project Related Materials

The contractor is responsible for the transportation of the required materials and components to the project site. It is the contractor’s decision to determine the most efficient and cost-effective method of transporting the equipment and materials to either side of the cableway. Any transportation methods are the responsibility of the contractor. Written confirmation is to be provided to ECCC Technical Authority for any material that is collected from ECCC.

The contractor is responsible for the removal and disposal of old material from the project site. Existing/used cable hardware must be marked and is not to be re-used. Receipt of disposal at an approved facility must be provided to ECCC by the contractor.

Any unused material must be returned within one (1) month from the completion of the project to ECCC in Richmond, B.C. unless otherwise directed by ECCC Technical Authority. Address will be provided upon contract award. The contractor is required to sign off on all materials received.

The materials provided by ECCC should include the following; however, ECCC reserves the right to update this list at any point.

a) Main cable with hardware (fist grips, thimbles, and turnbuckle);
b) Marker cable with hardware (fist grips, thimbles, turnbuckles, marker balls);
c) Safety loop cable and fist grips;
d) Bridle cables with hardware (fist grips, thimbles);
e) Tieback cables with hardware (fist grips, thimbles and turnbuckles);
f) A-frame footings with hardware;
g) Hinges with hardware;
h) All anchor components, including anchor rods and anchor plates;
i) Ladders and brackets, safety bars, platform gates and danger signs;
j) LSU cable car;
k) Platform decking with fasteners.

The contractor is responsible for pick-up and delivery of materials and components as designated and provided by ECCC from Richmond, BC to site location. The pick-up address will be provided upon contract award. The contractor is required to sign off on all materials received.

5.17 Recommended Specialized Tools/Equipment

ECCC recommends the following tools/equipment:

a) Cable Grips, large (up to – 1.1") for the main cable – two or more units;
b) Cable Grips, small (up to – 7/8") for marker and tieback cables – two or more units;
c) Torque Wrench, 3 ft handle (225 ft-lbs) for the main cable's fist grips;
d) Torque Wrench, small (45 ft-lbs and 65 ft-lbs) for marker and tieback cables' fist grips;
e) Chain Hoist 1.5 – 3.0 Ton – two or more units;
f) Portable Winch (min 8000lbs);
g) Shackles, ropes, chains, straps, come-along, etc.;
h) Snatch blocks, large and small, for main and marker cables respectively, quantity as required.

All cleared vegetation cut and evenly distributed over-top of disturbed areas. If trees are cut they are to be placed perpendicular to the estimated surface water flow direction. Any 150mm diameter at breast height vegetation removal will be monitored by QEP and require planting of same species at a 2:1 ratio.

6.0 Deliverables

6.1 Pre-Construction

The contractor must ensure that all pre-construction deliverables are completed and accepted by the ECCC Technical Authority **prior to mobilization** and per the table below. This includes:

Deliverable / Event	Date
Contract Award	May 27, 2022
Pre-commencement Meeting (1 hr)	Week of May 30, 2022
Submit Cost Breakdown	June 3, 2022
Contractor Submits:	June 8, 2022
Schedule	
Work Plan Methodology	
Quality Control Plan	
Waste Management Plan	
Health and Safety Plan	
Environmental Protection Plan	

Site Access and Layout Plan	
Pick-up of materials	Before June 10, 2022 as coordinated with ECCC
Expected mobilization date	June 13, 2022

The above table is assuming a May 27, 2022 Contract Award date. If Contract Award is different from the one noted above, deliverable/event dates to be modified accordingly.

ECCC Technical Authority has **5 business days** to review and provide comments. **Pre-construction deliverables must be accepted by ECCC Technical Authority prior to mobilization.** General Condition clauses GC2.3 Notices, and GC 7.1 Taking the Work out Of the Contractor's Hands will be utilized if mobilization occurs prior to acceptance in writing of deliverables.

6.2 Construction

The contractor must ensure that all deliverables related to the construction are completed. The contractor must:

a) Provide the ECCC Technical Authority with a written receipt of materials collected from ECCC;
b) Provide all services outlined in Section 4.0;
c) Submit copies of reports or direction issued by Federal or Provincial health and safety inspectors;
d) Submit copies of incident and accident reports within 24 hours of incident or accident.

6.3 Post-Construction

Upon completion, the contractor must submit all post-construction deliverables to the Technical Authority within ten (10) business days. This includes:

a) Photos of before, during, and after construction. See Section 5.15 for photo requirements;
b) Receipt of disposal;
c) Construction report outlining the work completed daily to date.

7.0 Safe Work Procedures

The contractor must remain in compliance with the Canada Labour Code and WorkSafeBC Guidelines.

The contractor is expected to follow safe work procedures, including proper Personal Protective Equipment (PPE) use at all times. A Personal Flotation Device (PFD) must be worn if there is a risk of drowning. A complete Basic First Aid Kit must be carried and on-site. Protection against wildlife is included within PPE.

The contractor is responsible for circulation of the Health and Safety Plan to all individuals on-site and ensuring that all individuals are in adherence to the Health and Safety Plan.

The contractor must have an on-site communication device for two-way text communication. This device must be available and usable at all times during construction while on site.

All guidelines and regulations provided by the Government of Canada, the Province of BC, WorkSafeBC, and the British Columbia Construction Association relating to the COVID-19 pandemic must be practiced throughout all construction activities.

8.0 Notifications of Non-Compliance

The following procedures will be followed in the case that non-compliance is observed by ECCC.

a) The Technical Authority will notify contractor in writing of observed non-compliance related to Health and Safety, Environment, Private Property, or any other regulations and requirements.
b) After receipt of such notice, the contractor shall inform the Technical Authority of proposed corrective action within one (1) day to obtain the acceptance from the ECCC Technical Authority. Technical Authority will provide review and acceptance in one (1) day.
c) Once acceptance has been provided by the ECCC Technical Authority, the contractor may

proceed with the proposed actions.

d) If warranted, the ECCC Technical Authority will issue a Stop Work Order until satisfactory corrective action has been taken by the contractor.
e) Suspensions will be lifted once the corrective action(s) have been proposed and taken by the contractor, with the acceptance of the Technical Authority.
f) No time extensions will be granted or equitable adjustments will be given to the contractor for such suspensions.
g) In the case where there is immediate danger to the health and safety of a worker or integrity of infrastructure, the contractor must take immediate actions.

9.0 Schedule

ECCC estimates that completion of the project will require up to 14 days on-site. Unless otherwise agreed upon, the project is to be completed over up to 14 days between **June 13th, 2022,** and **June 26th, 2022.** The final invoice must be submitted once work has been completed, no later than **July 26th, 2022**.

A pre-commencement meeting between ECCC and the contractor shall be scheduled within five **(5) business days** of contract award. Meeting to be arranged and led by the representative of ECCC.

The contractor must submit to ECCC for acceptance a comprehensive schedule of the project work/task(s). Required on-site presence of an ECCC employee should be included in the schedule. Schedule changes must be accepted in writing by ECCC.

Weekly progress meetings are to be arranged by the contractor to provide weekly updates to ECCC. This should include reporting of ongoing project schedule.

Standard work schedules for members of ECCC are Monday to Friday 8:00 AM to 4:00 PM. A minimum of 72-hour notice must be provided when an ECCC member is required outside of these hours. ECCC cannot guarantee the availability of a representative for on-site support outside of these hours.

The contractor must provide 72-hour advance notice when requesting the on-site presence of an ECCC member. See Section 10.0 for a list of items requiring ECCC field review.

10.0 Environment and Climate Change Canada Responsibilities

ECCC will provide the following:

a) Materials listed in Section 5.16;
b) Acquisition of relevant permits and background information with the Province of British Columbia and the Department of Fisheries and Oceans;
    i BC Water Act Notification;
    ii Archaeological Assessment;
    iii Desktop Study - Environmental Assessment;
    iv Working around Water Permit, as applicable;
c) Providing drawings and descriptions of all components related to the work;
d) Supply of Qualified Environmental Professional (QEP) services, as required;
e) Will provide on-site and remote support during all phases of the project;
    i Will be on-site at the beginning of construction and to conduct a final sign-off and survey upon completion;
    ii ECCC will provide field review of the following installations:
        - Depth, angle, and location of components installed in excavation(s) prior to backfill;
        - Inspection of cableway at completion of construction and prior to hand-over.

11.0 Photos

Photo 1. Taseko River Taken from Left Bank Home-Side

Photo 2. Right Bank Far-Side A-Frame (Back View)

Photo 3. Right Bank Far-Side Anchor Connections

Photo 4. Left Bank Home-Side A-Frame (Side View)

Photo 5. Left Bank Home-Side A-Frame (Back View)

Photo 6. Left Bank Home-Side Anchor Connections