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1.0 Background

On behalf of the people of Canada, PCA protects and presents nationally significant examples of Canada’s natural and cultural heritage, and fosters public understanding, appreciation, and enjoyment in ways that ensure their ecological and commemorative integrity for present and future generations.

The Boreal Trail was constructed in 1990. This signature trail was accessible to most users and was one of the most visited trails in Riding Mountain National Park. The compacted gravel trail, boardwalks and bridges follow the Jackfish Creek for 1km through the Boreal Forest. Over time and most recently this spring; the trail including small creek crossings has been affected by severe weather; causing excessive erosion and degradation to all infrastructure. Repairs are required to bring this trail back to an accessible standard so every visitor has an opportunity to connect with The Boreal Forest in Riding Mountain National Park. This project will require accessible trail design, design of solution/s to replace an existing boardwalk section and viewing platform and the design of 2 pedestrian bridges.



Fig 1. Boreal Trail Boardwalk



Fig 2. Pedestrian Bridge (Bridge 3)

Table 1: Components of the Boreal Trail (see Map below)

Segment	Segment / structure distance	Existing condition	Suggested / desired condition
(a) Viewing area with picnic option		Approx. 5m ² Infrastructure, platforms removed	Develop design for viewing platform / picnic area—accessible hard packed surface or raised platform with seating for multiple groups.
(b) Trail from viewing area to bridge 1	Approx: 110 m	Infrastructure removed. Over grown narrow dirt trail unsustainably built.	1.8-meter-wide hard packed gravel sustainable / accessible grade
(c) Bridge/ Crossing 1	Approx: 13-m length .85 m above the water 1.5-2 m width	Infrastructure removed	Investigate options for the wet area crossing that meets accessible trail standards. If a bridge is required; Parks Canada has design options; and design and construction of a bridge will be out of the scope of this contract.
(d) Trail	Approx: 16 m	Condition varies; over grown	1.8-meter-wide hard packed gravel

		vegetation, firm aggregate and hard packed soil	sustainable / accessible grade
(e) Bridge/ Crossing 2	Approx: 8 m length .6 m above ground 1.5 – 2 m wide	Infrastructure removed	Investigate options for the wet area crossing that meets accessible trail standards. If a bridge is required; Parks Canada has design options; and design and construction of a bridge will be out of the scope of this contract.
(f) Trail	Aprox: 228 m	Condition varies; over grown vegetation, firm aggregate and hard packed soil	1.8 meters wide hard packed gravel with raised tread.
(g) Bridge/ Crossing 3	Approx: 19m length 2 m above Jackfish Creek 1.5 – 2 m wide	Infrastructure removed	Develop design for a bridge capable of carrying a 4 person side by side type all terrain vehicle.
(h) Trail from bridge 3 to bridge 4	Approx: 105 m	Condition varies; over grown vegetation, firm aggregate and hard packed soil and several low wet areas	1.8 meters wide hard packed gravel with raised tread.
(i) Bridge/ Crossing 4	Approx: 10.2 length 1.7 above ground 1.5-2 m wide	Infrastructure removed	Investigate options for the wet area crossing that meets accessible trail standards. If a bridge is required; Parks Canada has design options; and design and construction of a bridge will be out of the scope of this contract.
(j) Trail	Approx: 50 m	Condition varies; over grown vegetation, firm aggregate and hard packed soil and several low wet areas potential for realignment	1.8 meters wide hard packed gravel with raised tread.
(k) Boardwalk	Approx:	Infrastructure	Develop design for

	136 m Length .5 – 1 m above ground 1.5 - 2 m wide	removed	Boardwalk or propose alternative solution with low impact footing design
(l) Bridge/ Crossing 5	Approx: 42 m length 1.7 above ground 1.5 – 2 m wide	Infrastructure removed	Develop design for a pedestrian bridge
(m) Trail	Approx: 32 m	Condition varies; over grown vegetation, firm aggregate and hard packed soil	1.8 meters wide hard packed gravel with raised tread.
(n) Bridge/ Crossing 6	Approx: 8.5 m length 0.4 m above ground 1.5 - 2 m wide	Infrastructure removed	Investigate options for the wet area crossing that meets accessible trail standards. If a bridge is required; Parks Canada has design options; and design and construction of a bridge will be out of the scope of this contract.
(o) Trail	Approx: 100m	Condition varies; over grown vegetation, firm aggregate and hard packed soil	1.8 meters wide hard packed gravel with raised tread.
(p) Bridge/ Crossing 7	Approx: 6.3 m length 0.4 m above ground 1.5 – 2 m wide	Infrastructure removed	Investigate options for the wet area crossing that meets accessible trail standards. If a bridge is required; Parks Canada has design options; and design and construction of a bridge will be out of the scope of this contract.
(q) Trail	Approx: 330 m	Condition varies; over grown vegetation, firm aggregate and hard packed soil	1.8 meters wide hard packed gravel with raised tread.

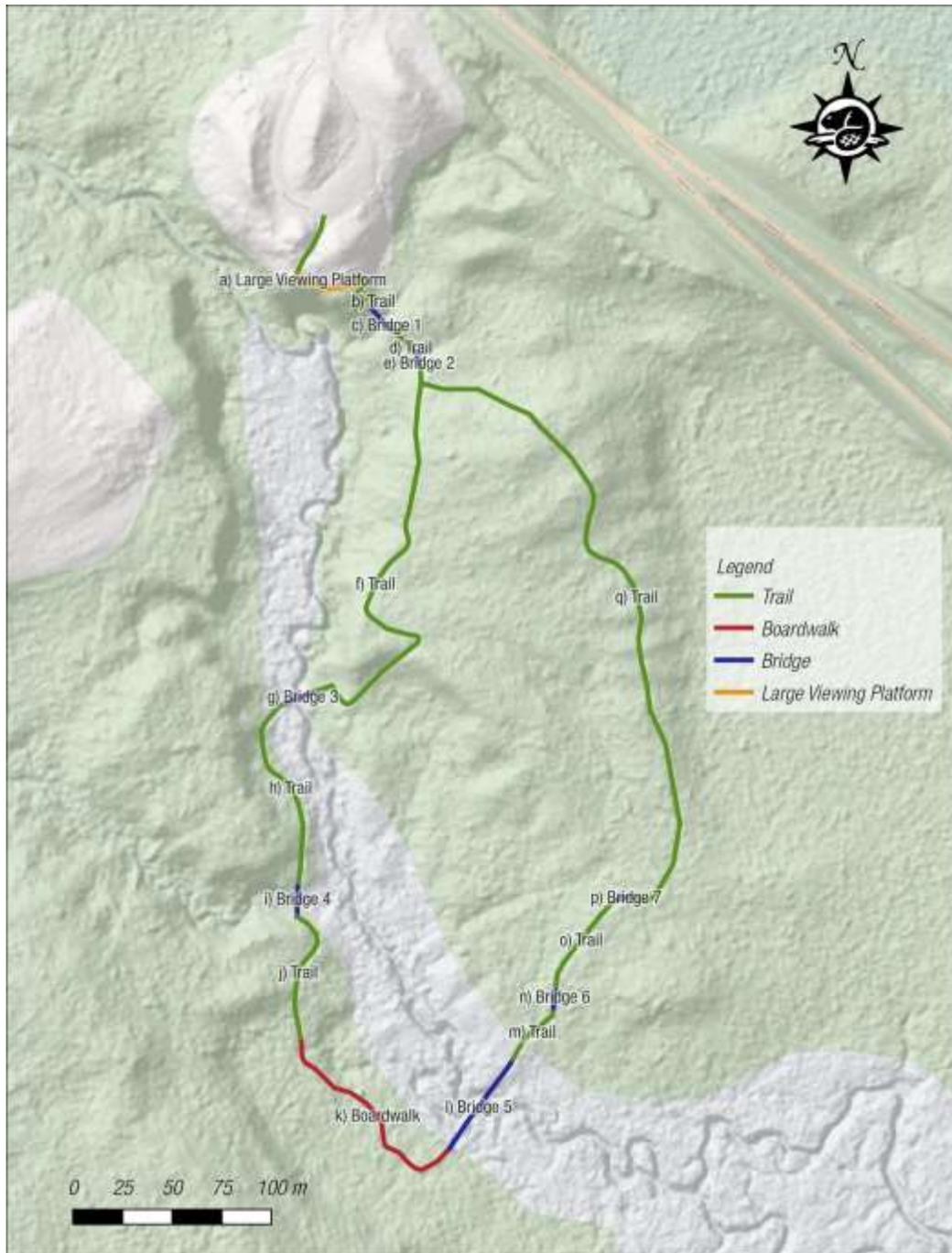


Fig 3. Boreal Trail Component Map

2.0 Objective

2.1 Project Delivery

- 2.1.1 The consultant team working collaboratively with PCA and as a cohesive multi-disciplinary team, is to achieve an integrated design for the reconstruction of the Boreal Trail that:

- 2.1.1.1 Meets functional needs, with improved user experience and safety
 - 2.1.1.2 Is resilient and sensitive to climate change
 - 2.1.1.3 Is type 1 accessible to all potential users (Refer to Section 8.5.1.7)
 - 2.1.1.4 Delivers life cycle cost benefit
 - 2.1.1.5 Is of proven construction
 - 2.1.1.6 Is simple to maintain and considers the availability of future maintenance funding.
- 2.2 Specific Objectives
- 2.2.1 Design of viewing platform and picnic space
 - 2.2.2 Design of 2 bridges (segment g and l). Bridges are expected to span approximately 19 m and 42m with the 19m bridge designed to carry a 4 person side by side type all terrain vehicle and the 42m bridge designed to carry pedestrians.
 - 2.2.3 Design of approximately 135 m of boardwalk fixed on screw piles or a low impact footing that won't shift.
 - 2.2.4 Re-Design of approximately .75 km raised trail tread repair (segments b,d,f,h,j,m,o and q) 1.8 m wide hard pack surface meeting type 1 accessibility standards.
 - 2.2.5 Design appropriate and sustainable drainage solutions where necessary through the use of trail grading (half rule, grade reversals, outslopes), ditching, french drains.
 - 2.2.6 Design appropriate erosion control including vegetation management.
- 2.3 Proposal Price
- 2.3.1 The Consultant is responsible for all costs associated with the Scope of Work outlined in section 3.0 including the provision of and payment for all labour, supplies, accommodation, transportation, Sub-Consultants and all other services necessary for proper completion of the work to the Milestones specified in Section 4.0. Pricing must be submitted on the Appendix C – Price Proposal Form in the Request for Proposal document.
 - 2.3.2 The Successful Proponent is required to provide a detailed cost breakdown for the re-design of the Boreal Trail after award. The Price Proposal shall include all hours of work for each task within each Section defined in 3.0 with separate line items for travel expenses, disbursements, and any Sub-Consultant work. The proponent may choose to include separate line items for tasks necessary to complete the work but not explicitly stated in Section 3.0.
 - 2.3.3 A list of all individuals, including Sub-Consultants assigned to work on the project is to be attached with the proposal and their technical expertise should be demonstrated.

3.0 Scope of Work

3.1 **Required Service 1 - Investigation/Assessments**

- 3.1.1 An inspection of the Boreal Trail is required. Capture and consolidate information about the current state of the trail. Tasks to be completed under the assessment component include:
 - 3.1.1.1 Field Assessment
 - 3.1.1.2 Background Information and Document Review
 - 3.1.1.3 Perform a topographic survey of the trail where redesign is required and at creek crossing locations for bridges 3 and 5.
- 3.1.2 Geotechnical Investigation relative to bridge and boardwalk design
- 3.1.3 Provide a written report in .pdf format with:
 - 3.1.3.1 A summary of the Field Inspection/Assessment.
 - 3.1.3.2 A summary of potential bridge/crossing options as per the requirements detailed in Table 1- Components of Boreal Trail with Class C Estimates
 - 3.1.3.3 2 options for the boardwalk requirement (including one screw pile option) with Class C estimates
 - 3.1.3.4 A summary of trail rehabilitation/decommission plans (including wet area crossings) with Class C estimates considering necessary de-compaction of the trail tread and planting native vegetation.
 - 3.1.3.5 A preliminary schedule for the construction work
- 3.1.4 Provide PCA with any survey data and/or .dwg files produced during the course of work

3.2 **Required Service 2 - Design Development Service:** The objective of the Design Development stage is to refine and develop in detail the design based on PCA information and the site investigation/assessments.

- 3.2.1 Project Manager responsible:
 - 3.2.1.1 Provide information, advice, manage, and lead during integrated Design Workshops and meetings,
 - 3.2.1.2 fully coordinate with and manage other sub-consultants,
 - 3.2.1.3 confirm quality management process for the consultant, and
 - 3.2.1.4 update quality management process for the consultant.
 - 3.2.1.5 Liaise with the PCA Project Manager
- 3.2.2 Trail Design Consultant responsible:

- 3.2.2.1 Develop Design for re-construction of Boreal Trail
- 3.2.2.2 Develop a trail erosion prevention design based on the field assessment and Cost estimates and with input from PCA
- 3.2.2.3 Develop Design for .75 km Type 1 accessible raised trail tread repair 1.8 m wide hard pack surface that allows for appropriate drainage from the trail and sustainable erosion control.
- 3.2.2.4 Ensuring that all design meets Parks Canada's accessibility requirement for a Type 1 Accessible Trail. (Refer to Section 8.5.1.7) These trails are intended for recreation purposes and are developed for visitors with mobility challenges to experience Parks Canada's sites from a trail. Key Requirements include:
 - Trail Surface – Firm and Stable
 - Gradient Running Slope – 5% for any distance, 7% for max 25m, 10% for max 10m, 12% for max 3m, Exception: 15% for 1.5m for open drainage
 - Outslope Cross-Slope – 5%, Exception: 10% for drainage purposes
 - Tread Width – 1-2m
 - Edge Protection – Where provided, min of 75mm
 - Obstacles– 50 mm high max, Exception: 75 max. (where running and cross slopes are 50% or less); Passing Space – Every 300m where clear tread width is less than 2m, a minimum 2x2m space, or a T-shaped intersection
- 3.2.2.5 Water diversion infrastructures (such as culverts and/or bridges) should be kept to a minimum and only used when other options (such as moving the trail alignment and shaping the landscape) have been exhausted. Where small bridges (Class B) cannot be avoided, PCA will be responsible for design and construction.
- 3.2.3 Civil Consultant responsible:
 - 3.2.3.1 Perform hydrological and hydraulic assessment of the 2 identified bridge sites (3 and 5) considering climate change and the potential for increased flow values in the future
 - 3.2.3.2 Undertake a geotechnical design to finalize crossing composition (type of bridge etc.)
 - 3.2.3.3 Ensuring mitigations are in place to preserve/protect aquatic habitat during construction activities.
 - 3.2.3.4 Develop design for Boardwalk or proposed alternative (approximately 136 m in length) with low impact footing design
 - 3.2.3.4.1 Design boardwalks to be accessible and respond to freeze thaw conditions.
 - 3.2.3.4.2 Ensure anchoring points are erosion and corrosion

resistant

3.2.3.5 Develop Design for Viewing Platform / Picnic Area near entry point to trail – Accessible hard packed surface or raised platform with seating for multiple groups.

3.2.4 Deliverables:

3.2.4.1 Drawings and specifications:

3.2.4.1.1 Review and coordinate discipline drawings and specifications (NMS Format). Submit a coordinated copy to PCA for review and comments.

3.2.4.2 Report:

3.2.4.2.1 Update Budget and Class B estimate, Schedule and Risk Analysis,

3.2.4.2.2 Allow for 1 week of review by PCA for review and comments. Hold a conference call to address the PCA comments and concerns.

3.2.4.2.3 Incorporate PCA comments and submit final submission.

3.3 Required Service 3 - Construction Document Service: The objective of the Construction Document stage is to prepare tender ready and construction drawings and specifications, setting forth in detail all the requirements for the construction of the project along with a Class A cost estimate.

3.3.1 Prepare tender package, including but not limited to: drawings, specifications, required reports and documents, in both digital copy and paper copies.

3.3.2 GENERAL DELIVERABLES.

3.3.2.1 Deliverables are similar at all three – 33%, 66% and 99% stages.

3.3.2.2 Deliverables at 100% stage is tender ready and issue for construction.

3.3.2.3 33%, 66%, 99% are progress submission. Submit written response to the Departmental Representative to review comments made at previous submission.

3.3.2.4 Completeness and coordination of the work should reflect the stage of each submission at 33%, 66% and 99%.

3.3.3 FOR 99% SUBMISSION DELIVERABLES:

3.3.3.1 Submit written response to the Departmental Representative to review comments made at previous submission (66%).

3.3.3.2 Submit one copy of updated Cost Plan, draft Class “A” (±5%) cost estimate.

3.3.3.3 Submit one copy of updated Project Schedule.

- 3.3.3.4 All construction drawings and edited specifications - fully complete.
- 3.3.3.5 Complete set of coordinated construction drawings and NMS specifications, including all details, suitable for final review and PCA effective construction funding approval.
- 3.3.3.6 Written contributions specific to the tender form and Invitation to Tender, as may be required.
- 3.3.4 100% SUBMISSION DELIVERABLES – FINAL TENDER DOCUMENTS
 - 3.3.4.1 Deliverables:
 - 3.3.4.2 Written response to the Departmental Representative to review comments made at 99% stage.
 - 3.3.4.3 All original reproducible drawings and specifications for tendering purposes, 100% reviewed and coordinated, incorporating all PCA comments made at the 99% stage, either in the documents themselves, if time allows, or as an addendum during the tendering period.
 - 3.3.4.4 All specification sections and an index of specifications. The specifications shall consist of typed and edited NMS sections.
 - 3.3.4.5 Provide final .dwg data files.
 - 3.3.4.6 Updated project implementation schedule.
 - 3.3.4.7 Final Class “A” cost estimate.
 - 3.3.4.8 Submit three (3) duplicate copies of signed and sealed, digitized specifications and drawing files on USB sticks, in both original and PDF (Portable Document Format), book marked by section to Departmental Representative for tender and construction.
- 3.4 **Required Service 4 - Tendering Service:**
 - 3.4.1 GENERAL REQUIREMENTS
 - 3.4.1.1 PCA will undertake public tendering of the Project.
 - 3.4.1.2 The Consultant's original Construction Documents (signed and sealed) are used to issue to the Government Electronic Tendering System (<https://canadabuys.canada.ca/en>) and/or to produce sets of prints required for tender call.
 - 3.4.2 BIDDERS CONFERENCE
 - 3.4.2.1 During the tender period, the Contracting Authority may, at the request of a potential offer or, arrange a Bidders Conference to clarify its requirements.
 - 3.4.2.2 The Consultant with their Sub-Consultants and Specialist Consultants, must attend any tender meeting, mandatory site meeting.
 - 3.4.2.3 Questions arising in such meetings will be answered by written addenda only, issued by the Contracting Authority.

- 3.4.2.4 All enquiries from bidders during the tender period shall be forwarded immediately to the Contracting Authority named on the front page of the Invitation to Tender, without providing any information to the inquirers. The Contracting Authority will obtain technical answers from the consultant through the Departmental Representative and will publish both questions and answers to all bidders at the same time, and will issue clarifications without publication.
- 3.4.3 DOCUMENT INTERPRETATION
 - 3.4.3.1 Provide the Departmental Representative with all information required by tenderers to fully interpret the Construction Documents
- 3.4.4 ADDENDA
 - 3.4.4.1 Addenda to Tender Documents are to be prepared, as required, by the Consultant and submitted to the Departmental Representative, then forwarded to Contracting Authority.
 - 3.4.4.2 Addenda to Tender Documents are issued through the Contracting Authority to all recipients of the Tender Documents.
 - 3.4.4.3 The Contracting Authority will issue all addenda in writing (no information is to be issued orally), and may issue an addendum by facsimile.
 - 3.4.4.4 Normally, addenda are issued no later than seven working days before the tenders close.
- 3.4.5 TENDER OPENING
 - 3.4.5.1 Tenders are opened at the location stated in the advertisement.
- 3.4.6 PRICE NEGOTIATION
 - 3.4.6.1 If the highest ranked bid exceeds the Consultant's final Construction Cost Estimate (Class 'A' estimate), PCA may negotiate to reduce the price to an acceptable level without making fundamental changes to the scope of work.
 - 3.4.6.2 If price reduction involves changes in the scope of work the Consultant shall:
 - 3.4.6.3 Advise the Departmental Representative which items can be changed and the reduction in cost to be expected by negotiation.
 - 3.4.6.4 Meet with the Contracting Officer, the Departmental Representative and the highest ranked tenderer, as required to provide information and advice during the negotiations.
- 3.4.7 RE-TENDERING
 - 3.4.7.1 If no satisfactory reduction can be negotiated with the highest ranked tenderer or if the desired price reduction entails significant changes in the scope of work or the character of the design, PCA may re-tender the Project.

3.4.7.2 If the Project has to be re-tendered, the Consultant shall provide advice and information to the Departmental Representative as how the re-tender should be done.

3.4.7.3 Consultant is not entitled to additional fee.

3.4.8 RE-WORK

3.4.8.1 Consultant shall revise or amend the Construction Documents to bring the cost of the work within the limits stipulated.

3.4.8.2 Consultant is not entitled to additional fee.

3.5 **Required Service 5 - Contract Administration Service:**

3.5.1 GENERAL

3.5.1.1 Monitor the progress of the Contractors' work, compliance with all drawings and specifications, time schedules, quality standards and prepare progress reports, through site supervision during the construction period.

3.5.1.2 Review reports on Health and Safety strategies for construction stage of work.

3.5.1.3 Notify the Departmental Representative immediately if Human Remains, Archaeological Remains and Items of Historical or Scientific Interest are discovered on the site and obtain further information on action to be taken.

3.5.1.4 Review and process shop drawings.

3.5.1.5 Prepare and provide to the Departmental Representative, detailed drawings, clarification advice, Site Instructions, Contemplated Change Orders and Change Orders and other related consultant input documents.

3.5.1.6 Reply to Request for Information.

3.5.1.7 Observe quality assurance testing, review and accept test reports.

3.5.1.8 Report on contractors maintaining specified quality and schedules, ensuring that contractors are monitoring delivery of critical materials and equipment.

3.5.1.9 Review and make recommendations on progress claims.

3.5.1.10 Issue interim and final deficiency reports.

3.5.1.11 Finalize project documentation and accounts.

3.5.1.12 Recommend the release of holdback upon satisfactory completion.

3.5.1.13 Issue interim and final certifications.

3.5.1.14 Follow-up on any problems identified during the warranty period.

3.5.2 CONSTRUCTION SAFETY

- 3.5.2.1 All construction projects that are occupied by Federal employees during construction are subject to the Canada Labour Code, and the Canada Occupational Health and Safety Regulations and/or Territorial Regulations - whichever is more restrictive.

3.5.3 PROJECT MEETINGS

- 3.5.3.1 The Departmental Representative will arrange meetings every two weeks or as deemed suitable, throughout the entire construction period, for representatives from:
 - 3.5.3.2 Stakeholders
 - 3.5.3.3 PCA in-house staff
 - 3.5.3.4 Prime Consultant
 - 3.5.3.5 Prime Consultant's Sub-Consultants and Specialist Consultants as determined by Departmental Representative.
 - 3.5.3.6 Contractor and their Consultants and Subcontractors.
- 3.5.3.7 The Consultant shall record the issues and decisions and prepare and distribute minutes to all attendees within two (2) working days of the meeting.
- 3.5.3.8 The Prime Consultant and their proposed Sub/Specialist Consultants, should be personally available to attend all construction meetings and respond to inquiries within one (1) working day of the Departmental Representative's request, in the locality of the place of the work, from the date of the award of the Consultant agreement, until final inspection and turnover.
- 3.5.3.9 Review minutes for errors in fact, omissions or other discrepancies and report to the Departmental Representative.

3.5.4 PROJECT SCHEDULE

- 3.5.4.1 Immediately upon receipt of the Project Schedule from the Contractor, after Contract award, review and verify whether the schedule is reasonable and has all detailed components of work shown separately.
- 3.5.4.2 Provide review comments and advice to the Departmental Representative prior to the Consultant approving the project Schedule.
- 3.5.4.3 Use the Project Schedule as the basis for monitoring and evaluating the progress of the work.
- 3.5.4.4 Assist the Contractor to avoid delays by providing timely reports and advice.
- 3.5.4.5 Keep accurate records of causes of delays.
- 3.5.4.6 Record all discrepancies and recommend remedial measures to the Departmental Representative.

- 3.5.4.7 Any request for Time Extensions shall be submitted to Department Representative who will forward to the Contracting officer. Only the Contracting officer may approve any request for Time Extensions.
- 3.5.5 BUDGET/FORECAST/CASH FLOW
 - 3.5.5.1 Review the value of progress of work against the approved cost breakdown. When each trade is regularly reviewed against the Project Schedule and the cost breakdown, it quickly becomes apparent whether the Contractor is on budget and is generating the appropriate cash flow for the work.
 - 3.5.5.2 Record all discrepancies and agreed remedial measures.
- 3.5.6 SHOP DRAWINGS
 - 3.5.6.1 Review and process shop drawings in a timely manner. (Maximum 5 days).
 - 3.5.6.2 Monitor and record the progress of shop drawing review. Record parties designated for action and follow up.
 - 3.5.6.3 Shop drawings shall be stamped: "Checked and Certified Correct for Construction" by the Contractor and stamped: "reviewed" by the Consultant before return to the Contractor.
- 3.5.7 CLARIFICATIONS DURING CONSTRUCTION
 - 3.5.7.1 The Consultant must provide clarifications on Drawings and Specifications or site conditions, as required in order that the project not be delayed.
 - 3.5.7.2 Record contractor's acknowledgment of receipt of all clarifications.
 - 3.5.7.3 Verify and record whether an impact on cost or schedule may be expected and advise the Departmental Representative.
 - 3.5.7.4 Provide to the Departmental Representative, any additional detail drawings, as and when required, to properly clarify or interpret the Contract documents, in a timely manner.
- 3.5.8 WORK MEASUREMENT
 - 3.5.8.1 If work is based on unit prices, measure and record the quantities for verification of monthly progress claims and the Final Certificate of Measurement.
 - 3.5.8.2 When a Contemplated Change Notice is to be issued based on Unit Prices, keep accurate account of the work. Record dimensions and quantities.
- 3.5.9 INSPECTIONS AND SITE REVIEW
 - 3.5.9.1 Provide construction inspection services by qualified personnel to verify compliance with Contract documents. These personnel must be fully knowledgeable with technical and administrative requirements of project.

- 3.5.9.2 It is required that fully qualified, experienced Inspection and site review personnel play a major role in the inspection and monitoring of the Work in detail. Daily resident construction supervision will not be required for the entirety of the trail construction period. The consultant will be required to attend the construction site at major construction milestones; and throughout construction of the bridge substructure. (abutments, other components, etc).
- 3.5.9.3 Establish a written understanding with contractors as to what stages or aspect of the work are to be inspected prior to being covered up.
- 3.5.9.4 Immediately after the award of the Construction contract and before Work begins on site, the Consultant Project Manager shall attend, prepare agenda and take minutes of the pre-construction meeting. The Consultants and Sub-Consultants should also attend this meeting.
- 3.5.9.5 Assess quality of work and identify, in writing to the Departmental Representative, all defects and deficiencies observed at time of inspections.
- 3.5.9.6 Inspect materials and prefabricated assemblies and components at their source or assembly plant, as necessary for the progress of the project.
- 3.5.9.7 Any recommendations, clarifications or deficiency lists shall be issued in writing to the Departmental Representative, with a copy to the Contractor.
- 3.5.9.8 Keep the Departmental Representative informed of the progress and quality of the work and report any defects or deficiencies in the work observed during the course of the site reviews.
- 3.5.9.9 The Contractor is responsible for recording any and all changes from the original Contract on a marked-up hard copy of drawings and then at the end of the project, check and verify the changes with the Sub-Contractors and after that forward to the Consultant. The Consultant is responsible for updating the drawing files and provides electronic version of the as-built Drawings and Specifications.
- 3.5.9.10 In the case of emergency where safety of persons or property is concerned, or Work is endangered by the actions of the Contractor or the elements, to safeguard the interests of PCA, the Consultant shall give immediate written notice to the Departmental Representative and to the Contractor of the possible hazard. The Consultant shall, if necessary, stop the work to protect the safety of the public, the workers or Crown property or give orders for remedial work, and contact the Departmental Representative immediately for further instruction.
- 3.5.9.11 The Consultant shall not: authorize deviations from the Contract documents; enter into the area of the responsibility of the Contractor's Field Superintendent; stop the work unless convinced that an emergency exists as noted above; authorize any payments.

3.5.10 CONSTRUCTION CHANGES

- 3.5.10.1 The Consultant does NOT have authority to change the scope of Work or the price of the Contract. Approved Change Orders must be issued to cover all changes, including those NOT affecting the cost of the project, such as schedule, substitutions, etc.
- 3.5.10.2 The Consultant must prepare Contemplated Change Notices (CCNs), review quotations associated with Change Orders (CO's). This includes monitoring and recording the progress of CCN's and CO's. Where Work must proceed pending issue of a Change Order, the Consultant must record time and materials expended.
- 3.5.10.3 Proposed changes that affect cost or design or otherwise alter the terms of the Contract must be accepted and approved by the Departmental Representative to process. Upon approval from the Departmental Representative, quotations must be obtained from the Contractor in detail. Prices are then reviewed and recommendations forwarded to the Departmental Representative.
- 3.5.10.4 The Departmental Representative will then forward the CCN to Contracting Authority to issue the COs to the Contractor, with a copy to Consultant.
- 3.5.10.5 The practice of "trade-offs" is not allowed.

3.5.11 CONTRACTOR'S PROGRESS PAYMENTS

- 3.5.11.1 Each month, the Contractor will submit a progress claim for work and materials delivered to site as required in the Contract. The claims are made by completing the following forms where applicable:
- 3.5.11.2 Request for Construction Payment with supporting invoices/documents in government format,
- 3.5.11.3 Cost Breakdown for Unit and/or combined Price Contract,
- 3.5.11.4 Cost Breakdown for Fixed Price Contract,
- 3.5.11.5 Statutory Declaration: Progress Claim, and
- 3.5.11.6 Worker's Compensation Board clearance letter.
- 3.5.11.7 The Consultant must determine the amounts owing to the Contractor based on the progress of the work and certify payments to the Contractor.
- 3.5.11.8 The Consultant must review and sign designated government forms and promptly forward claims to the Departmental Representative for processing. Obtain the following information from the Contractor and submit with each progress claim:
- 3.5.11.9 Updated schedule of the progress of work

3.5.12 PAYMENT FOR MATERIALS ON SITE

- 3.5.12.1 The Contractor may claim for payment of material on site, but not yet incorporated in work.

- 3.5.12.2 Material must be stored in a secure place and protected from weather as designated by the Departmental Representative.
- 3.5.12.3 A detailed list, checked and verified by the Consultant, of materials with supplier's invoice showing price of each item must accompany each claim.
- 3.5.12.4 Items must be listed separately on the Detail Sheet showing the breakdown list and total.

3.5.13 TESTING

- 3.5.13.1 Prior to tender, the Consultant must provide the Departmental Representative with a recommended list of tests to be undertaken, including on site and factory testing. Include items in Contract specifications.
- 3.5.13.2 Include all tests in the specifications, identify with a detail breakdown of the types of testing equipment and types required. List the conditions that the test will be done, under the observation of the consultant. Number and location of each test shall be determined and approved by PCA.
- 3.5.13.3 The Consultant shall coordinate with Contractor etc. for the test and review contractor's proposed testing agency's qualification and make recommendations to Departmental Representative for approval prior for the testing agency's services. Follow up with testing, and distribute test reports.
- 3.5.13.4 The Consultant must review all test reports and take necessary action with Contractor when work fails to comply with contract requirements. The Departmental Representative must be immediately notified when test fails to meet project requirements and when corrective work will affect the schedule.

3.5.14 SUBSTANTIAL (INTERIM) COMPLETION

- 3.5.14.1 The Contractor shall propose the site review when the project is at Substantial Completion stage and provide a list of deficiencies prior to the site review.
- 3.5.14.2 The Contractor shall arrange for an Interim Site Review with the Departmental Representative, PCA representatives, stakeholders, Consultants and major sub-contractors for the site review.
- 3.5.14.3 Consultants will prepare an Interim Completion report and a list of deficiencies. Upon reviewing the report, satisfy that the Work complies with Contract requirements and confirming the value of remaining work, Consultants will recommend the acceptance of Substantial Completion by signing the Substantial Completion Certificate.
- 3.5.14.4 When PCA is also satisfied that the construction work is substantially complete, they will also co-sign and issue the Substantial Certificate of Completion to the Contractor; provided that the Work remaining

to be done under the contract is, in the opinion of the Departmental Representative, capable of completion or correction at a cost of not more than:

- 3.5.14.4.1 3% of the first \$500,000, and
 - 3.5.14.4.2 2% of the next \$500,000, and
 - 3.5.14.4.3 1% of the balance of the value of the contract at the time this cost is calculated.
- 3.5.14.5 Payment to Contractor requires completion and signing, by the parties concerned, of the following documents:
- 3.5.14.5.1 Substantial Certificate of Completion (Government form),
 - 3.5.14.5.2 Interim Site Review report and Acceptance,
 - 3.5.14.5.3 Progress Claim including holdback amount to be released,
 - 3.5.14.5.4 Cost Breakdown for the Fixed Price Contract and the cost for the remaining Work,
 - 3.5.14.5.5 Cost Breakdown for Unit and/or Combined Price Contract,
 - 3.5.14.5.6 Project Schedule for the remaining Work,
 - 3.5.14.5.7 Statutory Declaration for Substantial Certificate of Completion, and
 - 3.5.14.5.8 Worker's Compensation Board Clearance Certificate.
- 3.5.14.6 The Consultant must verify that all items are correctly stated and ensure that completed documents and any supporting invoices/documents are given to the Departmental Representative for processing.
- 3.5.15 FINAL COMPLETION
- 3.5.15.1 The Contractor shall inform Department Representative when satisfied that all work under the Contract has been completed, including all deficiency items listed during the Interim Inspection.
 - 3.5.15.2 The Contractor shall arrange for the Final Site Review with the Departmental Representative, PCA representatives, stakeholders, Acceptance Board, Consultants and major sub-contractors for the site review.
 - 3.5.15.3 If the Work complies with Contract requirements and is satisfactory, upon recommendation from the Consultant, the Acceptance Board will accept of completion of the project.
 - 3.5.15.4 The final payment to Contractor requires completion and signing by the parties concerned, of the following documents:
 - 3.5.15.4.1 Final Certificate of Completion (Government form),

- 3.5.15.4.2 Final Site Review report and Acceptance,
- 3.5.15.4.3 Progress Claim including holdback amount to be released,
- 3.5.15.4.4 Cost Breakdown for Fixed Price Contract,
- 3.5.15.4.5 Cost Breakdown for Unit and/or Combined Price Contract,
- 3.5.15.4.6 Statutory Declaration for Final Certificate of Completion,
- 3.5.15.4.7 Worker’s Compensation Clearance Certificate,
- 3.5.15.5 The Consultant must verify that all items are correctly stated and ensure that completed documents and any supporting invoices/documents are given to the Departmental Representative for processing.
- 3.5.15.6 The Consultant shall continue to monitor the situation and communicate with the Departmental Representative to ensure that they are aware of any deficiency work being delayed beyond reasonable time frames.

4.0 Project Schedule

4.1 Milestones

- 4.1.1 100% SUBMISSION DELIVERABLES – FINAL TENDER DOCUMENTS to be delivered prior to May 12 2023.
- 4.1.2 Planned Schedule

100% SUBMISSION DELIVERABLES – FINAL TENDER DOCUMENTS	May 12 2023
CONSTRUCTION TENDERING PERIOD	May 13 2023 – July 7 2023
CONSTRUCTION PERIOD	Begins August 1 and must respect Fish Spawning Window (begins October 1 st)

5.0 Government Furnished Support/Equipment/Information

- 5.1 Parks Canada will attempt to provide as much information as possible. However, they cannot verify the accuracy or completeness of this information. Information may include drawings, records, plans, air photos, department directives, guidelines and data. The Consultant shall gather the rest of the necessary data from other sources. The Consultant shall return all materials after the completion of the work in good condition.
- 5.2 Environmental Impact Assessment as required
- 5.3 LIDAR data for the watershed
- 5.4 Access to the following documents:
 - 5.4.1 Parks Canada’s Trail Specifications;

- 5.4.2 Parks Canada’s Trail Classification System
 - 5.4.3 Parks Canada’s Trail User Guide;
 - 5.4.4 Parks Canada’s Trail Principles
 - 5.4.5 Parks Canada’s Trail Concept Planning User Guide
 - 5.4.6 Historic Construction drawings of the Boreal Trail
 - 5.5 Onsite investigation as required.
- 6.0 Meetings
- 6.1 Any meetings and/or on-site inspections to be proposed by the consultant for review and acceptance by the Parks Canada Project Manager.
 - 6.2 Parks Canada Project Manager can be available for meetings at the consultant’s headquarters as necessary.
- 7.0 Deliverables
- 7.1 Deliverables as per Section 3.0
- 8.0 Consultant Service Requirements
- 8.1 Consultant Team
 - 8.1.1 The Prime Consultant should be a Landscape Architect, with significant Trail Design expertise. A **Qualified Trail Professional** is preferred. A Qualified Trail Professional should be engaged if sufficient experience doesn’t exist or cannot be demonstrated within the prime consultant firm. A Qualified Trail Professional is defined as a service provider having:
 - experience in sustainable trail design (for design projects), or sustainable trail construction (for construction projects), or sustainable trail design and construction (for design-build projects); or
 - A member of the Professional Trail Builders Association (PTBA).
 - 8.1.2 The consultant team shall be comprised of qualified professional and technical expertise with extensive relevant experience, and shall be capable of providing the services identified in the Scope of Work section of the Required Services.
 - 8.1.3 Members of the consultant team may have the necessary qualifications and expertise to provide services in more than one discipline or specialty.
 - 8.2 Standards of Care
 - 8.2.1 Consultant must demonstrate that the project will be undertaken utilizing best practices of the professions, manufacturers, and trades involved and must meet or exceed the requirements of all applicable standards and codes.

- 8.3 Errors and Omissions
 - 8.3.1 No fee payment will be made by Parks Canada Agency based on the cost of work incurred to remedy errors or omissions, for which the Consultant is responsible.
- 8.4 Changes in Services
 - 8.4.1 The Consultant, if requested in writing to do so, will make any required changes in the work for the project notwithstanding his or her previous approval and advise the Parks Canada Project Manager of any changes to the time, schedule, budget, and other implications. The Consultant will provide an estimated cost for the required changes to the Parks Canada Project Manager. Once approved by the contracting officer, a formal Change Order will incorporate such changes into the Contract.
- 8.5 Standards, Guidelines, Codes, By-Laws, Permits
 - 8.5.1 The following shall apply to the activities in connection with this project:
 - 8.5.1.1 Canada National Parks Act and Regulations, Directives, Policies, Guidelines, Standards
 - 8.5.1.2 The National Building Codes of Canada (latest edition)
 - 8.5.1.3 Canadian Environmental Assessment Act
 - 8.5.1.4 Canadian Environmental Protection Act
 - 8.5.1.5 Local Provincial and Municipal Codes, Standards and Regulations accepted as having jurisdiction in the National Parks where work is being performed and for which the requirements are more stringent than those named above, shall be followed.
 - 8.5.1.6 Metrification: Projects shall be in accordance to Metric Drawings Practice and S.I. units as issued by the Metric Commission of Canada.
 - 8.5.1.7 Parks Canada's Trail Specification; Parks Canada's Trail Classification System, Parks Canada's Trail User Guide and Parks Canada's Trail Principles.
- 8.6 Risk Management
 - 8.6.1 Identify assumptions and constraints that the project is based on, including those related to schedule, budget, resources, quality and health and safety.
- 9.0 Project Administration Requirements
 - 9.1 Project Management
 - 9.1.1 The Parks Canada Project Manager:
 - 9.1.1.1 Facilitates a contract between the successful Consultant and

Parks Canada.

9.1.1.2 Will perform general Project Management duties, as required.

9.1.1.3 Arranges meetings and teleconferences as required.

9.2 The Consultant shall:

9.2.1 Arranges meetings and teleconferences as required.

9.2.2 Prepare and distribute minutes within 48 hours of the meeting.

9.2.3 Record issues and decisions.

9.2.4 Provide the services as outlined in Section 3.0

9.3 Lines of Communication

9.3.1 All formal directions regarding project scope, budget, schedule, etc. must come from the Parks Canada Project Representative or Parks Canada Contract Officer in writing.

9.4 Security Requirements

9.4.1 The Consultant shall distribute project documents such as drawings, specifications, reports, only to the PCA team members and only as required to perform the work.

9.4.2 The Consultant is expected to reasonably protect the documents in their care and the information to which they have access.

9.5 Submissions, Review and Approval Process

9.5.1 Procedure:

9.5.1.1 Provide all required submissions, either to, or as directed by the Parks Canada Project Manager.

9.5.1.2 Provide required deliverables as defined above.

9.5.1.3 The purpose of review and approval process is to ensure compliance with the project program, adherence to good design practice and technical quality assurance.

9.5.1.4 While PCA acknowledges the Consultant's obligations to meet project requirements, the project delivery process entitles PCA to review work. PCA reserves the right to reject undesirable or unsatisfactory work. The Consultant must obtain Park Canada Project Manager acceptances for each deliverable prior to proceeding to the next Phase.

9.5.1.5 Acceptance indicates that based on a general review of material for specific issues, the material is considered to comply with governmental and departmental objectives and practices, and that overall project objectives are being satisfied. Acceptance does not relieve the Consultant of professional responsibility for the work and compliance with the contract.

- 9.5.1.6 Throughout all phases of the project, Consultant to assume responsibility for coordinating the work of any Sub-Consultants and specialists retained by the Consultant.
- 9.5.1.7 Co-ordinate the Quality Assurance process ensuring submissions of Sub-Consultants are complete and signed-off by the designated senior reviewer.