



RETURN BIDS TO:

RETOURNER LES SOUMISSIONS Á:

**Parks Canada Agency**  
**1300 - 635 8 Ave SW**  
**Calgary, AB T2P3M3**  
**Bid Fax: 1-866-246-6893**

AMENDMENT / MODIFICATION

005

**Tender To: Parks Canada Agency**

We hereby offer to sell to Her Majesty the Queen in right of Canada, in accordance with the terms and conditions set out herein, referred to herein or attached hereto, the goods, services, and construction listed herein and on any attached sheets at the price(s) set out therefor.

**Soumission aux: l'Agence Parcs Canada**  
 Nous offrons par la présente de vendre à Sa Majesté la Reine du Chef du Canada, aux conditions énoncées ou incluses par référence dans la présente at aux annexes ci-jointes, les biens, services et construction énumérés ici et sur toute feuille ci-annexée, au(x) prix indiqué(s).

Comments - Commentaries

Vendor/Firm Name and Address  
 Raison sociale et adresse du fournisseur/de l'entrepreneur

Issuing Office - Bureau de distribution

**Parks Canada Agency**  
**Suite 1300**  
**635 – 8 Ave SW**  
**Calgary, AB T2P3M3**

<b>Title-Sujet</b> Logan Creek Bridge Construction – Pacific Rim National Park		
<b>Solicitation No. - No. de l'invitation</b> 5P420-17-5450/A	<b>Date:</b> February 1, 2018	
<b>GETS Reference No. – No de reference de SEAG</b> PW-18-00810188	<b>Amendment No. - N° de la modif.</b> PR00005	
<b>Solicitation Closes:</b>		
<b>at – á</b> 02:00 PM	<b>on – le</b> February 8, 2018	<b>Time Zone - Fuseau horaire</b> MST - HNR
<b>F.O.B. - F.A.B.</b> <b>Plant-Usine:</b> <input type="checkbox"/> <b>Destination:</b> <input checked="" type="checkbox"/> <b>Other-Autre:</b> <input type="checkbox"/>		
<b>Address Inquiries to: - Adresser toute demande de renseignements à :</b> Rebecca Chen		
<b>Telephone No. - No de téléphone</b> (403) 292-8509	<b>Fax No. – No de FAX:</b> 1-866-246-6893	
<b>Destination of Goods, Services, and Construction:</b> <b>Destinations des biens, services et construction:</b>  See Herein – Voir ici		

**TO BE COMPLETED BY THE BIDDER (type or print)**

<b>Vendor/Firm Name</b>	
<b>Address - Adresse</b>	
<b>Name of person authorized to sign on behalf of the Vendor/Firm</b> <b>Nom de la personne autorisée a signer au nom du fournisseur/ de l'entrepreneur</b>	
<b>Titale - Titre</b>	
<b>Telephone No. - N° de telephone:</b>	_____
<b>Facsimile No. - N° de télécopieur:</b>	_____
<b>Signature</b>	<b>Date</b>

## Amendment 05

This amendment is being raised to update the bidders' conference attendees, distribute tender package revisions, amend the drawings and to distribute the final questions and answers.

### A) BIDDER CONFERENCE ATTENDEES

Additional attendees that attended the bidders' conference on January 23, 2018 at 9:00 AM PST.

	Vendor	Name
1	Surespan Construction	Raydon Szeto
2	ALLTYPE Drilling	Charles Ryan Kelvin Lather

Contact information for the attendees are available upon request and approval from the vendors.

### B) TENDER PACKAGE REVISIONS

#### 1. SPECIFICATIONS

**Delete:**

General Instructions 01 11 55 section 1.22

.11 Arrange and pay for helicopter access for 18 site inspections to be carried out by the Departmental

Representative. Arrange the helicopter to allow for 3 passengers full day per site inspection.

#### 2. SOLICITATION AMENDMENT REVISIONS

**Question 28 in amendment 2 and question 5 in section D of amendment 3** are hereby rescinded and no longer form part of the solicitation. It is no longer required for the contractor to arrange and pay for helicopter access for 18 site inspections. Parks Canada will discuss the arrangement of helicopter site visits with the contractor after contract award to determine and coordinate efficiencies with site visits.

**Question 11 in amendment 3** is hereby rescinded and no longer forms part of the solicitation. The contractor is no longer restricted to using hand tools only for anchor installation. The use of a small tracked rock drill that can be slung in by helicopter for anchor installation is considered acceptable, provided that the following requirements are satisfied:

1. The drill is kept within the footprint of the work area to avoid potential ground compaction impacts outside the work area;
2. No additional clearing is undertaken to facilitate access by the machine (i.e., use of the machine should be localized and restricted to the anchoring area during use and staging area when not in use);
3. Biodegradable oils/lubricants are used;
4. All mitigation measures as outlined in the EMP related to machinery, spill prevention, etc. are implemented
5. Contractor's plans for machinery use needs to be submitted for review and approval by the Departmental Representative before they are mobilized onto site.

## C) STRUCTURAL DRAWINGS

### 1. DRAWING S301

.1 **Revise** foundation notes 5 & 6 and reinforcement concrete notes 1, 3 & 5 as per attached addendum sketch AD-S08.

### 2. DRAWING S305

.1 **Revise** Detail C as per attached addendum sketch AD-S05 Revision A.

.2 **Revise** Aluminum Section Size for Typical Bridge Deck Plan Per Bay as per attached addendum sketch AD-S02 Revision A.

.3 **Clarify** that the 12x100x100 steel washer plate is required on both top and bottom of the RT section for Detail Y.

### 3. DRAWING S306

.1 **Revise** new concrete foundation for back cable and outline of controlled density fill as per attached addendum sketch AD-S06 Revision A.

.2 **Revise** Section X-X as per attached addendum sketch AD-S09.

### 4. DRAWING S307

.1 **Revise** Typical Detail for Rock Anchors with Top Protection as per attached addendum sketch AD-S07 Revision A.

.2 **Revise** Detail C as per attached addendum sketch AD-S10.

### 5. DRAWING S308

.1 **Revise** Typical Bridge Deck End to Access Ramp Detail as per attached addendum sketch AD-S11.

### 6. DRAWING S303

.1 **Revise** side guy cable size to be 25mm diameter for side guy cables connecting to main cables (4 in total). The side guy cable size remains to be 16mm diameter for side guy cables connecting to deck.

### 7. DRAWINGS S305 to S307

.1 **Revise** material properties for 16mm diameter and 13mm diameter cables/ropes in Note 1 as follows.

**Add** material properties for 25mm diameter cables/ropes in Note 1 as follows:

All STRUCTURAL CABLES & ROPES SHALL BE WITH THE FOLLOWING MATERIAL PROPERTIES:

NOMINAL DIAMETER	APPROXIMATE MASS (kg/m)	MIN. BREAKING FORCE (kN)	MIN. MODULUS OF ELASTICITY (MPa)	MATERIAL
16mm(5/8") Rope	1.07	183	93,103	EIPS IWRC Wire
13mm(1/2") Rope	0.68	118	93,103	EIPS IWRC Wire
25mm(1") Rope	2.75	460	93,103	EIPS IWRC Wire

EIPS denotes Extra Improved Plow Steel; IWRC denotes Independent Wire Rope Core.

**The material properties for 50mm diameter cable remain as per tender documents**

### 8. DRAWING S305

- .1 **Revise** connection bend plate diagonal leg length from 100mm to 150mm in Detail D.
- .2 **Revise** steel connection member WT125x33.5 to be WT155x33.5 in Detail X.

### D) QUESTIONS AND ANSWERS

**Q1** Are the abutments designed to be founded atop rock?

- a. If the above is true, why do the specs call for a casing system, as required?
- b. The casing item may significantly increase costs to the project based on required equipment, equipment weights, required heli support for increased equipment weight

**A1** As per the drawings and geotechnical report footings are to be supported on dense glacial till and/or bedrock, or CDF placed on a geotechnically approved subgrade of these materials. The drawings indicate that casing is to be used as needed. The need for casing would be reduced if the upper soils are removed and groundwater seepage is appropriately managed prior to drilling of anchor holes. Limited information is available regarding the nature and extent of the weathered zone of rock and it is not possible to determine definitively / reliably in advance of construction that casing will or will not be required. Contractors should include the potential need for casing in their bids.

In general, unless highly fractured zones are encountered, casing is not anticipated to be required beyond the upper weathered zone of rock.

Please allow a length of casing of 3m to be included in the tender documents.

**Q2** Is there any geotechnical information on inferred rock profile?

- a. In the absence of information we cannot confirm how much anchor materials will be required to achieve the specified bond lengths into competent rock

**A2** Information about depth to bedrock at the abutment locations is described in the geotechnical assessment report which indicates it is variable. Contractor is to provide bond length and free stressing length into the bedrock as specified in the tender documents for the rock anchors.

**Q3** Is the clearing area adequate for a helicopter such as a Bell212 to sling in and drop small equipment such as a bobcat? It was suggested from a contractor that slinging from an area call "The Big Ugly" is a close option. Also discussed was slinging material from Port Renfrew.

**A3** The clearing area would not be adequate to provide an adequate area to land a helicopter but presumably it would be adequate for slinging materials in (dependent on the pilot's ability to maneuver – this would need to be discussed with the pilot). Clearing areas are to be limited to what is shown on the drawing for bridge construction and staging areas. Based on the drawings, the permanent footprint of the proposed new bridge abutments, anchoring system and connecting ramps is estimated to be

approximately 50 m<sup>2</sup> on each abutment with an additional approximately 75 m<sup>2</sup> of vegetation to be temporarily removed around the western abutment and 115 m<sup>2</sup> around the eastern abutment. In addition to this, Additional site clearing area for the temporary staging areas is approximate 40 m<sup>2</sup> for each side.

Regarding a bobcat – Please see A18, herein, for acceptable use requirements for small tracked equipment.

**Q4** We have been working on sourcing drilling equipment for the #14 anchors and have come to the following conclusion: If we can spec #14 anchors without casing it would be possible to utilize hand drills instead of excavator mounted drills.

**A4** Please allow a length of casing of 3m to be included in the tender documents.

**Q5** I roughly calculate 15m<sup>3</sup> of structural concrete. For a remote location, 15m<sup>3</sup> is a manageable volume. I roughly calculate another 80m<sup>3</sup> required for the CDF concrete. This sums to approx 95m<sup>3</sup> of concrete, which is an enormous mobilization effort to a remote location. This CDF is not structural, so my question is, what is the design intent for the CDF that carries with a significant cost to the bid / project? Would the Consultant consider backfilling around the structural footing concrete with the excavated material?

**A5** The CDF is required between the top of approved bearing stratum and the underside of footing as shown. Please refer to the addendum sketches AD-S06 Revision A & AD-S09 showing the volume of CDF, which is significantly reduced.

**Q6** Q14 page 05 14 00 4 of 6 note 2.3 finishes

Can you please provide more information on the required finish of the aluminium, as the aluminium association is the American counterpart to the aluminium association of Canada, I have no reference for this, and usually have a mill finish on aluminium, or paint which usually comes with a lot more specs and color requirements.

**A6** Mill finish is acceptable.

**Q7** Note 3.7 -a on 05 14 00 page 6 of 6

What is the paint specs required for matching?

**A7** The field paint for touch up is to match the color of the aluminum.

**Q8** Based on the detail and specs provided for the decking, this looks to be a proprietary decking type, can you please note the supplier as this does not match any of the local suppliers stock, and the only thing I can find that it looks like is a composite decking type.

**A8** Any aluminum planks satisfy the specified requirements, i.e., weight range, with punched holes (not solid) and upset pattern for enhanced slip resistance, are considered acceptable.

**Q9** Can you provide clarification on what standard the aluminium wf beams are specked from? See below two questions more specifically

-the main aluminium member wf 4x4.76" is noted as wf 4x4.76 as well, and just want to confirm that this is in fact specked from the American standard charts, and is 4"x4"x 4.76 # per foot and not some other variation that is 4.76" wide.

-section x-x page s308 Beam noted as wf8x11.8 -can you note which standard this falls under, or more information on its sizing as I cannot find this in any chart and without knowing sizing cannot find an equal alternate.

**A9** The aluminum beam size are updated in the addendum sketches.

**Q10** 05 14 00 page 5 of 6 note 3.5 inspection and testing

It is noted inspections to be carried out by laboratory designated by the department, and paid for by the contractor. Can you please provide either fixed rates for this, or the company and inspector that will be inspecting so we can properly account for this cost?

**A10** Contractor to account for the cost involved with the inspection.

**Q11** ASTM A 586 Grade 1 wire rope Bridge Strand) for vertical, wind & main cables vertical & wind cable to have fold back eyes. This specified design will not work properly and their recommendation is spelter sockets, which would be an issue with the specified connections.

**A11** The specified connections are to be used for tender bidding.

**Q12** The specified Eye size is not possible with a Thimble in it. The Vertical & Sway > should be 6x26 EEIPS RRL.

**A12** We are not sure which detail the question was referring to. The specified connections are to be used for tender bidding.

**Q13** The current design shows no connection for the Vertical cables on the bottom.

**A13** The bottom connection for the vertical cables is shown on the Detail Y on drawing S305.

**Q14** The requirement to set up a campsite for the engineers is vague. There are no showers, no running water, no privacy, cell phones and satellite phones do not receive a signal due to the canyon, no dietary restrictions, no heat, only out house washroom on site. Please clarify. Furthermore there is not enough room for additional tents at the designated campsites when considering the work force required on this project. Please reconsider this requirement and I would recommend that any of Parks representatives plan their inspections as "day trips".

**A14** The campsite required for Parks representatives will be primarily for environmental and archaeological monitoring. Specifically, an individual tent and cot will be required to be set up and meals provided for the Parks representative. Parks representatives are aware of the camping conditions on the West Coast Trail.

**Q15** One of our suppliers for the safety netting wants to know if Drop testing will be required as stated in ANSI 10.11 for safety nets even though the net its designed for use vertical plane and not horizontal.

**A15** We would recommend the testing is required to ensure the net provides its function in case someone falls. However, the drop height would be more reasonable from the deck rather than from a certain height, which is used for the drop test for the horizontal net.

**Q16** Referring to Amendment 3, Q2 - The question was un-answered.

Does the contractor have to provide for the Parks representative at the contractor's located campsite, if so what is required for the representative within camp?

Does the contractor's labour force have to purchase individual parks permits for working within the park and is there a charge for the "provided" camping sites?

**A16** The contractor will have to provide a campsite for Parks representatives. See A14 herein for more detail. The contractor will not have to purchase individual park permits and there is no charge for using the camp site.

**Q17** Referring to Amendment 3, Q9 - Is the 50% efficiency of helicopters only during times of year that the trail is open to the public?

**A17** While the West Coast Trail is open the contractor must take into consideration the safety and passage of hikers using the trail. When the West Coast Trail is closed, the contractor will not have to consider trail closures for safety of hikers.

**Q18** Referring to Amendment 3, Q11 - If no tracked equipment is now permitted on site, are the Rock anchor holes required to be drilled with hand tools? Is a casing drill still required equipment?

**A18** The use of a small tracked rock drill that can be slung in by helicopter for anchor installation is considered acceptable provided that the following requirements are satisfied:

1. The drill is kept within the footprint of the work area to avoid potential ground compaction impacts outside the work area;
2. No additional clearing is undertaken to facilitate access by the machine (i.e., use of the machine should be localized and restricted to the anchoring area during use and staging area when not in use);
3. Biodegradable oils/lubricants are used;
4. All mitigation measures as outlined in the EMP related to machinery, spill prevention, etc. are implemented
5. Contractor's plans for machinery use needs to be submitted for review and approval by the Departmental Representative before they are mobilized onto site.

As per response to previous question, contractor should allow for 3m casing for rock anchor installation.

**Q19** Clarification on the note 05 14 00 page 3 of 6 1.5 quality assurance note b.

Fabricator of structural aluminum shall, in addition, provide an affidavit stating that materials and products used in fabrication conform to applicable material and products standards called for by design drawings and specifications.

After talking with metallurgists, engineers and notary's, it's been pointed out that as the bridge supplier we cannot produce this as it is stated. We can pay to have every batch of material tested by metallurgic engineer so they can produce an affidavit stating that the material conforms to standards, and then we can produce one saying that we have paid for testing and results show this material is to spec, and that we used said tested material in the bridge. Being we are not the ones doing the testing we cannot produce the definitive affidavit as noted in the specs. Would an affidavit from the metallurgic engineer in regards to the materials testing conformance be enough to satisfy this section?

**A19** Yes.

**Q20** If possible please include –is crushed rock acceptable for both mixes?

Context:

Thanks for your patience in receiving this quote. Please see attached for your pricing for the 35MPa concrete, as well as the CDF. Both are in small bags. With the CDF, please note that we don't have a rounded aggregate available, as per the specs. The one that is priced here is for a crushed aggregate. We would meet all the other specs.

**A20** Crushed aggregate is acceptable to use provided that the mix design satisfies all other requirements as well as the crushed aggregate used satisfies the requirements specified in CSA A23.1.

**All other terms and conditions remain unchanged.**