

June 26, 2023

Mr. Alan Fehr, Superintendent
Jasper National Park
Parks Canada Agency
Box 10
Jasper, AB T0E 1E0

PROPOSAL FOR LICENSE OF OCCUPATION FOR SIMON CREEK BRIDGE

Dear Mr. Fehr,

Thank you for your letter dated January 30, 2023. In it, you mentioned the costs for the Simon Creek Bridge project will include:

- Maintenance
- Inspection
- Decommissioning and removal
- Impact assessment
- Project management for design review and environmental monitoring by Parks Canada

We wish to apply for a License of Occupation (LOO) for the Simon Creek Bridge site, approx. 10 ft wide x 180 ft long, plus temporary workspace during construction of the bridge and area for a small single panel interpretative display.

Full funding for this project is available, as follows:

Executive Summary

Item	Amount	Funding Provided by
Bridge construction, contingency, cost escalation, project/construction management, maintenance, inspection, decommissioning and removal, Parks Canada design review, impact assessment, environmental monitoring	\$366,822	<p>\$250,000 by a donor in Jasper \$ 91,822 – from public donations</p> <p>\$ 25,000 – A donor in Jasper has agreed to pay for the cost of decommissioning and removal of the bridge, via a clause in his will</p>

Details

Item	Amount	Funding Provided by
Bridge construction , including GST. See attached cost estimate	\$284,193	\$250,000 by a donor in Jasper \$ 34,193 – from public donations
Contingency (10%) – note that 98% of the cost estimate has firm quotes	\$ 28,419	Public donations
Cost Escalation (5%)	\$ 14,210	Public donations
Professional Engineer / Project Manager / Construction Manager	\$ 0	No charge, provided by Trevor Willson, P.Eng., 20 years experience in project management, including design and construction of 9 backcountry trail

		bridges, 5 including helicopter logistics
Maintenance. This bridge is extremely low maintenance. UV resistant fiberglass, HDG bolts, advanced eco-certified treated lumber and gabion abutments well out of the streambed will be utilized.	TBC	
Inspection every 5 years by a Parks Canada bridge engineer, including helicopter to site	\$ 5,000 every 5 years	public donations
Decommissioning and Removal. See attached cost estimate	\$ 25,000	A donor in Jasper has agreed to pay for this future cost, via a clause in his will
Project management for design review / impact assessment by Parks Canada	\$ 5,000	100 h at \$50 / h Public donations
Environmental monitoring by Parks Canada	\$ 5,000	\$5,000 for (1) Parks Canada staff to observe bridge construction and conduct environmental monitoring, \$500/day x 10 days. Helicopter transport provided.

We feel that all the financial concerns raised in your letter have been addressed by the above.

We believe that this project should proceed. It has very strong public support, as noted by the reference letters in the Dec 16, 2022 original application, and is also supported by many other agencies and individuals.

Please provide the path forward for a License of Occupation for this project.

Best Regards,



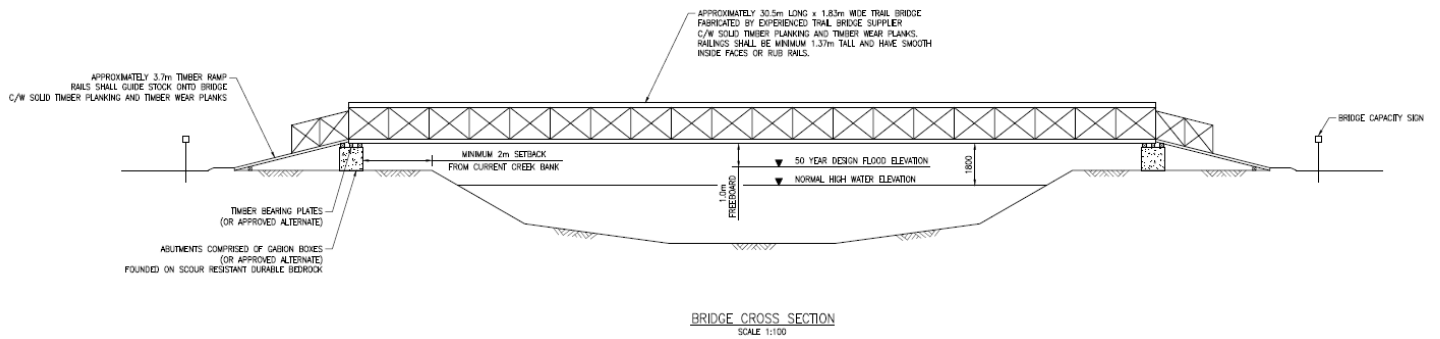
Trevor Willson, P.Eng.



Simon Creek Bridge Site July, 2022 28°C Looking South



Similar Fiberglass Truss Bridge



Simon Creek Bridge
Conceptual Design



Big Elbow Bridge 2018

98'6" x 6' wide



Office of the Superintendent
Jasper Field Unit
P.O. Box 10
Jasper, Alberta
T0E 1E0

January 30, 2023

Trevor Willson

Subject: Simon Creek Bridge proposal

Dear Trevor Willson:

Thank you for your proposal to replace the Simon Creek Bridge and enthusiasm for the Athabasca Pass.

The Athabasca Pass National Historic Site (NHS) memorializes the significance of the main fur trade route between Canada and the Oregon Country from 1811 to the mid-1850s. Parks Canada is committed to increasing awareness and appreciation for this unique cultural landscape and its role in Canadian history. Given that the vast majority of visitors are unable to travel this route, Jasper National Park has invested in the Athabasca Pass NHS viewpoint located approximately 15 kilometres south of the Municipality of Jasper which hosts several interpretive and pointer signs to foster recognition of the historic importance of the area.

Several years ago, Jasper National Park established a Trail Maintenance Matrix to inform decision making associated with trail maintenance activities. On this matrix, the Athabasca Pass Trail is identified as a remote route. Beyond the Whirlpool Campground, its remote nature and the very low number of visitors using the trail make it a low priority in the allocation of the limited resources available for trail maintenance.

Jasper National Parks annual investment for trail infrastructure is focused on trail maintenance and infrastructure associated with higher priority trails identified in the Trail Maintenance Matrix. These are the trails that have very high levels of use by the vast majority of visitors to Jasper National Park.

Bridges are an important component for both the front and backcountry trail offer. There are hundreds of bridges across Jasper National Park, more than 30 of which, due to the crossing characteristics and code specifications, require engineered designs and regular inspections. Bridge maintenance and replacement requirements are also informed by the Trail Maintenance Matrix and reviewed regularly based on the availability of resources.

Under new Treasury Board requirements, investment in new assets by Parks Canada are required to include future costs associated with maintenance and eventual recapitalization of assets when

they reach their lifespan. The costs to maintain, inspect, replace, decommission or remove a large permanent structure like the one proposed for Simon Creek would be significant.

At the present time, there are no resources available to increase trail maintenance and no planned infrastructure investments for the Athabasca Pass Trail. With our current program of work, resources required for the impact assessment, the project management required for design review, construction and environmental monitoring are fully engaged.

Each year the Jasper Field Unit management team reviews the capital plan, adjusting priorities against emerging requirements and available resources. The Simon Creek Bridge has been, and will continue to be reviewed in this context. Based on your interest in this trail, the Jasper Field Unit will contact you if and when the priority of the Athabasca Pass Trail and replacement of the Simon Creek Bridge changes.

Yours truly,



Alan Fehr
Field Unit Superintendent

Simon Creek Bridge Cost Estimate

Rev. D Jan 29, 2023

Qty	Item (Assume 1.34 CAD/USD)	Supplier	Cost (CAD)	Cost Basis
	BRIDGE, INSTALLATION, GABION ABUTMENTS			
1	<u>Fiberglass Truss Trail Bridge</u> , 100 ft long, 5'6" clear inside width, 4'6" handrails, suitable for horse use, built to CSA S6:19 Canadian Highway Bridge Design Code requirements		\$113,950 USD	FIRM QUOTE
1	USA PE stamped drawings and calculations		\$2,600 USD	FIRM QUOTE
1	Resin Surcharge, quoted at \$3,600, told this can be \$0		\$0	VERBAL AGREEMENT
1	CBSA fees at Canadian border (no tariffs on fiberglass)	Duty website	\$700	FIRM QUOTE
	REPORTS, DRAWINGS, ENGINEERING			
1	Hydrology Report	From Parks Canada, due to previous work at this bridge site	\$0	
1	Creation of topo map in vicinity of bridge site, in early Feb, 2023, based on high resolution drone imagery	TBD	\$1,500 (est.)	ESTIMATE OFFICE ONLY
1	Conceptual design drawing for bridge		\$2,500	FIRM

				QUOTE
1	P.Eng. stamped construction drawings to CSA S6:19 for bridge, ramps, gabion abutments, etc.		\$17,700	FIRM QUOTE
	TRANSPORTATION			
1	<u>Trucking</u> unassembled bridge parts to Kerkeslin Gravel Pit, where assembly will occur		\$11,200	FIRM QUOTE
1	Helicopter to transport surveyor and assistant to bridge site, inspect Simon Creek helicopter landing areas. \$0 due to use of previous available imagery	N/A	\$0	
1	Helicopter to transport volunteers, construction equipment and 1,000 lb of timber for temp supports, from Kerkeslin Gravel Pit (35 km south of Jasper) to Simon Creek and return, remove rigging to Gravel Pit, \$1650/h Bell 206L1C30 incl. fuel, 2.4 H	TBD	\$3,960 (est.)	DETAILED ESTIMATE BASED ON DISTANCES, <u>VERBAL</u> HOURLY RATE
1	<u>Heavy helicopter</u> <u>transport</u> of assembled fiberglass bridge in (3) sections (~5,000 lb each, with no decking), and remaining 15,000 lb of timber (4 flights), from Kerkeslin Gravel Pit to bridge site. This includes mob/demob \$6000/h. (Extra 0.8 h each way to / from in case of poor weather NOT INCLUDED = \$9,600)		\$52,200 (est.)	DETAILED ESTIMATE BASED ON DISTANCES, <u>WRITTEN</u> HOURLY RATE
1	<u>Bobcat</u> to clear snow at Kerkeslin Gravel Pit prior to volunteers arriving	TBD, in Jasper	\$600 (est.)	ESTIMATE

2	<u>26 ft truck rental (9,600 lb max each)</u> to bring 16,000 lb of lumber from Calgary. \$40/day for 14 days + \$0.79/km x (386 km x 2 + 100 km to pick up wood) = \$1,249/truck		\$2,500	FIRM QUOTE
2	Fuel for trucks, 10 MPG=23 L/100 km x 872 km = 201 L per truck. 201 L x \$1.57/L = \$316 / truck. Use current diesel prices, add 10% contingency		\$700	FIRM QUOTE
	FOOD AND ACCOMMODATION FOR VOLUNTEERS			
72	<u>Food</u> for volunteers, \$50/person/day: 6 x 5 days + 6 x 5 days + 4 x 3 days	various	\$3,600	FIRM PLAN
30	<u>Accommodation</u> for gravel pit volunteers: 6 x 5 days, \$100/day	TBD, Jasper area	\$3,000 (est.)	ESTIMATE
	TIMBER, RAMPS, HARDWARE			
	All timber in this project is MicroPro Sienna ecologically certified brown treated lumber.			
2	<u>Gabions</u> , 1 m x 1 m x 2 m (no rocks included) 1x1x3 m \$350.06 each, in stock 1x1x2 m \$255.68 each, in stock all welded and galvanized, Alberta Transportation specification		\$700	FIRM QUOTE

2	Steel Plates for gabion bases (\$??) and HDG threaded rods/nuts (<u>firm quote at \$406</u>) to connect to timber bridge sills	TBD	\$800	ESTIMATE
80	<u>Decking</u> : 3x12 for bridge and ramps: 138 @ 6 ft + 10 @ 12 ft for ramp long boards supporting posts + 1 @ 12 ft for ramp sill = 80 pieces @ 12 ft		\$6,076	FIRM QUOTE
25	<u>Rub rails</u> on inside of bridge + ramp handrails, (1) each side x 148 ft: 2x6 @ 12 ft, 25 pieces. This prevents a pack horse's packs from hitting the bridge. \$23.68 each		\$592	FIRM QUOTE
50	<u>Wear planks</u> over decking, 2x8 @ 12 ft, full length of bridge + ramps, 4 pieces wide, \$32.22 each		\$1,611	FIRM QUOTE
2	<u>Bridge Sills</u> : 8x8 @ 6 ft (2 per end of bridge), \$156 for 12 ft BROWN TREATED, JAN 27, 2023 quantities I need all in stock 8x8 x 12' \$156 (\$13/ft) 8x8 x 16' \$208 20' and 24' are only available in green treated Prices could change. 6x6: \$5.50/ft for 8', 10', 12', 16'		\$312	FIRM QUOTE
5	<u>Ramp Sills</u> : 8x8 @ 6 ft (5 per end of bridge), \$156 for 12 ft		\$780	FIRM QUOTE
16	<u>Ramp Beams</u> : 6x6 @ 12 ft, \$66.76 each		\$1068	FIRM QUOTE
2	<u>End Plate for Ramp Beam</u> , for one ramp: (2)		\$48	FIRM

	2x6 @ 6 ft (2) 2x6 @ 12 ft., \$23.68 each			QUOTE
24	<u>Ramp Rails/Posts/Supports</u> below for one 24 ft ramp, Qty to the left for 2 ramps 2x6 @ 12 ft: 8 for handrail, 4 midrail (\$23.68) 8 4x4 @ 12 ft: 4 for toekick (\$26.44) 10 4x4 @ 52.5"(4.4'): 10 for posts (\$20.23 x 9') 10 4x4 @ 48": 10 for post 60° supports (\$17.62 x 8') 2 4x4 @ 48": 2 for end support (\$17.62 x 8')		\$1194	FIRM QUOTE
	GRK Screws to connect: Handrails, midrails, toekicks Posts, 60° Supports Rubrails, wear planks		\$995	Based on FIRM QUOTE for 1.5 times shorter ramps
1	Exact distancing device, to locate gabions, Leica Geosystems 846805 DISTO D1 130' Laser Distance Measure, 2 mm accuracy		\$147	FIRM QUOTE
	PROFESSIONAL PROJECT MANAGEMENT			
1	Professional Engineer/Project Manager/Construction Manager, 100 h (office) + 14 days x 9 h/day (field) = 226 h @ \$150/h = \$33,900. Provided at no charge	Trevor Willson, P.Eng.	\$0	

	Subtotal		\$270,660	
	GST		\$13,533	
	Contingency			
	Total (CAD)		\$284,193	

Simon Creek Bridge

Decommissioning and Removal

Cost Estimate

Rev. 2 June 25, 2023

Trevor Willson, P.Eng.

Basis: The bridge will only be decommissioned if it is broken and it is unrepairable. The wire cage gabions of natural local rocks will be left in place, with the bridge sills on them.

(Option: The 24 ft PT wood equestrian ramps with railings could be left in place if Jasper National Park wants them to. That would reduce the cost of decommissioning described below.)

<https://parks.canada.ca/pn-np/ab/jasper/visit/routes-roads>

Moab Lake Road opens May 18, 2023.

Weight of Fiberglass Bridge/Bolts: 15,000 lb

Weight of PT Wood Ramps/Railings: 16,000 lb

Total Weight: 31,000 lb

Method:

- 1) In April, the creek is 45 cm deep (1.5 ft) allowing people to walk through it. Also snow needs to be on the Moab Creek Road to ensure it is frozen. The north ramp railings only will be removed and set aside. Then, the entire broken bridge will be pulled by chainsaw winch onto the north ramp / ground on the north side of the creek. It may come in pieces. The ramps and bridge will be disassembled sufficiently for transport.
- 2) The ramps and fiberglass bridge will be removed from Simon Creek to the Moab Lake Parking Lot (15 km by trail). This will be by helicopter.
- 3) A front end loader will load a dumptruck, which will take the material from Moab Lake Parking Lot, to the Hinton Landfill. The Jasper Landfill does not accept treated wood.
- 4) Experienced volunteers, with all necessary safety gear, chainsaws and hand tools, are used for all work, except the transportation of material. Chainsaw operators are certified. Volunteers are transported to Simon Creek by helicopter and camp there.
- 5) Permission to use Highway 93A and Moab Lake Road in April are required.

Qty	Item	Supplier	Cost (CAD)	Cost Basis
1	Chainsaw winch rental (\$300/week)		\$300	Firm Quote
	<p>Bell 206L1C30, 1200 lb cargo capacity</p> <p>(27) loads of material</p> <p>7.4 h x \$1,650/h = \$12,210, including mob/demob</p> <p><u>OR</u></p> <p>Bell 212HP, 2800 lb cargo capacity</p> <p>(12) loads</p> <p>4.7 h x \$4,149/h = \$19,500, including mob/demob</p> <p><u>OR</u></p> <p>6000 lb cargo capacity</p> <p>(6) loads</p> <p>7.8 h x \$6000/h = \$46,800, including mob/demob</p> <p><u>OR</u></p> <p>Bell 214, 6000 lb cargo capacity</p> <p>(6) loads</p> <p>9.2 h x \$6000/h = \$55,200, including mob/demob</p>		\$12,210	Firm Quote

	<p>Bell 206L1C30, 1200 lb cargo capacity</p> <p>(2) loads of people and construction gear for mob, 2 loads for demob</p> <p>4 loads / 27 loads x \$12,210 = \$1,810</p>		\$1,810	Firm Quote
1	<p>Dumptruck, deliver material to Landfill</p> <p>Front end loader with claw, to load dumptruck: 8 h x \$177/h for backhoe, 5 h x \$154/h round trip Moab Lake – Hinton Landfill, 4770 for second dumptruck load. 15 tonnes of cargo is the dumptruck's limit.</p>		\$2,956	Firm Quote
1	<p>Landfill disposal fee</p> <p>https://yhcounty.ca/wp-content/uploads/2023/02/2023-Fee-Schedule-WYR.pdf</p> <p>\$94/tonne x 14 tonnes = \$1,316</p> <p>31,000 lb = 14 tonnes</p>	West Yellowhead Regional Landfill, Hinton	\$1,316	Firm Quote
2	<p>Supervisor travel from Calgary</p> <p>403 km one way @ \$0.68/km (2023) = \$274 (This includes fuel)</p>		\$548	Firm Quote
	<p>Volunteers at \$50/day/person:</p> <p>All loads need to be prepared before the helicopter arrives. 1 day for helicopter</p> <p>27 loads at 1,200 lb each</p> <p>6 bridge disassemblers and load packagers</p> <p>1 day fly in, set up camp</p> <p>1 day winch bridge</p> <p>3 days disassembly</p> <p>1 day packaging</p> <p>1 day helicopter loads, decamp, fly out</p>		\$2,100	Firm Quote

	(7 days) 42 man-days x \$50 each = \$2,100			
1	Professional Engineer/Project Manager/Construction Manager, 60 h (office) + 10 days x 9 h/day (field) = 150 h @ \$150/h = \$22,500. Provided at no charge	Trevor Willson, P.Eng.	\$0	Firm Quote
	Subtotal		\$21,240	
	GST @ 5%		\$1,062	
	Contingency @ 10% (on all above)		\$2,230	
	Total (CAD)		\$24,532	