CK-2554
CK-2554

STAVE 29.6km

2022 Inspection

CBR iPad Offline Ver 0.36

CBR Data

Latitude	Longitude
49°35'42.9"	-122°24'14.2"

Site Status	Active
Insp. Status	Inspect
Crossing Name	Stave side channel
FSR #	8013
Branch #	1
Road Name	STAVE
User km	
Previous Load Rating (tonnes)	27
Structure Class	Temporary Bridge
Portable	N
Superstructure	Log Stringers
Deck Type	Gravel
Abutment Left	Sill -Temporary Materials
Abutment Right	Sill -Temporary Materials
Spans	1
Total Length (m)	7.5
Deck Width (m)	6.6

Updated Data

Latitude	Longitude
49°35'42.71"	-122°24'14.48"

HD Diff. (m)	8.0	Accuracy (m)	6

10 tonnes

Inspection

Date of Inspection: 2022-09-09 10:42:30 AM

Inspector Name: Cameron VandenBrink, EIT

Inspector Comments: Serial/ID Plate

Recommended Next Inspection: 2023

Inspection Company: Chartwell Resource Group Ltd

P.Eng Comments

The structure continues to deteriorate, limit loading to 10 tonnes and plan to replace soon. Post load rating signs. Install curb logs that meet section 26.81 of the OH&S Regulation. Install missing delineators and bridge ahead signs.

PERMIT TO PRACTICE: 1003022

Approach

Alignment	Fair	HC right approach
Bridge Ahead Signs Missing	○ 0 ○ 1 ● 2	
Brushing Required	N	
Delineator Missing Left	○ 0 ○ 1 ● 2	
Delineator Missing Right	○ 0 ○ 1 ● 2	
Fender Condition	Poor	No fenders
Posted Load Rating		Not posted
Road Surface	Good	

Abutment

Log/Timber Cribs		
Tie Backs		
Bin Wall		
Pier		
Concrete		
Caps or Sills	Fair	Oversized large diameter single sills. No riprap infront of sills.
Piles or Posts		
Ballast Wall		
Wing Wall		
Bracing		
Hardware		
Fill	Fair	
Riprap	Fair	None
Bearings		
Corrosion Protection		

Deck

Running Surface	Good	
Running Planks		
Sub Deck		
Ties		
Nails		
Deck to Girder Bolts		
Concrete Deck		
Grout Pockets		
Deck Joints		
Steel Deck Plate		
Gravel Surface	Fair	
Curb Rail/Blocks/Posts	Poor	No curb logs over structure
Hand Rails/Walkouts		
Hardware		
Overall Deck Condition	Poor	Due to no curb logs
Gravel Depth (mm)	200	
Pier Deck		

Steel/Concrete

Girders

Diaphragms

Bracing

Under Trussing

Hardware

Welded/grouted shear connectors

Log

Log Curbs Poor None

Needle Beam

Needle Lashing/ Shimming

Needle Beam to Crib (m)

Needle Diameter (mm)

Stringer Number	Species	Peeled	Diameter (mm)	Rot Depth (mm)	Condition	Comment
1	Cw	Y	810	430	Poor	Heart entire bit
2	Cw	Y	660	60	Fair	
3	Cw	Y	690	100	Poor	
4	Cw	Y	590	50	Fair	
5	Cw	Y	510	150	Poor	
6	Cw	Y	550	150	Poor	
7	Cw	Y	400	55	Fair	
8	Cw	Y	520	75	Fair	
9	Cw	Y	450	50	Fair	
10	Cw	Y	500	100	Poor	
11	Cw	Y	550	100	Poor	
12	Cw	Y	690	150	Poor	

Hazards

Estimated Present Water Level Depth (m)	0	High Water	☒	Debris	☒
Estimated Present Water Level Width (m)	0	Aggradation	☒	Scour	☒
Estimated High Water Level Clearance	0	Ic	☐		

Comments

Repairs and Monitoring

	Repair Item	Repair Description
1	Structure. Log/timber stringer maintenance. m. Priority:High	Install curbs and delineators
2	Structure. Add Load Rating Signs. # sites. Priority:High	Post load rating signs
3	Approach. Bridge ahead signs. Priority: Medium	Post bridge ahead signs.
4		
5		
6		
7		

Item	Monitor Description	Frequency
1		
2		
3		

Approach from bridge deck of Right bank approach when facing downstream

Approach from bridge deck of Left bank approach when facing downstream

Upstream from Crossing

Downstream from Crossing

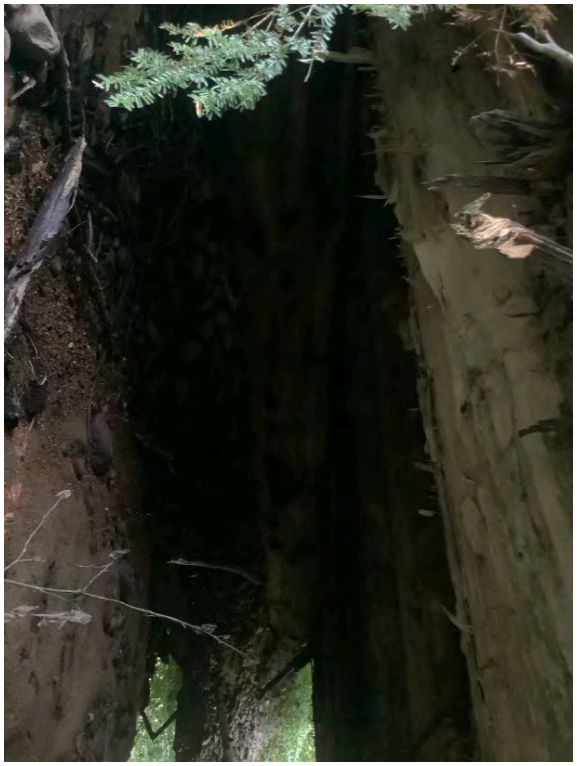
Approach from Left Bank when facing downstream

Downstream Profile

Approach from Right Bank when facing downstream

Left Bank Abutment when facing downstream

Right Bank Abutment when facing downstream



Upstream Profile

CHARTWELL

December 6, 2022

Attn: Tyson Miller, P.Eng., RPF
Area Engineer
Ministry of Forests
46360 Airport Road
Chilliwack, BC V2P 1A5

Re: EN23NAN900 District of Chilliwack Bridge Inspection Reports

Chartwell Resource Group Ltd. (CRGL) was retained by the Ministry of Forests (MOF) to carry out Routine Inspections and prepare inspection reports for 120 engineered structures throughout the Chilliwack Natural Resource District (DCK). Of the 120 structures, 1 structure was inaccessible at the time of inspection and was omitted with approval from the MOF. Multiple structures were inspected from the air as the roads have not been accessible for multiple years, resulting in no safe landing spot for the helicopter. The remaining sites were either accessed on foot, by truck, ATV or helicopter.

All bridge inspections and bridge inspection reports within the DCK were completed by Cameron VandenBrink, EIT under the direct supervision of Lindsey McGill, P.Eng./ RPF. Since completing the inspections, Cameron VandenBrink has received his P.Eng. designation. Structure CK-2269 was the only structure within the DCK not inspected by Cameron VandenBrink, it was inspected by Weillas Ng, P.Eng./ RPF, also part of the engineering team at CRGL.

Our routine inspections assessed the general condition of all readily accessible components for each structure. Where deficiencies were identified, recommendations for repairs and upgrades were provided and have been included with each inspection report. Photographs were taken in accordance with contract specifications and have been included with each inspection report. Previous inspection reports that were available on the Corporate Bridge Register were referenced to track the status of previous monitoring and repair items.

This letter applies to the structures in the appended list below. The bridge inspection reports for the bridges have been compiled with attached photographs and have been submitted to the Ministry on an external flash drive as per contract requirements. We trust that this letter and the accompanying documents fulfill the intent of the contract. Please reach out to CRGL with any questions and concerns regarding the completed work.

Prepared by:

EGBC Permit to Practice: #1001334

Reviewed by:

PROFESSIONAL ENGINEER PROVINCE OF BRITISH COLUMBIA C. G. VANDENBRINK # 56917

DEC 06 2022

PROFESSIONAL ENGINEER PROVINCE OF BRITISH COLUMBIA L. J. McGILL # 36203

Dec. 6, 2022

Cameron VandenBrink, PEng
Field Engineer
cvandenbrink@crgl.ca

Lindsey McGill, PEng, RPF
Partner / Engineer
lmcgill@crgl.ca

Site	Road Name	Project File ID #	Branch	UserKM	Structure Type	Latitude	Longitude
CK-2002	AMERICAN	8123	1	4.6	P	49.427167	-121.48075
CK-2005	ANDERSON	8074	1	2.7	MC	49.691778	-121.396833
CK-2007	ANDERSON 13000	8074	7	0.1	T	49.726528	-121.364556
CK-2120A	BEAR	5748	3	7	T	49.45575	-121.70475
CK-2121A	BEAR	5748	3	7.4	T	49.453	-121.702194
CK-2126	BEAR 7500	5748	7	0.1	T	49.452833	-121.702389
CK-2073	BENCH	5127	10	1.5	P	49.108889	-121.646
CK-2075	BENCH	5127	10	2.1	P	49.111278	-121.63175
CK-2011	BLUE MOUNTAIN 300	5913	2	0.1	T	49.236944	-122.462111
CK-2012	BLUE MOUNTAIN 300	5913	2	0.8	P	49.236	-122.468778
CK-2226	BOISE	8394	2	0.3	P	49.577083	-122.642889
CK-2228	BOISE	8394	2	3.2	T	49.598889	-122.652528
CK-2230	BOISE	8394	2	7.6	P	49.620944	-122.696472
CK-2232	BUCKLIN	8394	3	3	T	49.706611	-122.720278
CK-2019	CAYOOSE	8110	1	0.1	T	49.204583	-120.99975
CK-2074	CHIPMUNK	5127	12	8.3	T	49.14025	-121.695528
CK-2512	CLEAR	5748	5	14.7	MC	49.706278	-121.725556
CK-2348	COGBURN	5748	2	4.8	P	49.555778	-121.727333
CK-2118A	COGBURN	5748	2	8	T	49.560833	-121.690694
CK-2547	EIGHT MILE	8144	1		T	49.34325	-121.261694
CK-2211	EMORY	8147	1	2.8	MC	49.511611	-121.43975
CK-2496	ENGLISH	5748	29	2	T	49.661528	-121.868667
CK-2497	ENGLISH	5748	29	2.6	T	49.656417	-121.866361
CK-2099	FLORENCE LAKE	8648	1	13.8	P	49.322694	-122.337778
CK-2317	FOLEY	5127	13	11.7	P	49.154083	-121.538278
CK-2316	FOLEY	5127	13	12.7	P	49.162278	-121.536028
CK-2466	GARNET	7558	1	7.6	P	49.410306	-121.592083
CK-2555	GARNET 7600	7558	3	0.4	P	49.410528	-121.595583
CK-2556	GARNET 7600	7558	3	0.6	P	49.410528	-121.595583
CK-2479	GRIZZLY	6996	16	2.1	T	49.938444	-121.906611
CK-2539	HARRISON EAST	5748	1	20	P	49.509167	-121.767778
CK-2108	HARRISON EAST	5748	1	30.7	P	49.575056	-121.816778
CK-2109	HARRISON EAST	5748	1	35.3	P	49.604306	-121.822667
CK-2110	HARRISON EAST	5748	1	38.5	P	49.639194	-121.836861
CK-2531	HARRISON EAST	5748	1	48.2	MC	49.715139	-121.851167
CK-2122	HARRISON EAST	5748	1	57.6	P	49.78225	-121.862806
CK-2124	HARRISON EAST	5748	1	60.5	P	49.786417	-121.827083
CK-2123	HARRISON EAST	5748	1	7.6	P	49.809556	-121.778694
CK-2125	HARRISON EAST	5748	1	71	MC	49.832389	-121.758167
CK-2459	HORNET	5748	19	0.4	T	49.604444	-121.819167
CK-2462	HORNET	5748	19	2.8	T	49.62175	-121.801778
CK-2158	HUNTER	6086	1	4.9	P	49.328417	-121.544361
CK-2053	LIUMCHEN	5127	2	0.2	P	49.070611	-121.840917
CK-2054	LIUMCHEN	5127	2	0.9	P	49.073222	-121.847806
CK-2055	LIUMCHEN	5127	2	2.5	P	49.075639	-121.868944
CK-2061	LIUMCHEN EAST	5127	4	4.2	P	49.071306	-121.919972
CK-2329	LOST 7300	8466	4	1.1	MC	49.34125	-122.233
CK-2163	LOST CREEK	8466	1	1.1	P	49.288028	-122.228667
CK-2520	LOST CREEK	8466	1		MC	49.292667	-122.229139
CK-2165	LOST CREEK	8466	1	2.2	P	49.296917	-122.233
CK-2166	LOST CREEK	8466	1	5	P	49.315944	-122.248861
CK-2168	LOST CREEK	8466	1	8.6	P	49.341444	-122.240611
CK-2169	LOST CREEK	8466	1	14.6	P	49.381028	-122.222972
CK-2170	LOST CREEK	8466	1	17.1	P	49.39675	-122.230111

CK-2172	LOST CREEK	8466	1	18.8	T	49.394417	-122.24175
CK-2173	LOST CREEK	8466	1	18.9	T	49.400278	-122.2415
CK-2472	MAISAL	8241	16	11.5	T	49.419889	-121.965917
CK-2320	NAHATLATCH	6996	1	19.1	MC	50.003194	-121.731444
CK-2477	NAHATLATCH	6996	1	39.8	T	49.935833	-121.933419
CK-2474	NAHATLATCH	6996	1	46	P	49.906972	-121.992722
CK-2475	NAHATLATCH	6996	1	46.5	T	49.90475	-121.995833
CK-2448	NORRISH	10326	1	1.8	P	49.196722	-122.159972
CK-2449	NORRISH	10326	1	3.6	MC	49.208167	-122.153361
CK-2452	NORRISH	10326	1	7.1	T	49.232917	-122.135889
CK-2453	NORRISH	10326	1	7.4	T	49.235861	-122.132417
CK-2537	NORRISH 17000	10326	2	1.8	P	49.291972	-122.10275
CK-2218	PITT RIVER	8394	1	8	P	49.606028	-122.632944
CK-2219	PITT RIVER	8394	1	9.8	P	49.619611	-122.644583
CK-2222	PITT RIVER	8394	1	18.2	T	49.679472	-122.685111
CK-2406	PITT RIVER	8394	1	18.5	T	49.679444	-122.685139
CK-2224	PITT RIVER	8394	1	23	T	49.71125	-122.706889
CK-2225	PITT RIVER	8394	1	24.6	T	49.710722	-122.713806
CK-2551	PURCELL	11024	1	3.1	T	49.749611	-122.097972
CK-2552	PURCELL	11024	1	7.2	T	49.752667	-122.101639
CK-2102	ROCKY POINT	8648	2	0.2	P	49.311694	-122.322528
CK-2487	STS'AILES (WEST)	6314	1	7.9	P	49.375833	-121.841083
CK-2130	STS'AILES (WEST)	6314	1	12.8	MC	49.408306	-121.848278
CK-2528	MOLLY HOGAN POINT	6314	12	0.1	P	49.538167	-121.889694
CK-2139	STS'AILES (WEST)	6314	1	42	P	49.591611	-121.930306
CK-2140	STS'AILES (WEST)	6314	1	46.5	P	49.609639	-121.957194
CK-2147	STS'AILES (WEST)	6314	1	66	P	49.689889	-122.123083
CK-2239	SOWERBY	8112	1	6.5	P	49.282	-121.467417
CK-2240	SPUZZUM	8128	1	5	P	49.674833	-121.471306
CK-2363	SPUZZUM	8128	1	25.2	P	49.738583	-121.688583
CK-2241	SPUZZUM	8128	1	25.4	P	49.737722	-121.689667
CK-2249	SPUZZUM 16000	8128	7	5.4	T	49.686889	-121.639528
CK-2250	SPUZZUM 16000	8128	7	5.9	T	49.683722	-121.642139
CK-2252	SPUZZUM 17000	8128	10	4	T	49.701417	-121.638944
CK-2369	SPUZZUM 24000	8128	21	2.3	P	49.736	-121.659806
CK-2506	STATLU 1800	8241	18	0.2	P	49.344722	-122.047917
CK-2035	STATLU 7300	8241	3	0.1	P	49.369611	-122.11
CK-2334	STAVE	8013	1	3.7	MC	49.455944	-122.21775
CK-2338	STAVE	8013	1	12.2	MC	49.497444	-122.259861
CK-2264	STAVE	8013	1	11.9	T	49.503722	-122.264444
CK-2265	STAVE	8013	1	12	T	49.504417	-122.266056
CK-2339	STAVE	8013	1	12.4	MC	49.506278	-122.270778
CK-2266	STAVE	8013	1	15.8	T	49.531	-122.277861
CK-2267	STAVE	8013	1	17.8	T	49.543861	-122.295111
CK-2367	STAVE	8013	1	17.8	MC	49.544028	-122.295528
CK-2269	STAVE	8013	1	20.3	T	49.554694	-122.321944
CK-2271	STAVE	8013	1	24.6	P	49.572361	-122.367306
CK-2343	STAVE	8013	1	26.4	MC	49.573833	-122.385972
CK-2273	STAVE	8013	1	29	MC	49.589694	-122.399833
CK-2274	STAVE	8013	1	29.4	T	49.593639	-122.401694
CK-2440	STAVE	8013	1	29.9	P	49.596028	-122.405444
CK-2554	STAVE	8013	1		T	49.59525	-122.403944
CK-2275	STAVE	8013	1	30.9	MC	49.603167	-122.410389
CK-2233	STEVE	8394	4	0.7	P	49.686639	-122.715722
CK-2330	TEREPOCKI	8466	11	1.3	P	49.40325	-122.216556

CK-2189	TEREPOCKI	8466	11	2	P	49.404806	-122.208556
CK-2190	TEREPOCKI	8466	11	2.2	P	49.405111	-122.206306
CK-2285	TSILEUH	7978	1	12.1	P	49.74675	-121.465139
CK-2286	TSILEUH	7978	1	17.7	T	49.752472	-121.513194
CK-2243	URQUHART	8128	2	6.6	T	49.655222	-121.617639
CK-2244	URQUHART	8128	2	11.5	T	49.647028	-121.674722
CK-2247	URQUHART 2800	8128	6	0.4	T	49.666389	-121.579194
CK-2246	URQUHART 2800A	8128	4	0.2	P	49.669194	-121.572861
CK-2507	WINSLOW	8013	2	5.4	T	49.512861	-122.187889
CK-2508	WINSLOW	8013	2		T	49.534111	-122.171639