

BRIDGE INSPECTION

BRIDGE NO. N2-038: Findlay-Lavington
FSR (12.60 KM)

Inspection Date: September 25, 2012

Inspected By: R. Veitch, M. Hanson

Year Built: 1982

Number of Spans: 1



Span Lengths: 22,000 mm

Superstructure Type: Two glulam slab girders, 365 mm x 1825 mm spaced at 3065 mm c/c.

Deck: Deck planks, creosote treated timber planks, 300 mm x 100 mm thick.
Deck width 4300 mm.

Deck Structural: Creosote treated deck ties 200 mm x 250 mm

Curb: Untreated timber curb and risers.

Substructure: Creosote treated timber sills on cast-in-place concrete.

BRIDGE INSPECTION

GENERAL BRIDGE CONDITION:

Superstructure Condition:	Fair
Substructure Condition:	Fair
Deck Condition:	Fair
Load Posting:	No sign noted.
Date for the Next Close Proximity Inspection:	2015
Projection for Replacement:	2032

BRIDGE INSPECTION SUMMARY/ RECOMMENDATIONS:

The bridge is generally in fair condition. We recommend the approach barriers on the camp end upstream side be repositioned.

INSPECTION NOTES:

Approaches:

- The approaches are generally in fair condition.
- Tight horizontal curves on both ends of the bridge and vegetation limit visibility.
- Camp end upstream approach barrier pushed by grader
- No approach barrier on camp end downstream and woods end upstream corners.
- Cattle guard on woods end approach.
- All delineators and bridge ahead signs present.

Deck:

- The deck is generally in fair condition.
- Curb rail is loose on camp end
- Minimal wear observed on deck planks.

Abutments:

- The abutments are generally in fair condition.
- Inadequate riprap protection on woods end downstream bank resulting in erosion.

Girders:

Typical Condition:

Span 1 - Girders 1 & 2:

- The girders are generally in fair condition.
- Girder faces are covered with creosote.
- No new checks observed.

BRIDGE INSPECTION

Checks on Girders:

Span 1 - Girder 1 upstream face:

Tag Type	Check Start	Check End	Length (mm)	Max. Depth (mm)	Max. Width (mm)	Location (mm)	Condition
Existing	Woods end	AE001	-	50	-	800 below top of girder	Has not propagated.
Existing	AE001	AE149	-	50	-	800 below top of girder	Has not propagated.
Existing	Woods end	AE944	4000	130	-	1000 below top of girder	Has not propagated.
Existing	Woods end	Camp end	22000	130	-	500 below top of girder	Has not propagated.

Span 1 - Girder 2 downstream face:

Tag Type	Check Start	Check End	Length (mm)	Max. Depth (mm)	Max. Width (mm)	Location (mm)	Condition
Existing	Camp end	AE488	5000	120	-	1000 below top of girder	Has not propagated.
Existing	AE488	AE938	3000	75	-	1000 below top of girder	Has not propagated.
Existing	AE938	AE139	-	75	-	1000 below top of girder	Has not propagated.
Existing	AE139	AE936	-	75	-	1000 below top of girder	Has not propagated.
Existing	AE936	AE163	-	75	-	1000 below top of girder	Has not propagated.
Existing	Camp end	AE172	5000	55	-	1200 below top of girder	Has not propagated.

LIST OF MAINTENANCE ITEMS TO BE COMPLETED:

Items	Description	Priority
1.	Reposition barriers on camp end upstream side.	Medium

BRIDGE INSPECTION

MONITOR DURING FUTURE INSPECTIONS:

1. Monitor both abutments for scour and erosion.

Prepared by:



Ryan Veitch, ASCT
Engineering Technologist

Reviewed by:



David Chen, P.Eng.
Project Manager

Attached:

1. CBR Report
2. Annotated Photo Sheets

BRIDGE INSPECTION

NOTES:

Directional & Numbering Conventions Used:

Girders and piles are numbered from upstream to downstream. Left end or right end is determined facing downstream (except for delineators). Spans and piers are numbered from the left end when facing downstream.

Projected Replacement Date:

The projected date for the bridge replacement is based on the remaining service life of the bridge. We estimate the remaining service life as the greater of:

For Glulam Girder Bridges:

1. Original design life, typically 50 years.
2. If a bridge is nearing the end of its estimated service life but is still in fair condition, we recommend that the Ministry assume a remaining service life of five years.

For Steel and Concrete Bridges:

1. Original design life, typically 60 years.
2. If a bridge is nearing the end of its estimated service life but is still in fair condition, we recommend that the Ministry assume a remaining service life of ten years.

Condition Ratings:

Excellent:	New or almost new condition and properly installed
Good:	Structurally sound, in good repair with minimal wear
Fair:	Structurally functional, shows moderate wear or preliminary indications of deterioration
Poor:	Structurally unsound, items typically in need of repair or replacement

Maintenance Priority (Typical Usage):

High:	Critical items that need to be addressed to protect safety of users (curbs, structural decks, delineators, major structural repairs, etc.); schedule work immediately.
Medium:	Items that maintain the service life of the bridge (wearing planks, deck joints, etc.)
Low:	Items that will extend the service life of the structure or general maintenance.

Cost Estimate:

The cost estimate for individual maintenance items, shown in the CBR report, reflects the cost of materials and labour for completing a task; it does not include any costs associated with mobilization, demobilization, engineering or contract administration.



BC Ministry of Forests and Range

Permanent Bridge Inspection Report

Page 1 of 3
Date Printed: 2013/03/28
User Id: BCEID\WRILEY1
Database: PROD
Report Id: CBR001A

Structure #:	N2-038	Site #:	N2-038	Road Name:	FINDLAY-LAVINGTON	Inspection Date:	2012/09/25
KM:	0.00	User km:	12.60	Crossing Name:	FINDLAY Cr	Next Inspection Date:	2012/08/02
Project File ID #:	0108	Br.	02	Forest District:	Rocky Mountain Forest District		
Deck Type:	Timber - Untreated			Running Surface:	Timber Planks		
Superstructure	Glulam Girder			Abutments (Left/Right):	Concrete Cast in Place		
Total Length (metres):	22.0	# Spans:	1	Span Length(s) (metres):	21.7		
UTM Zone:	11	UTM Easting:	573753	UTM Northing:	5553810		
Inspector Name:	R. Veitch, M. Hanson			Year Built:	1982		
Access:							

ABUTMENTS

Bearings	Not Applicable	
Bracing	Not Applicable	
Ballast Wall	Good	
Corrosion Protection	Good	Galvanized coating on camp end abutment tie back anchor.
Caps or Sills	Good	Creosote treated timber sill
Fill	Good	
Hardware	Not Applicable	
Piles or Posts	Not Applicable	Cast in place concrete abutment.
Riprap	Fair	Inadequate riprap on downstream woods end, bank erosion present.
Wing Wall	Good	

APPROACHES

Alignment	Fair	Both approaches have tight corners.
Bridge Ahead Signs Missing	0	
Brushing Required	No	
Delineator Missing Left	0	
Delineator Missing Right	0	Downstream woods end delineator damaged, still functional.
Fender Condition	Fair	The camp end upstream fender has been pushed to the edge of the approach fill. No barriers present on woods end upstream and camp end downstream corners.
Road Surface	Good	Cattle guard on woods end approach.

DECK

Span 1

Curb Rail/Blocks/Posts	Fair	Curb rail is loose at camp end.
Deck to Girder Bolts	Good	
Hardware	Good	



BC Ministry of Forests and Range

Permanent Bridge Inspection Report

Page 2 of 3
Date Printed: 2013/03/28
User Id: BCEID\WRILEY1
Database: PROD
Report Id: CBR001A

Structure #:	N2-038	Site #:	N2-038	Road Name:	FINDLAY-LAVINGTON	Inspection Date:	2012/09/25				
Hand Rails/Walkouts	Not Applicable										
Nails	Good										
Overall Deck Condition	Good										
Running Planks	Fair Normal wear along length of deck.										
Sub Deck	Good										
Ties	Good										
SUPERSTRUCTURE											
Span 1											
Bracing	Good Steel pipe bracing.										
Diaphragms	Fair One diaphragm is split mid height near woods end. Has not worsened since steel plates installed to prevent further splitting.										
Girders	Fair Creosote leaching out and covering girder faces. No new checks since previous inspection; See additional notes for details.										
Hardware	Good										
Under Trussing	Not Applicable										
CHANNEL	Estimated Present Water Level Depth:		2.0		Estimated Present Water Level Width:		14.2				
	Estimated High Water Level Clearance:		2.5								
HAZARDS	High Water:	No	Scour:	Yes	Ice:	No	Debris:	No	Aggradation:	No	
	Comment:	Inadequate rip rap downstream woods end, observed erosion at toe of slope.									
REPAIRS	#	Status	Priority	Estimate	Description						
	1	Recommended	Medium	\$750.00	Reposition camp end upstream concrete barrier.						
MONITORS	#	Description									
	1	Monitor both embankments for scour and erosion.									
GENERAL	Professional Inspection Required?		No	Regional Review Date:		2013/03/27	P. Eng Reviewer Name:		Barry Trenholm		
	Replacement Date for full log haul traffic (year):			2032		Replacement Date for light vehicle traffic (year):			2032		
	Current Load Rating GVW (tonnes):		55		Design Load GVW (tonnes):		91		Design Vehicle Config.: L100		
	Inspector's Estimated Full Log Haul Replacement (year):			2032							
	Inspector's Comment:	Bridge is generally in good condition with no new checks developing in the girders. The upstream camp end barrier has been pushed to the edge of the approach fill and needs to be repositioned.									
Corporate Bridge Register (CBR)											



BC Ministry of Forests and Range

Permanent Bridge Inspection Report

Page 3 of 3

Date Printed: 2013/03/28

User Id: BCEID\WRILEY1

Database: PROD

Report Id: CBR001A

Structure #:	N2-038	Site #:	N2-038	Road Name:	FINDLAY-LAVINGTON	Inspection Date:	2012/09/25
	PEng Reviewer's Comment:	Accepted LT.					
	District Staff Comment:						

Structure #	Crossing Name	Forest Service Road	User km	CBR km		
N2-038	Findlay Cr	Findlay Lavington	12.60	0.0		



Figure 1-1: Downstream elevation.



Figure 1-2: Looking upstream.



Figure 1-3: Looking downstream.



Figure 1-4: Looking towards woods end.



Figure 1-5: Looking towards camp end.



Figure 1-6: Camp end upstream concrete barrier.

Structure #	Crossing Name	Forest Service Road	User km	CBR km		
N2-038	Findlay Cr	Findlay Lavington	12.60	0.0		



Figure 1-7: Typical curb rail condition.



Figure 1-8: Typical underside of deck.



Figure 1-9: Upstream face of girder 1.



Figure 1-10: Typical interior face of girders.



Figure 1-11: Camp end abutment.



Figure 1-12: Old bridge abutment upstream of camp end abutment.

Structure #	Crossing Name	Forest Service Road	User km	CBR km		
N2-038	Findlay Cr	Findlay Lavington	12.60	0.0		



Figure 1-13: Woods end abutment.



Figure 1-14: Woods end cap beam.



Figure 1-15: Debris accumulation on woods end cap beam.



Figure 1-16: Downstream woods end embankment, note erosion at toe of embankment.



Figure 1-17: Typical wing wall.