Bridge Culvert Inspection

Bridge File Number	74650 -1 Bridge Culvert	Form Type	CULM
Year Built	1986	Lot No.	1
Bridge or Town Name	SANGUDO	Inspector Name	Kris Bosters
Located Over	TRIBUTARY TO PADDLE RIVER, 8.11.84.30.17, WATERCRS-ST	Inspector Class	BR CLS A
		Assistant Name	
Located On	757:04 C1 9.592	Assistant Class	
Water Body Cl./Year		Inspection Date	20-Jul-2012
Navigabil. Cl./Year		Data Entry By	Theresa Lacusta
Legal Land Location	NW SEC 31 TWP 57 RGE 6 W5M	Data Entry Date	07-Aug-2012
Longitude, Latitude	-114:53:41, 53:58:11	Reviewer Name	Eric Carcoux
Road Authority	Alberta Transportation (AIT)	Review Date	06-Aug-2012
Contract Main. Area	CMA12	Dept. Reviewer Name	Brent Herrick
Clear Roadway/Skew	10.2 /	Dept. Review Date	08-Aug-2012
AADT/Year	310 / 2011 (A)	Follow-Up By	
Road Classification	RCU-209-110		
Detour Length (km)	3		

Bridge Culvert Information

Number of Culverts		2						
Pipe #	Barrel	Span	Rise (or Dia.)	Type	Length	Corr. Profile	Pl./Slab Thickness	Shape
1	MAIN	-	1500	MP	20	68X13	2.8	ROUND
2	MAIN	-	1500	MP	20	68X13	2.8	ROUND
Special Features								
Special Features Comment								

Utilities (Located at)

Utility Attachments			
Telephone	East & West r/w.	Gas	
Power	West r/w - 3 wire	Municipal	
Others		Problem (Y/N)	No
Remarks	BF tag u/s end S pipe.		

Approach Road / Embankment

		Last	Now	Explanation of Condition
Horizontal Alignment		8	8	Field entrance to S. site 1.2 km N. of bf 09309.
Vertical Alignment		9	9	
Roadway Width (m)	9.300			
Embankment		8	8	
Sideslope (__:1)	4.0			
(Height of Cover(m) : **1**)				
Guardrail (Y/N)	No			
Approach Road / Embankment General Rating		**8**	**8**	

Upstream End

Culvert Component		**Last**	**Now**	**Explanation of Condition**
(Pipe # : **1, Span Type: Primary Span**)				
Direction		W		South pipe. Too much water to view.
End Treatment (Concrete, Steel, Others, None)	STEEL			
Headwall		X	X	
Collar		X	X	
Wingwalls		X	X	
(Shape :)				

Upstream End				
Culvert Component		**Last**	**Now**	**Explanation of Condition**
(Pipe # : **1, Span Type: Primary Span**)				
Cutoff Wall		X	X	
Bevel End		7	N	
Heaving (mm)	0			
Invert Above/Below Stream Bed	BELOW			
Above/Below (mm)	200			
Scour Protection		8	N	
(Type : **RIP RAP**)				
(Avg. Rock Size(mm) : **150**)				
Scour/Erosion		8	N	
Beavers (Y/N)	No			
Upstream End General Rating		**7**	**7**	GR carried fwd from 14-Feb-2012

Bridge Culvert Barrel				
Culvert Component		**Last**	**Now**	**Explanation of Condition**
(Pipe # : **1, Primary Span, Location Code: MAIN, Span (mm): , Rise (mm): 1500, Type: MP**)				
Barrel Last Accessible Date	14-Feb-2012			Water ti 0.2m below crown.
Special Features				
Special Feature				
(Type :)				
Special Feature				
(Type :)				
Roof		4	N	
Measured Rise (mm)				est -14-Feb-2012
Measured At Ring No.				
Sag (mm)				
Percent Sag	4			
Sidewall		3	N	
Measured Span (mm)	1700			@ cl - 14-Feb-2012
Measured At Ring No.				
Deflection (mm)	200			
Percent Deflection	13			
Floor		N	N	
Bulge (mm)	0			
Measured At Ring No.				
Abrasion (Y/N)	No			
Circumferential Seams		7	N	
Separation (mm)	30			
Longitudinal Seams		X	N	
Total No. of Cracked Rings				
Total No. of Rings with Two Cracked Seams				
Min. Remaining Steel Between Cracks (mm)				
Proper Lap (Y/N)				
Longitudinal Stagger (Y/N)				
Coating		4	N	Pitting rust on lower 1/2.-14-Feb-2012
Corrosion By Soil (Y/N)	Yes			
Corrosion By Water (Y/N)	Yes			

Bridge Culvert Barrel				
Culvert Component		**Last**	**Now**	**Explanation of Condition**
(Pipe # : **1, Primary Span, Location Code: MAIN, Span (mm): , Rise (mm): 1500, Type: MP**)				
Camber POS/ZERO/NEG	NEG			
Ponding (Y/N)	Yes			About 0.2m below crown u/s.
Fish Passage Adequacy		5	5	
Baffle		X	X	
(Type :)				
Waterway Adequacy		7	4	Water 0.2 below crown.
Icing (Y/N)	No			
Silting (Y/N)	No			
Drift (Y/N)	No			
Barrel General Rating		**3**	**3**	GR carried fwd from 14-Feb-2012

Downstream End				
Culvert Component		**Last**	**Now**	**Explanation of Condition**
(Pipe # : **1, Span Type: Primary Span**)				
Direction		E		Too much water to view.
End Treatment (Concrete, Steel, Others, None)	STEEL			
Headwall		X	X	
Collar		X	X	
Wingwalls		X	X	
(Shape :)				
Cutoff Wall		X	X	
Bevel End		7	N	
Heaving (mm)	0			
Invert Above/Below Stream Bed	BELOW			
Above/Below (mm)	200			
Scour Protection		8	N	
(Type : **RIP RAP**)				
(Avg. Rock Size(mm) : **150**)				
Scour/Erosion		8	N	
Beavers (Y/N)	No			
Downstream End General Rating		**7**	**7**	GR carried fwd from 14-Feb-12

Upstream End				
Culvert Component		**Last**	**Now**	**Explanation of Condition**
(Pipe # : **2, Span Type: Secondary Span**)				
Direction		W		
End Treatment (Concrete, Steel, Others, None)	STEEL			
Headwall		X	X	
Collar		X	X	
Wingwalls		X	X	
(Shape :)				
Cutoff Wall		X	X	

Upstream End				
Culvert Component		**Last**	**Now**	**Explanation of Condition**
(Pipe # : **2, Span Type: Secondary Span**)				
Bevel End		7	N	
Heaving (mm)				
Invert Above/Below Stream Bed	BELOW			
Above/Below (mm)	200			
Scour Protection		8	N	
(Type : **RIP RAP**)				
(Avg. Rock Size(mm) : **150**)				
Scour/Erosion		8	N	
Beavers (Y/N)	No			
Upstream End General Rating		**7**	**7**	GR carried fwd from 14-Feb-2012

Bridge Culvert Barrel				
Culvert Component		**Last**	**Now**	**Explanation of Condition**
(Pipe # : **2, Secondary Span, Location Code: MAIN, Span (mm): , Rise (mm): 1500, Type: MP**)				
Barrel Last Accessible Date	14-Feb-2012			Water to 0.2m below crown
Special Features				
Special Feature				
(Type :)				
Special Feature				
(Type :)				
Roof		4	N	
Measured Rise (mm)				
Measured At Ring No.				
Sag (mm)				
Percent Sag	9			
Sidewall		3	N	
Measured Span (mm)	1680			
Measured At Ring No.				
Deflection (mm)	180			
Percent Deflection	12			
Floor		N	N	
Bulge (mm)	0			
Measured At Ring No.				
Abrasion (Y/N)	No			
Circumferential Seams		7	N	
Separation (mm)	30			
Longitudinal Seams		X	N	
Total No. of Cracked Rings				
Total No. of Rings with Two Cracked Seams				
Min. Remaining Steel Between Cracks (mm)				
Proper Lap (Y/N)				
Longitudinal Stagger (Y/N)				
Coating		4	N	Pitting rust on lower 1/2.-14-Feb-2012
Corrosion By Soil (Y/N)	Yes			
Corrosion By Water (Y/N)	Yes			
Camber POS/ZERO/NEG	NEG			

Bridge Culvert Barrel				
Culvert Component		**Last**	**Now**	**Explanation of Condition**
(Pipe # : **2, Secondary Span, Location Code: MAIN, Span (mm): , Rise (mm): 1500, Type: MP**)				
Ponding (Y/N)	Yes			About 0.2m from crown u/s end.
Fish Passage Adequacy		5	N	
Baffle		X	X	
(Type :)				
Waterway Adequacy		8	N	
Icing (Y/N)	No			
Silting (Y/N)	No			
Drift (Y/N)	No			
Barrel General Rating		**3**	**3**	GR carried fwd from 14-Feb-2012

Downstream End				
Culvert Component		**Last**	**Now**	**Explanation of Condition**
(Pipe # : **2, Span Type: Secondary Span**)				
Direction		E		Too much water to view
End Treatment (Concrete, Steel, Others, None)	STEEL			
Headwall		X	X	
Collar		X	X	
Wingwalls		X	X	
(Shape :)				
Cutoff Wall		X	X	
Bevel End		7	N	
Heaving (mm)	0			
Invert Above/Below Stream Bed	BELOW			
Above/Below (mm)	200			
Scour Protection		8	N	
(Type : **RIP RAP**)				
(Avg. Rock Size(mm) : **150**)				
Scour/Erosion		8	N	
Beavers (Y/N)	No			
Downstream End General Rating		**7**	**7**	GR carried fwd from 14-Feb-2012

Structure Usage				
		Last	**Now**	**Explanation of Condition**
Channel (U/S and D/S)				
Alignment		7	7	
Bank Stability		8	8	
HWM (m below Top of Culvert)				Grass in trees 0.2m above crown
Drift (Y/N)	No			
Channel Bottom Degrading/Aggrading				
Beavers (Y/N)	No			
(Fish Compensation Measure 1 : **NONE**)				
(Fish Compensation Measure 2 : **NONE**)				
Channel General Rating		**7**	**7**	

Maintenance Recommendations

Inspector Recommendations	Year	Inspector Comments	Department Comments	Target Year	Est. Cost	Cat #
SHOTCRETE REPAIRS						
PLACE ADDITIONAL RIP RAP						
REMOVE DRIFT ACCUMULATION						
INSTALL CONCRETE/STEEL LINING						
INSTALL STRUTS						
INSTALL CONCRETE COLLAR/CUTOFF						
REPAIR SEAMS						
OTHER ACTION	2012	Level 2 barrel measurements/inspection.				
OTHER ACTION						
OTHER ACTION						
OTHER ACTION						

Structural Condition Rating (Last/Now) (%)	**33.3/33.3**	**Sufficiency Rating (Last/Now) (%)**	**57.3/47.9**	Est. Repl. Yr	2030	Maint. Reqd. (Y/N)	Yes

Special Comments for Next Inspection	Do measurements in Fall.	Department Comments	

Maintenance Reviewed By		Date		Estimated Total	0
Proposed Long-Term Strategy					
On 3-Year Program (Y/N)					
Proposed Action					
Previous Inspector's Name	Wade Nanninga	Previous Assistant's Name			
Next Inspection Date	20-Oct-2015	Previous Inspection Date	14-Feb-2012		
Inspection Cycle (Default) (months)	39				
Comment					