Bridge Culvert Inspection

Bridge File Number	79922 -1 Bridge Culvert	Form Type	CULM
Year Built	1992	Lot No.	4
Bridge or Town Name	HAYS	Inspector Name	Jason Rusu
Located Over	BRP - IRRIGATION C, WATERCRS-IC	Inspector Class	BR CLS A
Located On	875:02 C1 21.406	Assistant Name	
Water Body Cl./Year		Assistant Class	
Navigabil. Cl./Year		Inspection Date	17-Mar-2012
Legal Land Location	SW SEC 24 TWP 12 RGE 14 W4M	Data Entry By	Lauren Korte
Longitude, Latitude	-111:47:39, 50:00:39	Data Entry Date	11-Apr-2012
Road Authority	Alberta Transportation (AIT)	Reviewer Name	Garry Roberts
Contract Main. Area	CMA24	Review Date	23-Mar-2012
Clear Roadway/Skew	9 /	Dept. Reviewer Name	Tim Davies
AADT/Year	290 / 2011 (A)	Dept. Review Date	17-Apr-2012
Road Classification	RCU-208-110	Follow-Up By	
Detour Length (km)	3		

Bridge Culvert Information

Number of Culverts		4						
Pipe #	Barrel	Span	Rise (or Dia.)	Type	Length	Corr. Profile	Pl./Slab Thickness	Shape
1	MAIN	-	900	CP	26			ROUND
2	MAIN	-	900	CP	26			ROUND
3	MAIN	-	900	CP	26			ROUND
4	MAIN	-	900	CP	26			ROUND

Special Features	
Special Features Comment	North and South pipes buried. South pipe carries high pressure water line. D/S end concealed by automated gates. -Inaccessible.

Utilities (Located at)

Utility Attachments			
Telephone	East.	Gas	20m South.
Power	3 line East ROW.	Municipal	
Others		Problem (Y/N)	No
Remarks			

Approach Road / Embankment

		Last	Now	Explanation of Condition
Horizontal Alignment			6	Curves 300m North and South.
Vertical Alignment			6	
Roadway Width (m)	8.200			
Embankment			7	
Sideslope (__:1)	4.0			
(Height of Cover(m) : **0.6**)				
Guardrail (Y/N)	No			
Approach Road / Embankment General Rating			**6**	

Upstream End

Culvert Component		**Last**	**Now**	**Explanation of Condition**
(Pipe # : **1, Span Type: Primary Span**)				
Direction		W		West. Buried- No end treatment visible.
End Treatment (Concrete, Steel, Others, None)	NONE			
Headwall			X	
Collar			X	

Upstream End				
Culvert Component		**Last**	**Now**	**Explanation of Condition**
(Pipe # : **1, Span Type: Primary Span**)				
Wingwalls			X	
(Shape :)				
Cutoff Wall			X	
Bevel End			X	
Heaving (mm)				
Invert Above/Below Stream Bed				
Above/Below (mm)				
Scour Protection			6	
(Type : **RIP RAP**)				
(Avg. Rock Size(mm) : **150**)				
Scour/Erosion			6	
Beavers (Y/N)	No			
Upstream End General Rating			**6**	

Bridge Culvert Barrel				
Culvert Component		**Last**	**Now**	**Explanation of Condition**
(Pipe # : **1, Primary Span, Location Code: MAIN, Span (mm): , Rise (mm): 900, Type: CP**)				
Barrel Last Accessible Date				Too small to inspect- confined space.
Special Features				
Special Feature				
(Type :)				
Special Feature				
(Type :)				
Roof			N	
Measured Rise (mm)				
Measured At Ring No.				
Sag (mm)				
Percent Sag				
Sidewall			N	
Measured Span (mm)				
Measured At Ring No.				
Deflection (mm)				
Percent Deflection				
Floor			N	
Bulge (mm)				
Measured At Ring No.				
Abrasion (Y/N)				
Circumferential Seams			N	
Separation (mm)				
Longitudinal Seams			X	
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)				

Bridge Culvert Barrel				
Culvert Component		**Last**	**Now**	**Explanation of Condition**
(Pipe # : **1, Primary Span, Location Code: MAIN, Span (mm): , Rise (mm): 900, Type: CP**)				
Coating			X	
Corrosion By Soil (Y/N)				
Corrosion By Water (Y/N)				
Camber POS/ZERO/NEG	ZERO			
Ponding (Y/N)	No			
Fish Passage Adequacy			X	
Baffle			X	
(Type :)				
Waterway Adequacy			X	
Icing (Y/N)	No			
Silting (Y/N)	No			
Drift (Y/N)	No			
Barrel General Rating			**N**	

Downstream End				
Culvert Component		**Last**	**Now**	**Explanation of Condition**
(Pipe # : **1, Span Type: Primary Span**)				
Direction		E		East.
End Treatment (Concrete, Steel, Others, None)				Unknown- covered by gates.
Headwall			X	
Collar			X	
Wingwalls			X	
(Shape :)				
Cutoff Wall			X	
Bevel End			X	
Heaving (mm)				
Invert Above/Below Stream Bed				
Above/Below (mm)				
Scour Protection			8	Concrete gate structure protects outlet from scour action.
(Type : **CONCRETE**)				
(Avg. Rock Size(mm) :)				
Scour/Erosion			8	
Beavers (Y/N)	No			
Downstream End General Rating			**8**	

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

Upstream End				
Culvert Component		**Last**	**Now**	**Explanation of Condition**
(Pipe # : **2, Span Type: Secondary Span**)				
Wingwalls			X	
(Shape :)				
Cutoff Wall			X	
Bevel End			X	
Heaving (mm)				
Invert Above/Below Stream Bed				
Above/Below (mm)				
Scour Protection			7	
(Type : **RIP RAP**)				
(Avg. Rock Size(mm) : **150**)				
Scour/Erosion			7	
Beavers (Y/N)	No			
Upstream End General Rating			**7**	

Bridge Culvert Barrel				
Culvert Component		**Last**	**Now**	**Explanation of Condition**
(Pipe # : **2, Secondary Span, Location Code: MAIN, Span (mm): , Rise (mm): 900, Type: CP**)				
Barrel Last Accessible Date				Not accessible- not bridge size.
Special Features				
Special Feature				
(Type :)				
Special Feature				
(Type :)				
Roof			N	
Measured Rise (mm)				
Measured At Ring No.				
Sag (mm)				
Percent Sag				
Sidewall			N	
Measured Span (mm)				
Measured At Ring No.				
Deflection (mm)				
Percent Deflection				
Floor			N	
Bulge (mm)				
Measured At Ring No.				
Abrasion (Y/N)				
Circumferential Seams			N	
Separation (mm)				
Longitudinal Seams			X	
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)				

Bridge Culvert Barrel				
Culvert Component		**Last**	**Now**	**Explanation of Condition**
(Pipe # : **2, Secondary Span, Location Code: MAIN, Span (mm): , Rise (mm): 900, Type: CP**)				
Coating			X	
Corrosion By Soil (Y/N)				
Corrosion By Water (Y/N)				
Camber POS/ZERO/NEG	ZERO			
Ponding (Y/N)	No			
Fish Passage Adequacy			X	
Baffle			X	
(Type :)				
Waterway Adequacy			7	
Icing (Y/N)	No			
Silting (Y/N)	No			
Drift (Y/N)	No			
Barrel General Rating			**7**	

Downstream End				
Culvert Component		**Last**	**Now**	**Explanation of Condition**
(Pipe # : **2, Span Type: Secondary Span**)				
Direction		E		East.
End Treatment (Concrete, Steel, Others, None)	CONCRETE			
Headwall			X	
Collar			X	
Wingwalls			X	
(Shape :)				
Cutoff Wall			X	
Bevel End			X	
Heaving (mm)				
Invert Above/Below Stream Bed				
Above/Below (mm)				
Scour Protection			8	Water control gate.
(Type : **CONCRETE**)				
(Avg. Rock Size(mm) :)				
Scour/Erosion			8	
Beavers (Y/N)	No			
Downstream End General Rating			**8**	

Upstream End				
Culvert Component		**Last**	**Now**	**Explanation of Condition**
(Pipe # : **3, Span Type: Secondary Span**)				
Direction		W		West.
End Treatment (Concrete, Steel, Others, None)	CONCRETE			
Headwall			X	
Collar			X	

Upstream End				
Culvert Component		**Last**	**Now**	**Explanation of Condition**
(Pipe # : **3, Span Type: Secondary Span**)				
Wingwalls			X	
(Shape :)				
Cutoff Wall			X	
Bevel End			X	
Heaving (mm)				
Invert Above/Below Stream Bed				
Above/Below (mm)				
Scour Protection			7	
(Type : **RIP RAP**)				
(Avg. Rock Size(mm) : **150**)				
Scour/Erosion			7	
Beavers (Y/N)	No			
Upstream End General Rating			**7**	

Bridge Culvert Barrel				
Culvert Component		**Last**	**Now**	**Explanation of Condition**
(Pipe # : **3, Secondary Span, Location Code: MAIN, Span (mm): , Rise (mm): 900, Type: CP**)				
Barrel Last Accessible Date				Not bridge size- not accessible.
Special Features				
Special Feature				
(Type :)				
Special Feature				
(Type :)				
Roof			N	
Measured Rise (mm)				
Measured At Ring No.				
Sag (mm)				
Percent Sag				
Sidewall			N	
Measured Span (mm)				
Measured At Ring No.				
Deflection (mm)				
Percent Deflection				
Floor			N	
Bulge (mm)				
Measured At Ring No.				
Abrasion (Y/N)				
Circumferential Seams			N	
Separation (mm)				
Longitudinal Seams			X	
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)				

Bridge Culvert Barrel				
Culvert Component		**Last**	**Now**	**Explanation of Condition**
(Pipe # : **3, Secondary Span, Location Code: MAIN, Span (mm): , Rise (mm): 900, Type: CP**)				
Coating			X	
Corrosion By Soil (Y/N)				
Corrosion By Water (Y/N)				
Camber POS/ZERO/NEG	ZERO			
Ponding (Y/N)	No			
Fish Passage Adequacy			X	
Baffle			X	
(Type :)				
Waterway Adequacy			7	
Icing (Y/N)	No			
Silting (Y/N)	No			
Drift (Y/N)	No			
Barrel General Rating			**N**	

Downstream End				
Culvert Component		**Last**	**Now**	**Explanation of Condition**
(Pipe # : **3, Span Type: Secondary Span**)				
Direction		E		East. Not visible.
End Treatment (Concrete, Steel, Others, None)				
Headwall			X	
Collar			X	
Wingwalls			X	
(Shape :)				
Cutoff Wall			X	
Bevel End			X	
Heaving (mm)				
Invert Above/Below Stream Bed				
Above/Below (mm)				
Scour Protection			8	
(Type : **CONCRETE**)				
(Avg. Rock Size(mm) :)				
Scour/Erosion			8	
Beavers (Y/N)	No			
Downstream End General Rating			**8**	

Upstream End				
Culvert Component		**Last**	**Now**	**Explanation of Condition**
(Pipe # : **4, Span Type: Secondary Span**)				
Direction		W		West. Buried- not visible.
End Treatment (Concrete, Steel, Others, None)				
Headwall			X	
Collar			X	

Upstream End				
Culvert Component		**Last**	**Now**	**Explanation of Condition**
(Pipe # : **4, Span Type: Secondary Span**)				
Wingwalls			X	
(Shape :)				
Cutoff Wall			X	
Bevel End			7	
Heaving (mm)				
Invert Above/Below Stream Bed				
Above/Below (mm)				
Scour Protection			7	
(Type : **RIP RAP**)				
(Avg. Rock Size(mm) : **150**)				
Scour/Erosion			7	
Beavers (Y/N)	No			
Upstream End General Rating			**7**	

Bridge Culvert Barrel				
Culvert Component		**Last**	**Now**	**Explanation of Condition**
(Pipe # : **4, Secondary Span, Location Code: MAIN, Span (mm): , Rise (mm): 900, Type: CP**)				
Barrel Last Accessible Date				Not accessible- not bridge size.
Special Features				
Special Feature				
(Type :)				
Special Feature				
(Type :)				
Roof			N	
Measured Rise (mm)				
Measured At Ring No.				
Sag (mm)				
Percent Sag				
Sidewall			N	
Measured Span (mm)				
Measured At Ring No.				
Deflection (mm)				
Percent Deflection				
Floor			N	
Bulge (mm)				
Measured At Ring No.				
Abrasion (Y/N)				
Circumferential Seams			N	
Separation (mm)				
Longitudinal Seams			X	
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)				

Bridge Culvert Barrel				
Culvert Component		**Last**	**Now**	**Explanation of Condition**
(Pipe # : **4, Secondary Span, Location Code: MAIN, Span (mm): , Rise (mm): 900, Type: CP**)				
Coating			X	
Corrosion By Soil (Y/N)				
Corrosion By Water (Y/N)				
Camber POS/ZERO/NEG	ZERO			
Ponding (Y/N)	No			
Fish Passage Adequacy			X	
Baffle			X	
(Type :)				
Waterway Adequacy			X	
Icing (Y/N)				
Silting (Y/N)				
Drift (Y/N)				
Barrel General Rating			**N**	

Downstream End				
Culvert Component		**Last**	**Now**	**Explanation of Condition**
(Pipe # : **4, Span Type: Secondary Span**)				
Direction		E		East.
End Treatment (Concrete, Steel, Others, None)	NONE			
Headwall			X	
Collar			X	
Wingwalls			X	
(Shape :)				
Cutoff Wall			X	
Bevel End			X	
Heaving (mm)				
Invert Above/Below Stream Bed				
Above/Below (mm)				
Scour Protection			8	
(Type : **CONCRETE**)				
(Avg. Rock Size(mm) :)				
Scour/Erosion			8	
Beavers (Y/N)	No			
Downstream End General Rating			**8**	

Structure Usage				
		Last	**Now**	**Explanation of Condition**
Channel (U/S and D/S)				
Alignment			5	90 degree turn @ D/S- Controlled by gates.
Bank Stability			7	
HWM (m below Top of Culvert)				None visible.
Drift (Y/N)	No			

Structure Usage				
		Last	**Now**	**Explanation of Condition**
Channel Bottom Degrading/Aggrading	AGGRADING			
Beavers (Y/N)	No			
(Fish Compensation Measure 1 : **NONE**)				
(Fish Compensation Measure 2 : **NONE**)				
Channel General Rating			**5**	

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						
OTHER ACTION						
OTHER ACTION						
OTHER ACTION						

Structural Condition Rating (Last/Now) (%)	**/77.8**	**Sufficiency Rating (Last/Now) (%)**	**/76.1**	Est. Repl. Yr	2045	Maint. Reqd. (Y/N)	No

Special Comments for Next Inspection		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		Previous Assistant's Name			
Next Inspection Date	17-Jun-2015	Previous Inspection Date			
Inspection Cycle (Default) (months)	39				
Comment					