Bridge Culvert Inspection

Bridge File Number	71734 -1 Bridge Culvert	Form Type	CUL1
Year Built	1989	Lot No.	3
Bridge or Town Name	EXSHAW	Inspector Name	Garry Roberts
Located Over	EXSHAW CREEK, 2.13.60, WATERCRS-ST	Inspector Class	BR CLS A
Located On	1A:02 C1 14.570	Assistant Name	
Water Body Cl./Year		Assistant Class	
Navigabil. Cl./Year		Inspection Date	31-Aug-2012
Legal Land Location	SW SEC 23 TWP 24 RGE 9 W5M	Data Entry By	Lauren Korte
Longitude, Latitude	-115:09:41, 51:03:34	Data Entry Date	03-Oct-2012
Road Authority	Alberta Transportation (AIT)	Reviewer Name	Joel Wozney
Contract Main. Area	CMA28	Review Date	20-Sep-2012
Clear Roadway/Skew	11.8 /	Dept. Reviewer Name	Tim Davies
AADT/Year	1,260 / 2011 (A)	Dept. Review Date	11-Oct-2012
Road Classification	RAU-210-110	Follow-Up By	
Detour Length (km)	3		

Bridge Culvert Information

Number of Culverts	1

Pipe #	Barrel	Span	Rise (or Dia.)	Type	Length	Corr. Profile	Pl./Slab Thickness	Shape
1	MAIN	12000	3008	RPB	14	152X51	4.0	ELLIPSE

Special Features	SIDEWALK
Special Features Comment	

Utilities (Located at)

Utility Attachments	TELEPHONE UTILITIES-PHONE LINE		
Telephone	North & South ditch.	Gas	20m South.
Power	5 wires North ditch OH.	Municipal	
Others	Cable TV on power poles. Light standard @ NE.	Problem (Y/N)	No
Remarks			

Approach Road / Embankment

		Last	Now	Explanation of Condition
Horizontal Alignment		6	6	
Vertical Alignment		6	6	
Roadway Width (m)	11.800			
Embankment		7	7	4:1 @ North.
Sideslope (__:1)	3.0			
(Height of Cover(m) : **1**)				
Guardrail (Y/N)	Yes			Wrong lap at SE. Missing 4 splice bolts at NE. 3 broken post at SE approach.
Approach Road / Embankment General Rating		**6**	**6**	

Upstream End

Culvert Component		Last	Now	Explanation of Condition
Direction				North.
End Treatment (Concrete, Steel, Others, None)	CONCRETE			
Headwall		7	7	Narrow and medium cracks.
Collar		X	X	
Wingwalls		7	7	
(Shape :)				
Cutoff Wall		X	X	

Upstream End				
Culvert Component		**Last**	**Now**	**Explanation of Condition**
Bevel End		X	X	
Heaving (mm)	0			
Invert Above/Below Stream Bed				
Above/Below (mm)				
Scour Protection		7	7	
(Type : **RIP RAP**)				
(Avg. Rock Size(mm) : **450**)				
Scour/Erosion		7	7	
Beavers (Y/N)	No			
Upstream End General Rating		**7**	**7**	

Bridge Culvert Barrel				
Culvert Component		**Last**	**Now**	**Explanation of Condition**
(Pipe # : **1, Primary Span, Location Code: MAIN, Span (mm): 12000, Rise (mm): 3008, Type: RPB**)				
Barrel Last Accessible Date	31-Aug-2012			
Special Features				
Special Feature		3	3	Isolated corrosion stains. NE curb patched. Missing 2 A/B nuts at ped rail.
(Type : **SIDEWALK**)				
Special Feature				
(Type :)				
Roof		6	6	Several plates sagged 50mm estimated.
Measured Rise (mm)				
Measured At Ring No.				
Sag (mm)	50			
Percent Sag	1			
Sidewall		7	7	Footings @ sidewalls - light scaling.
Measured Span (mm)				
Measured At Ring No.				
Deflection (mm)	0			
Percent Deflection				
Floor		X	X	Rock floor.
Bulge (mm)				
Measured At Ring No.				
Abrasion (Y/N)				
Circumferential Seams		7	7	
Separation (mm)	0			
Longitudinal Seams		7	7	1 seam each sidewall not staggered.
Total No. of Cracked Rings	0			
Total No. of Rings with Two Cracked Seams	0			
Min. Remaining Steel Between Cracks (mm)				
Proper Lap (Y/N)	Yes			
Longitudinal Stagger (Y/N)	No			
Coating		4	4	Isolated areas with pitting corrosion at bottom sidewall - worst @ East.
Corrosion By Soil (Y/N)	Yes			
Corrosion By Water (Y/N)	Yes			Alkalai stains @ longitudinal seams
Camber POS/ZERO/NEG	ZERO			
Ponding (Y/N)	No			

Bridge Culvert Barrel				
Culvert Component		**Last**	**Now**	**Explanation of Condition**
(Pipe # : **1, Primary Span, Location Code: MAIN, Span (mm): 12000, Rise (mm): 3008, Type: RPB**)				
Fish Passage Adequacy		5	X	
Baffle		X	X	
(Type :)				
Waterway Adequacy		6	6	1 m silt washed onto floor.
Icing (Y/N)	No			Has flow from culvert to NW.
Silting (Y/N)	Yes			
Drift (Y/N)	No			
Barrel General Rating		**6**	**6**	

Downstream End				
Culvert Component		**Last**	**Now**	**Explanation of Condition**
Direction				South.
End Treatment (Concrete, Steel, Others, None)	CONCRETE			
Headwall		7	6	Some minor cracking and spalls with efflorescence @ SE.
Collar		X	X	
Wingwalls		7	7	Medium width cracks @ SE.
(Shape :)				
Cutoff Wall		X	X	
Bevel End		X	X	
Heaving (mm)	0			
Invert Above/Below Stream Bed				
Above/Below (mm)				
Scour Protection		8	8	
(Type : **RIP RAP**)				
(Avg. Rock Size(mm) : **200**)				
Scour/Erosion		8	8	
Beavers (Y/N)	No			
Downstream End General Rating		**7**	**6**	

Structure Usage				
		Last	**Now**	**Explanation of Condition**
Channel (U/S and D/S)				
Alignment		5	5	Culvert to NW -warm discharge. Flows against footing @ NE. Rail road bridge 70m D/S.
Bank Stability		7	7	
HWM (m below Top of Culvert)	1.0			No visible HWM (1.0m in 1995)
Drift (Y/N)	No			
Channel Bottom Degrading/Aggrading	AGGRADING			
Beavers (Y/N)	No			
(Fish Compensation Measure 1 : **NONE**)				
(Fish Compensation Measure 2 : **NONE**)				
Channel General Rating		**5**	**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	2013	Galvacon coating @ East sidewall.				
OTHER ACTION	2013	Install 2 post A/B nuts- install 3 T.T. approach post				
OTHER ACTION						
OTHER ACTION						

Structural Condition Rating (Last/Now) (%)	**66.7/66.7**	**Sufficiency Rating (Last/Now) (%)**	**66.4/65.6**	Est. Repl. Yr	2030	Maint. Reqd. (Y/N)	Yes

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	Garry Roberts	Previous Assistant's Name	
Next Inspection Date	31-May-2014	Previous Inspection Date	28-Sep-2010
Inspection Cycle (Default) (months)	21		
Comment			