Bridge Culvert Inspection

Bridge File Number	76537 -1 Bridge Culvert	Form Type	CUL1
Year Built	1967	Lot No.	2
Bridge or Town Name	NORDEGG	Inspector Name	Owen Salava
Located Over	TRIBUTARY TO NORTH SASKATCHEWAN RIVER, 6.175, WATERCRS-ST	Inspector Class	BR CLS A
		Assistant Name	
Located On	11:04 C1 11.807	Assistant Class	
Water Body Cl./Year		Inspection Date	07-Feb-2012
Navigabil. Cl./Year		Data Entry By	Marcia Chavez
Legal Land Location	SW SEC 8 TWP 38 RGE 17 W5M	Data Entry Date	02-Mar-2012
Longitude, Latitude	-116:24:18, 52:15:12	Reviewer Name	John O'Brien
Road Authority	Alberta Transportation (AIT)	Review Date	22-Feb-2012
Contract Main. Area	CMA18	Dept. Reviewer Name	Andrew Smikles
Clear Roadway/Skew	13.3 / 7 deg. (RHF)	Dept. Review Date	09-Mar-2012
AADT/Year	840 / 2010 (A)	Follow-Up By	
Road Classification	RAU-213.4-120		
Detour Length (km)	300		

Bridge Culvert Information

Number of Culverts		1						
Pipe #	Barrel	Span	Rise (or Dia.)	Type	Length	Corr. Profile	Pl./Slab Thickness	Shape
1	MAIN	-	1500	SP	117.3	152X51	3.5	ROUND
Special Features		CONC FLOOR						
Special Features Comment								

Utilities (Located at)

Utility Attachments			
Telephone	South r/w.	Gas	
Power		Municipal	
Others		Problem (Y/N)	No
Remarks			

Approach Road / Embankment

		Last	Now	Explanation of Condition
Horizontal Alignment		7	7	No passing WB. "S" curves 200m East.
Vertical Alignment		7	7	
Roadway Width (m)	13.300			
Embankment		7	7	
Sideslope (__:1)	2.0			
(Height of Cover(m) : **11.5**)				
Guardrail (Y/N)	Yes			
Approach Road / Embankment General Rating		**7**	**7**	

Upstream End

Culvert Component		Last	Now	Explanation of Condition
Direction		N		Unable to view; under ice.
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**
Bevel End		7	N	
Heaving (mm)	0			
Invert Above/Below Stream Bed	BELOW			
Above/Below (mm)	200			
Scour Protection		7	N	
(Type : **RIP RAP**)				
(Avg. Rock Size(mm) : **200**)				
Scour/Erosion		7	N	
Beavers (Y/N)	No			
Upstream End General Rating		**7**	**N**	GR was 7 from 04May2010.

Bridge Culvert Barrel				
Culvert Component		**Last**	**Now**	**Explanation of Condition**
(Pipe # : **1, Primary Span, Location Code: MAIN, Span (mm): , Rise (mm): 1500, Type: SP**)				
Barrel Last Accessible Date	30-May-2007			Inlet under ice.
Special Features				
Special Feature		N	N	(50% gone - photo. 30/May/2007)
(Type : **CONC FLOOR**)				
Special Feature				
(Type :)				
Roof		N	N	(Deep pitting R13 to end - photo. 30/May/2007)
Measured Rise (mm)				
Measured At Ring No.				
Sag (mm)	0			
Percent Sag				
Sidewall		N	N	(Deep pitting upper sidewall - photo. Small perf's starting R24 - photo. 30/May/2007)
Measured Span (mm)	1520			
Measured At Ring No.	12			
Deflection (mm)	0			
Percent Deflection				
Floor		N	N	
Bulge (mm)	0			
Measured At Ring No.				
Abrasion (Y/N)	No			
Circumferential Seams		N	N	
Separation (mm)	0			
Longitudinal Seams		N	N	
Total No. of Cracked Rings	0			
Total No. of Rings with Two Cracked Seams				
Min. Remaining Steel Between Cracks (mm)				
Proper Lap (Y/N)	Yes			
Longitudinal Stagger (Y/N)	Yes			
Coating		N	N	(R13 to end deep pitting in roof and upper sidewall - photo. Perf.'s starting R24 in haunch - photo. 30/May/2007)
Corrosion By Soil (Y/N)				
Corrosion By Water (Y/N)				
Camber POS/ZERO/NEG	NEG			
Ponding (Y/N)	Yes			(1/2 full D/S 1/4. 04May2010).

Bridge Culvert Barrel				
Culvert Component		**Last**	**Now**	**Explanation of Condition**
(Pipe # : **1, Primary Span, Location Code: MAIN, Span (mm): , Rise (mm): 1500, Type: SP**)				
Fish Passage Adequacy		X	X	
Baffle		X	X	
(Type :)				
Waterway Adequacy		6	6	At D/S end.
Icing (Y/N)	No			At D/S end.
Silting (Y/N)	Yes			
Drift (Y/N)	Yes			
Barrel General Rating		**3**	**3**	G.R. carried over from 30/May/2007.

Downstream End				
Culvert Component		**Last**	**Now**	**Explanation of Condition**
Direction		S		D/S end in lake. Under F.S.L. 10.0m. Unable to locate outlet.
End Treatment (Concrete, Steel, Others, None)	NONE			
Headwall		X	X	
Collar		X	X	
Wingwalls		X	X	
(Shape :)				
Cutoff Wall		X	X	
Bevel End		N	N	Buried by ice.
Heaving (mm)				
Invert Above/Below Stream Bed				
Above/Below (mm)				
Scour Protection		7	N	
(Type : **RIP RAP**)				
(Avg. Rock Size(mm) : **200**)				
Scour/Erosion		7	N	
Beavers (Y/N)	No			
Downstream End General Rating		**7**	**N**	GR was 7 from 04May2010.

Structure Usage				
		Last	**Now**	**Explanation of Condition**
Channel (U/S and D/S)				
Alignment		7	7	
Bank Stability		7	7	
HWM (m below Top of Culvert)				HWM not visible.
Drift (Y/N)	Yes			At D/S. Pipe below service level (FSL) of reservoir by 10m.
Channel Bottom Degrading/Aggrading	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	Replace concrete floor, if not yet done.				
OTHER ACTION	2012	Remove silt/rock/drift from D/S bevel, if not yet done.				
OTHER ACTION						
OTHER ACTION						

Structural Condition Rating (Last/Now) (%)	**33.3/33.3**	**Sufficiency Rating (Last/Now) (%)**	**49.3/45.2**	Est. Repl. Yr	2020	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	Owen Salava	Previous Assistant's Name			
Next Inspection Date	07-Nov-2013	Previous Inspection Date	04-May-2010		
Inspection Cycle (Default) (months)	21				
Comment					