

| Bridge Culvert Inspection | | | | |
|---------------------------|--------------------------------|--|---------------------|----------------|
| Bridge File Number | 79451 -1 Bridge Culvert | | Form Type | CUL1 |
| Year Built | 1982 | | Lot No. | 4 |
| Bridge or Town Name | DERWENT | | Inspector Name | Jason Saly |
| Located Over | SLAWA CREEK, 6.19, WATERCRS-ST | | Inspector Class | BR CLS A |
| Located On | 41:20 C1 31.917 | | Assistant Name | |
| Water Body Cl./Year | | | Assistant Class | |
| Navigabil. Cl./Year | | | Inspection Date | 28-Nov-2012 |
| Legal Land Location | NE SEC 31 TWP 53 RGE 6 W4M | | Data Entry By | Marcia Chavez |
| Longitude, Latitude | -110:52:03, 53:37:23 | | Data Entry Date | 15-Jan-2013 |
| Road Authority | Alberta Transportation (AIT) | | Reviewer Name | John O'Brien |
| Contract Main. Area | CMA15 | | Review Date | 14-Dec-2012 |
| Clear Roadway/Skew | 11.1 / | | Dept. Reviewer Name | Andrew Smikles |
| AADT/Year | 1,530 / 2011 (A) | | Dept. Review Date | 17-Jan-2013 |
| Road Classification | RAU-211.8-110 | | 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 | 2155 | 1350 | FP | 33 | 68X13 | 4.2 | ARCH |
| Special Features | | | | | | | | |
| Special Features Comment | | | | | | | | |

Utilities (Located at)

| | | | |
|---------------------|-----------------------------|---------------|----|
| Utility Attachments | | | |
| Telephone | East r/w. | Gas | |
| Power | 3 wires OH 60m East of c/l. | Municipal | |
| Others | | Problem (Y/N) | No |
| Remarks | RR tracks removed. | | |

Approach Road / Embankment

| | Last | Now | Explanation of Condition |
|--|----------|----------|---|
| Horizontal Alignment | 7 | 7 | Local road access 30m SE. Curves both directions. Crest curve with no passing to S. |
| Vertical Alignment | 7 | 7 | |
| Roadway Width (m) | 11.100 | | |
| Embankment | N | N | Snow covered. Measured at U/S. 2.3m at D/S West. |
| Sideslope (___:1) (Height of Cover(m) : 2) | 4.0 | | |
| Guardrail (Y/N) | No | | |
| Approach Road / Embankment General Rating | 7 | 7 | |

Upstream End

| Culvert Component | Last | Now | Explanation of Condition |
|---|-------|-----|--------------------------|
| Direction | E | | |
| End Treatment (Concrete, Steel, Others, None) | STEEL | | |
| Headwall | X | X | |
| Collar | X | X | |
| Wingwalls (Shape :) | X | X | |
| Cutoff Wall | X | X | |

| Upstream End | | | | |
|---|-------------|----------|----------|--|
| Culvert Component | | Last | Now | Explanation of Condition |
| Bevel End | | N | 6 | |
| Heaving (mm) | 100 | | | |
| Invert Above/Below Stream Bed | BELOW | | | |
| Above/Below (mm) | 100 | | | |
| Scour Protection | | N | N | (Most covered with dirt/grass. 19Aug2009). Snow covered. |
| (Type : NATURAL) | | | | |
| (Avg. Rock Size(mm) :) | | | | |
| Scour/Erosion | | N | N | Snow covered. |
| Beavers (Y/N) | Yes | | | |
| Upstream End General Rating | | N | 6 | |
| Bridge Culvert Barrel | | | | |
| Culvert Component | | Last | Now | Explanation of Condition |
| (Pipe # : 1, Primary Span, Location Code: MAIN, Span (mm): 2155, Rise (mm): 1350, Type: FP) | | | | |
| Barrel Last Accessible Date | 17-Aug-2009 | | | Pipe only accessible for a couple of metres each end; ice to within 700mm of roof. |
| Special Features | | | | |
| Special Feature | | | | |
| (Type :) | | | | |
| Special Feature | | | | |
| (Type :) | | | | |
| Roof | | N | N | Roof started flattening at both ends approx. 2.5 from ends. Could not measure rise due to ice. |
| Measured Rise (mm) | | | | |
| Measured At Ring No. | | | | (Estimate. 17Aug2009). |
| Sag (mm) | 90 | | | |
| Percent Sag | 6 | | | |
| Sidewall | | N | N | Could not measure span due to ice levels. |
| Measured Span (mm) | 2250 | | | |
| Measured At Ring No. | 2 | | | |
| Deflection (mm) | 95 | | | (4.4%. 17Aug2009). |
| Percent Deflection | 4 | | | |
| Floor | | N | N | (Covered with silt throughout, max. depth 150mm at W end. 17Aug2009). |
| Bulge (mm) | 0 | | | |
| Measured At Ring No. | | | | |
| Abrasion (Y/N) | No | | | (27/Mar/2008) |
| Circumferential Seams | | N | N | Max separation located at heaving U/S section. |
| Separation (mm) | 120 | | | |
| Longitudinal Seams | | X | 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) | | | | |
| Coating | | N | N | (Minor superficial rust lower 1/2. 17Aug2009). |
| Corrosion By Soil (Y/N) | No | | | |
| Corrosion By Water (Y/N) | Yes | | | |
| Camber POS/ZERO/NEG | NEG | | | |

| Bridge Culvert Barrel | | | | |
|---|-------|----------|----------|---|
| Culvert Component | | Last | Now | Explanation of Condition |
| (Pipe # : 1, Primary Span, Location Code: MAIN, Span (mm): 2155, Rise (mm): 1350, Type: FP) | | | | |
| Ponding (Y/N) | No | | | |
| Fish Passage Adequacy | | 6 | 6 | |
| Baffle | | X | X | |
| (Type :) | | | | |
| Waterway Adequacy | | N | 6 | (Silt will easily flush in flood. 14/Sept/2004). |
| Icing (Y/N) | No | | | |
| Silting (Y/N) | Yes | | | |
| Drift (Y/N) | No | | | |
| Barrel General Rating | | N | N | GR was 5 from 19Aug2009 based on roof rating. |
| Downstream End | | | | |
| Culvert Component | | Last | Now | Explanation of Condition |
| Direction | | W | | |
| End Treatment (Concrete, Steel, Others, None) | STEEL | | | |
| Headwall | | X | X | |
| Collar | | X | X | |
| Wingwalls | | X | X | |
| (Shape :) | | | | |
| Cutoff Wall | | X | X | |
| Bevel End | | N | 6 | |
| Heaving (mm) | 30 | | | |
| Invert Above/Below Stream Bed | BELOW | | | |
| Above/Below (mm) | 200 | | | |
| Scour Protection | | N | N | (Well vegetated. 19Aug2009). |
| (Type : NATURAL) | | | | |
| (Avg. Rock Size(mm) :) | | | | |
| Scour/Erosion | | N | N | |
| Beavers (Y/N) | No | | | |
| Downstream End General Rating | | N | 6 | Previous GR was 6 from 19Aug2009. |
| Structure Usage | | | | |
| | | Last | Now | Explanation of Condition |
| Channel (U/S and D/S) | | | | |
| Alignment | | N | 8 | |
| Bank Stability | | N | N | (Channel well vegetated. 19Aug2009). Snow covered. |
| HWM (m below Top of Culvert) | | | | HWM not visible. |
| Drift (Y/N) | No | | | |
| Channel Bottom Degrading/Aggrading | | | | Unknown. |
| Beavers (Y/N) | No | | | |
| (Fish Compensation Measure 1 : NONE) | | | | |
| (Fish Compensation Measure 2 : NONE) | | | | |
| Channel General Rating | | 8 | 8 | |

| 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) (%) | 55.6/55.6 | Sufficiency Rating (Last/Now) (%) | 68.9/61.3 | Est. Repl. Yr | 2034 | Maint. Req. (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 | Jason Saly | | Previous Assistant's Name | | | | |
| Next Inspection Date | 28-Aug-2014 | | Previous Inspection Date | 07-Mar-2011 | | | |
| Inspection Cycle (Default) (months) | 21 | | | | | | |
| Comment | | | | | | | |