## Bridge Culvert Inspection

| | | | |
|---|---|---|---|
| Bridge File Number | 73471 -1 Bridge Culvert | Form Type | CUL1 |
| Year Built | 1959 | Lot No. | 2 |
| Bridge or Town Name | HAWK HILLS | Inspector Name | Russel Vanderschaaf |
| Located Over | SLIMS CREEK, 8.10.41.3.1, WATERCRS-ST | Inspector Class | BR CLS B |
| Located On | 35:08 C1 36.290 | Assistant Name | |
| Water Body Cl./Year | | Assistant Class | |
| Navigabil. Cl./Year | | Inspection Date | 15-Nov-2011 |
| Legal Land Location | NW SEC 8 TWP 95 RGE 22 W5M | Data Entry By | Theresa Lacusta |
| Longitude, Latitude | -117:32:38, 57:13:44 | Data Entry Date | 13-Dec-2011 |
| Road Authority | Alberta Transportation (AIT) | Reviewer Name | Eric Carcoux |
| Contract Main. Area | CMA04 | Review Date | 12-Dec-2011 |
| Clear Roadway/Skew | 10.5 / 22 deg. (RHF) | Dept. Reviewer Name | Steve Pasquan |
| AADT/Year | 1,700 / 2010 (A) | Dept. Review Date | 11-Jan-2012 |
| Road Classification | RAU-210-110 | Follow-Up By | |
| Detour Length (km) | 999 | | |

### Bridge Culvert Information

| | |
|---|---|
| Number of Culverts | 1 |

| Pipe # | Barrel | Span | Rise (or Dia.) | Type | Length | Corr. Profile | Pl./Slab Thickness | Shape |
|---|---|---|---|---|---|---|---|---|
| 1 | MAIN | - | 2430 | SP | 38.4 | 152X51 | 3.0 | ROUND |

| | |
|---|---|
| Special Features | |
| Special Features Comment | |

## Utilities (Located at)

| | | | |
|---|---|---|---|
| Utility Attachments | | | |
| Telephone | Buried cable on East ditch. | Gas | |
| Power | 7 wire o/h on West ROW | Municipal | |
| Others | | Problem (Y/N) | No |
| Remarks | | | |

## Approach Road / Embankment

| | | Last | Now | Explanation of Condition |
|---|---|---|---|---|
| Horizontal Alignment | | 7 | 7 | Intersection 400m N.<br>Field entrance 200m S. |
| Vertical Alignment | | 8 | 7 | |
| Roadway Width (m) | 10.500 | | | |
| Embankment | | N | 6 | NW ditch erosion into channel(4mX3mX0.5m)-May 16, 2008 |
| Sideslope (__:1) | 4.0 | | | |
| (Height of Cover(m) : **0.5**) | | | | |
| Guardrail (Y/N) | No | | | |
| **Approach Road / Embankment General Rating** | | **7** | **7** | |

## Upstream 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 : ) | | | | |

| Upstream End | | | | |
|---|---|---|---|---|
| **Culvert Component** | | **Last** | **Now** | **Explanation of Condition** |
| Cutoff Wall | | X | X | |
| Bevel End | | N | 4 | |
| Heaving (mm) | 200 | | | |
| Invert Above/Below Stream Bed | BELOW | | | EST.-May 16, 2008 |
| Above/Below (mm) | 100 | | | |
| Scour Protection | | N | 4 | |
| (Type : **NONE**) | | | | |
| (Avg. Rock Size(mm) : ) | | | | |
| Scour/Erosion | | N | 4 | Erosion at sides of bevel (2mX0.4mX0.7m)-May 16, 2008 |
| Beavers (Y/N) | Yes | | | |
| **Upstream End General Rating** | | **4** | **4** | |

| Bridge Culvert Barrel | | | | |
|---|---|---|---|---|
| **Culvert Component** | | **Last** | **Now** | **Explanation of Condition** |
| (Pipe # : **1, Primary Span, Location Code: MAIN, Span (mm): , Rise (mm): 2430, Type: SP**) | | | | |
| Barrel Last Accessible Date | 16-Feb-2010 | | | ~1m of water |
| **Special Features** | | | | |
| Special Feature | | | | |
| (Type : ) | | | | |
| Special Feature | | | | |
| (Type : ) | | | | |
| Roof | | 7 | N | |
| Measured Rise (mm) | | | | |
| Measured At Ring No. | | | | est |
| Sag (mm) | 80 | | | |
| Percent Sag | | | | |
| Sidewall | | 7 | N | |
| Measured Span (mm) | 2304 | | | |
| Measured At Ring No. | 6 | | | |
| Deflection (mm) | 126 | | | Deflection inward.-10-Feb-2010 |
| Percent Deflection | 5 | | | |
| Floor | | N | N | Covered with ice. |
| Bulge (mm) | | | | |
| Measured At Ring No. | | | | |
| Abrasion (Y/N) | | | | |
| Circumferential Seams | | 6 | N | |
| Separation (mm) | 0 | | | |
| Longitudinal Seams | | 6 | N | |
| Total No. of Cracked Rings | 0 | | | |
| Total No. of Rings with Two Cracked Seams | | | | |
| Min. Remaining Steel Between Cracks (mm) | | | | 1N stagger |
| Proper Lap (Y/N) | No | | | |
| Longitudinal Stagger (Y/N) | Yes | | | |
| Coating | | 6 | N | Minor superficial rust on sidewall. Alkaline deposit through roof bolts. |
| Corrosion By Soil (Y/N) | Yes | | | |
| Corrosion By Water (Y/N) | Yes | | | |
| Camber POS/ZERO/NEG | NEG | | | Approx 300mm neg chamber |

| Bridge Culvert Barrel | | | | |
|---|---|---|---|---|
| **Culvert Component** | | **Last** | **Now** | **Explanation of Condition** |
| (Pipe # : **1, Primary Span, Location Code: MAIN, Span (mm): , Rise (mm): 2430, Type: SP**) | | | | |
| Ponding (Y/N) | Yes | | | (1.3 m ponding.-20010510) |
| Fish Passage Adequacy | | 7 | 5 | Beaverdam in u/s bevel. |
| Baffle | | X | X | |
| (Type : ) | | | | |
| Waterway Adequacy | | 6 | 5 | Drift accumulation at u/s end. |
| Icing (Y/N) | No | | | |
| Silting (Y/N) | No | | | |
| Drift (Y/N) | Yes | | | |
| **Barrel General Rating** | | **7** | **N** | GR was 7 on 16-Feb-2010 |

| Downstream End | | | | |
|---|---|---|---|---|
| **Culvert Component** | | **Last** | **Now** | **Explanation of Condition** |
| Direction | | E | | |
| End Treatment (Concrete, Steel, Others, None) | STEEL | | | |
| Headwall | | X | X | |
| Collar | | X | X | |
| Wingwalls | | X | X | |
| (Shape : ) | | | | |
| Cutoff Wall | | X | X | |
| Bevel End | | 7 | 5 | Estimated-May 16, 2008 |
| Heaving (mm) | 0 | | | Rated based on 50% visibility. |
| Invert Above/Below Stream Bed | BELOW | | | |
| Above/Below (mm) | 100 | | | |
| Scour Protection | | N | 4 | |
| (Type : **NONE**) | | | | |
| (Avg. Rock Size(mm) : ) | | | | |
| Scour/Erosion | | N | 4 | Length of bevel 400mm wide X 1m deep |
| Beavers (Y/N) | No | | | |
| **Downstream End General Rating** | | **4** | **4** | |

| Structure Usage | | | | |
|---|---|---|---|---|
| | | **Last** | **Now** | **Explanation of Condition** |
| **Channel (U/S and D/S)** | | | | |
| Alignment | | 7 | 7 | |
| Bank Stability | | 7 | 8 | |
| HWM (m below Top of Culvert) | | | | HWM NOT VISIBLE |
| Drift (Y/N) | Yes | | | |
| Channel Bottom Degrading/Aggrading | DEGRADING | | | |
| Beavers (Y/N) | Yes | | | |
| (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 | 2012 | Remove drift accumulation at u/s. | | | | |
| 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) (%)** | **77.8/55.6** | **Sufficiency Rating (Last/Now) (%)** | **64.9/50.1** | Est. Repl. Yr | 2015 | Maint. Reqd. (Y/N) | Yes |

| | | | |
|---|---|---|---|
| Special Comments for Next Inspection | Monitor erosion @ bevel.-16-May-2008 | 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 | Brian Pientsch | Previous Assistant's Name | Lisbeth Medina | | |
| Next Inspection Date | 15-Aug-2013 | Previous Inspection Date | 16-Feb-2010 | | |
| Inspection Cycle (Default) (months) | 21 | | | | |
| Comment | | | | | |