## Bridge Culvert Inspection

| | | | |
|---|---|---|---|
| Bridge File Number | 77330 -1 Bridge Culvert | Form Type | CUL1 |
| Year Built | 1999 | Lot No. | 4 |
| Bridge or Town Name | PRINCESS | Inspector Name | Tom Carey |
| Located Over | EID - IRRIGATION C, WATERCRS-IC | Inspector Class | BR CLS A |
| Located On | 544:02 C1 28.277 | Assistant Name | |
| Water Body Cl./Year | | Assistant Class | |
| Navigabil. Cl./Year | | Inspection Date | 15-Feb-2010 |
| Legal Land Location | NW SEC 11 TWP 20 RGE 12 W4M | Data Entry By | Kelsey Roberts |
| Longitude, Latitude | -111:34:19, 50:41:06 | Data Entry Date | 03-Mar-2010 |
| Road Authority | Alberta Transportation (AIT) | Reviewer Name | Garry Roberts |
| Contract Main. Area | CMA23 | Review Date | 23-Feb-2010 |
| Clear Roadway/Skew | 8.6 / -35 deg. (LHF) | Dept. Reviewer Name | Lorenz Bohnert |
| AADT/Year | 720 / 2008 (A) | Dept. Review Date | 08-Mar-2010 |
| Road Classification | RCU-209-110 | Follow-Up By | |
| Detour Length (km) | 5 | | |

### Bridge Culvert Information

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| Number of Culverts | | 1 | | | | | | |
| Pipe # | Barrel | Span | Rise (or Dia.) | Type | Length | Corr. Profile | Pl./Slab Thickness | Shape |
| 1 | MAIN | - | 1800 | MP | 38 | 125X26 | 2.8,2.8,2.8 | ROUND |
| Special Features | | | | | | | | |
| Special Features Comment | | | | | | | | |

## Utilities (Located at)

| | | | |
|---|---|---|---|
| Utility Attachments | | | |
| Telephone | SOUTH R/W | Gas | |
| Power | 3W 25 m N&S OF CL-3W X RD 100m W | Municipal | |
| Others | | Problem (Y/N) | No |
| Remarks | | | |

## Approach Road / Embankment

| | | Last | Now | Explanation of Condition |
|---|---|---|---|---|
| Horizontal Alignment | | 6 | 6 | IN CURVE - SUPERELEVATED |
| Vertical Alignment | | 8 | 8 | (10:1 OVER PIPE<br>4:1 @ ROAD) |
| Roadway Width (m) | 8.600 | | | |
| Embankment | | 8 | N | Snow |
| Sideslope (__:1) | 4.0 | | | |
| (Height of Cover (m) : **1**) | | | | |
| Guardrail (Y/N) | No | | | |
| **Approach Road / Embankment General Rating** | | **6** | **6** | |

## Upstream End

| Culvert Component | | Last | Now | Explanation of Condition |
|---|---|---|---|---|
| Direction | | S | | SOUTH |
| 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 | | 8 | N | |
| Heaving (mm) | 0 | | | |
| Invert Above/Below Stream Bed | BELOW | | | |
| Above/Below (mm) | 400 | | | |
| Scour Protection | | 8 | N | Completely snowed in |
| (Type : **RIP RAP**) | | | | |
| (Avg. Rock Size (mm) : **250**) | | | | |
| Scour/Erosion | | 8 | N | |
| Beavers (Y/N) | No | | | |
| **Upstream End General Rating** | | **8** | **N** | |

| Bridge Culvert Barrel | | | | |
|---|---|---|---|---|
| **Culvert Component** | | **Last** | **Now** | **Explanation of Condition** |
| (Pipe # : **1, Primary Span, Location Code: MAIN, Span (mm): - , Rise (mm): 1800, Type: MP**) | | | | |
| Barrel Last Accessible Date | 21-Feb-2007 | | | |
| **Special Features** | | | | |
| Special Feature | | | | Both ends completetly snowed in |
| (Type : ) | | | | |
| Special Feature | | | | |
| (Type : ) | | | | |
| Roof | | 8 | N | (Est.) |
| Measured Rise (mm) | 1810 | | | |
| Measured At Ring No. | 2 | | | |
| Sag (mm) | 0 | | | |
| Percent Sag | | | | |
| Sidewall | | 8 | N | (INWARD 991105) |
| Measured Span (mm) | 1790 | | | |
| Measured At Ring No. | 2 | | | |
| Deflection (mm) | 10 | | | |
| Percent Deflection | | | | |
| Floor | | N | N | |
| Bulge (mm) | | | | |
| Measured At Ring No. | | | | |
| Abrasion (Y/N) | | | | |
| Circumferential Seams | | 8 | N | (D/S SEAM FILLED WITH FOAM) |
| Separation (mm) | 30 | | | |
| Longitudinal Seams | | X | N | |
| Total No. of Cracked Rings | 0 | | | |
| Total No. of Rings with Two Cracked Seams | 0 | | | |
| Min. Remaining Steel Between Cracks (mm) | 0 | | | |
| Proper Lap (Y/N) | | | | |
| Longitudinal Stagger (Y/N) | | | | |
| Coating | | 7 | N | |
| Corrosion By Soil (Y/N) | | | | |
| Corrosion By Water (Y/N) | | | | |
| Camber POS/ZERO/NEG | ZERO | | | |

| Bridge Culvert Barrel | | | | |
|---|---|---|---|---|
| **Culvert Component** | | **Last** | **Now** | **Explanation of Condition** |
| (Pipe # : **1, Primary Span, Location Code: MAIN, Span (mm): - , Rise (mm): 1800, Type: MP**) | | | | |
| Ponding (Y/N) | No | | | |
| Fish Passage Adequacy | | X | X | |
| Baffle | | X | X | |
| (Type : ) | | | | |
| Waterway Adequacy | | 9 | N | |
| Icing (Y/N) | No | | | |
| Silting (Y/N) | No | | | |
| Drift (Y/N) | No | | | |
| **Barrel General Rating** | | **8** | **N** | Snowed in |

| Downstream End | | | | |
|---|---|---|---|---|
| **Culvert Component** | | **Last** | **Now** | **Explanation of Condition** |
| Direction | | N | | NORTH |
| End Treatment (Concrete, Steel, Others, None) | STEEL | | | |
| Headwall | | X | X | |
| Collar | | X | X | |
| Wingwalls | | X | X | |
| (Shape : ) | | | | |
| Cutoff Wall | | X | X | |
| Bevel End | | 8 | N | |
| Heaving (mm) | 0 | | | |
| Invert Above/Below Stream Bed | BELOW | | | |
| Above/Below (mm) | 350 | | | |
| Scour Protection | | 8 | N | Completely snowed in |
| (Type : **RIP RAP**) | | | | |
| (Avg. Rock Size (mm) : **250**) | | | | |
| Scour/Erosion | | 8 | N | |
| Beavers (Y/N) | No | | | |
| **Downstream End General Rating** | | **8** | **N** | |

| Structure Usage | | | | |
|---|---|---|---|---|
| | | **Last** | **Now** | **Explanation of Condition** |
| **Channel (U/S and D/S)** | | | | |
| Alignment | | 6 | 6 | CURVE @ D/S END |
| Bank Stability | | 6 | N | Snow |
| HWM (m below Top of Culvert) | | | | |
| Drift (Y/N) | No | | | |
| Channel Bottom Degrading/Aggrading | | | | |
| Beavers (Y/N) | No | | | |
| (Fish Compensation Measure 1 : **NONE**) | | | | |
| (Fish Compensation Measure 2 : **NONE**) | | | | |
| **Channel General Rating** | | **6** | **6** | G.R. carried |

| 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) (%)** | **88.9/55.6** | **Sufficiency Rating (Last/Now) (%)** | **89.8/68.2** | Est. Repl. Yr | 2048 | 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 | Tim Davies | Previous Assistant's Name | | | |
| Next Inspection Date | 15-May-2013 | Previous Inspection Date | 22-Feb-2007 | | |
| Inspection Cycle (Default) (months) | 39 | | | | |
| Comment | | | | | |