

| Bridge Culvert Inspection |                              |                     |                 |
|---------------------------|------------------------------|---------------------|-----------------|
| Bridge File Number        | 86095 -1 Bridge Culvert      | Form Type           | CULM            |
| Year Built                | 2011                         | Lot No.             | 4               |
| Bridge or Town Name       |                              | Inspector Name      | Brian Pientsch  |
| Located Over              | WATERCOURSE, WATERCRS-NI     | Inspector Class     | BR CLS A        |
| Located On                | 58:06 C1 40.546              | Assistant Name      | Clem Guenette   |
| Water Body Cl./Year       |                              | Assistant Class     |                 |
| Navigabil. Cl./Year       |                              | Inspection Date     | 11-Jan-2012     |
| Legal Land Location       | SW SEC 20 TWP 110 RGE 22 W5M | Data Entry By       | Theresa Lacusta |
| Longitude, Latitude       | -117:39:12, 58:33:36         | Data Entry Date     | 04-Mar-2012     |
| Road Authority            | Alberta Transportation (AIT) | Reviewer Name       | Eric Carcoux    |
| Contract Main. Area       | CMA01                        | Review Date         | 26-Feb-2012     |
| Clear Roadway/Skew        | 11 / 0 deg.                  | Dept. Reviewer Name | David Morrison  |
| AADT/Year                 | 730 / 2011 (A)               | Dept. Review Date   | 30-Mar-2012     |
| Road Classification       | RAU-211.8-110                | Follow-Up By        |                 |
| Detour Length (km)        | 999                          |                     |                 |

**Bridge Culvert Information**

|                          |        |      |                |      |        |               |                    |       |
|--------------------------|--------|------|----------------|------|--------|---------------|--------------------|-------|
| Number of Culverts       | 2      |      |                |      |        |               |                    |       |
| Pipe #                   | Barrel | Span | Rise (or Dia.) | Type | Length | Corr. Profile | Pl./Slab Thickness | Shape |
| 1                        | MAIN   | -    | 1220           | SSP  | 29     | 125X26        | 9.5                | ROUND |
| 2                        | MAIN   | -    | 1220           | SSP  | 29     | 125X26        | 9.5                | ROUND |
| Special Features         |        |      |                |      |        |               |                    |       |
| Special Features Comment |        |      |                |      |        |               |                    |       |

**Utilities (Located at)**

|                     |                       |               |    |
|---------------------|-----------------------|---------------|----|
| Utility Attachments |                       |               |    |
| Telephone           |                       | Gas           |    |
| Power               | 4 wire o/h, 50m South | Municipal     |    |
| Others              |                       | Problem (Y/N) | No |
| Remarks             |                       |               |    |

**Approach Road / Embankment**

|  | Last   | Now      | Explanation of Condition |
|--|--------|----------|--------------------------|
| Horizontal Alignment                             |        | 9        |                          |
| Vertical Alignment                               |        | 9        |                          |
| Roadway Width (m)                                | 11.000 |          |                          |
| Embankment                                       |        | 8        |                          |
| Sideslope ( __:1)                                | 4.0    |          |                          |
| (Height of Cover(m) : 0.5)                       |        |          |                          |
| Guardrail (Y/N)                                  | No     |          |                          |
| <b>Approach Road / Embankment General Rating</b> |        | <b>9</b> |                          |

**Upstream End**

| Culvert Component                             | Last  | Now | Explanation of Condition |
|---|-------|-----|--------------------------|
| (Pipe # : 1, Span Type: Primary Span)         |       |     |                          |
| Direction                                     | N     |     | West pipe                |
| End Treatment (Concrete, Steel, Others, None) | STEEL |     |                          |
| Headwall                                      |       | X   |                          |
| Collar  |       | X   |                          |
| Wingwalls                                     |       | X   |                          |
| (Shape : )                                    |       |     |                          |

| Upstream End                                 |    |      |          |                          |
|--|----|------|----------|--------------------------|
| Culvert Component                            |    | Last | Now      | Explanation of Condition |
| <b>(Pipe # : 1, Span Type: Primary Span)</b> |    |      |          |                          |
| Cutoff Wall                                  |    |      | X        |                          |
| Bevel End                                    |    |      | 9        |                          |
| Heaving (mm)                                 |    |      |          |                          |
| Invert Above/Below Stream Bed                |    |      |          |                          |
| Above/Below (mm)                             |    |      |          |                          |
| Scour Protection                             |    |      | N        | Snow covered             |
| (Type : <b>RIP RAP</b> )                     |    |      |          |                          |
| (Avg. Rock Size(mm) : <b>150</b> )           |    |      |          |                          |
| Scour/Erosion                                |    |      | N        |                          |
| Beavers (Y/N)                                | No |      |          |                          |
| <b>Upstream End General Rating</b>           |    |      | <b>9</b> |                          |

| Bridge Culvert Barrel   |  |      |     |                                       |
|---|--|------|-----|---------------------------------------|
| Culvert Component   |  | Last | Now | Explanation of Condition              |
| <b>(Pipe # : 1, Primary Span, Location Code: MAIN, Span (mm): , Rise (mm): 1220, Type: SSP)</b> |  |      |     |                                       |
| Barrel Last Accessible Date   |  |      |     | Observed from ends-condition is good. |
| <b>Special Features</b>   |  |      |     |                                       |
| Special Feature   |  |      |     |                                       |
| (Type : )   |  |      |     |                                       |
| Special Feature   |  |      |     |                                       |
| (Type : )   |  |      |     |                                       |
| Roof  |  |      | 8   |                                       |
| Measured Rise (mm)  |  |      |     |                                       |
| Measured At Ring No.  |  |      |     |                                       |
| Sag (mm)  |  |      |     |                                       |
| Percent Sag   |  |      |     |                                       |
| Sidewall  |  |      | 9   |                                       |
| Measured Span (mm)  |  |      |     |                                       |
| Measured At Ring No.  |  |      |     |                                       |
| Deflection (mm)   |  |      |     |                                       |
| Percent Deflection  |  |      |     |                                       |
| Floor   |  |      | N   |                                       |
| Bulge (mm)  |  |      |     |                                       |
| Measured At Ring No.  |  |      |     |                                       |
| Abrasion (Y/N)  |  |      |     |                                       |
| Circumferential Seams   |  |      | N   |                                       |
| Separation (mm)   |  |      |     |                                       |
| Longitudinal Seams  |  |      | 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   |  |      | 8   |                                       |
| Corrosion By Soil (Y/N)   |  |      |     |                                       |
| Corrosion By Water (Y/N)  |  |      |     |                                       |

| Bridge Culvert Barrel  |       |      |          |                          |
|--|-------|------|----------|--------------------------|
| Culvert Component  |       | Last | Now      | Explanation of Condition |
| (Pipe # : 1, Primary Span, Location Code: MAIN, Span (mm): , Rise (mm): 1220, Type: SSP) |       |      |          |                          |
| Camber POS/ZERO/NEG  | ZERO  |      |          |                          |
| Ponding (Y/N)  | No    |      |          |                          |
| Fish Passage Adequacy  |       |      | 7        |                          |
| Baffle   |       |      | X        |                          |
| (Type : )  |       |      |          |                          |
| Waterway Adequacy  |       |      | 7        |                          |
| Icing (Y/N)  | No    |      |          |                          |
| Silting (Y/N)  | No    |      |          |                          |
| Drift (Y/N)  | No    |      |          |                          |
| <b>Barrel General Rating</b>   |       |      | <b>8</b> |                          |
| Downstream End   |       |      |          |                          |
| Culvert Component  |       | Last | Now      | Explanation of Condition |
| (Pipe # : 1, Span Type: Primary Span)  |       |      |          |                          |
| Direction  |       | S    |          |                          |
| End Treatment (Concrete, Steel, Others, None)  | STEEL |      |          |                          |
| Headwall   |       |      | X        |                          |
| Collar   |       |      | X        |                          |
| Wingwalls<br>(Shape : )  |       |      | X        |                          |
| Cutoff Wall  |       |      | X        |                          |
| Bevel End  |       |      | 9        |                          |
| Heaving (mm)   |       |      |          |                          |
| Invert Above/Below Stream Bed<br>Above/Below (mm)  |       |      |          |                          |
| Scour Protection<br>(Type : RIP RAP)<br>(Avg. Rock Size(mm) : 150)                       |       |      | N        | Snow covered             |
| Scour/Erosion  |       |      | N        | Snow covered             |
| Beavers (Y/N)  | No    |      |          |                          |
| <b>Downstream End General Rating</b>   |       |      | <b>9</b> |                          |
| Upstream End   |       |      |          |                          |
| Culvert Component  |       | Last | Now      | Explanation of Condition |
| (Pipe # : 2, Span Type: Secondary Span)  |       |      |          |                          |
| Direction  |       | N    |          | East pipe                |
| End Treatment (Concrete, Steel, Others, None)  | STEEL |      |          |                          |
| Headwall   |       |      | X        |                          |
| Collar   |       |      | X        |                          |
| Wingwalls<br>(Shape : )  |       |      | X        |                          |
| Cutoff Wall  |       |      | X        |                          |

| Upstream End  |      |      |          |                                |
|---|------|------|----------|--------------------------------|
| Culvert Component   |      | Last | Now      | Explanation of Condition       |
| <b>(Pipe # : 2, Span Type: Secondary Span)</b>  |      |      |          |                                |
| Bevel End   |      |      | N        | Snow covered                   |
| Heaving (mm)  |      |      |          |                                |
| Invert Above/Below Stream Bed   |      |      |          |                                |
| Above/Below (mm)  |      |      |          |                                |
| Scour Protection  |      |      | N        | Snow covered                   |
| (Type : <b>RIP RAP</b> )  |      |      |          |                                |
| (Avg. Rock Size(mm) : <b>150</b> )  |      |      |          |                                |
| Scour/Erosion   |      |      | N        | Snow covered                   |
| Beavers (Y/N)   | No   |      |          |                                |
| <b>Upstream End General Rating</b>  |      |      | <b>N</b> |                                |
| Bridge Culvert Barrel   |      |      |          |                                |
| Culvert Component   |      | Last | Now      | Explanation of Condition       |
| <b>(Pipe # : 2, Secondary Span, Location Code: MAIN, Span (mm): , Rise (mm): 1220, Type: SSP)</b> |      |      |          |                                |
| Barrel Last Accessible Date   |      |      |          | Observed from ends-looks good. |
| <b>Special Features</b>   |      |      |          |                                |
| Special Feature   |      |      |          |                                |
| (Type : )   |      |      |          |                                |
| Special Feature   |      |      |          |                                |
| (Type : )   |      |      |          |                                |
| Roof  |      |      | 9        |                                |
| Measured Rise (mm)  |      |      |          |                                |
| Measured At Ring No.  |      |      |          |                                |
| Sag (mm)  |      |      |          |                                |
| Percent Sag   |      |      |          |                                |
| Sidewall  |      |      | 9        |                                |
| Measured Span (mm)  |      |      |          |                                |
| Measured At Ring No.  |      |      |          |                                |
| Deflection (mm)   |      |      |          |                                |
| Percent Deflection  |      |      |          |                                |
| Floor   |      |      | N        |                                |
| Bulge (mm)  |      |      |          |                                |
| Measured At Ring No.  |      |      |          |                                |
| Abrasion (Y/N)  |      |      |          |                                |
| Circumferential Seams   |      |      | N        |                                |
| Separation (mm)   |      |      |          |                                |
| Longitudinal Seams  |      |      | 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   |      |      | 8        |                                |
| Corrosion By Soil (Y/N)   | No   |      |          |                                |
| Corrosion By Water (Y/N)  | No   |      |          |                                |
| Camber POS/ZERO/NEG   | ZERO |      |          |                                |

| Bridge Culvert Barrel   |       |      |          |                          |
|---|-------|------|----------|--------------------------|
| Culvert Component   |       | Last | Now      | Explanation of Condition |
| <b>(Pipe # : 2, Secondary Span, Location Code: MAIN, Span (mm): , Rise (mm): 1220, Type: SSP)</b> |       |      |          |                          |
| Ponding (Y/N)   | No    |      |          |                          |
| Fish Passage Adequacy   |       |      | 7        |                          |
| Baffle  |       |      | X        |                          |
| (Type : )   |       |      |          |                          |
| Waterway Adequacy   |       |      | 7        |                          |
| Icing (Y/N)   | No    |      |          |                          |
| Silting (Y/N)   | No    |      |          |                          |
| Drift (Y/N)   | No    |      |          |                          |
| <b>Barrel General Rating</b>  |       |      | <b>9</b> |                          |
| Downstream End  |       |      |          |                          |
| Culvert Component   |       | Last | Now      | Explanation of Condition |
| <b>(Pipe # : 2, Span Type: Secondary Span)</b>  |       |      |          |                          |
| Direction   |       | S    |          | East pipe                |
| End Treatment (Concrete, Steel, Others, None)   | STEEL |      |          |                          |
| Headwall  |       |      | X        |                          |
| Collar  |       |      | X        |                          |
| Wingwalls   |       |      | X        |                          |
| (Shape : )  |       |      |          |                          |
| Cutoff Wall   |       |      | X        |                          |
| Bevel End   |       |      | N        | Snow covered             |
| Heaving (mm)  |       |      |          |                          |
| Invert Above/Below Stream Bed   |       |      |          |                          |
| Above/Below (mm)  |       |      |          |                          |
| Scour Protection  |       |      | N        | Snow covered             |
| (Type : <b>RIP RAP</b> )  |       |      |          |                          |
| (Avg. Rock Size(mm) : <b>150</b> )  |       |      |          |                          |
| Scour/Erosion   |       |      | N        | Snow covered             |
| Beavers (Y/N)   | No    |      |          |                          |
| <b>Downstream End General Rating</b>  |       |      | <b>N</b> |                          |
| Structure Usage   |       |      |          |                          |
|   |       | Last | Now      | Explanation of Condition |
| <b>Channel (U/S and D/S)</b>  |       |      |          |                          |
| Alignment   |       |      | 7        |                          |
| Bank Stability  |       |      | 8        |                          |
| HWM (m below Top of Culvert)  |       |      |          | HWM not visible          |
| Drift (Y/N)   | No    |      |          |                          |
| Channel Bottom Degrading/Aggrading  | NONE  |      |          |                          |
| Beavers (Y/N)   | No    |      |          |                          |
| (Fish Compensation Measure 1 : <b>NONE</b> )  |       |      |          |                          |
| (Fish Compensation Measure 2 : <b>NONE</b> )  |       |      |          |                          |
| <b>Channel General Rating</b>   |       |      | <b>7</b> |                          |

| 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                                      |              |  |                           |               |           |                   |    |
| <b>Structural Condition Rating (Last/Now) (%)</b> | <b>/88.9</b> | <b>Sufficiency Rating (Last/Now) (%)</b> | <b>/85.0</b>              | Est. Repl. Yr | 2061      | 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                         |              |  | Previous Assistant's Name |               |           |                   |    |
| Next Inspection Date                              | 11-Oct-2013  |  | Previous Inspection Date  |               |           |                   |    |
| Inspection Cycle (Default) (months)               | 21           |  |                           |               |           |                   |    |
| Comment   |              |  |                           |               |           |                   |    |