

| Bridge Culvert Inspection |                              |  |                     |                |
|---------------------------|------------------------------|--|---------------------|----------------|
| Bridge File Number        | 74594 N-2 Bridge Culvert     |  | Form Type           | CUL1           |
| Year Built                | 1997                         |  | Lot No.             | 4              |
| Bridge or Town Name       | ALDERSYDE                    |  | Inspector Name      | Jon Davies     |
| Located Over              | TRAIL-ANIMAL, OVER SP        |  | Inspector Class     | BR CLS B       |
| Located On                | 2:12 R1 11.295               |  | Assistant Name      |                |
| Water Body Cl./Year       |                              |  | Assistant Class     |                |
| Navigabil. Cl./Year       |                              |  | Inspection Date     | 18-Oct-2011    |
| Legal Land Location       | SW SEC 5 TWP 20 RGE 28 W4M   |  | Data Entry By       | Alyssa Boynton |
| Longitude, Latitude       | -113:51:19, 50:40:00         |  | Data Entry Date     | 25-Nov-2011    |
| Road Authority            | Alberta Transportation (AIT) |  | Reviewer Name       | Garry Roberts  |
| Contract Main. Area       | CMA27                        |  | Review Date         | 08-Nov-2011    |
| Clear Roadway/Skew        | 13.8 /                       |  | Dept. Reviewer Name | Tim Davies     |
| AADT/Year                 | 15,040 / 2010 (A)            |  | Dept. Review Date   | 01-Dec-2011    |
| Road Classification       | RAD-412.4-120                |  | Follow-Up By        |                |
| Detour Length (km)        | 1                            |  |                     |                |

**Bridge Culvert Information**

|                          |            |      |                |      |        |               |                    |       |
|--------------------------|------------|------|----------------|------|--------|---------------|--------------------|-------|
| Number of Culverts       | 1          |      |                |      |        |               |                    |       |
| Pipe #                   | Barrel     | Span | Rise (or Dia.) | Type | Length | Corr. Profile | PI./Slab Thickness | Shape |
| 1                        | MAIN       | -    | 2400           | MP   | 38     | 125X26        | 2.8                | ROUND |
| Special Features         | CONC FLOOR |      |                |      |        |               |                    |       |
| Special Features Comment |            |      |                |      |        |               |                    |       |

**Posting Information**

|                                      |              |    |               |  |                  |  |      |    |               |  |                  |
|--------------------------------------|--------------|----|---------------|--|------------------|--|------|----|---------------|--|------------------|
| Required Vert. Clearance Posting (m) |              |    |               |  |                  |  |      |    |               |  |                  |
| Posted Vertical Clearance (Y/N)      |              |    |               |  |                  |  |      |    |               |  |                  |
| Posted:                              | Lane         | NB | On Bridge (m) |  | In Advance (Y/N) |  | Lane | SB | On Bridge (m) |  | In Advance (Y/N) |
| Remarks                              | Not Required |    |               |  |                  |  |      |    |               |  |                  |

**Utilities (Located at)**

|                     |   |  |  |  |  |               |  |    |  |  |  |
|---------------------|---|--|--|--|--|---------------|--|----|--|--|--|
| Utility Attachments |   |  |  |  |  |               |  |    |  |  |  |
| Telephone           | North r/w                               |  |  |  |  | Gas           |  |    |  |  |  |
| Power               | Light @ S end                           |  |  |  |  | Municipal     |  |    |  |  |  |
| Others              |   |  |  |  |  | Problem (Y/N) |  | No |  |  |  |
| Remarks             | Conduits for lighting at west sidewall. |  |  |  |  |               |  |    |  |  |  |

**Approach Road / Embankment**

|  |        | Last     | Now      | Explanation of Condition |
|--|--------|----------|----------|--------------------------|
| Horizontal Alignment                             |        | 7        | 7        |                          |
| Vertical Alignment                               |        | 8        | 8        |                          |
| Roadway Width (m)                                | 13.800 |          |          |                          |
| Embankment                                       |        | 7        | 7        |                          |
| Sideslope (__:1)                                 | 4.0    |          |          |                          |
| (Height of Cover(m) : 1.1)                       |        |          |          |                          |
| Guardrail (Y/N)                                  | No     |          |          |                          |
| <b>Approach Road / Embankment General Rating</b> |        | <b>7</b> | <b>7</b> |                          |

**Upstream End**

| Culvert Component                             | Last  | Now | Explanation of Condition |
|---|-------|-----|--------------------------|
| Direction                                     | N     |     |                          |
| End Treatment (Concrete, Steel, Others, None) | STEEL |     |                          |
| Headwall                                      | X     | X   |                          |

| Upstream End                       |    |          |          |                          |
|------------------------------------|----|----------|----------|--------------------------|
| Culvert Component                  |    | Last     | Now      | Explanation of Condition |
| Collar                             |    | X        | X        |                          |
| Wingwalls                          |    | X        | X        |                          |
| (Shape : )                         |    |          |          |                          |
| Cutoff Wall                        |    | X        | X        |                          |
| Bevel End                          |    | 8        | 8        |                          |
| Heaving (mm)                       | 0  |          |          |                          |
| Invert Above/Below Stream Bed      |    |          |          |                          |
| Above/Below (mm)                   |    |          |          |                          |
| Scour Protection                   |    | X        | X        |                          |
| (Type : <b>NATURAL</b> )           |    |          |          |                          |
| (Avg. Rock Size(mm) : )            |    |          |          |                          |
| Scour/Erosion                      |    | X        | X        |                          |
| Beavers (Y/N)                      | No |          |          |                          |
| <b>Upstream End General Rating</b> |    | <b>8</b> | <b>8</b> |                          |

| Bridge Culvert Barrel   |             |      |     |                                   |
|---|-------------|------|-----|-----------------------------------|
| Culvert Component   |             | Last | Now | Explanation of Condition          |
| (Pipe # : 1, Primary Span, Location Code: MAIN, Span (mm): , Rise (mm): 2400, Type: MP) |             |      |     |                                   |
| Barrel Last Accessible Date   | 25-Oct-2011 |      |     |                                   |
| <b>Special Features</b>   |             |      |     |                                   |
| Special Feature   |             |      | 6   | Concrete Floor                    |
| (Type : <b>CONC FLOOR</b> )   |             |      |     |                                   |
| Special Feature   |             |      |     |                                   |
| (Type : )   |             |      |     |                                   |
| Roof  |             | 8    | 8   | Concrete floor - no rise measured |
| Measured Rise (mm)  |             |      |     |                                   |
| Measured At Ring No.  |             |      |     |                                   |
| Sag (mm)  | 0           |      |     | Est                               |
| Percent Sag   |             |      |     |                                   |
| Sidewall  |             | 8    | 8   | inward                            |
| Measured Span (mm)  | 2370        |      |     |                                   |
| Measured At Ring No.  | 3           |      |     |                                   |
| Deflection (mm)   | 30          |      |     |                                   |
| Percent Deflection  | 1           |      |     |                                   |
| Floor   |             | N    | N   | 400mm concrete                    |
| Bulge (mm)  |             |      |     |                                   |
| Measured At Ring No.  |             |      |     |                                   |
| Abrasion (Y/N)  |             |      |     |                                   |
| Circumferential Seams   |             | 8    | 8   |                                   |
| Separation (mm)   | 30          |      |     |                                   |
| 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)  |             |      |     |                                   |

| Bridge Culvert Barrel   |      |          |          |   |
|---|------|----------|----------|---|
| Culvert Component   |      | Last     | Now      | Explanation of Condition  |
| (Pipe # : 1, Primary Span, Location Code: MAIN, Span (mm): , Rise (mm): 2400, Type: MP) |      |          |          |   |
| Coating   |      | 6        | 6        | Butt weld at roof at north end, not painted with galvacon, has superficial corrosion. |
| Corrosion By Soil (Y/N)   | No   |          |          |   |
| Corrosion By Water (Y/N)  | No   |          |          |   |
| Camber POS/ZERO/NEG   | ZERO |          |          |   |
| Ponding (Y/N)   | No   |          |          |   |
| Fish Passage Adequacy   |      | X        | X        |   |
| Baffle  |      | X        | X        |   |
| (Type : )   |      |          |          |   |
| Waterway Adequacy   |      | X        | X        |   |
| Icing (Y/N)   | No   |          |          |   |
| Silting (Y/N)   | No   |          |          |   |
| Drift (Y/N)   | No   |          |          |   |
| <b>Barrel General Rating</b>  |      | <b>8</b> | <b>8</b> |   |

| Downstream End                                |       |          |          |                          |  |
|---|-------|----------|----------|--------------------------|--|
| Culvert Component                             |       | Last     | Now      | Explanation of Condition |  |
| Direction                                     |       | S        |          |                          |  |
| End Treatment (Concrete, Steel, Others, None) | STEEL |          |          |                          |  |
| Headwall                                      |       | X        | X        |                          |  |
| Collar  |       | X        | X        |                          |  |
| Wingwalls                                     |       | X        | X        |                          |  |
| (Shape : )                                    |       |          |          |                          |  |
| Cutoff Wall                                   |       | X        | X        |                          |  |
| Bevel End                                     |       | 8        | 8        |                          |  |
| Heaving (mm)                                  | 0     |          |          |                          |  |
| Invert Above/Below Stream Bed                 |       |          |          |                          |  |
| Above/Below (mm)                              |       |          |          |                          |  |
| Scour Protection                              |       | X        | X        |                          |  |
| (Type : <b>NATURAL</b> )                      |       |          |          |                          |  |
| (Avg. Rock Size(mm) : )                       |       |          |          |                          |  |
| Scour/Erosion                                 |       | X        | X        |                          |  |
| Beavers (Y/N)                                 | No    |          |          |                          |  |
| <b>Downstream End General Rating</b>          |       | <b>8</b> | <b>8</b> |                          |  |

| Structure Usage           |    |      |     |                          |
|---------------------------|----|------|-----|--------------------------|
|                           |    | Last | Now | Explanation of Condition |
| <b>Grade Separation</b>   |    |      |     |                          |
| Road Alignment            |    | X    | X   |                          |
| Roadway Surface           |    | 7    | 7   |                          |
| (Type : <b>CONCRETE</b> ) |    |      |     |                          |
| Icing (Y/N)               | No |      |     |                          |
| Traffic Safety Features   |    | X    | X   |                          |
| Type                      |    |      |     |                          |

| <b>Structure Usage</b>                 |     |             |            |  |
|--|-----|-------------|------------|--|
|  |     | <b>Last</b> | <b>Now</b> | <b>Explanation of Condition</b>                      |
| Lighting                               |     | 7           | 7          | At South only.                                       |
| Barrel Leakage (Y/N)                   | No  |             |            |  |
| Drainage                               |     | 7           | 7          |  |
| Structure In Use (Y/N)                 | Yes |             |            | Moderate damage to North fences but still finctional |
| <b>Grade Separation General Rating</b> |     | <b>7</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>88.9/88.9</b> | <b>Sufficiency Rating (Last/Now) (%)</b> | <b>90.3/90.3</b>          | Est. Repl. Yr | 2055            | 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                         | Garry Roberts    |  | Previous Assistant's Name |               |                 |                   |    |
| Next Inspection Date                              | 18-Jul-2013      |  | Previous Inspection Date  | 11-Feb-2010   |                 |                   |    |
| Inspection Cycle (Default) (months)               | 21               |  |                           |               |                 |                   |    |
| Comment   |                  |  |                           |               |                 |                   |    |