|  |          |                   |                        |          | Bridg | e Culve         | ert Insp                               | ection                        |                             |                |                       |       |  |
|--|----------|-------------------|------------------------|----------|-------|-----------------|--|-------------------------------|-----------------------------|----------------|-----------------------|-------|--|
| Bridge File Number 74582 -1 Bridge Culvert |          |                   |                        |          |       |                 | Form Type                              |                               | CULM                        |                |                       |       |  |
| Year Built 1990                            |          |                   |                        |          |       | Lot No.         |  | 4                             |                             |                |                       |       |  |
| Bridge or Town                             | Name     | DE WIN            | ITON                   |          |       |                 | Inspec                                 | Inspector Name                |                             | Calvin Roberts |                       |       |  |
| Located Over                               |          | TRIBUT<br>2.13.27 | 7 2 2 2 M/ATEDCDQ_QT   |          |       |                 | Inspector Class                        |                               | BR CLS B                    |                |                       |       |  |
| Located On                                 |          |                   | C1 1.833               |          |       |                 | Assistant Name                         |                               |                             |                |                       |       |  |
| Water Body Cl./Year                        |          |                   |                        |          |       | Assistant Class |  | 00.10040                      |                             |                |                       |       |  |
| Navigabil. Cl./Year                        |          |                   |                        |          |       | Inspection Date |  | 30-Jan-2013                   |                             |                |                       |       |  |
| Legal Land Loc                             | cation   | SW SE             | C 11 TWP 21 R          | GE 1 W5  | М     |                 | Data Entry By                          |                               | Lauren Korte<br>01-Mar-2013 |                |                       |       |  |
| Longitude, Latitude -114:02:               |          |                   | 12.52 50.45.47         |          |       |                 |  | Data Entry Date Reviewer Name |                             | Garry Roberts  |                       |       |  |
| Road Authority Alberta                     |          |                   | a Transportation (AIT) |          |       |                 |  | Review Date                   |                             | 03-Feb-2013    |                       |       |  |
| Contract Main. Area CMA27                  |          |                   |                        |          |       |                 | Dept. Reviewer Name                    |                               |                             |                |                       |       |  |
| Clear Roadway/Skew 9 / -19 c               |          |                   | leg. (LHF)             |          |       |                 | Dept. Reviewer Name  Dept. Review Date |                               | 04-Mar-2013                 |                |                       |       |  |
| AADT/Year                                  |          | 1,890 / 2         | 2011 (A)               |          |       |                 | Follow                                 |                               |                             | 01111011 2010  |                       |       |  |
| Road Classifica                            | ation    | RCU-20            | 9-110                  |          |       |                 |  | -1 ,                          |                             |                |                       |       |  |
| Detour Length                              |          | 6                 |                        |          |       |                 |  |                               |                             |                |                       |       |  |
| Bridge Culvert                             |          |                   |                        |          |       |                 |  |                               |                             |                |                       |       |  |
| Number of Culv                             |          |                   | 2                      |          |       | l_              |  | l                             |                             | l              | I                     |       |  |
| Pipe #                                     | Barrel   |                   | Span                   | Rise (or | Dia.) | Туре            |  | Length                        |                             | Corr. Profile  | Pl./Slab<br>Thickness | Shape |  |
| 1  | MAIN     |                   | -                      | 2200     | 00 MP |                 |  | 31                            |                             | 125X26         | 2.8                   | ROUND |  |
| 2  | MAIN     |                   | -                      | 1800     |       | MP              |  | 33                            |                             | 125X26         | 2.8                   | ROUND |  |
| Special Feature                            | es       |                   |                        |          |       |                 |  |                               |                             |                |                       |       |  |
| Special Feature                            | es Comr  | ment              |                        |          |       |                 |  |                               |                             |                |                       |       |  |
|  |          |                   |                        |          | 1 14: | litios (l       | _ocated                                | ot\                           |                             |                |                       |       |  |
| Utility Attachme                           | ents     |                   |                        |          | Oti   | iities (L       | _ocaleu                                | al)                           |                             |                |                       |       |  |
| Telephone                                  | West     | R/W.              |                        |          |       |                 |  | Gas West 30 m.                |                             |                |                       |       |  |
| Power                                      | East F   | R/W - 3 v         | vire.                  |          |       |                 | Municipal                              |                               |                             |                |                       |       |  |
| Others                                     |          |                   |                        |          |       |                 | Problem (Y/N) No                       |                               |                             |                |                       |       |  |
| Remarks                                    |          |                   |                        |          |       |                 |  |                               |                             |                |                       |       |  |
|  |          |                   |                        | Ap       |       |                 | 1                                      | ankment                       |                             |                |                       |       |  |
|  |          |                   |                        |          | Last  | Now             | Explan                                 | ation of (                    | Condi                       | tion           |                       |       |  |
| Horizontal Align                           |          |                   |                        |          | 8     | 8               | -                                      |                               |                             |                |                       |       |  |
| Vertical Alignm                            | ent      |                   |                        |          | 8     | 8               | 2.9 m over secondary culvert.          |                               |                             |                |                       |       |  |
| Roadway Width                              | h (m)    |                   | 9.000                  |          |       |                 | 2.9 m (                                | over secor                    | naary (                     | cuivert.       |                       |       |  |
| . todaway vvidu                            | ()       |                   | 0.000                  |          |       |                 |  |                               |                             |                |                       |       |  |
| Embankment                                 |          |                   |                        |          | 8     | 8               |  |                               |                             |                |                       |       |  |
| Sideslope (                                | · ·      |                   | 3.0                    |          |       |                 | 2.9m over secondary culvert.           |                               |                             |                |                       |       |  |
| (Height of Co                              |          | 2.5)              |                        |          |       |                 |  |                               | -                           |                |                       |       |  |
| Guardrail (Y/N)                            |          |                   | No                     |          |       |                 |  |                               |                             |                |                       |       |  |
| Approach Roa                               | ad / Emb | oankmer           | nt General Rati        | ing      | 8     | 8               |  |                               |                             |                |                       |       |  |
|  |          |                   |                        |          |       | Upstre          | am End                                 |                               |                             |                |                       |       |  |
| Culvert Comp                               | onent    |                   |                        |          | Last  |                 |  | ation of 0                    | Condi                       | tion           |                       |       |  |
| (Pipe # : 1, Sp                            |          | e: Prima          | ry Span)               |          |       | '               | •                                      |                               |                             |                |                       |       |  |
| Direction                                  |          |                   |                        |          |       |                 | West.                                  |                               |                             |                |                       |       |  |
| End Treatment<br>Others, None)             | (Concre  | ete, Stee         | I, STEEL               |          |       |                 | ]                                      |                               |                             |                |                       |       |  |
| Headwall                                   |          |                   |                        |          | Х     | Х               |  |                               |                             |                |                       |       |  |
| Collar                                     |          |                   |                        |          | X     | X               |  |                               |                             |                |                       |       |  |
|  |          |                   |                        |          |       |                 |  |                               |                             |                |                       |       |  |

|  | am End               |      |        |                              |
|--|----------------------|------|--------|------------------------------|
| Culvert Component  |                      | Last | Now    | Explanation of Condition     |
| (Pipe #: 1, Span Type: Primary   | / Span)              |      |        |                              |
| Wingwalls  |                      | Х    | Х      |                              |
| (Shape: )  |                      |      |        |                              |
| Cutoff Wall  |                      | Х    | X      |                              |
| Bevel End  |                      | 7    | N      | Snow covered.                |
| (Pipe # : 1, Span Type: Primary Span)  Wingwalls (Shape : ) Cutoff Wall  Bevel End Heaving (mm) Invert Above/Below Stream Bed Above/Below (mm) Scour Protection (Type : RIP RAP) (Avg. Rock Size(mm) : 250) Scour/Erosion  Beavers (Y/N)  Upstream End General Rating  Culvert Component |                      |      |        |                              |
| Invert Above/Below Stream Bed  | BELOW                |      |        |                              |
| Above/Below (mm)   | 300                  |      |        |                              |
| Scour Protection   |                      | 7    | N      | Snow covered.                |
| (Type : RIP RAP)   |                      |      |        |                              |
| (Avg. Rock Size(mm) : 250)   |                      |      |        |                              |
| Scour/Erosion  |                      | 7    | N      |                              |
| Beavers (Y/N)  | No                   |      |        |                              |
| Culvert Component (Pipe # : 1, Primary Span, Location Code: MAIN, S  |                      | 7    | N      | P.R 7.                       |
|  |                      | Brid | dae Cu | lvert Barrel                 |
| Culvert Component  |                      |      | Now    | Explanation of Condition     |
| ·  | tion Code: MAIN, Spa |      |        | , Rise (mm): 2200, Type: MP) |
|  |                      |      |        | Cattlepass. Is in use.       |
| Special Features   |                      |      |        |                              |
|  |                      |      |        |                              |
| (Type:)  |                      |      |        |                              |
| Special Feature  |                      |      |        |                              |
| (Type:)  |                      |      |        |                              |
| Roof   |                      | 8    | 8      | Estimate Roof.               |
| Measured Rise (mm)   |                      |      |        |                              |
| Measured At Ring No.   |                      |      |        |                              |
| Sag (mm)   | 0                    |      |        |                              |
|  | 2                    |      |        |                              |
| Sidewall   |                      | 8    | 8      | Inward.                      |
| Measured Span (mm)   | 2150                 |      |        |                              |
| Measured At Ring No.   | 3                    |      |        |                              |
| Deflection (mm)  | 50                   |      |        |                              |
| Percent Deflection   | 2                    |      |        |                              |
| Floor  |                      | N    | N      | 200 mm dirt floor.           |
|  | 0                    |      |        |                              |
| Measured At Ring No.   |                      |      |        |                              |
| Abrasion (Y/N)   | No                   |      |        |                              |
| Circumferential Seams  |                      | 7    | 7      |                              |
| Separation (mm)  | 44                   |      |        |                              |
| Longitudinal Seams   |                      | Х    | Х      |                              |
| Total No. of Cracked Rings   | 0                    |      |        |                              |
| Total No. of Rings with Two<br>Cracked Seams   | 0                    |      |        |                              |
| Min. Remaining Steel<br>Between Cracks (mm)  | 0                    |      |        |                              |
| Proper Lap (Y/N)   |                      |      |        |                              |
| Longitudinal Stagger (Y/N)   |                      |      |        |                              |

|   |                      | Bric  | lge Cu      | Ivert Barrel                 |
|---|----------------------|-------|-------------|------------------------------|
| Culvert Component                             |                      | Last  | Now         | Explanation of Condition     |
| (Pipe #: 1, Primary Span, Locat               | tion Code: MAIN, Spa | n (mm | ):          | , Rise (mm): 2200, Type: MP) |
| Coating                                       |                      | 8     | 7           |                              |
| Corrosion By Soil (Y/N)                       | No                   |       |             |                              |
| Corrosion By Water (Y/N)                      | No                   |       |             |                              |
| Camber POS/ZERO/NEG                           | ZERO                 |       |             |                              |
| Ponding (Y/N)                                 | No                   |       |             |                              |
| Fish Passage Adequacy                         |                      | Х     | Х           |                              |
| Baffle  |                      | Х     | Х           |                              |
| (Type:)                                       |                      |       |             |                              |
| Waterway Adequacy                             |                      | 9     | 7           |                              |
| Icing (Y/N)                                   | No                   |       |             |                              |
| Silting (Y/N)                                 | No                   |       |             |                              |
| Drift (Y/N)                                   | No                   |       |             |                              |
| Barrel General Rating                         |                      | 8     | 8           |                              |
|   |                      | D     | ownstr      | ream End                     |
| Culvert Component                             |                      | Last  | Now         | Explanation of Condition     |
| (Pipe #: 1, Span Type: Primary                | / Span)              |       |             |                              |
| Direction                                     |                      |       |             | East.                        |
| End Treatment (Concrete, Steel, Others, None) | STEEL                |       |             |                              |
| Headwall                                      |                      | Х     | Х           |                              |
| Collar  |                      | Х     | Х           |                              |
| Wingwalls                                     |                      | Х     | Х           |                              |
| (Shape: )                                     |                      |       |             |                              |
| Cutoff Wall                                   |                      | Х     | Х           |                              |
| Bevel End                                     |                      | 7     | N           | Snow covered.                |
| Heaving (mm)                                  | 50                   |       |             |                              |
| Invert Above/Below Stream Bed                 | ABOVE                |       |             |                              |
| Above/Below (mm)                              | 600                  |       |             |                              |
| Scour Protection                              |                      | 7     | N           | Snow covered.                |
| (Type : RIP RAP)                              |                      |       |             |                              |
| (Avg. Rock Size(mm) : 250)                    |                      |       |             |                              |
| Scour/Erosion                                 |                      | 7     | N           |                              |
| Beavers (Y/N)                                 | No                   |       | '           |                              |
| Downstream End General Rating                 |                      | 7     | N           | P.R 7.                       |
|   |                      |       | u<br>Upstre | am End                       |
| Culvert Component                             |                      |       |             | Explanation of Condition     |
| (Pipe # : 2, Span Type: Second                | lary Span)           |       |             |                              |
| Direction                                     |                      |       |             | West.                        |
| End Treatment (Concrete, Steel,               | STEEL                |       |             |                              |
| Others, None)                                 |                      |       |             |                              |
| Headwall                                      |                      | Х     | Х           |                              |
| Collar  |                      | X     | X           |                              |

|   |                     |        | Upstre | am End                          |
|---|---------------------|--------|--------|---------------------------------|
| Culvert Component                           |                     | Last   | Now    | Explanation of Condition        |
| (Pipe # : 2, Span Type: Second              | ary Span)           |        |        |                                 |
| Wingwalls                                   |                     | Х      | Х      |                                 |
| (Shape: )                                   |                     |        |        |                                 |
| Cutoff Wall                                 |                     | Х      | X      |                                 |
| Bevel End                                   |                     | 7      | N      | Snow covered.                   |
| Heaving (mm)                                | 0                   |        |        |                                 |
| Invert Above/Below Stream Bed               | BELOW               |        |        |                                 |
| Above/Below (mm) 300                        |                     |        |        |                                 |
| Scour Protection                            |                     | 7      | N      | Snow covered.                   |
| (Type : RIP RAP)                            |                     |        |        |                                 |
| (Avg. Rock Size(mm) : 250)                  |                     |        |        |                                 |
| Scour/Erosion                               |                     | 7      | N      |                                 |
| Beavers (Y/N)                               | No                  |        |        | Fence 5 m upstream.             |
| Upstream End General Rating                 |                     | 7      | N      | P.R 7.                          |
|   |                     | Deid   | dae Cu | lvert Barrel                    |
| Culvert Component                           |                     | Last   |        | Explanation of Condition        |
| (Pipe # : 2, Secondary Span, Lo             | cation Code: MAIN S |        |        | , Rise (mm): 1800, Type: MP)    |
| Barrel Last Accessible Date                 | 30-Jan-2013         | pan (i | ,.     | , Rise (min). Tooo, Type: mir ) |
|   | 30-3an-2013         |        |        |                                 |
| Special Features                            |                     |        |        |                                 |
| Special Feature                             |                     |        |        |                                 |
| (Type:)                                     |                     | I      | T      |                                 |
| Special Feature                             |                     |        |        |                                 |
| (Type:)                                     |                     |        | 1      |                                 |
| Roof  |                     | 8      | 8      | Est.                            |
| Measured Rise (mm)                          | 1790                |        |        |                                 |
| Measured At Ring No.                        | 2                   |        |        |                                 |
| Sag (mm)                                    | 10                  |        |        |                                 |
| Percent Sag                                 | 1                   |        |        |                                 |
| Sidewall                                    |                     | 7      | 8      |                                 |
| Measured Span (mm)                          | 1791                |        |        |                                 |
| Measured At Ring No.                        | 2                   |        |        |                                 |
| Deflection (mm)                             | 8                   |        |        |                                 |
| Percent Deflection                          | 1                   |        |        |                                 |
| Floor                                       |                     | 8      | N      | Ice covered.                    |
| Bulge (mm)                                  | 0                   |        |        | Approx 0.3m thick.              |
| Measured At Ring No.                        |                     |        |        |                                 |
| Abrasion (Y/N)                              | No                  |        |        |                                 |
| Circumferential Seams                       |                     | 8      | 8      |                                 |
| Separation (mm)                             | 35                  |        |        |                                 |
| Longitudinal Seams                          |                     | Х      | Х      |                                 |
| Total No. of Cracked Rings                  | 0                   |        |        |                                 |
| Total No. of Rings with Two Cracked Seams   | 0                   |        |        |                                 |
| Min. Remaining Steel<br>Between Cracks (mm) | 0                   |        |        |                                 |
| Proper Lap (Y/N)                            |                     |        |        |                                 |
| Longitudinal Stagger (Y/N)                  |                     |        |        |                                 |

|   |                      | Brio    | lge Cu | lvert Barrel                 |
|---|----------------------|---------|--------|------------------------------|
| Culvert Component                             |                      | Last    | Now    | Explanation of Condition     |
| (Pipe # : 2, Secondary Span, Lo               | cation Code: MAIN, S | Span (n | nm):   | , Rise (mm): 1800, Type: MP) |
| Coating                                       |                      | 8       | 8      |                              |
| Corrosion By Soil (Y/N)                       | No                   |         |        |                              |
| Corrosion By Water (Y/N)                      | No                   |         |        |                              |
| Camber POS/ZERO/NEG                           | ZERO                 |         |        |                              |
| Ponding (Y/N)                                 | No                   |         |        |                              |
| Fish Passage Adequacy                         |                      | Х       | Х      |                              |
| Baffle  |                      | Х       | Х      |                              |
| (Type:)                                       |                      |         |        |                              |
| Waterway Adequacy                             |                      | 9       | 7      |                              |
| Icing (Y/N)                                   | No                   |         |        |                              |
| Silting (Y/N)                                 | No                   |         |        |                              |
| Drift (Y/N)                                   | No                   |         |        |                              |
| Barrel General Rating                         |                      | 7       | 8      |                              |
|   |                      | D       | ownsti | ream End                     |
| Culvert Component                             |                      |         | Now    | Explanation of Condition     |
| (Pipe # : 2, Span Type: Second                | ary Span)            |         |        |                              |
| Direction                                     |                      |         |        | East.                        |
| End Treatment (Concrete, Steel, Others, None) | STEEL                |         |        |                              |
| Headwall                                      |                      | Х       | Х      |                              |
| Collar  |                      | Х       | Х      |                              |
| Wingwalls                                     |                      | Х       | Х      |                              |
| (Shape: )                                     |                      |         |        |                              |
| Cutoff Wall                                   |                      | X       | Х      |                              |
| Bevel End                                     |                      | 7       | N      | Snow covered.                |
| Heaving (mm)                                  | 0                    |         |        |                              |
| Invert Above/Below Stream Bed                 | BELOW                |         |        |                              |
| Above/Below (mm)                              | 300                  |         |        |                              |
| Scour Protection                              |                      | 7       | N      | Snow covered.                |
| (Type : <b>RIP RAP</b> )                      |                      |         |        |                              |
| (Avg. Rock Size(mm) : <b>250</b> )            |                      |         |        |                              |
| Scour/Erosion                                 |                      | 7       | N      |                              |
| Beavers (Y/N)                                 | No                   |         |        |                              |
| Downstream End General Ratio                  | ng                   | 7       | N      | P.R 7.                       |
|   |                      | s       | tructu | re Usage                     |
|   |                      | Last    | Now    | Explanation of Condition     |
| Channel (U/S and D/S)                         |                      |         |        |                              |
| Alignment                                     |                      | 8       | 8      |                              |
| Bank Stability                                |                      | 8       | 8      |                              |
| HWM (m below Top of Culvert)                  |                      |         |        | No visible HWM.              |
| Drift (Y/N)                                   | No                   |         |        |                              |

| Structure Usage                              |    |      |     |                          |  |  |  |  |
|--|----|------|-----|--------------------------|--|--|--|--|
|  |    | Last | Now | Explanation of Condition |  |  |  |  |
| Channel Bottom Degrading/Aggrading           |    |      |     |                          |  |  |  |  |
| Beavers (Y/N)                                | No |      |     |                          |  |  |  |  |
| (Fish Compensation Measure 1 : NONE)         |    |      |     |                          |  |  |  |  |
| (Fish Compensation Measure 2 : <b>NONE</b> ) |    |      |     |                          |  |  |  |  |
| Channel General Rating                       |    |      | 8   |                          |  |  |  |  |
|  |    |      |     |                          |  |  |  |  |

|  |              | Maintenan                 | ce Recommendations        |                     |                |            |    |  |  |
|--|--------------|---------------------------|---------------------------|---------------------|----------------|------------|----|--|--|
| Inspector Recommendations                  | Year         | Inspector Comments        | Department Con            | Department Comments |                |            |    |  |  |
| SHOTCRETE REPAIRS                          |              |                           |                           |                     |                |            |    |  |  |
| PLACE ADDITIONAL RIP RAP                   |              |                           |                           |                     |                |            |    |  |  |
| REMOVE DRIFT ACCUMULATION                  |              |                           |                           |                     |                |            |    |  |  |
| INSTALL CONCRETE/STEEL LINING              | 3            |                           |                           |                     |                |            |    |  |  |
| INSTALL STRUTS                             |              |                           |                           |                     |                |            |    |  |  |
| INSTALL CONCRETE COLLAR/CUT                | OFF          |                           |                           |                     |                |            |    |  |  |
| REPAIR SEAMS                               |              |                           |                           |                     |                |            |    |  |  |
| OTHER ACTION                               |              |                           |                           |                     |                |            |    |  |  |
| OTHER ACTION                               |              |                           |                           |                     |                |            |    |  |  |
| OTHER ACTION                               |              |                           |                           |                     |                |            |    |  |  |
| OTHER ACTION                               |              |                           |                           |                     |                |            |    |  |  |
| Structural Condition Rating (Last/N<br>(%) | low) 77.8/88 | Sufficiency Rating (I (%) | ast/Now) 82.8/76.8        | Est. Repl. Yr 2044  | Maint. Re      | eqd. (Y/N) | No |  |  |
| Special<br>Comments for<br>Next Inspection |              |                           | Department<br>Comments    |                     |                |            |    |  |  |
| Maintenance Reviewed By                    |              |                           | Date                      |                     | Estimated Tota | ıl 0       |    |  |  |
| Proposed Long-Term Strategy                |              |                           |                           |                     |                |            |    |  |  |
| On 3-Year Program (Y/N)                    |              |                           |                           |                     |                |            |    |  |  |
| Proposed Action                            |              |                           |                           |                     |                |            |    |  |  |
| Previous Inspector's Name                  | Rex Davidson |                           | Previous Assistant's Name |                     |                |            |    |  |  |
| Next Inspection Date                       | 30-Apr-2016  |                           | Previous Inspection Date  | 19-Nov-2009         |                |            |    |  |  |
| Inspection Cycle (Default) (months)        | 39           |                           |                           |                     |                |            |    |  |  |
| 1 / / / / / / / / / / / / / / / / / / /    |              |                           |                           |                     |                |            |    |  |  |