01366 -2 Bridge Culvert

| Utility Attachments   | Bridge Culvert Inspection                              |                  |             |               |            |         |                 |                         |                           |            |               |     |       |  |  |  |
|---|--|------------------|-------------|---------------|------------|---------|-----------------|-------------------------|---------------------------|------------|---------------|-----|-------|--|--|--|
| Detail   Decaded Over   | Bridge File Number 01366 -2 Bridge Culvert             |                  |             |               |            |         | Form Type       |                         |                           | CUL1       |               |     |       |  |  |  |
| Located Over  | Year Built 2007  |                  |             |               |            |         | Lot No.         |                         |                           | 4          |               |     |       |  |  |  |
| Located On   595:02 C1 29.619   | Bridge or Town Name DELBURNE                           |                  |             |               |            |         | Inspector Name  |                         |                           | Jason Saly |               |     |       |  |  |  |
| Navigabl   CJ/Year  | Located Over GAETZ CREEK, 3.69, WATERC                 |                  |             |               | RS-S       | Γ       | Inspector Class |                         |                           | BR CLS A   |               |     |       |  |  |  |
|   |  |                  |             |               |            |         |                 | Assistant Name          |                           |            |               |     |       |  |  |  |
| Legal Land Location   W SEC 1 TWP 38 RGE 24 W4M   Data Entry By   Marcia Chavez   | Water Body Cl.   | /Year            |             |               |            |         |                 | Assistant Class         |                           |            |               |     |       |  |  |  |
| Longitude, Latitude   | Navigabil. Cl./Y                                       | ear              |             |               |            |         |                 | Inspection Date         |                           |            | 22-Nov-2011   |     |       |  |  |  |
| Reviewer Name   | Legal Land Loc   | ation S          | SW SEC      | 1 TWP 38 RG   | E 24 W4    | M       |                 | Data Entry By           |                           |            | Marcia Chavez |     |       |  |  |  |
| Contract Main. Area   | Longitude, Latit                                       | ude -1           | 113:18:3    | 3, 52:13:49   |            |         |                 | Data Entry Date         |                           |            | 21-Dec-2011   |     |       |  |  |  |
| Clear Roadway/Skew   11.8 / 20 deg. (RHF)   Dept. Reviewer Name   Andrew Smikles  | Road Authority   | A                | Alberta Tr  | ransportation | (AIT)      |         |                 | Reviewer Name           |                           |            | John O'Brien  |     |       |  |  |  |
| AADT/Year   | Contract Main.   | Area C           | CMA19       |               |            |         |                 | Review Date             |                           |            | 15-Dec-2011   |     |       |  |  |  |
| Road Classification   RAU-211.8-110   6   8   8   8   8   8   8   8   8   8   | Clear Roadway  | /Skew 1          | 1.8 / 20    | deg. (RHF)    |            |         |                 | Dept. Reviewer Name     |                           |            | Andrew Smikle | es  |       |  |  |  |
| Detour Length (km)   6   8   8   6   6   8   6   6   6   6  | AADT/Year  | 1                | ,840 / 20   | )10 (A)       |            |         |                 | Dept. Review Date       |                           |            | 09-Jan-2012   |     |       |  |  |  |
| Span  | Road Classifica  | ition R          | RAU-211.    | .8-110        |            |         |                 | Follow-                 | Up By                     |            |               |     |       |  |  |  |
| Number of Culverts  | Detour Length (  | (km) 6           | 5           |               |            |         |                 |                         |                           |            |               |     |       |  |  |  |
| Pipe #   Barrel   | Bridge Culvert   | Informat         | tion        |               |            |         |                 |                         |                           |            |               |     |       |  |  |  |
| Main  | Number of Culv   | erts             | 1           |               |            |         |                 |                         |                           |            |               |     |       |  |  |  |
| Utility Attachments   |  |                  | SI          | pan           | Rise (or I | Dia.)   |                 |                         | Length                    |            | Corr. Profile |     | Shape |  |  |  |
| Utility Attachments   | 1  | MAIN             | -           |               | 3360       |         | SP              |                         | 86.564                    |            | 152X51        | 4.0 | ROUND |  |  |  |
| Utility Attachments Telephone N ditch.  Power 3 o/h N fenceline.  Municipal Others Remarks  Approach Road / Embankment Last Now Explanation of Condition Horizontal Alignment Horizontal Alignment Femankment Roadway Wridth (m) 13.000  Embankment Sideslope (_:1) Sideslope | Special Feature  | Special Features |             |               |            |         |                 |                         |                           |            |               |     |       |  |  |  |
| Utility Attachments   | Special Features Comment                               |                  |             |               |            |         |                 |                         |                           |            |               |     |       |  |  |  |
| Utility Attachments   |  |                  |             |               |            | 1 14    | litios /I       | ocatod                  | at)                       |            |               |     |       |  |  |  |
| Telephone   | Litility Attachme                                      | ents             |             |               |            | Oti     | ililes (L       | ocated                  | at)                       |            |               |     |       |  |  |  |
| Now   Some content   Now   N  |  |                  |             |               |            |         |                 | Gas                     |                           |            |               |     |       |  |  |  |
| Now   Problem (Y/N)   No  |  |                  |             |               |            |         |                 |                         |                           |            |               |     |       |  |  |  |
| Remarks   |  | 0 0/1111         | 10110011110 | J.            |            |         |                 |                         |                           |            |               |     |       |  |  |  |
| Approach Road / Embankment    Last   Now   Explanation of Condition   |  |                  |             |               |            |         |                 | 1 100101                | ( . / . • /               | 1110       |               |     |       |  |  |  |
| Horizontal Alignment  |  |                  |             |               | Ar         | proac   | h Road          | d / Emba                | ankment                   |            |               |     |       |  |  |  |
| Vertical Alignment  |  |                  |             |               |            |         |                 |                         |                           |            | tion          |     |       |  |  |  |
| Roadway Width (m)  Embankment  Sideslope (_:1)  Measure next inspection.  Measure next inspection.  Measure next inspection.  Separate End  Supported Explanation of Condition  Explanation of Condition  Sideslope (_:1)  Sideslope (_:1)  Measure next inspection.  Measure next inspection.  Separate End  Supported Explanation of Condition  Sideslope (_:1)  Sideslope (_:1)  Sideslope (_:1)  Measure next inspection.  Measure next inspection.  | Horizontal Alignment                                   |                  |             |               | 7          |         |                 |                         |                           |            |               |     |       |  |  |  |
| Embankment 7 Sideslope (_:1) 3.0  (Height of Cover(m):)  Guardrail (Y/N) Yes  Approach Road / Embankment General Rating 6  Upstream End  Culvert Component Last Now Explanation of Condition  Direction S  End Treatment (Concrete, Steel, Others, None)  Headwall 8  Collar N Snow covered.  Wingwalls X  (Shape:)   |  |                  |             |               | 6          | Limited | l sight dis     | stance t                | o W.                      |            |               |     |       |  |  |  |
| Sideslope (_:1) 3.0  (Height of Cover(m) : )  Guardrail (Y/N) Yes  Approach Road / Embankment General Rating 6  Upstream End  Culvert Component Last Now Explanation of Condition  Direction S  End Treatment (Concrete, Steel, Others, None)  Headwall 8  Collar N Snow covered.  Wingwalls X  (Shape : )  |  |                  |             | 13.000        |            |         |                 |                         |                           |            |               |     |       |  |  |  |
| (Height of Cover(m) : )  Guardrail (Y/N)  Approach Road / Embankment General Rating  Culvert Component  Direction  End Treatment (Concrete, Steel, Others, None)  Headwall  Collar  N Snow covered.  Wingwalls  (Shape : )  | Embankment   |                  |             |               |            |         | 7               |                         |                           |            |               |     |       |  |  |  |
| (Height of Cover(m):)  Guardrail (Y/N)  Yes  Approach Road / Embankment General Rating  Culvert Component  Direction  End Treatment (Concrete, Steel, Others, None)  Headwall  Collar  N Snow covered.  Wingwalls  (Shape:)   | Sideslope (  | :1)              | 3.0         |               |            |         |                 | Measure next inspection |                           |            |               |     |       |  |  |  |
| Superiorial (Y/N)   Yes   Superiorial (Y/N)   Superior  |  | •                |             |               |            |         |                 |                         | modelio floxt inspection. |            |               |     |       |  |  |  |
| Culvert Component Last Now Explanation of Condition  Direction S End Treatment (Concrete, Steel, Others, None)  Headwall  Collar  N Snow covered.  Wingwalls  (Shape:)  |  |                  |             | Yes           |            |         |                 |                         |                           |            |               |     |       |  |  |  |
| Culvert Component         Last         Now         Explanation of Condition           Direction         S           End Treatment (Concrete, Steel, Others, None)         CONCRETE           Headwall         8           Collar         N           Wingwalls         X           (Shape : )   | Approach Roa   | d / Emba         | nkment      | General Rati  | ing        |         | 6               |                         |                           |            |               |     |       |  |  |  |
| Culvert Component         Last         Now         Explanation of Condition           Direction         S           End Treatment (Concrete, Steel, Others, None)         CONCRETE           Headwall         8           Collar         N           Wingwalls         X           (Shape : )   |  |                  |             |               |            |         | Upstre          | am <u>E</u> nd          |                           |            |               |     |       |  |  |  |
| Direction S End Treatment (Concrete, Steel, CONCRETE Others, None)  Headwall 8  Collar N Snow covered.  Wingwalls X (Shape:)  | Culvert Component                                      |                  |             |               |            | Т.      |                 |                         |                           |            |               |     |       |  |  |  |
| Others, None)         8           Headwall         8           Collar         N Snow covered.           Wingwalls         X           (Shape:)  | -  |                  |             | S             |            |         |                 |                         |                           |            |               |     |       |  |  |  |
| Headwall         8           Collar         N         Snow covered.           Wingwalls         X           (Shape:)         (Shape:)   | End Treatment (Concrete, Steel, CONCRETE Others, None) |                  |             |               |            |         |                 |                         |                           |            |               |     |       |  |  |  |
| Wingwalls X (Shape:)  | Headwall   |                  |             |               | 8          |         |                 |                         |                           |            |               |     |       |  |  |  |
| (Shape:)  | Collar   |                  |             |               | N          | Snow o  | covered.        |                         |                           |            |               |     |       |  |  |  |
|   | Wingwalls  |                  |             |               |            |         | X               |                         |                           |            |               |     |       |  |  |  |
| Cutoff Wall N Buried.   | (Shape : )   |                  |             |               |            |         |                 |                         |                           |            |               |     |       |  |  |  |
|   | Cutoff Wall  |                  |             |               |            |         | N               | Buried.                 |                           |            |               |     |       |  |  |  |

|  |                     |         | <u>Upstre</u> | am End                                      |  |  |  |  |  |  |  |
|--|---------------------|---------|---------------|---|--|--|--|--|--|--|--|
| Culvert Component                            |                     | Last    | Now           | Explanation of Condition                    |  |  |  |  |  |  |  |
| Bevel End                                    |                     |         | 8             | Not visible.                                |  |  |  |  |  |  |  |
| Heaving (mm)                                 |                     |         |               |   |  |  |  |  |  |  |  |
| Invert Above/Below Stream Bed                |                     |         |               | Not visible.                                |  |  |  |  |  |  |  |
| Above/Below (mm)                             |                     |         |               |   |  |  |  |  |  |  |  |
| Scour Protection                             |                     |         | 8             |   |  |  |  |  |  |  |  |
| (Type : RIP RAP)                             |                     |         |               |   |  |  |  |  |  |  |  |
| (Avg. Rock Size(mm) : <b>400</b> )           |                     |         |               |   |  |  |  |  |  |  |  |
| Scour/Erosion                                |                     |         | N             | Snow covered.                               |  |  |  |  |  |  |  |
| Beavers (Y/N)                                | No                  |         |               |   |  |  |  |  |  |  |  |
| Upstream End General Rating                  |                     |         | 8             |   |  |  |  |  |  |  |  |
| Bridge Culvert Barrel                        |                     |         |               |   |  |  |  |  |  |  |  |
| Culvert Component                            |                     |         | Now           |   |  |  |  |  |  |  |  |
| (Pipe # : 1, Primary Span, Loca              | tion Code: MAIN, Sp | oan (mm | າ):           | , Rise (mm): 3360, Type: SP)                |  |  |  |  |  |  |  |
| Barrel Last Accessible Date                  | 22-Nov-2011         |         |               | 5 steel pipes installed at S inlet.         |  |  |  |  |  |  |  |
| Special Features                             |                     |         |               |   |  |  |  |  |  |  |  |
| Special Feature                              |                     |         |               |   |  |  |  |  |  |  |  |
| (Type:)                                      |                     |         |               |   |  |  |  |  |  |  |  |
| Special Feature                              |                     |         |               |   |  |  |  |  |  |  |  |
| (Type:)                                      |                     |         |               |   |  |  |  |  |  |  |  |
| Roof   |                     |         | 8             | Could not measure rise due to ice on floor. |  |  |  |  |  |  |  |
| Measured Rise (mm)                           |                     |         |               |   |  |  |  |  |  |  |  |
| Measured At Ring No.                         |                     |         |               |   |  |  |  |  |  |  |  |
| Sag (mm)                                     |                     |         |               |   |  |  |  |  |  |  |  |
| Percent Sag                                  |                     |         |               |   |  |  |  |  |  |  |  |
| Sidewall                                     |                     |         | 8             | Span at R10=3334=26mm=0.8%.                 |  |  |  |  |  |  |  |
| Measured Span (mm)                           | 3334                |         |               |   |  |  |  |  |  |  |  |
| Measured At Ring No.                         | 10                  |         |               |   |  |  |  |  |  |  |  |
| Deflection (mm)                              | 26                  |         |               | 0.8%  |  |  |  |  |  |  |  |
| Percent Deflection                           | 1                   |         | _             |   |  |  |  |  |  |  |  |
| Floor  |                     |         | N             | Ice covered.                                |  |  |  |  |  |  |  |
| Bulge (mm)                                   |                     |         |               |   |  |  |  |  |  |  |  |
| Measured At Ring No.                         |                     |         |               |   |  |  |  |  |  |  |  |
| Abrasion (Y/N)                               |                     |         |               |   |  |  |  |  |  |  |  |
| Circumferential Seams                        |                     |         | 8             |   |  |  |  |  |  |  |  |
| Separation (mm)                              | 0                   |         |               |   |  |  |  |  |  |  |  |
| Longitudinal Seams                           |                     |         | 8             |   |  |  |  |  |  |  |  |
| Total No. of Cracked Rings                   | 0                   |         |               |   |  |  |  |  |  |  |  |
| Total No. of Rings with Two<br>Cracked Seams | 0                   |         |               |   |  |  |  |  |  |  |  |
| Min. Remaining Steel<br>Between Cracks (mm)  |                     |         |               |   |  |  |  |  |  |  |  |
| Proper Lap (Y/N)                             | Yes                 |         |               | 2N  |  |  |  |  |  |  |  |
| Longitudinal Stagger (Y/N)                   | Yes                 |         |               |   |  |  |  |  |  |  |  |
| Coating                                      |                     |         | 7             | ALDIO E. I.                                 |  |  |  |  |  |  |  |
| Corrosion By Soil (Y/N)                      | Yes                 |         |               | At R19, E side.                             |  |  |  |  |  |  |  |
| Corrosion By Water (Y/N)                     | No                  |         |               |   |  |  |  |  |  |  |  |
| Camber POS/ZERO/NEG                          | ZERO                |         |               |   |  |  |  |  |  |  |  |
| Ponding (Y/N)                                | No                  |         |               |   |  |  |  |  |  |  |  |

|   |                      | Bric  | lge Cu  | Ivert Barrel                 |  |  |  |  |  |  |  |
|---|----------------------|-------|---------|------------------------------|--|--|--|--|--|--|--|
| Culvert Component                             |                      |       | Now     | Explanation of Condition     |  |  |  |  |  |  |  |
| (Pipe # : 1, Primary Span, Locat              | tion Code: MAIN, Spa | n (mm | ):      | , Rise (mm): 3360, Type: SP) |  |  |  |  |  |  |  |
| Fish Passage Adequacy                         |                      |       | 8       |                              |  |  |  |  |  |  |  |
| Baffle  |                      |       | X       |                              |  |  |  |  |  |  |  |
| (Type:)                                       |                      |       |         |                              |  |  |  |  |  |  |  |
| Waterway Adequacy                             |                      |       | 8       |                              |  |  |  |  |  |  |  |
| Icing (Y/N)                                   | No                   |       |         |                              |  |  |  |  |  |  |  |
| Silting (Y/N)                                 | No                   |       |         |                              |  |  |  |  |  |  |  |
| Drift (Y/N) No                                |                      |       |         |                              |  |  |  |  |  |  |  |
| Barrel General Rating                         |                      |       | 8       |                              |  |  |  |  |  |  |  |
| Downstream End                                |                      |       |         |                              |  |  |  |  |  |  |  |
| Culvert Component                             |                      | Last  | Now     | Explanation of Condition     |  |  |  |  |  |  |  |
| Direction                                     |                      | N     |         |                              |  |  |  |  |  |  |  |
| End Treatment (Concrete, Steel, Others, None) | CONCRETE             |       |         |                              |  |  |  |  |  |  |  |
| Headwall                                      |                      |       | 8       |                              |  |  |  |  |  |  |  |
| Collar  |                      |       | N       | Snow covered.                |  |  |  |  |  |  |  |
| Wingwalls                                     |                      |       | Х       |                              |  |  |  |  |  |  |  |
| (Shape : )                                    |                      |       |         |                              |  |  |  |  |  |  |  |
| Cutoff Wall                                   |                      |       | N       | Buried.                      |  |  |  |  |  |  |  |
| Bevel End                                     |                      |       | 8       | Not visible.                 |  |  |  |  |  |  |  |
| Heaving (mm)                                  |                      |       |         |                              |  |  |  |  |  |  |  |
| Invert Above/Below Stream Bed                 |                      |       |         | Not visible.                 |  |  |  |  |  |  |  |
| Above/Below (mm)                              |                      |       |         |                              |  |  |  |  |  |  |  |
| Scour Protection                              |                      |       | 8       |                              |  |  |  |  |  |  |  |
| (Type : RIP RAP)                              |                      |       |         |                              |  |  |  |  |  |  |  |
| (Avg. Rock Size(mm) : 300)                    |                      |       |         |                              |  |  |  |  |  |  |  |
| Scour/Erosion                                 |                      |       | N       | Snow covered.                |  |  |  |  |  |  |  |
| Beavers (Y/N)                                 | Beavers (Y/N) No     |       |         |                              |  |  |  |  |  |  |  |
| Downstream End General Ratir                  | ng                   |       | 8       |                              |  |  |  |  |  |  |  |
|   |                      | 9     | structu | re Usage                     |  |  |  |  |  |  |  |
|   |                      | Last  | Now     | Explanation of Condition     |  |  |  |  |  |  |  |
| Channel (U/S and D/S)                         |                      |       |         |                              |  |  |  |  |  |  |  |
| Alignment                                     |                      |       | 7       | Bends to E d/s.              |  |  |  |  |  |  |  |
| Bank Stability                                |                      |       | 7       |                              |  |  |  |  |  |  |  |
| HWM (m below Top of Culvert)                  |                      |       |         | HWM not visible.             |  |  |  |  |  |  |  |
| Drift (Y/N) No                                |                      |       |         |                              |  |  |  |  |  |  |  |
| Channel Bottom Degrading/Aggrading            |                      |       |         | Unknown.                     |  |  |  |  |  |  |  |
| Beavers (Y/N)                                 | No                   |       |         |                              |  |  |  |  |  |  |  |
| (Fish Compensation Measure 1 :                |                      |       |         |                              |  |  |  |  |  |  |  |
| (Fish Compensation Measure 2 :                | NONE)                |       |         |                              |  |  |  |  |  |  |  |
| Channel General Rating                        |                      |       | 7       |                              |  |  |  |  |  |  |  |

|  |     |                         |  | Mai                               | ntenance Re | ecommend      | lations                |     |            |       |                        |                    |   |    |
|--|-----|-------------------------|--|-----------------------------------|-------------|---------------|------------------------|-----|------------|-------|------------------------|--------------------|---|----|
| Inspector Recommendations                  |     | Year Inspector Comments |  |                                   |             | Department Co | Target Ye              | ear | Est. Cost  | Cat # |                        |                    |   |    |
| SHOTCRETE REPAIRS                          |     |                         |  |                                   |             |               |                        |     |            |       |                        |                    |   |    |
| PLACE ADDITIONAL RIP RAP                   |     |                         |  |                                   |             |               |                        |     |            |       |                        |                    |   |    |
| REMOVE DRIFT ACCUMULATION                  |     |                         |  |                                   |             |               |                        |     |            |       |                        |                    |   |    |
| INSTALL CONCRETE/STEEL LINING              |     |                         |  |                                   |             |               |                        |     |            |       |                        |                    |   |    |
| INSTALL STRUTS                             |     |                         |  |                                   |             |               |                        |     |            |       |                        |                    |   |    |
| INSTALL CONCRETE COLLAR/CUTC               | )FF |                         |  |                                   |             |               |                        |     |            |       |                        |                    |   |    |
| REPAIR SEAMS                               |     |                         |  |                                   |             |               |                        |     |            |       |                        |                    |   |    |
| OTHER ACTION                               |     |                         |  |                                   |             |               |                        |     |            |       |                        |                    |   |    |
| OTHER ACTION                               |     |                         |  |                                   |             |               |                        |     |            |       |                        |                    |   |    |
| OTHER ACTION                               |     |                         |  |                                   |             |               |                        |     |            |       |                        |                    |   |    |
| OTHER ACTION                               |     |                         |  |                                   |             |               |                        |     |            |       |                        |                    |   |    |
| Structural Condition Rating (Last/No. (%)  | ow) | /88.9                   |  | Sufficiency Rating (Last/Now) (%) |             | Now)          | /86.5                  |     | . Repl. Yr | 2055  | Maint                  | Maint. Reqd. (Y/N) |   | No |
| Special<br>Comments for<br>Next Inspection |     |                         |  |                                   |             |               | Department<br>Comments |     |            |       |                        |                    |   |    |
| Maintenance Reviewed By                    |     |                         |  |                                   |             |               | Date                   |     |            |       | Estimated <sup>-</sup> | Total              | 0 |    |
| Proposed Long-Term Strategy                |     |                         |  |                                   |             |               |                        |     |            |       |                        |                    |   |    |
| On 3-Year Program (Y/N)                    |     |                         |  |                                   |             |               |                        |     |            |       |                        |                    |   |    |
| Proposed Action                            |     |                         |  |                                   |             |               |                        |     |            |       |                        |                    |   |    |
| Previous Inspector's Name                  |     |                         |  |                                   |             | Previous      | Assistant's Name       | е   |            |       |                        |                    |   |    |
| Next Inspection Date 22                    |     | -2015                   |  |                                   |             | Previous      | Inspection Date        |     |            |       |                        |                    |   |    |
| Inspection Cycle (Default) (months)        | 39  |                         |  |                                   |             |               |                        |     |            |       |                        |                    |   |    |
| Comment                                    |     |                         |  |                                   |             |               |                        |     |            |       |                        |                    |   |    |