

| Bridge Culvert Inspection |  |  |                     |                 |
|---------------------------|--|--|---------------------|-----------------|
| Bridge File Number        | 76914 -2 Bridge Culvert  |  | Form Type           | CUL1            |
| Year Built                | 2009   |  | Lot No.             | 4               |
| Bridge or Town Name       | WOKING   |  | Inspector Name      | Brian Pientsch  |
| Located Over              | 2ND ORDER TRIBUTARY TO SADDLE RIVER, 8.10.72.17.2, WATERCRS-ST |  | Inspector Class     | BR CLS A        |
| Located On                | 677:02 C1 10.791   |  | Assistant Name      | Clem Guenette   |
| Water Body Cl./Year       |  |  | Assistant Class     |                 |
| Navigabil. Cl./Year       |  |  | Inspection Date     | 05-Mar-2012     |
| Legal Land Location       | SE SEC 16 TWP 76 RGE 6 W6M                                     |  | Data Entry By       | Theresa Lacusta |
| Longitude, Latitude       | -118:51:38, 55:34:43   |  | Data Entry Date     | 02-Apr-2012     |
| Road Authority            | Alberta Transportation (AIT)                                   |  | Reviewer Name       | Eric Carcoux    |
| Contract Main. Area       | CMA05  |  | Review Date         | 27-Mar-2012     |
| Clear Roadway/Skew        | 12 / -26 deg. (LHF)  |  | Dept. Reviewer Name | David Morrison  |
| AADT/Year                 | 190 / 2011 (A)   |  | Dept. Review Date   | 31-Oct-2012     |
| Road Classification       | RAU-211.8-110  |  | Follow-Up By        |                 |
| Detour Length (km)        | 49   |  |                     |                 |

| Bridge Culvert Information |        |      |                |      |        |               |                    |       |
|----------------------------|--------|------|----------------|------|--------|---------------|--------------------|-------|
| Number of Culverts         |        | 1    |                |      |        |               |                    |       |
| Pipe #                     | Barrel | Span | Rise (or Dia.) | Type | Length | Corr. Profile | Pl./Slab Thickness | Shape |
| 1                          | MAIN   | -    | 3360           | SP   | 49.38  | 152X51        | 3.0                | ROUND |
| Special Features           |        |      |                |      |        |               |                    |       |
| Special Features Comment   |        |      |                |      |        |               |                    |       |

| Utilities (Located at) |                   |               |    |
|------------------------|-------------------|---------------|----|
| Utility Attachments    |                   |               |    |
| Telephone              |                   | Gas           |    |
| Power                  | South r/w 1 wire. | Municipal     |    |
| Others                 |                   | Problem (Y/N) | No |
| Remarks                |                   |               |    |

| Approach Road / Embankment                       |        |          |          |                          |
|--|--------|----------|----------|--------------------------|
|  |        | Last     | Now      | Explanation of Condition |
| Horizontal Alignment                             |        | 6        | 6        |                          |
| Vertical Alignment                               |        | 8        | 8        |                          |
| Roadway Width (m)                                | 12.000 |          |          |                          |
| Embankment                                       |        | 9        | 9        |                          |
| Sideslope ( __:1)                                | 3.5    |          |          |                          |
| (Height of Cover(m) : 2.1)                       |        |          |          |                          |
| Guardrail (Y/N)                                  |        |          |          |                          |
| <b>Approach Road / Embankment General Rating</b> |        | <b>6</b> | <b>6</b> |                          |

| Upstream End                                  |          |      |     |                          |
|---|----------|------|-----|--------------------------|
| Culvert Component                             |          | Last | Now | Explanation of Condition |
| Direction                                     |          | S    |     |                          |
| End Treatment (Concrete, Steel, Others, None) | CONCRETE |      |     |                          |
| Headwall                                      |          | 9    | 9   |                          |
| Collar  |          | 9    | 9   |                          |
| Wingwalls                                     |          | 9    | X   |                          |
| (Shape : )                                    |          |      |     |                          |
| Cutoff Wall                                   |          | 9    | N   |                          |

| Upstream End  |             |          |          |                          |
|---|-------------|----------|----------|--------------------------|
| Culvert Component   |             | Last     | Now      | Explanation of Condition |
| Bevel End   |             | 9        | 9        |                          |
| Heaving (mm)  |             |          |          |                          |
| Invert Above/Below Stream Bed   | BELOW       |          |          |                          |
| Above/Below (mm)  | 920         |          |          |                          |
| Scour Protection  |             | 9        | 9        |                          |
| (Type : <b>RIP RAP</b> )  |             |          |          |                          |
| (Avg. Rock Size(mm) : <b>300</b> )  |             |          |          |                          |
| Scour/Erosion   |             | 9        | 9        |                          |
| Beavers (Y/N)   | No          |          |          |                          |
| <b>Upstream End General Rating</b>  |             | <b>9</b> | <b>9</b> |                          |
| Bridge Culvert Barrel   |             |          |          |                          |
| Culvert Component   |             | Last     | Now      | Explanation of Condition |
| (Pipe # : 1, Primary Span, Location Code: MAIN, Span (mm): , Rise (mm): 3360, Type: SP) |             |          |          |                          |
| Barrel Last Accessible Date   | 05-Mar-2012 |          |          |                          |
| <b>Special Features</b>   |             |          |          |                          |
| Special Feature   |             |          |          |                          |
| (Type : )   |             |          |          |                          |
| Special Feature   |             |          |          |                          |
| (Type : )   |             |          |          |                          |
| Roof  |             | 9        | 9        | near cl                  |
| Measured Rise (mm)  | 3368        |          |          | Ice to roof 3261         |
| Measured At Ring No.  | 6           |          |          |                          |
| Sag (mm)  | 89          |          |          |                          |
| Percent Sag   | 1           |          |          |                          |
| Sidewall  |             | 9        | 9        | near cl                  |
| Measured Span (mm)  | 3372        |          |          |                          |
| Measured At Ring No.  | 6           |          |          |                          |
| Deflection (mm)   | 12          |          |          |                          |
| Percent Deflection  |             |          |          |                          |
| Floor   |             | 9        | N        | Ice on floor             |
| Bulge (mm)  |             |          |          |                          |
| Measured At Ring No.  |             |          |          |                          |
| Abrasion (Y/N)  |             |          |          |                          |
| Circumferential Seams   |             | 9        | 9        |                          |
| Separation (mm)   |             |          |          |                          |
| Longitudinal Seams  |             | 9        | 9        |                          |
| Total No. of Cracked Rings  |             |          |          |                          |
| Total No. of Rings with Two Cracked Seams   |             |          |          |                          |
| Min. Remaining Steel Between Cracks (mm)  |             |          |          |                          |
| Proper Lap (Y/N)  | Yes         |          |          |                          |
| Longitudinal Stagger (Y/N)  | Yes         |          |          |                          |
| Coating   |             | 9        | 9        |                          |
| Corrosion By Soil (Y/N)   | No          |          |          |                          |
| Corrosion By Water (Y/N)  | No          |          |          |                          |
| Camber POS/ZERO/NEG   | POS         |          |          |                          |
| Ponding (Y/N)   |             |          |          |                          |

| Bridge Culvert Barrel   |       |          |          |                          |
|---|-------|----------|----------|--------------------------|
| Culvert Component   |       | Last     | Now      | Explanation of Condition |
| (Pipe # : 1, Primary Span, Location Code: MAIN, Span (mm): , Rise (mm): 3360, Type: SP) |       |          |          |                          |
| Fish Passage Adequacy   |       | 9        | 9        |                          |
| Baffle  |       | X        | X        |                          |
| (Type : )   |       |          |          |                          |
| Waterway Adequacy   |       | 9        | 9        |                          |
| Icing (Y/N)   | No    |          |          |                          |
| Silting (Y/N)   | No    |          |          |                          |
| Drift (Y/N)   | No    |          |          |                          |
| <b>Barrel General Rating</b>  |       | <b>9</b> | <b>9</b> |                          |
| Downstream End  |       |          |          |                          |
| Culvert Component   |       | Last     | Now      | Explanation of Condition |
| Direction   |       | N        |          |                          |
| End Treatment (Concrete, Steel, Others, None)   | STEEL |          |          |                          |
| Headwall  |       | X        | X        |                          |
| Collar  |       | X        | X        |                          |
| Wingwalls   |       | X        | X        |                          |
| (Shape : )  |       |          |          |                          |
| Cutoff Wall   |       | X        | X        |                          |
| Bevel End   |       | 9        | 9        |                          |
| Heaving (mm)  | 0     |          |          |                          |
| Invert Above/Below Stream Bed   | BELOW |          |          |                          |
| Above/Below (mm)  | 920   |          |          |                          |
| Scour Protection  |       | 9        | 9        |                          |
| (Type : RIP RAP)  |       |          |          |                          |
| (Avg. Rock Size(mm) : 300)  |       |          |          |                          |
| Scour/Erosion   |       | 9        | 9        |                          |
| Beavers (Y/N)   | No    |          |          |                          |
| <b>Downstream End General Rating</b>  |       | <b>9</b> | <b>9</b> |                          |
| Structure Usage   |       |          |          |                          |
|   |       | Last     | Now      | Explanation of Condition |
| <b>Channel (U/S and D/S)</b>  |       |          |          |                          |
| Alignment   |       | 7        | 7        |                          |
| Bank Stability  |       | 8        | 8        |                          |
| HWM (m below Top of Culvert)  |       |          |          | HWM not visible          |
| Drift (Y/N)   | No    |          |          |                          |
| Channel Bottom Degrading/Aggrading  |       |          |          | stable                   |
| Beavers (Y/N)   | No    |          |          |                          |
| (Fish Compensation Measure 1 : NONE)  |       |          |          |                          |
| (Fish Compensation Measure 2 : NONE)  |       |          |          |                          |
| <b>Channel 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>100.0/100.0</b>  | <b>Sufficiency Rating (Last/Now) (%)</b> | <b>98.5/98.5</b>          | Est. Repl. Yr | 2060      | 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                         | Russel Vanderschaaf |  | Previous Assistant's Name |               |           |                   |    |
| Next Inspection Date                              | 05-Jun-2015         |  | Previous Inspection Date  | 28-Jun-2010   |           |                   |    |
| Inspection Cycle (Default) (months)               | 39                  |  |                           |               |           |                   |    |
| Comment   |                     |  |                           |               |           |                   |    |