## Bridge Culvert Inspection

| | | | |
|---|---|---|---|
| Bridge File Number | 78994 -1 Bridge Culvert | Form Type | CUL1 |
| Year Built | 1981 | Lot No. | 1 |
| Bridge or Town Name | BUCK LAKE | Inspector Name | Owen Salava |
| Located Over | TRAIL-ANIMAL, OVER SP | Inspector Class | BR CLS A |
| Located On | 22:28 C1 10.570 | Assistant Name | |
| Water Body Cl./Year | | Assistant Class | |
| Navigabil. Cl./Year | | Inspection Date | 25-Jun-2012 |
| Legal Land Location | SE SEC 6 TWP 47 RGE 6 W5M | Data Entry By | Marcia Chavez |
| Longitude, Latitude | -114:51:34, 53:01:29 | Data Entry Date | 15-Jul-2012 |
| Road Authority | Alberta Transportation (AIT) | Reviewer Name | John O'Brien |
| Contract Main. Area | CMA17 | Review Date | 05-Jul-2012 |
| Clear Roadway/Skew | 11.3 / | Dept. Reviewer Name | Andrew Smikles |
| AADT/Year | 2,380 / 2011 (A) | Dept. Review Date | 19-Jul-2012 |
| Road Classification | RAU-211.8-110 | Follow-Up By | |
| Detour Length (km) | 35 | | |

### Bridge Culvert Information

| | |
|---|---|
| Number of Culverts | 1 |

| Pipe # | Barrel | Span | Rise (or Dia.) | Type | Length | Corr. Profile | Pl./Slab Thickness | Shape |
|---|---|---|---|---|---|---|---|---|
| 1 | MAIN | - | 2120 | MP | 26.8 | 68X13 | 2.8 | ROUND |

| | |
|---|---|
| Special Features | |
| Special Features Comment | |

## Posting Information

| | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Required Vert. Clearance Posting (m) | | | | | | | | | | | |
| Posted Vertical Clearance (Y/N) | | | | | | | | | | | |
| Posted: | Lane | EB | On Bridge (m) | | In Advance (Y/N) | | Lane | WB | On Bridge (m) | | In Advance (Y/N) |
| Remarks | | | | | | | | | | | |

## Utilities (Located at)

| | | | |
|---|---|---|---|
| Utility Attachments | | | |
| Telephone | Plowed in W r/w. | Gas | |
| Power | 3 wire o/h, E r/w. | Municipal | |
| Others | | Problem (Y/N) | No |
| Remarks | | | |

## Approach Road / Embankment

| | | Last | Now | Explanation of Condition |
|---|---|---|---|---|
| Horizontal Alignment | | 8 | 8 | Curve to the North. |
| Vertical Alignment | | 8 | 8 | |
| Roadway Width (m) | 11.300 | | | |
| Embankment | | 8 | 8 | Measurement on W side, 4:1 on East side. |
| Sideslope (__:1) | 3.0 | | | |
| (Height of Cover(m) : **1.3**) | | | | |
| Guardrail (Y/N) | Yes | | | Minor collision damage. |
| **Approach Road / Embankment General Rating** | | **8** | **8** | |

## Upstream End

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

| Upstream End | | | | |
|---|---|---|---|---|
| **Culvert Component** | | **Last** | **Now** | **Explanation of Condition** |
| Wingwalls | | X | X | |
| (Shape : ) | | | | |
| Cutoff Wall | | X | X | |
| Bevel End | | X | X | |
| Heaving (mm) | 0 | | | |
| Invert Above/Below Stream Bed | ABOVE | | | |
| Above/Below (mm) | 250 | | | |
| Scour Protection | | N | 4 | Culvert takes flow from W pipe 250mm above ground causing ponding - minor. |
| (Type : **NONE**) | | | | |
| (Avg. Rock Size(mm) : ) | | | | |
| Scour/Erosion | | N | 4 | Minor erosion at culvert invert area. |
| Beavers (Y/N) | No | | | |
| **Upstream End General Rating** | | **4** | **4** | |

| Bridge Culvert Barrel | | | | |
|---|---|---|---|---|
| **Culvert Component** | | **Last** | **Now** | **Explanation of Condition** |
| (Pipe # : **1, Primary Span, Location Code: MAIN, Span (mm): , Rise (mm): 2120, Type: MP**) | | | | |
| Barrel Last Accessible Date | 26-Jun-2012 | | | |
| **Special Features** | | | | |
| Special Feature | | | | |
| (Type : ) | | | | |
| Special Feature | | | | |
| (Type : ) | | | | |
| Roof | | 3 | 3 | Minor damage from grass cutter at W end of pipe.<br>Deformation at R2/3 coupler.<br>1st joint from E deformed, stable.<br>R3 1840 to dirt, approx. 150mm of dirt on floor.<br>R2 1950 steek to steel (170mm, 8%). |
| Measured Rise (mm) | 1863 | | | |
| Measured At Ring No. | 3 | | | |
| Sag (mm) | 257 | | | |
| Percent Sag | 12 | | | |
| Sidewall | | 3 | 3 | 10.8% |
| Measured Span (mm) | 2350 | | | |
| Measured At Ring No. | 2 | | | |
| Deflection (mm) | 230 | | | |
| Percent Deflection | 11 | | | |
| Floor | | N | N | Dirt covered. |
| Bulge (mm) | 0 | | | |
| Measured At Ring No. | | | | |
| Abrasion (Y/N) | No | | | |
| Circumferential Seams | | 4 | 5 | 40mm vert @ circ. 1 & circ 3.<br>No infiltration. |
| Separation (mm) | 120 | | | |
| 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) | | | | |
| Coating | | 7 | 7 | |
| Corrosion By Soil (Y/N) | No | | | |
| Corrosion By Water (Y/N) | No | | | |

| Bridge Culvert Barrel | | | | |
|---|---|---|---|---|
| **Culvert Component** | | **Last** | **Now** | **Explanation of Condition** |
| (Pipe # : **1, Primary Span, Location Code: MAIN, Span (mm): , Rise (mm): 2120, Type: MP**) | | | | |
| 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 | | | |
| **Barrel General Rating** | | **3** | **3** | |

| Downstream End | | | | |
|---|---|---|---|---|
| **Culvert Component** | | **Last** | **Now** | **Explanation of Condition** |
| Direction | | E | | Gate across end. |
| End Treatment (Concrete, Steel, Others, None) | NONE | | | |
| Headwall | | X | X | |
| Collar | | X | X | |
| Wingwalls | | X | X | |
| (Shape : ) | | | | |
| Cutoff Wall | | X | X | |
| Bevel End | | X | X | |
| Heaving (mm) | 0 | | | |
| Invert Above/Below Stream Bed | BELOW | | | |
| Above/Below (mm) | 80 | | | |
| Scour Protection | | N | 7 | |
| (Type : **NATURAL**) | | | | |
| (Avg. Rock Size(mm) : ) | | | | |
| Scour/Erosion | | N | 7 | |
| Beavers (Y/N) | No | | | |
| **Downstream End General Rating** | | **7** | **7** | |

| Structure Usage | | | | |
|---|---|---|---|---|
| | | **Last** | **Now** | **Explanation of Condition** |
| **Grade Separation** | | | | |
| Road Alignment | | 6 | 6 | Approach @ W. 250mm low causing ponding. |
| Roadway Surface | | 5 | 5 | |
| (Type : **GRAVEL**) | | | | |
| Icing (Y/N) | No | | | |
| Traffic Safety Features | | X | X | |
| Type | NONE | | | |
| Lighting | | X | X | |
| Barrel Leakage (Y/N) | No | | | |

| Structure Usage | | | | |
|---|---|---|---|---|
| | | **Last** | **Now** | **Explanation of Condition** |
| Drainage | | N | 4 | Ponding @ W. side. |
| Structure In Use (Y/N) | Yes | | | |
| **Grade Separation General Rating** | | **4** | **4** | |

**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 | 2012 | Place 5m(cubed) fill @ W. end approach. | | | | |
| OTHER ACTION | | | | | | |
| OTHER ACTION | | | | | | |
| OTHER ACTION | | | | | | |

| **Structural Condition Rating (Last/Now) (%)** | **33.3/33.3** | **Sufficiency Rating (Last/Now) (%)** | **53.8/53.6** | Est. Repl. Yr | 2020 | Maint. Reqd. (Y/N) | Yes |
|---|---|---|---|---|---|---|---|

| Special Comments for Next Inspection | No action for r=3, roof & sidewall ratings. | Department Comments | |
|---|---|---|---|

| Maintenance Reviewed By | | Date | | Estimated Total | 0 |
|---|---|---|---|---|---|
| Proposed Long-Term Strategy | 2006.09.05 Cattlepass being used. There is some damage/wear that should be investigated. Arrange for inspection by Bridge Branch. | | | | |
| On 3-Year Program (Y/N) | | | | | |
| Proposed Action | | | | | |

| Previous Inspector's Name | Owen Salava | Previous Assistant's Name | |
|---|---|---|---|
| Next Inspection Date | 25-Mar-2014 | Previous Inspection Date | 02-Feb-2011 |
| Inspection Cycle (Default) (months) | 21 | | |
| Comment | | | |

**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 | 2012 | Place 5m(cubed) fill @ W. end approach. | To operations | | | |
| OTHER ACTION | | | | | | |
| OTHER ACTION | | | | | | |
| OTHER ACTION | | | | | | |

| **Structural Condition Rating (Last/Now) (%)** | **33.3/33.3** | **Sufficiency Rating (Last/Now) (%)** | **53.8/53.6** | Est. Repl. Yr | 2020 | Maint. Reqd. (Y/N) | Yes |
|---|---|---|---|---|---|---|---|

| Special Comments for Next Inspection | No action for r=3, roof & sidewall ratings. | Department Comments | Roof sag is static. Monitor on 21 month cycle. Tentatively programmed to be replaced in 2022. AS |
|---|---|---|---|

| Maintenance Reviewed By | Andrew Smikles | Date | 23-Aug-2012 | Estimated Total | 0 |
|---|---|---|---|---|---|
| Proposed Long-Term Strategy | 2006.09.05 Cattlepass being used. There is some damage/wear that should be investigated. Arrange for inspection by Bridge Branch. | | | | |
| On 3-Year Program (Y/N) | | | | | |
| Proposed Action | | | | | |

| Previous Inspector's Name | Owen Salava | Previous Assistant's Name | |
|---|---|---|---|
| Next Inspection Date | 25-Mar-2014 | Previous Inspection Date | 02-Feb-2011 |
| Inspection Cycle (Default) (months) | 21 | | |
| Comment | | | |