

| Bridge Culvert Inspection | | | |
|---------------------------|--|---------------------|----------------|
| Bridge File Number | 75990 -2 Bridge Culvert | Form Type | CUL1 |
| Year Built | 2002 | Lot No. | 4 |
| Bridge or Town Name | MORINVILLE | Inspector Name | Kris Bosters |
| Located Over | 2ND ORDER TRIBUTARY TO STURGEON RIVER, 6.65.6.1, WATERCRS-ST | Inspector Class | BR CLS A |
| Located On | LOCAL ROAD | Assistant Name | Brian Cote |
| Water Body Cl./Year | | Assistant Class | BR CLS B |
| Navigabil. Cl./Year | | Inspection Date | 24-Apr-2013 |
| Legal Land Location | SW SEC 28 TWP 54 RGE 25 W4M | Data Entry By | Lisa Fairhurst |
| Longitude, Latitude | -113:38:20, 53:41:14 | Data Entry Date | 03-May-2013 |
| Road Authority | Alberta Transportation (AIT) | Reviewer Name | Eric Carcoux |
| Contract Main. Area | CMA09 | Review Date | 29-Apr-2013 |
| Clear Roadway/Skew | 8 / | Dept. Reviewer Name | |
| AADT/Year | 80 / 2013 (E) | Dept. Review Date | |
| Road Classification | RLU-208G-90 | Follow-Up By | |
| Detour Length (km) | 6 | | |

Bridge Culvert Information

| | | | | | | | | |
|--------------------------|--------|------|----------------|------|--------|---------------|--------------------|--------|
| Number of Culverts | 1 | | | | | | | |
| Pipe # | Barrel | Span | Rise (or Dia.) | Type | Length | Corr. Profile | Pl./Slab Thickness | Shape |
| 1 | MAIN | 2440 | 2440 | PCB | 28.6 | | | SQUARE |
| Special Features | | | | | | | | |
| Special Features Comment | | | | | | | | |

Utilities (Located at)

| | | | | | | | |
|---------------------|----------------------|--|--|---------------|-------------------------|--|--|
| Utility Attachments | | | | | | | |
| Telephone | East r/w. | | | Gas | East r/w. | | |
| Power | 3 wires North r/w. | | | Municipal | Water line in East r/w. | | |
| Others | File tag U/S, North. | | | Problem (Y/N) | No | | |
| Remarks | | | | | | | |

Approach Road / Embankment

| | | Last | Now | Explanation of Condition |
|--|--|----------|----------|--|
| Horizontal Alignment | | 7 | 7 | Near intersection of Hwy 2 & Twp Rd 544. |
| Vertical Alignment | | 8 | 8 | Minor undulations. |
| Roadway Width (m) | | 8.000 | | Guardrail along Hwy 2, South end only. |
| Embankment | | 7 | 7 | |
| Sideslope (__:1) | | 5.0 | | |
| (Height of Cover(m) : 0.6) | | | | |
| Guardrail (Y/N) | | No | | |
| Approach Road / Embankment General Rating | | 7 | 7 | |

Upstream End

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

| Upstream End | | | | |
|--|-------------|----------|----------|--|
| Culvert Component | | Last | Now | Explanation of Condition |
| Wingwalls (Shape :) | | X | X | |
| Cutoff Wall | | X | X | |
| Bevel End | | 9 | 9 | Lift hooks not grouted. 45mm separation between bevel and R1 |
| Heaving (mm) | 0 | | | |
| Invert Above/Below Stream Bed | BELOW | | | |
| Above/Below (mm) | 600 | | | |
| Scour Protection (Type : RIP RAP) (Avg. Rock Size(mm) : 800) | | 8 | 8 | |
| Scour/Erosion | | 8 | 8 | |
| Beavers (Y/N) | No | | | |
| Upstream End General Rating | | 8 | 8 | |
| Bridge Culvert Barrel | | | | |
| Culvert Component | | Last | Now | Explanation of Condition |
| (Pipe # : 1, Primary Span, Location Code: MAIN, Span (mm): 2440, Rise (mm): 2440, Type: PCB) | | | | |
| Barrel Last Accessible Date | 09-May-2008 | | | Viewed from ends, shape looks good |
| Special Features | | | | |
| Special Feature (Type :) | | | | |
| Special Feature (Type :) | | | | |
| Roof | | 8 | N | (Lift hooks for barrel, pipe 1,2 exposed, no grout. Ring 6 - 2436, ring 10 - 2430. At U/S. - May/2008) |
| Measured Rise (mm) | 2427 | | | |
| Measured At Ring No. | | | | |
| Sag (mm) | 13 | | | |
| Percent Sag | 0 | | | |
| Sidewall | | 8 | N | (U/S - 2432, ring 10 - 2442.-May/2008) |
| Measured Span (mm) | 2430 | | | |
| Measured At Ring No. | 6 | | | |
| Deflection (mm) | 10 | | | |
| Percent Deflection | 0 | | | |
| Floor | | N | N | (600 deep water. Silt deposit on floor rings 11 & 12. - May 2008) |
| Bulge (mm) | 0 | | | |
| Measured At Ring No. | | | | |
| Abrasion (Y/N) | No | | | |
| Circumferential Seams | | 8 | N | |
| Separation (mm) | 0 | | | |
| 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 | | X | X | |
| Corrosion By Soil (Y/N) | | | | |
| Corrosion By Water (Y/N) | | | | |

| Bridge Culvert Barrel | | | | |
|--|----------|----------|----------|--|
| Culvert Component | | Last | Now | Explanation of Condition |
| (Pipe # : 1, Primary Span, Location Code: MAIN, Span (mm): 2440, Rise (mm): 2440, Type: PCB) | | | | |
| Camber POS/ZERO/NEG | ZERO | | | |
| Ponding (Y/N) | No | | | |
| 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 | | | |
| Barrel General Rating | | 8 | 9 | Last rated 8 May/2008. |
| Downstream End | | | | |
| Culvert Component | | Last | Now | Explanation of Condition |
| Direction | | S | | |
| End Treatment (Concrete, Steel, Others, None) | CONCRETE | | | |
| Headwall | | X | X | |
| Collar | | X | X | |
| Wingwalls | | X | X | |
| (Shape :) | | | | |
| Cutoff Wall | | X | X | |
| Bevel End | | 8 | 8 | |
| Heaving (mm) | 0 | | | |
| Invert Above/Below Stream Bed | BELOW | | | |
| Above/Below (mm) | 600 | | | |
| Scour Protection | | 8 | 8 | |
| (Type : RIP RAP) | | | | |
| (Avg. Rock Size(mm) : 800) | | | | |
| Scour/Erosion | | 8 | 8 | |
| Beavers (Y/N) | No | | | |
| Downstream End General Rating | | 8 | 8 | |
| Structure Usage | | | | |
| | | Last | Now | Explanation of Condition |
| Channel (U/S and D/S) | | | | |
| Alignment | | 9 | 9 | |
| Bank Stability | | 4 | 4 | Vertical banks NW - does not appear to have changed. |
| HWM (m below Top of Culvert) | | | | HWM not visible. |
| Drift (Y/N) | No | | | |
| Channel Bottom Degrading/Aggrading | NONE | | | |
| Beavers (Y/N) | No | | | |

| Structure Usage | | | | |
|--|--|----------|----------|--------------------------|
| | | Last | Now | Explanation of Condition |
| (Fish Compensation Measure 1 : NONE) | | | | |
| (Fish Compensation Measure 2 : NONE) | | | | |
| Channel 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 | | | | | | | |
| OTHER ACTION | | | | | | | |
| OTHER ACTION | | | | | | | |
| OTHER ACTION | | | | | | | |
| Structural Condition Rating (Last/Now) (%) | 88.9/100.0 | Sufficiency Rating (Last/Now) (%) | 89.3/94.4 | Est. Repl. Yr | 2080 | Maint. Req'd. (Y/N) | No |
| Special Comments for Next Inspection | Monitor u/s banks. | | 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 | Jacob Oresile | | Previous Assistant's Name | | | | |
| Next Inspection Date | 24-Jan-2018 | | Previous Inspection Date | 09-May-2008 | | | |
| Inspection Cycle (Default) (months) | 57 | | | | | | |
| Comment | | | | | | | |