

| Bridge Culvert Inspection | | | | |
|---------------------------|---------------------------------|--|---------------------|---------------|
| Bridge File Number | 72348 -1 Bridge Culvert | | Form Type | CULE |
| Year Built/Lined | 1958/1994 | | Lot No. | 4 |
| Bridge or Town Name | | | Inspector Name | Jason Rusu |
| Located Over | LNI - IRRIGATION C, WATERCRS-IC | | Inspector Class | BR CLS A |
| Located On | 25:02 C1 27.281 | | Assistant Name | |
| Water Body Cl./Year | | | Assistant Class | |
| Navigabil. Cl./Year | | | Inspection Date | 09-Dec-2011 |
| Legal Land Location | NW SEC 11 TWP 11 RGE 21 W4M | | Data Entry By | Anne Roberts |
| Longitude, Latitude | -112:46:48, 49:54:03 | | Data Entry Date | 17-Jan-2012 |
| Road Authority | Alberta Transportation (AIT) | | Reviewer Name | Garry Roberts |
| Contract Main. Area | CMA25 | | Review Date | 26-Dec-2011 |
| Clear Roadway/Skew | 11.4 / | | Dept. Reviewer Name | Tim Davies |
| AADT/Year | 1,300 / 2010 (A) | | Dept. Review Date | 18-Jan-2012 |
| Road Classification | RAU-211.8-110 | | Follow-Up By | |
| Detour Length (km) | 5 | | | |

Bridge Culvert Information

| Number of Culverts | 2 | | | | | | | |
|--------------------------|----------------------|------|----------------|------|--------|---------------|--------------------|-------|
| Pipe # | Barrel | Span | Rise (or Dia.) | Type | Length | Corr. Profile | Pl./Slab Thickness | Shape |
| 1 | MAIN Partially Lined | 2133 | 1550 | RPP | 32.3 | | | ARCH |
| 2 | MAIN PARTIAL LINER | - | 1200 | MP | 32 | 125X26 | 2.8 | ROUND |
| Special Features | | | | | | | | |
| Special Features Comment | | | | | | | | |

Utilities (Located at)

| | | | |
|---------------------|---------------------------|---------------|----|
| Utility Attachments | | | |
| Telephone | West Ditch | Gas | |
| Power | East Ditch | Municipal | |
| Others | Supernet fibre east ditch | Problem (Y/N) | No |
| Remarks | | | |

Approach Road / Embankment

| | Last | Now | Explanation of Condition |
|--|----------|----------|--------------------------|
| Horizontal Alignment | 7 | 7 | |
| Vertical Alignment | 8 | 8 | |
| Roadway Width (m) | 11.000 | | |
| Embankment | 8 | 8 | |
| Sideslope (__:1) | 6.0 | | |
| (Height of Cover(m) : 1.2) | | | |
| Guardrail (Y/N) | No | | |
| Approach Road / Embankment General Rating | 7 | 7 | |

Upstream End

| Culvert Component | Last | Now | Explanation of Condition |
|---|------|-----|--------------------------|
| (Pipe # : 1, Span Type: Primary Span) | | | |
| Direction | W | | |
| End Treatment (Concrete, Steel, Others, None) | NONE | | |
| Headwall | X | 7 | |
| Collar | X | 7 | |

| Upstream End | | | | |
|--|----|----------|----------|--------------------------|
| Culvert Component | | Last | Now | Explanation of Condition |
| (Pipe # : 1, Span Type: Primary Span) | | | | |
| Wingwalls | | X | X | |
| (Shape :) | | | | |
| Cutoff Wall | | X | X | |
| Bevel End | | X | 5 | |
| Heaving (mm) | | | | |
| Invert Above/Below Stream Bed | | | | |
| Above/Below (mm) | | | | |
| Scour Protection | | X | 7 | |
| (Type : NATURAL) | | | | |
| (Avg. Rock Size(mm) :) | | | | |
| Scour/Erosion | | X | 7 | |
| Beavers (Y/N) | No | | | |
| Upstream End General Rating | | N | 5 | |

| Bridge Culvert Barrel | | | | |
|---|--|------|-----|---|
| Culvert Component | | Last | Now | Explanation of Condition |
| (Pipe # : 1, Primary Span, Location Code: MAIN, Span (mm): 2133, Rise (mm): 1550, Type: RPP) | | | | |
| Barrel Last Accessible Date | | | | Unable to view - now lined and sealed with grout / concrete |
| Special Features | | | | |
| Special Feature | | | | |
| (Type :) | | | | |
| Special Feature | | | | |
| (Type :) | | | | |
| Roof | | X | N | |
| Measured Rise (mm) | | | | |
| Measured At Ring No. | | | | |
| Sag (mm) | | | | |
| Percent Sag | | | | |
| Sidewall | | X | N | |
| Measured Span (mm) | | | | |
| Measured At Ring No. | | | | |
| Deflection (mm) | | | | |
| Percent Deflection | | | | |
| Floor | | X | N | |
| Bulge (mm) | | | | |
| Measured At Ring No. | | | | |
| Abrasion (Y/N) | | | | |
| Circumferential Seams | | X | N | |
| Separation (mm) | | | | |
| Longitudinal Seams | | X | N | |
| 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) | | | | |

| Bridge Culvert Barrel | | | | |
|--|----------|----------|----------|--------------------------|
| Culvert Component | | Last | Now | Explanation of Condition |
| (Pipe # : 1, Primary Span, Location Code: MAIN, Span (mm): 2133, Rise (mm): 1550, Type: RPP) | | | | |
| Coating | | X | N | |
| Corrosion By Soil (Y/N) | | | | |
| Corrosion By Water (Y/N) | | | | |
| Camber POS/ZERO/NEG | | | | |
| Ponding (Y/N) | | | | |
| Fish Passage Adequacy | | X | X | |
| Baffle | | X | X | |
| (Type :) | | | | |
| Waterway Adequacy | | X | X | |
| Icing (Y/N) | No | | | |
| Siltting (Y/N) | No | | | |
| Drift (Y/N) | No | | | |
| Barrel General Rating | | N | N | Grouted and not visible |
| Downstream End | | | | |
| Culvert Component | | Last | Now | Explanation of Condition |
| (Pipe # : 1, Span Type: Primary Span) | | | | |
| Direction | | E | | |
| End Treatment (Concrete, Steel, Others, None) | NONE | | | |
| Headwall | | X | N | Snow covered |
| Collar | | X | N | Snow covered |
| Wingwalls | | X | X | |
| (Shape :) | | | | |
| Cutoff Wall | | X | X | |
| Bevel End | | X | 5 | |
| Heaving (mm) | | | | |
| Invert Above/Below Stream Bed | | | | |
| Above/Below (mm) | | | | |
| Scour Protection | | X | 7 | |
| (Type : NATURAL) | | | | |
| (Avg. Rock Size(mm) :) | | | | |
| Scour/Erosion | | X | 7 | |
| Beavers (Y/N) | | | | |
| Downstream End General Rating | | N | 5 | |
| Upstream End | | | | |
| Culvert Component | | Last | Now | Explanation of Condition |
| (Pipe # : 2, Span Type: Secondary Span) | | | | |
| Direction | | W | | |
| End Treatment (Concrete, Steel, Others, None) | CONCRETE | | | |
| Headwall | | 8 | 7 | |
| Collar | | 8 | 7 | |

| Upstream End | | | | |
|--|-------|----------|----------|--------------------------|
| Culvert Component | | Last | Now | Explanation of Condition |
| (Pipe # : 2, Span Type: Secondary Span) | | | | |
| Wingwalls | | X | X | |
| (Shape :) | | | | |
| Cutoff Wall | | X | X | |
| Bevel End | | 6 | 6 | |
| Heaving (mm) | 0 | | | |
| Invert Above/Below Stream Bed | BELOW | | | |
| Above/Below (mm) | 200 | | | |
| Scour Protection | | 7 | 7 | |
| (Type : NATURAL) | | | | |
| (Avg. Rock Size(mm) :) | | | | |
| Scour/Erosion | | 7 | 7 | |
| Beavers (Y/N) | No | | | |
| Upstream End General Rating | | 6 | 6 | |

| Bridge Culvert Barrel | | | | |
|--|-------------|------|-----|--------------------------|
| Culvert Component | | Last | Now | Explanation of Condition |
| (Pipe # : 2, Secondary Span, Location Code: MAIN, Span (mm): , Rise (mm): 1200, Type: MP) | | | | |
| Barrel Last Accessible Date | 09-Dec-2011 | | | 400 mm ice on floor |
| Special Features | | | | |
| Special Feature | | | | |
| (Type :) | | | | |
| Special Feature | | | | |
| (Type :) | | | | |
| Roof | | N | 6 | Unable to measure rise |
| Measured Rise (mm) | | | | Estimate |
| Measured At Ring No. | | | | |
| Sag (mm) | | | | |
| Percent Sag | 1 | | | |
| Sidewall | | N | 6 | |
| Measured Span (mm) | 1220 | | | |
| Measured At Ring No. | 3 | | | |
| Deflection (mm) | 20 | | | |
| Percent Deflection | 1 | | | |
| Floor | | N | N | Ice covers floor |
| Bulge (mm) | | | | |
| Measured At Ring No. | | | | |
| Abrasion (Y/N) | | | | |
| Circumferential Seams | | N | 6 | |
| Separation (mm) | | | | |
| 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) | | | | |

| Bridge Culvert Barrel | | | | |
|--|------|----------|----------|-------------------------------------|
| Culvert Component | | Last | Now | Explanation of Condition |
| (Pipe # : 2, Secondary Span, Location Code: MAIN, Span (mm): , Rise (mm): 1200, Type: MP) | | | | |
| Coating | | N | 5 | superficial corrosion at water line |
| Corrosion By Soil (Y/N) | No | | | |
| Corrosion By Water (Y/N) | Yes | | | |
| Camber POS/ZERO/NEG | ZERO | | | |
| Ponding (Y/N) | No | | | |
| Fish Passage Adequacy | | 6 | 6 | |
| Baffle | | X | X | |
| (Type :) | | | | |
| Waterway Adequacy | | 7 | 7 | |
| Icing (Y/N) | No | | | |
| Silting (Y/N) | No | | | |
| Drift (Y/N) | No | | | |
| Barrel General Rating | | N | 6 | |

| Downstream End | | | | |
|--|----------|----------|----------|--------------------------|
| Culvert Component | | Last | Now | Explanation of Condition |
| (Pipe # : 2, Span Type: Secondary Span) | | | | |
| Direction | | E | | |
| End Treatment (Concrete, Steel, Others, None) | CONCRETE | | | |
| Headwall | | 7 | N | Snow covered |
| Collar | | 7 | N | Snow covered |
| Wingwalls | | X | X | |
| (Shape :) | | | | |
| Cutoff Wall | | X | X | |
| Bevel End | | 7 | 6 | |
| Heaving (mm) | 0 | | | |
| Invert Above/Below Stream Bed | BELOW | | | |
| Above/Below (mm) | 200 | | | |
| Scour Protection | | 7 | 7 | |
| (Type : NATURAL) | | | | |
| (Avg. Rock Size(mm) :) | | | | |
| Scour/Erosion | | 7 | 7 | |
| Beavers (Y/N) | No | | | |
| Downstream End General Rating | | 7 | 6 | |

| Structure 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) | | | | Not visible |
| Drift (Y/N) | No | | | |

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

| 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) (%) | 55.6/66.7 | Sufficiency Rating (Last/Now) (%) | 64.5/67.3 | Est. Repl. Yr | 2054 | 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 | Jason Rusu | | Previous Assistant's Name | | | | |
| Next Inspection Date | 09-Sep-2013 | | Previous Inspection Date | 06-Jun-2010 | | | |
| Inspection Cycle (Default) (months) | 21 | | | | | | |
| Comment | | | | | | | |